

Energy-efficient, comfortable, versatile  
Catalogue 2020





## Efficient distribution

Theben stands for a clear commitment to the three-stage distribution approach via wholesaler and retail outlets. Our capacious central warehouse guarantees our goods are ready for delivery at all times.



## Reliable customer service

You can rely on us – even after the guarantee period expires: just in case our customer service is at your disposal quickly and uncomplicatedly. You will immediately receive the spare parts requested – even for older devices.



## Effective training

You can never have enough knowledge: especially about our products. We offer our customers a broad range of training options – at our own premises in Haigerloch or also in your vicinity at our sales partners. The entire Theben training program can be found at: [www.theben.de/training](http://www.theben.de/training)



## Most important trade fairs

You can find us at important trade fairs. There you can find out everything about our new products. Drop by: we look forward to your visit:  
Light&Building, Frankfurt, 08.03.–13.03.2020  
Belektro, Berlin, 03.11.–05.11.2020  
GET NORD, Hamburg, 19.–21.11.2020



## Personal contact

Some questions can't wait. Our experts will help you in a quick and straightforward way. Monday to Thursday from 7.00 am to 6.00 pm, Friday to 4.00 pm on the telephone. Or immediately by email.

↳ Telephone hotline: +49 7474 692-369

↳ Email hotline: [hotline@theben.de](mailto:hotline@theben.de)



## Information-packed website

All important information about our products can be found on our website. With just a few clicks the "Product finder" function takes you to the right product for your application.



## Digital newsletter

It couldn't be more convenient: our email newsletter informs you about interesting facts and news from us. Just register at [www.theben.de/en/email-newsletter](http://www.theben.de/en/email-newsletter)



## Social media

Whether praise, questions or suggestions: we look forward to your posts and provide you with up-to-date information via the following channels:



[xing.com/companies/thebenag](https://www.xing.com/companies/thebenag)



[plus.google.com/+TheThebenAG/](https://plus.google.com/+TheThebenAG/)



[youtube.com/user/TheThebenAG](https://youtube.com/user/TheThebenAG)



[www.facebook.com/ThebenAG/](https://www.facebook.com/ThebenAG/)



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[de.linkedin.com/company/theben-ag](https://de.linkedin.com/company/theben-ag)

New products & LED expertise



## Time and light control

Digital time switches



Analogue time switches



Time relays/hour counters

1234h

Staircase time switches/  
dimmers



Twilight switches



## Presence and motion detectors

Presence detectors



Motion detectors/spotlights



## Climate control

Clock thermostats



Room thermostats



Sensor technology



## House and building control

KNX



Smart Home system LUXORliving/  
Living comfort control LUXOR



Logic controllers



## Accessories / appendix

Accessories, Index, Packaging units, List of discontinued models, Brochures, Terms and conditions, Agencies







Dear customers and partners,

From light and heating control to smart homes and smart metering – the technologies, products and solutions in building technology are increasingly merging, becoming more automated and more closely networked. Even so, it is not just the big-time innovations that are making real progress. Targeted improvements to little details and product innovations that might at first seem unremarkable also provide significant benefits in the areas of efficiency, ease of use and security. And that's precisely in line with what our slogan communicates: „energy saving comfort“.

Two examples of this can be found in our product catalogue for 2020. The new KNX flush-mounted wireless actuators, for instance, are the perfect solution for retrofitting a KNX-based smart home system. Thanks to KNX Data Secure, the actuators also provide encrypted, tamper-proof communication pathways. KNX Data Secure ensures secure communication in this case, too. Both products are also available in versions for the LUXORliving smart home system, adding to its fantastic ease of use by making it even simpler, more convenient and more secure.

But there's even more to talk about besides that. You can look forward to seeing these innovations and many more, both large and small, in our catalogue.

For our part, we're looking forward to continuing the excellent partnership that we have established with you and making 2020 another successful year.

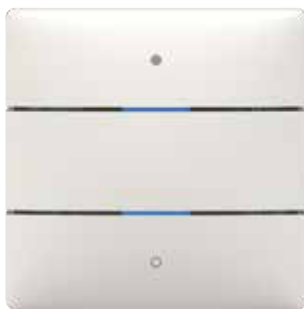
Your Theben board, together with the whole team

Paul Sebastian Schwenk  
Vorstand

Thomas Sell  
Vorstand

# Simple operation Superb functionality LUXORliving push-button sensors

The new LUXORliving iON push-button sensors are a brilliant alternative to the binary inputs that have been available to date. iON push-button sensors are flexible and cut a stylish figure in every room thanks to their frameless design. They can be configured using the free LUXORplug application and operated via the LUXORplay app.



## LUXORliving iON2

Working together with heating actuator technology, the LUXORliving push-button sensor with temperature sensor helps to regulate the room temperature.



## LUXORliving iON4

Colour status LEDs signal the current status of the push-button sensor, allowing you to see the status of the outdoor light, for instance, without having to go outside. The brightness of the status LEDs adjusts itself as required based on the surrounding brightness. If the room gets darker, the status LEDs are dimmed automatically, preventing disruptive light interference at night. During the day, the LEDs shine more brightly.



## LUXORliving iON8

You can select a suitable icon for each of the 10 functions on the iON room controller from a library. The icon is supplemented with individual function names and the current status (on/off/dimming value/location). This makes the room controller easier to use and navigate. The brightness of the LCD display adjusts itself based on the surrounding brightness. If the room is dark, the backlight on the display is dimmed, preventing disruptive lighting effects. During the day, the display shines more brightly, so it is easy to read when there is lots of ambient light.

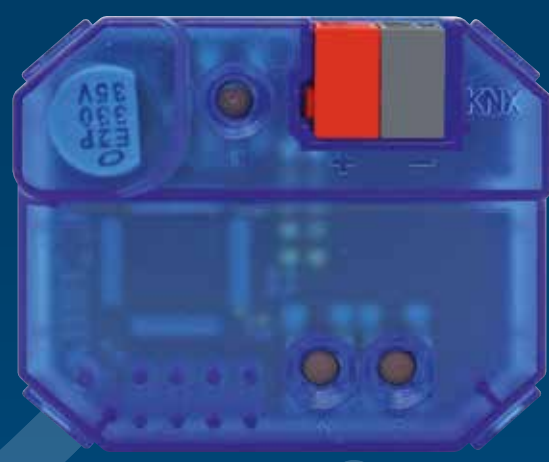
# Want to expand your smart home? No problem!

## LUXORliving flush-mounted wireless actuators

With its new wireless actuators, Theben is offering a practical option to expand or retrofit an existing LUXORliving smart home system. This means, for example, that extensions or retrofitted awnings can be easily integrated into the existing wired system by wireless transmission.

Thanks to the media coupler, you can easily link wired and wireless components.

Buttons, window contacts and temperature sensors can be directly integrated via the inputs of the flush-mounted actuators. And if you prefer a wired KNX installation in the future, you simply continue to use all LUXORliving products. Sure and safe!



**Speaking of safety:**  
Communication between wireless actuators and lighting, blinds and heating is, of course, encrypted. That leaves no opportunities open for data theft or tampering.



LUXORliving D1 RF dimming actuator



LUXORliving S1 RF switch actuator



LUXORliving J1 RF blind actuator



LUXORliving H1 RF heating actuator



LUXORliving T4 RF wireless button interface

# Full control – simply via Internet

## Safe remote access via Theben Cloud

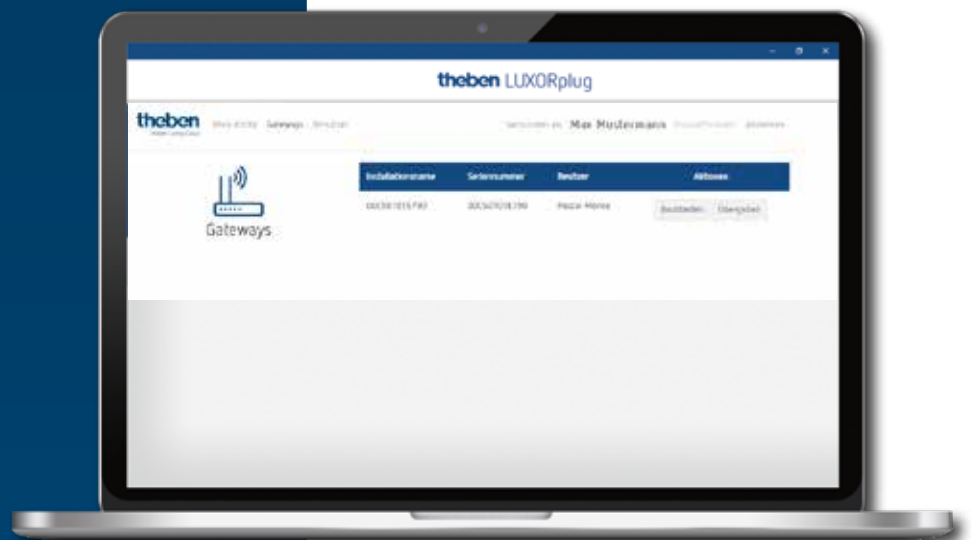
### There for you, always and everywhere.

All LUXORliving functions can be controlled and statuses monitored remotely via Theben Cloud using the LUXORplay app.

Start and configure access via the Cloud with just a few clicks – without any network knowledge. Or you leave everything to your installer.



The easy programming and operation of LUXORliving is really hard to beat. Unless you additionally enable full access via the Internet. Welcome to Theben Cloud!



### Safety first

With Theben Cloud, you can play it safe thanks to the certified server location in Germany. In this way, your LUXORliving Smart Home System is optimally protected against data theft and tampering.



No sooner said than done: by connecting the LUXORliving IP1 system center to the Theben cloud, the programmed functions can be automatically adopted in the voice assistant. Whether Amazon Alexa or Google Assistant - the integration is as easy as LUXORliving itself.





# Let the weather work for you! With the LUXORliving weather station

It's true that you can't change the weather. But you can use sunlight, wind, temperature and rain to control your blinds and sun protection via your LUXORliving smart home system. How does it work? Easily – with the LUXORliving M140 weather station from Theben.

The weather station brings down the blinds and lowers the room heating; for example, when there is direct sun radiation. Or it brings the blinds into a secure position during strong winds. And if it starts to rain, delicate textile hangings are automatically retracted. The weather station can also automatically open the hangings at dawn and close them when it gets dark in the evening as required.

With the new weather sensor LUXORliving M100 and the weather station M130 you can cover multiple LUXORliving installations at the same time.

The weather sensor delivers the information to the weather station. This means that up to 20 LUXORliving installations - for example in an apartment building - will get valuable weather information.

This reduces the device costs and saves installation time.

# iON KNX push-button sensor and room controller

## Looks great, works great

The new iON KNX push-button sensors and room controller with integrated temperature sensor enable you to trigger various functions in KNX installations at the touch of a button. For example:

- Switching lights on and off and dimming lights
- Adjusting lighting colours and calling up lighting scenarios
- Raising and lowering blinds
- Initiating and saving user-specific scenes
- Operating central or group functions

The push-button sensors are available in various designs: as a single sensor (two buttons), a double sensor (four buttons) and a room controller with LCD display and Bluetooth interface. Depending on the device, you can control up to 20 functions using a single button. iON KNX push-button sensors stand out from the crowd thanks to their extensive functionality and exceptional ease of use. The iON 108 KNX room controller with LCD and integrated room thermostat features a Bluetooth interface to make it easier to use. All push-button sensors come with an integrated bus coupling and can be programmed without the ETS app.



### iON 102 KNX

Push-button sensor with two operating points and temperature sensor. Switch light on and dim light, control blinds, initiate and save scenes, measure temperature, manage colours, show status (multicolour LED)



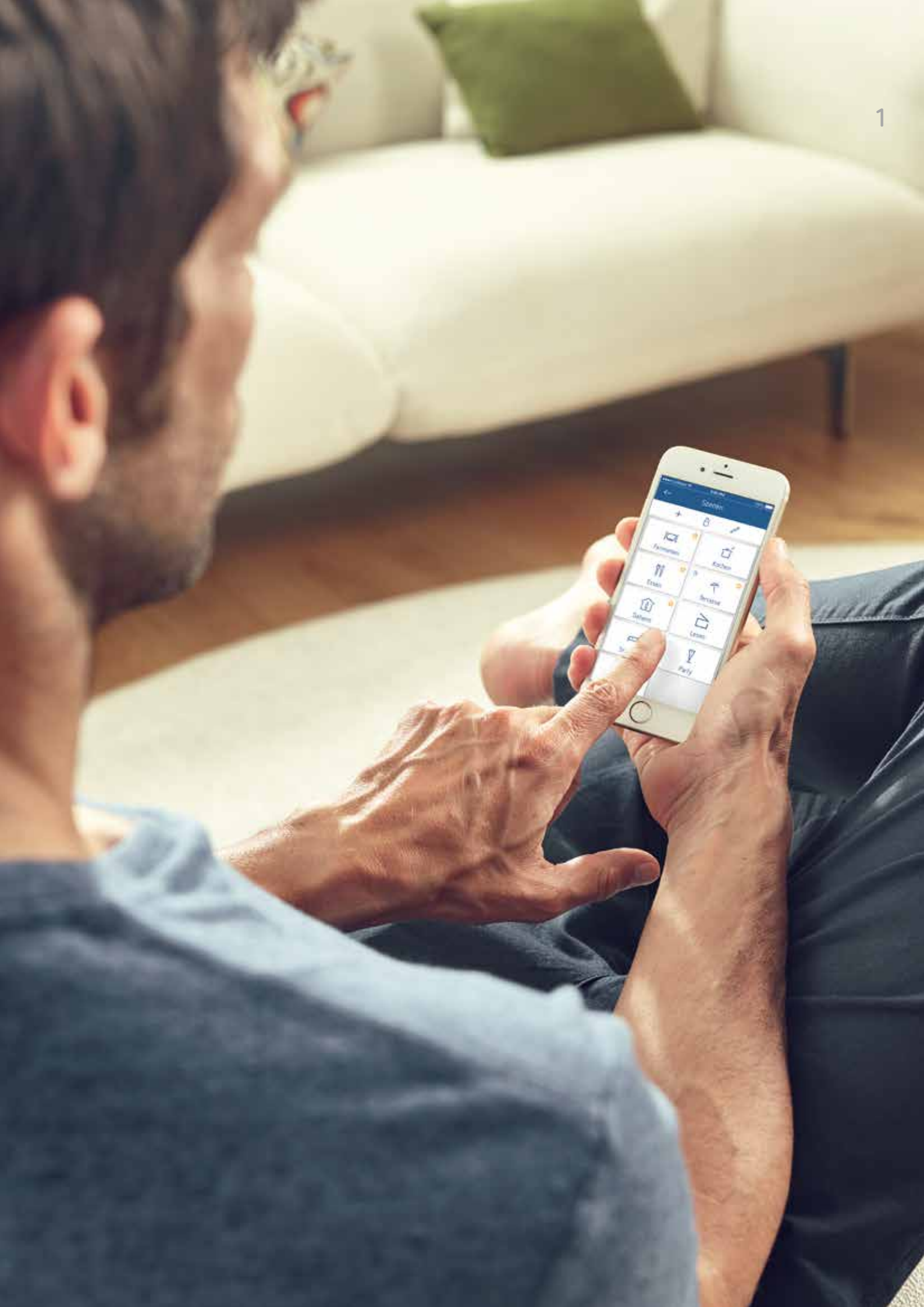
### iON 104 KNX

Double push-button sensor with four operating points and temperature sensor. Switch light on and dim light, control blinds, initiate and save scenes, measure temperature, manage colours, show status (multicolour LED)



### iON 108 KNX

KNX room controller with 20 functions, LC display, room thermostat, app operation and two operating points. Switch light on and dim light, control blinds, initiate and save scenes, control temperature, manage colours, show status (LC display), Bluetooth interface for using the app via smartphone or tablet



# Secure wireless communication via KNX Data Secure KNX flush-mounted wireless actuators

## Highlights

### Secure communication

The encryption according to KNX Data Secure standard effectively prevents interpretation of the sent data

### Wide range of applications

Depending on device, can be used for dimming (DU 1 RF KNX), for blinds/shading control (JU 1 RF KNX), for switching loads with high inrush currents (SU 1 RF KNX) or for heating control (HU 1 RF KNX)

### Quick installation

Thanks to their compact design, the KNX flush-mounted wireless actuators fit into any switch/junction box

### Flexible integration

With 2 external inputs for connecting a button, signal contact or temperature sensor

With its new wireless actuators that comply with the KNX standard „KNX RF1.R S-Mode“, Theben offers a practical option to expand existing KNX systems in buildings without the need to invest much time or effort. In this way, extensions to buildings or functions can be easily integrated into the system at a later date.



Thanks to the media coupler, you can easily link wired and wireless components.

Buttons, window contacts and temperature sensors can be directly integrated via the inputs of the flush-mounted actuators.

**Speaking of safety:** Communication between wireless actuators and lighting, blinds and heating is, of course, encrypted. That leaves no opportunities open for data theft or tampering.



Theben AG is expanding its range of KNX RF products with new KNX RF flush-mounted actuators and media couplers. Thanks to encryption with KNX Data Secure, communication is optimally protected against interception and tampering.

**DU1 RF KNX dimming actuator**



**HU1 RF KNX heating actuator**



**SU1 RF KNX switch actuator**



**TU 4 RF KNX wireless button interface**



**JU1 RF KNX blind actuator**



# Versatility can be so attractive and clever

Flush-mounted wall detectors can be placed particularly unobtrusively inside the room. That's great – but it's even better if they have an attractive design that blends harmoniously into their surroundings. If they can be used universally for virtually all switch ranges from leading manufacturers. And if you can use 2-wire or 3-wire devices for your specific application.

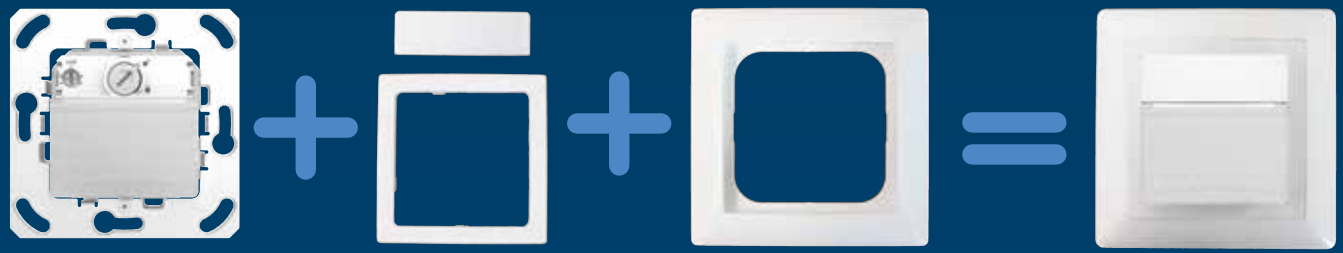
So how can you achieve all that? With a simple yet perfect solution: Theben's theMura flush-mounted motion and presence detectors. Thanks to their extra-flat design, they have an especially unobtrusive appearance wherever they're installed. And due to a wide range of available accessory sets, they can be used for every common switch range.



## Highlights at a glance

- Attractive, flat design
- Large detection area of 14 x 17 m
- Flexible extension thanks to master-slave
- Integrated button (can be deactivated)
- Thanks to accessory sets, theMura fits perfectly into the specified switch range

# Universal geniuses for energy-efficient lighting control



theMura base unit  
(theMura S180 ... B UP)

e.g. BJ  
adapter frame +  
button cover  
(Item no. 9070788)

BJ balance SI  
frame (not included  
in scope of delivery!)

Theben theMura flush-mounted motion and presence detectors can be used universally for switch ranges of all leading manufacturers. The scope of delivery depends on the respective switch range. More information at [www.theben.de/theMura](http://www.theben.de/theMura)

Energy-efficient lighting control can be so simple and flexible!

## Motion and presence detectors

**2 in 1**  
Two in one:  
with integrated  
button

By using the integrated button, the lighting can be switched on or off manually. If the function is not required, simply deactivate it.


 Perfectly safe:  
Staircase light  
function

With theMura, nobody trips up. Not even on the stairs. The light can be switched on using the button, but it only goes off when there is no more movement on the stairs. It prevents you from being left in the dark because someone turned off the lights.


 Clever:  
Teach-in  
function

Lighting conditions change quickly – so it’s good when you can simply save them when they are exactly how you want them. With the teach-in function, the current lux value can be permanently saved. Without specialist knowledge. By the end user. It couldn’t be easier.


## Presence detectors

 Leading the way:  
orientation light

The orientation light ensures greater safety in corridors and on staircases. After the main light has been switched off automatically, it remains activated for an adjustable time delay or permanently (depending on the brightness). Safety first.

 Hear ye, hear ye:  
acoustic function

In rooms like bathrooms, it can make sense to let the noise level decide whether the light should be switched off or not. With theMura, you can also set the time delay using the integrated microphone. It’s pretty handy.

 Remote-controlled:  
via remote control  
or app

To be able to use all functions, theSenda B remote control is used in combination with the free theSenda Plug app.

# Premium class!

## DIMAX 544 plus P

### flush-mounted universal dimmer



#### Functions



##### Compact housing

For convenient installation in the flush-mounted box



##### Adjustable dimming response

For ideal dimming of LEDs



##### Ideal for LEDs

Thanks to optimised zero-cross switching



##### Password protection possible

Prevents unauthorised access to your devices



##### Handy memory function

Saves the most recently set light level value



##### App for Android and iOS

Convenient operation via app



##### Load detection for R, L and C loads

To control ventilation systems



##### Individual lighting scenarios

Conveniently set up and call up via smartphone



##### Convenient snooze function

Lets you glide gently into the realm of dreams



##### Adjustable staircase light function

With optimised switch-off pre-warning

## Highlights at a glance

- **Optimised for dimmable LEDs**  
Thanks to zero-cross switching and optimised dimming curves for various lamps
- **Convenient control**  
Via button, switch or smartphone app
- **Practical comfort features**  
E.g. wake-up, snooze and staircase light function



# Total control. Maximum efficiency

## TC 649 E control box



**Control of individual devices using remote access via LAN**

The Theben TC 649 E control box enables simple, convenient and fast data transmission of time and astro programs.


In industry and branch businesses, the control of consumers has so far mainly been carried out with individual devices, which have to be programmed directly on site. In this case, alterations always require a walk to the device. With the new TC 649 E control box, individual applications can be programmed directly via the LAN network. The connection is established via the company's internal LAN network. This ensures compliance with all security requirements applicable within the LAN network. Each device is provided with the application software via an integrated web server. Time, astro and annual programs can be transmitted. Direct switching is also possible.

 **Secure operation in the company network (LAN)**


The control box is integrated into the company's own network, remotely controllable via networks like a VPN. This enables you to operate your control boxes in the secure environment that you are already using successfully.

 **Maximum investment protection**

Access your time and astro programs whenever you need them via the central storage, and continue to use previously created programs.

 **Always up to date**


Thanks to the update option, you can always keep your software up to date.

 **Greater flexibility**


Control your switched applications in different places at the click of a mouse from your control centre.

 **Increased exposure**


Participate in high-publicity events such as the WWF Earth Hour to promote your company's sustainability measures.

 **Reduced costs**

Make changes to switching times, for instance, in just a few minutes – without expensive staff resources. This also does away with the need for extensive travel.

 **Quick installation**

The control box is installed easily via plug connections.

 **Less energy consumption**

Only switch on your consumers when they are actually in use and thus reduce your electricity costs.

# RAMSES 814 BLE UP

## Conveniently controlled from your smartphone

The new RAMSES 814 BLE UP clock thermostat by Theben is the first invisible clock thermostat (heating or cooling). It is completely hidden in the flush-mounted socket, under the blind cover or the socket cover.

This clock thermostat can be controlled and programmed via app, is easy to use and can be quickly adapted to different user prompts. A direct Bluetooth Low Energy (BLE) connection is established between the app and the RAMSES 814 BLE UP. This scores points with minimum power consumption for accurate temperature measurement and control. No additional components are necessary, making it attractively priced.

## The invisible clock thermostat

### An absolute must



#### Convenient operation

Fiddly buttons and a basic operating display are a thing of the past. The RAMSES 814 BLE UP is conveniently operated using smartphones and tablets with a high-definition colour touch screen.



#### Maximum security against tampering

The RAMSES 814 BLE UP only needs a local Bluetooth connection to work in your home. There is no need for an Internet connection or any additional gateways or routers. A clear advantage in terms of security against tampering.



#### Easy to Install

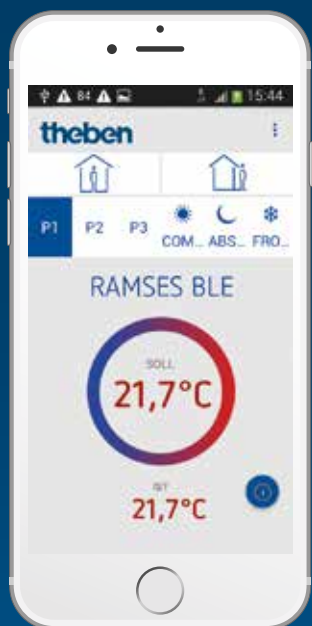
In contrast with other smart thermostats, the RAMSES 814 BLE UP does not need any additional components (gateways, switch actuators, etc.).

Install the RAMSES 814 BLE UP just like a conventional clock thermostat: quickly, easily and without fuss.



#### Highlights

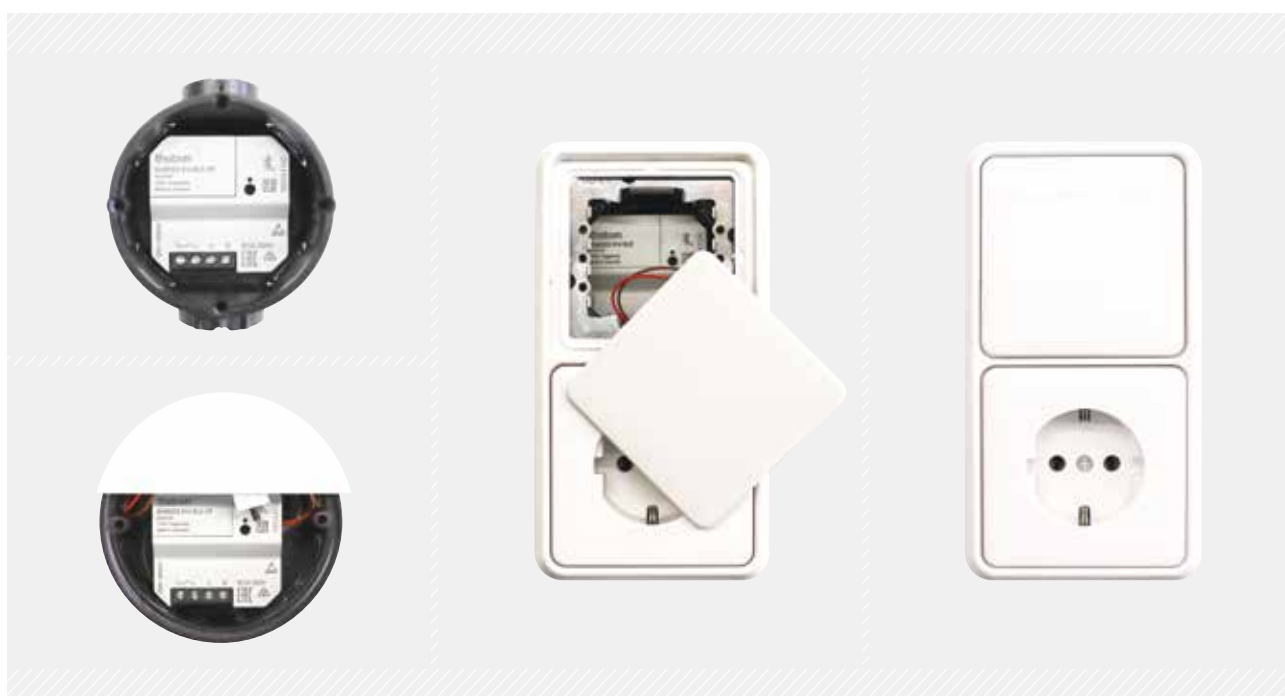
- Adjustable heating or cooling
- 3 freely programmable weekly programs: P1, P2, P3 (temperature level, times)
- Setting options:
  - Permanent comfort, set-back operation and frost protection mode
- Party and Eco function
- Holiday program
- Wall comparison to adjust the room temperature measurement
- Programmable optimiser to achieve the target room temperature at time switch
- Optional external input for floor sensors, room temperature sensors, window contact and presence detectors
- Small sensor unit for recording the temperature (photo on left)



 Bluetooth®



Seek and you shall find  
Neatly hidden



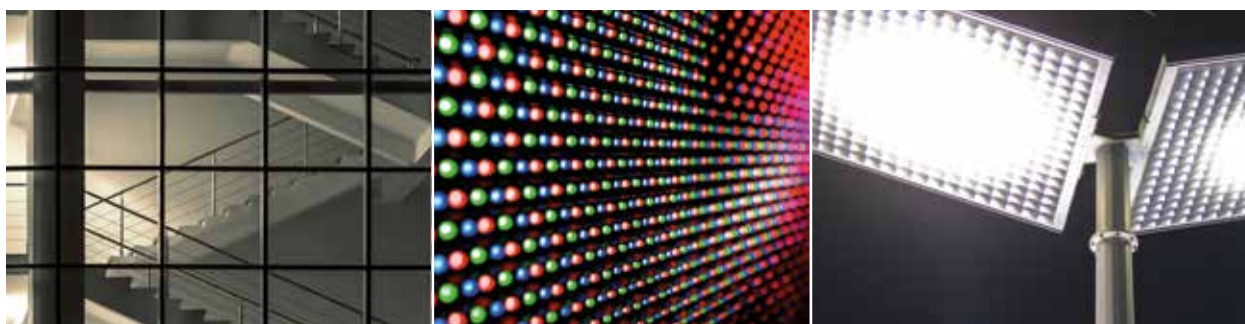


## LEDs – Energy savers with a bright future and little quirks

LEDs have progressed enormously in recent years. Thanks to the improvements in the degree of efficiency and colour rendering index, there is almost no area of lighting technology where they are not present: as retrofit versions, they are a welcome alternative to unpopular energy-saving lamps. As illuminated strips and surfaces, they snuggle against every surface and thus allow completely new possibilities for light design. Even the first high-performance devices, such as stage and studio spotlights, are already available as LED versions.

However, not every bulb can easily be replaced by an LED retrofit lamp. This may lead to significant faults in the installation – surprisingly even with simple switching. The reason for this are the short but extremely high inrush currents. They can be a thousand times and more than the rated output. Contacts could burn through or fuse as a result.

## The challenge for LEDs and how to deal with it



The difficulties with such everyday tasks such as switching or dimming are surprising. The problem is that there are no uniform standards, especially for LED lamps yet.

The general guidelines for lamps apply to LED lamps, from the version of the socket to the measurement setup for the luminous intensity. However, whatever happens in-between is not recorded. As opposed to a classic lamp with simple spiral-wound filament, LED lamps include a lot of electronics for control purposes. Every manufacturer can decide the layout of these themselves. The manufacturer of switching and dimming devices currently does not have any reference points as to which electronics it controls and as to how the lamp behaves. The respective standards currently only exist as a draft.

### **No standards available? Then we will test it ourselves!**

If special switching loads for LED lamps and discharge lamps are not specified on a product, one can assume that the product has not been approved for these. However, the specifications for LED loads are not always helpful. Which inrush currents does the device manufacturer assume? These may differ from lamp to lamp. You should also be careful when adding. Several LEDs with low rated output may have higher inrush currents when added together than one single LED with the respective total output.

In order to be able to specify the load specifications for switching devices and dimmers, Theben conducts ongoing measurements on all conventional retrofit lamps. During these tests, the switching devices run through at least 40,000 switching cycles. This allows us to make reliable statements for the switchable loads.

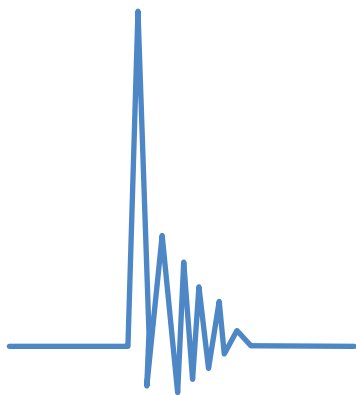
The load details given on the product pages are determined using selected illuminants and are therefore typical details due to the large number of products available on the market.

# Contact killer LED

## Low consumption in use, wasteful when switched on

**A simple scenario:** In the staircases of a large residential building, the building management replaces the light bulbs with LED retrofit lamps. A specialist measures and verifies the prescribed brightness. The potential for savings is promising: in addition to the more favourable energy consumption, the long service life should reduce maintenance costs.

**But suddenly the staircase light timer switches fail.** An examination shows scorched or fused contacts: the devices were obviously overloaded, although the rated output of the installation was reduced significantly.

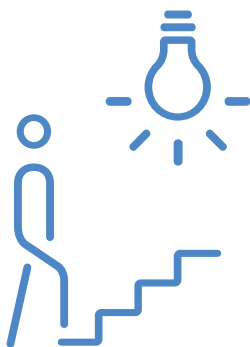


### Hard work for the contacts

#### Capacitive switching loads

How can an LED lamp that only has a few watts of rated output destroy a switching contact that has been dimensioned for several times that? Upon closer inspection, the answer is found in the inrush currents: in light bulbs, the typical inrush currents of the cold spiral coil cause ten times the respective rated current. In LED lamps and energy-saving lamps with their capacitive characteristics, one finds inrush current pulses in the  $\mu\text{s}$  range that could be a 1000 times and more than the rated current.

A measurement in our test laboratory authorised by the VDE has shown that in a particularly unfavourable case, an inrush current of 19 A with a 1.8 W LED lamp is 1706 times the rated output!



### Watch your step!

#### Switch-off pre-warning

At this point, we also wish to draw attention to problems with the switch-off pre-warning (flashing twice or similar according to DIN 18015-2): the flashing is not reliably visible, as the switching-off process is buffered by the electronic ballasts or capacitors of the LEDs. Switching several times additionally impairs the service life of the device.

# This is how LED lamps are switched

## With the right contact at the right time



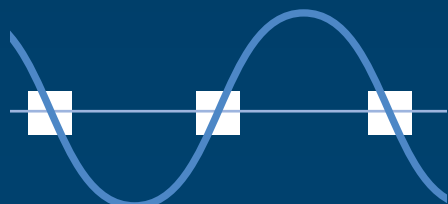
10 A–10 AX  
230 V~

### Two contacts for all switching cases: Tungsten pre-contact

High currents require special contacts. Alongside silver tin oxide ( $\text{AgSnO}_2$ ), Theben uses a combination of two contacts closing one after the other: tungsten pre-contacts. The leading contact consists of high-resistance and very durable tungsten.

It captures the inrush current and limits it at the same time. As a result, the low-resistance main contact remains unloaded from the switching peaks.

Theben uses these relays in the digital time switches TR 609 top2 S and SELEKTA 175 top2 as well as with the performance motion detectors theLuxa P and the presence detector theRonda P.



### Switching at precisely the right time: Zero-cross switching

Switching devices that are designed for the C-load generally deal with the inrush currents in a better manner. Theben uses a particularly efficient solution, known as zero-cross switching. It calculates the zero-crossing of the sine curve of the alternating voltage. At this moment, the inrush current is at its minimum during switching. This protects the relay contact and extends its service life, even at nominally high switching loads. Almost all of the devices of the top2 series are equipped with the motion detector theLuxa S and the presence detector PlanoCentro.



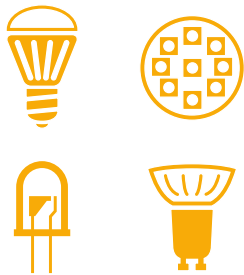
### Environmentally aware and safe switching: Cadmium-free contacts

Cadmium oxide was thought to have been the ideal contact material for high inrush currents. However, it is now forbidden according to the RoHS guidelines, although there are exceptions for electrical switching contacts. Nevertheless, Theben had switched to environmentally friendly  $\text{AgSnO}_2$  materials at the turn of the millennium.

These offer comparably good, in some cases even better contact and switching properties, such as higher burn-off resistance, increased resistance against electric wear and a significantly reduced tendency for material migration during direct current operation.

# Dimming LEDs?

## Not something that should be taken for granted!



### Dimmable or not?

#### Making the right choice is crucial

Not every LED lamp is dimmable. Even with suitable versions, the dimming characteristics differ significantly and depending on the manufacturer. LEDs frequently flicker and cannot be dimmed linearly and harmonically, as the required electronic ballasts react with great differences to the leading and trailing edge. This is why some manufacturers only explicitly allow one of the methods.



### Unwanted continuous light

#### Residual currents are sufficient

Another problem is caused by the interference suppression capacitors of the dimmer. Very low residual currents continuously run through them. These are sufficient to supply LED lamps with one to two watts of rated output. They therefore never go out completely.

A similar effect can be caused by long lines positioned in parallel.



### Dimmer meets lamp

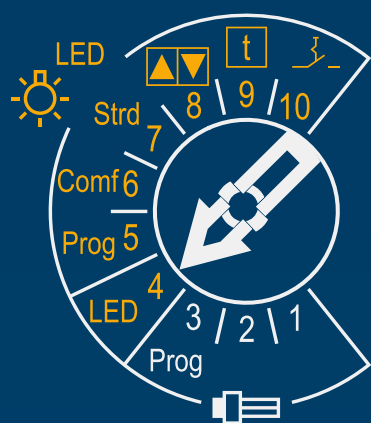
#### Not all of them are compatible

For infinitely variable control, not only does the LED lamp have to be dimmable, but the dimmer also has to be LED-compatible. Theben has developed several solutions for this purpose:

- Presets for different LED lamps
- Dimming curves that can be reloaded via ETS



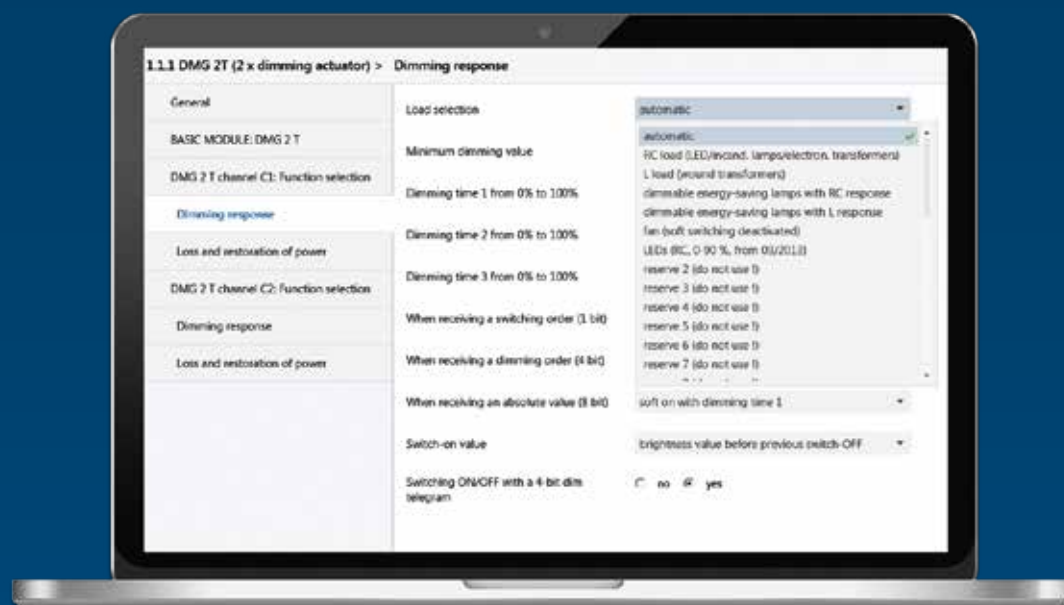
# Dimming LEDs! Theben can



## A matter of settings Selecting presets

LED-compatible switching devices from Theben, such as the universal dimmer DIMAX 534 plus, offer additional setting options for a perfect adaptation to this technology.

A minimum brightness for LED lamps with low wattage can be set using potentiometers and rotary switches. Even the type of control, phase angle or trailing-edge phase control can be preselected. This practically allows all dimmable LED lamps of renowned manufacturers to be controlled reliably.












## Up to date with KNX Reloading dimming curves

The KNX universal dimmer actuator from Theben goes one step further: the ETS programming software stores various dimming curves, which correct the dimming response appropriately depending on the lamp used, thus ensuring seamless, infinitely variable dimming.

Another advantage of the new dimming actuators is the ability to extend the dimming curves. New dimming curves – e.g. for future lamps – can be imported via ETS. With this update capability, KNX dimming actuators ensure your investments are well-protected.



	Program	Number of channels	Memory locations	External inputs	PC Interface	Memory card supplied	Type of connection	Type	Page
<b>DIN rail, 2 modules</b>									
	Weekly program	1	56	–	✓	–	DuoFix spring terminals	TR 610 top3	28
		2	56	–	✓	–	DuoFix spring terminals	TR 612 top3	28
		1	84	1	✓	–	DuoFix spring terminals	TR 611 top3	30
								TR 611 top3 RC	30
		2	84	2	✓	–	DuoFix spring terminals	TR 622 top3	30
	Weekly program, astronomical program	1	56	–	✓	–	DuoFix spring terminals	SELEKTA 170 top3	32
		2	56	–	✓	–	DuoFix spring terminals	SELEKTA 174 top3	32
		1	84	1	✓	–	DuoFix spring terminals	SELEKTA 171 top2 RC	32
		2	84	2	✓	–	DuoFix spring terminals	SELEKTA 172 top2 RC	32
		2	84	2	✓	–	DuoFix spring terminals	SELEKTA 172 top3	32
<b>DIN rail, 3 modules</b>									
	Yearly program, astronomical program	1	800	1	✓	–	DuoFix spring terminals	TR 641 top2	34
						✓	DuoFix spring terminals	TR 641 top2 RC	34
		2	800	2	✓	–	DuoFix spring terminals	TR 642 top2	34
						✓	DuoFix spring terminals	TR 642 top2 RC	34
<b>DIN rail, 4 modules</b>									
	Yearly program, astronomical program	4	800	4	✓	–	DuoFix spring terminals	TR 644 top2	34
						✓	DuoFix spring terminals	TR 644 top2 RC	34
	–	4	–	4	–	–	DuoFix spring terminals	EM 4 top2	36
<b>DIN rail, 4 modules, LAN time switch</b>									
	Yearly program, astronomical program	4	800	–	–	–	Screw terminals	TC 649 E	37
<b>DIN rail, 1 module</b>									
	Weekly program	1	56	–	✓	–	DuoFix spring terminals	TR 608 top2 S	38
			84	1	✓	–	DuoFix spring terminals	TR 609 top2 S	38
	Weekly program, astronomical program	1	56	1	✓	–	DuoFix spring terminals	SELEKTA 175 top2	38
<b>Front panel installation/wall installation</b>									
	Weekly program	1	84	–	✓	–	Screw terminals	TR 635 top2	40
		2	84	–	✓	–	Screw terminals	TR 636 top2	40
<b>Wall installation</b>									
	Weekly program	1	56	–	–	–	–	TR 684-1 top2	42
<b>Plug-in</b>									
	Weekly program	1	36	–	–	–	Plug-in	theben-eltimo 020 S	44
			33	–	–	–	Plug-in	theben-eltimo 020 S DCF	44

# Time and light control

## Digital time switches, DIN rail, 2 modules

2



TR 610 top3

TR 612 top3

TR 612 top2

### Description

#### Common functions

- Digital time switch with weekly program
- DuoFix spring terminals
- Text-oriented user guidance in display
- 56 memory locations
- Interface for OBELISK top2 memory card (PC programming)
- 10 year power reserve (lithium battery)
- Zero-cross switching for relay-saving switching and high lamp loads (not with 24 V devices)
- ON-OFF switching times
- Switching preselection
- Permanent switching ON/OFF
- Integrated operating hour counter

- Holiday program
- Display back light (can be turned off)
- PIN coding
- Automatic summer/winter time changeover

#### TR 610 top3

- 1 channel
- Programming by app possible
- Safe transfer via optional Bluetooth Low Energy OBELISK top3
- Maximum manipulation security, time switch programs can only be transferred from the app to the time switch when the Bluetooth OBELISK top3 is plugged into the time switch
- 100 % compatible with top2

#### TR 612 top3

- 2 channels
- Programming by app possible
- Safe transfer via optional Bluetooth Low Energy OBELISK top3
- Maximum manipulation security, time switch programs can only be transferred from the app to the time switch when the Bluetooth OBELISK top3 is plugged into the time switch
- 100 % compatible with top2

#### TR 610 top2

- 1 channel

#### TR 612 top2

- 2 channels

### Product selection

Program	Program functions	Number of channels	Switching load < 1 mA	Operating voltage	Type	Article number
Weekly program	ON-OFF	1	-	230 V AC	TR 610 top3	6100130
		2	-	230 V AC	TR 612 top3	6120130
		1	-	230-240 V AC	TR 610 top2	6100100
			✓	230-240 V AC	TR 610 top2 G	6100110
			-	12-24 V UC	TR 610 top2 24V	6104100
		2	-	230-240 V AC	TR 612 top2	6120100
-	12-24 V UC		TR 612 top2 24V	6124100		

### Technical data

	TR 610 top3	TR 612 top3	TR 610 top2 G	TR 610 top2 24V	TR 612 top2 24V
Operating voltage	230 V AC		230–240 V AC	12–24 V UC	12–24 V UC
Frequency	50–60 Hz				
Width	2 modules				
Installation type	DIN rail				
Type of contact	Changeover contact	Two-way changeover contact	Changeover contact		Two-way changeover contact
Power reserve	10 years				
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A				
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	10 A		2 A		
Incandescent/halogen lamp load	2600 W		1400 W		
Energy saving lamps	1100 W		30 W		
LED lamp < 2 W (typ.)	50 W		6 W		
LED lamp 2-8 W (typ.)	600 W		20 W		
LED lamp > 8 W (typ.)	600 W		25 W		
Switching capacity min.	ca. 10 mA		< 1 mA	ca. 10 mA	
Shortest switching times	1 min				
Time accuracy at 25 °C	typical $\pm 0,25$ s/day (quartz)				
Stand-by consumption	0,4 W		0,8 W	0,3 W	
Type of protection	IP 20				
Protection class	II according to EN 60 730-1				
Ambient temperature	–30 °C ... +60 °C		–30 °C ... +55 °C		

### Accessories

**Front panel kit**

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**Wall mounting kit 35 mm**

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**Bluetooth OBELISK top3**

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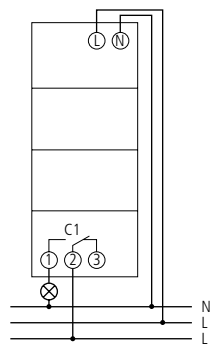
**Memory card OBELISK top2**

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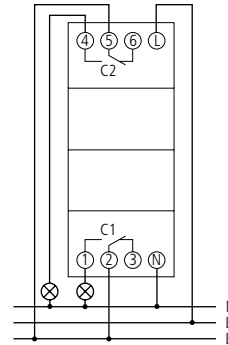
**PC set OBELISK top2/3**

Details page 332

### Connection diagrams



TR 610 top3, TR 610 top2



TR 612 top3, TR 612 top2

# Time and light control

## Digital time switches, DIN rail, 2 modules

2



TR 611 top3

TR 611 top3 RC

TR 622 top3

### Description

#### Common functions

- Digital time switch with weekly program
- DuoFix spring terminals
- Text-oriented user guidance in display
- 84 memory locations
- Interface for OBELISK top2 memory card (PC programming)
- 10 year power reserve (lithium battery)
- Zero-cross switching for relay-saving switching and high lamp loads (not with 24 V devices)
- ON-OFF switching times
- Pulse program
- Cycle program
- Switching preselection
- Permanent switching ON/OFF
- Timer countdown
- Integrated operating hour counter
- Holiday program
- 2 random programs
- Display back light (can be turned off)
- PIN coding
- Automatic summer/winter time changeover

#### Functions top3 devices

- Programming by app possible
- Safe transfer via optional Bluetooth Low Energy OBELISK top3
- Maximum manipulation security, time switch programs can only be transferred from the app to the time switch when the Bluetooth OBELISK top3 is plugged into the time switch
- 100 % compatible with top2

#### TR 611 top3

- 1 channel, external input
- 3 special programs (small annual program)
- 84 memory locations

#### TR 611 top3 RC

- Time synchronisation option via connection of an external DCF or GPS antenna (GPS not with 24 V device)
- Additional power unit required for GPS if only one device is connected to the antenna
- 1 channel, external input
- 3 special programs (small annual program)
- 84 memory locations

#### TR 611 top3

- 2 channels, 2 external inputs
- 3 special programs (small annual program)
- 84 memory locations
- Channel switching and channel locking possible

#### TR 611 top2

- 1 channel
- External input
- 84 memory locations

#### TR 622 top2

- 2 channel
- 2 external inputs
- 84 memory locations

### Produktauswahl

Program	Program functions	Number of channels	App programming	Time basis	Operating voltage	Type	Article number
Weekly program	ON-OFF, Pulse, Cycle	1	✓	Quarz	230 V AC	TR 611 top3	6110130
			-		12-24 V UC	TR 611 top2 24V	6114100
		2	✓	Quarz/DCF77/ GPS	110-230 V AC	TR 611 top3 RC	6110330
			-		12-24 V UC	TR 611 top2 RC 24V	6114300
		2	✓	Quarz	230 V AC	TR 622 top2	6220130
			-		12-24 V UC	TR 622 top2 24V	6224100

### Technische Daten

	TR 611 top3	TR 611 top2 24V	TR 611 top3 RC	TR 611 top2 RC 24V	TR 622 top3	TR 622 top2 24V
Operating voltage	230 V AC	12–24 V UC	110–230 V AC	12–24 V UC	230 V AC	12–24 V UC
Frequency	50–60 Hz					
Width	2 TE					
Installation type	DIN-Schiene					
Type of contact	Wechsler					
Power reserve	10 Jahre					
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A					
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	10 A	2 A	10 A	2 A	10 A	2 A
Incandescent/halogen lamp load	2600 W	1400 W	2600 W	1400 W	2600 W	1400 W
Energy saving lamps	1100 W	30 W	1100 W	30 W	1100 W	30 W
LED lamp < 2 W (typ.)	50 W	6 W	50 W	6 W	50 W	6 W
LED lamp 2–8 W (typ.)	600 W	20 W	600 W	20 W	600 W	20 W
LED lamp > 8 W (typ.)	600 W	25 W	600 W	25 W	600 W	25 W
Switching capacity min.	ca. 10 mA					
Shortest switching times	1 s					
Time accuracy at 25 °C	typisch $\pm 0,25$ s/Tag (Quarz)		typisch $\pm 0,25$ s/Tag (Quarz) oder DCF77/GPS		typisch $\pm 0,25$ s/Tag (Quarz)	
Stand-by consumption	0,4 W	0,3 W	0,75 W	0,9 W	0,4 W	0,3 W
Type of protection	IP 20					
Protection class	II nach EN 60 730-1					
Ambient temperature	–30 °C ... +60 °C		–25 °C ... +55 °C		–30 °C ... +55 °C	–25 °C ... +55 °C

### Accessories



**PC set OBELISK top2/3**  
↳ Art.No.: 9070409  
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**Memory card OBELISK top2**  
↳ Art.No.: 9070404  
Details page 333



**Bluetooth OBELISK top3**  
↳ Art.No.: 9070130  
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**Front panel kit**  
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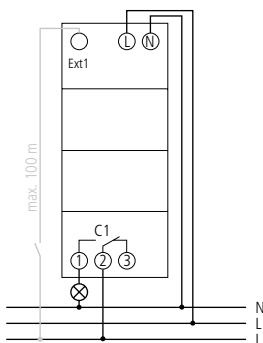
**Antenna RC-DCF**  
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**Antenna RC-GNSS**  
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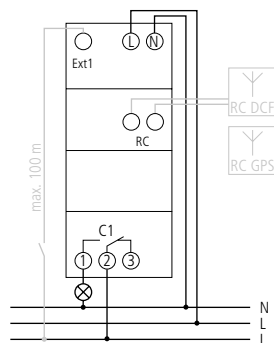
**Antenna RC-GNSS R**  
Details page 333

**Wall mounting kit**  
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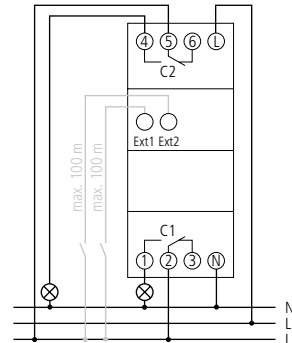
### Connection diagrams



TR 611 top3



TR 611 top3 RC



TR 622 top3

# Time and light control

## Digital time switches, DIN rail, 2 modules

2



SELEKTA 170 top3

SELEKTA 174 top3

SELEKTA 175 top2

### Description

#### Common functions

- Astronomical time switch with weekly program
- Astronomical time switch function (automatic calculation of sunrise and sunset times for the whole year)
- DuoFix spring terminals
- Text-oriented user guidance in display
- Interface for OBELISK top2 memory card (PC programming)
- 10 year power reserve (lithium battery)
- Zero-cross switching for relay-saving switching and high lamp loads (not with 24 V devices)
- Calculated astronomical switching times
- Programmable ON-OFF switching times
- Switching preselection
- Permanent switching ON/OFF
- Integrated operating hour counter
- Holiday program
- Display back light (can be turned off)
- PIN coding
- Automatic summer/winter time changeover

#### Functions top3 devices

- Programming by app possible
- Safe transfer via optional Bluetooth Low Energy OBELISK top3
- Maximum manipulation security, time switch programs can only be transferred from the app to the time switch when the Bluetooth OBELISK top3 is plugged into the time switch
- 100 % compatible with top2

#### SELEKTA 170 top3

- 1 channel
- 56 memory locations

#### SELEKTA 174 top3

- As SELEKTA 170 top3, but:
- 2 channels

#### SELEKTA 171 top3 RC

- Time synchronisation via connection of external DCF or GPS antennas, additional positioning for astronomical program with GPS (GPS not with 24 V device)
- 1 channel, external input
- 3 special programs (small annual program)

- 3 custom twilight ranges plus adjustable offset (sunset, twilight, darkness)
- Astro-pulse, 84 memory locations

#### SELEKTA 172 top3

- 2 channels, 2 external inputs
- 3 special programs (small annual program)
- 3 custom twilight ranges plus adjustable offset (sunset, twilight, darkness)
- Astro-pulse, 84 memory locations
- Channel switching and channel locking possible

#### SELEKTA 172 top3 RC

As SELEKTA 171 top3 RC, but:

- 2 channels, without external inputs

#### SELEKTA 170 top2

- 1 channel
- 56 memory locations

#### SELEKTA 175 top2

- 1 channel
- 56 memory locations
- External input

### Product selection

Program	Number of channels	App programming	Time basis	Operating voltage	Type	Article number
Weekly program, astronomical program	1	✓	Quarz	230 V AC	SELEKTA 170 top3	1700130
	2	✓	Quarz	230 V AC	SELEKTA 174 top3	1740130
	1	-	Quarz	12–24 V UC	SELEKTA 170 top2 24V	1704100
		✓	Quarz/DCF77/GPS	110–230 V AC	SELEKTA 171 top3 RC	1710330
	2	-		12–24 V UC	SELEKTA 171 top2 RC 24V	1714100
		✓	Quarz	230 V AC	SELEKTA 172 top3	1720130
	1	-		12–24 V UC	SELEKTA 172 top2 24V	1724100
		✓	Quarz/DCF77/GPS	110–230 V AC	SELEKTA 172 top3 RC	1710330
		-	Quarz	230–240 V AC	SELEKTA 175 top3	1750100



### Technical data

	SELEKTA 170 top3	SELEKTA 174 top3	SELEKTA 170 top2 24V	SELEKTA 171 top3 RC	SELEKTA 172 top3 RC	SELEKTA 171 top2 RC 24V	SELEKTA 172 top3	SELEKTA 172 top2 24V	SELEKTA 175 top2
Operating voltage	230 V AC		12–24 V UC	110–230 V AC		12–24 V UC	230 V AC	12–24 V UC	230–240 V AC
Frequency	50–60 Hz								
Width	2 modules								1 module
Installation type	DIN rail								
Power reserve	10 years								
Switching capacity at 250 V AC, cos φ = 1	16 A								
Switching capacity at 250 V AC, cos φ = 0,6	10 A	2 A		10 A	2 A		10 A	2 A	4 A
Incandescent/halogen lamp load	2600 W	1400 W		2600 W	1400 W		2600 W	1400 W	2000 W
Energy saving lamps	1100 W	30 W		1100 W	30 W		1100 W	30 W	300 W
LED lamp < 2 W (typ.)	50 W	6 W		50 W	6 W		50 W	6 W	55 W
LED lamp < 2 W (typ.)	600 W	20 W		600 W	20 W		600 W	20 W	180 W
Switching capacity min.	ca. 10 mA								
Shortest switching times	1 min								
Time accuracy at 25 °C	typical ± 0,25 s/day (Quarz)			typical ± 0,25 s/day (quartz) or DCF77 / GPS			typical ± 0,25 s/day (Quarz)		
Stand-by consumption	0,4 W	0,2 W		0,75 W	0,8 W		0,4 W	0,2 W	0,4 W
Type of protection	IP 20								
Protection class	II according to EN 60 730-1								
Ambient temperature	–30 °C ... +60 °C	–30 °C ... +55 °C		–25 °C ... +55 °C			–30 °C ... +55 °C	–25 °C ... +55 °C	

### Accessories



**PC set OBELISK top2/3**  
↳ Art.No.: 9070409  
Details page 332



**Memory card OBELISK top2**  
↳ Art.No.: 9070404  
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**Bluetooth OBELISK top3**  
↳ Art.No.: 9070130  
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**Front panel kit**  
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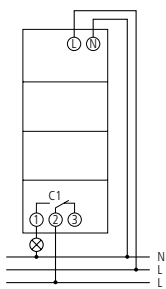
**Antenna RC-DCF**  
Details page 333

**Antenna RC-GNSS R**  
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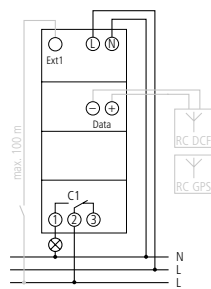
**Antenna RC-GNSS**  
Details page 333

**Wall mounting kit**  
Details page 332

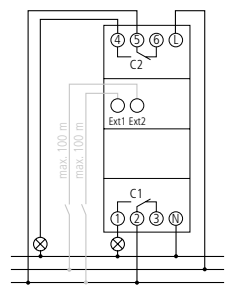
### Connection diagrams



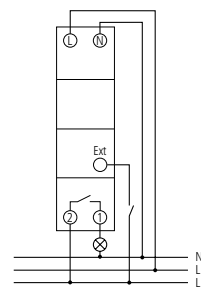
SELEKTA 170 top3



SELEKTA 171 top3 RC



SELEKTA 172 top3



SELEKTA 175 top2

# Time and light control

## Digital time switches, DIN rail, 3 modules, 4 modules

2



TR 641 top2

TR 642 top2 RC

TR 644 top2

### Description

#### Common functions

- Digital time switch with yearly and astronomical time program
- DuoFix spring terminals
- Text-oriented user guidance in display
- 800 memory locations
- Interface for OBELISK top2 memory card (PC programming)
- 8 year power reserve (lithium battery)
- Zero-cross switching for leay-saving switching and high lamp loads (not with 24 V devices)
- Automatic summer/winter time changeover
- ON-OFF switching times
- Pulse program
- Cycle program
- Extensive yearly clock functions
- Astronomical time switch function (automatic calculation of sunrise and sunset times for the whole year)
- Switching preselection

- Permanent switching ON/OFF
- Count-down timer
- Integrated operating hour counter
- Holiday program
- 2 random programs
- Display back light (can be turned off)
- PIN coding

#### TR 641 top2

- 1 channel
- External input

#### TR 641 top2 RC

- Time synchronisation via connection of external DCF or GPS antennas, additional positioning for astronomical program with GPS
- 1 channel
- External input
- Extension module can be connected
- Memory card OBELISK top2 included in delivery

#### TR 642 top2

- 2 channels
- 2 external inputs

#### TR 642 top2 RC

- As TR 641 top2 RC but:
- 2 channels
- 2 external inputs

#### TR 644 top2

- 4 channels
- 4 external inputs

#### TR 644 top2 RC

- As TR 641 top2 RC but:
- 4 channels
- 4 external inputs

### Product selection

Program	Number of channels	External inputs	Time basis	Memory card supplied	Program functions	Operating voltage	Type	Article number
Yearly program, astronomical program	1	1	Quartz	-	ON-OFF, Pulse, Cycle	110-240 V AC	TR 641 top2	6410100
			Quartz/DCF77/GPS	✓	ON-OFF, Pulse, Cycle	110-240 V AC	TR 641 top2 RC	6410300
						12-24 V UC	TR 641 top2 RC 24V	6414300
	2	2	Quartz	-	ON-OFF, Pulse, Cycle	110-240 V AC	TR 642 top2	6420100
			Quartz/DCF77/GPS	✓	ON-OFF, Pulse, Cycle	110-240 V AC	TR 642 top2 RC	6420300
						12-24 V UC	TR 642 top2 RC 24V	6424300
	4	4	Quartz	-	ON-OFF, Pulse, Cycle	110-240 V AC	TR 644 top2	6440100
			Quartz/DCF77/GPS	✓	ON-OFF, Pulse, Cycle	110-240 V AC	TR 644 top2 RC	6440300

# Time and light control

## Digital time switches, DIN rail, 3 modules, 4 modules

2

### Technical data

	TR 641 top2	TR 642 top2	TR 641 top2 RC	TR 642 top2 RC	TR 644 top2	TR 644 top2 RC	TR 641 top2 RC 24V	TR 642 top2 RC 24V
Operating voltage	110–240 V AC						12–24 V UC	
Frequency	50–60 Hz							
Width	3 modules				4 modules		3 modules	
Installation type	DIN rail							
Power reserve	8 years							
Switching capacity at 250 V AC, cos φ = 1	16 A				2 x 16 A   2 x 10 A		16 A	
Switching capacity at 250 V AC, cos φ = 0,6	10 A							
Incandescent / halogen lamp load 230 V	2600 W				2300 W		1400 W	
Incandescent / halogen lamp load 120 V	1300 W				1150 W		–	
Energy saving lamps 230 V	37 x 7 W, 30 x 11 W, 26 x 15 W, 26 x 20 W, 11 x 23 W						7 x 7 W, 6 x 11 W, 5 x 15 W, 5 x 20 W, 4 x 23 W	
Energy saving lamps 120 V	18 x 7 W, 15 x 11 W, 13 x 15 W, 13 x 20 W, 11 x 23 W						–	
LED lamp < 2 W (typ.)	50 W							
LED lamp 2–8 W (typ.)	180 W							
LED lamp > 8 W (typ.)	200 W							
Switching capacity min.	Approx. 10 mA							
Shortest switching time	1 s							
Time accuracy at 25 °C	≤ ± 0,5 s/day (quartz)		≤ ± 0,5 s/day (quartz) or DCF77/GPS		≤ ± 0,5 s/day (quartz)		≤ ± 0,5 s/day (quartz) or DCF77/GPS	
Stand-by consumption	0,6 W	0,6 W	1,2 W	1,2 W	0,5 W	1,3 W	1,5 W	
Type of protection	IP 20							
Protection class	II according to EN 60 730-1							
Ambient temperature	–30 °C ... +45 °C							

### Accessories



**EM 4 top2**  
for TR RC  
↳ Art.No.: 6490104  
Details page 36



**Antenna RC-DCF**  
for TR RC  
↳ Art.No.: 9070410  
Details page 333

**Wall mounting kits**  
Details page 332

**Front panel kit**  
Details page 332

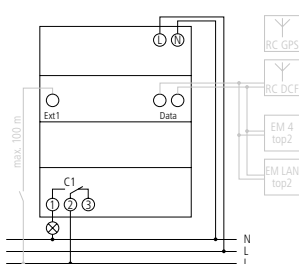
**Antenna RC-GNSS**  
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**Antenna RC-GNSS R**  
Details page 333

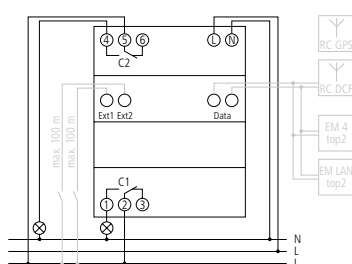
**Memory card OBELISK top2**  
Details page 333

**PC set OBELISK top2/3**  
Details page 333

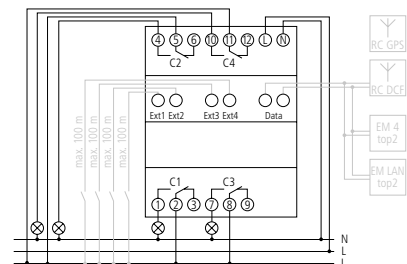
### Connection diagrams



TR 641 top2 RC



TR 642 top2 RC



TR 644 top2 RC

# Time and light control

## Digital time switches, DIN rail, 4 modules

2



EM 4 top2

### Description

- Extension module for TR 641 top2 RC, TR 642 top2 RC and TR 644 top2 RC
- 4 channels
- Width: 4 modules
- DuoFix spring terminals
- 4 external inputs
- Switching preselection
- Permanent ON/OFF switching
- 4 LEDs for displaying switching status
- Zero-cross switching for relay-saving switching and high lamp loads

### Product selection

Type	Article number
EM 4 top2	6490104

### Technical data

	EM 4 top2
Operating voltage	110 – 240 V AC
Frequency	50 – 60 Hz
Width	4 modules
Installation type	DIN rail
Type of contact	Two-way switch
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A
Switching capacity channels 1+3	10 A
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	10 A
Incandescent/halogen lamp load 230 V	2300 W
Incandescent/halogen lamp load 120 V	1150 W
Energy saving lamps 230 V	22 x 7 W, 18 x 11 W
Energy saving lamps 120 V	11 x 7 W, 9 x 11 W
Switching capacity min.	ca. 10 mA
Stand-by consumption	1,5 W
Type of protection	IP 20
Protection class	II according to EN 60 730-1
Ambient temperature	-30 °C ... +55 °C

### Accessories

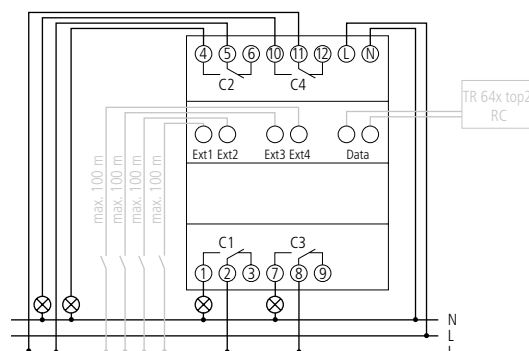
#### Front panel kit

Details page 332

#### Wall mounting kit 70 mm

Details page 332

### Connection diagram





**Description**

- Digital time switch / astro time switch with weekly program and annual program
- With integrated webserver, can be controlled via LAN/smartphone
- 4 channels
- 800 memory programs
- Channel 1 to 4 can be switched over as time or astro time switch program
- 3 special programs per channel: switching program / astro program; Duration Off; Duration Each with year date function
- Local holidays, fixed date ranges, recurring date ranges and Easter-themed holidays
- Astro times with other night interruption / fixed ON circuit
- Permanent ON or OFF switching via LAN switchable
- Pulse program
- Automatic summer winter time changeover Europe; Canada; UNITED STATES; Iran, Australia and freely definable
- Deactivate summer / winter time change over
- Hour counter

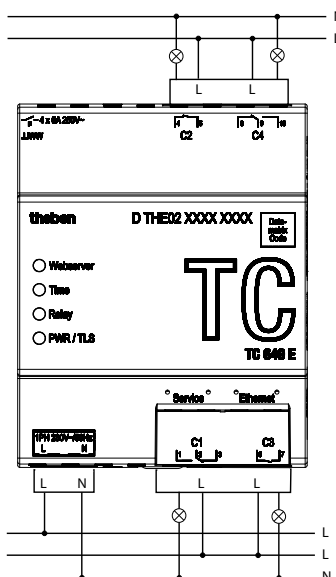
**Product selection**

Type	Article number
TC 649 E	6490130

**Technical data**

	TC 649 E
Operating voltage	230 V AC
Frequency	50 – 60 Hz
Width	4 modules
Installation type	DIN rail
Switching capacity at 250 V AC, cos φ = 1	6 A
Stand-by consumption	3 W
Type of protection	IP 30
Protection class	II according to EN 60 730-1
Ambient temperature	-25 °C ... +55 °C

**Connection diagram**



# Time and light control

## Digital time switches, DIN rail, 1 module

2



TR 608 top2 S

TR 609 top2 S

SELEKTA 175 top2

### Description

#### Common functions

- 1 channel
- DuoFix spring terminals
- Text-oriented user guidance in display
- Interface for OBELISK top2 memory card (PC programming)
- 10 year power reserve (lithium battery)
- Switching preselection
- Integrated operating hour counter
- Holiday program
- PIN coding
- Automatic summer/winter time changeover

#### TR 608 top2 S

- Digital time switch with weekly program
- 56 memory locations
- ON-OFF switching times
- Permanent switching ON/OFF

#### TR 609 top2 S

- Digital time switch with weekly program
- 84 memory locations
- External input
- Pulse program
- Cycle program
- Timer countdown
- 2 random programs
- ON-OFF switching times
- Permanent switching ON/OFF

#### SELEKTA 175 top2

- Astronomical time switch with weekly program
- External input
- 56 memory locations
- Astronomical time switch function (automatic calculation of sunrise and sunset times for the whole year)
- Offset for adjusting of sunrise and sunset times
- Calculated astronomical switching times
- Fixed ON-OFF switching times can be programmed (e.g. night time interruption)
- Permanent switching ON/OFF

### Product selection

Program	Number of channels	Memory locations	Program functions	Operating voltage	Type	Article number
Weekly program	1	56	-	230–240 V AC	TR 608 top2 S	6080101
		84	-	230–240 V AC	TR 609 top2 S	6090101
Weekly program, astronomical program	1	1	Quartz	230–240 V AC	SELEKTA 175 top2	1750100

### Technical data

	TR 608 top2 S	TR 609 top2 S	SELEKTA 175 top2
Operating voltage	230–240 V AC		
Frequency	50–60 Hz		
Width	1 module		
Installation type	DIN rail		
Type of contact	Changeover contact	NO contact	
Power reserve	10 years		
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A		
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	4 A		
Incandescent / halogen lamp load 230 V	1000 W	2000 W	
Energy saving lamps 230 V	30 W	300 W	
LED lamp < 2 W (typ.)	6 W	55 W	
LED lamp > 2 W (typ.)	60 W	600 W	
Switching capacity min.	10 mA		
Shortest switching times	1 min		
Time accuracy at 25 °C	typical $\pm 0,25$ s/day (quartz)		
Stand-by consumption	0,4 W		
Type of protection	IP 20		
Protection class	II according to EN 60 730-1		
Ambient temperature	–25 °C ... +55 °C		

### Accessories

**Front panel kit**

Details page 332

**Wall mounting kit 17,5 mm**

Details page 332

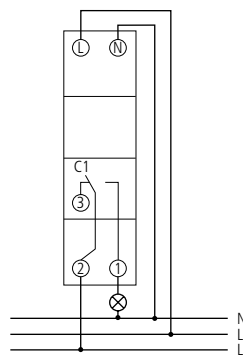
**Memory card OBELISK top2**

Details page 333

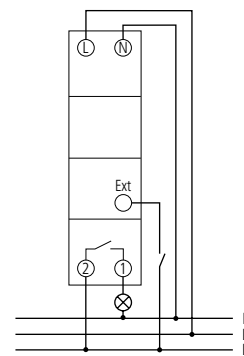
**PC set OBELISK top2/3**

Details page 333

### Connection diagrams



TR 608 top2 S



TR 609 top2 S, SELEKTA 175 top2

# Time and light control

## Digital time switches, Front panel installation/wall installation

2



TR 635 top2

TR 636 top2

### Description

#### Common functions

- Digital time switch with weekly program
- Text-based operator guidance in the display
- 84 memory locations
- Interface for OBELISK top2 memory card (PC programming)
- 10 year power reserve (lithium battery)
- ON-OFF switching times
- Pulse program
- Cycle program
- Switching preselection
- Permanent ON/OFF switching
- Count-down timer
- Integrated hour counter
- Holiday program
- 2 random programs
- Back lighting (can be turned off)
- PIN coding
- Automatic summer/winter time changeover

#### TR 635 top2

- 1 channel

#### TR 636 top2

- 2 channels

### Product selection

Program	Number of channels	Memory locations	Program functions	Operating voltage	Type	Article number
Weekly program	1	84	ON-OFF, Pulse, Cycle	230–240 V AC	TR 635 top2	6350100
	2	84	ON-OFF, Pulse, Cycle	230–240 V AC	TR 636 top2	6360100



# Time and light control

## Digital time switches, Front panel installation/wall installation

2

### Technical data

	TR 635 top2	TR 636 top2
Operating voltage	230–240 V AC	
Frequency	50–60 Hz	
Installation type	Front panel installation/wall installation	
Type of contact	Changeover contact	
Power reserve	10 years	
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A	6 A
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	10 A	6 A
Incandescent/halogen lamp load	2300 W	1200 W
Energy saving lamps 230 V	90 W	
LED lamp < 2 W (typ.)	20 W	
LED lamp > 2 W (typ.)	50 W	
Shortest switching times	1 s	
Time accuracy at 25 °C	$\leq \pm 0,5$ s/day (quartz) at 25 °C	
Stand-by consumption	0,9 W	1,1 W
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	
Ambient temperature	–30 °C ... +55 °C	

### Accessories



#### PC set OBELISK top2/3

↳ Art.No.: 9070409  
Details page 332



#### Memory card OBELISK top2

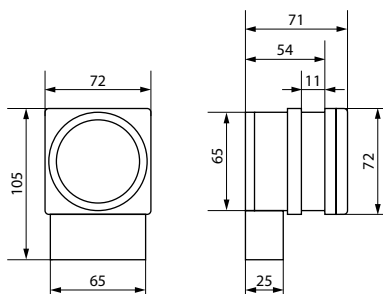
↳ Art.No.: 9070404  
Details page 333



#### Snap-on mounting 72 x 72

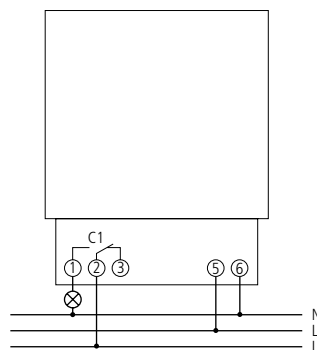
↳ Art.No.: 9070071  
Details page 332

### Scale drawings

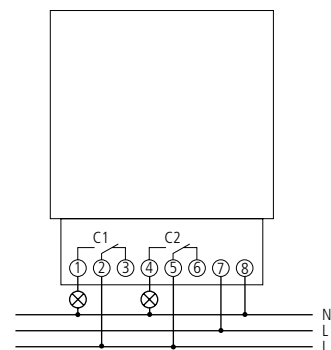


TR 635 top2, TR 636 top2

### Connection diagrams



TR 635 top2



TR 636 top2

# Time and light control

## Digital time switches, Front panel installation/wall installation

2



TR 684-1 top2

### Description

#### Common functions

- Digital time switch with weekly program
- 1 channel
- Timer module without plug-in base
- Connection by 4.8 mm AMP flat plug for original installation standard devices
- For installation in regulation and control
- Text-based operator guidance in the display
- 56 memory locations
- Interface for OBELISK top2 memory card (PC programming)
- 10 year power reserve (lithium battery)
- ON-OFF switching times
- Switching preselection
- Permanent ON/OFF switching
- Integrated hour counter
- Holiday program
- Back lighting (can be turned off)
- PIN coding
- Automatic summer/winter time changeover

### Product selection

Program	Number of channels	Memory locations	Program functions	Operating voltage	Type	Article number
Weekly program	1	56	ON-OFF	230–240 V AC	TR 684-1 top2	6840100

### Technical data

	TR 684-1 top2
Operating voltage	230–240 V AC
Frequency	50–60 Hz
Installation type	Front panel installation/wall installation
Type of contact	Changeover contact
Power reserve	10 years
Switching capacity at 250 V AC, $\cos \varphi = 1$	6 A
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	1 A
Shortest switching times	1 min
Time accuracy at 25 °C	$\leq \pm 0,5$ s/day (quartz) at 25 °C
Stand-by consumption	1 W
Type of protection	IP 20
Protection class	II according to EN 60 730-1
Ambient temperature	-10 °C ... +55 °C

Accessories

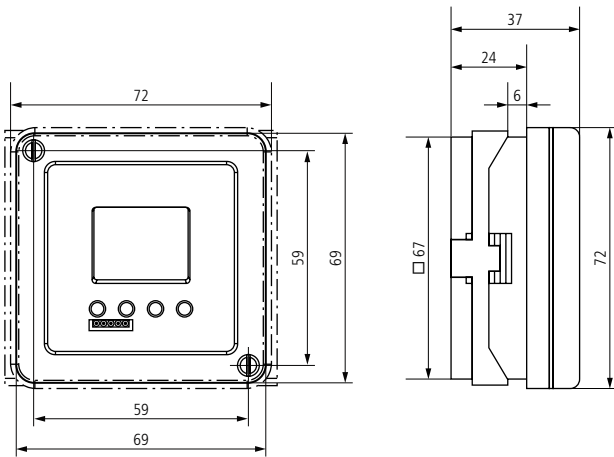


PC set OBELISK top2/3  
↳ Art.No.: 9070409  
Details page 332

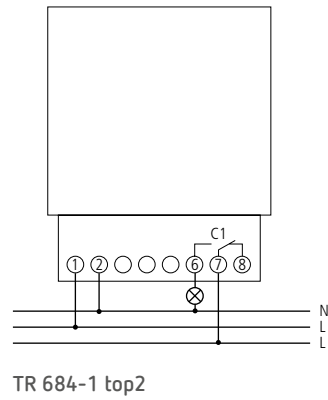


Memory card OBELISK top2  
↳ Art.No.: 9070404  
Details page 333

Scale drawings



Connection diagrams



# Time and light control

## Digital time switches, Plug-in

2



### Description

#### Common functions

- Digital plug-in timer with weekly program
- Use with earthed sockets
- 1 channel
- Easy operation via keys for program function and day of the week, hours, minutes

- ON-OFF switching times
- Switching preselection
- Permanent switching ON/OFF
- Random program
- Automatic summer/winter time changeover

#### theben-eltimo 020 S

- 36 memory locations

#### theben-eltimo 020 S DCF

- DCF radio control
- 33 memory locations

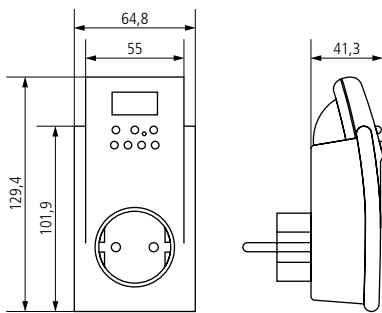
### Product selection

Program	Number of channels	Memory locations	Time basis	Operating voltage	Type	Article number
Weekly program	1	36	Quartz	230 V AC	theben-eltimo 020 S	0200000
		33	Quartz/DCF77	230 V AC	theben-eltimo 020 S DCF	0200300

### Technical data

	theben-eltimo 020 S	theben-eltimo 020 S DCF
Operating voltage	230 V AC	
Frequency	50 Hz	
Installation type	Plug-in	
Type of contact	NO contact	
Power reserve	20 days	
Switching capacity at 250 V AC, cos φ = 1	16 A	
Switching capacity at 250 V AC, cos φ = 0,6	2 A	
Incandescent/halogen lamp load 230 V	1000 W	
Shortest switching times	1 min	
Time accuracy at 25 °C	≤ ± 1 s/day (quartz)	DCF77 synchronous or ≤ ± 1 s/day (quartz)
Stand-by consumption	0,8 W	
Type of protection	IP 20	
Protection class	II for housing, I for plug system as per EN 62 730-1	
Ambient temperature	-10 °C ... +40 °C	

### Scale drawings



theben-eltimo 020 S, theben-eltimo 020 S DCF



## A special form of stability


Stability is a precondition for innovative power, Theben offers both. Everyone benefits, our customers, our partners and our employees. Because only those with the required resource can invest in innovation, but also the solid foundations of a company create climate of trust. This kind of predictability has characterised Theben's success for many years. Behind that lies a local virtue, one that is of special importance in times like these, solidarity.

# TIME AND LIGHT CONTROL

## Analogue time switches

	Program	Number of channels	Type of contact	Power reserve	Shortest switching times	Programmable every	Type of connection	Type	Page
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### DIN rail, 1 module

	Daily program	1	NO contact	–	15 min	15 min	Screw terminals	SYN 160 a	48
				3 days	15 min	15 min	Screw terminals	SUL 180 a	48
	Weekly program	1	NO contact	3 days	2 h	2 h	Screw terminals	MEM 190 a	48


### DIN rail, 3 modules

	60 minutes program	1	Changeover contact	–	37,5 s	37,5 s	DuoFix spring terminals	SYN 151 h	50
	Daily program	1	Changeover contact	–	15 min	15 min	DuoFix spring terminals	SYN 161 d	50
				200 hours	15 min	15 min	DuoFix spring terminals	SUL 181 d	50
	Weekly program	1	Changeover contact	200 hours	2 h	2 h	DuoFix spring terminals	SUL 191w	50
	Daily program	2	Changeover contact	3 days	30 min	15 min	Screw terminals	SUL 188 g	52
	Daily/weekly program with 1/2 day OFF function	1	Changeover contact	3 days	45 min, 12 h	15 min, 12 h	Screw terminals	SUL 188 hw	52

### Front panel installation/wall installation

	Daily program	1	Changeover contact	–	15 min	15 min	Screw terminals	SYN 169 s	54
				3 days	15 min	15 min	Screw terminals	SUL 189 s	54
	Daily program	1	Changeover contact	–	20 min, 2 h	5 min, 30 min	Screw terminals	SYN 269 h	56
				3 days	20 min, 2 h	5 min, 30 min	Screw terminals	SUL 289 h	56
		2	Changeover contact	3 days	20 min, 2 h	5 min, 30 min	Screw terminals	SUL 289 g	56
	60 minutes program	1	Changeover contact	–	1,25 min	18,5 s	Screw terminals	TM 179 h	58
	Daily/weekly program with 1/2 day OFF function	1	Changeover contact	3 days	30 min, 12 h	15 min, 12 h	Screw terminals	SUL 189 hw	58

### Wall installation/3-point mounting

	Daily program	2	Changeover contact	6 days	20 min	5 min	Screw terminals	SUL 285/2 T	60
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### Plug-in

	Daily program	1	NO contact	–	15 min	15 min	Plug-in	theben-timer 26	61
								theben-timer 26 IP 44	61
		Weekly program	1	NO contact	–	2 h	2 h	Plug-in	theben-timer 27

### Surface-mounted

	Daily and defrost program	2	Changeover contact	–	2 min, 1 h	1 min, 1 h	Screw terminals	FRI 77 g	62
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### Drive with quick fastening for DIN rail

	Daily and defrost program	1	Changeover contact	–	2 min, 1 h	1 min, 1 h	Screw terminals	FRI 77 h-2	62
		2	Changeover contact	–	2 min, 1 h	1 min, 1 h	Screw terminals	FRI 77 g-2	62

# Time and light control

## Analogue time switches, DIN rail, 1 module

3



SYN 160 a

SUL 180 a

MEM 190 a

### Description

#### Common functions

- Analogue time switch
- 1 channel
- Screw terminals
- Manual switch with 3 positions: Permanent ON/AUTO/continuous OFF

#### SYN 160 a

- Daily program
- Without power reserve
- 96 switching segments
- Synchronised with mains
- Shortest switching time: 15 minutes

#### SUL 180 a

- Daily program
- With power reserve
- 96 switching segments
- Quartz controlled
- Shortest switching time: 15 minutes

#### MEM 190 a

- Weekly program
- With power reserve
- 84 switching segments
- Quartz controlled
- Shortest switching time: 2 hours

### Product selection

Program	Number of channels	Power reserve	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
Daily program	1	-	15 min	15 min	NO contact	230 V AC	SYN 160 a	1600001
		3 days	15 min	15 min	NO contact	230–240 V AC	SUL 180 a	1800001
Weekly program	1	3 days	2 h	2 h	NO contact	230–240 V AC	MEM 190 a	1900001



# Time and light control

## Analogue time switches, DIN rail, 1 module

3

### Technical data

	SYN 160 a	SUL 180 a	MEM 190 a
Operating voltage	230 V AC	230 – 240 V AC	
Frequency	50 Hz	50 – 60 Hz	
Width	1 module		
Installation type	DIN rail		
Program	Daily program		Weekly program
Power reserve	–	3 days	
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A		
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	4 A		
Incandescent/halogen lamp load	1000 W		
Energy saving lamps	150 W		
LED lamp < 2 W (typ.)	30 W		
LED lamp 2–8 W (typ.)	90 W		
LED lamp > 8 W (typ.)	300 W		
Shortest switching times	15 min		2 h
Programmable every	15 min		2 h
Time accuracy at 25 °C	Synchronised with mains	$\leq \pm 1$ s/day (quartz)	
Stand-by consumption	0,9 W	0,5 W	
Test approval	VDE		
Type of protection	IP 20		
Protection class	II according to EN 60 730-1		
Ambient temperature	–25 °C ... +50 °C	–10 °C ... +50 °C	

### Accessories

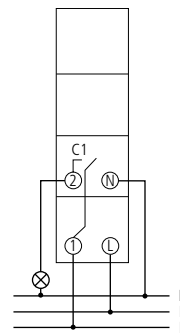


**Front panel kit**  
↳ Art.No.: 9070001  
Details page 332



**Wall mounting kit 17,5 mm**  
↳ Art.No.: 9070065  
Details page 332

### Connection diagrams



SYN 160 a, SUL 180 a, MEM 190 a

# Time and light control

## Analogue time switches, DIN rail, 3 modules

3



SYN 151 h

SUL 181 d

SUL 191 w

### Description

#### Common functions

- Analogue time switch
- 1 channel
- DuoFix spring terminals
- Switching preselection
- Manual switch with 3 positions: Continuous ON/AUTO/continuous OFF
- Switching status display

#### SYN 151 h

- 60 minute program
- Without power reserve
- 96 switching segments
- Synchronised with mains
- Shortest switching time: 37.5 seconds

#### SYN 161 d

- Daily program
- Without power reserve
- 96 switching segments
- Synchronised with mains
- Shortest switching time: 15 minutes
- Clock hands for time display and in addition 12/24 hour recognition
- Simple summer/winter time correction

#### SUL 181 d

- Daily program
- With power reserve
- 96 switching segments
- Quartz controlled
- Shortest switching time: 15 minutes
- Clock hands for time display and in addition 12/24 hour recognition
- Simple summer/winter time correction

#### SUL 191 w

- Weekly program
- With power reserve
- 84 switching segments
- Quartz controlled
- Shortest switching time: 2 hours
- Clock hands for time display and in addition 12/24 hour recognition
- Simple summer/winter time correction

### Product selection

Program	Number of channels	Power reserve	Shortest switching time	Programmable every	Type of contact	Operating voltage	Type	Article number	
60 minutes program	1	-	37,5 s	37,5 s	Changeover contact	230 V AC	SYN 151 h	1510011	
Daily program	1	-	15 min	15 min	Changeover contact	230 V AC	SYN 161 d	1610011	
			200 h	15 min	15 min	Changeover contact	110-230 V AC	SUL 181 d	1810011
							12-24 V UC	SUL 181 d 24V	1814011
Weekly program	1	200 h	2 h	2 h	Changeover contact	110-230 V AC	SUL 191 w	1910011	

# Time and light control

## Analogue time switches, DIN rail, 3 modules

3

### Technical data

	SYN 151 h	SYN 161 d	SUL 181 d	SUL 191 w	SUL 181 d 24V
Operating voltage	230 V AC		110–230 V AC		12–24 V UC
Frequency	50 Hz		50–60 Hz		
Width	3 modules				
Installation type	DIN rail				
Program	60 minutes program	Daily program		Weekly program	Daily program
Power reserve	–		100 hours, approx. 50 hours at 110 V		100 hours
Switching capacity at 250 V AC, $\cos \varphi = 1$	10 A	16 A			
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	4 A				
Incandescent / halogen lamp load	1100 W				
LED lamp < 2 W (typ.)	20 W				
LED lamp > 2 W (typ.)	180 W				
Shortest switching time	37,5 s	15 min		2 h	15 min
Programmable every	37,5 s	15 min		2 h	15 min
Time accuracy at 25 °C	Synchronised with mains		$\leq \pm 1$ s/day (quartz)		
Stand-by consumption	0,9 W	0,5 W			
Test approval	VDE				–
Type of protection	IP 20				
Protection class	II according to EN 60 730-1				
Ambient temperature	–20 °C ... +55 °C				

### Accessories



#### Wall mounting kit 52,5 mm

↳ Art.No.: 9070050

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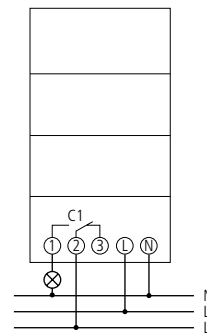


#### Front panel kit

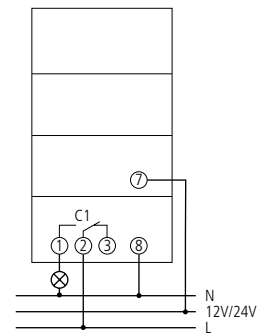
↳ Art.No.: 9070001

Details page 332

### Connection diagrams



SYN 151 h, SYN 161 d,  
SUL 181 d, SUL 191 w



SUL 181 d 24V

# Time and light control

## Analogue time switches, DIN rail, 3 modules

3



SUL 188 g

SUL 188 hw

### Description

#### Common functions

- Analogue time switch
- With power reserve
- Quartz controlled
- Tappets
- Screw terminals
- Switching status display
- Operating indication

#### SUL 188 g

- Daily program
- 2 channels
- Fine adjustment to set the time to the minute
- Shortest switching time: 30 minutes
- 10 tappets included in delivery

#### SUL 188 hw

- Daily/weekly program and 1/2 day OFF function for the weekdays
- 1 channel (with series connection of the 2 contacts)
- Tappets and turning segments
- Shortest switching time: 45 minutes (12 hours for the 1/2 day OFF function)
- 6 tappets included in delivery

### Product selection

Program	Number of channels	Power reserve	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
Daily program	2	3 days	30 min	15 min	Changeover contact	230 V AC	SUL 188 g	1880033
Daily/weekly program with 1/2 day OFF function	1	3 days	45 min, 12 h	15 min, 12 h	Changeover contact	230 V AC	SUL 188 hw	1880108

# Time and light control

## Analogue time switches, DIN rail, 3 modules

3

### Technical data

	SUL 188 g	SUL 188 hw
Operating voltage	230 V AC	
Frequency	45–60 Hz	
Width	3 modules	
Installation type	DIN rail	
Program	Daily program	Daily/weekly program with 1/2 day OFF function
Power reserve	3 days	
Switching capacity at 250 V AC, $\cos \varphi = 1$	10 A	
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	4 A	
Shortest switching times	30 min	45 min, 12 h
Programmable every	15 min	15 min, 12 h
Time accuracy at 25 °C	$\leq \pm 1$ s/day (quartz)	
Stand-by consumption	0,5 W	
Test approval	VDE	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	
Ambient temperature	–20 °C ... +55 °C	

### Accessories



#### Front panel kit

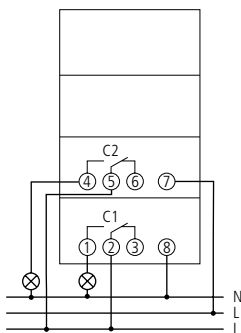
↳ Art.No.: 9070001  
Details page 332



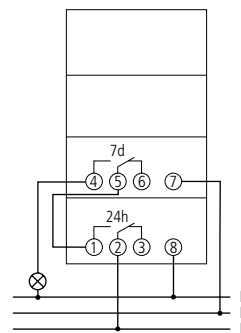
#### Terminal cover 52,5 mm

↳ Art.No.: 9070061  
Details page 332

### Connection diagrams



SUL 188 g



SUL 188 hw

## Time and light control

### Analogue time switches, Front panel installation / wall installation

3



SYN 169 s

SUL 189 s

#### Description

##### Common functions

- Analogue time switch
- 1 channel
- Daily program
- 96 switching segments
- Shortest switching time: 15 minutes
- Clock hands for time display
- Switching preselection
- Permanent ON/OFF switch
- Switching status display
- Simple summer / winter time correction

##### SYN 169 s

- Without power reserve
- Synchronised with mains

##### SUL 189 s

- With power reserve
- Quartz controlled

#### Product selection

Program	Number of channels	Power reserve	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
Daily program	1	-	15 min	15 min	Changeover contact	230 V AC	SYN 169 s	1690801
		3 days	15 min	15 min	Changeover contact	230 V AC	SUL 189 s	1890801
						110 V AC	SUL 189 s 110V	1891801

# Time and light control

## Analogue time switches, Front panel installation/wall installation

3

### Technical data

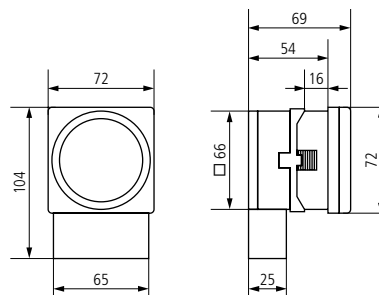
	SYN 169 s	SUL 189 s	SUL 189 s 110V
Operating voltage	230 V AC		110 V AC
Frequency	50 Hz	50–60 Hz	
Installation type	Front panel installation/wall installation		
Program	Daily program		
Power reserve	–	3 days, full power reserve approx. 3 days after connection to operating voltage	
Switching capacity at 250 V AC, $\cos \varphi = 1$	10 A		
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	2 A		
Shortest switching times	15 min		
Programmable every	15 min		
Time accuracy at 25 °C	Synchronised with mains	$\leq \pm 1$ s/day (quartz)	
Stand-by consumption	0,9 W	0,5 W	
Type of protection	IP 20		
Protection class	II according to EN 60 730-1		
Ambient temperature	–10 °C ... +55 °C		

### Accessories



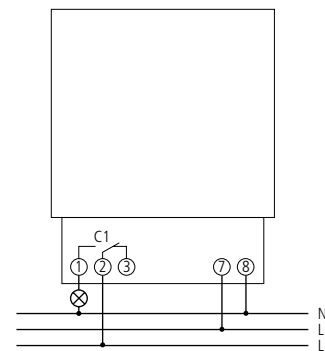
**Snap-on mounting 72 x 72**  
 ↳ Art.No.: 9070071  
 Details page 332

### Scale drawings



SYN 169 s, SUL 189 s

### Connection diagrams



SYN 169 s, SUL 189 s

## Time and light control

### Analogue time switches, Front panel installation/wall installation

3



SYN 269 h

SUL 289 g

#### Description

##### Common functions

- Analogue time switch with daily or weekly program (switching disc can be turned)
- Tappets
- Shortest switching time: 20 minutes or 2 hours
- Clock hands for time display
- Switching status display

##### SYN 269 h

- 1 channel
- Without power reserve
- Synchronised with mains
- Switching preselection
- Permanent ON/OFF switch
- Simple summer/winter time correction
- 32 tappets included in delivery

##### SUL 289 h

- 1 channel
- With power reserve
- Quartz controlled
- Switching preselection
- Permanent ON/OFF switch
- Simple summer/winter time correction
- 32 tappets included in delivery

##### SUL 289 g

- 2 channels
- With power reserve
- Quartz controlled
- 49 tappets included in delivery

#### Product selection

Program	Number of channels	Power reserve	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
Daily program	1	-	20 min, 2 h	5 min, 30 min	Changeover contact	230 V AC	SYN 269 h	2690008
		3 days	20 min, 2 h	5 min, 30 min	Changeover contact	230 V AC	SUL 289 h	2890008
	2	3 days	20 min, 2 h	5 min, 30 min	Changeover contact	230 V AC	SUL 289 g	2890033



# Time and light control

## Analogue time switches, Front panel installation/wall installation

3

### Technical data

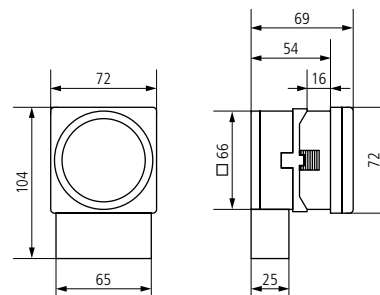
	SYN 269 h	SUL 289 h	SUL 289 g
Operating voltage	230 V AC		
Frequency	50 Hz	50–60 Hz	
Installation type	Front panel installation/wall installation		
Program	Daily program, Weekly program		
Power reserve	–	3 days, full power reserve approx. 3 days after connection to operating voltage	
Switching capacity at 250 V AC, $\cos \varphi = 1$	10 A		
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	2 A		
Shortest switching times	20 min, 2 h		
Programmable every	5 min, 30 min		
Time accuracy at 25 °C	Synchronised with mains	$\leq \pm 1$ s/day (quartz)	
Stand-by consumption	0,9 W	0,5 W	
Type of protection	IP 20		
Protection class	II according to EN 60 730-1		
Ambient temperature	–10 °C ... +55 °C		

### Accessories

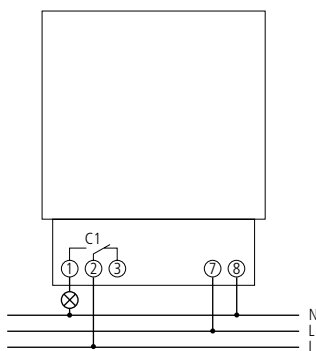


**Snap-on mounting 72 x 72**  
 ↳ Art.No.: 9070071  
 Details page 332

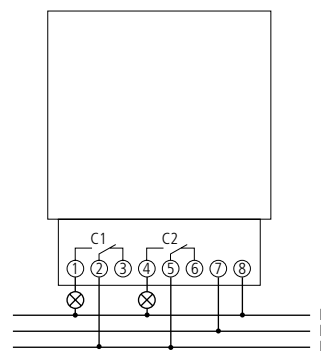
### Scale drawings



### Connection diagrams



SYN 269 h, SUL 289 h



SUL 289 g

## Time and light control

### Analogue time switches, Front panel installation/wall installation

3



TM 179 h

SUL 189 hw

#### Description

##### Common functions

- Analogue time switch
- Switching status display
- 6 tappets included in delivery

##### TM 179 h

- 60 minute program
- 1 channel
- Without power reserve
- Synchronised with mains
- Tappets
- Shortest switching time: 75 seconds
- Switching preselection

##### SUL 189 hw

- Daily/weekly program and 1/2 day OFF function for the weekdays
- 1 channel (with series connection of 2 the contacts)
- With power reserve
- Quartz controlled
- Tappets and turning segments
- Shortest switching time: 30 minutes (12 hours for the 1/2 day OFF function)

#### Product selection

Program	Number of channels	Power reserve	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
60 minutes program	1	–	1,25 min	18,5 s	Changeover contact	230 V AC	TM 179 h	1790008
Daily/weekly program with 1/2 day OFF function	1	3 days	30 min, 12 h	15 min, 12 h	Changeover contact	230 V AC	SUL 189 hw	1890108

# Time and light control

## Analogue time switches, Front panel installation/wall installation

3

### Technical data

	TM 179 h	SUL 189 hw
Operating voltage	230 V AC	
Frequency	50 Hz	50–60 Hz
Installation type	Front panel installation/wall installation	
Program	60 minutes program	Daily/weekly program with 1/2 day OFF function
Power reserve	–	3 days, full power reserve approx. 3 days after connection to operating voltage
Switching capacity at 250 V AC, $\cos \varphi = 1$	10 A	
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	2 A	
Shortest switching times	1,25 min	30 min, 12 h
Programmable every	18,5 s	15 min, 12 h
Time accuracy at 25 °C	Synchronised with mains	$\leq \pm 1$ s/day (quartz)
Stand-by consumption	0,9 W	0,5 W
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	
Ambient temperature	– 10 °C ... +55 °C	

### Accessories

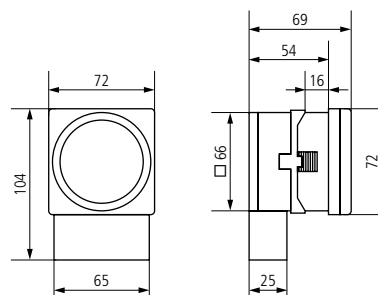


Snap-on mounting 72 x 72

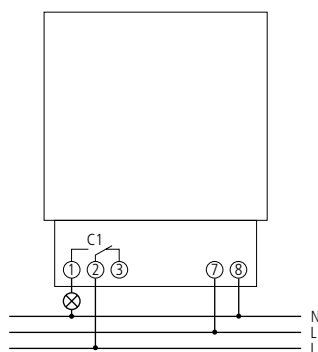
↳ Art.No.: 9070071

Details page 332

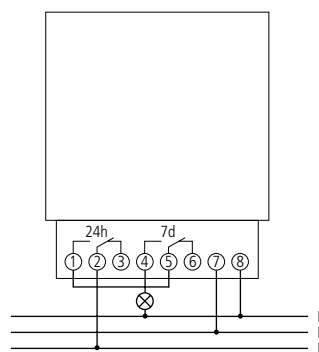
### Scale drawings



### Connection diagrams



TM 179 h



SUL 189 hw

# Time and light control

## Analogue time switches, Wall installation/3-point mounting

3



SUL 285/2 T

### Description

- Analogue tariff time switch with daily program
- 2 channels
- With power reserve (exchangeable NiMH rechargeable battery)
- Quartz controlled
- Tappets
- Shortest switching time: 20 minutes
- Clock hands for time display
- Switching status display
- Simple summer/winter time correction
- Control LED for battery change
- 32 tappets included in delivery

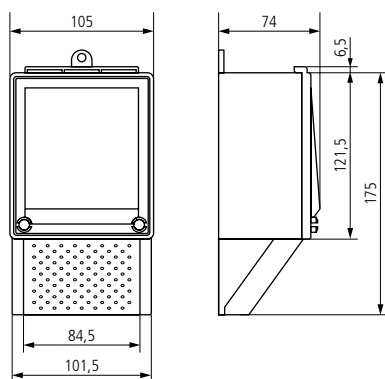
### Product selection

Program	Number of channels	Power reserve	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
Daily program	2	6 days	20 min	5 min	Changeover contact	110–230 V AC	SUL 285/2 T	2850033

### Technical data

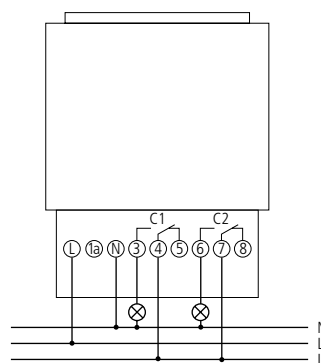
SUL 285/2 T			
Operating voltage	110–230 V AC	Shortest switching times	20 min
Frequency	50–60 Hz	Programmable every	5 min
Installation type	Wall installation/3-point mounting	Time accuracy at 25 °C	± 1 s/day (quartz)
Program	Daily program	Stand-by consumption	0,6 W
Power reserve	6 days, full power reserve approx. 3 days after connection to operating voltage	Type of protection	IP 54
Switching capacity at 250 V AC, cos φ = 1	6 A	Protection class	II according to EN 62 054-21
Switching capacity at 250 V AC, cos φ = 0,6	2 A	Ambient temperature	–10 °C ... +55 °C

### Scale drawings



SUL 285/2 T

### Connection diagrams



SUL 285/2 T



## Description

### Common functions

- Analogue plug-in timer
- 1 channel
- Without power reserve
- Synchronised with mains
- Use with earthed sockets
- Switching preselection
- Switching status display

### theben-timer 26

- Daily program
- 96 switching segments
- Shortest switching time: 15 minutes

### theben-timer 26 IP 44

As theben-timer 26, but:

- Waterproof protection for damp locations and outdoor areas
- Transparent cover

### theben-timer 27

- Weekly program
- 84 switching segments
- Shortest switching time: 2 hours

\* According to guarantee conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

## Product selection

Program	Shortest switching times	Programmable every	Type of contact	Operating voltage	Type	Article number
Daily program	15 min	15 min	NO contact	230 V AC	theben-timer 26	0260030
				230 V AC	theben-timer 26 IP 44	0260855
Weekly program	2 h	2 h	NO contact	230 V AC	theben-timer 27	0270930

## Technical data

	theben-timer 26	theben-timer 26 IP 44	theben-timer 27
Operating voltage	230 V AC		
Frequency	50 Hz		
Installation type	Plug-in		
Program	Daily program		Weekly program
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A		
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	4 A		
LED lamp < 2 W (typ.)	40 W		
LED lamp > 2 W (typ.)	400 W		
Shortest switching times	15 min		2 h
Programmable every	15 min		2 h
Time accuracy at 25 °C	Synchronised with mains		
Stand-by consumption	0,8 W		
Type of protection	IP 20	IP 44	IP 20
Protection class	II according to EN 60 730-1		
Ambient temperature	-40 °C ... +55 °C		

## Time and light control

Analogue time switches, Surface-mounted, Drive with quick fastening for DIN rail

3



FRI 77 g



FRI 77 g-2

### Description

#### Common functions

- Analogue cooling time switch with daily and short time program
- Tappet
- 2 separate switching discs

#### FRI 77 g

- 2 channels
- Wall-mounted
- 8 tappets included in delivery
- Optional delayed switching on of fan

#### FRI 77 g-2

- 2 channels
- Drive with quick fastening for DIN rail
- 8 tappets included in delivery
- Optional delayed switching on of fan

#### FRI 77 h-2

- 1 channel
- Drive with quick fastening for DIN rail
- 6 tappets included in delivery

### Product selection

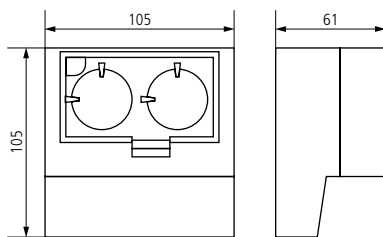
Type of contact	Installation type	Shortest switching times	Programmable every	Operating voltage	Type	Article number
Changeover contact	Surface-mounted	2 min, 1 h	1 min, 1 h	230 V AC	FRI 77 g	0770033
	Drive with quick fastening for DIN rail	2 min, 1 h	1 min, 1 h	230 V AC	FRI 77 h-2	0770802
					FRI 77 g-2	0770832

Analogue time switches, Surface-mounted, Drive with quick fastening for DIN rail

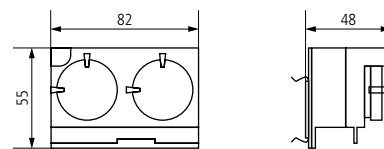
Technical data

	FRI 77 g	FRI 77 h-2	FRI 77 g-2
Operating voltage	230 V AC		
Frequency	50 Hz		
Installation type	Surface-mounted	Drive with quick fastening for DIN rail	
Program	Daily and defrost program		
Switching capacity at 250 V AC, $\cos \varphi = 1$	16 A		
Switching capacity at 250 V AC, $\cos \varphi = 0,6$	2,5 A		
Shortest switching times	2 min, 1 h		
Programmable every	1 min, 1 h		
Time accuracy at 25 °C	Synchronised with mains		
Stand-by consumption	0,9 W		
Type of protection	IP 20	IP 00	
Protection class	II according to EN 60 730-1		
Ambient temperature	- 10 °C ... +50 °C		

Scale drawings

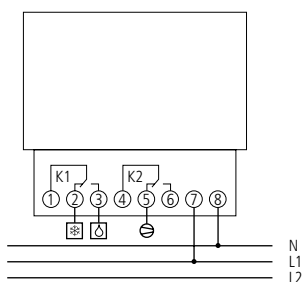


FRI 77 g

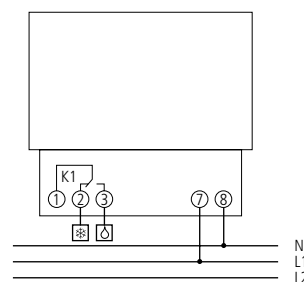


FRI 77 h-2, FRI 77 g-2

Connection diagrams



FRI 77 g, FRI 77 g-2

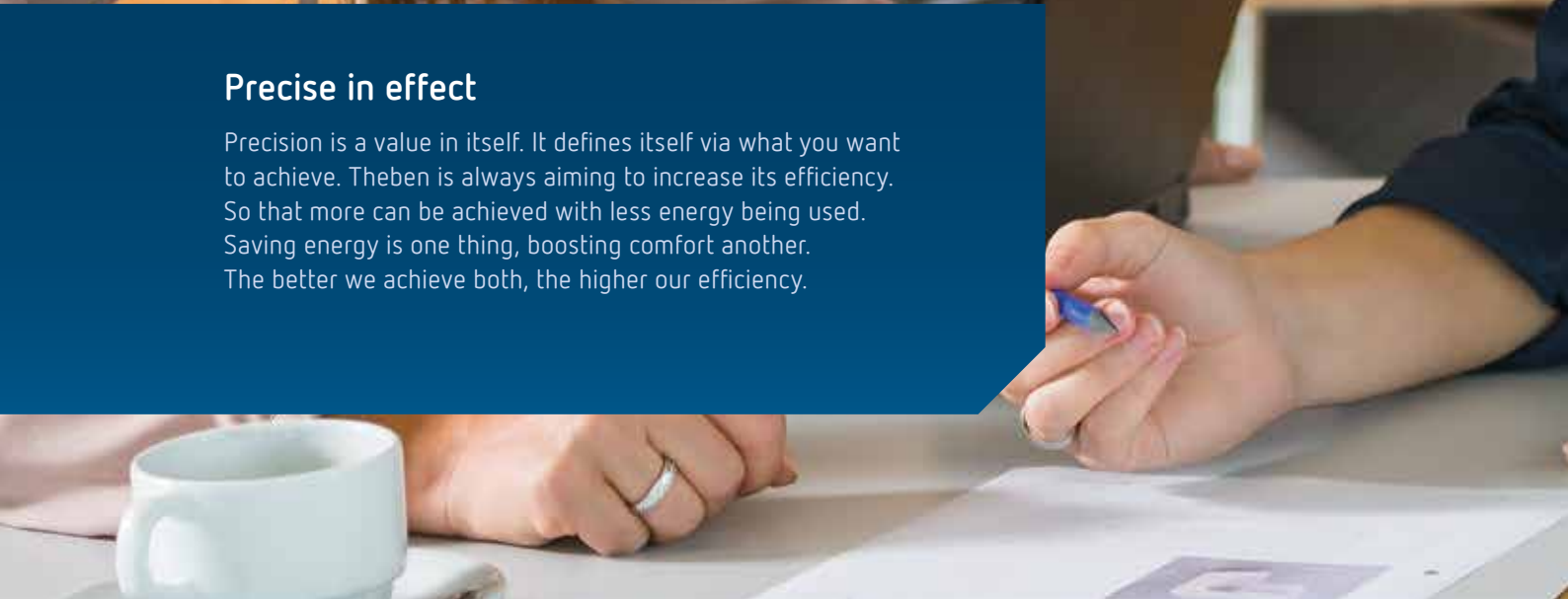


FRI 77 h-2



## Precise in effect

Precision is a value in itself. It defines itself via what you want to achieve. Theben is always aiming to increase its efficiency. So that more can be achieved with less energy being used. Saving energy is one thing, boosting comfort another. The better we achieve both, the higher our efficiency.









Description	Type	Page
-------------	------	------

### Time relays

 Multi-function relay	TM 345 M	66
 Time relay with switch function	TM 345 B	66

Installation type	Size front plate	Type	Page
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### Hour counters, analogue

 Front panel installation	48 x 48 mm	BZ 142-1	68
		BZ 142-3	68
	52 x 52 mm	BZ 143-1	68
 DIN rail	35 x 45 mm	BZ 145	68

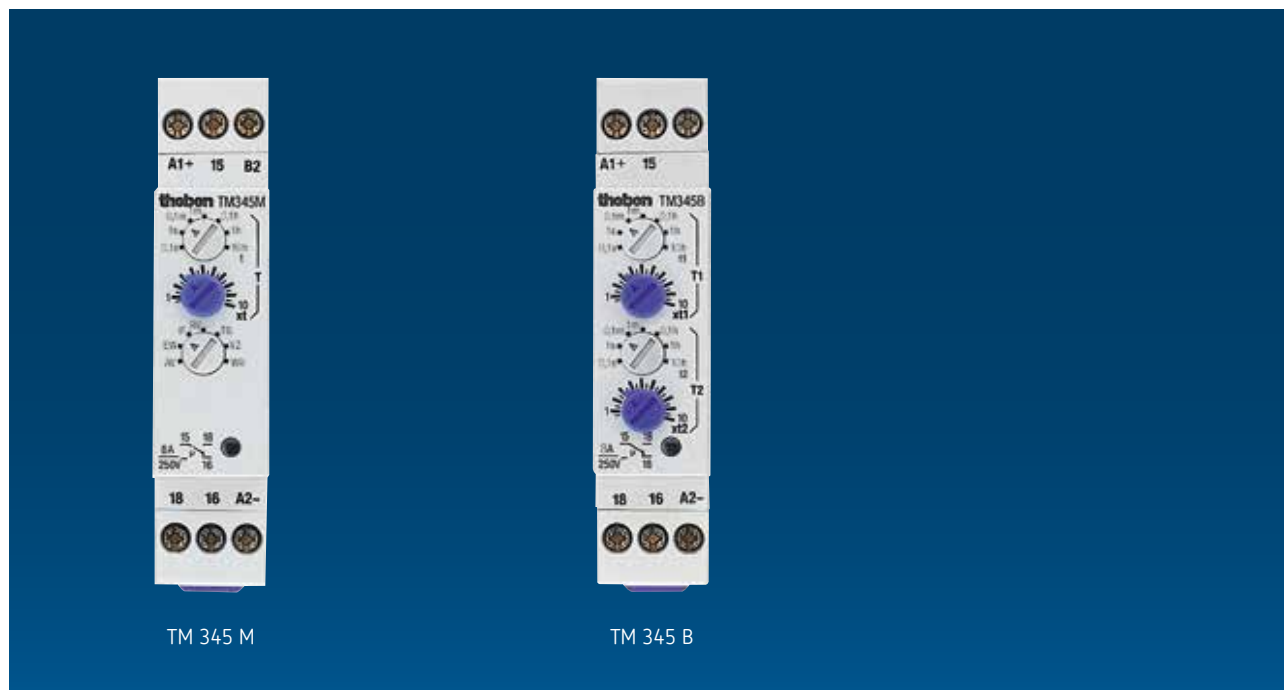
### Hour counters, digital

 Front panel installation	24 x 48 mm	BZ 146	70
	48 x 48 mm	BZ 147	70
 DIN rail	35 x 45 mm	BZ 148	70

# Time and light control

## Time relays

4



TM 345 M

TM 345 B

### Description

#### Common functions

- Electronic time relay
- Can be used universally for controlling automatic processes in machines, lighting, ventilation, heating, cupboards etc.
- Precise analogue time setting
- Multi-voltage input for all supply and control voltages, no jumpers or additional terminals are required

- LED to display the switching status

#### TM 345 M

- Locking snap switch to select the period of time, as well as the following operating modes:
- Response delay (AV), without control contact
- Wipe contact (EW), without control contact
- Release delay (RV), with control contact
- Pulse former (IF), with control contact

- Response and release delay (VZ), with control contact
- Pulse output (WR), with control contact
- Flip-flop (TG)

#### TM 345 B

- With flip-flop function
- Pulse and break time independently adjustable

### Product selection

Multi-function	Type	Article number
√	TM 345 M	3450731
-	TM 345 B	3450730

### Technical data

	TM 345 M	TM 345 B
Operating voltage	12 – 240 V AC/DC	24 – 240 V AC/24 V DC
Frequency	50 – 60 Hz	
Width	1 module	
Stand-by consumption	1 W	
Type of contact	Changeover contact	
Housing and insulation material	High-temperature resistant, self-extinguishing thermoplastic	
Switching capacity at 250 V AC, $\cos \varphi = 1$	8 A	
Switching output	Potential-free	
Nominal current	10 mA – 20 A < 10 ms	
Electrical service life	10 <sup>5</sup> operating cycles	
Fall back value of nominal input voltage	< 10.2 V AC/DC (as per EN 61812-1)	< 20.4 V AC/DC (as per EN 61812-1)
Type of protection	IP 20	
Protection class	II	
Ambient temperature	–20 °C ... +60 °C	

### Accessories



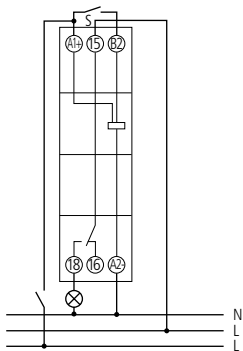
#### Wall mounting kit 35 mm

for BZ 145

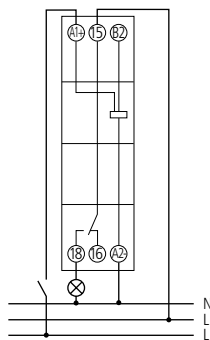
↳ Art.No.: 9070064

Details page 332

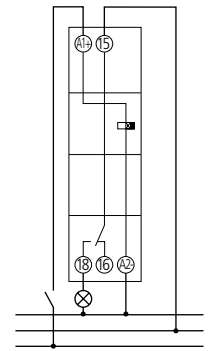
### Connection diagrams



TM 345 M



TM 345 M



TM 345 B

## Time and light control

### Hour counters, analogue, front panel and DIN rail

4



#### Description

##### Common functions

- Hour counter with synchronous motor drive

##### BZ 142-1

- Front panel devices with click-in or stretch clamp supports for walls up to a maximum of 10 mm thick
- Clamp or flat plug connection 6.3 mm
- Versions for direct voltage with quartz-controlled stepper motor
- Progress display

##### BZ 142-3

- With plug-in base for wall installation (terminal cover required)
- Plug-in base with quick fastening for 35 mm profile rails (DIN EN 60 715)
- Screw terminals
- Contact protection to comply with accident prevention regulation BGV A3
- Housing colour: anthracite
- Versions for direct voltage with quartz-controlled stepper motor
- Progress display

##### BZ 143-1

As BZ 142-1

##### BZ 145

- Built in distributor device with quick fastening for 35 mm profile rails (DIN EN 60 715)
- Top mounting with additional terminal box cover plate, sealable
- Control panel installation with assembly kit No. 907 0 001
- Contact protection to comply with accident prevention regulation BGV A3
- Captive screw terminals

#### Product selection

Counting range	Installation type	Size front plate	Size of Installation section	Operating voltage	Type	Article number
99 999,99 hours without reset	Front panel installation	48 x 48 mm	46 x 46 mm	230 V AC	BZ 142-1	1420721
				10–80 V DC	BZ 142-1 10V	1420821
				230–240 V AC	BZ 142-1 230V	1420621
				24 V AC	BZ 142-1 24V	1424721
				230 V AC	BZ 142-3	1420723
		10–80 V DC	BZ 142-3 10V	1420823		
		52 x 52 mm	46 x 46 mm or ø 50 mm	230 V AC	BZ 143-1	1430721
				10–80 V DC	BZ 143-1 10V	1430821
				24 V AC	BZ 143-1 24V	1434721
				230 V AC	BZ 145	1450000
24–48 V DC	BZ 145 24V			1459024		

# Time and light control

## Hour counters, analogue, front panel and DIN rail

### Technical data

	BZ 142-1	BZ 142-1 10V	BZ 142-1 230V	BZ 142-1 24V	BZ 142-3	BZ 142-3 10V	BZ 143-1	BZ 145	BZ 145 24V	
Operating voltage	230 V AC	10–80 V DC	230–240 V AC	24 V AC	230 V AC	10–80 V DC	230 V AC	230 V AC	24–48 V DC	
Frequency	50 Hz	–	60 Hz	50 Hz		–	50 Hz		–	
Width	–						2 modules			
Installation type	Front panel installation						DIN rail			
Counting range	99 999,99 hours without reset						99 999,9 hours without reset			
Type of protection	IP 65 (Front frame)						IP 20			
Protection class	II according to EN 60 335-1									
Ambient temperature	–20 °C ... +70 °C						–10 °C ... +70 °C			

4

### Accessories



**Cover 55 x 55 for BZ**  
for BZ 142-1  
↳ Art.No.: 9070041  
Details page 333

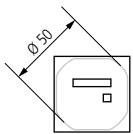


**Cover 72 x 72 for BZ**  
for BZ 142-1  
↳ Art.No.: 9070074  
Details page 333

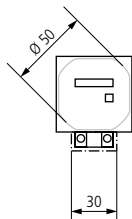
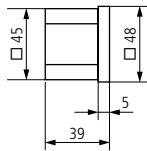


**Wall mounting kit 35 mm**  
for BZ 145  
↳ Art.No.: 9070064  
Details page 332

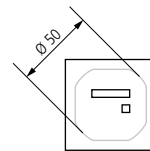
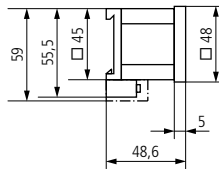
### Scale drawings



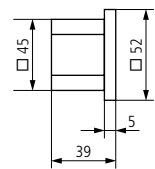
BZ 142-1



BZ 142-3



BZ 143-1



# Time and light control

## Hour counters, digital, front panel and DIN rail

4



### Description

#### Common functions

- Digital hour counter
- With EEPROM memory provides reliable operating data capture even with loss of power
- 7-digit high-contrast LCD display
- Onscreen progress display

#### BZ 146

- Installation cutout 22 mm x 45 mm
- Control panel installation
- Screw terminals
- Tension clamp brackets for walls up to 5mm thick
- Quartz controlled version

#### BZ 147

- Installation cutout 45 mm x 45 mm
- Control panel installation
- Screw terminals
- Tension clamp brackets for walls up to 5mm thick
- Quartz controlled version

#### BZ 148

- For DIN rail mounting with quick fastening for 35 mm profile rails (DIN EN 60 715)
- Surface mounting with additional terminal box cover plate option
- Captive screw terminals

### Product selection

Counting range	Installation type	Size front plate	Size of Installation section	Operating voltage	Type	Article number
99 999,99 hours without reset	Front panel installation	24 x 48 mm	22 x 45 mm	110–240 V AC	BZ 146	1460000
		48 x 48 mm	45 x 45 mm	110–240 V AC	BZ 147	1470000
999 999.9 hours without reset	DIN rail	35 x 45 mm	35 x 45 mm (depth 60 mm)	24–240 V AC/12–150 V DC	BZ 148	1480000

### Technical data

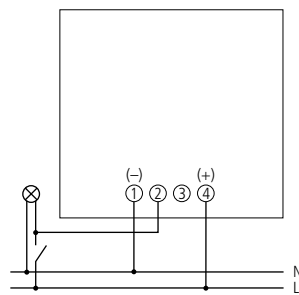
	BZ 146	BZ 147	BZ 148
Operating voltage	110 – 240 V AC		24 – 240 V AC / 12 – 150 V DC
Frequency	50 – 60 Hz		
Width	–		2 modules
Installation type	Front panel installation		DIN rail
Counting range	99 999,99 hours without reset		999 999.9 hours without reset
Type of protection	IP 65		IP 20
Protection class	II according to EN 61010		
Ambient temperature	–30 °C ... +70 °C		–10 °C ... +70 °C

### Accessories

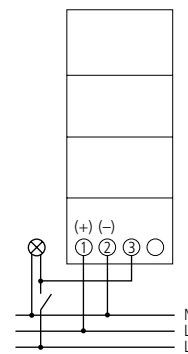


**Wall mounting kit 35 mm**  
for BZ 148  
↳ Art.No.: 9070064  
Details page 332

### Connection diagrams

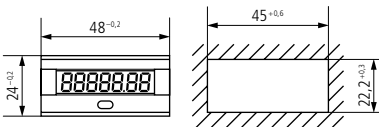


BZ 146, BZ 147

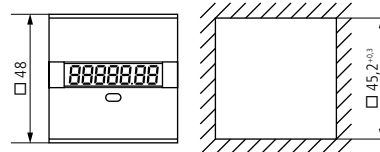


BZ 148

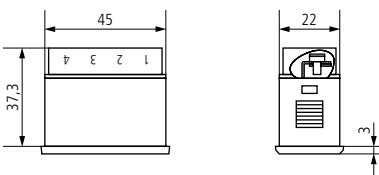
### Scale drawings



BZ 146



BZ 147





## Everything in view

When Paul Schwenk developed the first staircase time switch in 1921, it was due to his special kind of attentiveness. He noticed that the staircase light never switched off so lots of energy was being wasted. What then may have been no more than an expression of his frugality is now in demand worldwide as a consequence of climate change: using energy sensibly. Theben has been making a contribution to that for a long time now and not just with staircase light time switches. We call that attentiveness.




# TIME AND LIGHT CONTROL


## Staircase time switches/Dimmer

Setting range time	Key input	Multi-voltage input	Switch-off pre-warning	Long-time function	Zero-cross switching	Without stand-by consumption	Type	Page
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### DIN rail, electronic with multi-function

	0,5–20 min	150 mA	✓	✓	60 min	✓	–	ELPA 1	74
			–	✓	60 min	✓	–	ELPA 6	74
			–	–	–	–	–	ELPA 6 plus	74


### DIN rail, Electronic

	0,5–20 min	150 mA	✓	–	–	–	–	ELPA 3	74
			–	–	–	–	–	ELPA 7	74

### DIN rail, Electro-mechanical

	1–7 min	50 mA	–	–	–	–	✓	ELPA 8	76
			–	–	–	–	–	ELPA 9	76

### Flush-mounted, electronic with multi-function

	0,5–20 min	30 mA	✓	✓	60 min	✓	–	ELPA 041	78
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### Flush-mounted, electronic with switch-off pre-warning

	0,5–20 min	30 mA	–	–	–	✓	–	ELPA 047	78
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Universal dimmer for R, L, and C loads	Mounting type	Multi-voltage input	Multifunction	Operation via App possible	Type	Page
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### Dimmer

	DIN rail	✓	–	–	DIMAX 532 plus	80
			✓	–	DIMAX 534 plus	80
	Flush-mounted	–	–	–	DIMAX 541 plus E	82
			–	–	DIMAX 542 plus S	82
			–	✓	DIMAX 544 plus P	82

# Time and light control

## Staircase time switches, DIN rail, electronic with multi-function, Electronic

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### Description

#### Common functions

- Staircase time switch, electronic
- Terminal layout same as ELPA 8
- Extremely accurate
- Push button input with electronic overload protection
- Automatic 3 or 4 conductor detection (4 conductor with connection for floor lighting, 3 conductor no longer permitted for new systems)

#### ELPA 1

- Zero-cross switching for relay-saving switching and high lamp loads
- Multi-functional device with 10 available functions, set at the front of the device
- Additional multi-voltage input electrically isolated for AC/DC 8...240 V, e.g. für inter-coms
- Switch-off pre-warning (two double flashes) in accordance with DIN 18015-2 to avoid sudden darkness

- Extended function activated via long button press
- Immediate secondary switching (stair light switch) or prematurely switched off (pulse switch with switch-off delay)
- Permanent switch
- Electronic pulse light

#### ELPA 6

- Zero-cross switching for relay-saving switching and high lamp loads
- Multi-functional device with 10 available functions, set at the front of the device
- Switch-off pre-warning (two double flashes) in accordance with DIN 18015-2 to avoid sudden darkness
- Extended function activated via long button press
- Immediate secondary switching (stair light switch) or prematurely switched off (pulse switch with switch-off delay)
- Permanent switch
- Electronic pulse light

#### ELPA 6 plus

As ELPA 6 but:

- Switch-off pre-warning (two flashes) optimized for switching LEDs

#### ELPA 3

- Additional multi-voltage input electrically isolated for AC/DC 8...240 V, e.g. für inter-coms
- Immediate secondary switching
- Toggle switch for permanent light

#### ELPA 7

As ELPA 3 but:

- Without multi-voltage input

### Product selection

Incandescent lamp load	Multi-function	Multi-voltage input	Switch-off pre-warning	Zero-cross switching	Type	Article number
3600 W	✓	✓	✓	✓	ELPA 1	0010002
		-	✓	✓	ELPA 6	0060002
		-	-	-	ELPA 6 plus	0060003
2300 W	-	✓	-	-	ELPA 3	0030002
		-	-	-	ELPA 7	0070002

Technical data

	ELPA 1	ELPA 6	ELPA 6 plus	ELPA 3	ELPA 7
Operating voltage	220 – 240 V AC				
Frequency	50 – 60 Hz				
Stand-by consumption	0,9 W			0,7 W	
Glow lamp load	150 mA				
Setting range time	0,5 – 20 min				
3/4-way conductors	Automatic				
Type of contact	NO contact				
Switching output	Not potential-free (230 V)				
Incandescent / halogen lamp load	3600 W			2300 W	
Fluorescent lamp load (conventional) lead-lag circuit	3600 VA			2300 VA	
Energy saving lamps	250 W			90 W	
LED lamp < 2 W (typ.)	55 W			20 W	
LED lamp 2 – 8 W (typ.)	600 W			180 W	
LED lamp > 8 W (typ.)	600 W			180W	
Switching capacity	16 AX (at 230 V AC, cos φ = 0.3), 16 A (at 230 V AC, cos φ = 1)			10 AX (at 230 V AC, cos φ = 0.3), 16 A (at 230 V AC, cos φ = 1)	
Test approval	VDE				
Ambient temperature	–25 °C ... +50 °C				
Protection class	II				
Type of protection	IP 20				

Accessories



Wall mounting kit 17,5 mm

↳ Art.No.: 9070065

Details page 332

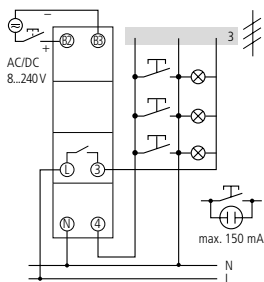


Front panel kit

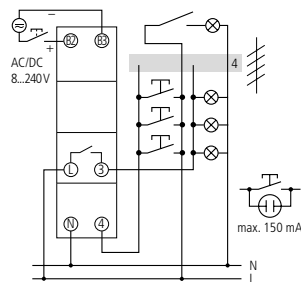
↳ Art.No.: 9070001

Details page 332

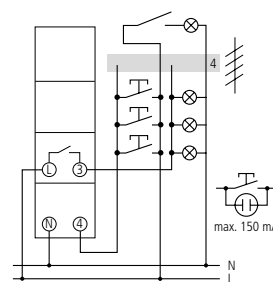
Connection diagrams



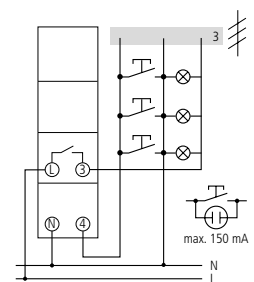
ELPA 1, ELPA 3



ELPA 1, ELPA 3



ELPA 6, ELPA 6 plus, ELPA 7



ELPA 6, ELPA 6 plus, ELPA 7

## Time and light control

### Staircase time switches, DIN rail, Electro-mechanical

5



#### Description

##### Common functions

- Staircase time switch, electro-mechanical
- No closed-circuit current consumption
- Toggle switch for permanent light ON
- Reliable due to synchronous motor drive
- Simplest possible time setting and direct delay time readout on absolute scale
- Precision mechanics and therefore exact switching period
- Very low sensitivity to interference

\* According to guarantee conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

##### ELPA 8

- 4 conductor with floor lighting connection
- 3 conductor without floor lighting (no longer permitted for new systems)
- Retriggerable

##### ELPA 9

- 3 conductor connection and floor lighting, but without secondary switching (no longer permitted for new systems)
- Terminal layout same as ELPA 8

#### Product selection

Incandescent lamp load	Setting range time	Without stand-by consumption	Switch-off pre-warning	3/4-way conductors	Secondary switching	Type	Article number
2300 W	1–7 min	✓	–	Yes	After 30 s	ELPA 8	0080002
				Only 3-way conductor	No	ELPA 9	0090001

# Time and light control

## Staircase time switches, DIN rail, Electro-mechanical

5

### Technical data

	ELPA 8	ELPA 9
Operating voltage	230 V AC	
Frequency	50 Hz	
Stand-by consumption	0 W	
Glow lamp load	50 mA	
Setting range time	1 – 7 min	
3/4-way conductors	Yes	Only 3-way conductor
Type of contact	NO contact	
Switching output	Not potential-free (230 V)	
Incandescent / halogen lamp load	2300 W	
Energy saving lamps	150 W	
LED lamp < 2 W (typ.)	30 W	
LED lamp 2 – 8 W (typ.)	300 W	
LED lamp > 8 W (typ.)	300 W	
Switching capacity	6 AX (at 230 V AC, $\cos \varphi = 0.3$ ), 16 A (at 230 V AC, $\cos \varphi = 1$ )	
Test approval	VDE	–
Ambient temperature	–10 °C ... +50 °C	
Protection class	II	
Type of protection	IP 20	

### Accessories



**Wall mounting kit 17,5 mm**

↳ Art.No.: 9070065

Details page 332

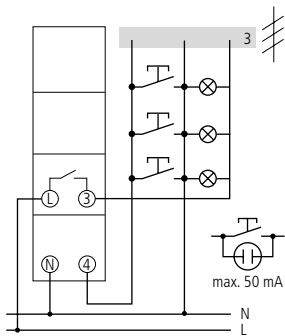


**Front panel kit**

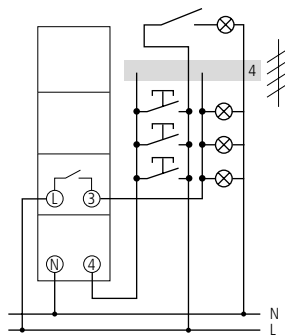
↳ Art.No.: 9070001

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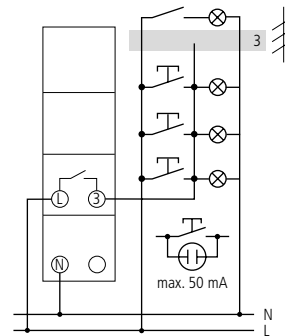
### Connection diagrams



ELPA 8



ELPA 8



ELPA 9

# Time and light control

## Staircase time switches, Flush-mounted



ELPA 041

ELPA 047

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### Description

#### Common functions

- Flush-mounted staircase time switch, electronic
- Suitable for upgrades and new installation
- Zero-cross switching for relay-saving switching and high lamp loads
- Push button input with electronic overload protection
- Automatic 3 or 4 conductor detection (4 conductor with connection for floor lighting, 3 conductor no longer permitted for new systems)
- Extremely accurate
- Immediate secondary switching

#### ELPA 041

- Multi-functional device with 12 available functions, set at the front of the device
- Switch or push button connectable, i.e. existing switches can be used (e.g. when updating)
- Additional multi-voltage input electrically isolated for AC/DC 8...240 V, e.g. für inter-coms
- Switch-off pre-warning (two double flashes) in accordance with DIN 18015-2 to avoid sudden darkness
- 60 min. extended function activated via long button press
- Immediate secondary switching (stair light switch) or prematurely switched off (pulse switch with switch-off delay)

#### ELPA 047

- Push button connectable

### Product selection

Incandescent lamp load	Multi-function	Multi-voltage input	Switch-off pre-warning	Zero-cross switching	Type	Article number
1800 W	✓	✓	✓	✓	ELPA 041	0410002
	-	-	-	✓	ELPA 047	0470002

### Technical data

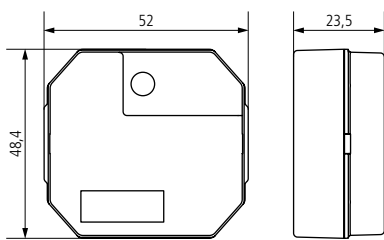
	ELPA 041	ELPA 047
Operating voltage	230 V AC	
Frequency	50–60 Hz	
Stand-by consumption	0,1 W	
Glow lamp load	30 mA	
Setting range time	0,5–20 min	
3/4-way conductors	Automatic	
Type of contact	NO contact	

# Time and light control

## Staircase time switches, Flush-mounted

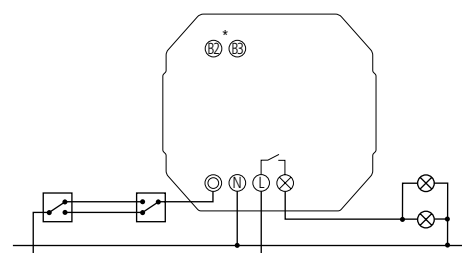
	ELPA 041	ELPA 047
Switching output	Not potential-free (230 V)	
Incandescent/halogen lamp load	1800 W	
Fluorescent lamp load (conventional) lead-lag circuit	1200 VA	
Fluorescent lamp load (conventional) parallel-corrected	580 VA, 54 µF	
Energy saving lamps	110 W	
LED lamp < 2 W (typ.)	20 W	
LED lamp 2-8 W (typ.)	250 W	
LED lamp > 8 W (typ.)	250 W	
Switching capacity	6 AX (at 230 V AC, cos φ = 0.3), 10 A (at 230 V AC, cos φ = 1)	
Test approval	VDE	
Ambient temperature	-25 °C ... +45 °C	
Protection class	II	
Type of protection	IP 20	

### Scale drawings



ELPA 041, ELPA 047

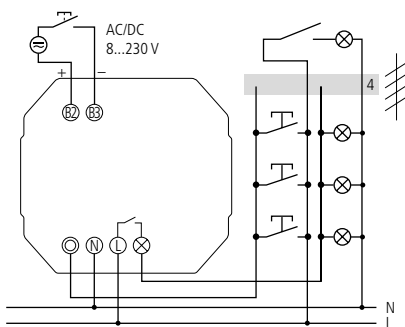
### Connection diagram



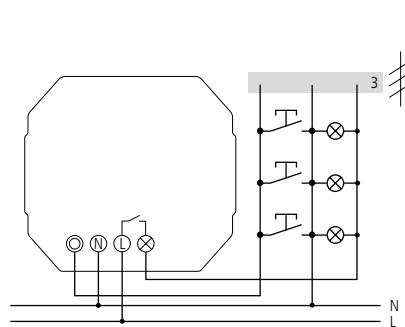
ELPA 041

\* with switch  
(with three-way switch the multi-voltage input is not usable)

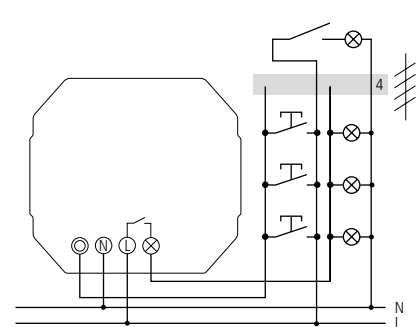
### Connection diagrams



ELPA 041



ELPA 047



ELPA 047

# Time and light control

## Dimmer

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DIMAX 532 plus



DIMAX 534 plus

### Description

#### Common functions

- Universal dimmer for R, L and C loads with automatic load detection
- Switch-on brightness can be saved individually
- Adjustable minimum brightness (required for ESL and LED)
- Multi-voltage input, e.g. for intercoms
- Low stand-by consumption
- Memory function in the event of power failure
- Automatic electronic overload and overheating switch-off
- Dimming switch-on function

- Permanent ON function (test function)
- No minimum load requirement
- Soft ON and Soft OFF protects the light
- The dimming output can be upgraded by using additional dimmboosters „DMB 1 T KNX“ - dimming output 300 W/VA for each dimmbooster

#### DIMAX 534 plus

- Comfort setting with wake-up and snooze function (can be deactivated), e.g. for children's bedrooms
- Adjustable dimming rate (with automatic functions)

- One and two button operation for ease of use
- Up to 3 light scenes can be called up via separate input (diode module required for more than one light scene)
- Central OFF/ON or light scene for up to 10 devices possible with one push button
- Staircase light function with dimming function in accordance with DIN 18015-2 (resettable, long-time function)
- Can be controlled by push buttons or switches e.g. for combination with presence detectors or time switch

### Product selection

Load detection	Optimized for energy-saving lamps	Light settings	Multi-function	Type	Article number
√	√	–	–	DIMAX 532 plus	5320001
		√	√	DIMAX 534 plus	5340001



### Technical data

	DIMAX 532 plus	DIMAX 534 plus
Operating voltage	230 V AC	
Frequency	50 Hz	
Stand-by consumption	0,2 W	
Incandescent / halogen lamp load	400 W	
Transformer electronic (C)	300 W	
Transformer inductive (L)	400 W	
Energy saving lamps	Trailing edge: 400 W	
LED lamp (typ.)	Trailing edge: 400 W	
Ambient temperature	-30 °C ... +50 °C	
Protection class	II	
Type of protection	IP 20	

### Accessories



**Wall mounting kit 17,5 mm**  
↳ Art.No.: 9070065  
Details page 332

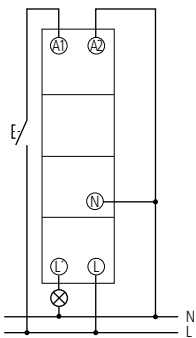


**Front panel kit**  
↳ Art.No.: 9070001  
Details page 332

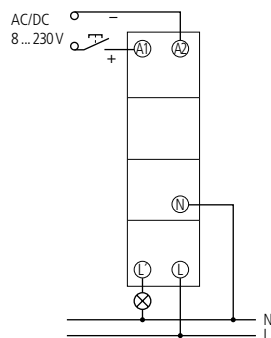


**Diode module**  
for DIMAX 534 plus  
↳ Art.No.: 9070367  
Details page 340

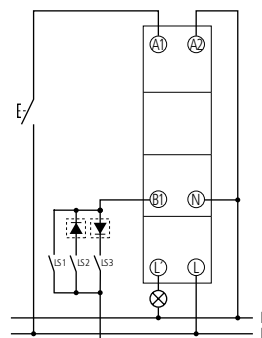
### Connection diagrams



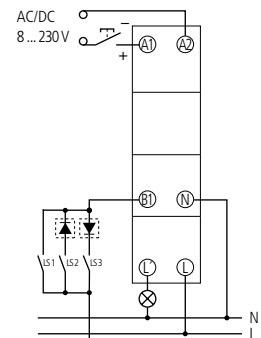
DIMAX 532 plus



DIMAX 532 plus



DIMAX 534 plus



DIMAX 534 plus

# Time and light control

## Dimmer

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### Description

#### Common functions

- Universal dimmer for R, L and C loads with automatic load detection
- Optimised settings for LEDs, incandescent lamps
- Easy installation thanks to a highly compact housing
- Ideal for all dimmable LEDs and halogen lamps
- Memory function saves the most recently set light level value and then dims to this value the next time it is switched on
- Convenient snooze function

#### DIMAX 541 plus E

- Push button operation

#### DIMAX 542 plus S

- Push button operation, setting via potentiometer
- Adjustable minimum brightness for LEDs
- „Gentle” lamp-conserving function for switching on and off
- Automatic detection of the load type
- Overheating protection against overload
- Short-circuit protection

#### DIMAX 544 plus P

- Operation by button or app via Bluetooth Low Energy
- Adjustable minimum brightness for LEDs
- Adjustable dimming response
- Adjustable staircase light function
- App for Android and iOS
- Special load setting
- Sequential scenes
- Password protection possible
- „Gentle” lamp-conserving function for switching on and off
- Automatic detection of the load type
- Overheating protection against overload
- Short-circuit protection

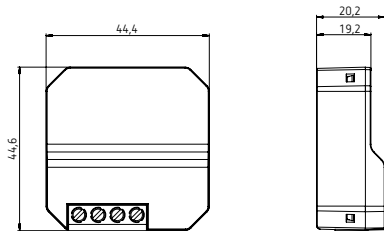
### Product selection

Load detection	Optimized for energy-saving lamps/LED	Light settings	Operation via App possible	Type	Article number
✓	✓	-	-	DIMAX 541 plus E	5410130
		-	-	DIMAX 542 plus S	5420130
		✓	✓	DIMAX 544 plus P	5440130

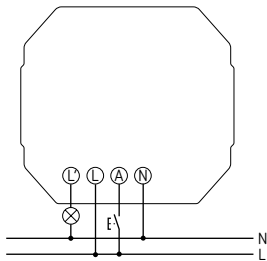
### Technical data

	DIMAX 541 plus E	DIMAX 542 plus S	DIMAX 544 plus P
Operating voltage	230 V AC		
Frequency	50 – 60 Hz		
Stand-by consumption	0,15 W		
Incandescent / halogen lamp load	250 W		
Transformer electronic (C)	250 W		
Energy saving lamps	Trailing edge: 200 W		
LED lamp (typ.)	Trailing edge: 250 W		
Ambient temperature	– 25 °C ... +45 °C		

### Scale drawings



### Connection diagrams



DIMAX 541 plus E/542 plus S











## The right moment

What we don't consume today is still available to us tomorrow and for our children's generation. Often that doesn't mean having to do without anything. It means only using our resources when we actually need them. Theben contributes to this with a multitude of clever innovations such as twilight switches are one of these. That's what we mean by sustainability.

# TIME AND LIGHT CONTROL

## Twilight switches

	Number of channels	Setting range brightness	Switch-on delay	Separate on/off switching delay	External inputs	PC interface	Program	Type of connection	Type	Page
<b>Analogue, DIN rail</b>										
	1	2–2000 lx	20 s	–	–	–	–	Screw terminals	LUNA 108 plus	86
		2–50000 lx	0–20 min	–	–	–	–	DuoFix spring terminals	LUNA 110 plus	86
<b>Digital without clock, DIN rail</b>										
	1	1–99000 lx	0–59 min	✓	1	✓	–	DuoFix spring terminals	LUNA 111 top3	88
	2	1–99000 lx	0–59 min	✓	–	✓	–	DuoFix spring terminals	LUNA 112 top3	88
<b>Digital, DIN rail</b>										
	1	1–99000 lx	0–59 min	✓	1	✓	Weekly program	DuoFix spring terminals	LUNA 121 top3 RC	90
	2	1–99000 lx	0–59 min	✓	–	✓	Weekly program	DuoFix spring terminals	LUNA 122 top3 RC	90
<b>Analogue, Wall installation or mast bracket</b>										
	1	2–200 lx	20 s	–	–	–	–	Screw terminals	LUNA 126 star E	92
		2–2000 lx	2–100 s	–	–	–	–	Screw terminals	LUNA 127 star S	92
<b>Digital, Wall installation or mast bracket</b>										
	1	2–200 lx	0–10 min	✓	–	–	Daily program	Screw terminals	LUNA 129 star-time	92

# Zeit- und Lichtsteuerung

## Dämmerungsschalter, Analog, DIN-Schiene



LUNA 108 plus

LUNA 110 plus

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### Description

#### Common functions

- Analogue twilight switch
- External light sensor included in delivery
- Display of channel and switching status
- Infinitely adjustable switching brightness

#### LUNA 108 plus

- Fixed On and Off switching delay

#### LUNA 110 plus

- Adjustable On and Off switching delay
- DuoFix spring terminals
- Extended brightness levels and adjustable delay
- Five adjustable brightness levels for simple setting of lux value

- Zero-cross switching for relay-saving switching and high lamp loads (not with 24 V devices)
- Permanent OFF and permanent ON function can be set on the potentiometer
- Test function

### Product selection

Setting range brightness	Switch-on delay	Type of connection	Operating voltage	Sensor (included)	Type of protection	Type	Article number
2–2000 lx	20 s	Screw terminals	230 V AC	Flush-mounted light sensor	IP 20, sensor IP 66	LUNA 108 plus EL	1080900
				Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 108 plus AL	1080910
2–50000 lx	0–20 min	DuoFix spring terminals	110–230 V AC	Flush-mounted light sensor	IP 20, sensor IP 66	LUNA 110 plus EL	1080900
				Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 110 plus AL	1080910
			12–24 V UC	Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 110 AL 24V	1104100
				Flush-mounted light sensor	IP 20, sensor IP 65	LUNA 110 EL 24V	1104200

# Zeit- und Lichtsteuerung Dämmerungsschalter, Analog, DIN-Schiene

## Technical data

	LUNA 108 plus	LUNA 110 plus	LUNA 110 24V
Operating voltage	230 V AC	110–230 V AC	12–24 V UC
Frequency	50–60 Hz		
Stand-by consumption	0,3 W	0,4 W	0,2 W
Setting range brightness	2–2000 lx	2–50000 lx	
Switch-on delay	20 s	0–20 min	
Type of contact	NO contact	Changeover contact	
Switching output	Potential-free	Not for SELV	Potential-free
Width	1 module	2 modules	
Switching capacity	16 A (at 250 V AC, $\cos \varphi = 1$ ), 10 AX (Fluorescent lamp load)	16 A (at 250 V AC, $\cos \varphi = 1$ ), 16 AX (Fluorescent lamp load)	16 A (at 250 V AC, $\cos \varphi = 1$ ), 2 AX (Fluorescent lamp load)
Switching capacity min.	–	<10 mA	
Incandescent lamp load	2600 W	2600 W	1400 W
LED lamp < 2 W (typ.)	30 W	50 W	6 W
LED lamp 2–8 W (typ.)	350 W	600 W	20 W
LED lamp > 8 W (typ.)	350 W	600 W	24 W
Energy saving lamps	90 W	270 W	45 W
Ambient temperature	–30 °C ... +55 °C	–25 °C ... +55 °C	–30 °C ... +55 °C
Protection class	II, Sensor III		
Max. cable length to sensor	25 m	100 m	

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## Accessories



**Wall mounting kit 17,5 mm**  
for LUNA 108 plus  
↳ Art.No.: 9070065  
Details page 332



**Wall mounting kit 35 mm**  
for LUNA 110 plus  
↳ Art.No.: 9070064  
Details page 332

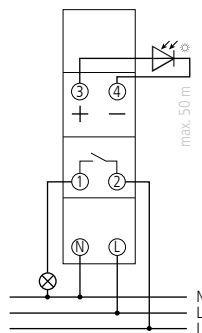


**Front panel kit**  
↳ Art.No.: 9070001  
Details page 332

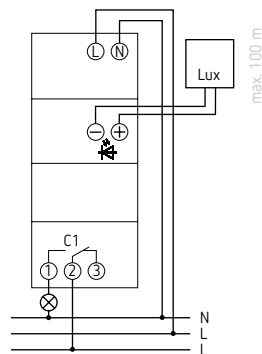
**Surface-mounted light sensor**  
Details page 340

**Flush-mounted light sensor**  
Details page 340

## Connection diagrams



LUNA 108 plus



LUNA 110 plus

# Time and light control

## Twilight switches, Digital without clock, DIN rail



LUNA 111 top3

LUNA 112 top3

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### Description

#### Common functions

- Twilight switch/light controller
- External light sensor included in the scope of supply
- Programming by app possible
- Safe transfer via optional Bluetooth Low Energy with OBELISK top3
- Maximum security against tampering, time switch programmes can only be transferred from the app to the timer if the Bluetooth OBELISK top3 is plugged in
- Switching brightness digitally adjustable
- Adjustable on and off switching delay
- Switching brightness and switching delay can be set separately for switching on and off
- Onscreen display of channel and switching status as well as current lux value

- DuoFix load line connections
- Zero-cross switching for relay-saving switching and high lamp loads
- Up to 4 sensors can be attached
- Up to 10 devices can be connected to a digital sensor
- Interface for OBELISK top2 memory card (PC programming)
- Extended brightness range
- Permanent ON/OFF switching
- Test function
- Switching pre-selection
- Display lighting
- PIN coding
- Hour counter

#### LUNA 111 top3

- 1 channel
- External input

#### LUNA 112 top3

- 2 channels

### Product selection

Number of channels	External inputs	On/off switching delay	Sensor (included)	Protection rating	Type	Article number
1	1	0–59 min	Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 111 top3 AL	1110130
			Flush-mounted light sensor	IP 20, sensor IP 66 (front), ball throw tested   IP 40 (back)	LUNA 111 top3 EL	1110230
2	–	0–59 min	Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 112 top3 AL	1120130
			Flush-mounted light sensor	IP 20, sensor IP 66 (front), ball throw tested   IP 40 (back)	LUNA 112 top3 EL	1120230



### Technical data

	LUNA 111 top3	LUNA 112 top3
Operating voltage	110–230 V AC	
Frequency	50–60 Hz	
Standby output	0.75 W	
Brightness setting range	1–99,000 lx	
On/off switching delay	0–59 min	
Type of contact	Changeover contact	
Width	2 units	
Switching capacity	16 A (at 250 V AC, $\cos \varphi = 1$ ), 10 A (at 250 V AC, $\cos \varphi = 0.6$ )	
Incandescent / halogen lamp load	2600 W	
LED lamp < 2 W (typ.)	50 W	
LED lamp > 2 W (typ.)	600 W	
Fluorescent lamps uncompensated	2600 W	
Fluorescent lamps, parallel-compensated	130 $\mu$ F	
Ambient temperature	–25 °C ... +55 °C	
Protection class	II, sensor III	
Max. line length to sensor	100 m	

### Accessories



#### Bluetooth OBELISK top3

↳ Art.No.: 9070130  
Details page 333



#### OBELISK top2 memory card

↳ Art.No.: 9070404  
Details page 333



#### Front panel mounting kit

↳ Art.No.: 9070001  
Details page 332

#### Light sensors

Details page 340

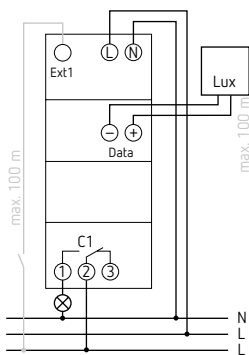
#### Wall mounting kits

Details page 332

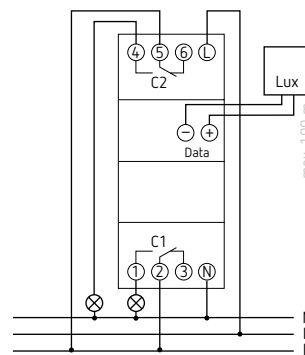
#### Front panel kit

Details page 332

### Connection example



LUNA 111 top3



LUNA 112 top3

# Time and light control

## Twilight switches, Digital, DIN rail, Analogue



LUNA 121 top3

LUNA 122 top3

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### Description

#### Common functions

- Twilight switch/light controller with integrated time switch with weekly programme
- External light sensor included in the scope of supply
- Time synchronisation option via connection of an external antenna, e.g. top2/3 RC-DCF or top2/3 GPS antennas
- 3 special programmes (small annual programme)
- 84 memory locations
- Programming by app possible
- Safe transfer via optional Bluetooth Low Energy with OBELISK top3
- Maximum security against tampering, time switch programmes can only be transferred from the app to the timer if the Bluetooth OBELISK top3 is plugged in
- Switching brightness digitally adjustable
- Adjustable on and off switching delay

- Switching brightness and switching delay can be set separately for switching on and off
- Onscreen display of channel and switching status as well as current lux value
- DuoFix load line connections
- Zero-cross switching for relay-saving switching and high lamp loads
- Up to 4 sensors can be attached
- Up to 10 devices can be connected to a digital sensor
- Interface for OBELISK top2 memory card (PC programming)
- Extended brightness range
- Permanent ON/OFF switching
- Test function
- Switching pre-selection
- Display lighting
- PIN coding
- Hour counter

#### LUNA 121 top3 RC

- 1 channel
- External input

#### LUNA 122 top3 RC

- 2 channels
- Channel switching and channel lock possible

### Product selection

Number of channels	External inputs	On/off switching delay	Sensor (included)	Protection rating	Type	Article number
1	1	0–59 min	Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 121 top3 RC AL	1210130
			Flush-fitting light sensor	IP 20, sensor IP 66 (front), ball throw tested   IP 40 (back)	LUNA 121 top3 RC EL	1210230
2	–	0–59 min	Surface-mounted light sensor	IP 20, sensor IP 55	LUNA 122 top3 RC AL	1220130
			Flush-fitting light sensor	IP 20, sensor IP 66 (front), ball throw tested   IP 40 (back)	LUNA 122 top3 RC EL	1220230

### Technical data

	LUNA 121 top3	LUNA 122 top3
Operating voltage	110–230 V AC	
Frequency	50–60 Hz	
Standby output	0.75 W	
Brightness setting range	1–99,000 lx	
On/off switching delay	0–59 min	
Type of contact	Changeover contact	
Width	2 units	
Switching capacity	16 A (at 250 V AC, $\cos \varphi = 1$ ), 10 A (at 250 V AC, $\cos \varphi = 0.6$ )	
Incandescent/halogen lamp load	2600 W	
LED lamp < 2 W (typ.)	50 W	
LED lamp > 2 W (typ.)	600 W	
Fluorescent lamps uncompensated	2600 W	
Fluorescent lamps, parallel-compensated	130 $\mu$ F	
Ambient temperature	–25 °C ... +55 °C	
Protection class	II, sensor III	
Max. line length to sensor	100 m	

### Accessories



**Bluetooth OBELISK top3**  
↳ Art.No.: 9070130  
Details page 333



**OBELISK top2 memory card**  
↳ Art.No.: 9070404  
Details page 333



**Front panel mounting kit**  
↳ Art.No.: 9070001  
Details page 332

**Light sensors**  
Details page 344

**Wall mounting kits**  
Details page 332

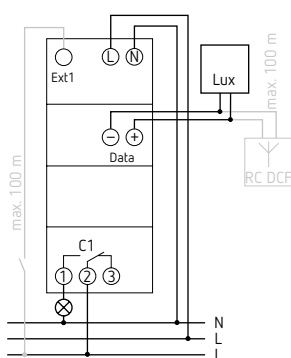
**Front panel kit**  
Details page 332

**Antenna RC-DCF**  
Details page 333

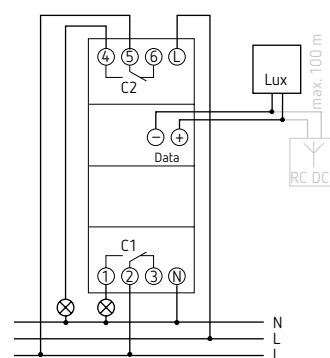
**Antenna RC-GNSS**  
Details page 333

**Antenna RC-GNSS R**  
Details page 333

### Connection example



LUNA 121 top3



LUNA 122 top3

## Time and light control

### Twilight switches, Wall installation or mast bracket



6

LUNA 126 star E

LUNA 127 star S

LUNA 129 star-time

#### Description

##### Common functions

- Twilight switch with integrated light sensor
- Cable feed from the back and from below
- Captive screws
- Large terminal area
- Brightness value can be set without opening the device
- Large light exposure angle (approx. 180 degrees)

##### LUNA 126 star E

- Fixed On and Off switching delay
- Infinitely adjustable switching brightness

##### LUNA 127 star S

- Adjustable On and Off switching delay
- Infinitely adjustable switching brightness
- Test function
- Teach-in function
- Timer function (1 hour on)
- Switchable brightness range: 2-100/100-2000 lux

##### LUNA 129 star-time

- Time function for freely-programmable night switch-off (daily program)
- Adjustable On and Off switching delay

- Easy programming philosophy
- Preset night switch-off (23.00 OFF/5.00 ON), lux values and switch delay
- Automatic summer/winter time correction
- Integrated replaceable lithium battery enables programming before installation
- Switching brightness and switching delay can be set digitally for switching On and Off separately
- Test button
- Time function can be deactivated

#### Product selection

Setting range brightness	Switch-on delay	Switching capacity at 230 V AC	Time program	Type	Article number
2-200 lx	20 s	16 (6) A AX	-	LUNA 126 star E	1260900
2-2000 lx	2-100 s	16 (10) A AX	-	LUNA 127 star S	1270900
2-200 lx	0-10 min	16 (10) A AX	Daily program	LUNA 129 star-time	1290700

# Time and light control

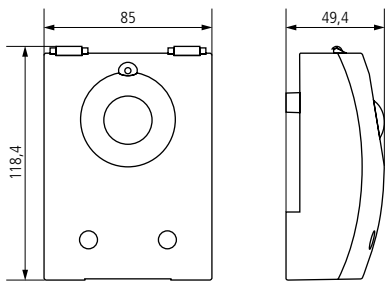
## Twilight switches, Wall installation or mast bracket

### Technical data

	LUNA 126 star E	LUNA 127 star S	LUNA 129 star-time
Operating voltage	230 V AC		220–230 V AC
Frequency	50–60 Hz		
Stand-by consumption	0,6 W		
Setting range brightness	2–200 lx	2–2000 lx	2–200 lx
Switch-on delay	20 s	2–100 s	0–10 min
Type of contact	NO contact		
Switching output	Not potential-free (230 V)		
Switching capacity	16 A (at 230 V AC, $\cos \varphi = 1$ ), 10 AX (at 230 V AC, $\cos \varphi = 0.3$ )		
Incandescent lamp load	2300 W		
Energy saving lamps	90 W		
LED lamp < 2 W (typ.)	30 W	50 W	20 W
LED lamp > 2 W (typ.)	350 W	600 W	180 W
Ambient temperature	-35 °C ... +55 °C		
Type of protection	IP 55		
Protection class	II		

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### Scale drawings



### Accessories



**Adapter plate LUNA star**  
↳ Art.No.: 9070486  
Details page 339

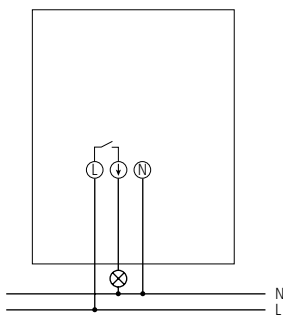


**Mast fixing S**  
↳ Art.No.: 9070928  
Details page 343

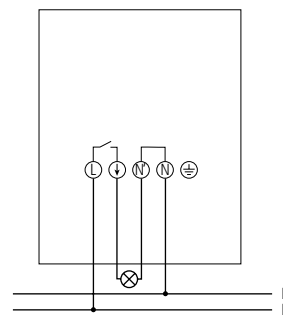


**LUNA star adapter mast fixing**  
↳ Art.No.: 9070793  
Details page 339

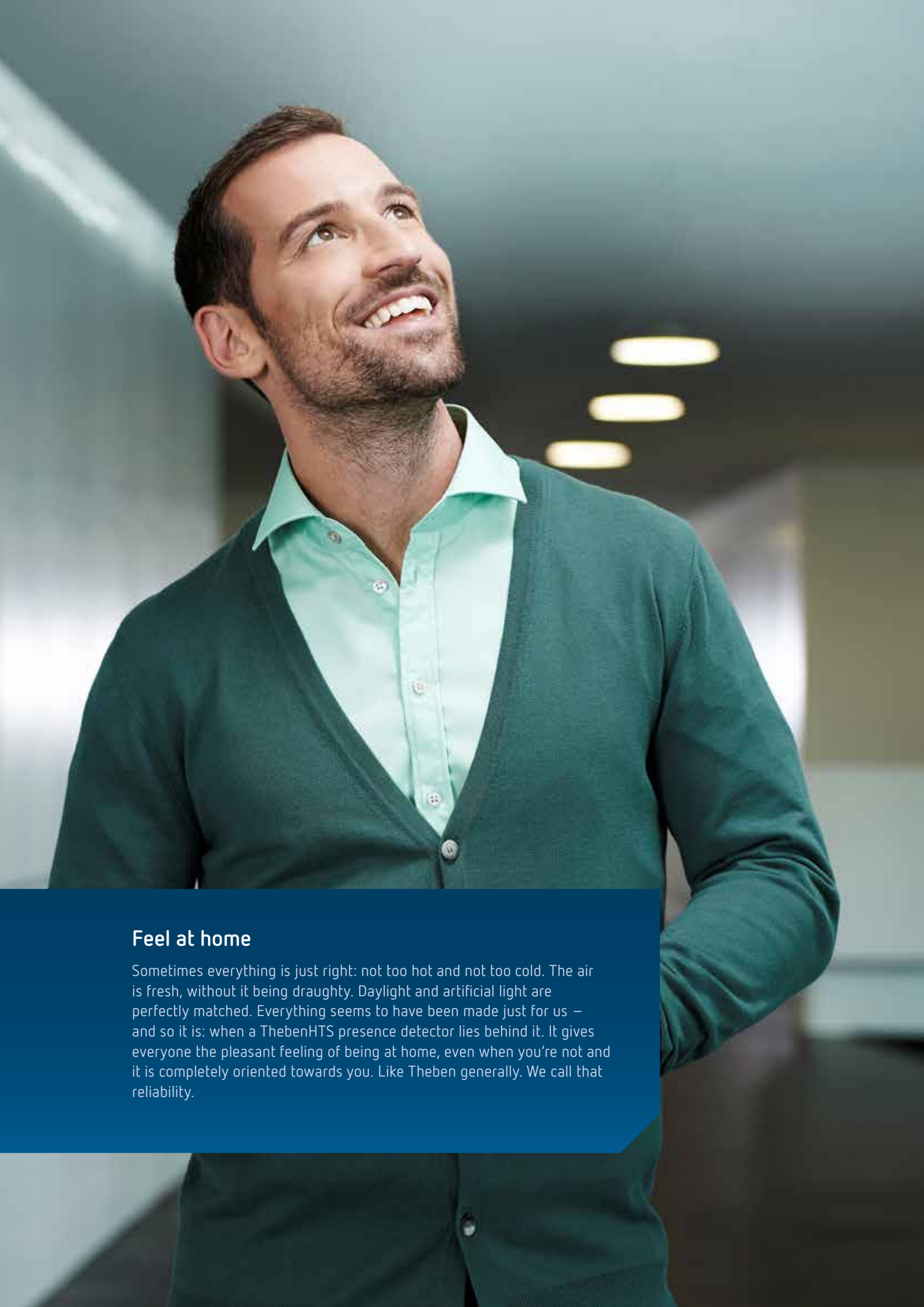
### Connection diagrams



LUNA 126 star E, LUNA 127 star S



LUNA 129 star-time




## Feel at home

Sometimes everything is just right: not too hot and not too cold. The air is fresh, without it being draughty. Daylight and artificial light are perfectly matched. Everything seems to have been made just for us – and so it is: when a ThebenHTS presence detector lies behind it. It gives everyone the pleasant feeling of being at home, even when you're not and it is completely oriented towards you. Like Theben generally. We call that reliability.

# Presence and motion detectors

## Presence detectors

	Installation type	Detection range - Sitting   3,0 m -	Detection range - Walking   3,0 m -	Channel	Function	Type of protection	Type	Page
<b>230 V AC</b>								
	Ceiling	3 m² (ø 2,0 m   360°)	50 m² (ø 8 m   360°) *	Light	Switching	IP 44	thePiccola P360-100 DE	96
		28 m² (ø 6,0 m   360°)	452 m² (ø 24 m   360°)	Light   Presence	Switching	IP 40	SPHINX 104-360/2 DIMplus	98
		3 m² (ø 4,0 m   360°)	50 m² (ø 8 m   360°)	Light	Switching	IP 54	theRonda S360-100 UP	106
				Light   Presence	Switching	IP 54	theRonda S360-101 UP	106
				Light	Switching	IP 54	theRonda S360-100 DE	100
				Light   Presence	Switching	IP 54	theRonda S360-101 DE	100
				Light	Switching	IP 54	theRonda S360-100 AP	102
				Light   Presence	Switching	IP 54	theRonda S360-101 AP	102
				Light	Switching	IP 54	theRonda S360-100 GST	104
		50 m² (ø 8,0 m   360°)	452 m² (ø 24 m   360°)	Light	Switching	IP 54	theRonda P360-100 M	108
				Light   Presence	Switching	IP 54	theRonda P360-101 M	108
				Light	Switching	IP 54	theRonda P360-100 GST	110
		20 m² (4,5 x 4,5 m)	49 m² (7,0 x 7,0 m)	Light   1 – 10 V	Dimming	IP 40	compact office DIM	112
		90 m² (20 x 4,5 m)	135 m² (30,0 x 4,5 m)	Light   Presence	Switching	IP 54	thePassa P360-101 UP	114
		25 m² (5,0 x 5,0 m)	49 m² (7,0 x 7,0 m)	Light	Switching	IP 40	thePrema S360-100 E	116
				Light   Presence	Switching	IP 40	thePrema S360-101 E	116
		49 m² (7,0 x 7,0 m)	81 m² (9,0 x 9,0 m)	Light   Presence	Switching	IP 40	thePrema P360-101 E	118
	Wall	28 m² (ø 7,0 m   180°)	100 m² (ø 16 m   180°)**	Light	Switching	IP 54	PresenceLight 180	120
		-	238 m² (14x17 m   170°)***	Light   Presence	Switching	IP 20	theMura S180-101	174
<b>DALI</b>								
	Ceiling	25 m² (5,0 x 5,0 m)	49 m² (7,0 x 7,0 m)	1 channel Broadcast	DALI	IP 40	thePrema S360 DALI	122
		50 m² (ø 8,0 m   360°)	452 m² (ø 24 m   360°)	3 channels addressable	DALI	IP 54	theRonda P360-330 DALI	124
				1 channel Broadcast	DALI	IP 54	theRonda P360-110 DALI	124
		13 m² (ø 4 m   360°)	50 m² (ø 8 m   360°)	1 channel Broadcast	DALI	IP 54	theRonda S360-110 DALI	124
		90 m² (20 x 4,5 m)	135 m² (30,0 x 4,5 m)	2 channels	DALI	IP 54	thePassa P360-221 DALI	126
		20 m² (4,5 x 4,5 m)	49 m² (7,0 x 7,0 m)	-	-	IP 20	PlanoSpot 360 DALI-2 S	128

\* Mounting height 2,5 m

\*\* Mounting height m

\*\*\* Mounting height 1,1 m

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infra-red presence detector for ceiling installation
- Circular detection area 360°, up to Ø 8 m (50 m<sup>2</sup>)
- Automatic presence- and brightness-dependent control for lighting
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Channel A light: relay, 230 V
- Choice of fully or semi-automatic operation
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Test mode for checking function and detection area
- Connection option for sensor for manual switching
- Extension of detection area via Master/ Slave switching
- Ready for immediate use due to factory presetting
- Diameter of ceiling cutout 34–36 mm
- Remote controllable with optionally remote controls theSenda B, theSenda P and theSenda S

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### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	110–240 V AC	White	thePiccola P360-100 DE WH	2090200

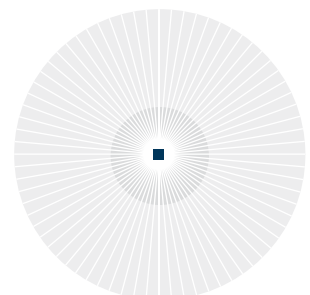
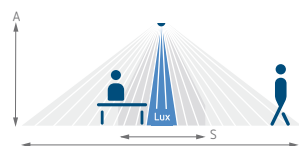
### Technical data

thePiccola P360-100 DE WH			
Operating voltage	110–240 V AC	Fluorescent lamp load (conventional) series-corrected	2000 VA
Frequency	50–60 Hz	Fluorescent lamp load (electronic ballast)	1200 W
Installation height	2–6 m	LED lamp < 2 W (typ.)	55 W
Power consumption	0,4 W	LED lamp > 2 W (typ.)	600 W
Setting range brightness	5–1000 lx	Ambient temperature	–20 °C ... +50 °C
Light switch-off delay	30 s–30 min	Type of protection	IP 44 (Sensor), IP 20 (power module) (when mounted)
Incandescent/ halogen lamp load	2000 W		
Fluorescent lamp load (conventional) not corrected	2000 VA		
Fluorescent lamp load (conventional) parallel-corrected	1300 VA, 140 µF		

### Detection range (Round)

Mounting height (A)	Sitting (S)	Head on to (r)	Diagonally (T)
2,5 m	3 m <sup>2</sup>   2 m	3 m <sup>2</sup>   2 m	50 m <sup>2</sup>   8 m

Detection range according to sensNORM IEC 63180 see datasheet





Accessories



theSenda B

↳ Art.No.: 9070985  
Details page 339



theSenda P

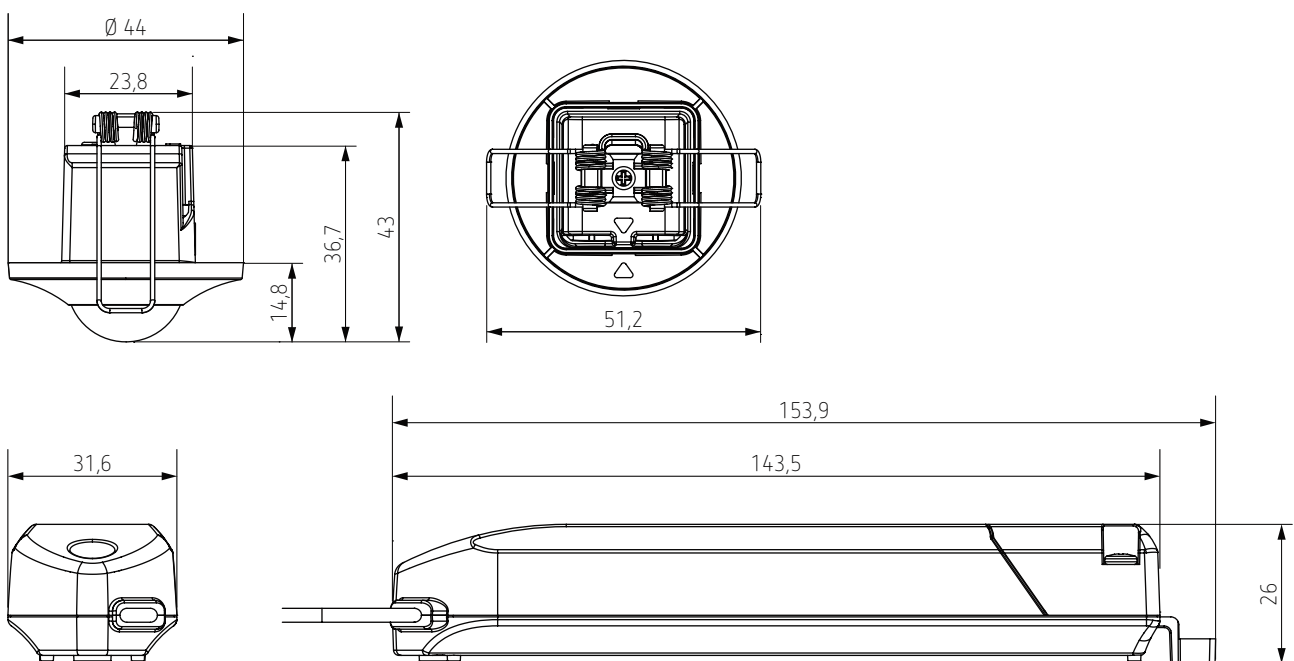
↳ Art.No.: 9070910  
Details page 339



theSenda S

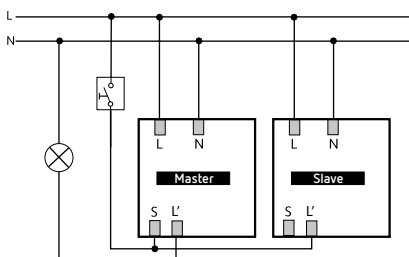
↳ Art.No.: 9070911  
Details page 339

Scale drawings

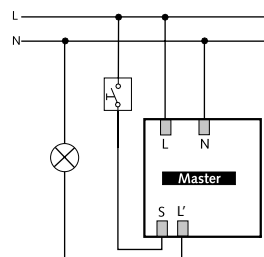


7

Connection diagrams



thePiccola P360-100 DE WH



thePiccola P360-100 DE WH

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Presence detector (PIR)
- 2 channels for application areas class and conference rooms
- Flush-mounted installation
- Channel 2 presence dependent, e.g. for blackboard lighting with programmable switch-off delay or for HVAC control
- Channel 1 for constant light control (1–10 V)
- Lighting control with adjustable light threshold value and adjustable switch-off delay
- Additional pulse function can be selected for combination with staircase timer (ELPA), building automation or PLC
- Test function for checking detection area
- Zero-cross switching
- Automatic lighting control based on presence and brightness
- Detection area can be limited using three enclosed segments
- Mixed light measurement suitable for the control of fluorescent, incandescent and halogen lamps
- Instant start-up possible via factory preset
- Push-button or for manual switching
- Fully or semi-automatic: In „Fully automatic“ mode, the lighting switches on and off automatically according to presence and light In „Semi-automatic“ mode, it must be switched on manually and it switches off automatically

### Product selection

Installation type	Channel	Detection angle	Colour	Type	Article number
Ceiling installation	Light   Presence	360°	Pure white (similar to RAL 9010)	SPHINX 104-360/2 DIMplus	1040374

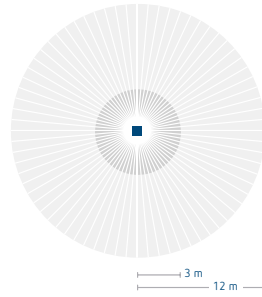
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### Technical data

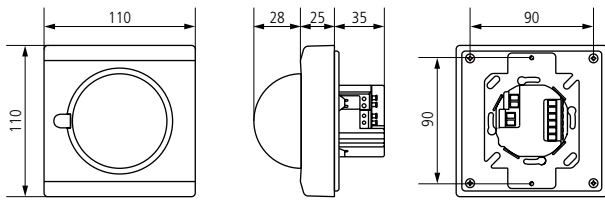
SPHINX 104-360/2 DIMplus			
Operating voltage	230 V AC	Fluorescent lamp load (conventional) not corrected	900 VA
Frequency	50–60 Hz	Fluorescent lamp load (conventional) not corrected (channel presence)	200 VA
Stand-by consumption	1 W	Fluorescent lamp load (conventional) series-corrected	900 VA
Setting range brightness	5–2000 lx	Fluorescent lamp load (conventional) series-corrected (channel presence)	200 VA
Switching capacity light	4 A (at 230 V AC, $\cos \varphi = 1$ )	Fluorescent lamp load (electronic ballast) (channel presence)	60 VA
Switching capacity presence	2 A ( $\cos \varphi = 1$ ) $\mu$ , 250 V AC/30 V DC	Energy saving lamps	4 x 7 W, 3 x 11 W, 3 x 15 W, 3 x 20 W, 3 x 23 W
Detection angle	360°	Energy saving lamps (channel presence)	2 x 7 W, 2 x 11 W, 1 x 15 W, 1 x 20 W, 1 x 23 W
Installation height	2,5–3,5 m	LED lamp < 2 W (typ.)	25 W
Switching output	Not potential-free (230 V)	LED lamp > 2 W (typ.)	90 W
Switching output channel presence	Potential-free	Ambient temperature	–10 °C ... +55 °C
Light switch-off delay	1 s–20 min	Protection class	II
Presence switch-off delay	1–120 min	Type of protection	IP 40 (when fitted)
Incandescent lamp load	1000 W		
Incandescent lamp load (channel presence)	400 W		

### Detection range (Round)

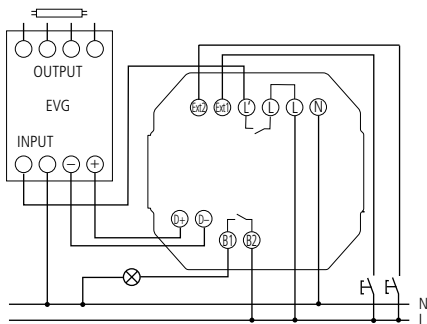
Mounting height	Sitting	Walking diagonally	Walking head on to
2 m	4 m	18 m	9 m
2,5 m	6 m	24 m	12 m
3 m	6 m	24 m	12 m
3,5 m	8 m	26 m	13 m
4 m	6 m	24 m	12 m



### Scale drawings



### Connection diagrams



### Accessories



RC filter

↳ Art.No.: 9070523  
Details page 336

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infra-red presence detector for ceiling installation
- Circular detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Channel A light: relay, 230 V
- Operation as fully automatic device
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Detection sensitivity configurable
- Test mode for checking function and detection area
- Ready for immediate use due to factory presetting (Brightness switching value 300 lux, Time delay 10 min)
- One of these optional remote controls is required for changing the values and attitudes:
  - Management remote control theSenda B
  - Installation remote control theSenda P
  - Optional user remote control: theSenda S

#### theRonda S360-100 DE

- Automatic motion and brightness-dependent control for lighting

#### theRonda S360-101 DE

- Automatic motion and brightness-dependent control for lighting and HVAC
- Channel H, presence: relay, floating e.g. for HVAC control

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### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	230 V AC	White	theRonda S360-100 DE WH	2080560
	Light   Presence	230 V AC	White	theRonda S360-101 DE WH	2080565

Further colours with accessory possible

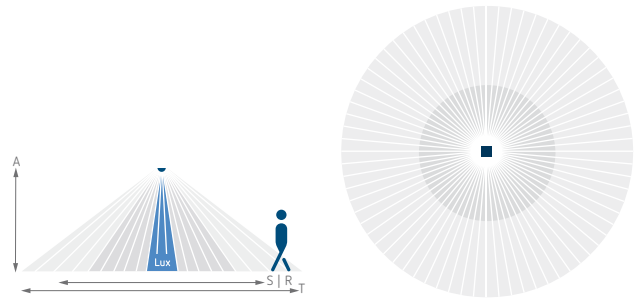
### Technical data

	theRonda S360-100 DE	theRonda S360-101 DE
Operating voltage	230 V AC	
Frequency	50 Hz	
Installation height	2 – 4 m	
Minimum height	> 1,7 m	
Setting range brightness	30 – 3000 lx	
Light switch-off delay	10 s – 60 min	
Incandescent/halogen lamp load	2300 W	
Inrush current	max. 400 A/200 µs	
LED lamp < 2 W (typ.)	25 W	
LED lamp 2 – 8 W (typ.)	70 W	
LED lamp > 8 W (typ.)	80 W	
Switching capacity presence	–	50 W/50 VA, max. 2 A
Ambient temperature	–15 °C ... +50 °C	
Type of protection	IP 54 (when fitted)	

Detection range (Round)

Mounting height (A)	Sitting (S)	Walking head on to (R)	Walking diagonally (T)
2 m	5 m <sup>2</sup>   2,5 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	–	–	50 m <sup>2</sup>   8 m
4 m	–	–	64 m <sup>2</sup>   9 m

Detection range according to sensNORM IEC 63180 see datasheet



Accessories



theSenda B

↳ Art.No.: 9070985  
Details page 339



theSenda P

↳ Art.No.: 9070910  
Details page 339

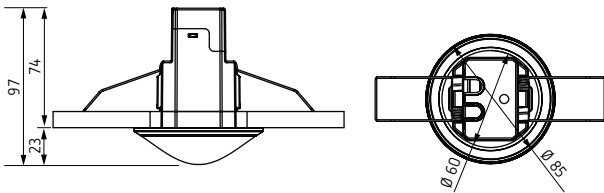
theSenda S

Details page 339

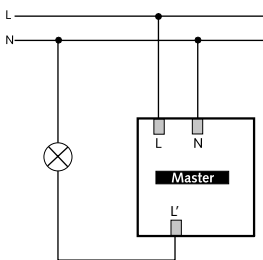
Cover 85 GR

Details page 334

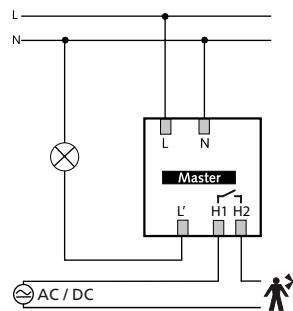
Scale drawings



Connection diagrams



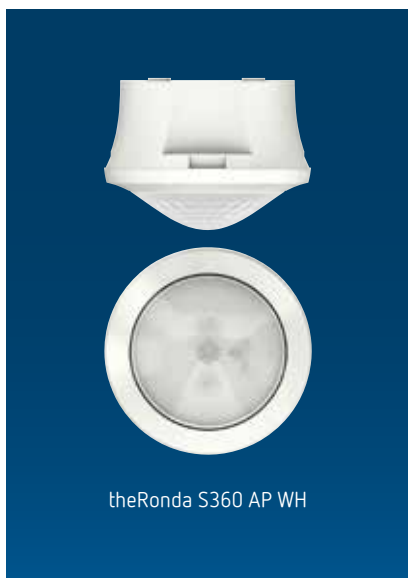
theRonda S360-100 DE



theRonda S360-101 DE

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infra-red presence detector for ceiling installation
  - Circular detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Channel A light: relay, 230 V
  - Operation as fully automatic device
  - Brightness switching value configurable, teach-in function
  - Pulse function for staircase light time switch
  - Time delay configurable
  - Detection sensitivity configurable
  - Test mode for checking function and detection area
  - Ready for immediate use due to factory presetting (Brightness switching value 300 lux, Time delay 10 min)
  - One of these optional remote controls is required for changing the values and attitudes:
    - Management remote control theSenda B
    - Installation remote control theSenda P
    - Optional user remote control: theSenda S
- theRonda S360-100 AP**
- Automatic motion and brightness-dependent control for lighting
- theRonda S360-101 AP**
- Automatic motion and brightness-dependent control for lighting and HVAC
  - Channel H, presence: relay, floating e.g. for HVAC control

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	230 V AC	White	theRonda S360-100 AP WH	2080550
			Grey	theRonda S360-100 AP GR	2080551
	Light   Presence	230 V AC	White	theRonda S360-101 AP WH	2080555
			Grey	theRonda S360-101 AP GR	2080556

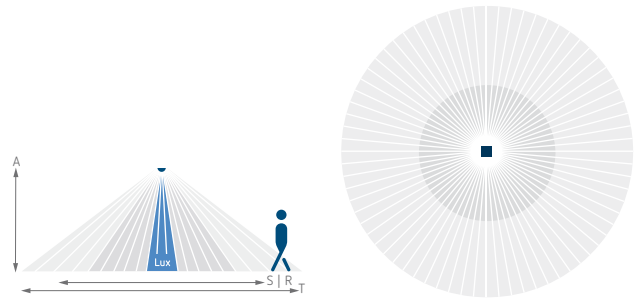
### Technical data

	theRonda S360-100 AP	theRonda S360-101 AP
Operating voltage	230 V AC	
Frequency	50 Hz	
Installation height	2 – 4 m	
Minimum height	> 1,7 m	
Setting range brightness	30 – 3000 lx	
Light switch-off delay	10 s – 60 min	
Incandescent/halogen lamp load	2300 W	
Inrush current	max. 400 A/200 µs	
LED lamp < 2 W (typ.)	25 W	
LED lamp 2 – 8 W (typ.)	70 W	
LED lamp > 8 W (typ.)	250 W	
Switching capacity presence	–	50 W/50 VA, max. 2 A
Ambient temperature	–15 °C ... +50 °C	
Type of protection	IP 54	

Detection range (Round)

Mounting height (A)	Sitting (S)	Walking head on to (R)	Walking diagonally (T)
2 m	5 m <sup>2</sup>   2,5 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	–	–	50 m <sup>2</sup>   8 m
4 m	–	–	64 m <sup>2</sup>   9 m

Detection range according to sensNORM IEC 63180 see datasheet



Accessories



theSenda B

↳ Art.No.: 9070985  
Details page 339



theSenda P

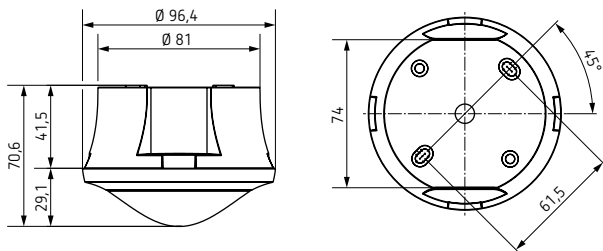
↳ Art.No.: 9070910  
Details page 339



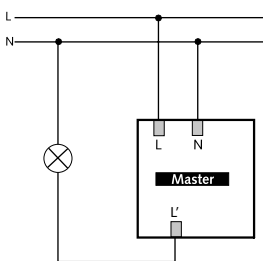
theSenda S

↳ Art.No.: 9070911  
Details page 339

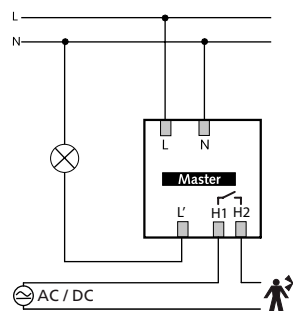
Scale drawings



Connection diagrams



theRonda S360-100 AP



theRonda S360-101 AP

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Presence detector (PIR), with pre-configured cable and Wieland GSTi18 connector, cable length 1.50 meter
- Circular detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
- Automatic motion and brightness-dependent control for lighting
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Channel A light: relay, 230 V
- Operation as fully automatic device
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Detection sensitivity configurable
- Test mode for checking function and detection area
- Ready for immediate use due to factory presetting (Brightness switching value 300 lux, Time delay 10 min)
- One of these optional remote controls is required for changing the values and attitudes:
  - Management remote control theSenda B
  - Installation remote control theSenda P
  - Optional user remote control: theSenda S

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	230 V AC	White	theRonda S360-100 WH GST	2080570
Further colours with accessory possible					

### Technical data

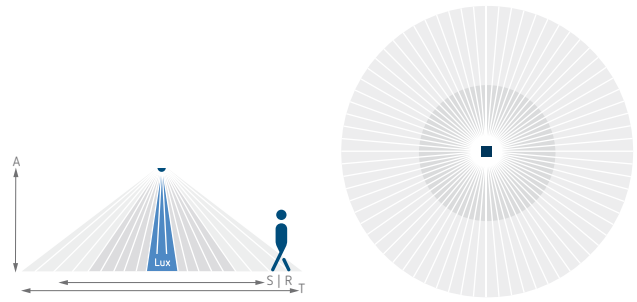
	theRonda S360-100 WH GST
Operating voltage	230 V AC
Frequency	50 Hz
Installation height	2–4 m
Minimum height	> 1,7 m
Setting range brightness	30–3000 lx
Light switch-off delay	10 s–60 min
Incandescent/halogen lamp load	2300 W
Inrush current	max. 400 A/200 µs
LED lamp < 2 W (typ.)	25 W
LED lamp 2–8 W (typ.)	70 W
LED lamp > 8 W (typ.)	250 W
Ambient temperature	–15 °C ... +50 °C
Type of protection	IP 54 (when fitted)



Detection range (Round)

Mounting height (A)	Sitting (S)	Walking head on to (R)	Walking diagonally (T)
2 m	5 m <sup>2</sup>   2,5 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	–	–	50 m <sup>2</sup>   8 m
4 m	–	–	64 m <sup>2</sup>   9 m

Detection range according to sensNORM IEC 63180 see datasheet



Accessories



theSenda B

↳ Art.No.: 9070985  
Details page 339



theSenda P

↳ Art.No.: 9070910  
Details page 339

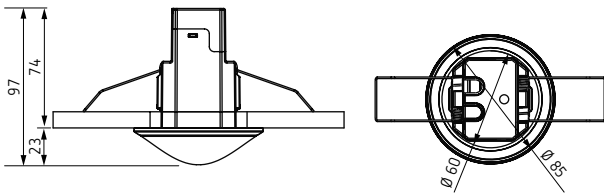
theSenda S

Details page 339

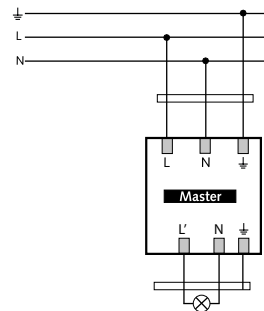
Cover 85 GR

Details page 334

Scale drawings



Connection diagrams



# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infrared presence detector for ceiling mounting
  - Round detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Channel A, light: relay, 230V
  - Choice of fully or semi-automatic operation
  - Adjustable brightness switching value, teach-in function
  - Reduction of switch-off delay time in the event of short presence (brief-presence)
  - Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
  - Pulse function for staircase light time switch
  - Switch-on delay and switch-off delay configurable
  - Sensitivity adjustable
  - Detection area can be limited using cover clip
  - Ready for immediate use due to factory preset
  - An optional remote control is required for changing the values and attitudes
  - Test mode for checking function and detection area
  - Ceiling installation in flush-mounted socket
  - Ceiling installation also possible with surface-mounted frame
  - User remote control theSenda S, service remote control theSenda P, management remote control theSenda B (optional)
- theRonda S360-100 UP**
- Automatic presence- and brightness-dependent control for lighting
- theRonda S360-101 UP**
- Automatic presence- and brightness-dependent control for lighting and HVAC
  - Channel H, presence: relay, floating
  - e.g. for HVAC control
  - Switch-on delay and switch-off delay configurable
  - Extension of detection area via Master/ Slave or Master/Master switching, a maximum of 10 detectors can be switched in parallel with each other
- theRonda S360 Slave UP**
- Slave version for theRonda S360-101 UP
  - Just to be used with theRonda S360-101 UP as Master

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	110–230 V AC	White	theRonda S360-100 UP WH	2080520
	Light   Presence	110–230 V AC	White	theRonda S360-101 UP WH	2080525
	Slave	110–230 V AC	White	theRonda S360 Slave UP WH	2080530

Further colours with accessory possible

### Technical data

	theRonda S360-100 UP	theRonda S360-101 UP	theRonda S360 Slave UP
Operating voltage	110–230 V AC		
Frequency	50–60 Hz		
Installation height	2–4 m		
Minimum height	> 1,7 m		
Power consumption	0,1 W		
Setting range brightness	30–3000 lx		–
Incandescent/halogen lamp load	2300 W		–
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)		–
Inrush current	max. 800 A/200 μs		–
LED lamp < 2 W (typ.)	60 W		–
LED lamp 2–8 W (typ.)	180 W		–
LED lamp > 8 W (typ.)	600 W		–
Switch-on delay presence	–	0 s–10 min/Room surveillance	–

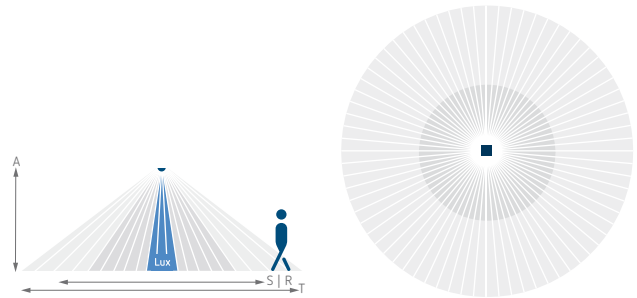
# Presence and motion detectors

## Presence detectors, 230 V AC

	theRonda S360-100 UP	theRonda S360-101 UP	theRonda S360 Slave UP
Presence switch-off delay	–	10 s – 120 min	–
Switching capacity presence	–	50 W / 50 VA	–
Size of concealed housing	Ø 55 mm (NIS, PMI)		
Ambient temperature	–15 °C ... +50 °C		
Type of protection	IP 54 (when fitted)		

### Detection range (Round)

Mounting height (A)	Sitting (S)	Walking head on to (R)	Walking diagonally (T)
2 m	5 m <sup>2</sup>   2,5 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	–	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
4 m	–	13 m <sup>2</sup>   4 m	64 m <sup>2</sup>   9 m



Detection range according to sensNORM IEC 63180 see datasheet

### Accessories



**theSenda B**

↳ Art.No.: 9070985  
Details page 339



**theSenda P**

↳ Art.No.: 9070910  
Details page 339



**theSenda S**

↳ Art.No.: 9070911  
Details page 339

#### QuickSafe

Details page 336

#### Surface frame 110A WH

Details page 334

#### Surface frame 110A GR

Details page 334

#### Ceiling installation box 68A

Details page 334

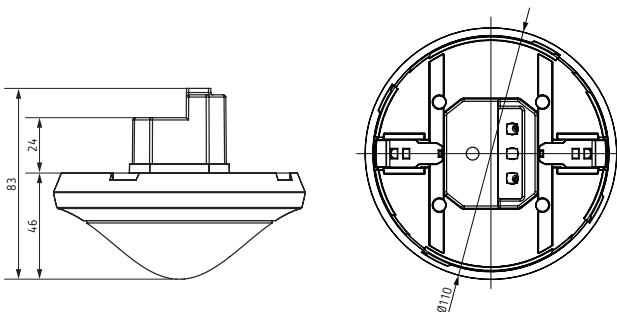
#### Masking clip

Details page 335

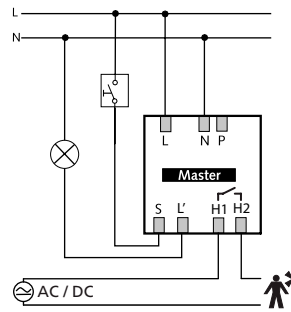
#### Cover 110 GR

Details page 336

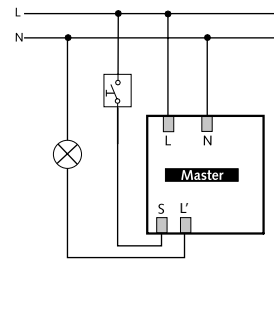
### Scale drawings



### Connection diagrams



theRonda S360-101 UP



theRonda S360-100 UP

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infrared presence detector for ceiling mounting
  - Round detection area 360°, up to Ø 24 m (452 m<sup>2</sup>)
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Channel A, light: relay, 230V
  - Choice of fully or semi-automatic operation
  - Adjustable brightness switching value, teach-in function
  - Reduction of switch-off delay time in the event of short presence (brief-presence)
  - Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
  - Pulse function for staircase light time switch
  - Switch-on delay and switch-off delay configurable
  - Sensitivity adjustable
  - Detection area can be limited using cover clip
  - Ready for immediate use due to factory preset
  - Test mode for checking function and detection area
  - Extension of detection area via Master/Slave or Master/Master switching, a maximum of 10 detectors can be switched in parallel with each other
  - Ceiling installation in flush-mounted socket
  - Ceiling installation also possible with surface-mounted frame
  - User remote control theSenda S, management remote control theSenda B (optional)
- theRonda P360-100 M**
- Automatic presence- and brightness-dependent control for lighting
- theRonda P360-101 M**
- Automatic presence- and brightness-dependent control for lighting and HVAC
  - Channel H, presence: relay, floating
  - e.g. for HVAC control
- theRonda P360 Slave**
- Slave version for theRonda P360 M
  - Just to be used with theRonda P360 M as Master

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	110–230 V AC	White	theRonda P360-100 M UP WH	2080020
	Light   Presence	110–230 V AC	White	theRonda P360-101 M UP WH	2080025
	Slave	110–230 V AC	White	theRonda P360 Slave UP WH	2080030

Further colours with accessory possible

### Technical data

	theRonda P360-100 M UP	theRonda P360-101 M UP	theRonda P360 Slave UP
Operating voltage	110–230 V AC		
Frequency	50–60 Hz		
Installation height	2–15 m		
Minimum height	> 1,7 m		
Power consumption	0,15 W		
Setting range brightness	30–3000 lx		–
Light switch-off delay	10 s–60 min		–
Incandescent/halogen lamp load	2300 W		–
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)		–
Inrush current	max. 800 A/200 μs		–
LED lamp < 2 W (typ.)	60 W		–
LED lamp 2–8 W (typ.)	180 W		–
LED lamp > 8 W (typ.)	600 W		–
Switch-on delay presence	–	0 s–10 min	–

# Presence and motion detectors

## Presence detectors, 230 V AC

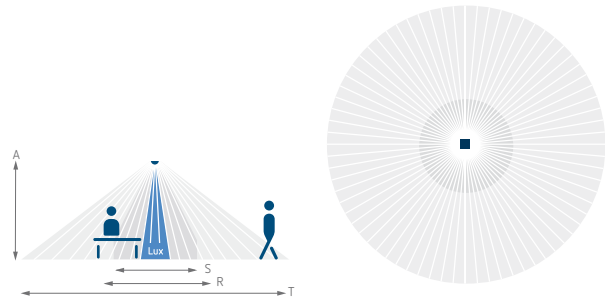
	theRonda P360-100 M UP	theRonda P360-101 M UP	theRonda P360 Slave UP
Presence switch-off delay	–	10 s – 120 min	–
Switching capacity presence	–	50 W / 50 VA	–
Size of concealed housing	Ø 55 mm (NIS, PMI)		
Ambient temperature	–15 °C ... +50 °C		
Type of protection	IP 54 (when fitted)		

### Detection range (Round)

Mounting height (A)	Sitting (S)	Walking diagonally (T)	Walking head on to (R)
2 m	16 m²   4,5 m	380 m²   22 m	28 m²   6 m
2,5 m	24 m²   5,5 m	415 m²   23 m	38 m²   7 m
3 m	28 m²   6 m	452 m²   24 m	50 m²   8 m
3,5 m	38 m²   7 m	452 m²   24 m	50 m²   8 m
6 m	–	452 m²   24 m	50 m²   8 m
10 m	–	491 m²   25 m	50 m²   8 m

With a mounting height of more than 3.5 m walking motions are necessary and the detection areas of several detectors should overlap in the marginal zone. All figures are up to values. The detection range decreases with increasing temperatures.

Detection range according to sensNORM IEC 63180 see datasheet



### Accessories



**theSenda B**

↳ Art.No.: 9070985  
Details page 339



**theSenda P**

↳ Art.No.: 9070910  
Details page 339



**theSenda S**

↳ Art.No.: 9070911  
Details page 339

#### QuickSafe

Details page 336

#### Surface frame 110A WH

Details page 334

#### Surface frame 110A GR

Details page 334

#### Ceiling installation box 68A

Details page 334

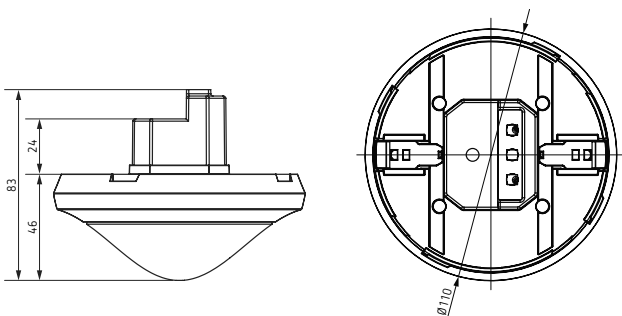
#### Masking clip

Details page 335

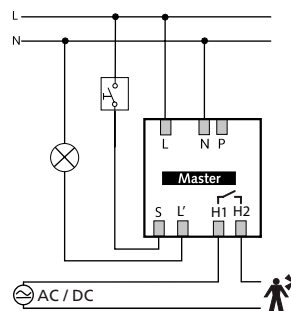
#### Cover 110 GR

Details page 334

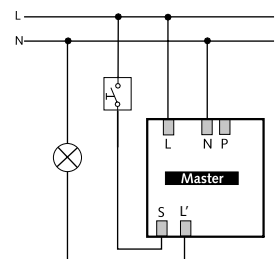
### Scale drawings



### Connection diagrams



theRonda P360-101 M UP



theRonda P360-100 M UP

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Presence detector (PIR), with pre-configured cable and Wieland GSTi18 connector, cable length 1.50 meter
- Round detection area 360°, up to Ø 24 m (452 m<sup>2</sup>)
- Automatic presence- and brightness-dependent control for lighting
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Channel A, light: relay, 230 V
- Choice of fully or semi-automatic operation
- Adjustable brightness switching value, teach-in function
- Reduction of switch-off delay time in the event of short presence (brief-presence)
- Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
- Pulse function for staircase light time switch
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Ready for immediate use due to factory preset
- Test mode for checking function and detection area
- Ceiling installation in flush-mounted socket
- Ceiling installation also possible with surface-mounted frame
- User remote control theSenda S, management remote control theSenda B (optional)

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	110–230 V AC	White	theRonda P360-100 WH GST	2080010

### Technical data

	theRonda P360-100 WH GST
Operating voltage	110–230 V AC
Frequency	50–60 Hz
Installation height	2–15 m
Minimum height	> 1,7 m
Power consumption	0,15 W
Setting range brightness	30–3000 lx
Light switch-off delay	10 s–60 min
Incandescent/halogen lamp load	2300 W
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)
LED lamp < 2 W (typ.)	60 W
LED lamp 2–8 W (typ.)	180 W
LED lamp > 8 W (typ.)	600 W
Ambient temperature	–15 °C ... +50 °C
Type of protection	IP 54 (when fitted)

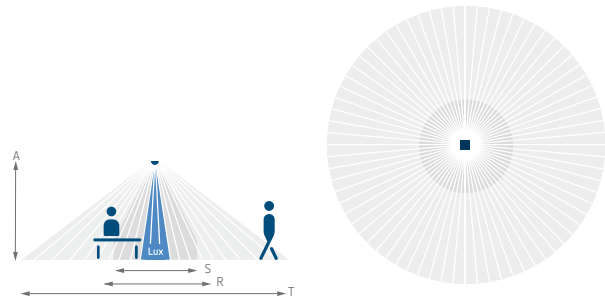
7

### Detection range (Round)

Mounting height (A)	Sitting (S)	Walking diagonally (T)	Walking head on to (R)
2 m	16 m <sup>2</sup>   4,5 m	380 m <sup>2</sup>   22 m	28 m <sup>2</sup>   6 m
2,5 m	24 m <sup>2</sup>   5,5 m	415 m <sup>2</sup>   23 m	38 m <sup>2</sup>   7 m
3 m	28 m <sup>2</sup>   6 m	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
3,5 m	38 m <sup>2</sup>   7 m	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
6 m	–	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
10 m	–	491 m <sup>2</sup>   25 m	50 m <sup>2</sup>   8 m

With a mounting height of more than 3.5 m walking motions are necessary and the detection areas of several detectors should overlap in the marginal zone. All figures are up to values. The detection range decreases with increasing temperatures.

Detection range according to sensNORM IEC 63180 see datasheet



### Accessories



theSenda B

↳ Art.No.: 9070985  
Details page 339



theSenda P

↳ Art.No.: 9070910  
Details page 339



theSenda S

↳ Art.No.: 9070911  
Details page 339

#### Masking clip

Details page 335

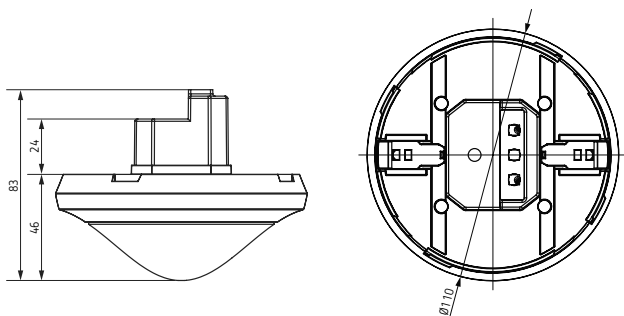
#### QuickSafe

Details page 336

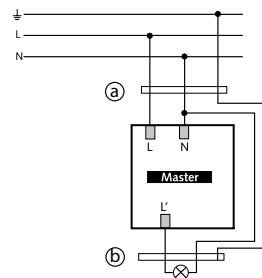
#### Cover 110 GR

Details page 334

### Scale drawings

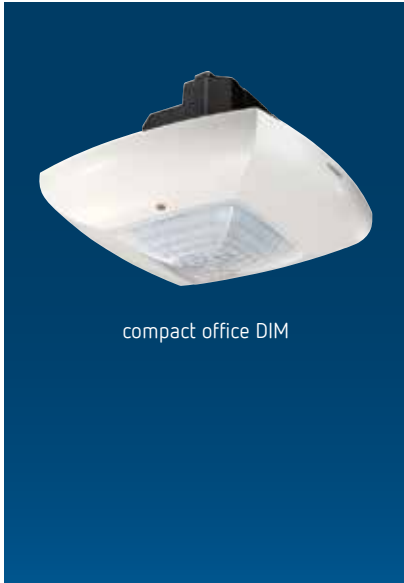


### Connection diagrams



# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Presence detector (PIR)
- Automatic control of lighting depending on presence and brightness
- Square detection area allows accurate and simple planning
- Light switching output (relay, 230 V) and 1–10 V interface
- Mixed light measurement, suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Brightness threshold, self-learning switch-off delay and stand-by time adjustable
- The stand-by time guarantees a minimum brightness and provides for a sense of security in hospital and care environments as the lighting does not switch off when areas are unoccupied but remains in stand-by mode for the set time
- Choice of fully or semi automatic operation: In „Semi-automatic“ (absence detection) mode the light must be switched on manually and switches off automatically
- Parameters can be set using the potentiometers or via the optional service remote controls
- Optional user remote control
- Ready for use by ex-factory set items
- Test operation to check detection area and installation
- Master/slave or master/master parallel switching: Up to ten detectors can be connected with each other to extend the detection area
- Ceiling mounting in flush-mounted box
- Possibility of surface mounting by using a surface frame

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light   1–10 V	230 V AC	Pure white (similar to RAL 9010)	compact office DIM	2010001

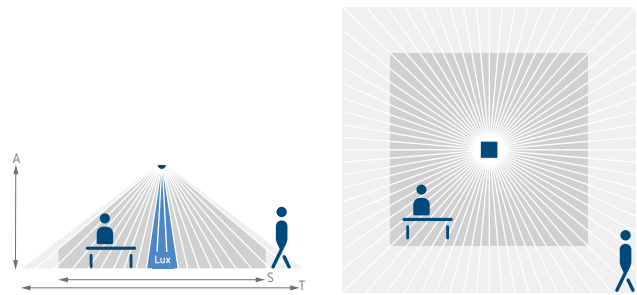
### Technical data

	compact office DIM
Operating voltage	230 V AC
Frequency	50 Hz
Installation height	2–3,5 m
Power consumption	0,8 W
Setting range brightness	Approx. 10–1500 lx/on
Light switch-off delay	10 s–20 min
Stand-by time light	0 s–60 min/on
Stand-by brightness	10 %
Type of contact light	Relay 230 V
Resistive load	1400 VA
Incandescent/halogen lamp load	1200 W
Compact and fluorescent lamps	960 VA (cos φ = 0,8), 580 VA (cos φ = 0,5)
Compact and fluorescent lamps (max. number of electronic ballasts)	10 x (1 x 54/58 W), 5 x (2 x 54/58 W), 16 x (1 x 35/36 W), 8 x (2 x 35/36 W), 16 x (smaller than 35/36 W)
Control output	1–10 V DC/100 mA as per EN 60929/A1
Size of concealed housing	Ø 55 mm (NIS, PMI)
Ambient temperature	0 °C ... +50 °C
Type of protection	IP 40 (when fitted)



Detection range (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	20 m <sup>2</sup>   4,5 m x 4,5 m ± 0,5 m	9 m <sup>2</sup>   3 m x 3 m
2,5 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	16 m <sup>2</sup>   4 m x 4 m
3 m	49 m <sup>2</sup>   7 m x 7 m ± 1 m	20 m <sup>2</sup>   4,5 m x 4,5 m
3,5 m	64 m <sup>2</sup>   8 m x 8 m ± 1 m	-



Accessories

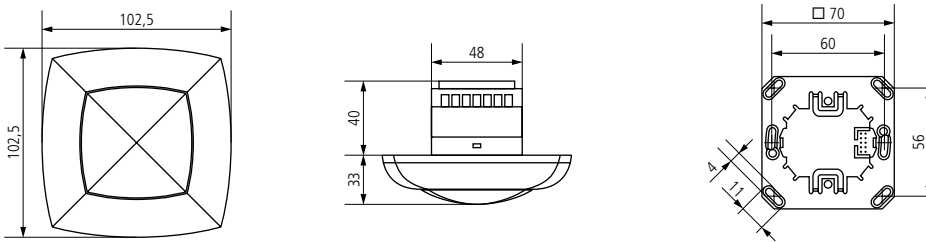


Ceiling installation box 68A  
Details page 334

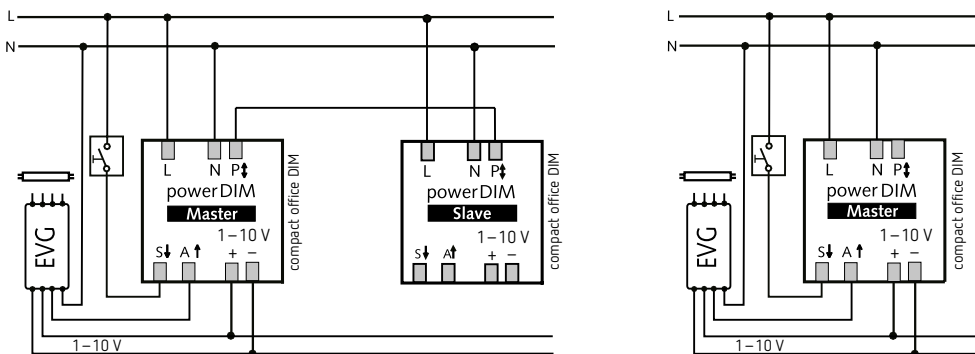
QuickSafe  
Details page 334

Surface frame compact  
↳ Art.No.: 9070514  
Details page 334

Scale drawings



Connection diagrams



# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infrared presence detector for ceiling mounting
  - Square detection area for corridors and storage areas
  - Detection area with 2 individually connectable and disconnectable detection zones, each 15 x 5 m (total 30 x 5 m)
  - Automatic presence- and brightness-dependent control for lighting and HVAC
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Channel A, light: relay, 230V
  - Choice of fully or semi-automatic operation
  - Adjustable brightness switching value, teach-in function
  - Reduction of switch-off delay time in the event of short presence (brief-presence)
  - Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
  - Pulse function for staircase light time switch
  - Channel H, presence: relay, floating
  - e.g. for HVAC control
  - Switch-on delay and switch-off delay configurable
  - Sensitivity adjustable
  - Detection area can be limited using cover clip
  - Ready for immediate use due to factory preset
  - Test mode for checking function and detection area
  - Extension of detection area via Master/ Slave or Master/Master switching, a maximum of 10 detectors can be switched in parallel with each other
  - Ceiling installation in flush-mounted socket
  - Ceiling installation also possible with surface-mounted frame
  - User remote control theSenda S, management remote control theSenda B (optional)
- thePassa P360 Slave**
- Slave version for thePassa P360
  - Just to be used with thePassa P360 as Master

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### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light   Presence	110–230 V AC	White	thePassa P360-101 UP WH	2010300
	Slave	110–230 V AC	White	thePassa P360 Slave UP WH	2010330

Further colours with accessory possible

### Technical data

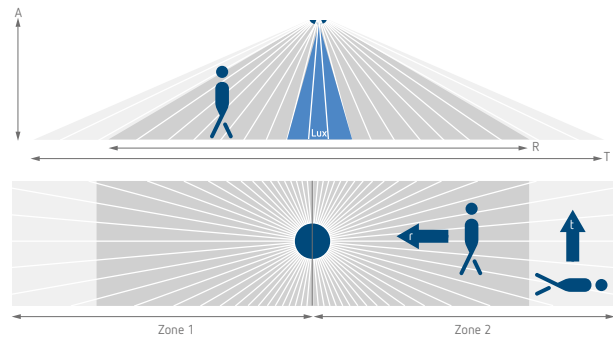
	thePassa P360-101 UP	thePassa P360 Slave UP
Operating voltage	110–230 V AC	
Frequency	50–60 Hz	
Installation height	2–15 m	
Minimum height	> 1,7 m	
Power consumption	ca. 0,1 W	
Setting range brightness	30–3000 lx	–
Incandescent/ halogen lamp load	2300 W	–
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)	–
Inrush current	max. 800 A/200 μs	–
LED lamp < 2 W (typ.)	60 W	–
LED lamp 2-8 W (typ.)	180 W	–
LED lamp > 8 W (typ.)	600 W	–
Switch-on delay presence	0 s–10 min/Room surveillance	–
Presence switch-off delay	10 s–120 min	–
Switching capacity presence	50 W/50 VA	–
Size of concealed housing	Ø 55 mm (NIS, PMI)	
Ambient temperature	–15 °C ... +50 °C	
Type of protection	IP 54 (when fitted)	

# Presence and motion detectors

## Presence detectors, 230 V AC

### Detection range (Rectangular)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	56 m <sup>2</sup>   16 m x 3,5 m	56 m <sup>2</sup>   16 m x 3,5 m
2,5 m	72 m <sup>2</sup>   18 m x 4 m	88 m <sup>2</sup>   22 m x 4 m
3 m	90 m <sup>2</sup>   20 m x 4,5 m	135 m <sup>2</sup>   30 m x 4,5 m
3,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
4 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
4,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
5,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
6 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m



Detection range according to sensNORM IEC 63180 see datasheet

### Accessories



**theSenda B**

↳ Art.No.: 9070985

Details page 339



**theSenda P**

↳ Art.No.: 9070910

Details page 339



**theSenda S**

↳ Art.No.: 9070911

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#### QuickSafe

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#### Surface frame 110A WH

Details page 334

#### Surface frame 110A GR

Details page 334

#### Ceiling installation box 68A

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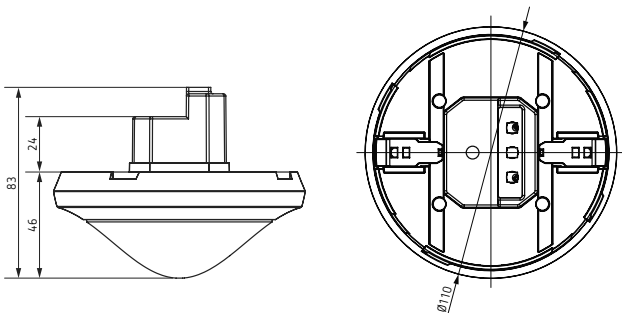
#### Masking clip

Details page 335

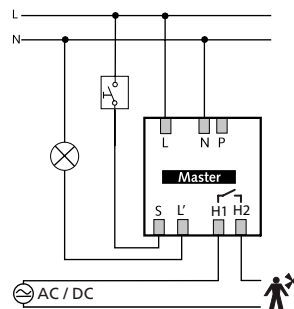
#### Cover 110 GR

Details page 334

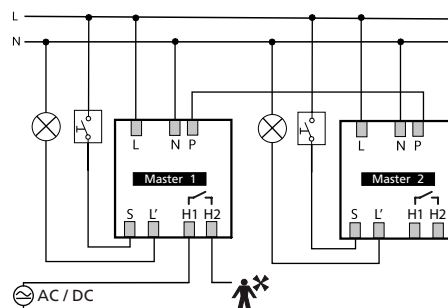
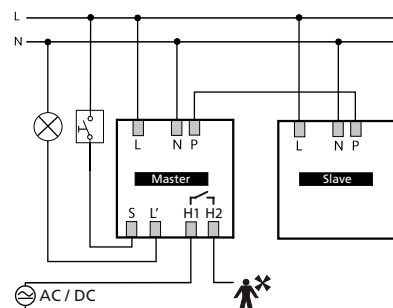
### Scale drawings



### Connection diagrams

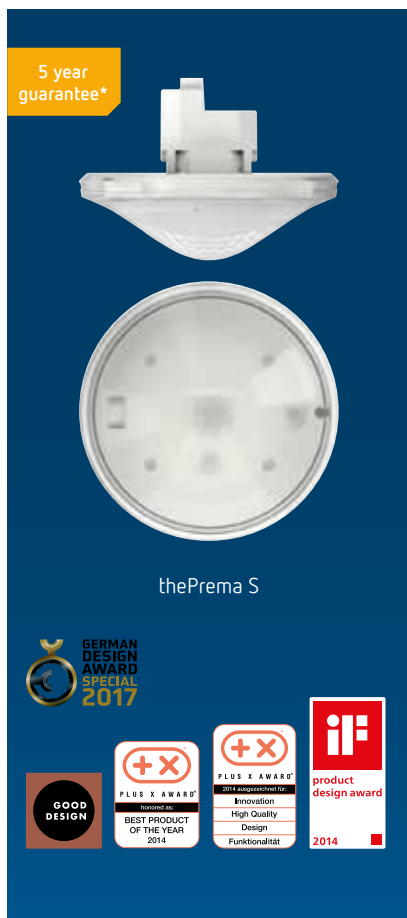


### Connection diagrams



# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Passive infrared presence detector for ceiling mounting
  - Square detection area 360° (up to 64 m²) for reliable and easy planning
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Choice of fully or semi-automatic (absence detection) operation
  - Adjustable brightness switching value, teach-in function
  - Self-learning time delay
  - Reduction of switch-off delay time in the event of short presence (brief-presence)
  - Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
  - Pulse function for staircase light time switch
  - Switch-on delay and switch-off delay configurable
  - Room monitoring with selective movement detection
  - Exceptionally easy configuration of the energy-saving behaviour with the new «eco plus» function
  - Staircase time function
  - User remote control theSenda S, management remote control theSenda B (optional)
  - Ready for immediate use due to factory preset
  - Test mode for checking function and detection area
  - Extension of detection area via Master/Slave or Master/Master switching, a maximum of 10 detectors can be switched in parallel with each other
  - Ceiling installation in flush-mounted socket
  - Ceiling installation also possible with surface-mounted frame
- thePrema S360-101 E**
- Automatic presence- and brightness-dependent control for lighting and HVAC
  - Channel A, light: relay, 230 V
  - Channel H, presence: relay, floating e.g. for HVAC control
  - Operating mode of light and presence relay can be flexibly selected using the remote control theSenda B
- thePrema S360-100 E**
- Automatic presence- and brightness-dependent control for lighting
  - Channel A, light: relay, 230V
- thePrema S360 Slave E**
- Slave version for thePrema
  - Just to be used with thePrema as Master

\* According to guarantee conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light   Presence	110–230 V AC	White	thePrema S360-101 E UP WH	2070605
			Grey	thePrema S360-101 E UP GR	2070606
	Light	110–230 V AC	White	thePrema S360-100 E UP WH	2070600
			Grey	thePrema S360-100 E UP GR	2070601
	Slave	110–230 V AC	White	thePrema S360 Slave E UP WH	2070630
			Grey	thePrema S360 Slave E UP GR	2070631

### Technical data

	thePrema S360-101 E UP	thePrema S360-100 E UP	thePrema S360 Slave E UP
Operating voltage	110–230 V AC		
Frequency	50–60 Hz		
Installation height	2–3,5 m		
Power consumption	0,1 W		
Setting range brightness	Approx. 5–3000 lx/on		–
Light switch-off delay	Pulse (0,5 s), 10 s–60 min		–
Type of contact light	Relay 230 V / 10 A µ-contact		–
Incandescent/halogen lamp load	2300 W		–
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)		–
Inrush current	max. 800 A / 200 µs		–

# Presence and motion detectors

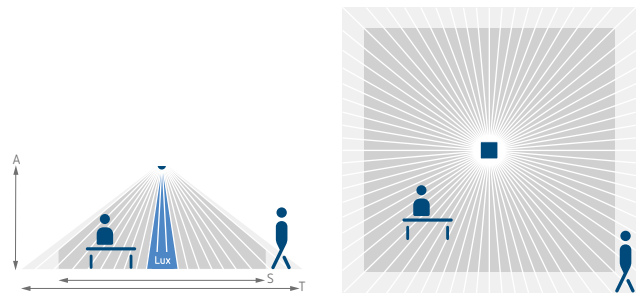
## Presence detectors, 230 V AC

	thePrema S360-101 E UP	thePrema S360-100 E UP	thePrema S360 Slave E UP
Compact and fluorescent lamps (max. number of electronic ballasts)	16 x 54/58 W, 24 x 35/36 W, 8 x 2 x 54/58 W, 12 x 2 x 35/36 W		-
LED lamp < 2 W (typ.)	60 W		-
LED lamp 2-8 W (typ.)	180 W		-
LED lamp > 8 W (typ.)	600 W		-
Switch-on delay presence	0 s-10 min/Room surveillance		-
Presence switch-off delay	10 s-120 min		-
Type of contact presence	Relay potential-free, 220 V DC / 250 V AC		-
Switching capacity presence	50 W/50 VA (max. 2 A), min. 0,5 mV/10 mA		-
Size of concealed housing	Ø 55 mm (NIS, PMI)		
Ambient temperature	0 °C ... +50 °C		
Type of protection	IP 40 (when fitted)		

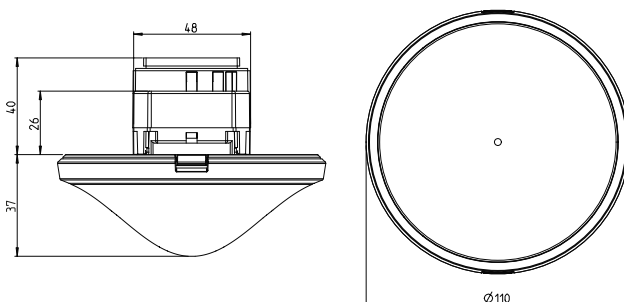
### Detection range (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	20 m²   4,5 m x 4,5 m ± 0,5 m	9 m²   3 m x 3 m
2,5 m	36 m²   6 m x 6 m ± 0,5 m	16 m²   4 m x 4 m
3 m	49 m²   7 m x 7 m ± 1 m	25 m²   5 m x 5 m
3,5 m	64 m²   8 m x 8 m ± 1 m	-

Detection range according to sensNORM IEC 63180 see datasheet



### Scale drawings



### Accessories



**QuickSafe**  
Details page 336

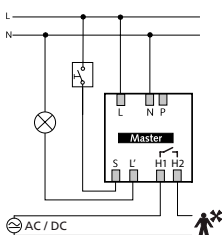
**theSenda B**  
Details page 339

**theSenda S**  
Details page 339

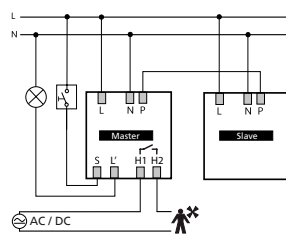
**Surface frame 110A**  
Details page 334

**Ceiling installation box 68A**  
Details page 334

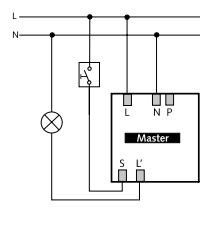
### Connection diagrams



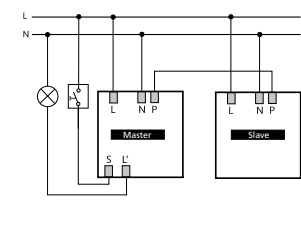
thePrema S360-101 E



thePrema S360-101 E,  
thePrema S360 Slave E



thePrema S360-100 E



thePrema S360-100 E,  
thePrema S360 Slave E

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

#### thePrema P360-101 E

- Passive infrared presence detector for ceiling mounting
- Square detection area 360° (up to 100 m²) for reliable and easy planning
- Automatic presence- and brightness-dependent control for lighting and HVAC
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Light measurement can be switched to spot or wide measurement
- Channel A, light: relay, 230 V
- Choice of fully or semi-automatic (absence detection) operation
- Adjustable brightness switching value, teach-in function
- Self-learning time delay
- Reduction of switch-off delay time in the event of short presence (brief-presence)
- Connection option for sensors or switches for manual switching with automatic recognition of sensor/switch
- Pulse function for staircase light time switch
- Channel H, presence: relay, floating e.g. for HVAC control

- Switch-on delay and switch-off delay configurable
  - Room monitoring with selective movement detection
  - Exceptionally easy configuration of the energy-saving behaviour with the new «eco plus» function
  - Staircase time function
  - Operating mode of light and presence relay can be flexibly selected using the remote control theSenda B
  - User remote control theSenda S, management remote control theSenda B (optional)
  - Ready for immediate use due to factory preset
  - Test mode for checking function and detection area
  - Extension of detection area via Master/Slave or Master/Master switching, a maximum of 10 detectors can be switched in parallel with each other
  - Ceiling installation in flush-mounted socket
  - Ceiling installation also possible with surface-mounted frame
- thePrema P360 Slave E**
- Slave version for thePrema
  - Just to be used with thePrema as Master

\* According to guarantee conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light   Presence	110–230 V AC	White	thePrema P360-101 E UP WH	2070105
			Grey	thePrema P360-101 E UP GR	2070106
	Slave	110–230 V AC	White	thePrema P360 Slave E UP WH	2070130
			Grey	thePrema P360 Slave E UP GR	2070131

### Technical data

	thePrema P360-101 E UP	thePrema P360 Slave E UP
Operating voltage	110–230 V AC	
Frequency	50–60 Hz	
Installation height	2–10 m	
Power consumption	0,1 W	
Setting range brightness	Approx. 5–3000 lx/on	–
Light switch-off delay	Pulse (0,5 s), 10 s–60 min	–
Type of contact light	Relay 230 V/10 A μ-contact	–
Incandescent/halogen lamp load	2300 W	–
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)	–
Inrush current	max. 800 A/200 μs	–
Compact and fluorescent lamps (max. number of electronic ballasts)	16 x 54/58 W, 24 x 35/36 W, 8 x 2 x 54/58 W, 12 x 2 x 35/36 W	–
LED lamp < 2 W (typ.)	60 W	–
LED lamp 2–8 W (typ.)	180 W	–

# Presence and motion detectors

## Presence detectors, 230 V AC

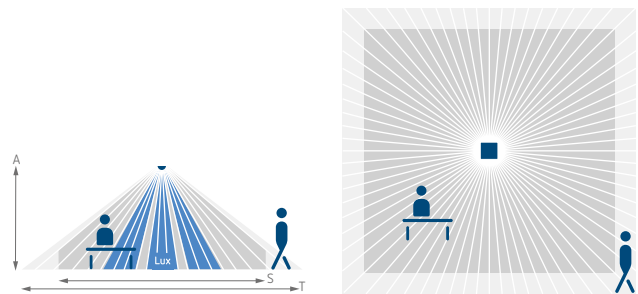
	thePrema P360-101 E UP	thePrema P360 Slave E UP
LED lamp > 8 W (typ.)	600 W	-
Switch-on delay presence	0 s – 10 min/Room surveillance	-
Presence switch-off delay	10 s – 120 min	-
Type of contact presence	Relay potential-free, 220 V DC / 250 V AC	-
Switching capacity presence	50 W / 50 VA (max. 2 A), min. 0,5 mV / 10 mA	-
Size of concealed housing	Ø 55 mm (NIS, PMI)	
Ambient temperature	0 °C ... +50 °C	
Type of protection	IP 40 (when fitted)	

### Detection range (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	20 m <sup>2</sup>   4,5 m x 4,5 m
2,5 m	64 m <sup>2</sup>   8 m x 8 m ± 0,5 m	36 m <sup>2</sup>   6 m x 6 m
3 m	81 m <sup>2</sup>   9 m x 9 m ± 1 m	49 m <sup>2</sup>   7 m x 7 m
3,5 m	100 m <sup>2</sup>   10 m x 10 m ± 1 m	64 m <sup>2</sup>   8 m x 8 m
6 m	144 m <sup>2</sup>   12 m x 12 m ± 1,5 m	-
10 m	400 m <sup>2</sup>   20 m x 20 m ± 2 m	-

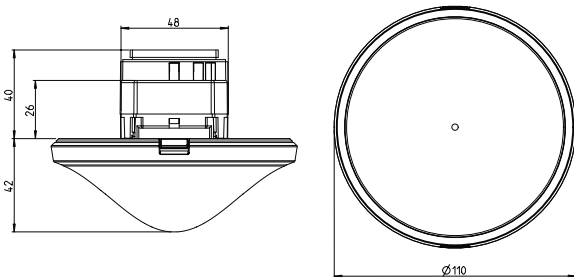
With a mounting height of more than 3.5 m walking motions are necessary and the detection areas of several detectors should overlap in the marginal zone. All figures are up to values. The detection range decreases with increasing temperatures.

Detection range according to sensNORM IEC 63180 see datasheet



7

### Scale drawings



### Accessories



**theSenda B**  
Details page 339

**QuickSafe**  
Details page 336

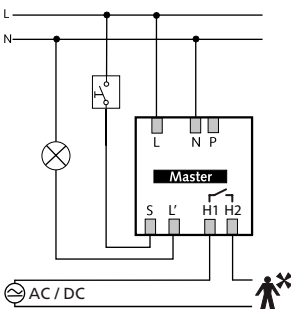
**Ceiling installation box 68A**  
Details page 334

**theSenda P**  
↳ Art.No.: 9070910  
Details page 339

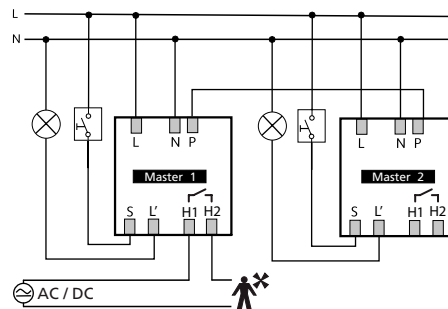
**Surface frame 110A WH/GR**  
Details page 334

**theSenda S**  
Details page 339

### Connection diagrams



thePrema P360-101 E



thePrema P360-101 E

# Presence and motion detectors

## Presence detectors, 230 V AC



### Description

- Presence detector (PIR)
- Automatic control of lighting depending on presence and brightness
- Cover frame in white included in delivery, cover frames in black or silver available as optional accessories
- IP 54 for versatile use
- Light switch output (relay, 230 V)
- Mixed light measurement, suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Brightness threshold and self-learning switch-off delay adjustable
- Pulse function for staircase time switch
- Parameters can be set using the potentiometers or via the optional service remote controls
- Optional user remote control
- Ready for use by ex-factory set items
- Test operation to check detection area and installation
- Wall mounting in flush-mounted box
- Possibility of surface mounting by using a surface frame

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Wall installation	Light	230 V AC	Pure white (similar to RAL 9010)	PresenceLight 180	2000050
Further colours with accessory possible					

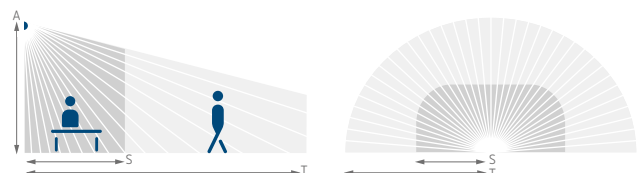
7

### Technical data

	PresenceLight 180
Operating voltage	230 V AC
Frequency	50 Hz
Installation height	1,7–2,2 m
Power consumption	0,9 W
Setting range brightness	Approx. 10–1500 lx/on
Light switch-off delay	Pulse (0,5 s), 10 s–20 min
Type of contact light	Relay 230 V
Resistive load	1400 W
Incandescent/halogen lamp load	1200 W
Compact and fluorescent lamps	960 VA (cos φ = 0,8), 580 VA (cos φ = 0,5)
Compact and fluorescent lamps (max. number of electronic ballasts)	10 x (1 x 54/58 W), 5 x (2 x 54/58 W), 16 x (1 x 35/36 W), 8 x (2 x 35/36 W), 16 x (smaller than 35/36 W)
LED lamp < 2 W (typ.)	25 W
LED lamp 2–8 W (typ.)	70 W
LED lamp > 8 W (typ.)	80 W
Size of concealed housing	Ø 55 mm (NIS, PMI)
Ambient temperature	–20 °C ... +50 °C
Type of protection	IP 54

### Detection range (Semicircular)

Mounting height (A)	Walking (T)	Sitting (S)
2,2 m	100 m²   8 m	25 m²   7 m x 3,5 m





Accessories



Surface frame PresenceLight

↳ Art.No.: 9070513  
Details page 334

QuickSafe

Details page 336

Cover frame PresenceLight  
180 SR

Details page 334

Cover frame PresenceLight  
180 BK

Details page 334

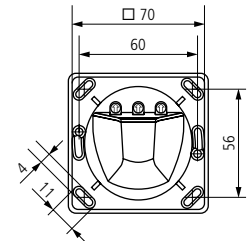
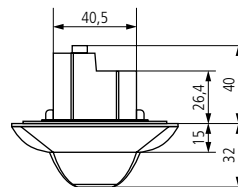
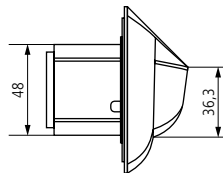
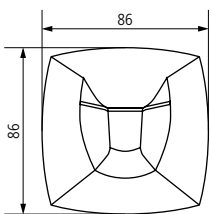
Surface frame PresenceLight BK

Details page 334

Surface frame PresenceLight SR

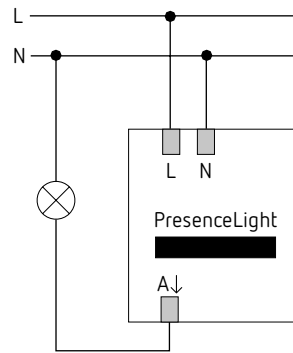
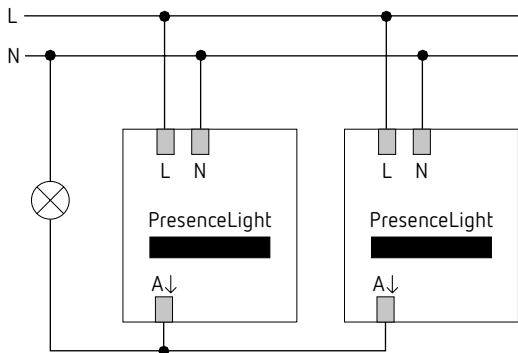
Details page 334

Scale drawings

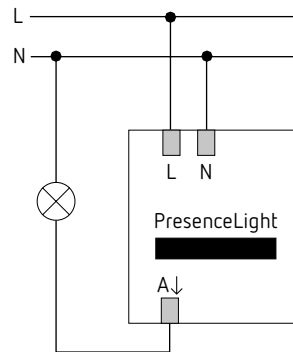
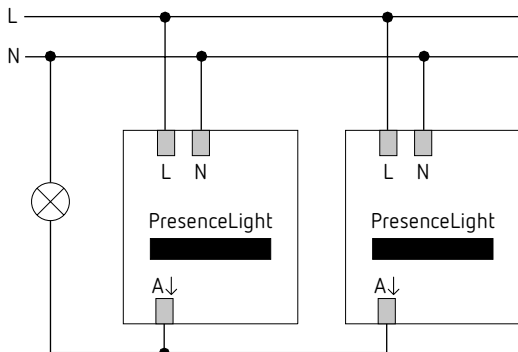


7

Connection diagrams



Connection diagrams



# Presence and motion detectors

## Presence detectors, DALI



### Description

- Passive infrared presence detector for ceiling mounting
- Square 360° detection range for an accurate and simple planning
- DALI interface in accordance with EN 62386 for max. 25 DALI electronic ballasts
- Automatic allocation of DALI participants (DALI Broadcast)
- Automatic lighting regulation with constant light control
- Mixed light measurement suitable for switching fluorescent lamps (FL/PL), halogen and incandescent lamps as well as LEDs
- Facility to connect a push button for manual dimming and switching (single-button control)
- Fully or semi-automatic operation switch-selectable
- Brightness switching level, self-learning switch-off delay time, stand-by time and stand-by brightness can be adjusted
- Scene component with two built-in scenes
- Ready for immediate use due to factory preset
- Test mode for checking function and detection area
- Extension of detection area via Master/Slave or Master/Master switching, a maximum of 10 detectors can be switched at the same time
- Ceiling installation in flush-mounted socket
- Ceiling installation possible with surface-mounted frame
- User remote control theSenda S (option)
- Service remote control theSenda B (option)

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\* According to guarantee conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	DALI	230 V AC	White	thePrema S360 DALI UP WH	2070525
			Grey	thePrema S360 DALI UP GR	2070526

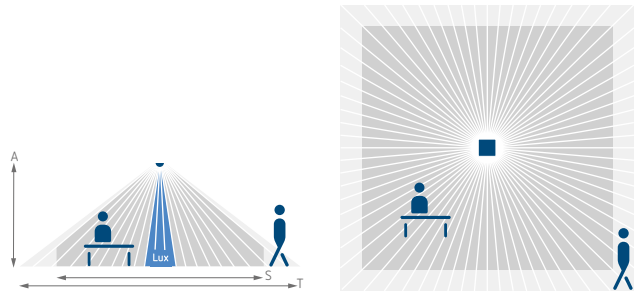
### Technical data

	thePrema S360 DALI UP WH	thePrema S360 DALI UP GR
Operating voltage	230 V AC	
Frequency	50 Hz	
Installation height	2–3,5 m	
Minimum height	> 1,7 m	
Power consumption	0,5 W	
Setting range brightness	5–3000 lx	
Stand-by time light	0 s–60 min/on	
Stand-by brightness	1–25 %	
Control output	50 mA	
Size of concealed housing	Ø 55 mm (NIS, PMI)	
Ambient temperature	0 °C ... +50 °C	
Type of protection	IP 40 (when fitted)	

Detection range (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	20 m <sup>2</sup>   4,5 m x 4,5 m ± 0,5 m	9 m <sup>2</sup>   3 m x 3 m
2,5 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	16 m <sup>2</sup>   4 m x 4 m
3 m	49 m <sup>2</sup>   7 m x 7 m ± 1 m	25 m <sup>2</sup>   5 m x 5 m
3,5 m	64 m <sup>2</sup>   8 m x 8 m ± 1 m	-

Detection range according to sensNORM IEC 63180 see datsheet



Accessories



Surface frame 110A WH  
↳ Art.No.: 9070912  
Details page 334



theSenda P  
↳ Art.No.: 9070910  
Details page 339



theSenda S  
↳ Art.No.: 9070911  
Details page 339

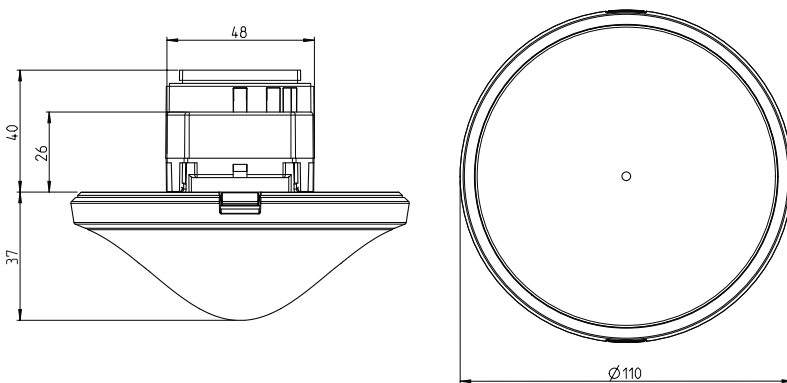
Surface frame 110A GR  
Details page 334

theSenda B  
Details page 339

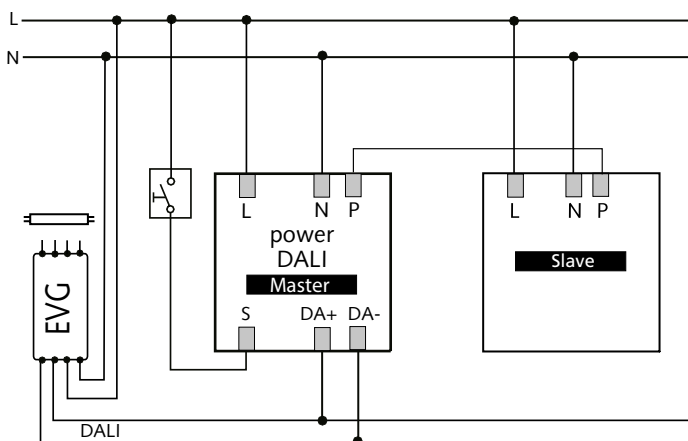
Ceiling installation box 68A  
Details page 334

QuickSafe  
Details page 334

Scale drawings

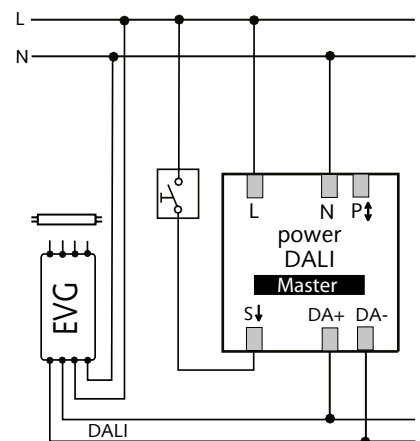


Connection diagrams



thePrema S360 DALI

thePrema S360 Slave E



thePrema S360 DALI

# Presence and motion detectors

## Presence detectors, DALI



### Description

- Passive infrared presence detector for ceiling mounting, DALI-2 certified
- Square detection area for corridors and storage areas
- Detection area with 2 individually connectable and disconnectable detection zones, each 15 x 5 m (total 30 x 5 m)
- Up to 2 light channels DALI-2 addressable or 1 light channel DALI-2 in Broadcast mode
- DALI-2 technology according to IEC 62386 Parts 101 and 103
- Flexible assignment of up to 2 light groups towards one DALI line
- Easy, intuitive configuration of the DALI groups
- Up to 2 push-button inputs
- Using of conventional push-buttons for maximum design freedom
- Switch or constant light control mode with stand-by function
- Dimmable lighting in switch mode with stand-by function
- Choice of fully or semi-automatic operation
- Easy integration of an external DALI relay by an additional group e.g. for HVAC applications possible
- Adjustable brightness switching value
- Teach-in function via remote control or push-button
- Setting of room correction factor (Automatic adjustment of brightness measurement)
- Light time delay can be set
- Calibrated 2 channels light measurement
- Brief-presence
- Self-learning time delay
- Extremely easy setting of energy saving characteristics with the new „eco plus“ function
- Selectable control speed
- Manual override via remote control or pushbutton
- Behavior after push button operation selectable (school / office)
- Test mode light
- Test-Mode presence
- Remote-controllable
- Scenes
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Extension of detection area via Master/ Slave or Master/Master switching
- Optimized handling by installer during assembly, wiring, commissioning

7

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	DALI	110–230 V AC	White	thePassa P360-221 DALI UP WH	2010340

Further colours with accessory possible

### Technical data

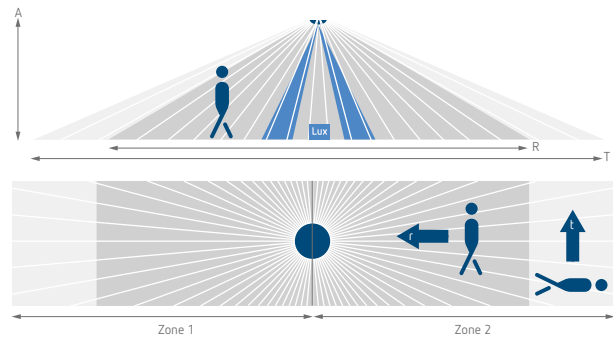
	thePassa P360-221 DALI UP WH
Operating voltage	110–230 V AC
Frequency	50–60 Hz
Installation height	2–15 m
Minimum height	> 1,7 m
Switching output	DALI
Power consumption	≤ 0,4 W
Setting range brightness	10–3000 lx
Stand-by time light	0 s–60 min/on
Stand-by brightness	1–25 %
Control output	100 mA
Output light	DALI-interface according to IEC SN EN 62 386 for max. 64 DALI devices
Size of concealed housing	Ø 55 mm (NIS, PMI)
Ambient temperature	–15 °C ... +50 °C
Type of protection	IP 54 (when fitted)

# Presence and motion detectors

## Presence detectors, DALI

### Detection range (Rectangular)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	56 m <sup>2</sup>   16 m x 3,5 m	56 m <sup>2</sup>   16 m x 3,5 m
2,5 m	72 m <sup>2</sup>   18 m x 4 m	88 m <sup>2</sup>   22 m x 4 m
3 m	90 m <sup>2</sup>   20 m x 4,5 m	135 m <sup>2</sup>   30 m x 4,5 m
3,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
4 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
4,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
5,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
6 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m



Detection range according to sensNORM IEC 63180 see datasheet

### Accessories



**theSenda B**

↳ Art.No.: 9070985

Details page 339



**theSenda P**

↳ Art.No.: 9070910

Details page 339



**theSenda S**

↳ Art.No.: 9070911

Details page 339

#### QuickSafe

Details page 336

#### Surface frame 110A WH

Details page 334

#### Surface frame 110A GR

Details page 334

#### Ceiling installation box 68A

Details page 334

#### Masking clip

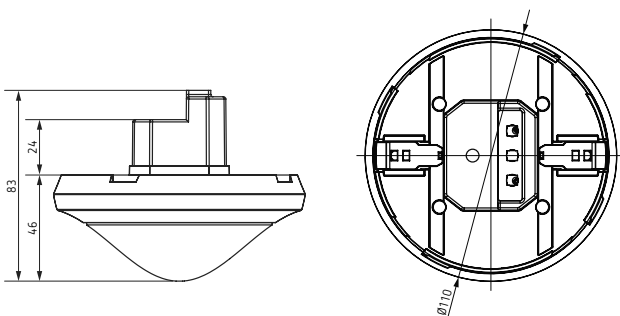
Details page 335

#### Cover 110 GR

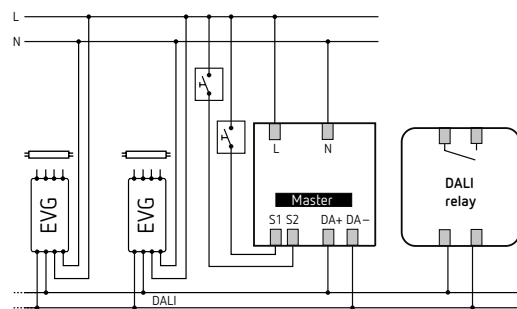
Details page 334

7

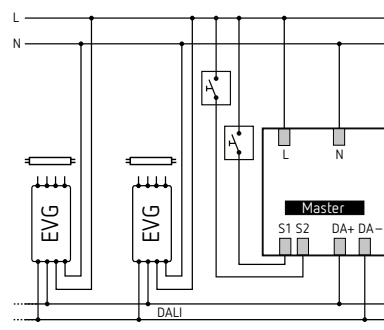
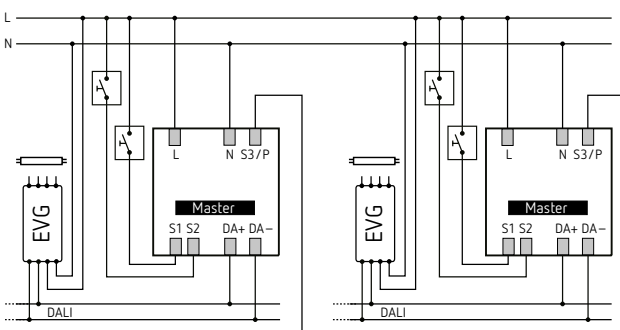
### Scale drawings



### Connection diagrams



### Connection diagrams



# Presence and motion detectors

## Presence detectors, DALI



### Description

theRonda P360-110 DALI UP,  
theRonda S360-110 DALI UP

- Passive infrared presence detector for ceiling mounting, DALI-2 certified
- Round detection area 360°
- 1 light channel DALI-2 broadcast
- DALI-2 technology according to IEC 62386 Parts 101 and 103
- 1 push-button input
- Using of conventional push-buttons for maximum design freedom
- Switch or constant light control mode with stand-by function
- Dimmable lighting in switch mode with stand-by function
- Choice of fully or semi-automatic operation
- Adjustable brightness switching value
- Teach-in function via remote control or push-button
- Setting of room correction factor (Automatic adjustment of brightness measurement)
- Light time delay can be set
- Calibrated 1 channel light measurement
- Brief-presence
- Self-learning time delay
- Extremely easy setting of energy saving characteristics with the new „eco plus“ function

- Selectable control speed
- Manual override via remote control or push-button
- Behavior after push button operation selectable (school / office)
- Test mode light
- Test-Mode presence
- Remote-controllable
- Scenes
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Extension of detection area via Master/ Slave or Master/Master switching
- Optimized handling by installer during assembly, wiring, commissioning

theRonda P360-330 DALI UP

As theRonda S360-110 & P360-110, but:

- Flexible assignment of up to 3 light groups towards one DALI line
- Easy, intuitive configuration of the DALI groups
- Up to 3 push-button inputs
- Flexible assignment of the push-buttons to the desired light channel using remote control
- Calibrated 3 channels light measurement

### Product selection

Installation type	Channel	Detection range	Colour	Type	Article number
Ceiling installation	3 channels addressable	Ø 24 m	White	theRonda P360-330 DALI UP WH	2080045
	1 channel Broadcast	Ø 24 m	White	theRonda P360-110 DALI UP WH	2080040
	1 channel Broadcast	Ø 8 m	White	theRonda S360-110 DALI UP WH	2080580

Further colours with accessory possible

### Technical data

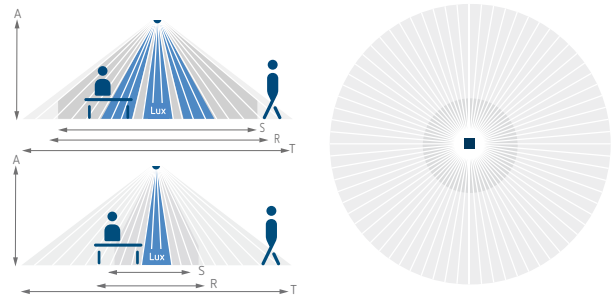
	theRonda P360-330 DALI UP	theRonda P360-110 DALI UP	theRonda S360-110 DALI UP
Operating voltage	110–230 V AC		
Frequency	50–60 Hz		
Installation height	2–15 m		2–4 m
Minimum height	> 1,7 m		
Power consumption	0,3 W		
Setting range brightness	10–3000 lx / measurement off		
Light switch-off delay	10 s–60 min		
Stand-by time light	0 s–60 min/on		
Stand-by brightness	1–25 %		
Control output	100 mA		
Size of concealed housing	Ø 55 mm (NIS, PMI)		
Ambient temperature	–15 °C ... +50 °C		
Type of protection	IP 54 (when fitted)		

### Detection range theRonda P (Round)

Mounting height (A)	Sitting (S)	Walking diagonally (T)	Walking head on to (R)
2 m	16 m <sup>2</sup>   4,5 m	380 m <sup>2</sup>   22 m	28 m <sup>2</sup>   6 m
2,5 m	24 m <sup>2</sup>   5,5 m	415 m <sup>2</sup>   23 m	38 m <sup>2</sup>   7 m
3 m	28 m <sup>2</sup>   6 m	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
3,5 m	38 m <sup>2</sup>   7 m	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
6 m	-	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
10 m	-	491 m <sup>2</sup>   25 m	50 m <sup>2</sup>   8 m

With a mounting height of more than 3.5 m walking motions are necessary and the detection areas of several detectors should overlap in the marginal zone. All figures are up to values. The detection range decreases with increasing temperatures.

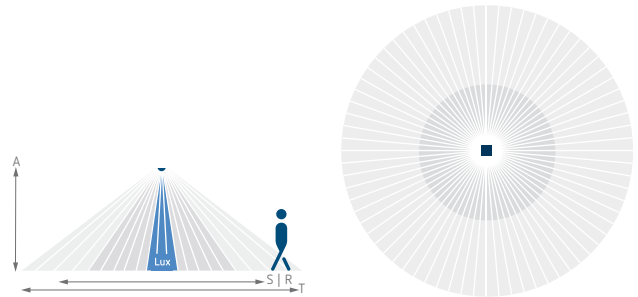
Detection range according to sensNORM IEC 63180 see datsheet



### Detection range theRonda S (Round)

Mounting height (A)	Sitting (S)	Walking diagonally (T)	Walking head on to (R)
2 m	5 m <sup>2</sup>   2,5 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	-	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
4 m	-	13 m <sup>2</sup>   4 m	64 m <sup>2</sup>   9 m

Detection range according to sensNORM IEC 63180 see datsheet



### Accessories



**theSenda B**  
↳ Art.No.: 9070985  
Details page 339

**Surface frame 110A**  
Details page 334

**theSenda S/P**  
Details page 339

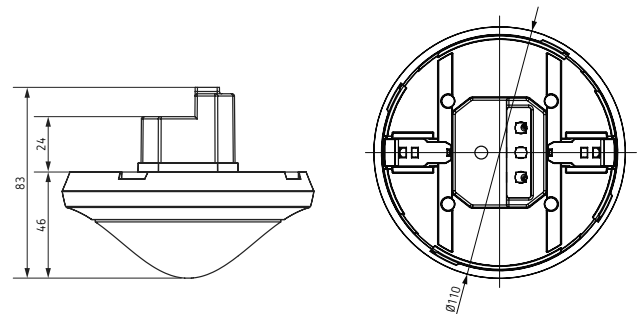
**Ceiling installation box 68A**  
Details page 334

**Masking clip**  
Details page 335

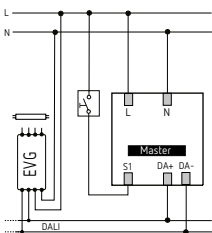
**QuickSafe**  
Details page 336

**Cover 110 GR**  
Details page 334

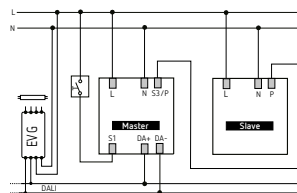
### Scale drawings



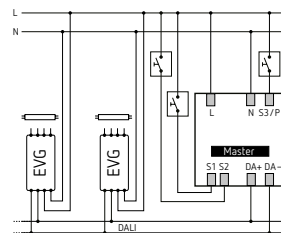
### Connection diagrams



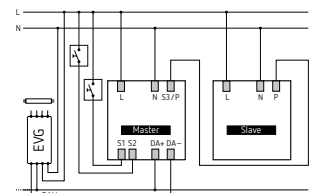
theRonda S360-110 DALI UP,  
theRonda P360-110 DALI UP,



theRonda S360-110 DALI UP,  
theRonda P360-110 DALI UP,



theRonda P360-330 DALI UP



theRonda P360-330 DALI UP

# Presence and motion detectors

## Presence detectors, DALI



### Description

- Passive infrared presence detector for mounting in suspended ceilings, DALI-2 certified
- DALI-2 technology according to IEC 62386 Parts 101 and 103
- Detection area: 360°, square (up to 64 sqm) for easy and reliable planning
- Higher flexibility due to two detection areas, different in size
- Detection of brightness and presence for automatic control of lighting and HVAC
- Triple light measurement (mixed light), suitable for fluorescent lamps, halogen- / incandescent lamps and LEDs
- Totally flat design, cover frames changeable in form, colour and material
- Optical system can be swiveled for adjusting detection area
- Test mode for verification of function and detection area
- Adjustable detection sensitivity
- Setting of parameters via DALI-bus or remote control
- Management remote control (optional)
- PlanoSpot DALI is configured as a sensor only
- It cannot control loads, process events or make any bus configurations (addressing, binding)
- Configuring the PlanoSpot DALI via the DALI bus therefore requires a commissioning device which supports the functionality of PlanoSpot DALI
- Detection area, detection sensitivity and room factor may be optionally configured by means of the theSenda B management remote control

## 7

### Product selection

Installation type	Colour	Type	Article number
Ceiling installation	White	PlanoSpot 360 DALI-2 S DE WH	2030190

### Technical data

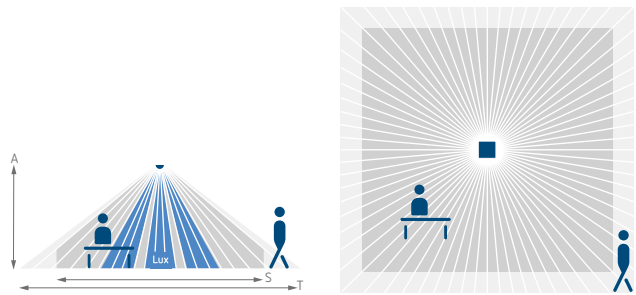
	PlanoSpot 360 DALI-2 S DE WH
Installation height	2 – 3,5 m
Minimum height	> 1,7 m
Measurement range brightness	10 – 10000 lx
Light switch-off delay	10 s – 60 min
Ambient temperature	0 °C ... +50 °C
Type of protection	IP 20



Detection range (Square)

Detection zone standard		
Mounting height (A)	Sitting (S)	Walking (T)
2 m	9 m <sup>2</sup>   3 m x 3 m	20 m <sup>2</sup>   4,5 m x 4,5 m ± 0,5 m
2,5 m	16 m <sup>2</sup>   4 m x 4 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m
3 m	20 m <sup>2</sup>   4,5 m x 4,5 m	49 m <sup>2</sup>   7 m x 7 m ± 1 m
3,5 m	-	64 m <sup>2</sup>   8 m x 8 m ± 1 m

Detection zone reduced		
Mounting height (A)	Sitting (S)	Walking (T)
2 m	4 m <sup>2</sup>   2 m x 2 m	4,4 m <sup>2</sup>   2,1 m x 2,1 m ± 0,5 m
2,5 m	6,3 m <sup>2</sup>   2,5 m x 2,5 m	9 m <sup>2</sup>   3 m x 3 m ± 0,5 m
3 m	9 m <sup>2</sup>   3 m x 3 m	14,4 m <sup>2</sup>   3,8 m x 3,8 m ± 1 m
3,5 m	-	22,1 m <sup>2</sup>   4,7 m x 4,7 m ± 1 m



Accessories



**Surface frame 75B WH**  
Details page 335

**PlanoCover 76 BK**  
Details page 335

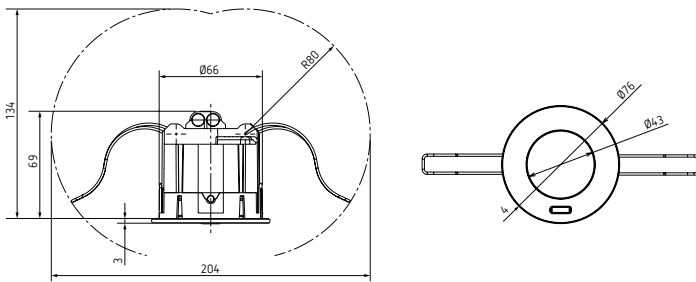
**PlanoCover 76 SR**  
Details page 335

**theSenda B**

↳ Art.No.: 9070985





















Details page 339

Scale drawings

















# Presence and motion detectors

## Motion detectors/ Spotlights

	Installation tyoe	Detection angle	Detection range	Channel	LED lamps	Remote controllable	Type	Page
<b>Outdoor</b>								
	Wall	180°	12 m	Light	150 W	–	theLuxa E180	132
		180°	12 m	Light	500 W	–	theLuxa R180	134
		150°	12 m	Light	500 W	–	theLuxa S150	136
		180°	12 m	Light	500 W	–	theLuxa S180	136
	Wall and ceiling	360°	16 m	Light	500 W	–	theLuxa S360	138
		220°	16 m	Light	600 W	✓	theLuxa P220	140
		300°	16 m	Light	500 W	✓	theLuxa P300	140
<b>Outdoor with spotlight</b>								
	Wall	–	–	–	–	–	theLeda B20L/B30L/ B50L/B100L	142
		180°	10 m	–	–	–	theLeda S10	144
							theLeda S20	144
		–	–	–	–	–	theLeda S10L	146
							theLeda S20L	146
		180°	12 m	–	–	✓	theLeda P12	148
							theLeda P24	148
		–	–	–	–	–	theLeda P12L	150
							theLeda P24L	150
		180°	10 m	–	–	✓	theLeda D S AL theLeda D SU AL theLeda D U AL theLeda D UD AL	152
		–	–	–	–	–	theLeda D SL AL theLeda D SUL AL theLeda D UL AL theLeda D UDL AL	154
	Floor	180°	12 m	–	–	✓	theLeda D B AL theLeda D B plus AL theLeda D B plus S AL	156
		–	–	–	–	–	theLeda D BL AL theLeda D BL plus AL	156

# Presence and motion detectors

## Motion detectors / Spotlights

	Installation tyoe	Detection angle	Detection range	Channel	LED lamps	Remote controllable	Type	Page		
<b>Indoor</b>										
	Ceiling	360°	Ø 8 m	Light	200 W	–	thePiccola S360-100 DE	158		
				Light	250 W	✓	theMova S360-100 DE	160		
				Light   Presence	250 W	✓	theMova S360-101 DE	160		
				Light	250 W	✓	theMova S360-100 AP	162		
				Light   Presence	250 W	✓	theMova S360-101 AP	162		
					Ø 24 m	Light	600 W	✓	theMova P360-100 UP	166
					Ø 7 m	Light	400 W	–	LUXA 103-100 DE WH	168
					Ø 7 m	Light   Presence	400 W	–	LUXA 103-101 DE WH	168
					Ø 7 m	Light	400 W	–	LUXA 103-100 AP WH	168
					Ø 7 m	Light   Presence	400 W	–	LUXA 103-101 AP WH	168
			Ø 7 m	Light	400 W	–	LUXA 103-100 C DE WH	170		
			Ø 12 m	Light	400 W	–	LUXA 103-100 UA WH	172		
	Flush-mounted wall installation	170°	14 x 17 m	Light	450 W	–	theMura S180-100	174		
				Light   Presence	450 W	✓	theMura S180-101	174		
				–	–	–	theMura S180 Slave	174		
				Light	–	–	theMura S180-100 2W	174		
		200°	8 m	Light	–	–	LUXA 103-200 T	176		

# Presence and motion detectors

## Motion detectors, Outdoor



### Description

#### Common functions

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- 180° detection angle
- For outdoor use
- Sensor head can be turned by  $\pm 90^\circ$  horizontally and by  $30^\circ$  downwards/upwards
- Adjustable brightness switching value and switch-off delay
- Mixed light measurement suitable for the control of fluorescent, incandescent, halogen lamps and LEDs
- Area limit via stickers
- Test function for checking detection area
- Single-handed plug-in installation

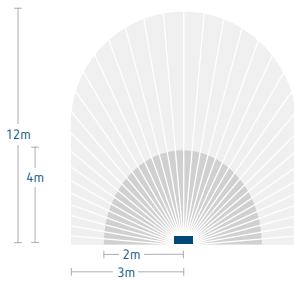
### Product selection

Installation type	Channel	Detection angle	Colour	Type	Article number
Wall installation	Light	180°	White	theLuxa E180 WH	1010205
			Black	theLuxa E180 BK	1010206

### Technical data

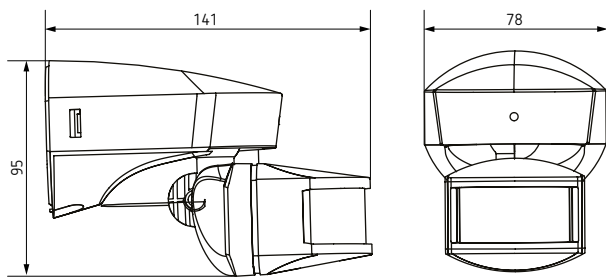
	theLuxa E180
Operating voltage	230 V AC
Frequency	50
Stand-by consumption	< 1 W
Setting range brightness	5 – 1000 lx
Switching capacity light	10 A (at 230 V AC, $\cos \phi = 1$ )
Detection angle	180°
Light switch-off delay	5 s – 15 min
Incandescent lamp load	2300 W
Fluorescent lamp load (conventional) parallel-corrected	350 VA, 37 $\mu$ F
Fluorescent lamp load (conventional) series-corrected	400 VA
LED lamp < 2 W (typ.)	50 W
LED lamp 2 – 8 W (typ.)	150 W
LED lamp > 8 W (typ.)	150 W
Ambient temperature	-20 °C ... +40 °C
Protection class	II
Type of protection	IP 55

### Detection range (Semicircular)



■ Walking diagonally to the detector  
■ Walking head on to the detector  
 Mounting height: 2.5 m

### Scale drawings



### Accessories

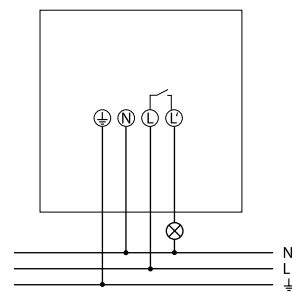


**Corner angle theLuxe E WH**  
 ↳ Art.No.: 9070974  
 Details page 336



**Corner angle theLuxe E BK**  
 ↳ Art.No.: 9070975  
 Details page 336

### Connection diagrams



# Presence and motion detectors

## Motion detectors, Outdoor



theLuxa R180 WH



theLuxa R180 BK

### Description

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- 180° detection angle
- For outdoor use
- Protection from tampering thanks to the robust case design
- Compact dimensions
- Covered operating controls under the secured front cover
- Adjustable brightness switching value and switch-off delay
- Area limit via lens attachment
- Zero-cross switching for relay-saving switching and high lamp loads
- Test function for checking detection area
- Installation on flush-mounted socket possible (60 mm)
- Single-handed plug-in installation
- Instant start-up possible via factory preset
- Terminal for protective earth conductor

8

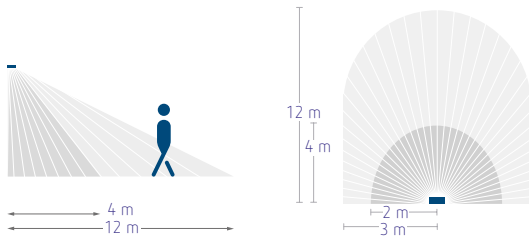
### Product selection

Installation type	Channel	Detection angle	Colour	Type	Article number
Wall installation	Light	180°	White	theLuxa R180 WH	1010200
			Black	theLuxa R180 BK	1010201

### Technical data

	theLuxa R180 WH	theLuxa R180 BK
Operating voltage	230 V AC	
Frequency	50–60 Hz	
Stand-by consumption	< 0,5 W	
Installation height	2,5	
Detection angle	180°	
Switching capacity light	10 A (at 230 V AC, cos φ = 1)	
Setting range brightness	2–200 lx/∞	
Light switch-off delay	2 s–30 min	
Incandescent lamp load	2300 W	
Energy saving lamps	500 W	
LED lamp < 2 W (typ.)	50 W	
LED lamp > 2 W (typ.)	500 W	
Ambient temperature	–25 °C ... +45 °C	
Protection class	II	
Type of protection	IP 55	

### Detection range (Semicircular)



- Walking diagonally to the detector
  - Walking head on to the detector
- Mounting height: 2.5 m

### Accessories



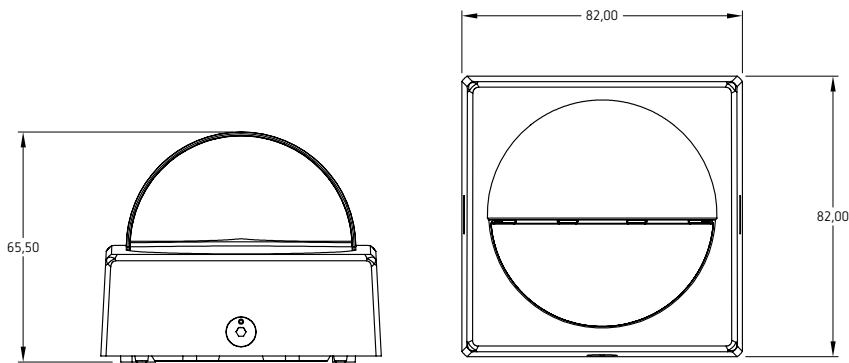
**Corner angle 10 WH**  
 ↳ Art.No.: 9070969  
 Details page 337

**Spacer 10 WH**  
 Details page 337

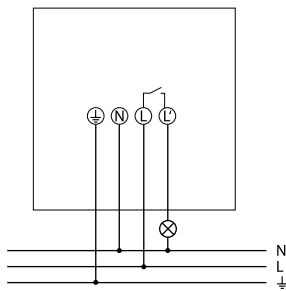
**Corner angle 10 BK**  
 Details page 337

**Spacer 10 BK**  
 Details page 337

### Scale drawings



### Connection diagrams



# Presence and motion detectors

## Motion detectors, Outdoor



### Description

#### Common functions

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- For outdoor use
- Additional creep under protection
- Sensor head can be turned by  $\pm 90^\circ$  horizontally and by  $30^\circ$  downwards
- Adjustable brightness switching value and switch-off delay
- Zero-cross switching for relay-saving switching and high lamp loads
- Teach-in of current brightness value possible
- Pulse function
- Test function for checking detection area
- Installation on flush-mounted socket possible (60 mm)
- Single-handed plug-in installation
- Instant start-up possible via factory preset
- Controls are place protected
- Terminal for protective earth conductor

### Product selection

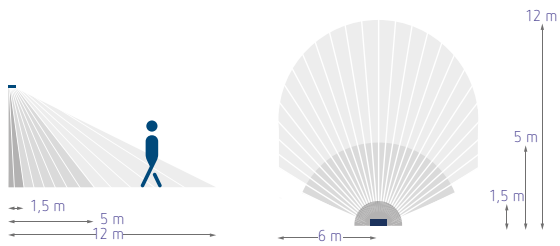
Installation type	Channel	Detection angle	Colour	Type	Article number
Wall installation	Light	150°	White	theLuxa S150 WH	1010500
			Black	theLuxa S150 BK	1010501
		180°	White	theLuxa S180 WH	1010505
			Black	theLuxa S180 BK	1010506

### Technical data

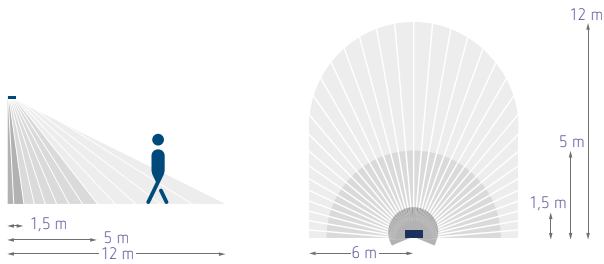
	theLuxa S150	theLuxa S180
Operating voltage	230 V AC	
Frequency	50 Hz	
Stand-by consumption	0,9 W	
Setting range brightness	5 – 1000 lx	
Switching capacity light	10 A (at 230 V AC, $\cos \varphi = 1$ ), 6 A (at 230 V AC, $\cos \varphi = 0.6$ ), 3 AX (at 230 V AC, $\cos \varphi = 0.3$ )	
Detection angle	150°	180°
Light switch-off delay	1 s – 20 min	
Incandescent lamp load	2300 W	
Energy saving lamps	150 W	
LED lamp < 2 W (typ.)	50 W	
LED lamp > 2 W (typ.)	500 W	
Ambient temperature	–25 °C ... +45 °C	
Protection class	II	
Type of protection	IP 55	



Detection range (Semicircular)



theLuxa S150



theLuxa S180

Mounting height	Walking head on to	Walking diagonally
2 m	3 m	9 m
2,5 m	5 m	12 m
3 m	5 m	12 m
3,5 m	5 m	12 m
4 m	3 m	9 m

- Walking diagonally to the detector
  - Walking head on to the detector
  - Creep under protection
- Mounting height: 2.5 m

Accessories



Corner angle theLuxa S WH  
↳ Art.No.: 9070902  
Details page 336



Spacer theLuxa S WH  
↳ Art.No.: 9070906  
Details page 336

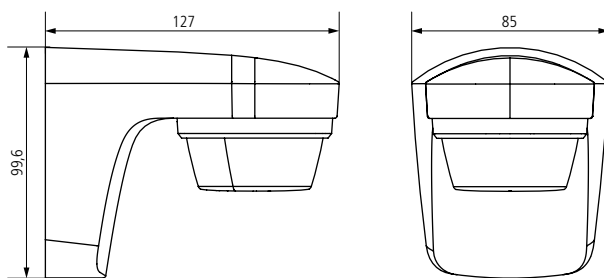


Corner angle theLuxa S BK  
↳ Art.No.: 9070903  
Details page 336

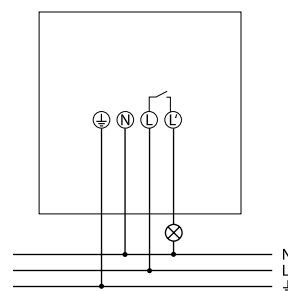


Spacer theLuxa S BK  
↳ Art.No.: 9070907  
Details page 336

Scale drawings



Connection diagrams



# Presence and motion detectors

## Motion detectors, Outdoor



### Description

#### Common functions

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- For outdoor use
- For installation on walls and ceilings
- 360° detection angle
- Sensor head can be turned by  $\pm 90^\circ$  horizontally, by  $45^\circ$  downwards and by  $90^\circ$  upwards
- Adjustable brightness switching value and switch-off delay
- Sensitivity can be reduced to limit detection area
- Area limit via lens attachment
- Zero-cross switching for relay-saving switching and high lamp loads
- Teach-in of current brightness value possible
- Pulse function
- Test function for checking detection area
- Installation on flush-mounted socket possible (60 mm)
- Single-handed plug-in installation
- Instant start-up possible via factory preset
- Controls are place protected
- Terminal for protective earth conductor
- Corner angle included in delivery

### Product selection

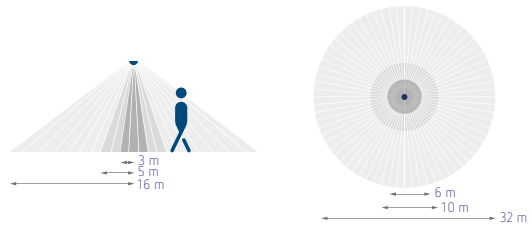
Installation type	Channel	Detection angle	Colour	Type	Article number
Wall and ceiling installation	Light	360°	White	theLuxa S360 WH	1010510
			Black	theLuxa S360 BK	1010511

### Technical data

	theLuxa S360
Operating voltage	230 V AC
Frequency	50 Hz
Stand-by consumption	0,5 W
Setting range brightness	5 – 1000 lx
Switching capacity light	10 A (at 230 V AC, $\cos \varphi = 1$ ), 6 A (at 230 V AC, $\cos \varphi = 0.6$ ), 3 AX (at 230 V AC, $\cos \varphi = 0.3$ )
Detection angle	360°
Light switch-off delay	1 s – 20 min
Incandescent lamp load	2300 W
Energy saving lamps	150 W
LED lamp < 2 W (typ.)	50 W
LED lamp > 2 W (typ.)	500W
Ambient temperature	-25 °C ... +45 °C
Protection class	II
Type of protection	IP 55

Detection range (Round)

Mounting height	Walking head on to	Walking diagonally
2 m	4 m	15 m
2,5 m	5 m	16 m
3 m	5 m	16 m
3,5 m	5 m	10 m
4 m	3 m	8 m



- Walking diagonally to the detector
  - Walking head on to the detector
  - Creep under protection
- Mounting height: 2.5 m

Accessories

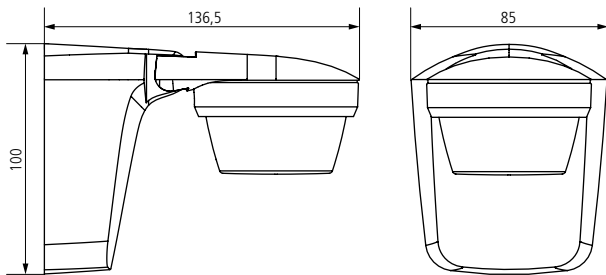


Spacer theLuxe S WH  
↳ Art.No.: 9070906  
Details page 336

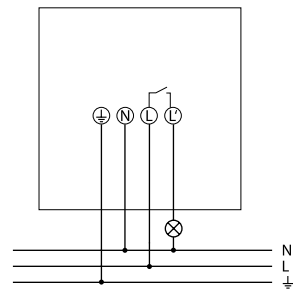


Spacer theLuxe S BK  
↳ Art.No.: 9070907  
Details page 336

Scale drawings



Connection diagrams



# Presence and motion detectors

## Motion detectors, Outdoor



### Description

#### Common functions

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- For outdoor use
- For installation on walls and ceilings
- Additional creep under protection
- For larger, commercial outdoors properties such as offices, public buildings, hotels, schools, car parks and warehouses
- Adjustable brightness switching value and switch-off delay
- Sensor head can be turned by  $\pm 90^\circ$  horizontally, by  $45^\circ$  downwards and by  $90^\circ$  upwards
- Remote-controllable

- Sensitivity can be reduced to limit detection area
- Area limit via lens attachment
- Potential-free relay with tungsten pre-contact for relay-saving switching and high lamp loads
- Teach-in of current brightness value possible
- Pulse function
- Test function for checking detection area
- Installation on flush-mounted socket possible (60 mm)
- Single-handed plug-in installation
- Instant start-up possible via factory preset
- Controls are place protected

- Terminal for protective earth conductor
- Switching of FELV (Functional Extra Low Voltage) possible

#### theLuxa P220

- $220^\circ$  detection angle
- Spacer included in delivery

#### theLuxa P300

- $300^\circ$  detection angle
- Spacer and corner angle included in delivery

### Product selection

Installation type	Channel	Detection angle	Colour	Type	Article number
Wall and ceiling installation	Light	$220^\circ$	White	theLuxa P220 WH	1010605
			Black	theLuxa P220 BK	1010606
		$300^\circ$	White	theLuxa P300 WH	1010610
			Black	theLuxa P300 BK	1010611

### Technical data

	theLuxa P220	theLuxa P300
Operating voltage	230 V AC	
Frequency	50 Hz	
Stand-by consumption	0,3 W	
Setting range brightness	5 – 1000 lx	
Switching capacity light	10 A (at 230 V AC, $\cos \varphi = 1$ ), 10 AX (at 230 V AC, $\cos \varphi = 0.3$ )	
Detection angle	$220^\circ$	$300^\circ$
Light switch-off delay	1 s – 20 min	
Incandescent lamp load	2300 W	
Energy saving lamps	300 W	
LED lamp < 2 W (typ.)	60 W	
LED lamp > 2 W (typ.)	600 W	

# Presence and motion detectors

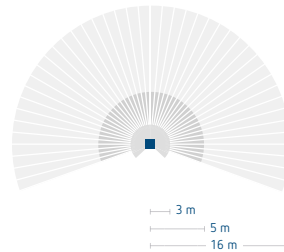
## Motion detectors, Outdoor

	theLuxa P220	theLuxa P300
Ambient temperature	-25 °C ... +45 °C	
Protection class	II	
Type of protection	IP 55	

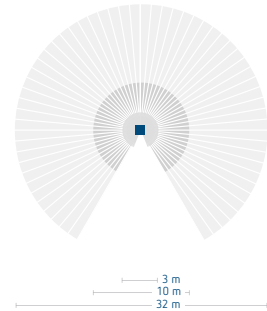
### Detection range (Semicircular)

Mounting height	Walking head on to	Walking diagonally
2 m	4 m	12 m
2,5 m	5 m	16 m
3 m	5 m	16 m
3,5 m	5 m	16 m
4 m	4 m	12 m

- Walking diagonally to the detector
  - Walking head on to the detector
  - Creep under protection
- Mounting height: 2.5 m



theLuxa P220



theLuxa P300

### Accessories



Corner angle theLuxa P WH

↳ Art.No.: 9070904  
Details page 337



Corner angle theLuxa P BK

↳ Art.No.: 9070905  
Details page 337



theSenda P

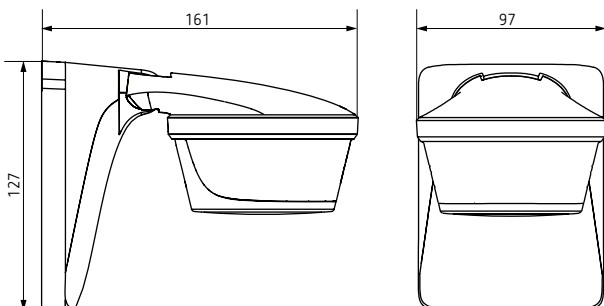
↳ Art.No.: 9070910  
Details page 339



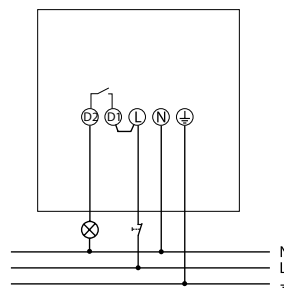
theSenda S

↳ Art.No.: 9070911  
Details page 339

### Scale drawings



### Connection diagrams



# Presence and motion detectors

## LED spotlights, Motion detector/light sensor as accessory



theLeda B20L WH

theLeda B30L BK

theLeda B100L WH

### Description

#### Common functions

- LED spotlight
- Suitable for outdoor use
- Flexible extension options thanks to optional module with motion detector including switch output or light sensor incl. switch output
- Spotlight can be turned by 360°
- Not dimmable

#### theLeda B20L

- 20 W LED spotlight

#### theLeda B30L

- 30 W LED spotlight

#### theLeda B50L

- 50 W LED spotlight

#### theLeda B100L

- 100 W LED spotlight

#### theLeda B motion module RC

- theLeda B radio-controlled motion detector module
- 180° detection angle at 12 m range
- Additional light switch output
- Sensor can be turned horizontally by ± 90° and downwards/backwards by 90°
- IP 55 protection rating
- theLeda B remote control included in scope of supply for the motion detector module
- A remote control can be combined with different motion detector modules
- Up to 6 remote controls can be combined with a single motion detector module
- Remote control range up to 100 m on open air test site

#### theLeda B motion module

- 180° detection angle at 12 m range
- Additional light switch output
- Sensor can be turned horizontally by ± 90° and downwards/backwards by 90°
- Protection rating IP 55

#### theLeda B light module

- Duty cycle range: 2, 4, 6, 8 hours, on/permanent on at night
- Switch-on brightness can be set from 2–200 lux
- Additional light switch output
- Protection rating IP 55

### Produktauswahl

Installation type	LED	Colour	Type	Article number	
Wall mounting	20 W	White	theLeda B20L WH	1020683	
		Black	theLeda B20L BK	1020684	
	30 W	White	theLeda B30L WH	1020685	
		Black	theLeda B30L BK	1020686	
	50 W	White	theLeda B50L WH	1020687	
		Black	theLeda B50L BK	1020688	
	100 W	White	theLeda B100L WH	1020681	
		Black	theLeda B100L BK	1020682	
	-	-	White	Light module theLeda B WH	9070762
			Black	Light module theLeda B BK	9070763
-		White	Motion module theLeda B WH	9070760	
		Black	Motion module theLeda B BK	9070761	
-		White	Motion module RC theLeda B WH	9070800	
		Black	Motion module RC theLeda B WH	9070801	
-		-	Black	Remote control theLeda B	9070802

# Presence and motion detectors

## LED spotlights, Motion detector/light sensor as accessory

### Technical data

	theLeda B20L WH	theLeda B20L BK	theLeda B30L WH	theLeda B30L BK	theLeda B50L WH	theLeda B50L BK	theLeda B100L WH	theLeda B100L BK
Operating voltage	230 V AC							
Frequency	50 Hz							
LED output (luminous flux)	1500 lm	1400 lm	2100 lm	2050 lm	3600 lm	3500 lm	10.200 lm	9.800 lm
Colour temperature	5000 K							
Ambient temperature	-20 °C ... +40 °C							
Protection class	I							
Protection rating	IP 65							

### Application example



**Version 1:**  
LED spotlight

For lighting control via a switch or a button



**Version 2:**  
LED spotlight with light sensor

For lighting-based lighting control



**Version 3:**  
LED spotlight with motion detector-Strahler

For motion-based lighting control

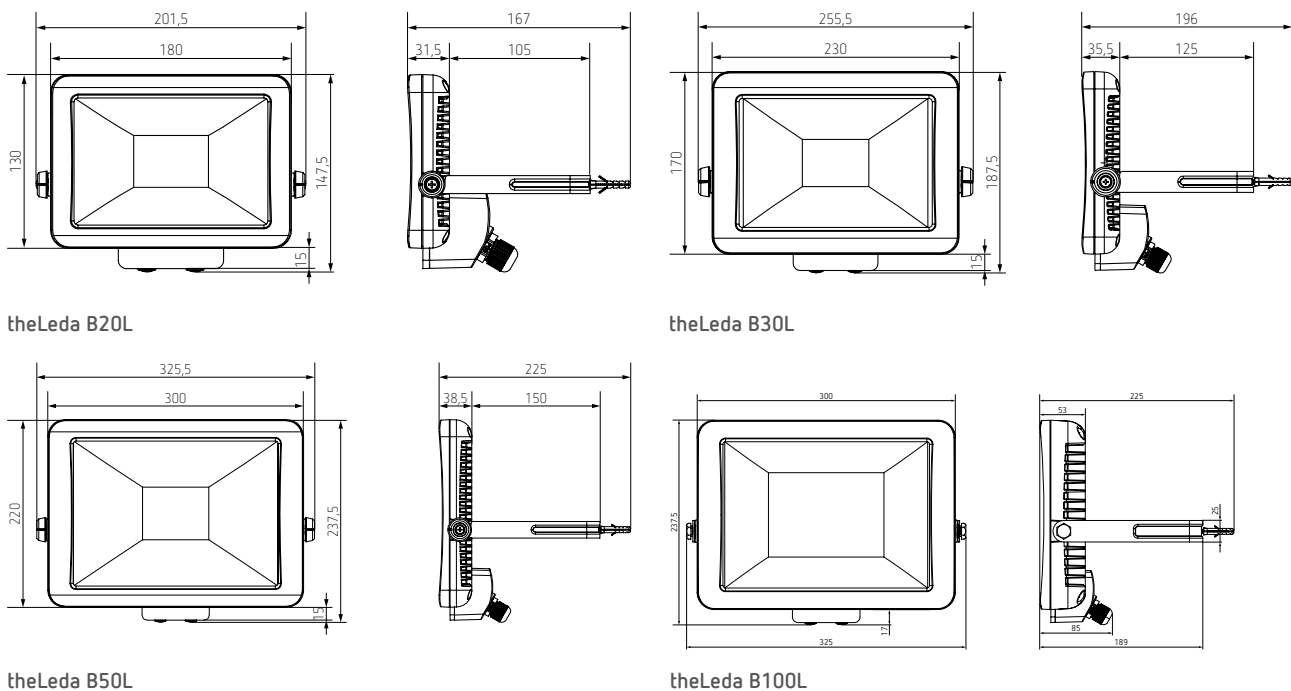


**Version 4:**  
LED spotlight with RC motion detector

For motion-based lighting control

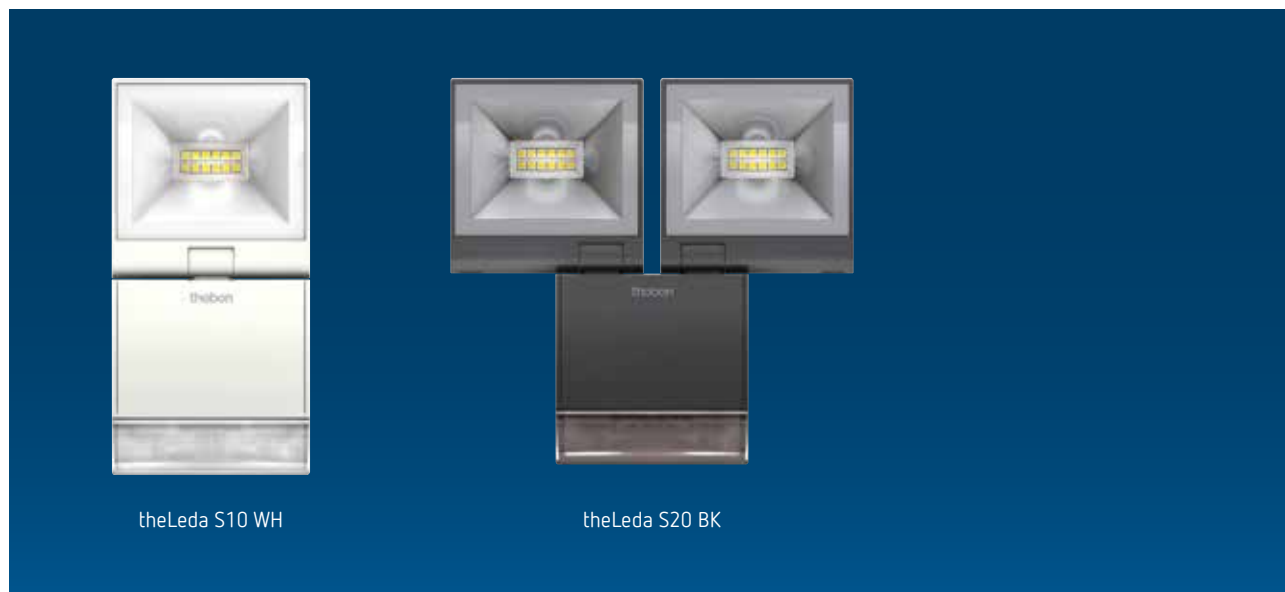
Each RC motion detector is supplied with a remote control

### Scale drawings



# Presence and motion detectors

## Spotlights, with motion detector



### Description

#### Common functions

- LED spotlight with motion detector
- Suitable for outdoor use
- Automatic lighting control based on presence and brightness
- 180° detection angle at a detection range of 10 m
- Area limit via lens attachment
- Orientation light with configurable dimming level

- Short and extended function via manual control system
- Integrated heat sink in housing color
- Single-handed plug-in installation
- Instant start-up possible via factory preset
- Adjustable lux value and switch-off delay
- Setting elements easily accessible on the side

#### theLeda S10

- 1 LED spot with 10 W

- Spotlight can be swivelled  $\pm 40^\circ$  horizontally, and adjusted  $70^\circ$  downwards, wall-wash functionality by swivelling  $180^\circ$

#### theLeda S20

- 2 LED spot with 10 W each
- Spotlights can be swivelled  $\pm 20^\circ$  horizontally, and adjusted  $70^\circ$  downwards

### Product selection

Installation type	LED	Colour temperature	Colour	Type	Article number
Wall installation	10 W	4000 K, neutral white	White	theLeda S10 WH	1020921
			Black	theLeda S10 BK	1020922
		3000 K, warm white	White	theLeda S10 W WH	1020931
			Black	theLeda S10 W BK	1020932
	2 x 10 W	4000 K, neutral white	White	theLeda S20 WH	1020923
			Black	theLeda S20 BK	1020924
3000 K, warm white		White	theLeda S20 W WH	1020933	
		Black	theLeda S20 W BK	1020934	

### Technical data

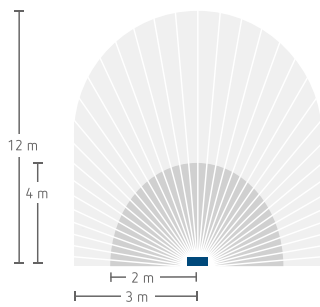
	theLeda S10	theLeda S10 W	theLeda S20	theLeda S20 W
Operating voltage	230 V AC			
Frequency	50–60 Hz			
Stand-by consumption	0,4 W			
Setting range brightness	5–200 lx			
LED output (lighting current)	840 lm	770 lm	2 x 840 lm	2 x 770 lm



# Presence and motion detectors Spotlights, with motion detector

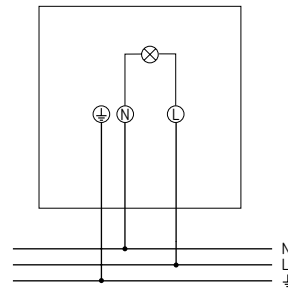
	theLeda S10	theLeda S10 W	theLeda S20	theLeda S20 W
Colour temperature	4000 K, neutral white	3000 K, warmwhite	4000 K, neutral white	3000 K, warmwhite
Detection angle	180°			
Installation height	1,8–2,5 m			
Light switch-off delay	2 s–30 min			
Ambient temperature	–20 °C ... +45 °C			
Protection class	I			
Type of protection	IP 55			

## Detection range (Semicircular)



■ Walking diagonally to the detector  
■ Walking head on to the detector  
 Mounting height: 2.5 m

## Connection diagrams



## Accessories



**Corner angle 10 WH**

↳ Art.No.: 9070969

Details page 337



**Spacer 10 WH**

↳ Art.No.: 9070971

Details page 337



**Corner angle 10 BK**

↳ Art.No.: 9070987

Details page 337

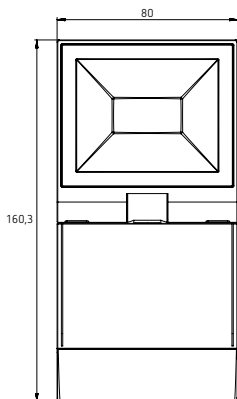


**Spacer 10 BK**

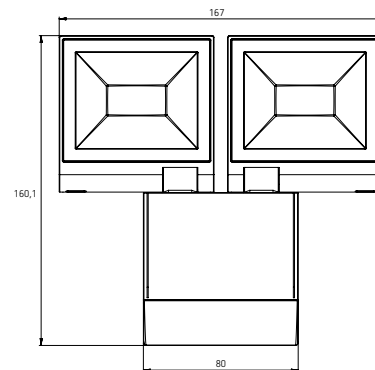
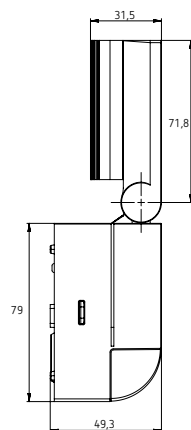
↳ Art.No.: 9070988

Details page 337

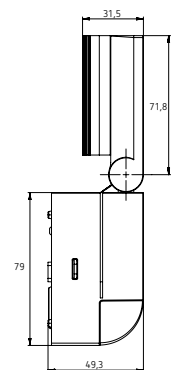
## Dimensions



theLeda S10



theLeda S20



# Presence and motion detectors

## Spotlights



### Description

#### Common functions

- LED spotlight
- Suitable for outdoor use
- Single-handed plug-in installation
- Integrated heat sink in housing color

#### theLeda S10L

- 1 LED spot with 10 W
- Spotlight can be swivelled  $\pm 40^\circ$  horizontally, and adjusted  $70^\circ$  downwards, wall-wash functionality by swivelling  $180^\circ$

#### theLeda S20L

- 2 LED spot with 10 W each
- Spotlights can be swivelled  $\pm 20^\circ$  horizontally, and adjusted  $70^\circ$  downwards

8

### Product selection

Installation type	LED	Colour	Type	Article number
Wall installation	10 W	White	theLeda S10L WH	1020721
		Black	theLeda S10L BK	1020722
	2 x 10 W	White	theLeda S20L WH	1020723
		Black	theLeda S20L BK	1020724

### Technical data

	theLeda S10L	theLeda S20L
Operating voltage	230 V AC	
Frequency	50–60 Hz	
LED output (lighting current)	840 lm	2 x 840 lm
Colour temperature	4000 K, neutral white	
Installation height	1,8–2,5 m	
Ambient temperature	–20 °C ... +45 °C	
Protection class	II	
Type of protection	IP 55	

Accessoires



Corner angle 10 WH  
↳ Art.No.: 9070969  
Details page 337



Spacer 10 WH  
↳ Art.No.: 9070971  
Details page 337

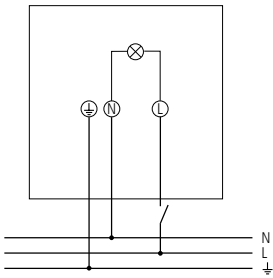


Corner angle 10 BK  
↳ Art.No.: 9070987  
Details page 337



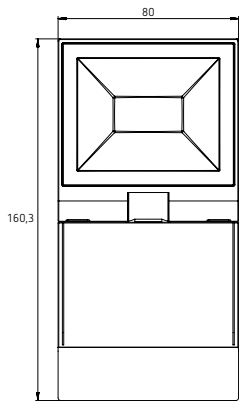
Spacer 10 BK  
↳ Art.No.: 9070988  
Details page 337

Connection diagrams

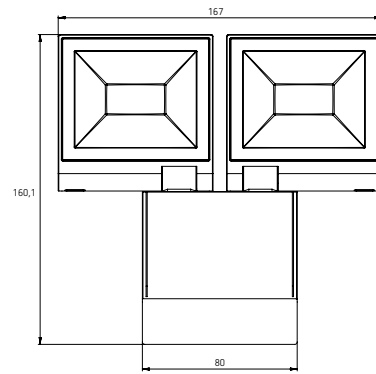


theLeda S L

Dimensions



theLeda S10L



theLeda S20L

# Presence and motion detectors

## Spotlights, with motion detector



theLeda P12 WH

theLeda P24 AL

### Description

#### Common functions

- LED light with motion detector
- Suitable for outdoor use
- Automatic lighting control based on presence and brightness
- 180° detection angle at a detection range of 12 m and creep under protection
- Diffused glare-free light
- Functions teach-in, test, twilight switch, dimmable orientation light and night interruption adjustable
- Area limit via lens attachment

- Controls are place protected
- Remote controllable with optionally remote controls theSenda P and theSenda S
- Back side made of high-quality aluminum die-cast for an optimally cooling of the high-power LEDs

#### theLeda P12

- 11 W (900 lm)
- Spotlight can be swivelled 35° left/right, 60° upwards/downwards and 180° backwards
- Spacer included in delivery

#### theLeda P24

- 20 W (2 x 900 lm)
- Spotlight can be swivelled 30° backwards, 60° downwards
- Spacer and corner angle included in delivery

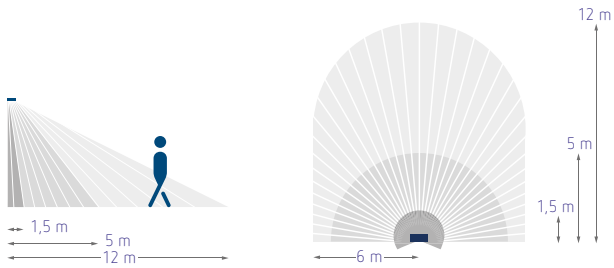
### Product selection

Installation type	LED	Colour	Type	Article number
Wall installation	11 W (900 lm)	White	theLeda P12 WH	1020941
		Aluminium	theLeda P12 AL	1020942
	20 W (2 x 900 lm)	White	theLeda P24 WH	1020943
		Aluminium	theLeda P24 AL	1020944

### Technical data

	theLeda P12	theLeda P24
Operating voltage	230 V AC	
Frequency	50–60 Hz	
Stand-by consumption	0,4 W	
Setting range brightness	5–800 lx or just presence dependent	
LED output (lighting current)	11 W (900 lm)	20 W (2 x 900 lm)
Colour temperature	4000 K, neutral white	
Detection angle	180°	
Installation height	1,8–2,5 m	
Light switch-off delay	10 s–20 min	
Ambient temperature	–25 °C ... +45 °C	
Protection class	II	
Type of protection	IP 55	

## Detection range (Semicircular)



## Accessories



**theSenda P**  
↳ Art.No.: 9070910  
Details page 339



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339

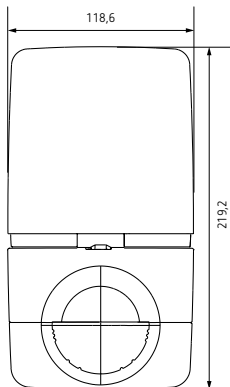
**Corner angle 10 WH**  
Details page 337

**Spacer 10 WH**  
Details page 337

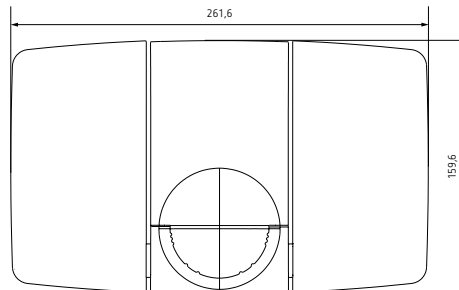
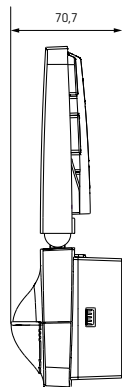
**Corner angle 10 AL**  
Details page 337

**Spacer 10 AL**  
Details page 337

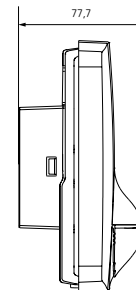
## Scale drawings



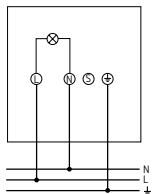
theLeda P12



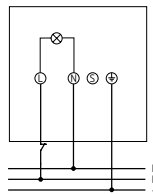
theLeda P24



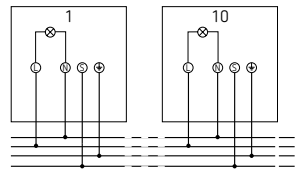
## Connection diagrams



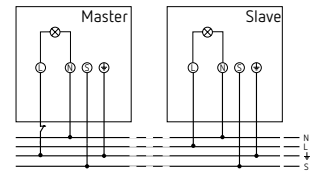
theLeda P12, theLeda P24  
(Standard operation)



theLeda P12, theLeda P24  
(Manual operation via circuit  
breaker button)



theLeda P12, theLeda P24  
(Connection Master/Master)



Master/Slave

# Presence and motion detectors

## Spotlights



### Description

#### Common functions

- LED light
- Suitable for outdoor use
- Diffused glare-free light
- Back side made of high-quality aluminum die-cast for an optimally cooling of the high-power LEDs

#### theLeda P12L

- 11 W (900 lm)
- Spotlight can be swivelled 35° left/right, 60° upwards/downwards and 180° backwards
- Spacer included in delivery

#### theLeda P24L

- 20 W (2 x 900 lm)
- Spotlight can be swivelled 30° backwards, 60° downwards
- Spacer and corner angle included in delivery

8

### Product selection

Installation type	LED	Colour	Type	Article number
Wall installation	11 W (900 lm)	White	theLeda P12L WH	1020741
		Aluminium	theLeda P12L AL	1020742
	20 W (2 x 900 lm)	White	theLeda P24L WH	1020743
		Aluminium	theLeda P24L AL	1020744

### Technical data

	theLeda P12L	theLeda P24L
Operating voltage	230 V AC	
Frequency	50–60 Hz	
Stand-by consumption	0,4 W	
LED output (lighting current)	11 W (900 lm)	20 W (2 x 900 lm)
Colour temperature	4000 K, neutral white	
Installation height	1,8–2,5 m	
Ambient temperature	–25 °C ... +45 °C	
Protection class	II	
Type of protection	IP 55	

Accessories



Corner angle 10 WH  
↳ Art.No.: 9070969  
Details page 337



Spacer 10 WH  
↳ Art.No.: 9070971  
Details page 337

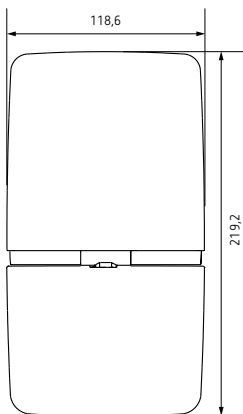


Corner angle 10 AL  
↳ Art.No.: 9070970  
Details page 337

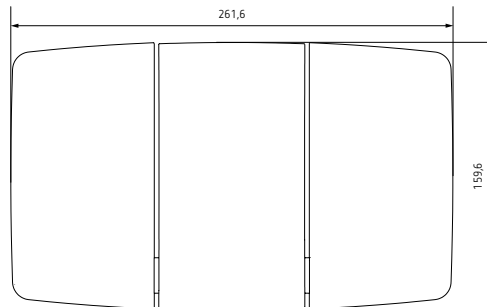
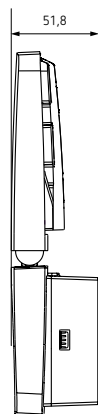


Spacer 10 AL  
↳ Art.No.: 9070972  
Details page 337

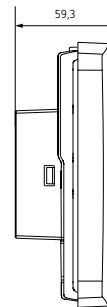
Scale drawings



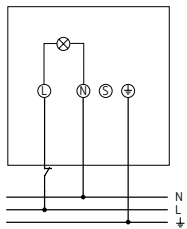
theLeda P12L



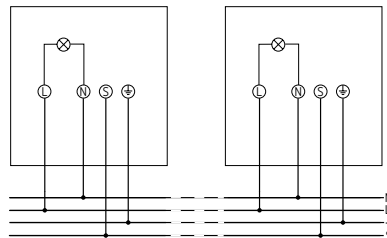
theLeda P24L



Connection diagrams



theLeda P12L, theLeda P24L



theLeda P12, theLeda P24L  
(Connection Master/Slave)

# Presence and motion detectors

## LED light



theLeda D S AL



theLeda D U AL



theLeda UD AL

### Description

#### Common functions

- Stylish LED light with motion detector (PIR)
- High-quality housing made from anodised extruded-aluminium profiles
- Suitable for outdoor use
- Automatic lighting control based on presence and brightness
- 180° detection angle at 10 m range
- Teach-in, test, twilight switch, dimmable orientation light and self-calculating night interruption functions can be adjusted
- High IP 55 protection rating for outdoor installation
- Easy installation with socket

- Wireless connectivity
- Long-lasting LEDs: service life of 50,000 hours
- Manual control via an interrupter switch (PERM ON 6 h)

#### theLeda D S AL

- 8.5 W LED light
- Light emission at front (spotlight)

#### theLeda D SU AL

- 14 W LED light
- Light emission at front (spotlight) and at top (uplighter)

#### theLeda D U AL

- 8.5 W LED light
- Light emission at top (uplighter)

#### theLeda D UD AL

- 11.5 W LED light
- Light emission at top (uplighter) and bottom (downlighter)

### Product selection

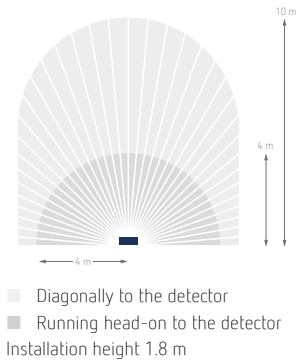
Type of installation	Light emission	Colour	Type	Article number
Wall mounting	Spotlight (at front)	Aluminium	theLeda D S AL	1020901
	Spot/up-light (at front/top)	Aluminium	theLeda D SU AL	1020902
	Up-light (at top)	Aluminium	theLeda D U AL	1020903
	Up-light/down-light (at top/bottom)	Aluminium	theLeda D UD AL	1020904

### Technical data

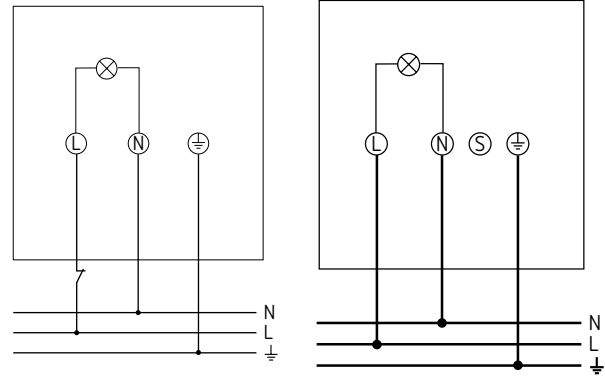
	theLeda D S AL	theLeda D SU AL	theLeda D U AL	theLeda D UD AL
Operating voltage	230 V AC			
Frequency	50–60 Hz			
Stand-by consumption	0,5 W			
Setting range brightness	2–800 lx			
LED output (lighting current)	760 lm	760 lm   475 lm	760 lm	2 x 475 lm
Colour temperature	3000 K, warmwhite			
Light switch-off delay	10 s–20 min			
Ambient temperature	–25 °C ... +45 °C			
Protection class	II			
Type of protection	IP 55			



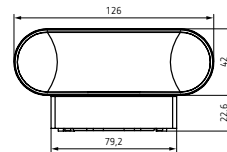
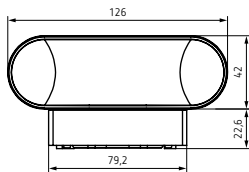
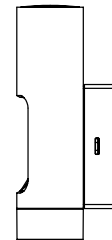
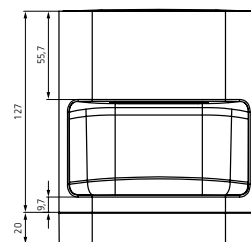
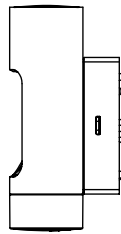
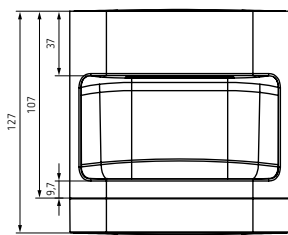
## Detection area (semicircle)



## Connection example

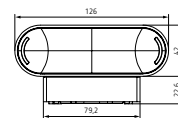
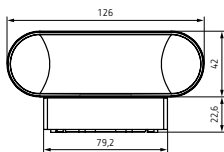
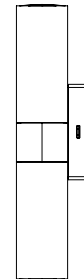
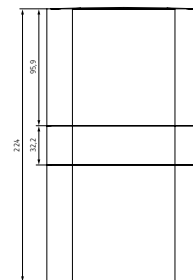
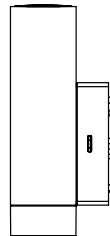
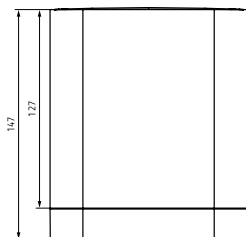


## Scale drawings



theLeda D S AL

theLeda D SU AL



theLeda D U AL

theLeda D UD AL

## Accessories



theSenda P

↳ Art.No.: 9070910  
Details page 339



theSenda S

↳ Art.No.: 9070911  
Details page 339



theSenda B

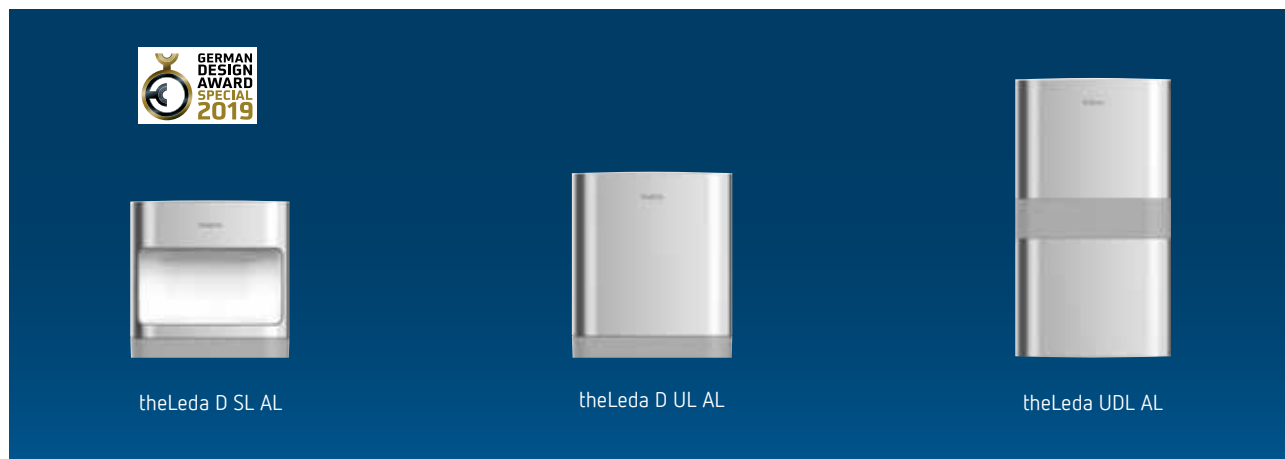
↳ Art.No.: 9070985  
Details page 339

Spacer 10 AL  
Details page 337

Corner angle 10 AL  
Details page 337

# Presence and motion detectors

## LED light



### Description

#### Common functions

- Stylish LED light
- High-quality housing made from anodised extruded-aluminium profiles
- Suitable for outdoor use
- High IP 55 protection rating for outdoor installation
- Easy installation with socket
- Wireless connectivity
- Long-lasting LEDs: service life of 50,000 hours

#### theLeda D SL AL

- Stylish LED light 8.5 W
- Light emission at front (spot-light)

#### theLeda D SUL AL

- Stylish LED light 14 W
- Light emission at front (spot-light) and at top (up-light)

#### theLeda D UL AL

- Stylish LED light 8.5 W
- Light emission at top (up-light)

#### theLeda D UDL AL

- Stylish LED light 11.5 W
- Light emission at top (up-light) and bottom (down-light)

8

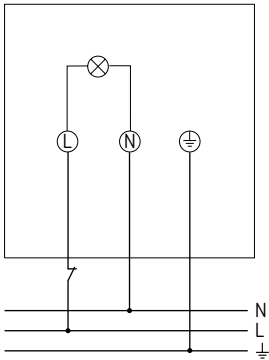
### Product selection

Type of installation	Light emission	Colour	Type	Article number
Wall mounting	Spotlight (at front)	Aluminium	theLeda D SL AL	1020701
	Spot/up-light (at front/top)	Aluminium	theLeda D SUL AL	1020702
	Up-light (at top)	Aluminium	theLeda D UL AL	1020703
	Up-light/down-light (at top/bottom)	Aluminium	theLeda D UDL AL	1020704

### Technical data

	theLeda D SL AL	theLeda D SUL AL	theLeda D UL AL	theLeda D UDL AL
Operating voltage	230 V AC			
Frequency	50–60 Hz			
Stand-by consumption	0,5 W			
LED output (lighting current)	760 lm	760 lm   475 lm	760 lm	2 x 475 lm
Colour temperature	3000 K, warmwhite			
Ambient temperature	–25 °C ... +45 °C			
Protection class	II			
Type of protection	IP 55			

Connection example



Accessories

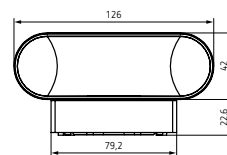
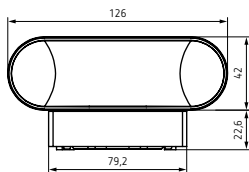
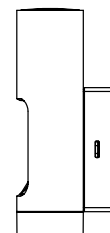
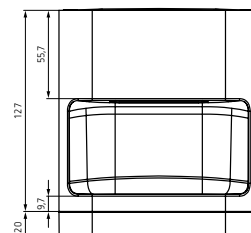
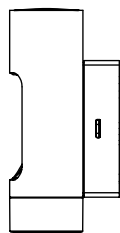
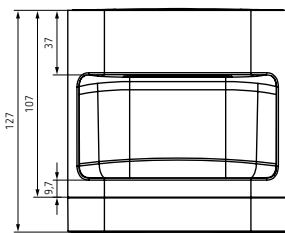


Corner angle 10 AL  
↳ Art.No.: 9070970  
Details page 337



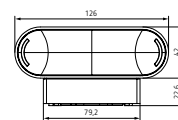
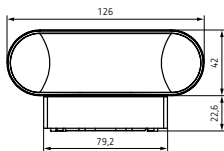
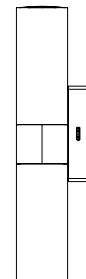
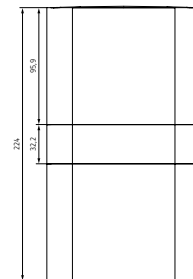
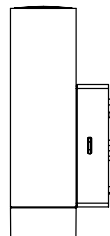
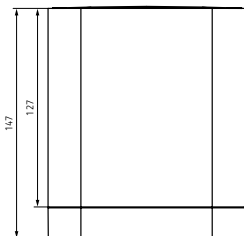
Spacer 10 AL  
↳ Art.No.: 9070972  
Details page 337

Scale drawings



theLeda D SL AL

theLeda D SUL AL



theLeda D UL AL

theLeda D UDL AL

# Presence and motion detectors

## LED bollard light, with/without motion detector



### Description

#### Common functions

##### (theLeda D with motion detector)

- Stylish LED bollard light with motion detector (PIR)
- High-quality housing made from anodised extruded-aluminium profiles
- Suitable for outdoor use
- Automatic lighting control based on presence and brightness
- 180° detection angle with 12 m diameter, optimised for paths
- Teach-in, test, twilight switch, dimmable orientation light and self-calculating night interruption functions can be adjusted
- Can be adjusted via the theSenda S and P remote controls, via theSenda B and the theSenda Plug app, or by setting the potentiometer on the device itself
- High IP 55 protection rating for outdoor installation (with IP 54 socket)

- Wireless connectivity, can only be set via theSenda B with theSenda Plug
- Exceptionally efficient thanks to high light output
- Long-lasting LEDs: service life of 50,000 hours
- Manual control via an interrupter switch (PERM ON 6 h)

##### theLeda D B AL

- 8,5 W short LED bollard light
- Light emission at front (spotlight)

##### theLeda D B plus AL

- 8,5 W long LED bollard light
- Light emission at front (spotlight)

##### theLeda D B plus S AL

- 8,5 W long LED bollard light
- Light emission at front (spotlight)
- With socket on the back of the housing

#### Common functions

##### (theLeda D without motion detector)

- Stylish LED bollard light
- High-quality housing made from anodised extruded-aluminium profiles
- Suitable for outdoor use
- High IP 55 protection rating for outdoor installation
- Wireless connectivity, can only be set via theSenda B with theSenda Plug
- Exceptionally efficient thanks to high light output
- Long-lasting LEDs: service life of 50,000 hours

##### theLeda D BL AL

- 8,5 W short LED bollard light
- Light emission at front (spotlight)

##### theLeda D BL plus AL

- 8,5 W long LED bollard light
- Light emission at front (spotlight)

### Product selection

Type of installation	With motion detector	Version	With socket	Colour	Type	Article number
Floor installation	✓	Short	-	Aluminium	theLeda D B AL	1020905
		Long	-	Aluminium	theLeda D B plus AL	1020906
		Long	✓	Aluminium	theLeda D B plus S AL	1020907
	-	Short	-	Aluminium	theLeda D BL AL	1020705
		Long	-	Aluminium	theLeda D BL plus AL	1020706

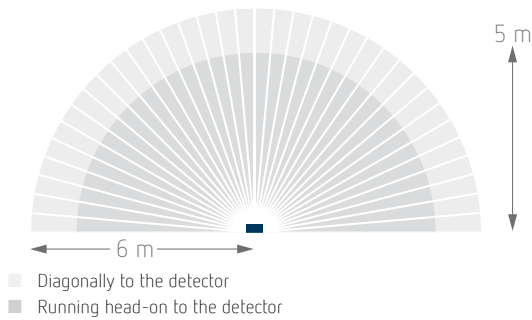
### Technical data

	theLeda D B AL	theLeda D B plus AL	theLeda D B plus S AL	theLeda D BL AL	theLeda D BL plus AL
Operating voltage	230 V AC				
Frequency	50–60 Hz				
Setting range brightness	2–800 lx			-	
LED output (lighting current)	760 lm				
Colour temperature	3000 K, warmwhite				
Light switch-off delay	10 s–20 min			-	
Ambient temperature	–25 °C ... +45 °C				

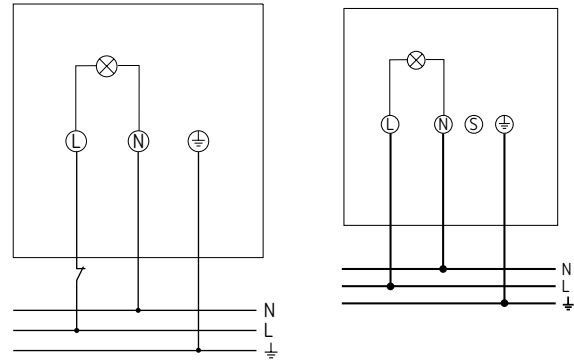
# Presence and motion detectors LED bollard light, with/without motion detector

	theLeda D B AL	theLeda D B plus AL	theLeda D B plus S AL	theLeda D BL AL	theLeda D BL plus AL
Protection class	II		I	II	
Type of protection	IP 55		IP 54	IP 55	

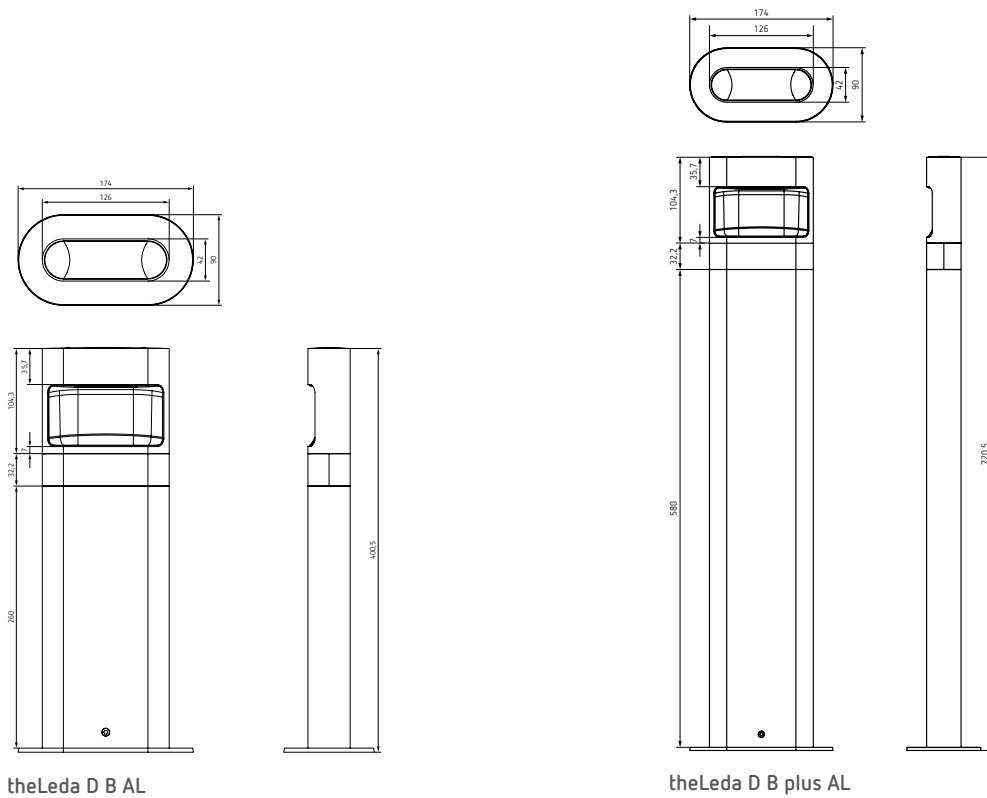
## Detection area (semicircle)



## Connection example



## Scale drawings



## Accessories



**theSenda B/P**  
↳ Art.No.: 9070985/9070910  
Details page 339



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339



**theLeda D B ground spike**  
↳ Art.No.: 9070765  
Details page 339

# Presence and motion detectors

## Motion detectors



### Description

- Passive infra-red motion detector for ceiling installation
- Circular detection area 360°, up to Ø 8 m (50 m<sup>2</sup>)
- Automatic motion and brightness-dependent control for lighting
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Channel A light: relay, 230 V
- Operation as fully automatic device
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Extension of detection area via Master/ Slave switching
- Test mode for checking function and detection area
- Diameter of ceiling cutout 34–36 mm
- Ready for immediate use due to factory presetting

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	110–240 V AC	White	thePiccola S360-100 DE WH	1060200

8

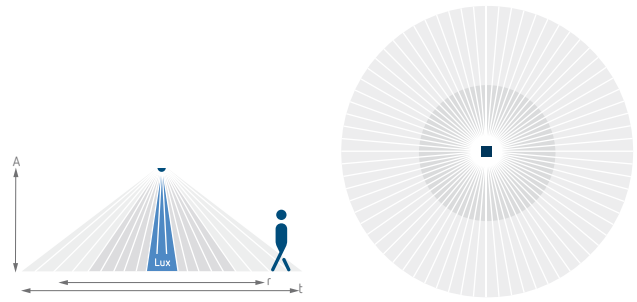
### Technical data

thePiccola S360-100 DE WH			
Operating voltage	110–240 V AC	Fluorescent lamp load (conventional) parallel-corrected	1300 VA, 140 µF
Frequency	50–60 Hz	Fluorescent lamp load (conventional) series-corrected	2000 VA
Installation height	2–6 m	Fluorescent lamp load (electronic ballast)	1200 W
Power consumption	0,4 W	LED lamp < 2 W (typ.)	55 W
Setting range brightness	5–1000 lx	LED lamp > 2 W (typ.)	600 W
Light switch-off delay	30 s–30 min	Ambient temperature	–20 °C ... +50 °C
Incandescent/halogen lamp load	2000 W	Type of protection	IP 44 (Sensor), IP 20 (power module) (when mounted)
Fluorescent lamp load (conventional) not corrected	2000 VA		

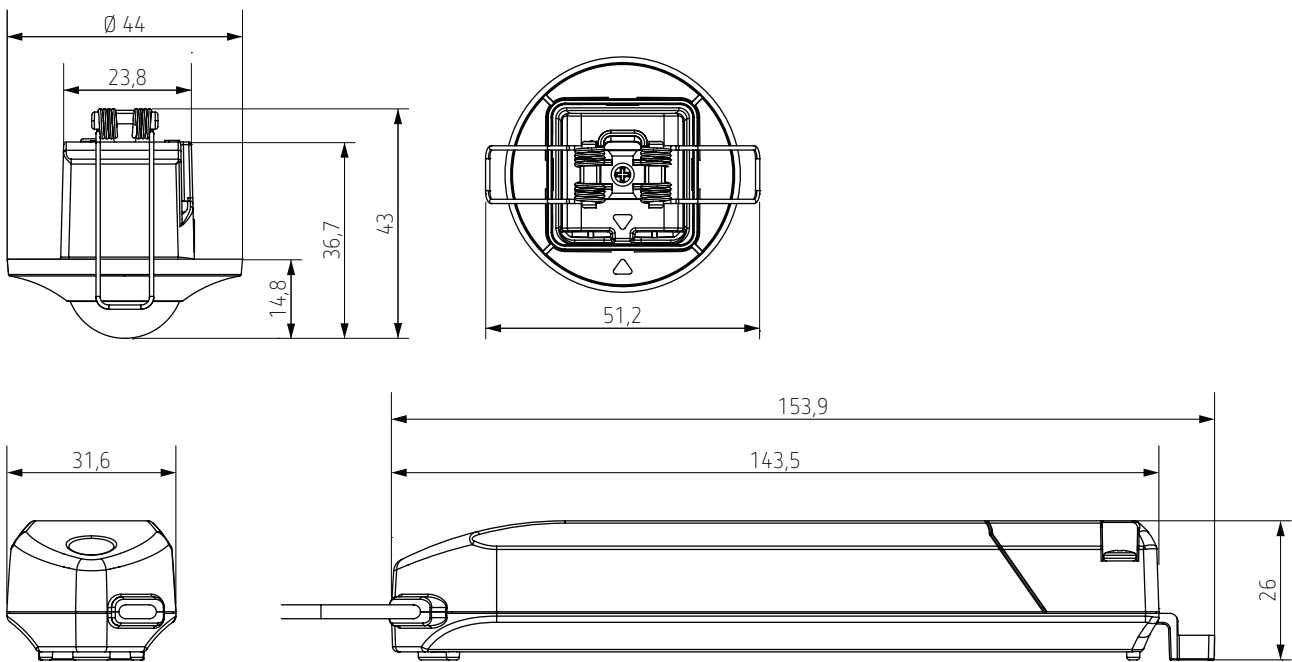
Detection range (Round)

Mounting height (A)	Head on to (r)	Diagonally (t)
2,5 m	3 m <sup>2</sup>   2 m	50 m <sup>2</sup>   8 m

Detection range according to sensNORM IEC 63180 see datasheet

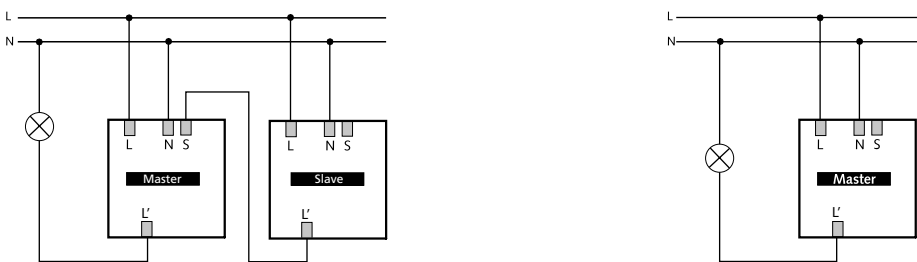


Scale drawings



8

Connection diagrams



# Presence and motion detectors

## Motion detectors



### Description

- Passive infra-red motion detector for ceiling installation
  - Circular detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Channel A light: relay, 230 V
  - Operation as fully automatic device
  - Brightness switching value configurable, teach-in function
  - Pulse function for staircase light time switch
  - Detection sensitivity configurable
  - Test mode for checking function and detection area
  - Ready for immediate use due to factory presetting (Brightness switching value 300 lux, Time delay 10 min)
- One of these optional remote controls is required for changing the values and attitudes:
    - Management remote control theSenda B
    - Installation remote control theSenda P
  - Optional user remote control:
    - theSenda S
- theMova S360-100 DE**
- 1 channel light
  - Automatic motion and brightness-dependent control for lighting
- theMova S360-101 DE**
- 1 channel light and 1 channel presence
  - Automatic motion and brightness-dependent control for lighting and HVAC
  - Channel H, presence: relay, floating e.g. for HVAC control
  - Time delay configurable

### Product selection

Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	230 V AC	White	theMova S360-100 DE WH	1030560
	Light   Presence	230 V AC	White	theMova S360-101 DE WH	1030565

8

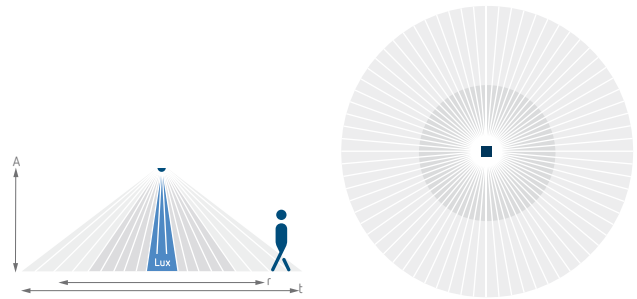
### Technical data

	theMova S360-100 DE	theMova S360-101 DE
Operating voltage	230 V AC	
Frequency	50 Hz	
Recommended installation height	2–3,5 m	
Power consumption	0,5 W	
Setting range brightness	30–3000 lx	
Light switch-off delay	10 s–60 min	
Type of contact light	Relay 230 V/10 A µ-contact	
Incandescent/halogen lamp load	2300 W	
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)	
Inrush current	max. 400 A/200 µs	
LED lamp < 2 W (typ.)	25 W	
LED lamp > 2 W (typ.)	250 W	
Switching capacity presence	–	50 W/50 VA
Ambient temperature	–15 °C ... +50 °C	
Type of protection	IP 40 (when fitted)	



Detection range (Round)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
4 m	13 m <sup>2</sup>   4 m	64 m <sup>2</sup>   9 m



Accessories



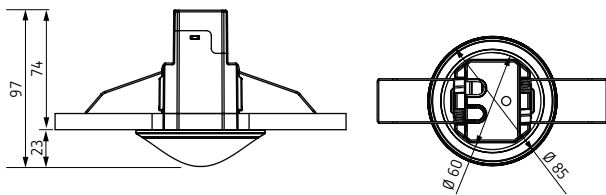
**theSenda B**  
↳ Art.No.: 9070985  
Details page 339



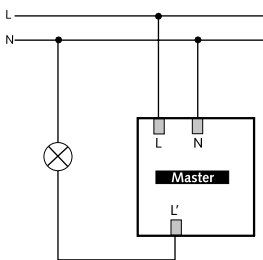
**theSenda P**  
↳ Art.No.: 9070910  
Details page 339

**theSenda S**  
Details page 339  
**Cover 85 GR**  
Details page 334

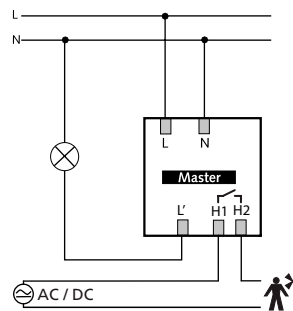
Scale drawings



Connection diagrams



theMova S360-100 DE



theMova S360-101 DE

# Presence and motion detectors

## Motion detectors



### Description

- Passive infra-red motion detector for ceiling installation
  - Circular detection area 360°, up to Ø 9 m (64 m²)
  - Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
  - Channel A light: relay, 230 V
  - Operation as fully automatic device
  - Brightness switching value configurable, teach-in function
  - Pulse function for staircase light time switch
  - Detection sensitivity configurable
  - Test mode for checking function and detection area
  - Ready for immediate use due to factory presetting (Brightness switching value 300 lux, Time delay 10 min)
- One of these optional remote controls is required for changing the values and attitudes:
    - Management remote control theSenda B
    - Installation remote control theSenda P
  - Optional user remote control:
    - theSenda S
- theMova S360-100 AP**
- 1 channel light
  - Automatic motion and brightness-dependent control for lighting
- theMova S360-101 AP**
- 1 channel light and 1 channel presence
  - Automatic motion and brightness-dependent control for lighting and HVAC
  - Channel H, presence: relay, floating e.g. for HVAC control
  - Time delay configurable

### Product selection

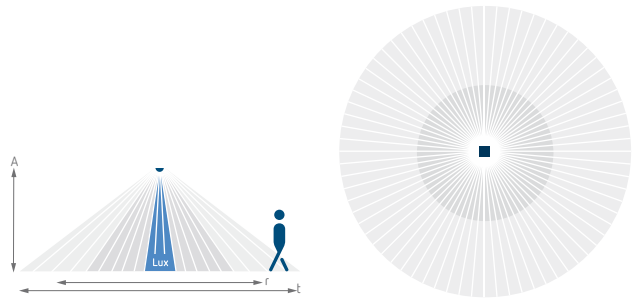
Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	230 V AC	White	theMova S360-100 AP WH	1030550
			Grey	theMova S360-100 AP GR	1030551
	Light   Presence	230 V AC	White	theMova S360-101 AP WH	1030555
			Grey	theMova S360-101 AP GR	1030556

### Technical data

	theMova S360-100 AP	theMova S360-101 AP
Operating voltage	230 V AC	
Frequency	50 Hz	
Recommended installation height	2–3,5 m	
Power consumption	0,5 W	
Setting range brightness	30–3000 lx	
Light switch-off delay	10 s–60 min	
Type of contact light	Relay 230 V/10 A µ-contact	
Incandescent/halogen lamp load	2300 W	
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)	
Inrush current	max. 400 A/200 µs	
LED lamp < 2 W (typ.)	25 W	
LED lamp > 2 W (typ.)	250 W	
Switching capacity presence	–	50 W/50 VA
Ambient temperature	– 15 °C ... +50 °C	
Type of protection	IP 54	

Detection range (Round)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
4 m	13 m <sup>2</sup>   4 m	64 m <sup>2</sup>   9 m



Accessories



theSenda B

↳ Art.No.: 9070985  
Details page 339



theSenda P

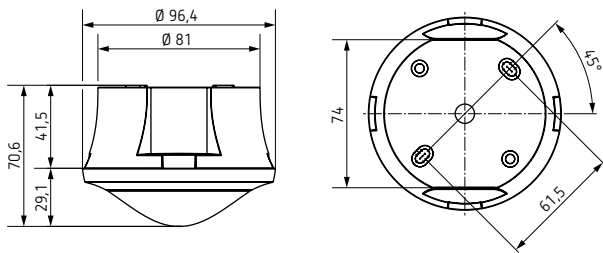
↳ Art.No.: 9070910  
Details page 339



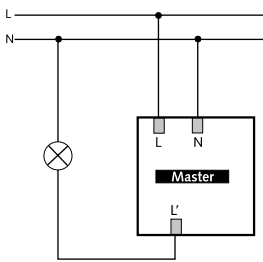
theSenda S

↳ Art.No.: 9070911  
Details page 339

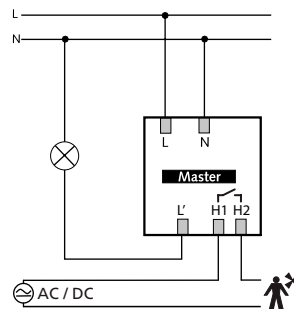
Scale drawings



Connection diagrams



theMova S360-100 AP



theMova S360-101 AP

# Presence and motion detectors

## Motion detectors



### Description

- Motion detector (PIR), with pre-configured cable and Wieland GSTi18 connector, cable length 1,50 meter
- Circular detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
- Automatic motion and brightness-dependent control for lighting
- Mixed light measurement
- Channel A light: relay, 230 V
- Operation as fully automatic device
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Detection sensitivity configurable
- Test mode for checking function and detection area
- Ready for immediate use due to factory presetting (Brightness switching value 300 lux, Time delay 10 min)
- One of these optional remote controls is required for changing the values and attitudes:
  - Management remote control theSenda B
  - Installation remote control theSenda P
- **Optional user remote control:**
  - theSenda S

### Product selection

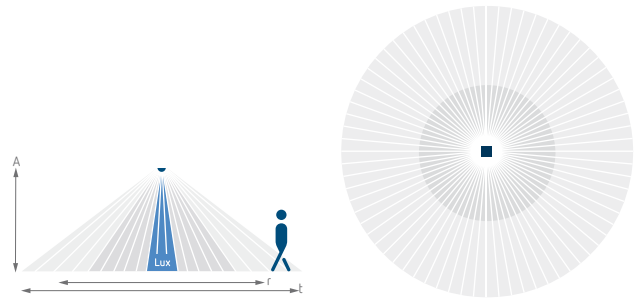
Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	230 V AC	White	theMova S360-100 WH GST	1030570

### Technical data

	theMova S360-100 WH
Operating voltage	230 V AC
Frequency	50 Hz
Installation height	2–4 m
Power consumption	0,5 W
Setting range brightness	30–3000 lx
Light switch-off delay	10 s–60 min
Type of contact light	Relay 230 V / 10 A µ-contact
Incandescent/halogen lamp load	2300 W
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)
Inrush current	max. 400 A / 200 µs
LED lamp < 2 W (typ.)	25 W
LED lamp 2–8 W (typ.)	70 W
LED lamp > 8 W (typ.)	250 W
Ambient temperature	–15 °C ... +50 °C
Type of protection	IP 54 (when fitted)

Detection range (Round)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
4 m	13 m <sup>2</sup>   4 m	64 m <sup>2</sup>   9 m



Accessories



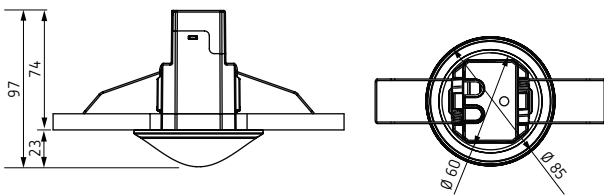
**theSenda B**  
↳ Art.No.: 9070985  
Details page 339



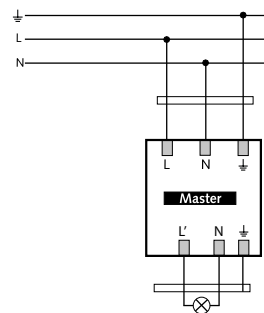
**theSenda P**  
↳ Art.No.: 9070910  
Details page 339

**theSenda S**  
Details page 339  
**Cover 85 GR**  
Details page 334

Scale drawings



Connection diagrams



# Presence and motion detectors

## Motion detectors



### Description

- Passive infra-red motion detector for ceiling installation
- Circular detection area 360°, up to Ø 24 m (452 m<sup>2</sup>)
- Restriction of detection area with cover clips
- Automatic motion and brightness-dependent control for lighting
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Channel A light: relay, 230 V
- Operation as fully automatic device
- Brightness switching value configurable, teach-in function
- Pulse function for staircase light time switch
- Time delay configurable
- Detection sensitivity configurable
- Ready for immediate use due to factory presetting
- Test mode for checking function and detection area
- Ceiling installation in flush-mounted socket
- Ceiling installation possible with back box, IP44 (option)
- User remote control theSenda S (option)
- Management remote control theSenda B (option)
- Installation remote control theSenda P (option)

### Product selection

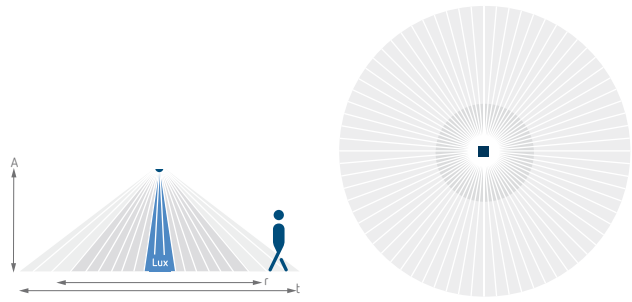
Installation type	Channel	Operating voltage	Colour	Type	Article number
Ceiling installation	Light	110–230 V AC	White	theMova P360-100 UP WH	1030600

### Technical data

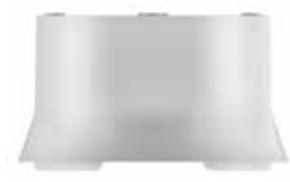
	theMova P360-100 UP
Operating voltage	110–230 V AC
Frequency	50–60 Hz
Recommended installation height	2–10 m
Power consumption	0,15 W
Setting range brightness	30–3000 lx
Light switch-off delay	10 s–60 min
Type of contact light	Relay 230 V/10 A µ-contact
Incandescent/halogen lamp load	2300 W
Compact and fluorescent lamps	1150 VA (cos φ = 0,5)
Inrush current	max. 800 A/200 µs
LED lamp < 2 W (typ.)	60 W
LED lamp > 2 W (typ.)	600 W
Ambient temperature	–15 °C ... +50 °C
Type of protection	IP 54 (when fitted)

Detection range (Round)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	28 m <sup>2</sup>   6 m	380 m <sup>2</sup>   22 m
2,5 m	38 m <sup>2</sup>   7 m	415 m <sup>2</sup>   23 m
3 m	50 m <sup>2</sup>   8 m	452 m <sup>2</sup>   24 m
3,5 m	50 m <sup>2</sup>   8 m	452 m <sup>2</sup>   24 m
6 m	50 m <sup>2</sup>   8 m	452 m <sup>2</sup>   24 m
10 m	50 m <sup>2</sup>   8 m	452 m <sup>2</sup>   24 m



Accessories



**Surface frame 110A WH**  
↳ Art.No.: 9070912  
Details page 334



**theSenda P**  
↳ Art.No.: 9070910  
Details page 339



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339

**QuickSafe**  
Details page 336

**theSenda B**  
Details page 339

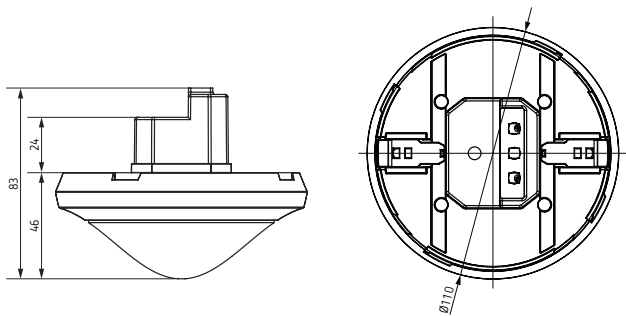
**Surface frame 110A GR**  
Details page 334

**Ceiling installation box 68A**  
Details page 334

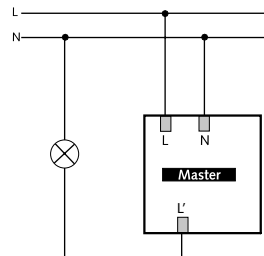
**Masking clip**  
Details page 335

**Cover 110 GR**  
Details page 334

Scale drawings



Connection diagrams



# Presence and motion detectors

## Motion detectors



LUXA 103 DE

LUXA 103 AP

### Description

#### Common functions

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- Mixed light measurement suitable for the control of fluorescent, incandescent, halogen lamps and LED
- Zero-cross switching for relay-saving switching and high lamp loads
- Easy installation via two clamping brackets
- Large clamping area for quick installation
- Single-handed plug-in installation with captive screws
- Instant start-up possible via factory preset

- No unintentional adjustment due to covered up controls
- Adjustable brightness switching value and switch-off delay

#### LUXA 103-100 DE

- 1 channel
- System consists of power box and sensor with plugged connection cable

#### LUXA 103-101 DE

- 2 channels
- 2. Relay for HVAC control with adjustable switch-off delay, presence-dependent, potential-free

- HVAC control with programmable switch-off delay
- System consists of power box and sensor with plugged connection cable

#### LUXA 103-100 AP

- 1 channel

#### LUXA 103-101 AP

- 2 channels
- 2. Relay for HVAC control with adjustable switch-off delay, presence-dependent, potential-free
- HVAC control with programmable switch-off delay

8

### Product selection

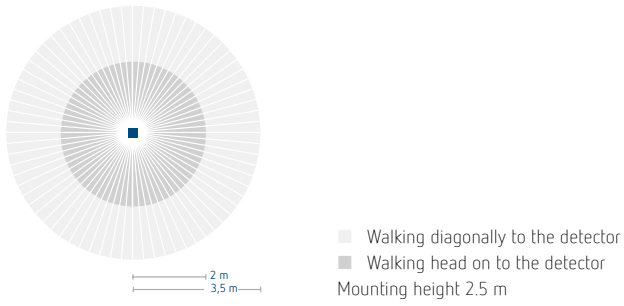
Installation type	Channel	Operating voltage	Colour	Type	Article number
False ceilings	Light	230 V AC	White	LUXA 103-100 DE WH	1030012
	Light   Presence	230 V AC	White	LUXA 103-101 DE WH	1030013
Ceiling	Light	230 V AC	White	LUXA 103-100 AP WH	1030022
	Light   Presence	230 V AC	White	LUXA 103-101 AP WH	1030023

### Technical data

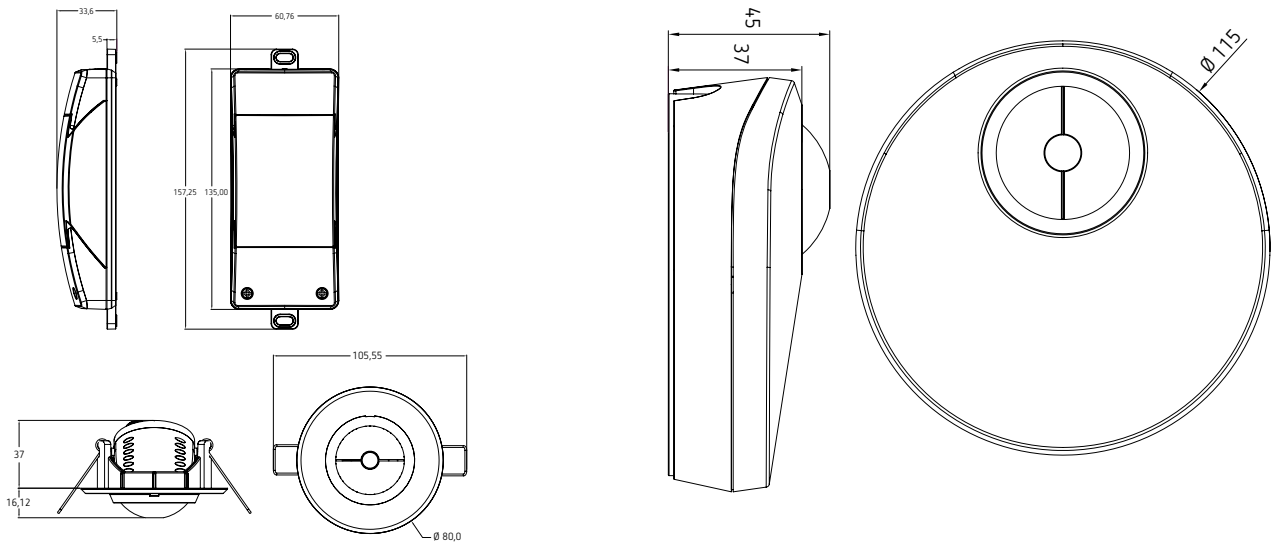
	LUXA 103-100 DE	LUXA 103-101 DE	LUXA 103-100 AP	LUXA 103-101 AP
Operating voltage	230 V AC			
Frequency	50–60 Hz			
Installation height	2–3 m			
Stand-by consumption	0,5 W			
Setting range brightness	10–2000 lx			
Light switch-off delay	5 s–30 min			
Switching capacity light	10 A (230 V AC, cos φ = 1)			
Incandescent lamp load	2000 W			
LED lamp < 2 W (typ.)	35 W			
LED lamp > 2 W (typ.)	400 W			
Switching capacity presence	–	5 A (250 V AC, cos φ = 1)	–	5 A (250 V AC, cos φ = 1)
Presence switch-off delay	–	10 s–60 min	–	10 s–60 min
Ambient temperature	0 °C ... +45 °C			
Type of protection	IP 44 (Sensor), IP 20 (power module)		IP 40	



Detection range (Round)



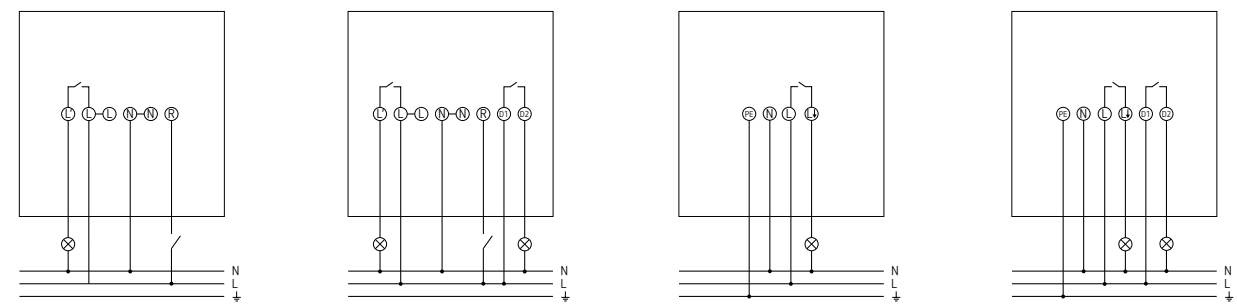
Dimensions



LUXA 103 DE

LUXA 103 AP

Connection diagrams



LUXA 103-100 DE

LUXA 103-101 DE

LUXA 103-100 AP

LUXA 103-101 AP

# Presence and motion detectors

## Motion detectors



### Description

- Motion detector (PIR)
- 1 channel
- Automatic lighting control based on presence and brightness
- Mixed light measurement suitable for the control of fluorescent, incandescent, halogen lamps and LED
- Zero-cross switching for relay-saving switching and high lamp loads
- Large clamping area for quick installation
- Single-handed plug-in installation with captive screws
- Instant start-up possible via factory preset
- No unintentional adjustment due to covered up controls
- Adjustable brightness switching value and switch-off delay

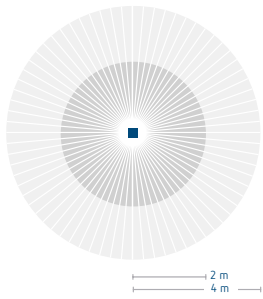
### Product selection

Installation type	Channel	Colour	Type	Article number
Ceiling installation	Light	White	LUXA 103-100 C DE WH	1030016

### Technical data

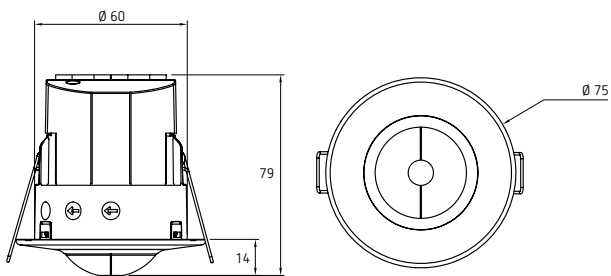
	LUXA 103-100 C DE
Operating voltage	230 V AC
Frequency	50–60 Hz
Installation height	2–3 m
Stand-by consumption	0,5 W
Setting range brightness	10–2000 lx
Light switch-off delay	5 s–30 min
Switching capacity light	10 A (230 V AC, $\cos \varphi = 1$ )
Incandescent lamp load	2000 W
LED lamp < 2 W (typ.)	35 W
LED lamp > 2 W (typ.)	400 W
Ambient temperature	0 °C ... +45 °C
Type of protection	IP 44

### Detection range (Round)

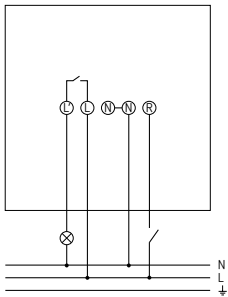


- Walking diagonally to the detector
  - Walking head on to the detector
- Mounting height 2.5 m

### Dimensions



### Connection diagrams



LUXA 103-100 C DE

# Presence and motion detectors

## Motion detectors



### Description

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- 1 channel
- With acoustic function
- Activation by the PIR sensor and deactivation by the microphone (microphone can also be deactivated)
- Flexible installation options, ceiling installation using clamping brackets as well as flush-mounted or surface mounting using the optional surface frame
- Mixed light measurement suitable for the control of fluorescent, incandescent, halogen lamps and LED
- Zero-cross switching
- Detection area can be limited using three enclosed segments
- Instant start-up possible via factory preset
- No unintentional adjustment due to covered up controls
- Adjustable brightness switching value and switch-off delay
- Sensitivity can be reduced to limit detection area
- Pulse function
- Test function

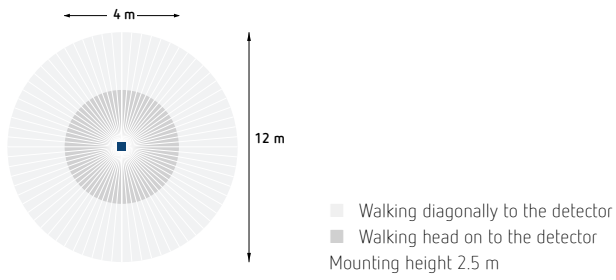
### Product selection

Installation type	Channel	With acoustic function	Colour	Type	Article number
Ceiling installation	Light	✓	White	LUXA 103-100 UA WH	1030045

### Technical data

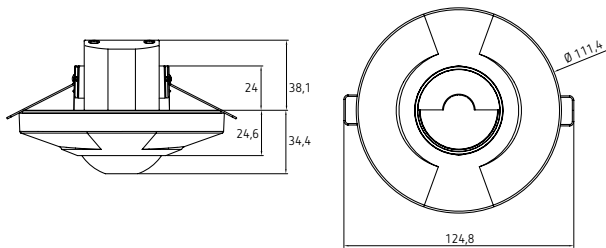
	LUXA 103-100 UA WH
Operating voltage	230 V AC
Frequency	50–60 Hz
Stand-by consumption	0,5 W
Installation height	2–4 m
Detection angle	360°
Setting range brightness	10–2000 lx
Light switch-off delay	5 s–30 min
Incandescent lamp load	2000 W
LED lamp < 2 W (typ.)	35 W
LED lamp > 2 W (typ.)	400 W
Ambient temperature	–20 °C ... +45 °C
Protection class	II
Type of protection	IP 40 (when fitted)

### Detection range (Round)

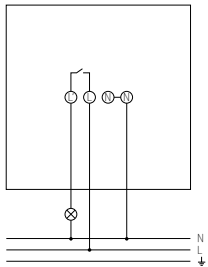


LUXA 103-100 UA WH

### Dimensions



### Connection diagrams



### Accessories



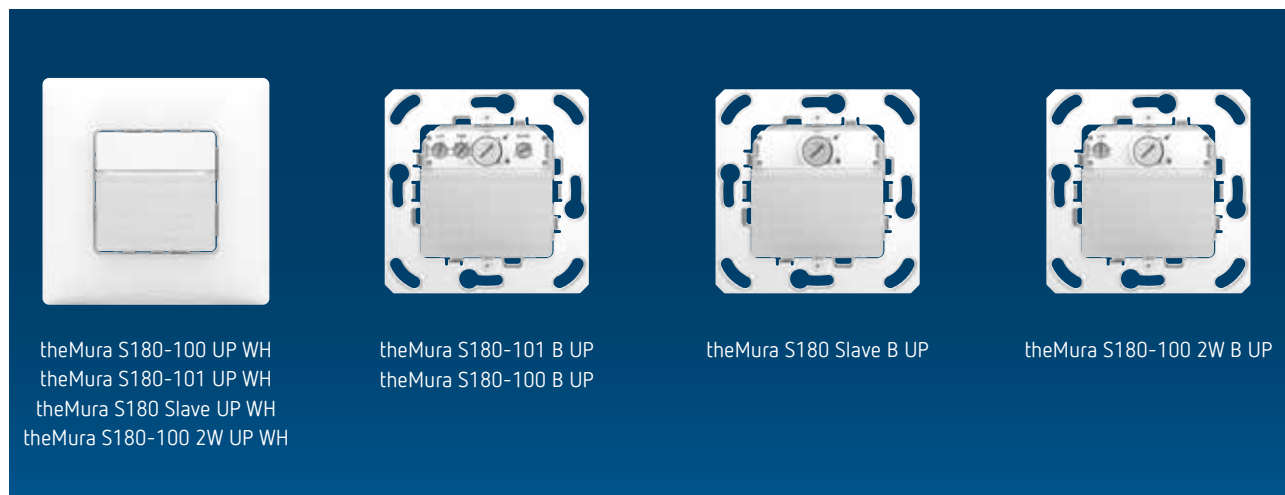
Surface frame LUXA 103-100 U

↳ Art.No.: 9070986

Details page 337

# Presence and motion detectors

## Motion detectors



### Description

#### Common functions

- Passive infrared motion/presence detector for flush-mounted wall mounting
- Semicircular detection area 170°, up to 14x17 m
- Mixed light measurement suitable for the control of fluorescent, incandescent, halogen lamps and LEDs
- Integrated button (can be blocked)
- Available with Theben frame or without frame
- Adapter frames for common switch ranges available as accessory, see [www.theben.de/theMura](http://www.theben.de/theMura)

#### theMura S180-100 UP WH (with Theben frame) theMura S180-100 B UP (without frame)

- Motion detector,
- 1 channel light
- Fully or semi-automatic operation
- Adjustable brightness switching value, teach-in function
- Staircase light function
- Switch-on delay configurable
- Extension of detection area via master/slave switching
- Ready for immediate use due to factory presetting

#### theMura S180-101 UP WH (with Theben frame)

#### theMura S180-101 B UP (without frame)

- Presence detector
- 1 channel light
- 1 channel presence
- Fully or semi-automatic operation
- External button can be connected
- Adjustable brightness switching value, teach-in function
- Automatic calibration of brightness measurement
- Switch-on delay configurable
- Short-term presence
- Acoustic function
- Orientation light
- Configurable sensitivity
- External button can be connected
- Staircase light function
- Extension of detection area via master/slave switching
- Ready for immediate use due to factory presetting
- Remote operation with theSenda S, theSenda P, theSenda B

#### theMura S180 Slave UP WH

#### (with Theben frame)

#### theMura S180 Slave B UP (without frame)

- Slave version for:
  - theMura S180-100 UP WH
  - theMura S180-100 B UP
  - theMura S180-101 UP WH
  - theMura S180-101 B UP

#### theMura S180-100 2W UP WH

#### (with Theben frame)

#### theMura S180-100 2W B UP (without frame)

- Motion detector
- 1 channel light
- 2-wire version in combination with an ELPA staircase time switch for switching the lamp loads
- Adjustable brightness switching value, teach-in function
- Ideal for replacing existing buttons
- Switch-on delay configurable on the staircase time switch
- Parallel connection possible (up to 12 detectors towards an ELPA)

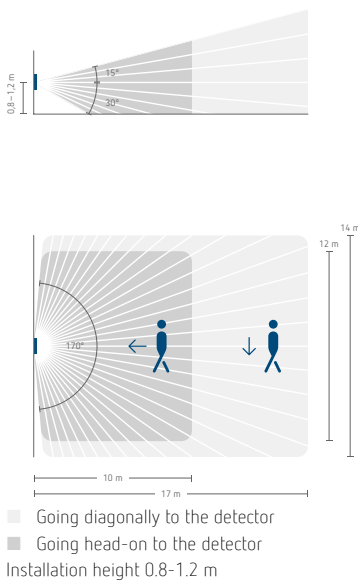
### Product selection

With Theben frame	Channel	Product type	Type	Article number
√	Light	Motion detector	theMura S180-100 UP WH	2060650
	Light   Presence	Presence detector	theMura S180-101 UP WH	2060655
	Slave	Motion/presence detector	theMura S180 Slave UP WH	2060660
	Light (In combination with ELPA)	Motion detector	theMura S180-100 2W UP WH	2060670
-	Light	Motion detector	theMura S180-100 B UP	2060750
	Light   Presence	Presence detector	theMura S180-101 B UP	2060755
	Slave	Motion/presence detector	theMura S180 Slave B UP	2060760
	Light (In combination with ELPA)	Motion detector	theMura S180-100 2W B UP	2060770

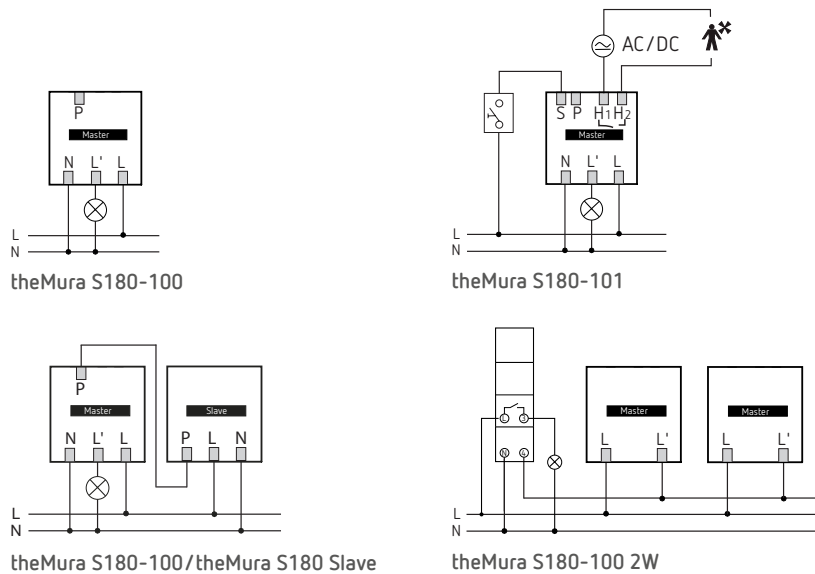
Technical data

	theMura S180-100	theMura S180-101	theMura S180 Slave	theMura S180-100 2W
Operating voltage	230 V AC			
Frequency	50–60 Hz			
Standby output	0.4 W			
Brightness setting range	5–1000 lx	5–3000 lx	–	5–1000 lx
Lighting time delay	10 s – 30 min/pulse	10 s – 60 min/pulse	–	Pulse
Incandescent/halogen lamp load	2300 W			–
LED lamp (typ.)	< 2 W = 40 W   > 2 W = 450 W			–
Presence switch-on delay	–	0 s–10 min	–	–
Presence time delay	–	10 s–120 min	–	–
Switching capacity presence	–	50 W / 50 VA	–	–
Ambient temperature	–15 °C ... +45 °C			
Protection rating	IP 20			

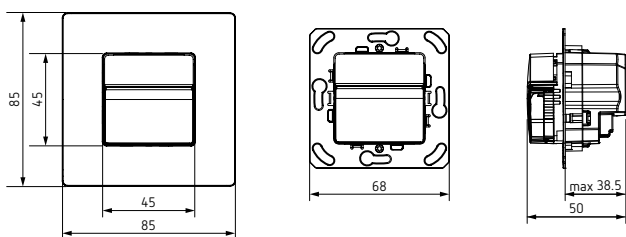
Detection area



Connection examples



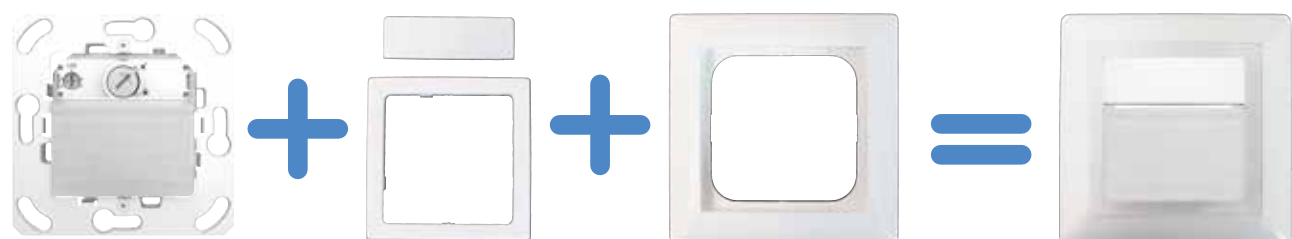
Dimensions



Accessories

- theSenda B**  
Details page 339
- theSenda P**  
Details page 339
- theSenda S**  
Details page 339
- Cover frames theMura**  
Details page 337/338

Application example



# Presence and motion detectors

## Motion detectors



LUXA 103-200 T

### Description

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- 2 wire connection, ideal for retrofitting
- Light switch output (triac, 230 V AC)
- Mixed light measurement suitable for incandescent and halogen lamps (no electronic ballast)
- Advance shut-off warning through dimming 15 seconds before light switches off
- Wall installation
- Compatible with branded switches, replaces conventional light switches
- Area limit via lens attachment
- Manual AUTO/ON/OFF switching by simple adjustment of cover flap
- Teach-in of current brightness value
- Instant start-up possible via factory preset
- No unintentional adjustment due to covered up controls
- Adjustable brightness switching value and switch-off delay
- Sensitivity can be reduced to limit detection area
- Pulse function

### Product selection

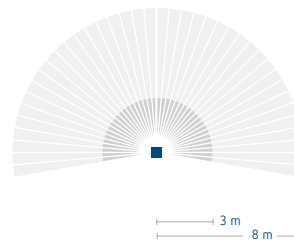
Installation type	Channel	Colour	Detection angle	Type	Article number
Flush-mounted wall installation	Light	White	200°, circular	LUXA 103-200 T	1030031

### Technical data

	LUXA 103-200 T
Operating voltage	230 V AC
Frequency	50 Hz
Stand-by consumption	0,7 W
Setting range brightness	10 – 1000 lx Infinitely adjustable
Switching capacity light	2 A (at 230 V AC, $\cos \varphi = 1$ )
Detection angle	200°, circular
Installation height	1,2 – 2 m
Light switch-off delay	20 s – 30 min
Incandescent lamp load	400 W
Fluorescent lamp load (conventional) parallel-corrected	400 VA, 42 $\mu$ F
Ambient temperature	0 °C ... +45 °C
Protection class	II
Type of protection	IP 40

### Detection range (Semicircular)

Mounting height (A)	Head on to (r)	Diagonally (t)
1,2 – 2 m	3,5 m	8 m





### Accessories

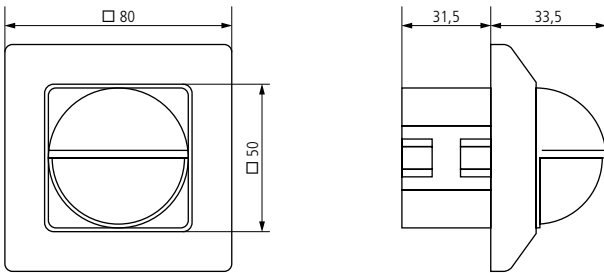


Surface frame LUXA 103-200  
↳ Art.No.: 9070504  
Details page 337

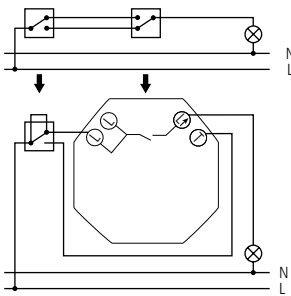


RC filter  
↳ Art.No.: 9070523  
Details page 336

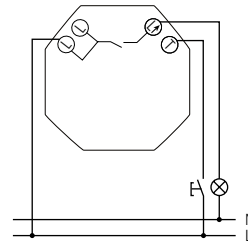
### Scale drawings



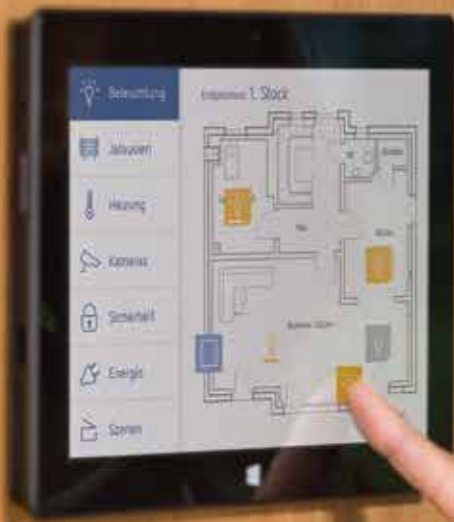
### Connection diagrams



LUXA 103-200 T















LUXA 103-200 T



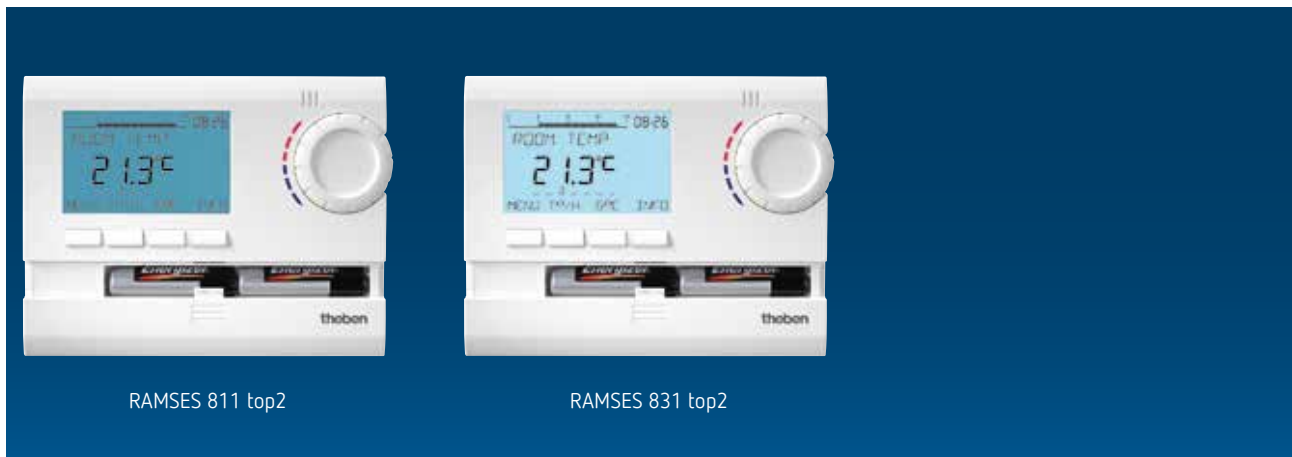
## Space and time

There are daily processes that always follow a fixed schedule. It's good when everything is just so, Theben takes care of that, for example with its programmable clock thermostats, that create exactly the conditions expected – and that one is entitled to expect. This type of precision characterises Theben generally. It is apparent not just in our products. Above all, it characterises our thoughts and actions. As there is scarcely anything more important for us than precision.

Program	Type of connection	Operating voltage	Switching capacity at 250 V AC	Type of contact	Type	Page	
<b>Digital battery version</b>							
	Weekly program	2/3-way conductors	2 AA batteries	6 (1) A	Changeover contact	RAMSES 811 top2	180
						RAMSES 831 top2	180
		3-/4-conductors	2 AA batteries	16 (2) A	NO contact	RAMSES 813 top2 HF Set A	188
				6 (1) A	Changeover contact	RAMSES 813 top2 HF Set 1	188
						RAMSES 833 top2 HF Set 1	190
						RAMSES 833 top2 HF Set 2	190
<b>Digital 230 V</b>							
	Weekly program	3-/4-conductors	230 V AC	8 (1) A	Changeover contact	RAMSES 812 BLE	182
		3-/4-conductors	230 V AC	8 (1) A	Changeover contact	RAMSES 814 BLE UP	183
		2-way conductor (BUS) room controller	230 V AC	10 (1) A	Changeover contact	RAMSES 816 BLE	184
		3-/4-conductors	230 V AC	6 (1) A	Changeover contact	RAMSES 812 top2	186
						RAMSES 832 top2	186
		DuoFix spring terminals	230 V AC	10 (2) A	Changeover contact	RAMSES 366/1 top2	192
<b>OpenTherm</b>							
	Weekly program	2-way conductor (BUS) room controller	OT-Bus	-	-	RAMSES 850 BLE OT	193
			230 V AC	2 x 2 (1) A Relay, 1 x 1 (1) A Relay	NO contact	RAMSES 816 top2 OT	194
				5 x 5 (1) A Relay, 2 x 1 (1) A Relay	NO contact	RAMSES 856 top2 OT	196
<b>Analogue battery version</b>							
	Daily program	2/3-way conductors	2 AA batteries	6 (1) A	Changeover contact	RAMSES 784 S	198
	Daily/weekly program	2/3-way conductors	2 AA batteries	6 (1) A	Changeover contact	RAMSES 784	198
<b>Analogue 230 V</b>							
	Daily program	3-/4-conductors	230 V AC	6 (1) A	Changeover contact	RAMSES 722 S	200
	Daily/weekly program	3-/4-conductors	230 V AC	6 (1) A	Changeover contact	RAMSES 722	200
						RAMSES 782	200
	Daily program	3-/4-conductors	230 V AC	6 (1) A	Changeover contact	RAMSES 721	200
	Daily/weekly program	3-/4-conductors	230 V AC	6 (1) A	Changeover contact	RAMSES 725	

# Climate control

## Clock thermostats, Digital battery version



RAMSES 811 top2

RAMSES 831 top2

### Description

#### Common functions

- Digital clock thermostat with a low profile design for time-dependent monitoring and control of room temperature
- Battery version
- Suitable for energy-saving room temperature control in houses, apartments, heating zones, offices, showrooms, factories, medical practices, holiday homes
- Temperature is set quickly via rotary switch
- INFO key for viewing important settings

- Quick start-up via 3 basic programs with individually changeable comfort and reduced temperature
- Party / ECO program
- Fully automatic summer / winter-time correction
- Holiday program with reduction phase or date-controlled heating phase for holiday homes
- Different control types can be individually set
- Optimum start option thanks to operating point and switching differential setting option

- 24 programmable time phases per program also enable reduction phases during the day
- Plug-in base for wall or flush-mounted socket installation

#### RAMSES 831 top2

- Backlit display through keystroke
- External input for connection of presence detectors, temperature sensors, floor sensors, window contacts or telephone remote switches
- Optimisation function for automatic correction of heating start up

9

### Product selection

Type of connection	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
2/3-way conductors	Weekly program	6 (1) A	+6 °C ... +30 °C	2 AA batteries	RAMSES 811 top2	8119132
					RAMSES 831 top2	8319132

### Technical data

	RAMSES 811 top2	RAMSES 831 top2
Operating voltage	2 AA batteries	
Type of contact	Changeover contact	
Switching capacity	6 A (at 250 V AC, $\cos \varphi = 1$ ), 1 A (at 250 V AC, $\cos \varphi = 0.6$ )	
Setting range temperature	+6 °C ... +30 °C	
Time basis	Quartz	
Program	Weekly program, Daily program, Holiday program, 3 basic programs	
Number of memory locations	42, max. 24 per program	
Control types	Pulse width modulation, Hysteresis controller	
Control period	5–30 min	
Control capture range	0,2–5 K	
Switching output	Potential-free	
Time accuracy at 25 °C	$\leq \pm 1$ s/day (quartz)	
Power reserve	Max. 10 mins without losing time	
Battery life	approx. 1 year, depending on switching frequency	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

### Accessories



**Actuator ALPHA 5 230 V**  
↳ Art.No.: 9070441  
Details page 342



**Actuator ALPHA 5 24 V**  
↳ Art.No.: 9070442  
Details page 342



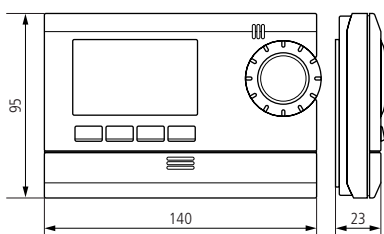
**Temperature sensor**  
for RAMSES 831 top2  
↳ Art.No.: 9070321  
Details page 341



**Temperature sensor RAMSES IP 65**  
for RAMSES 832 top2  
↳ Art.No.: 9070459  
Details page 341

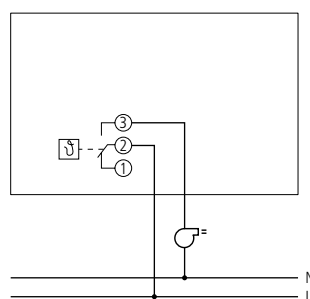
9

### Scale drawings

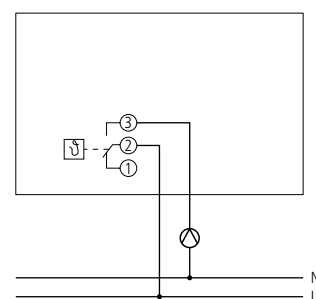


RAMSES 811 top2, RAMSES 831 top2

### Connection diagrams



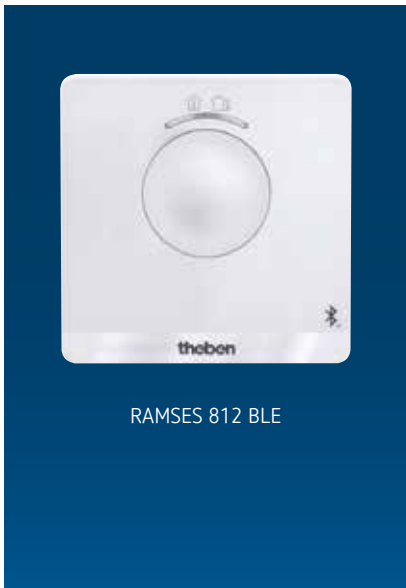
RAMSES 811 top2



RAMSES 811 top2

# Climate control

## Clock thermostats, Digital 230 V



### Description

- Digital clock thermostat for time-dependent monitoring and control of room temperature
- Mains version
- Suitable for energy-saving room temperature control in houses, apartments, etc.
- Operation via app
- Direct Bluetooth Low Energy (BLE) connection between the app and RAMSES BLE, no communication via the Internet
- Settings configured conveniently via the app with intuitive operation from a smartphone or tablet
- Increased user convenience
- External input for the flexible connection of the external room temperature sensor, floor sensor, motion detector or telephone contact
- Intelligent control algorithm (pulse-duration controller, hysteresis controller)
- Suitable for on/off heating systems, zone-based or single-room control, electric heating units

### Product selection

Connection type	Program	Setting range temperature	Type	Article number
3-/4-wire	Weekly program	+2 °C to +30 °C	RAMSES 812 BLE	8120150

### Technical data

RAMSES 812 BLE			
Operating voltage	230 V AC, 50 Hz	Program	Weekly program
Controller type	Hysteresis or pulse-duration controller	Number of memory locations	42
Switching capacity	8 (1) A/250 V AC	Power reserve	4 hours
Setting range temperature	+2 °C to +30 °C	Type of protection	IP 20
Connection type	3-/4-wire (230 V + switching output)	Protection class	II in accordance with EN 60730-1

9

### Accessories



**Temperature sensor RAMSES IP 65**  
↳ Art.No.: 9070459  
Details page 341



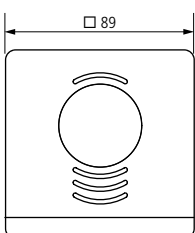
**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341

### Simple operation via app



- Intuitive programming without the need for prior experience and device monitoring on a high-resolution smartphone display
- Maximum protection against tampering and optimum data protection thanks to the local Bluetooth Low Energy connection. No Internet connection with cloud data storage, remote access and geofencing

### Scale drawings





### Description

- Digital clock thermostat for time-dependent monitoring and control of room temperature (heating or cooling)
- Mains version
- Operation via app
- Suitable for energy-saving room temperature regulation in houses, apartments, etc.
- Installation in flush-mounted box, can be used with any switching programme or under a blind cover
- Temperature sensor in scope of supply
- Direct Bluetooth Low Energy (BLE) connection between the app and RAMSES BLE, no communication via the Internet

- Settings configured conveniently via the app with intuitive operation from a smartphone or tablet
- Increased user convenience
- External input for the flexible connection of the external room temperature sensor, floor sensor, motion detector or telephone contact
- Intelligent control algorithm (pulse-duration controller, hysteresis controller)
- Suitable for on/off heating systems, zone-based or single-room control, electric heating units

### Simple operation via app

- Intuitive programming without the need for prior experience and device monitoring on a high-resolution smartphone display
- Maximum protection against tampering and optimum data protection thanks to the local Bluetooth Low Energy connection. No Internet connection with cloud data storage, remote access and geofencing

### Product selection

Programme	Switching capacity at 250 V AC	Temperature setting range	Operating voltage	Type	Item no.
Weekly programme	8 (1) A (with external sensor) 2 (1) A (with temperature sensor in flush-mounted box)	+2 °C ... +30 °C	230 V AC	RAMSES 814 BLE UP	8140150

### Technical data

RAMSES 814 BLE UP			
Operating voltage	230 V AC, 50 Hz	Temperature setting range	+2 °C ... +30 °C
Controller type	Hysteresis or pulse-duration controller	Programme	Weekly programme
Switching capacity	8 (1) A/250 V AC (with external sensor)	Number of memory locations	42
	2 (1) A/250 V AC (with temperature sensor in flush-mounted box)	Power reserve	4 years

### Accessories

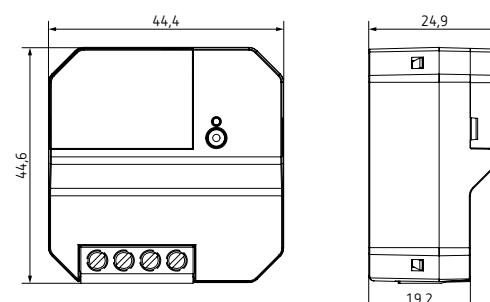


Temperature sensor RAMSES IP 65  
↳ Art.No.: 9070459  
Details page 341



Temperature sensor  
↳ Art.No.: 9070321  
Details page 341

### Scale drawings



# Climate control

## Clock thermostats, Digital 230 V



### Description

- Digital clock thermostat for time-dependent monitoring and control of room temperature
- Suitable for energy-saving room temperature control in houses, apartments, etc.
- Operation via app
- Direct Bluetooth Low Energy (BLE) connection between the app and RAMSES BLE, no communication via the Internet
- Settings configured conveniently via the app with intuitive operation from a smartphone or tablet
- Increased user convenience
- Power supply via OpenTherm bus (clock thermostat)

#### RAMSES 816 BLE

- Mains version (control box)
- Relay switch output at the control box (floating, 10 (1) A)
- External input for the flexible connection of the external room temperature sensor, floor sensor, motion detector or telephone contact
- Replaces 2-wire controller in the room when the lower housing is fitted next to the heating
- Suitable for switching higher currents (relay in lower housing) for electric heating units
- Suitable for on/off heating systems, zone-based or single-room control, for higher switching capacities with control box, and for 2-wire connection (for replacing 2-wire battery devices)

#### RAMSES 816 BLE 2

- Power supply via OpenTherm bus (clock thermostat)
- Mains version (control box)
- Relay switch output at the control box (floating, 5 A) for heating ON/OFF
- Special function for device reset, relay closes briefly for time adjustable in seconds
- Modulation output 0-10 V
- Suitable for heaters with 0-10 V modulation input
- Suitable for heaters with device reset, input or master reset

#### RAMSES 816 BLE 3

- Power supply via OpenTherm bus (clock thermostat)
- Mains version (control box)
- 1 x relay 10 A floating, 1 x relay 5 A, floating, for heaters with 2-stage regulation
- Hysteresis adjustable between stage 1 and stage 2, (temperature difference between room ACTUAL and room SETPOINT value adjustable from 0.5 °C to 2.5 °C in 0.5 °C steps)
- Heating and cooling function possible
- Heating from 20 °C downwards with relay 1
- Cooling start temperatures (range 20-30 °C)
- Waiting time adjustable for change over between heating and cooling (1-50 h)

### Product selection

Program	Setting range temperature	Type	Article number
Weekly program	+2 °C to +30 °C	RAMSES 816 BLE	8160150
		RAMSES 816 BLE 2	8160151
		RAMSES 816 BLE 3	8160152



### Technical data

	RAMSES 816 BLE	RAMSES 816 BLE 2	RAMSES 816 BLE 3
Operating voltage	230 V AC   OT-Bus		
Frequency	50 Hz		
Switching capacity	10 A (bei 250 V AC, $\cos \varphi = 1$ ), 1 A (bei 250 V AC, $\cos \varphi = 0,6$ )	5 A	1 x 10 A   1 x 5 A
Setting range temperature	+2 °C ... +30 °C		
Program	Weekly program		
Number of memory locations	42		
Power reserve	4 hours		
Type of protection	IP 20		
Protection class	II according to EN 60 730-1		

### Accessories



**Temperature sensor RAMSES IP 65**  
↳ Art.No.: 9070459  
Details page 341



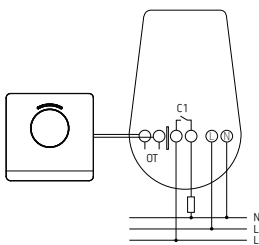
**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341

### Simple operation via app

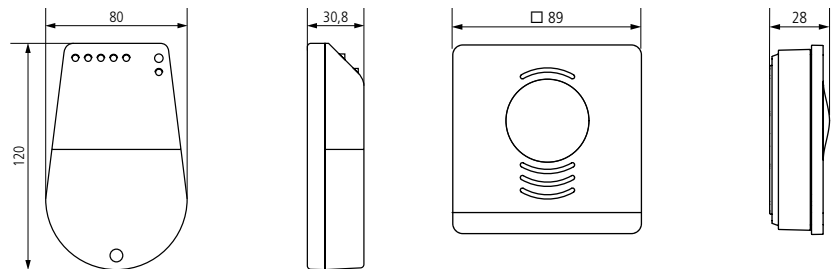


- Intuitive programming without the need for prior experience and device monitoring on a high-resolution smartphone display
- Maximum protection against tampering and optimum data protection thanks to the local Bluetooth Low Energy connection. No Internet connection with cloud data storage, remote access and geofencing

### Connection diagrams

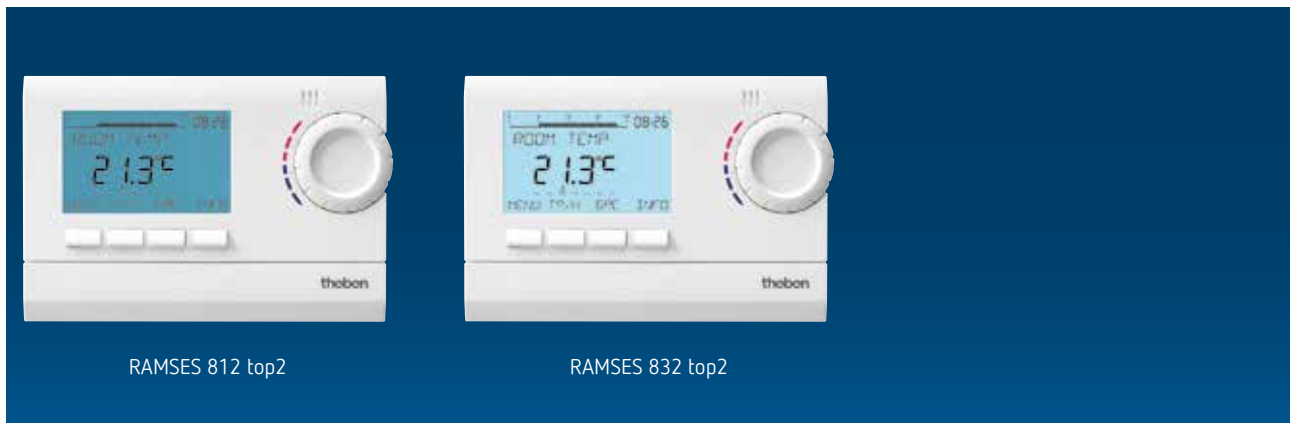


### Scale drawings



# Climate control

## Clock thermostats, Digital 230 V



RAMSES 812 top2

RAMSES 832 top2

### Description

#### Common functions

- Digital clock thermostat with low profile design for time-dependent monitoring and control of room temperature
- Mains version
- Suitable for energy-saving room temperature control in houses, apartments, heating zones, offices, showrooms, factories, medical practices, holiday homes
- Temperature is set quickly via rotary switch
- INFO key for viewing important settings
- Quick start-up via 3 basic programs with individually changeable comfort and reduced temperature
- Party / ECO program
- Fully automatic summer/winter-time correction
- Different control types can be individually set
- Optimum start option thanks to operating point and switching differential setting option
- 24 programmable time phases per program also enable reduction phases during the day
- Plug-in base for wall or flush-mounted socket installation

#### RAMSES 832 top2

- Backlit display through keystroke
- External input for connection of presence detectors, temperature sensors, floor sensors, window contacts or telephone remote switches
- Optimisation function for automatic correction of heating start up

### Product selection

Type of connection	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
3-/4-conductors	Weekly program	6 (1) A	+6 °C ... +30 °C	230 V AC	RAMSES 812 top2	8120132
					RAMSES 832 top2	8320132

### Technical data

	RAMSES 812 top2	RAMSES 832 top2
Operating voltage	230 V AC	
Frequency	50 Hz	
Type of contact	Changeover contact	
Switching capacity	6 A (at 250 V AC, cos φ = 1), 1 A (at 250 V AC, cos φ = 0.6)	
Setting range temperature	+6 °C ... +30 °C	
Time basis	Quartz	
Program	Weekly program, Daily program, Holiday program, 3 basic programs	
Number of memory locations	42, max. 24 per program	
Control types	Pulse width modulation, Hysteresis controller	
Control period	5–30 min	
Control capture range	0,2–5 K	
Switching output	Potential-free, not for SELV	
Time accuracy at 25 °C	≤ ± 1 s/day (quartz)	
Power reserve	5 hours	

	RAMSES 812 top2	RAMSES 832 top2
Stand-by consumption	0,4 W	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

### Accessories



**Actuator ALPHA 5 230 V**  
↳ Art.No.: 9070441  
Details page 342



**Actuator ALPHA 5 24 V**  
↳ Art.No.: 9070442  
Details page 342

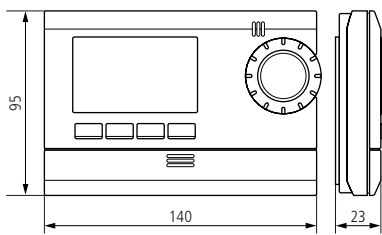


**Temperature sensor**  
for RAMSES 832 top2  
↳ Art.No.: 9070321  
Details page 341



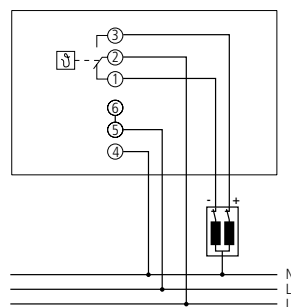
**Temperature sensor RAMSES IP 65**  
for RAMSES 832 top2  
↳ Art.No.: 9070459  
Details page 341

### Scale drawings

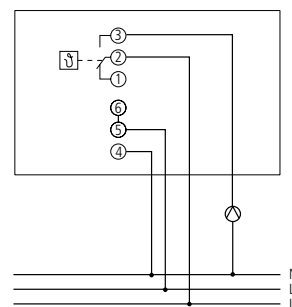


RAMSES 812 top2, RAMSES 832 top2

### Connection diagrams

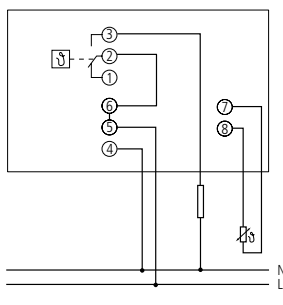


RAMSES 812 top2

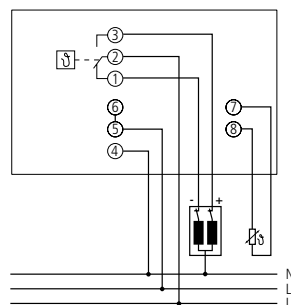


RAMSES 812 top2

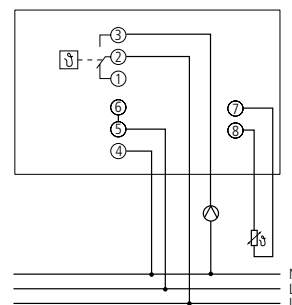
### Connection diagrams



RAMSES 832 top2



RAMSES 832 top2



RAMSES 832 top2

# Climate control

## Clock thermostats, Digital battery version



RAMSES 813 top2 HF Set A

RAMSES 813 top2 HF Set 1

### Description

#### Common functions

- Radio-controlled system for room temperature control
- The system consists of one digital clock thermostat and one receiver
- Suitable for energy-saving room temperature control in houses, apartments, heating zones, offices, showrooms, factories, medical practices, holiday homes
- Required temperature set via the rotary dial
- INFO key for viewing important settings
- Quick start-up via 3 basic programs with individually changeable comfort and reduced temperature
- Party / ECO program
- Automatic summer/winter time adjustment
- Different control types can be individually set

- Optimum start option thanks to operating point and switching differential setting option
- 24 programmable time phases per program also enable reduction phases during the day
- 2 comfort and 2 reduced temperatures can be allocated to each phase
- Including base for free choice of position
- An optionally available plug-in base is required for wall installation
- Holiday program with reduced temperature or date-controlled heating phase
- Optional pump protection function
- Optional feature to warn when boiler maintenance required

#### RAMSES 813 top2 HF Set A

- Consisting of a RAMSES 813 top2 HF and a REC 11 receiver with an NO contact 16(2) A/250 V AC for wall mounting

#### RAMSES 813 top2 HF Set 1

- Consisting of a RAMSES 813 top2 HF and a REC 1 receiver with a two-way switch 6(2) A/250 V AC

### Product selection

Type of connection	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
Radio controlled	Weekly program	16 (2) A	+6 °C ... +30 °C	2 AA batteries	RAMSES 813 top2 HF Set A	8139503
	Weekly program	6 (1) A	+6 °C ... +30 °C	2 AA batteries	RAMSES 813 top2 HF Set 1	8139501

### Technical data

	RAMSES 813 top2 HF Set A	RAMSES 813 top2 HF Set 1
Operating voltage	2 AA batteries	
Type of contact	NO contact	Changeover contact
Switching capacity	16 A (at 250 V AC, cos φ = 1), 2 A (at 250 V AC, cos φ = 0.6)	6 A (at 250 V AC, cos φ = 1), 1 A (at 250 V AC, cos φ = 0.6)
Setting range temperature	+6 °C ... +30 °C	
Time basis	Quartz	
Program	Weekly program, Daily program, Holiday program, 3 basic programs	
Number of memory locations	42, max. 24 per program	
Control types	Pulse width modulation, Hysteresis controller	
Control period	5–30 min	
Control capture range	0,2–5 K	
Switching output	Potential-free, not for SELV	Potential-free
Time accuracy at 25 °C	± 1 s/day (quartz)	
Power reserve	Max. 10 mins without losing time	
Stand-by consumption	1,9 W	1,7 W
Battery life	approx. 1 year, depending on switching frequency	
Width	–	5 modules
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

### Accessories

#### Socket RAMSES

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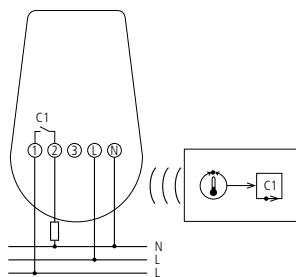
#### Actuator ALPHA 5 230 V

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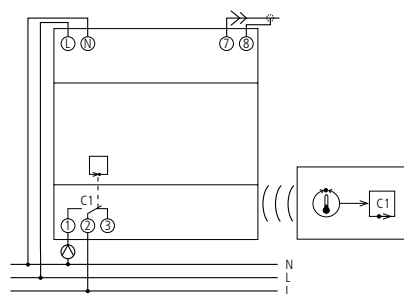
#### Actuator ALPHA 5 24 V

Details page 342

### Connection diagrams

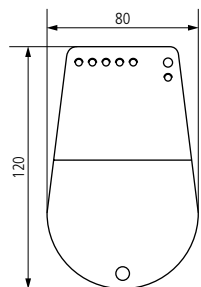


RAMSES 813 top2 HF Set A

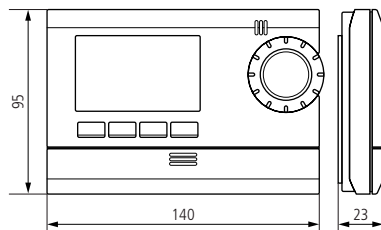
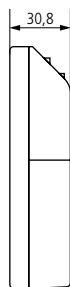


RAMSES 813 top2 HF Set 1

### Scale drawings



RAMSES 813 top2 HF Set A



RAMSES 813 top2 HF

# Climate control

## Clock thermostats, Digital battery version



RAMSES 833 top2 HF Set 1

RAMSES 833 top2 HF Set 2

### Description

#### Common functions

- Radio-controlled system for room temperature control
- Suitable for energy-saving room temperature control in houses, apartments, heating zones, offices, showrooms, factories, medical practices, holiday homes
- The system consists of one or two digital clock thermostat and one receiver
- Required temperature set via the rotary dial
- INFO key for viewing important settings
- Quick start-up via 3 basic programs with individually changeable comfort and reduced temperature
- Party/ECO program
- Automatic summer/winter time adjustment
- Different control types can be individually set

- Optimum start option thanks to operating point and switching differential setting option
- 24 programmable time phases per program also enable reduction phases during the day
- Backlit display through keystroke
- External input for connection of presence detectors, temperature sensors, floor sensors, window contacts or telephone remote switches (can only be used in connection with optional plug-in base for wall mounting)
- Optimisation function for automatic correction of heating start up
- Holiday program with reduction phase or date-controlled heating phase for holiday homes

- Optional feature to warn when boiler maintenance required
- Optional pump protection function
- 3 comfort and 2 reduced temperatures can be allocated to each phase
- Including base for free choice of position
- An optionally available plug-in base is required for wall installation

#### RAMSES 833 top2 HF Set 1

- Consisting of a RAMSES 833 top2 HF and a REC 1 receiver with a two-way switch 6(2) A/250 VDC

#### RAMSES 833 top2 HF Set 2

- Consisting of two RAMSES 833 top2 HF and a 2 channel REC 2 receiver with a two-way switch 6(2) A/250 VDC per channel

### Product selection

Type of connection	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
Radio controlled	Weekly program	6 (1) A	+6 °C ... +30 °C	2 AA batteries	RAMSES 833 top2 HF Set 1	8339501
	Weekly program	6 (1) A	+6 °C ... +30 °C	2 AA batteries	RAMSES 833 top2 HF Set 2	8339502

### Technical data

	RAMSES 833 top2 HF Set 1	RAMSES 833 top2 HF Set 2
Operating voltage	2 AA batteries	
Type of contact	Changeover contact	
Switching capacity	6 A (at 250 V AC, $\cos \varphi = 1$ ), 1 A (at 250 V AC, $\cos \varphi = 0.6$ )	
Setting range temperature	+6 °C ... +30 °C	
Time basis	Quartz	
Program	Weekly program, Daily program, Holiday program, 3 basic programs	
Number of memory locations	42, max. 24 per program	
Control types	Pulse width modulation, Hysteresis controller	
Control period	5–30 min	
Control capture range	0,2–5 K	
Switching output	Potential-free, not for SELV	
Time accuracy at 25 °C	$\leq \pm 1$ s/day (quartz)	
Power reserve	Max. 10 mins without losing time	
Stand-by consumption	1,7 W	2,2 W
Battery life	approx. 1 year, depending on switching frequency	
Width	5 modules	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

### Accessories



**Actuator ALPHA 5 230 V**  
↳ Art.No.: 9070441  
Details page 342



**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341



**Temperature sensor RAMSES IP 65**  
for RAMSES 833 top2 HF Set 1  
↳ Art.No.: 9070459  
Details page 341

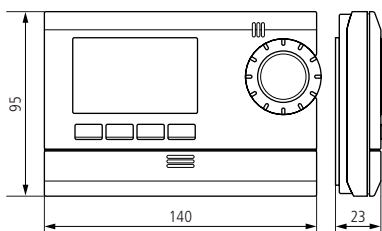
#### Socket RAMSES

Details page 30

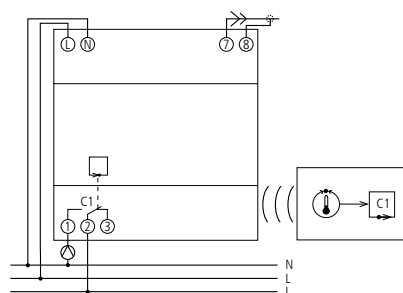
#### Actuator ALPHA 5 24 V

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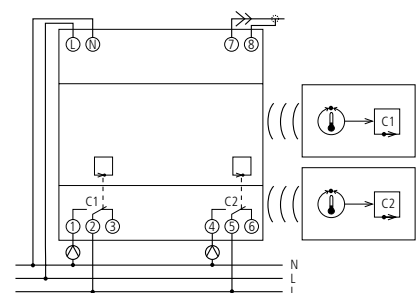
### Scale drawings



### Connection diagrams



RAMSES 833 top2 HF Set 1



RAMSES 833 top2 HF Set 2

# Climate control

## Clock thermostats, Digital 230 V



RAMSES 366/1 top2

### Description

- Digital clock thermostat for time-dependent monitoring and control of room temperature
- Zone control, 1 zone
- 1 external temperature sensor required
- Daily/weekly program can be set to the minute
- Date-controlled holiday program
- Programming displayed graphically by a bar arrangement in the LCD
- Fully automatic summer/winter-time correction
- Manual switching pre-selection and operation mode selector for: Automatic mode, comfort mode, reduction mode, frost protection mode
- PIN coding
- DuoFix spring terminals
- Text-oriented user guidance in display
- Interface for OBELISK top2 memory card (Copying of programs)

### Product selection

Number of channels	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
1	Weekly program	10 (2) A	+6 °C ... +30 °C	230 V AC	RAMSES 366/1 top2	3660100

### Technical data

RAMSES 366/1 top2			
Operating voltage	230 V AC	Number of memory locations	42
Frequency	50–60 Hz	Time accuracy at 25 °C	≤ ± 0.25 s/day (quartz)
Type of contact	Changeover contact	Power reserve	10 years
Switching capacity	10 (2) A	Stand-by consumption	1,3 W
Setting range temperature	+6 °C ... +30 °C	Width	2 modules
Time basis	Quartz	Type of protection	IP 20
Program	Weekly program	Protection class	II

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### Accessories



Actuator ALPHA 5 230 V  
↳ Art.No.: 9070441  
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**Actuator ALPHA 5 24 V**  
Details page 342

**Wall mounting kit 35 mm**  
Details page 332

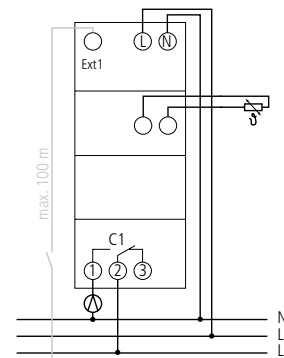
**Memory card OBELISK top2**  
Details page 333

**Front panel kit**  
Details page 332

**External temperature sensor 1**  
Details page 341

**External temperature sensor 2**  
Details page 341

### Connection diagrams







### Description

- Digital clock thermostat for time-dependent monitoring and control of room temperature
- Power supply via OpenTherm bus
- Suitable for energy-saving room temperature control in houses, apartments, etc.
- Operation via app
- Direct Bluetooth Low Energy (BLE) connection between the app and RAMSES BLE, no communication via the Internet
- Settings configured conveniently via the app with intuitive operation from a smartphone or tablet
- Increased user convenience
- Communication with the heating unit via OpenTherm
- External input for the flexible connection of the external room temperature sensor, floor sensor, motion detector or telephone contact
- PI room controller, controlled by atmospheric conditions, with or without room influence
- Preset with three modifiable weekly programs for heating and one for tap water
- Suitable for modulating gas condensing boiler systems and modulating heating systems with OpenTherm interface

### Product selection

Connection type	Program	Setting range temperature	Type	Article number
2-wire (BUS) room controller	Weekly program	+2 °C to +30 °C	RAMSES 850 BLE OT	8509150

### Technical data

RAMSES 850 BLE OT			
Operating voltage	OT bus	Program	Weekly program
Controller type	Modulating controller, works with OpenTherm protocol (OpenTherm V4.0 with SmartPower)	Number of memory locations	42
Setting range temperature	+2 °C to +30 °C	Power reserve	4 hours
Connection type	2-way conductor (BUS) room controller	Type of protection	IP 20
		Protection class	II

### Accessories



**Temperature sensor RAMSES IP 65**  
↳ Art.No.: 9070459  
Details page 341



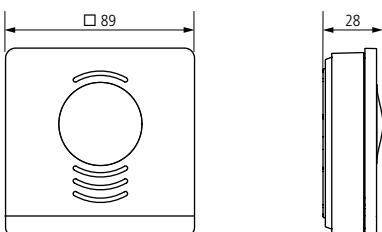
**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341

### Simple operation via app

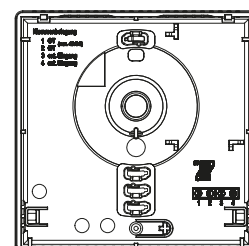


- Intuitive programming without the need for prior experience and device monitoring on a high-resolution smartphone display
- Maximum protection against tampering and optimum data protection thanks to the local Bluetooth Low Energy connection. No Internet connection with cloud data storage, remote access and geofencing

### Scale drawings



### Connection diagrams



# Climate control

## Clock thermostats, OpenTherm



### Description

- Digital mixer control
- 3 different weekly programs
- 3 comfort and 2 reduced temperatures can be allocated to each zone
- INFO button for the most important data
- Party/ECO program
- Chimney sweeping function with push button OT box
- Minimum boiler temperature can be set
- 2-stage burner control option
- Holiday program with reduced temperature or date-controlled heating phase can be programmed e. g. for holiday homes
- USB interface for modem
- Automatic summer/winter time adjustment
- Control of feed temperature via motorcontrolled mixer
- 3-point controller with feed sensor
- Pump protection function
- Inputs: feed sensor heating circuit (contained in set), external sensor
- Elapsed-time counter for recording relay switching times e.g. burner operating time
- Adjustable reminder function for heater maintenance

### Product selection

Type of connection	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
2-way conductor (BUS) room controller	Weekly program	2 x 2 (1) A, 1 x 1 (1) A	+6 °C ... +30 °C	230 V AC	RAMSES 816 top2 OT	8169132

### Technical data

RAMSES 816 top2 OT			
Operating voltage	230 V AC	Number of memory locations	42
Frequency	50 Hz	Switching hysteresis	2–20 K
Type of contact	NO contact	Mixer runtime	2–10 min
Switching capacity	2 x 2 (1) A Relay, 1 x 1 (1) A Relay	Power reserve	4 hours
Setting range temperature	+6 °C ... +30 °C	Stand-by consumption	~1,1 W
Flow temperature limit	+40 °C ... +90 °C	Type of protection	IP 20
Type of connection	2-way conductor (BUS) room controller	Protection class	II according to EN 60 730-1
Program	Weekly program		

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Accessories



External temperature sensor  
 ↳ Art.No.: 9070463  
 Details page 341

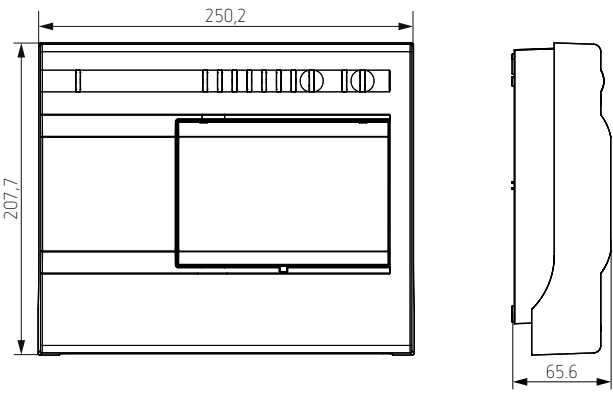


Temperature sensor RAMSES IP 65  
 ↳ Art.No.: 9070459  
 Details page 341

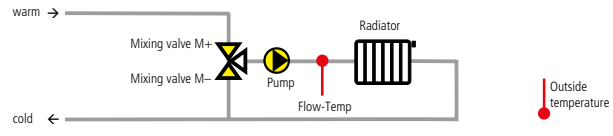
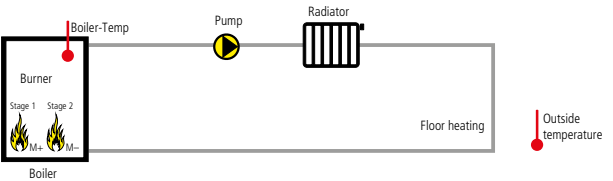


Plunge sensor RAMSES  
 ↳ Art.No.: 9070379  
 Details page 341

Scale drawings



Connection diagrams



# Climate control

## Clock thermostats, OpenTherm



### Description

- Digital heating control for time-dependent monitoring and control of room temperature
- Open Therm heating controller for 2 or 3 point control, weather-dependent, service water and circulation control
- Automatic sensor recognition for weather- or room-dependent control; can be switched manually at any time
- 3 different weekly programs
- 3 comfort and 2 reduced temperatures can be allocated to each phase
- INFO button for the most important data
- Additional switching program for domestic hot water utilisation times
- Adjustable service water storage temperature, programmable legionella protection
- Party/ECO program
- Chimney sweeping function with push button OT box
- Minimum boiler temperature can be set
- 2 heating curves can be set for 2 heating circuits
- 2-stage burner control option
- Holiday program with reduced temperature or date-controlled heating phase can be programmed e. g. for holiday homes
- USB interface for modem
- Automatic summer/winter time adjustment
- Boiler/feed temperature (control circuit 1) controlled by switching the burner
- Control of feed temperature (control circuit 2) via pump control or motor-controlled mixer
- 3-point controller with feed sensor
- Time- and temperature-dependent control of hot water circulation pump.
- Pump protection function
- Inputs: External sensor (contained in set), feed sensor heating circuit (contained in set), contact or immersion sensor for domestic hot water, contact sensor for circulation
- Elapsed-time counter for recording relay switching times e.g. burner operating time
- Adjustable reminder function for heater maintenance

### Product selection

Type of connection	Program	Switching capacity at 250 V AC	Setting range temperature	Operating voltage	Type	Article number
2-way conductor (BUS) room controller	Weekly program	5 x 5 (1), 2 x 1 (1) A	+6 °C ... +30 °C	230 V AC	RAMSES 856 top2 OT	8569132

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### Technical data

RAMSES 856 top2 OT			
Operating voltage	230 V AC	Number of memory locations	42, max. 24 per program
Frequency	50 Hz	Switching hysteresis	2–20 K
Type of contact	NO contact	Mixer runtime	2–10 min
Switching capacity	5 x 5 (1) A Relay, 2 x 1 (1) A Relay	Power reserve	4 hours
Setting range temperature	+6 °C ... +30 °C	Stand-by consumption	~1,1 W
Flow temperature limit	+40 °C ... +90 °C	Type of protection	IP 20
Type of connection	2-way conductor (BUS) room controller	Protection class	II according to EN 60 730-1
Program	Weekly program		

## Accessories



Temperature sensor RAMSES  
IP 65  
↳ Art.No.: 9070459  
Details page 341



Flow temperature sensor  
RAMSES  
↳ Art.No.: 9070371  
Details page 341

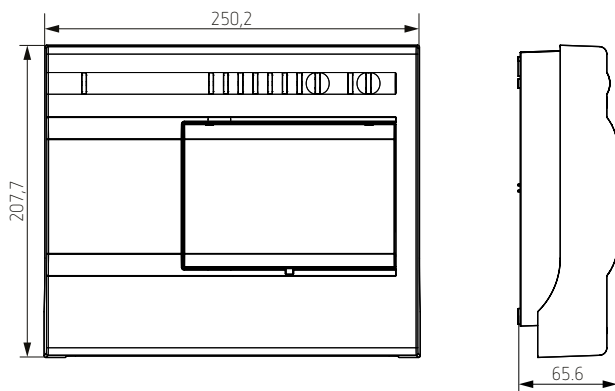


OT-Box Standard  
↳ Art.No.: 9070712  
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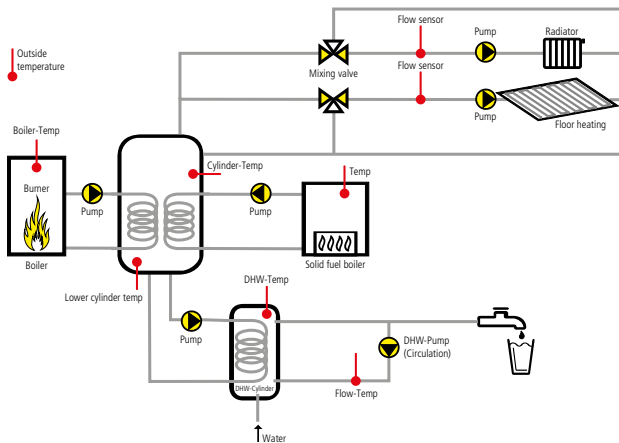
Plunge sensor RAMSES  
↳ Art.No.: 9070379  
Details page 341

## Scale drawings

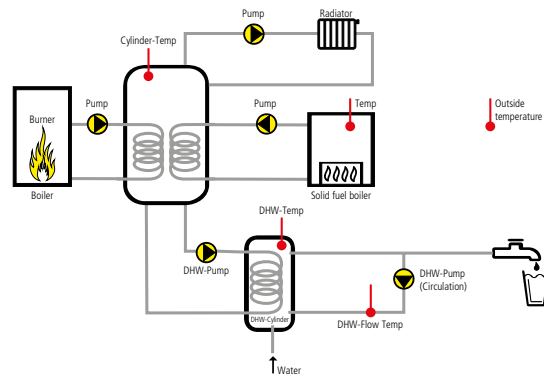


RAMSES 856 top2 OT

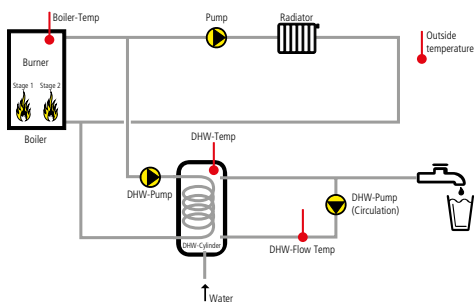
## Connection diagrams



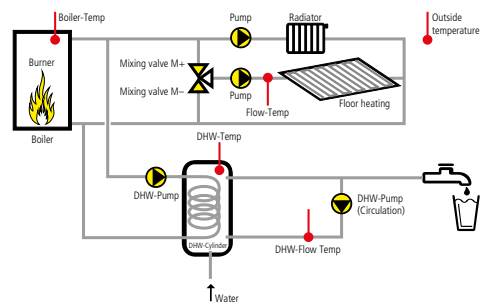
RAMSES 856 top2 OT (in combination with OT-Box 9070712)



RAMSES 856 top2 OT



RAMSES 856 top2 OT



RAMSES 856 top2 OT

## Climate control

### Clock thermostats, Analogue battery version, Analogue 230 V



RAMSES 784 S

#### Description

##### Common functions

- Analogue clock thermostat with a low profile design for time-dependent monitoring and control of room temperature
- Segment program disc with daily program
- Normal and reduced temperature can be set separately
- Operating point and electronic recirculation are set from the front
- Party switch and program display

##### RAMSES 784 S

- Battery version
- Electronic temperature control
- Quartz mechanism
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C
- Battery monitoring with battery replacement indicator via flashing LED

- Silting and pump protection function (option)

##### RAMSES 722 S

- Mains version
- Synchronous motor drive
- Electronic temperature control
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C

#### Product selection

Power reserve	Type of connection	Program	Type of contact	Setting range temperature	Operating voltage	Type	Article number
-	2/3-way conductors	Daily program	Changeover contact	+10 °C ... +30 °C	2 AA batteries	RAMSES 784 S	7840801
-	3-/4-conductors	Daily program	Changeover contact	+10 °C ... +30 °C	230 V AC	RAMSES 722 S	7220801

# Climate control

## Clock thermostats, Analogue battery version, Analogue 230 V

### Technical data

	RAMSES 784 S	RAMSES 722 S
Operating voltage	2 AA batteries	230 V AC
Frequency	–	50 Hz
Type of contact	Changeover contact	
Program	Daily program	
Switching capacity	6 A (at 250 V AC, $\cos \varphi = 1$ ), 1 A (at 250 V AC, $\cos \varphi = 0.6$ )	
Switching differential	0,4–1,2 K	
Switching output	Potential-free	Potential-free, not for SELV
Setting range temperature	+10 °C ... +30 °C	
Shortest switching times	15 min	
Programmable every	15 min	
Time accuracy at 25 °C	$\leq \pm 1$ s/day (quartz)	Synchronised with mains
Stand-by consumption	–	1,3 W
Battery life	approx. 1 year, depending on switching frequency	–
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

### Accessories



**Actuator ALPHA 5 230 V**

↳ Art.No.: 9070441

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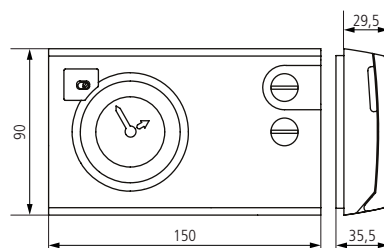
**Actuator ALPHA 5 24 V**

Details page 3472

**Adapter RAMSES 72x/78x**

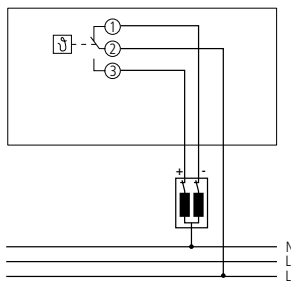
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### Scale drawings

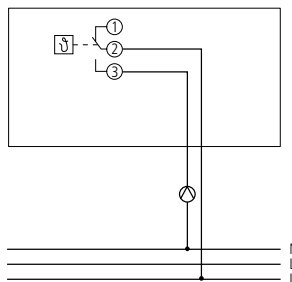


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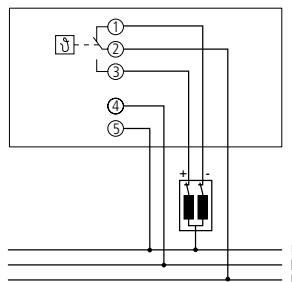
### Connection diagrams



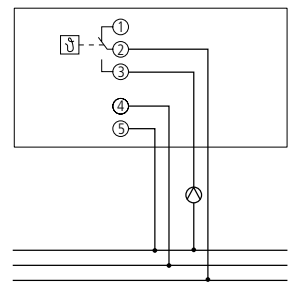
RAMSES 784 S



RAMSES 784 S



RAMSES 722 S



RAMSES 722 S

# Climate control

## Clock thermostats, Analogue battery version, Analogue 230 V



### Description

#### Common functions

- Analogue clock thermostat with a low profile design for time-dependent monitoring and control of room temperature
- Operating point and electronic recirculation are set from the front
- Party switch and program display

#### RAMSES 784

- Battery version
- Tappet program disc with daily or weekly program
- Electronic temperature control
- Normal and reduced temperature can be set separately
- Quartz mechanism
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C
- Battery monitoring with battery replacement indicator via flashing LED
- Silting and pump protection function (option)

#### RAMSES 722

- Mains version

- Tappet program disc with daily or weekly program
- Synchronous motor drive
- Normal and reduced temperature can be set separately
- Electronic temperature control
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C

#### RAMSES 782

- Mains version
- Tappet program disc with daily or weekly program
- Quartz mechanism, 3 day power reserve
- Normal and reduced temperature can be set separately
- Electronic temperature control
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C

#### RAMSES 721

- Mains version
- Tappet program disc with daily program

- Synchronous motor drive
- Normal temperature can be set
- Reduced temperature approx. 5 K lower in relation to the set comfort temperature
- Without selector switch
- Electronic temperature control
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C

#### RAMSES 725

- Mains version
- Tappet program disc with daily or weekly program
- Synchronous motor drive
- Reduced temperature can be set
- Central control of reduced temperature as per time program
- Electronic temperature control
- Selector switch for operating mode: continuous reduced temperature, continuous normal temperature, automatic mode, frost and plant protection +6 °C

### Product selection

Power reserve	Type of connection	Program	Type of contact	Setting range temperature	Operating voltage	Type	Article number
-	2/3-way conductors	Daily/weekly program	Changeover contact	+10 °C ... +30 °C	2 AA batteries	RAMSES 784	7840030
	3-/4-conductors	Daily/weekly program	Changeover contact	+10 °C ... +30 °C	230 V AC	RAMSES 722	7220030
3 days	3-/4-conductors	Daily/weekly program	Changeover contact	+10 °C ... +30 °C	230 V AC	RAMSES 782	7820030
-	3-/4-conductors	Daily program	Changeover contact	+10 °C ... +30 °C	230 V AC	RAMSES 721	7210030
		Daily/weekly program	Changeover contact	+10 °C ... +30 °C	230 V AC	RAMSES 725	7250030



# Climate control

## Clock thermostats, Analogue battery version, Analogue 230 V

### Technical data

	RAMSES 784	RAMSES 722	RAMSES 782	RAMSES 721	RAMSES 725
Operating voltage	2 AA batteries	230 V AC			
Frequency	–	50 Hz	50–60 Hz	50 Hz	
Type of contact	Changeover contact				
Program	Daily/weekly program			Daily program	Daily/weekly program
Switching capacity	6 A (at 250 V AC, $\cos \varphi = 1$ ), 1 A (at 250 V AC, $\cos \varphi = 0.6$ )				
Switching differential	0,4–1,2 K			1,5 K	
Switching output	Potential-free	Potential-free, not for SELV			
Setting range temperature	+10 °C ... +30 °C				
Shortest switching times	20 min, 120 min			20 min	20 min, 120 min
Programmable every	5 min, 30 min			5 min	5 min, 30 min
Time accuracy at 25 °C	$\leq \pm 1$ s/day (quartz)	Synchronised with mains	$\leq \pm 1$ s/day (quartz)	Synchronised with mains	
Power reserve	–	3 days		–	
Stand-by consumption	–	~1,3 W	1,1 W	1,3 W	1,4 W
Battery life	approx. 1 year, depending on switching frequency	–			
Type of protection	IP 20				
Protection class	II according to EN 60 730-1				

### Accessories



**Actuator ALPHA 5 230 V**

↳ Art.No.: 9070441  
Details page 3472

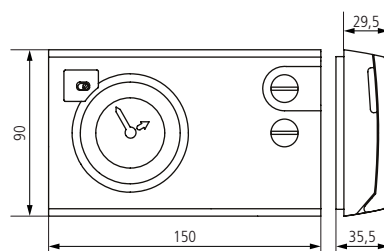
**Actuator ALPHA 5 24 V**

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**Adapter RAMSES 72x/78x**

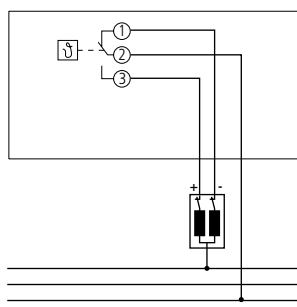
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### Scale drawings

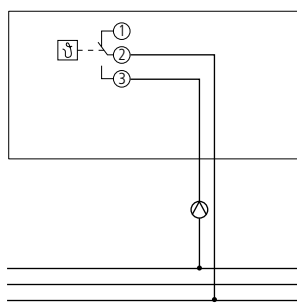


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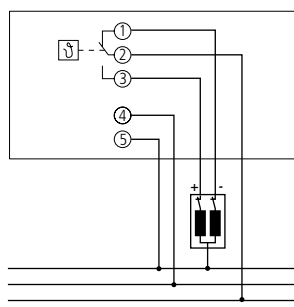
### Connection diagrams



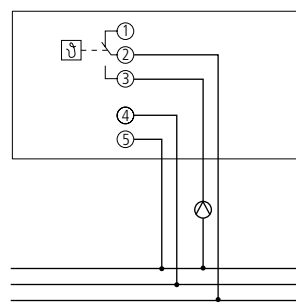
RAMSES 784



RAMSES 784



RAMSES 722, RAMSES 782,  
RAMSES 721, RAMSES 725









RAMSES 722, RAMSES 782,  
RAMSES 721, RAMSES 725



## The perfect work climate

Cause and effect: Whoever wants to act efficiently must create the best conditions for themselves and their employees. The right attitude is decisive. Theben provides it with products such as presence detectors, room thermostats or KNX systems for home and building automation, we help people live, work and achieve more in a relaxed way and in a pleasant atmosphere. As a company we offer exactly that to our employees: a reliable work environment. For us, it's a sign of our professionalism.

	Type of connection	Switching capacity at 230 V AC	Type of contact	Operating voltage	Installation type	Type	Page
<b>Mechanical</b>							
	2/3-way conductors	10 (4) A	NC contact	230–240 V AC	Surface-mounted	RAMSES 701	204
	3-/4-conductors	10 (4) A	NC contact	230–240 V AC	Surface-mounted	RAMSES 702	204
						RAMSES 703	204
						RAMSES 704	204
						RAMSES 705	204
4/5-way conductor	10 (4) A	NC contact	230–240 V AC	Surface-mounted	RAMSES 706	204	
					RAMSES 707	204	
	3-/4-conductors	Heating: 10 (4) A Cooling: 5 (2) A	Changeover contact	230–240 V AC	Surface-mounted	RAMSES 708	204
	4/5-way conductor	Heating: 10 (4) A Cooling: 5 (2) A	Changeover contact	230–240 V AC	Surface-mounted	RAMSES 709	204
	2/3-way conductors	10 (4) A	NC contact	230–240 V AC	Flush-mounted	RAMSES 741	206
	4/5-way conductor	10 (4) A	NC contact	230–240 V AC	Flush-mounted	RAMSES 746	206
	3-/4-conductors	Heating: 10 (4) A Cooling: 5 (1) A	Changeover contact	230–240 V AC	Flush-mounted	RAMSES 748	206
	2/3-way conductors	10 (4) A	NC contact	230–240 V AC	Flush-mounted	RAMSES 741 RA	206
	4/5-way conductor	10 (4) A	NC contact	230–240 V AC	Flush-mounted	RAMSES 746 RA	206
	3-/4-conductors	Heating: 10 (4) A Cooling: 5 (1) A	Changeover contact	230–240 V AC	Flush-mounted	RAMSES 748 RA	206
<b>Electronic</b>							
	2/3-way conductors	8 A (at 230 V AC, cos $\varphi = 1$ )	NC contact	230 V AC	Surface-mounted	RAMSES 714	208
	4/5-way conductor	16 A (at 230 V AC, cos $\varphi = 1$ )	NC contact	230 V AC	Surface-mounted	RAMSES 714 A	208
	5-way conductor	16 (4) A	NO contact	230 V AC	Flush-mounted	RAMSES 751 RA	208

# Climate control

## Room thermostats, Mechanical



### Description

#### Common functions

- Room temperature controller with thermal feedback
- Suitable for all types of heating, e.g. gas, water, electric heating with central/individual room control
- Setting controller with mechanical setting limit or detection

#### RAMSES 702

- Integrated temperature reduction (approx. 4 K) possible via control with time switch

#### RAMSES 703

- Internal setting: Temperature cannot be set externally. Temperature is set inside the device at start-up

- Integrated temperature reduction (approx. 4 K) possible via control with time switch

#### RAMSES 704

- Switch for additional heating ON/OFF + indicator lamp

#### RAMSES 705

- Switch for heating ON/OFF

#### RAMSES 706

- Switch for heating ON/OFF + indicator lamp
- Integrated temperature reduction (approx. 4 K) possible via control with time switch

#### RAMSES 707

- Switch for heating ON/OFF

- Switch for additional heating ON/OFF + indicator lamp

#### RAMSES 708

- Also suitable for air conditioning equipment
- Heating/cooling changeover contact

#### RAMSES 709

- Also suitable for air conditioning equipment
- Heating/cooling changeover contact
- 3-way selector switch for: comfort mode, reduction mode, external reduction
- Indicator lamp
- External temperature reduction (approx. 4 K) possible via control with time switch

10

### Product selection

Type of connection	Type of contact	Switching capacity at 230 V AC	Setting range temperature	Operating voltage	Type	Article number
2/3-way conductors	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 701	7010001
3-/4-conductors	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 702	7020001
					RAMSES 703	7030001
					RAMSES 704	7040001
					RAMSES 705	7050001
4/5-way conductor	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 706	7060001
					RAMSES 707	7070001
3-/4-conductors	Changeover contact	Heating: 10 (4) A Cooling: 5 (2) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 708	7080001
4/5-way conductor	Changeover contact	Heating: 10 (4) A Cooling: 5 (2) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 709	7090001

## Technical data

	RAMSES 701 – RAMSES 707	RAMSES 708 – RAMSES 709
Operating voltage	230–240 V AC	
Frequency	50–60 Hz	
Type of contact	NC contact	Changeover contact
Switching capacity	10 A (at 230 V AC, $\cos \varphi = 1$ ), 4 A (at 230 V AC, $\cos \varphi = 0.6$ )	Heating: 10 A (at 230 V AC, $\cos \varphi = 1$ ), 4 A (at 230 V AC, $\cos \varphi = 0.6$ ) Cooling: 5 A (at 230 V AC, $\cos \varphi = 1$ ), 2 A (at 230 V AC, $\cos \varphi = 0.6$ )
Setting range temperature	+5 °C ... +30 °C	
Control accuracy	Approx. 1 K, thermal recirculation	
Colour	Pure white (similar to RAL 9010)	
Installation type	Surface-mounted	
Type of protection	IP 30	
Protection class	II according to EN 60 730-1	

## Accessories



**Actuator ALPHA 5 230 V**

↳ Art.No.: 9070441

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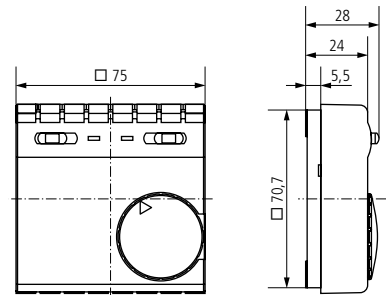


**Adapter plate RAMSES 70x**

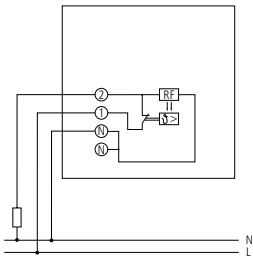
↳ Art.No.: 9070480

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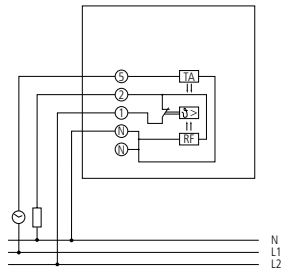
## Scale drawings



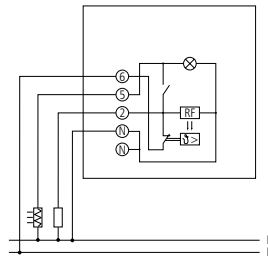
## Connection diagrams



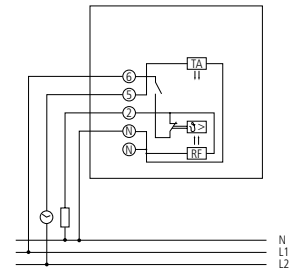
RAMSES 701



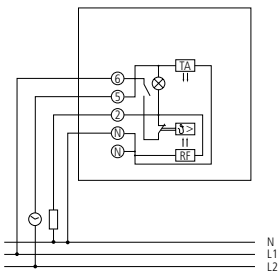
RAMSES 702, RAMSES 703



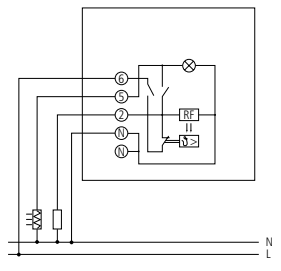
RAMSES 704



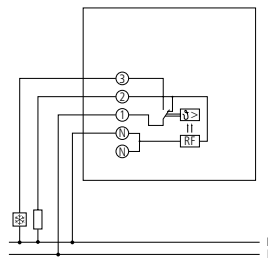
RAMSES 705



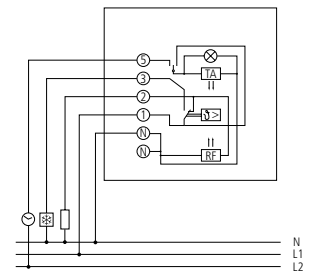
RAMSES 706



RAMSES 707



RAMSES 708



RAMSES 709

# Climate control

## Room thermostats, Mechanical



### Description

#### Common functions

- Room temperature controller with thermal feedback
- Central part fits nearly all frames using an adapter frame from the switch manufacturer
- Ideal controller for refurbished and new build properties

#### RAMSES 741

- Supplied as replacement device without frame, central part and setting button
- Frame, central part and setting button available as accessories

#### RAMSES 746

- Switch for heating ON/OFF + indicator lamp
- Supplied as replacement device without frame, central part and setting button
- Frame, central part and setting button available as accessories

#### RAMSES 748

- Heating/cooling two-way switch
- Supplied as replacement device without frame, central part and setting button
- Frame, central part and setting button available as accessories

#### RAMSES 741 RA

- With frame, central part and setting button

#### RAMSES 746 RA

- With frame, central part and setting button
- Switch for heating ON/OFF + indicator lamp

#### RAMSES 748 RA

- Heating/cooling two-way switch
- With frame, central part and setting button

### Product selection

Scope of delivery	Type of connection	Type of contact	Switching capacity at 230 V AC	Setting range temperature	Operating voltage	Type	Article number
Without cover	2/3-way conductors	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 741	7410130
	4/5-way conductor	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 746	7460130
	3-/4-conductors	Changeover contact	Heating: 10 (4) A Cooling: 5 (1) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 748	7480130
With cover	2/3-way conductors	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 741 RA	7410131
	4/5-way conductor	NC contact	10 (4) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 746 RA	7460131
	3-/4-conductors	Changeover contact	Heating: 10 (4) A Cooling: 5 (1) A	+5 °C ... +30 °C	230–240 V AC	RAMSES 748 RA	7480131

### Technical data

	RAMSES 741	RAMSES 746	RAMSES 748	RAMSES 741 RA	RAMSES 746 RA	RAMSES 748 RA
Operating voltage	230–240 V AC					
Frequency	50–60 Hz					
Type of contact	NC contact		Changeover contact	NC contact		Changeover contact
Switching capacity	10 A (at 230 V AC, cos φ = 1), 4 A (at 230 V AC, cos φ = 0.6)		Heating: 10 A (at 230 V AC, cos φ = 1), 4 A (at 230 V AC, cos φ = 0.6) Cooling: 5 A (at 230 V AC, cos φ = 1), 1 A (at 230 V AC, cos φ = 0.6)	10 A (at 230 V AC, cos φ = 1), 4 A (at 230 V AC, cos φ = 0.6)		Heating: 10 A (at 230 V AC, cos φ = 1), 4 A (at 230 V AC, cos φ = 0.6) Cooling: 5 A (at 230 V AC, cos φ = 1), 1 A (at 230 V AC, cos φ = 0.6)
Setting range	+5 °C ... +30 °C					
Control accuracy	approx. 0.5 K, thermal recirculation					
Colour	–			Brilliant pure white (similar to RAL 9010)		
Installation type	Flush-mounted					
Type of protection	–			IP 30		
Protection class	II according to EN 60 730-1					

### Accessories



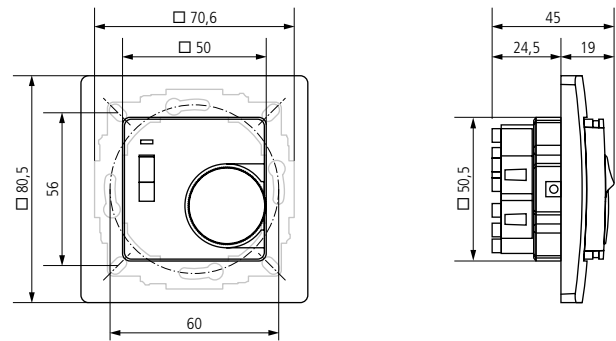
**Actuator ALPHA 5 230 V**  
↳ Art.No.: 9070441  
Details page 342

**Central part RAMSES 746**  
Details page 343

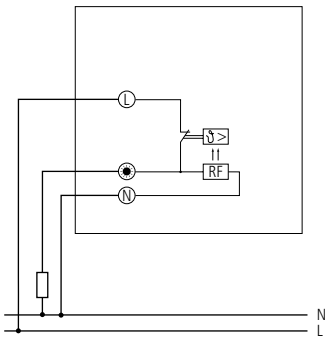
**Central part RAMSES 741/748**  
Details page 342

**Frame RAMSES 74x**  
Details page 342

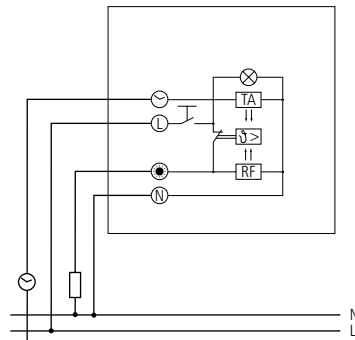
### Scale drawings



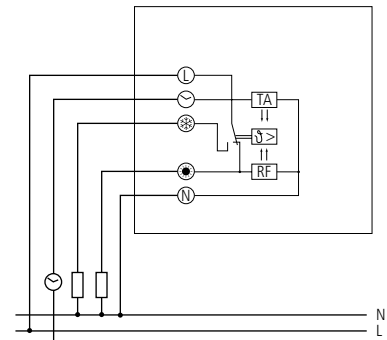
### Connection diagrams



RAMSES 741, RAMSES 741 RA



RAMSES 746, RAMSES 746 RA



RAMSES 748, RAMSES 748 RA

# Climate control

## Room thermostats, Electronic



### Description

#### RAMSES 714

- Electronic room thermostats for all types of heating, e.g. gas, water, electric heating etc.
- Individual room control possible in combination with Theben actuators
- Heating status display via LED
- External temperature reduction (approx. 3.5 K) is possible via control with time switch. Temperature reduction can be cut to 2 K by opening a wire bridge

#### RAMSES 714 A

As RAMSES 714, but:

- External temperature sensor for underfloor heating (wet rooms or bathroom heating)
- Switchable for the connection of available NTC sensors (33 K $\Omega$ /25 °C)
- Switch for heating ON/OFF

#### RAMSES 751 RA

- Electronic room thermostat with remote temperature sensor for underfloor heating control

- Display of temperature reduction and heating ON
- 2-pole mains switch for heating ON/OFF
- Emergency mode for sensor malfunction at 30 % heating
- Central part fits nearly all frames using an adapter frame from the switch manufacturer

### Product selection

Type of connection	Type of contact	Switching capacity at 230 V AC	Setting range temperature	Installation type	Type	Article number
2/3-way conductors	NC contact	8 A (at 230 V AC, cos $\phi$ = 1)	+5 °C ... +30 °C	Surface-mounted	RAMSES 714	7140002
4/5-way conductor	NC contact	16 A (at 230 V AC, cos $\phi$ = 1)	+10 °C ... +60 °C	Surface-mounted	RAMSES 714 A	7140016
5-way conductor	NO contact	16 (4) A	+10 °C ... +50 °C	Flush-mounted	RAMSES 751 RA	7510131

### Technical data

	RAMSES 714	RAMSES 714 A	RAMSES 751 RA
Operating voltage	230 V AC		
Frequency	50 Hz		
Type of contact	NC contact		NO contact
Switching output	Not potential-free		Potential-free
Switching capacity	8 A (at 230 V AC, cos $\phi$ = 1)	16 A (at 230 V AC, cos $\phi$ = 1)	16 A (at 230 V AC, cos $\phi$ = 1), 4 A (at 230 V AC, cos $\phi$ = 0.6)
Setting range temperature	+5 °C ... +30 °C	+10 °C ... +60 °C	+10 °C ... +50 °C
Control accuracy	$\pm$ 0.25 K	$\pm$ 0.5 K	
Control behaviour	-		Proportional controller with PWM (continuous type)
Colour	Pure white (similar to RAL 9010)		
Installation type	Surface-mounted		Flush-mounted
Max. cable length	-	Length 4 m, $\varnothing$ 6 mm, (IP 54)	Length 4 m, $\varnothing$ 6 mm, extendable to 50 m
Ambient temperature	-		+0 °C ... +40 °C
Type of protection	IP 20		IP 30
Protection class	II according to EN 60 730-1		



Accessories

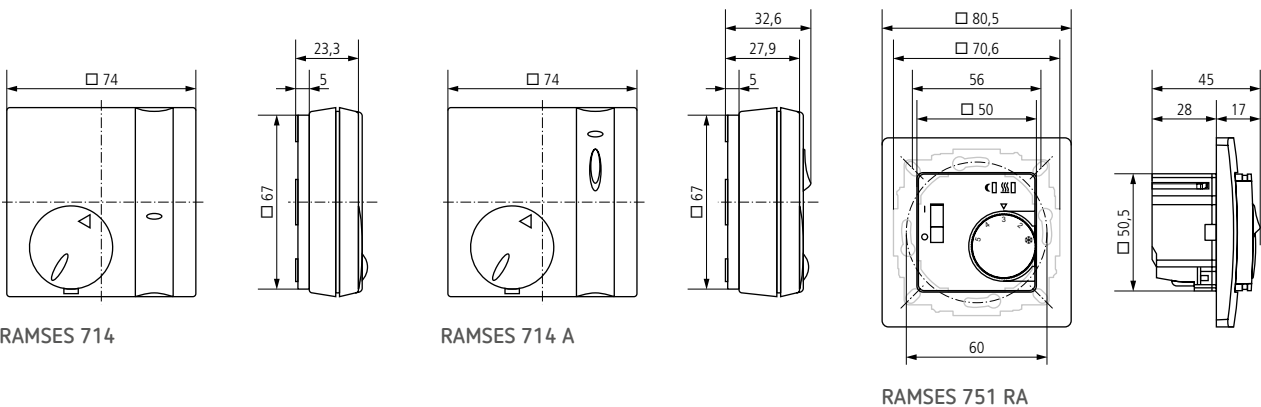


**Actuator ALPHA 5 230 V**  
↳ Art.No.: 9070441  
Details page 342

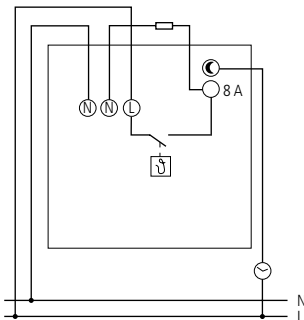


**Adapter plate RAMSES 714**  
for RAMSES 714, RAMSES 714 A  
↳ Art.No.: 9070212  
Details page 341

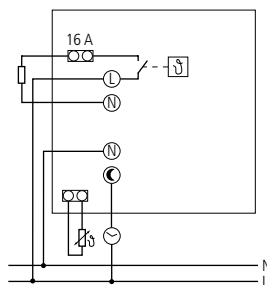
Scale drawings



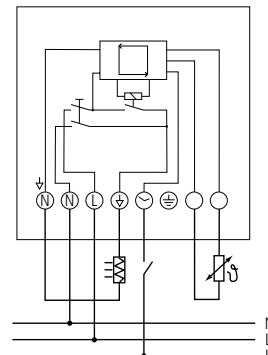
Connection diagrams



RAMSES 714, RAMSES 714 A



RAMSES 714 A





RAMSES 751 RA



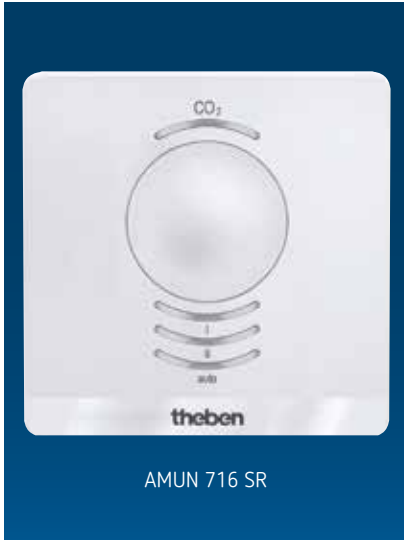
## The sense for what's fresh

Where a fresh wind blows, there is also room for new ideas. You need a feeling for what is needed – or a sensor. Theben offers many such sensors and each one of them helps inspire the mind. For example in public areas such as schools and universities or in offices. For many people the supply of fresh air is just a stimulus. However mostly it offers more: namely comfort.

Description	Type	Page
<b>CO<sub>2</sub> sensors</b>		
 CO <sub>2</sub> sensor for ventilation control and monitoring of air quality in the room with switch and analog outputs	AMUN 716 SR	212
<b>Hygrostat</b>		
 Hygrostat for wall installation for control of humidifiers or ventilation and dehumidifier systems	SOTHIS 715	212

# Climate control

## CO<sub>2</sub> sensors



### Description

- CO<sub>2</sub> sensor
- Suitable for conference and meeting rooms, offices, schools/nurseries, passive and low-energy housing.
- For fan control
- Warning display for CO<sub>2</sub> concentration (lights)
- Power unit optionally available. Power unit is suitable for flush mounted installation
- Simple upgrade of uncontrolled ventilation systems possible
- 2 switch outputs CO<sub>2</sub> controlled for 2 stage control, with manual and automatic mode as well as display of switching status
- 3 x 0–10 V outputs for CO<sub>2</sub>, temperature and relative humidity

### Product selection

Measuring range	Data interface	Display	Operating voltage	Protection class	Type	Article number
Selectable: 0–5000 ppm/0–5000 ppm	3 x 0-10 V, 2 x relay 5 A/250 V AC	LEDs	24 V AC/DC	II according to EN 60 730-1	AMUN 716 SR	7160110

### Technical data

AMUN 716 SR			
Operating voltage	24 V AC/DC SELV	Type of connection	Screw terminals
Outputs	3 x 0-10 V, 2 x relay 5 A/250 V AC	Display	6 LEDs
Measuring range CO <sub>2</sub>	Selectable: 0–5000 ppm or 0–5000 ppm	Installation type	Wall installation (also on flush-mounted socket possible)
Measuring range temperature	+5 °C ... +40 °C	Type of protection	IP 20
Measuring range humidity	30–80 % rH	Protection class	II according to EN 60 730-1
ON/OFF thresholds	700 ppm ±200 ppm, 1300 ppm ±200 ppm		

### Accessori

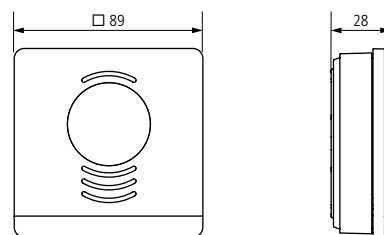


#### Power unit CO<sub>2</sub>-sensor

↳ Art.No.: 9070494

Details page 343

### Dimensioni



AMUN 716 SR



## Description

- Hygrostat for wall installation
- Measurement of relative humidity
- Suitable for control of humidifiers or ventilation and dehumidifier systems
- Use SELV when there is a risk of high humidity and the build up of condensation

## Product selection

Measuring range	Type of contact	Switching capacity humidifier	Switching capacity dehumidifying	Type	Article number
35–100 % rH	Changeover contact	2 A	5 A	SOTHIS 715	7150002

## Technical data

SOTHIS 715			
Switching capacity dehumidifying	5 A	Installation type	Wall installation
Switching capacity humidifier	2 A	Type of protection	IP 30
Suitable for SELV	Yes	Protection class	II according to EN 60 730-1
Colour	Pure white (similar to RAL 9010)		

## Accessories

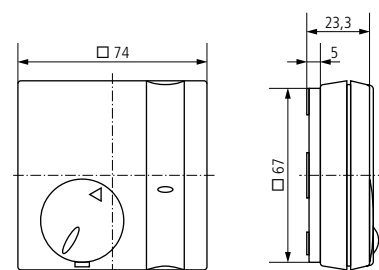


### Adapter plate RAMSES 714

↳ Art.No.: 9070212

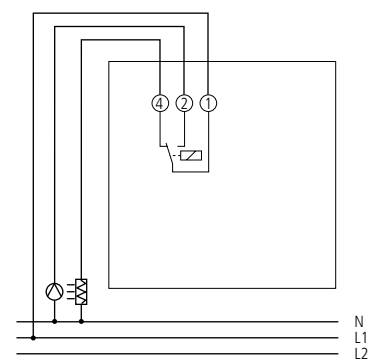
Details page 341

## Scale drawings



SOTHIS 715

## Connection diagrams




























SOTHIS 715

## How innovation arises

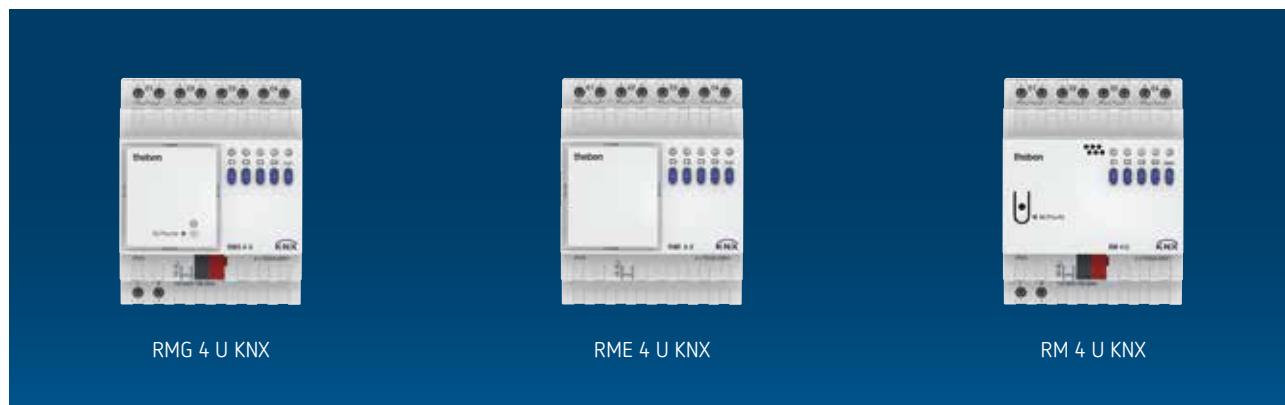
Progress thrives on exchanging and from intelligently developing what's already proved itself or applying it to other spheres. Theben is an example of that. Over and over again, through changes in technology, we have pushed open the door to new areas and thus successfully completed the transformation from mechanical to electromechanical systems and digital technology to systems based on bus technology. Behind that lies the competence of our employees - and we do everything to promote that. Because that is the precondition for developing innovations.



Description	Type	Page
<b>Switching actuators</b>		
 Switching actuators	RMG 4 U KNX/RME 4 U KNX/ RM 4 U KNX/RMG 8 S KNX/RME 8 S KNX/RM 8 S KNX/ RM 16 S KNX/RMG 4 I KNX/RME 4 I KNX/RM 4 I KNX/RM 8 I KNX/RM 4 H KNX/ RM 8 H KNX/RMG 8 T KNX/RME 8 T KNX/RM 8 T KNX/RM 16 T KNX	216
<b>Blinds actuators</b>		
 Blinds actuators	JMG 4 T KNX/JME 4 T KNX/JM 4 T KNX/ JM 8 T KNX/ JMG 4 T 24V KNX/ JME 4 T 24V KNX/JM 4 T 24V KNX/ JM 8 T 24V KNX	226
<b>Dimming actuators</b>		
 Universal dimming actuators	DMG 2 T KNX/DME 2 T KNX/DMB 1 T KNX/DM 2 T KNX/DM 4 T KNX/DM 4-2 T KNX/ DM 8-2 T KNX	230
 Control units	SMG 2 S KNX/SME 2 S KNX	234
<b>Flush-mounted actuators</b>		
 Switching actuators/ Blinds actuators/ Universal dimming actuators	SU 1 KNX/JU 1 KNX/DU 1 KNX/HU 1 KNX/SU 1 RF KNX/JU 1 RF KNX/DU 1 RF KNX/ HU 1 RF KNX/Media coupler TP-RF KNX/TU 4 RF KNX	236
<b>Push-buttons</b>		
 Push-buttons	iON 102 KNX,iON 104 KNX,iON 108 KNX	242
<b>Binary inputs</b>		
 Binary inputs	BMG 6 T KNX/BME 6 T KNX/BM 6 T KNX/BM 12 T KNX	244
 Binary inputs for flush-mounted sockets	TA 2 S KNX/TA 4 S KNX/TA 6 S KNX/TA 8 S KNX	246
<b>HVAC controller</b>		
 Multifunction display and room thermostats	VARIA 826 S KNX/RAMSES 718 P KNX/RAMSES 718 S KNX	247
 Heating actuators	HMG 6 T KNX/HME 6 T KNX/HM 6 T KNX/HM 12 T KNX/HMT 6 S KNX/HMT 12 S KNX	250
 Motor-driven actuators	CHEOPS control KNX/CHEOPS drive KNX	253
 CO <sub>2</sub> room air sensor	AMUN 716 S KNX	254
 Room thermostat Fan-Coil and Fan-Coil actuator	RAMSES 713 FC KNX/FCA 1 KNX /FCA 2 KNX	255
<b>Presence and motion detectors</b>		
 Presence detectors	PresenceLight 360 KNX/thePassa KNX/thePrema KNX/theRonda S KNX/theRonda P KNX/PlanoCentro KNX/PlanoSpot KNX/PresenceLight 180 KNX	258
 Motion detectors	theLuxa P KNX	274
<b>Weather station, brightness sensor</b>		
 Weather stations KNX	Meteodata 140 S KNX/Meteodata 139 KNX	276
 Brightness and temperature sensors	LUNA 134 KNX/LUNA 131 S KNX/LUNA 133 KNX	279
<b>Digital time switches/Time transmitter</b>		
 8 channel time switch with yearly and astro program	TR 648 top2 RC KNX/TR 648 top2 RC-DCF KNX	282
 Time transmitter	ZS 600 DCF KNX	284
<b>Gateways</b>		
 KNX-OpenTherm-Gateway	KNX-OT-Box S	286
 KNX-DALI-interface	DALI-Gateway KNX plus	285
<b>System devices</b>		
 Supply voltage	PS 640 mA/320 mA/160 mA	287
 Interface and line coupler	IP Interface KNX/IPsecure Router KNX/Interface USB KNX/Line coupler S KNX	288
<b>Display units</b>		
 KNX indoor clocks	OSIRIA KNX	290
<b>Visualisation</b>		
 KNX-Visualisation	theServa S110	292

# Home and building control

## KNX, Switching actuators



### Description

#### Common functions

- Switching actuator
- LED switching status display for each channel
- Manual operation on device (even without bus connection)
- Switching functions: On/Off, pulse, On/Off delay, staircase light with warning
- Logical links: e.g. lock, AND, release, OR
- Adjustable characteristics: e.g. switching, delayed switching, pulse function
- Links, type of contact (NC contact/NO contact) and participation in central commands such as continuous On, continuous Off, central switching and save/call up scene

#### RMG 4 U KNX

- 4-way switching actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 12 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of switching actuators is possible without KNX bus module

#### RME 4 U KNX

- 4-way switching actuator MIX2
- Extension module MIX2
- For upgrading to maximum of 12 channels

#### RM 4 U KNX

- 4-way switching actuator

### Product selection

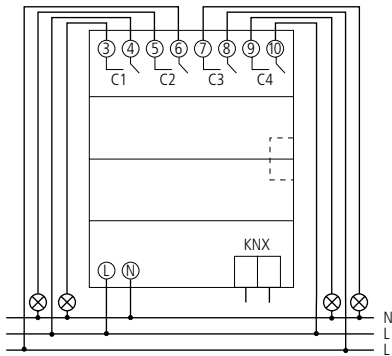
Function	Type	Article number
Base module	RMG 4 U KNX	4930223
Extension module	RME 4 U KNX	4930228
Module FIX1	RM 4 U KNX	4940223



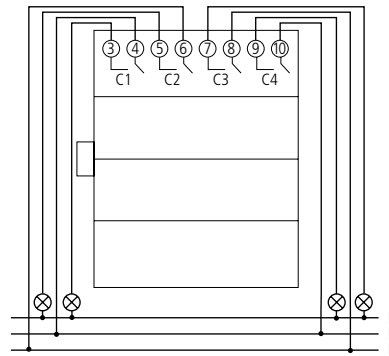
### Technical data

	RMG 4 U KNX	RME 4 U KNX	RM 4 U KNX
Operating voltage KNX	Bus voltage, $\leq 4$ mA	–	Bus voltage, $\leq 4$ mA
Operating voltage	110–240 V AC	–	110–240 V AC
Frequency	50–60 Hz	–	50–60 Hz
Stand-by consumption	0,3 W	0,2 W	0,2 W
Width	4 modules		
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>		
Type of contact	NO contact, 16 A (cos $\phi$ = 1), 3 A (cos $\phi$ = 0,6)		
Inrush current	max. 800 A / 200 $\mu$ s		
Resistive load	3680 W		
Incandescent lamp load	2000 W		
Incandescent lamp load	1200 W		
Energy saving lamps	300 W		
LED lamp < 2 W (typ.)	55 W		
LED lamp > 2 W (typ.)	600 W		
Inrush current	max. 800 A / 200 $\mu$ s		
Ambient temperature	–5 °C ... +45 °C		
Type of protection	IP 20		
Protection class	II		

### Connection diagrams



RMG 4 U KNX, RM 4 U KNX



RME 4 U KNX

# Home and building control

## KNX, Switching actuators



### Description

#### Common functions

- C load switching actuator
- With current recognition
- For higher lamp loads
- LED switching status display for each channel
- Manual operation on device (even without bus connection)
- Switching functions: On/Off, pulse, On/Off delay, staircase light with warning
- Logical links: e.g. lock, AND, release, OR
- Adjustable characteristics: e.g. switching, delayed switching, pulse function
- Links, type of contact (NC contact/NO contact) and participation in central commands such as continuous On, continuous Off, central switching and save/call up scene

#### RMG 4 I KNX

- 4-way C load switching actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 12 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of switching actuators is possible without KNX bus module

#### RME 4 I KNX

- 4-way C load switching actuator MIX2
- Extension module MIX2
- For upgrading to maximum of 12 channels

#### RM 8 I KNX

- 8-way C load switching actuator FIX1

#### RM 4 I KNX

- 4-way C load switching actuator FIX2

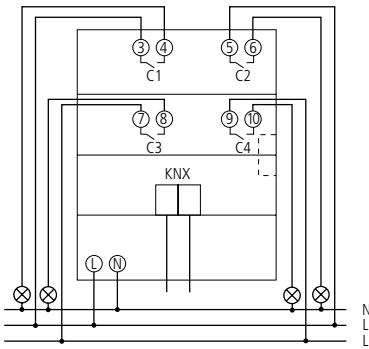
### Product selection

Function	Type	Article number
MIX2 Base module	RMG 4 I KNX	4930210
MIX2 Extension module	RME 4 I KNX	4930215
FIX1 module	RM 4 I KNX	4940210
FIX2 module	RM 8 I KNX	4940215

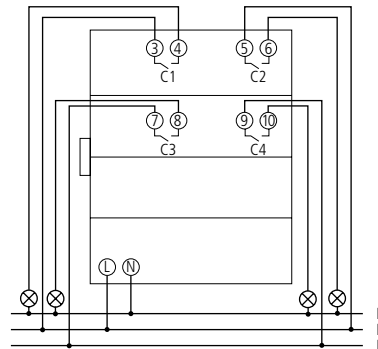
### Technical data

	RMG 4   KNX	RME 4   KNX	RM 8   KNX	RM 4   KNX
Operating voltage KNX	Bus voltage, $\leq 4$ mA	–	Bus voltage, $\leq 4$ mA	
Operating voltage	110–240 V AC			
Frequency	50–60 Hz			
Stand-by consumption	1,3 W	1,1 W	2,4 W	1,3 W
Width	4 modules		8 modules	4 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>			
Type of contact	NO contact, 16 A (cos $\varphi$ = 1), 10 A (cos $\varphi$ = 0,6)			
Inrush current	max. 1500 A / 200 $\mu$ s			
Resistive load	3680 W			
Incandescent lamp load	2600 W			
Fluorescent lamp load (electronic ballast)	1650 W			
Energy saving lamps	410 W			
LED lamp < 2 W (typ.)	75 W			
LED lamp > 2 W (typ.)	600 W			
Inrush current	max. 1500 A / 200 $\mu$ s			
Ambient temperature	–5 °C ... +45 °C			
Type of protection	IP 20			
Protection class	II according to EN 60 669			

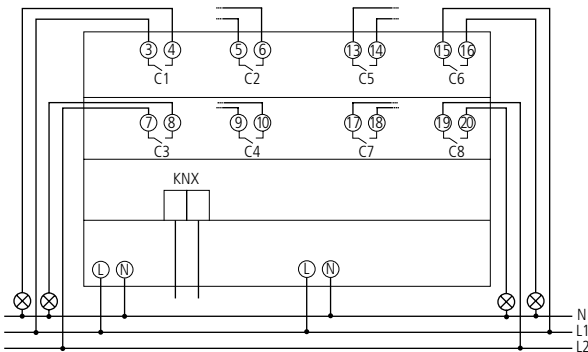
### Connection diagrams



RMG 4 | KNX, RM 4 | KNX



RME 4 | KNX



RM 8 | KNX

# Home and building control

## KNX, Switching actuators



### Description

#### Common functions

- High-performance switching actuator
- Bistable relays
- Switching capacity 25 A
- No additional operating voltage needed (only KNX bus voltage)
- LED switching status display for each channel
- Manual operation on device
- Switching functions: On/Off, pulse, On/Off delay, staircase light with warning
- Logical links: e.g. lock, AND, release, OR

#### RM 4 H KNX

- 4-way high-performance switching actuator FIX1

#### RM 8 H KNX

- 8-way high-performance switching actuator FIX2

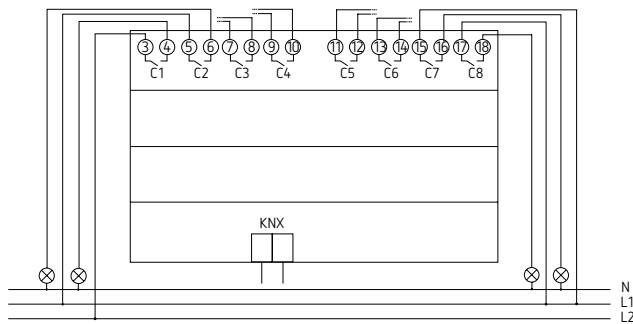
### Product selection

Function	Number of channels	Type	Article number
Module FIX1	4	RM 4 H KNX	4940212
Module FIX2	8	RM 8 H KNX	4940217

Technical data

	RM 4 H KNX	RM 8 H KNX
Operating voltage KNX	Bus voltage, $\leq 10$ mA	
Width	4 modules	8 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>	
Type of contact	NO contact, 25 A ( $\cos \phi = 1$ )	
Energy saving lamps	410 W	
LED lamp < 2 W (typ.)	75 W	
LED lamp > 2 W (typ.)	850 W	
Inrush current	max. 1200 A / 200 $\mu$ s	
Ambient temperature	-5 °C ... +45 °C	
Type of protection	IP 20	
Protection class	II according to EN 60 669	

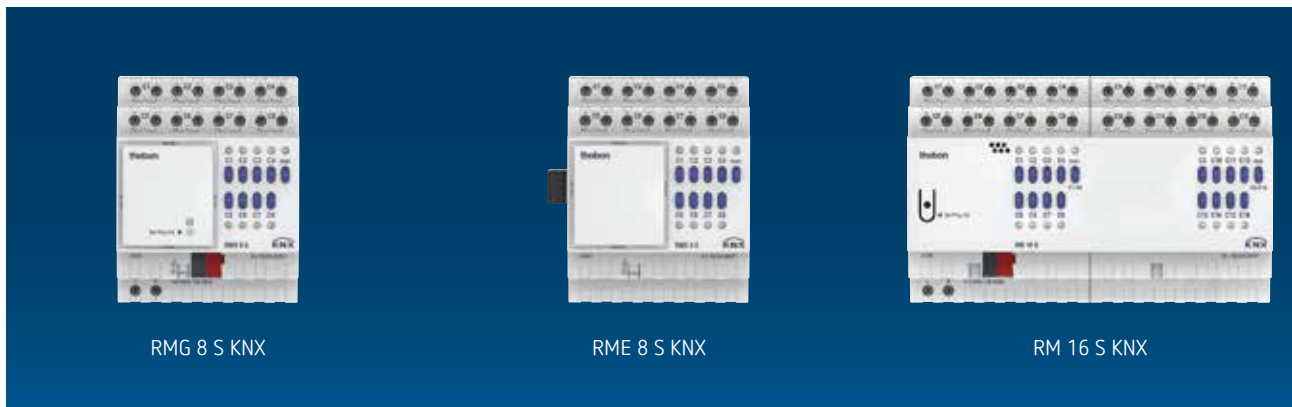
Connection diagrams



RM 8 H KNX

# Home and building control

## KNX, Switching actuators



### Description

#### Common functions

- Switching actuator
- LED switching status display for each channel
- Manual operation on device (even without bus connection)
- Switching functions: On/Off, pulse, On/Off delay, staircase light with warning
- Logical links: e.g. lock, AND, release, OR
- Adjustable characteristics: e.g. switching, delayed switching, pulse function
- Links, type of contact (NC contact/NO contact) and participation in central commands such as continuous On, continuous Off, central switching and save/call up scene

#### RMG 8 S KNX

- 8-way switching actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 24 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of switching actuators is possible without KNX bus module

#### RME 8 S KNX

- 8-way switching actuator MIX2
- Extension module MIX2
- For upgrading to maximum of 24 channels

#### RM 8 S KNX

- 8-way switching actuator FIX1

#### RM 16 S KNX

- 16-way switching actuator FIX2

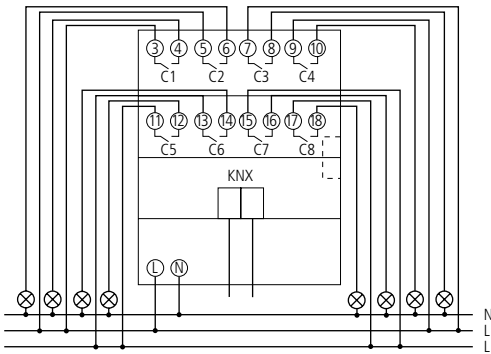
### Product selection

Function	Type	Article number
MIX2 Base module	RMG 8 S KNX	4930220
MIX2 Extension module	RME 8 S KNX	4930225
FIX1 module	RM 8 S KNX	4940220
FIX2 module	RM 16 S KNX	4940225

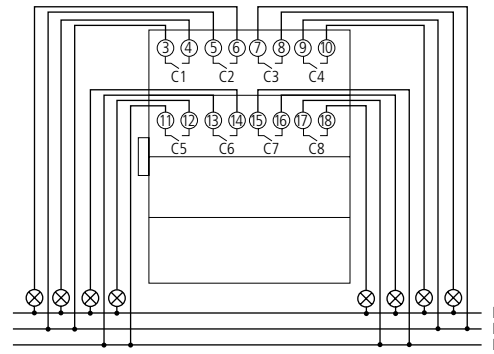
### Technical data

	RMG 8 S KNX	RME 8 S KNX	RM 8 S KNX	RM 16 S KNX
Operating voltage KNX	Bus voltage, $\leq 4$ mA	–	Bus voltage, $\leq 4$ mA	
Operating voltage	110–240 V AC	–	110–240 V AC	
Frequency	50–60 Hz	–	50–60 Hz	
Stand-by consumption	0,3 W	0,2 W	0,3 W	
Width	4 modules			8 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>			
Type of contact	NO contact, 16 A ( $\cos \varphi = 1$ ), 3 A ( $\cos \varphi = 0,6$ )			
Inrush current	max. 800 A / 200 $\mu$ s			
Resistive load	3680 W			
Incandescent lamp load	2000 W			
Incandescent lamp load	1200 W			
Energy saving lamps	300 W			
LED lamp < 2 W (typ.)	55 W			
LED lamp > 2 W (typ.)	600 W			
Inrush current	max. 800 A / 200 $\mu$ s			
Ambient temperature	–5 °C ... +45 °C			
Type of protection	IP 20			
Protection class	II			

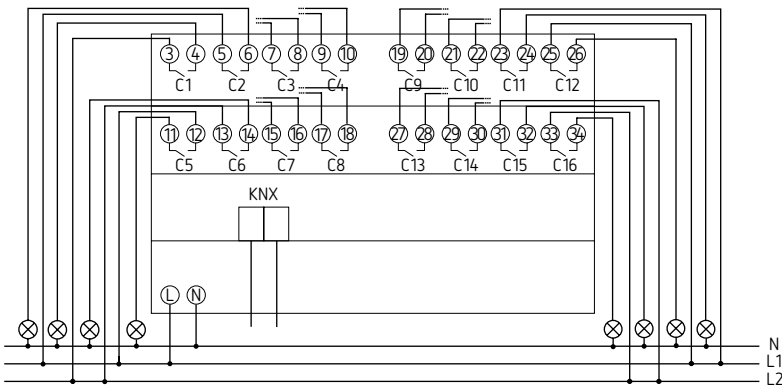
### Connection diagrams



RMG 8 S KNX, RM 8 S KNX



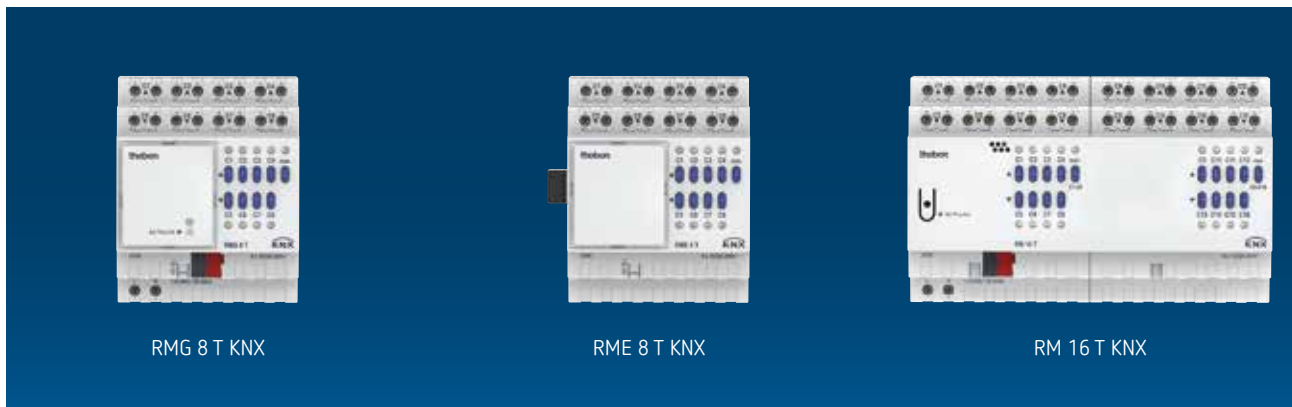
RME 8 S KNX



RM 16 S KNX

# Home and building control

## KNX, Switching actuators



### Description

#### Common functions

- Switching or blind actuator
- Flexible channel function selection as switching actuator or for controlling drives for blinds, shutters, sun and vision protection devices, skylights and ventilation flaps
- LED switching status display for each channel
- Manual operation on device (even without bus connection)
- Switching functions: On/Off, pulse, On/Off delay, staircase light with warning
- Logical links: e.g. lock, AND, release, OR
- Adjustable characteristics: e.g. switching, delayed switching, pulse function
- Links, type of contact (NC contact/NO contact) and participation in central commands such as continuous On, continuous Off, central switching and save/call up scene

#### RMG 8 T KNX

- 8-way switching or 4-way blind actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 24 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of actuator is possible without KNX bus module

#### RME 8 T KNX

- 8-way switching or 4-way blind actuator MIX2
- Extension module MIX2
- For upgrading to maximum of 24 channels

#### RM 8 T KNX

- 8-way switching or 4-way blind actuator FIX1

#### RM 16 T KNX

- 16-way switching or 8-way blind actuator FIX2

### Product selection

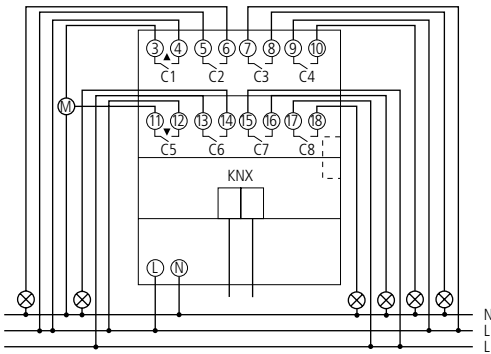
Function	Type	Article number
MIX2 Base module	RMG 8 T KNX	4930200
MIX2 Extension module	RME 8 T KNX	4930205
FIX1 module	RM 8 T KNX	4940200
FIX2 module	RM 16 T KNX	4940205



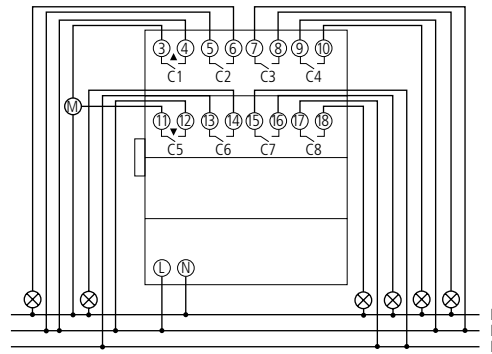
### Technical data

	RMG 8 T KNX	RME 8 T KNX	RM 16 T KNX	RM 8 T KNX
Operating voltage KNX	Bus voltage, $\leq 4 \text{ mA}$	-	Bus voltage, $\leq 4 \text{ mA}$	
Operating voltage	110–240 V AC	-	110–240 V AC	
Frequency	50–60 Hz	-	50–60 Hz	
Stand-by consumption	0,3 W	0,2 W	0,5 W	
Width	4 modules		8 modules	4 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>			
Type of contact	NO contact, 16 A ( $\cos \varphi = 1$ ), 3 A ( $\cos \varphi = 0,6$ )			
Inrush current	max. 800 A / 200 $\mu\text{s}$			
Resistive load	3680 W			
Incandescent lamp load	2000 W			
Fluorescent lamp load (electronic ballast)	1200 W			
Energy saving lamps	300 W			
LED lamp < 2 W (typ.)	55 W			
LED lamp > 2 W (typ.)	180 W			
Inrush current	max. 800 A / 200 $\mu\text{s}$			
Ambient temperature	-5 °C ... +45 °C			
Type of protection	IP 20			
Protection class	II according to EN 60 669			

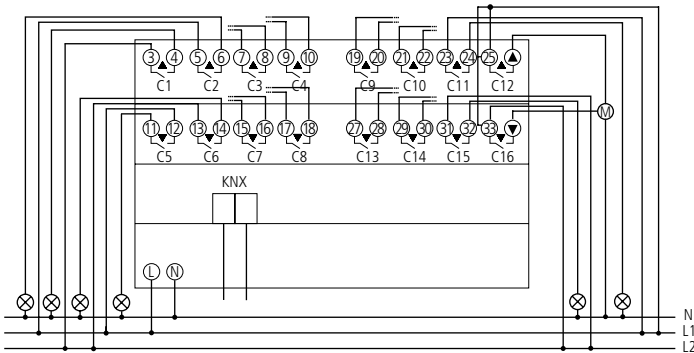
### Connection diagrams



RMG 8 T KNX, RM 8 T KNX



RME 8 T KNX



RM 16 T KNX

# Home and building control

## KNX, Blinds actuators



### Description

#### Common functions

- Blind actuator
- For controlling drives for blinds, shutters, sun and vision protection devices, skylights and ventilation flaps
- Manual operation on device (even without bus connection)
- LED Up and Down switching status display for each channel
- Potential-free contacts for Up and Down per channel
- Copy function for fast configuration
- Setting option for phase sequence and running time of devices

#### JMG 4 T KNX

- 4-way blind actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 12 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of actuators is possible without KNX bus module
- Free combination of switches, dimming, blinds and heating control as well as binary inputs

#### JME 4 T KNX

- 4-way blind actuator MIX2
- Extension module MIX2
- Can be upgraded to maximum of 12 channels

#### JM 4 T KNX

- 4-way blind actuator FIX1

#### JM 8 T KNX

- 8-way blind actuator FIX2

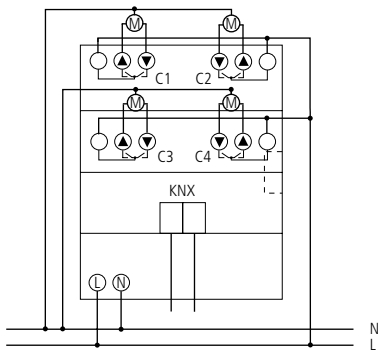
### Product selection

Function	Type	Article number
MIX2 Base module	JMG 4 T KNX	4930250
MIX2 Extension module	JME 4 T KNX	4930255
FIX1 module	JM 4 T KNX	4940250
FIX2 module	JM 8 T KNX	4940255

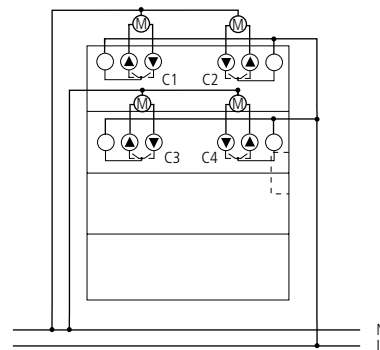
### Technical data

	JMG 4 T KNX	JME 4 T KNX	JM 8 T KNX	JM 4 T KNX
Operating voltage KNX	Bus voltage, $\leq 4 \text{ mA}$	–	Bus voltage, $\leq 4 \text{ mA}$	
Operating voltage	110–240 V AC	–	110–240 V AC	
Stand-by consumption	0,3 W	0,2 W	0,5 W	0,3 W
Frequency	50–60 Hz	–	50–60 Hz	
Width	4 modules		8 modules	4 modules
Max. cable cross section	Solid wire: $0.5 \text{ mm}^2$ to $6 \text{ mm}^2$   Stranded wire with end sleeve: $0.5 \text{ mm}^2$ to $4 \text{ mm}^2$			
Type of contact	NO contact, 6 A ( $\cos \phi = 1$ )			
Ambient temperature	$-5 \text{ }^\circ\text{C} \dots +45 \text{ }^\circ\text{C}$			
Type of protection	IP 20			
Protection class	II according to EN 60 669			

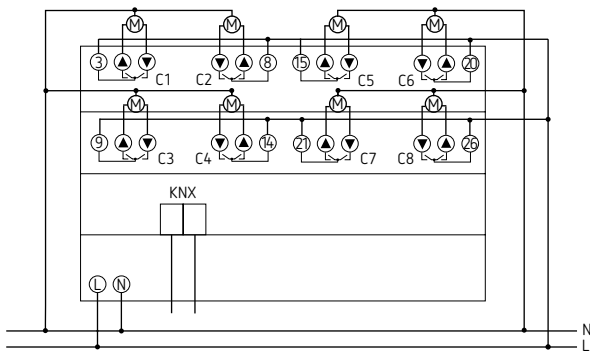
### Connection diagrams



JMG 4 T KNX, JM 4 T KNX



JME 4 T KNX



JM 8 T KNX

# Home and building control

## KNX, Blinds actuators



### Description

#### Common functions

- Blind actuator
- For controlling 24V drives for blinds, shutters, sun and vision protection devices, skylights and ventilation flaps
- Manual operation on device (even without bus connection)
- LED Up and Down switching status display for each channel
- Potential-free contacts for Up and Down per channel
- Setting option for phase sequence and running time of devices
- Copy function for fast configuration

#### JMG 4 T 24V KNX

- 4-way blind actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 12 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of actuators is possible without KNX bus module
- Free combination of switches, dimming, blinds and heating control as well as binary inputs

#### JME 4 T 24V KNX

- 4-way blind actuator MIX2
- Extension module MIX2
- Can be upgraded to maximum of 12 channels

#### JM 4 T 24V KNX

- 4-way blind actuator FIX1

#### JM 8 T 24V KNX

- 8-way blind actuator FIX2

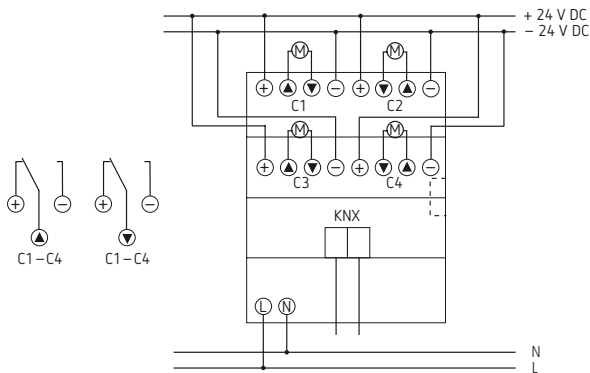
### Product selection

Function	Type	Article number
MIX2 Base module	JMG 4 T 24V KNX	4930260
MIX2 Extension module	JME 4 T 24V KNX	4930265
FIX1 module	JM 4 T 24V KNX	4940260
FIX2 module	JM 8 T 24V KNX	4940265

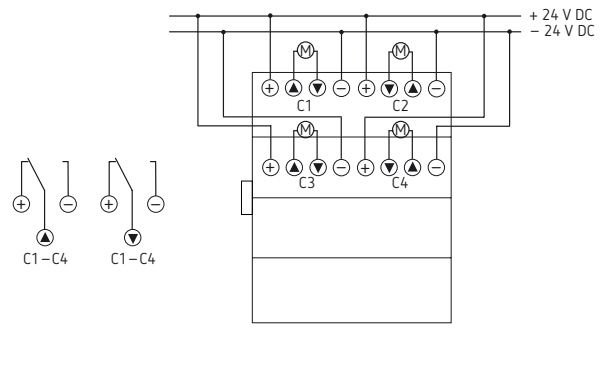
### Technical data

	JMG 4 T 24V KNX	JME 4 T 24V KNX	JM 4 T 24V KNX	JM 8 T 24V KNX
Operating voltage KNX	Bus voltage, $\leq 4$ mA	–	Bus voltage, $\leq 4$ mA	
Operating voltage	110–240 V AC	–	110–240 V AC	
Stand-by consumption	0,3 W	–	0,3 W	0,5 W
Frequency	50–60 Hz	–	50–60 Hz	
Width	4 modules			8 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>			
Type of contact	Changeover contact			
Switching capacity	6 A (at 24 V DC)			
Ambient temperature	–5 °C ... +45 °C			
Type of protection	IP 20			
Protection class	II according to EN 60 730-1			

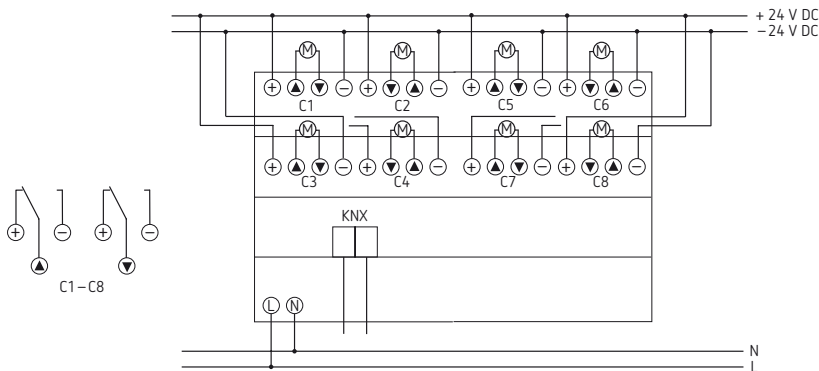
### Connection diagrams



JMG 4 T 24V KNX, JM 4 T 24V KNX



JME 4 T 24V KNX



JM 8 T 24V KNX

# Home and building control

## KNX, Blinds actuators



### Description

#### Common functions

- Universal dimmer actuator
- For dimming dimmable LED, incandescent lamps, LV, HV halogen lamps and energy saving lamps
- Also suitable for dimming of dimmable energy-saving lamps
- Also suitable for controlling fans
- LED switching status display for each channel
- Manual operation on device (even without bus connection)
- The dimming output can be upgraded by using additional dimmboosters „DMB 1 T KNX“ - dimming output 300 W/VA (incandescent lamp) for each dimmbooster. Output to a maximum of 2000 W/VA (incandescent lamp) by using max. 4 boosters possible
- Automatic load detection (can be deactivated)
- For R, L and C loads

#### DMG 2 T KNX

- 2-way universal dimmer actuator MIX2
- Base module MIX2
- Can be upgraded to maximum of 6 channels
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of switching actuators is possible without KNX bus module
- Dimming output: 400 W per channel or 800 W in parallel operation

#### DME 2 T KNX

- 2-way universal dimmer actuator MIX2
- Extension module MIX2
- For upgrading to maximum of 6 channels

#### DM 2 T KNX

- 2-way universal dimmer actuator FIX1

#### DM 4 T KNX

- 4-way universal dimmer actuator FIX2

#### DMB 1 T KNX

- 1 channel dimming output extension module ‚Dimmbooster‘

### Product selection

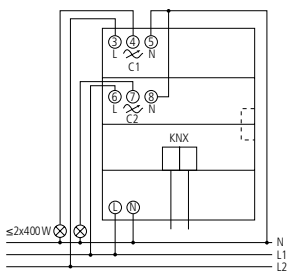
Function	Type	Article number
MIX2 Base module	DMG 2 T KNX	4930270
MIX2 Extension module	DME 2 T KNX	4930275
FIX1 module	DM 2 T KNX	4940270
FIX2 module	DM 4 T KNX	4940275
Dimmbooster	DMB 1 T KNX	4930279

### Technical data

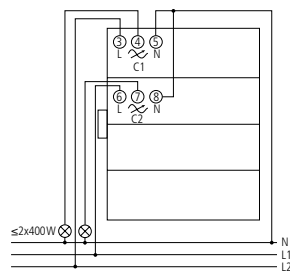
	DMG 2 T KNX	DME 2 T KNX	DM 4 T KNX	DM 2 T KNX	DMB 1 T KNX
Operating voltage KNX	Bus voltage, ≤ 4 mA	–	Bus voltage, ≤ 4 mA		–
Operating voltage	230 V AC				
Frequency	50 Hz				
Stand-by consumption	0,9 W	0,6 W	1,5 W	–	0,2 W
Width	4 modules		8 modules	4 modules	1 modules

	DMG 2 T KNX	DME 2 T KNX	DM 4 T KNX	DM 2 T KNX	DMB 1 T KNX
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>				
Lamp types	Incandescent, low-voltage and high-voltage halogen and dimmable energy saving lamps and LED			Incandescent, low-voltage and high-voltage halogen and dimmable LED	
Switching capacity per channel	400 W			300 W	
Switching capacity in parallel operation	800 W			-	
Dimming capacity LED lamp (typ.) per channel	Trailing edge (RC-mode): 400 W			45 W	
Dimming capacity LED lamp (typ.) in parallel operation	Trailing edge (RC-mode): 800 W			-	
Dimming capacity energy saving lamps per channel	Trailing edge (RC-mode): 80 W			-	
Dimming capacity energy saving lamps in parallel operation	Trailing edge (RC-mode): 140 W			-	
Switching capacity min.	5 W				
Ambient temperature	-5 °C ... +45 °C				
Type of protection	IP 20				
Protection class	II according to EN 60 669				

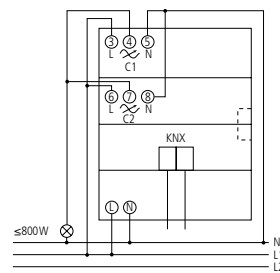
### Connection diagrams



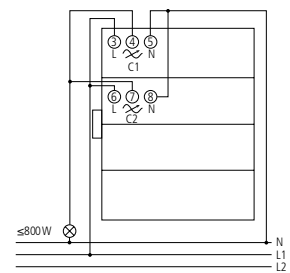
DMG 2 T KNX, DM 2 T KNX



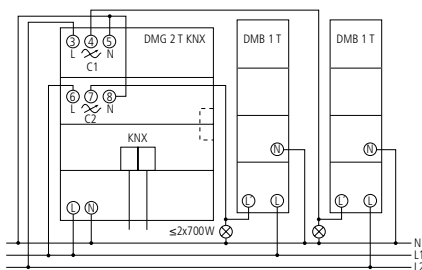
DME 2 T KNX



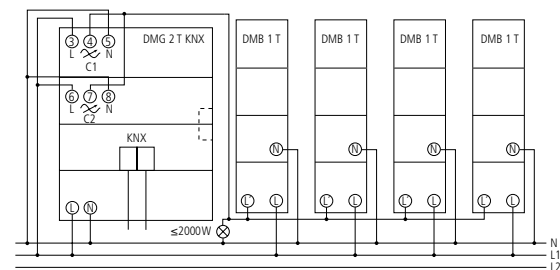
DMG 2 T KNX, DM 2 T KNX



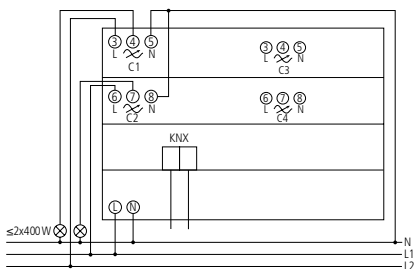
DME 2 T KNX



DMG 2 T KNX, DMB 1 T KNX



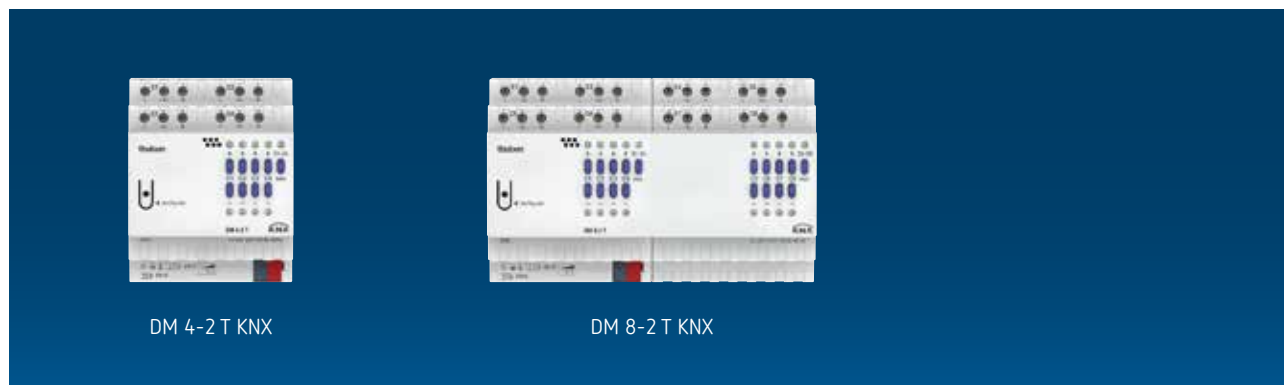
DMG 2 T KNX, DM 2 T KNX



DM 4 T KNX

# Home and building control

## KNX, Dimming actuators



### Description

#### Common functions

- Universal dimmer actuator
- For dimming dimmable LED, incandescent lamps, LV, HV halogen lamps and energy saving lamps
- Also suitable for dimming of dimmable energy-saving lamps
- Also suitable for controlling fans

- LED switching status display for each channel
- Manual operation on device
- Dimming output: 200 W per channel or 400 W in parallel operation
- Automatic load detection (can be deactivated)
- For R, L and C loads

- DM 4-2 T KNX**
- 4-way universal dimmer actuator FIX1
- DM 8-2 T KNX**
- 8-way universal dimmer actuator FIX2

### Description

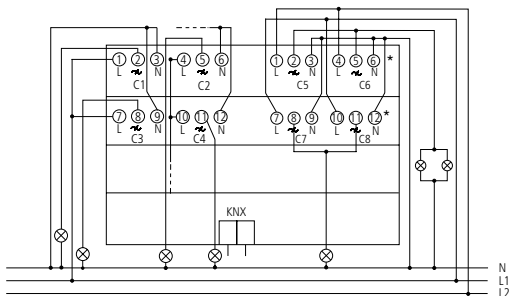
Function	Number of channels	Type	Article number
FIX1 module	4	DM 4-2 T KNX	4940280
FIX2 module	8	DM 8-2 T KNX	4940285



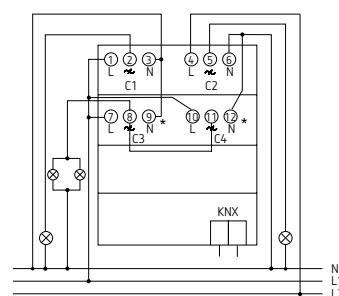
### Technical data

	DM 4-2 T KNX	DM 8-2 T KNX
Operating voltage KNX	Bus voltage, $\leq 10$ mA	Bus voltage, $\leq 17,5$ mA
Operating voltage	230–240 V AC	
Frequency	50–60 Hz	
Stand-by consumption	$< 1$ W	
Width	4 modules	8 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>	
Lamp types	Incandescent, low-voltage and high-voltage halogen and dimmable energy saving lamps and LED	
Switching capacity per channel	200 W	
Switching capacity in parallel operation	400 W	
Dimming capacity LED lamp (typ.) per channel	Trailing edge (RC-mode): 200 W	
Dimming capacity LED lamp (typ.) in parallel operation	Trailing edge (RC-mode): 400 W	
Dimming capacity energy saving lamps per channel	Trailing edge (RC-mode): typ. 200 W	
Dimming capacity energy saving lamps in parallel operation	Trailing edge (RC-mode): typ. 400 W	
Switching capacity min.	2 W	
Ambient temperature	$-5$ °C ... $+45$ °C	
Type of protection	IP 20	
Protection class	II according to EN 60 669	

### Connection diagrams



DM 8-2 T KNX



DM 4-2 T KNX

# Home and building control

## KNX, Dimming actuators



SMG 2 S KNX

SME 2 S KNX

### Description

#### Common functions

- 2-way 1–10 V control unit MIX
- Free combination of switching, dimming, blinds and heating control as well as binary inputs
- Switching and dimming of lighting circuits in combination with electronic ballasts (EBs and ballasts LED)

- 1–10 V inputs and one switch output (relay contact) per channel
- LED switching status display for each channel
- Manual switch with On/Off/Bus settings (also without bus voltage)
- Zero-cross switching for relay-saving switching and high lamp loads

- SMG 2 S KNX**
- Base module MIX
  - Can be upgraded to maximum of 6 channels
- SME 2 S KNX**
- Extension module MIX
  - For upgrading to maximum of 6 channels

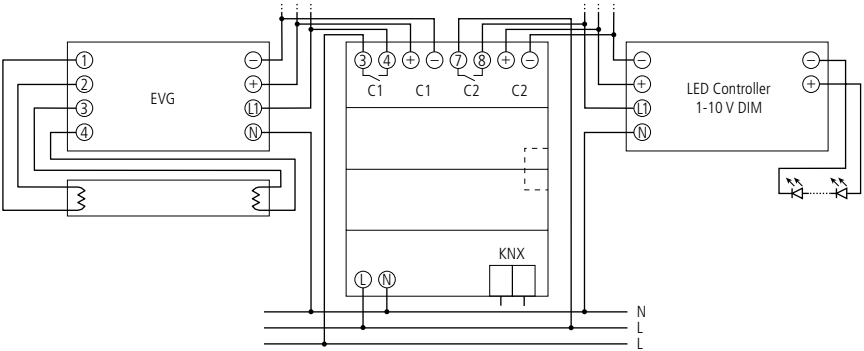
### Product selection

Type	Article number
SMG 2 S KNX	4910273
SME 2 S KNX	4910274

### Technical data

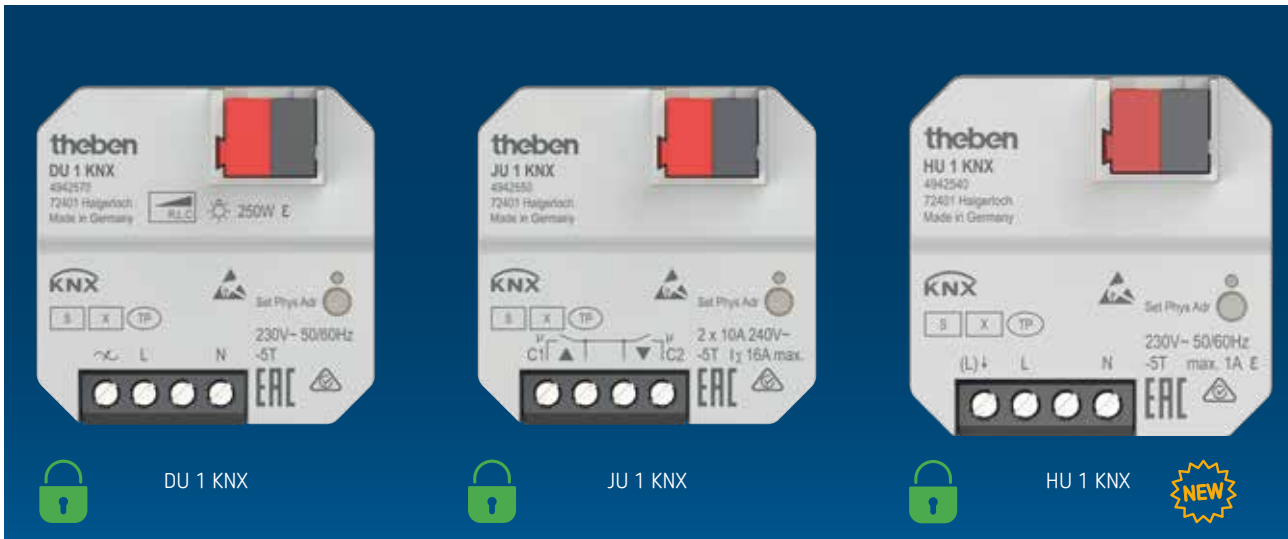
	SMG 2 S KNX	SME 2 S KNX
Operating voltage KNX	Bus voltage, ≤ 10 mA	–
Operating voltage	230 V AC	
Frequency	50 Hz	
Stand-by consumption	1,6 W	
Width	4 modules	
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>	
Type of contact	NO contact, 16 A (cos φ = 1), 10 A (cos φ = 0,6)	
Incandescent/halogen lamp load	2500 W	
Ambient temperature	–5 °C ... +45 °C	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

Connection diagrams



# Home and building control

## KNX, Flush-mounted actuators



### Description

#### Common functions

- 1-way flush-mounted actuator
- Secure communication via with support of „KNX Data Secure“
- Easy installation due to the compact housing
- 2 binary inputs for floating contacts such as buttons, switches, window contacts, temperature sensor (I2)
- Integrated temperature monitoring for increased operating safety, e.g. in the event of overload

#### SU 1 KNX

- 1-way flush-mounted switching actuator
- 1x NO contact & 1x NC contact with common control
- Adjustable features: NC/NO contact, switching, delayed switching, pulse function
- The binary inputs are assigned to the switch output as standard (function test before programming)

#### JU 1 KNX

- 1-way flush-mounted blind / switching actuator
- For controlling drives for blinds, roller blinds, sun and vision protection devices, skylights, and ventilation flaps
- Integrated automatic ventilation function
- Flexible configuration options: blind actuator or 2-channel switch actuator
- The binary inputs are assigned to the output as standard (function test before programming)

#### DU 1 KNX

- 1-way flush-mounted dimming actuator
- Optimised dimming output for dimmable energy-saving lamps, LEDs, incandescent and halogen lamps, and dimmable transformers
- Easy to adapt to different lamps thanks to automatic load detection

- Adjustable dimming curve for precise and flicker-free dimming
- The binary inputs are assigned to the dimming output as standard (function test before programming)

#### HU 1 KNX

- 1-way flush-mounted heating actuator
- Noiseless control of thermal actuators 230 V AC
- Function selection as a heating actuator (continuous or switching) or as a heating controller (integrated temperature controller heating / cooling)
- Valve protection function and summer function

### Product selection

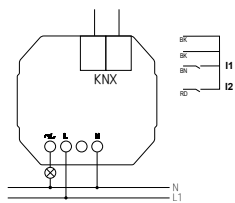
Number of channels	Funktionsart	Type	Article number
1	Flush-mounted switching actuator	SU 1 KNX	4942520
	Flush-mounted blind/switching actuator	JU 1 KNX	4942550
	Flush-mounted dimming actuator	DU 1 KNX	4942570
	Flush-mounted heating actuator	HU 1 KNX	4942540 *

\* Available june 2020

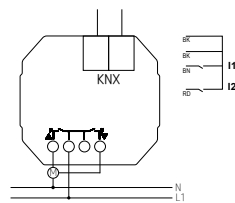
## Technical data

	DU 1 KNX	JU 1 KNX	SU 1 KNX	HU 1 KNX
Operating voltage KNX	Bus voltage, $\leq 4$ mA			
Energy saving lamps	-		300 W	-
LED lamp < 2 W (typ.)	Trailing edge (RC-mode): 250 W	-	50 W	-
LED lamp > 2 W (typ.)	Trailing edge (RC-mode): 250 W	-	600 W	-
Switching capacity	-	10 A	16 A	max. 1 A or 4 actuators 230 V AC (ALPHA 5)
Ambient temperature	-5 °C ... +45 °C			
Protection class	II			

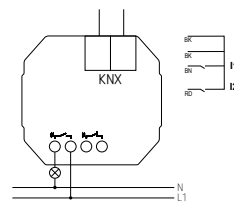
## Connection examples



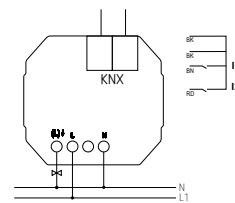
DU 1 KNX



JU 1 KNX



SU 1 KNX



HU 1 KNX

## Accessories



Temperature sensor RAMSES  
IP 65  
↳ Art.No.: 9070459  
Details page 341



Temperature sensor  
↳ Art.No.: 9070321  
Details page 341

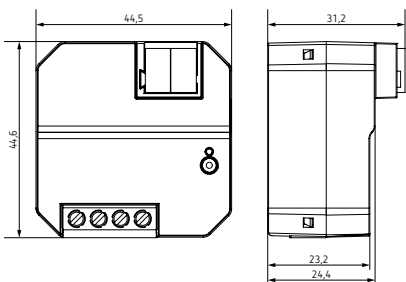


Flush-mounted temperature  
sensor  
↳ Art.No.: 9070469  
Details page 342



Actuator ALPHA 5 230 V  
for HU 1 KNX  
↳ Art.No.: 9070441  
Details page 342

## Scale drawings



# Home and building control

## KNX, Flush-mounted actuators



### Description

#### Common functions

- 1-way wireless flush-mounted actuator
- Secure communication via KNX-RF with support from KNX Data Secure
- Easy installation due to the compact housing
- 2 binary inputs for floating contacts such as buttons, switches, temperature sensor (I2)
- Integrated temperature monitoring for increased operating safety, e.g. in the event of overload

#### SU 1 RF KNX

- 1-way wireless flush-mounted switch actuator
- Adjustable features: NC/NO contact, switching, delayed switching, pulse function
- The binary inputs are assigned to the switch output as standard (function test before programming)

#### DU 1 RF KNX

- 1-way wireless flush-mounted dimming actuator
- Optimised dimming output for dimmable energy-saving lamps, LEDs, incandescent and halogen lamps, and dimmable transformers.
- Easy to adapt to different lamps thanks to automatic load detection
- Adjustable dimming curve for precise and flicker-free dimming
- The binary inputs are assigned to the dimming output as standard (function test before programming)

#### JU 1 RF KNX

- 1-way wireless flush-mounted blind actuator

- For controlling drives for blinds, roller blinds, sun and vision protection devices, skylights, and ventilation flaps
- Integrated automatic ventilation function
- The binary inputs are assigned to the output as standard (function test before programming)

#### HU 1 RF KNX

- 1-way wireless flush-mounted heating actuator
- Silent control of 230 V AC thermal actuators
- Integrated heating/cooling temperature controller
- Valve protection function

### Product selection

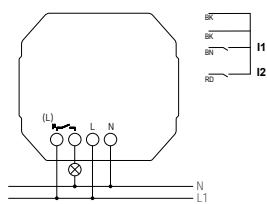
Configuration type	Number of channels	Type	Article number
Switch actuator	1	SU 1 RF KNX	4941620
Dimming actuator	1	DU 1 RF KNX	4941670
Blind actuator	1	JU 1 RF KNX	4941650
Heating actuator	1	HU 1 RF KNX	4941640 *

\* Available june 2020

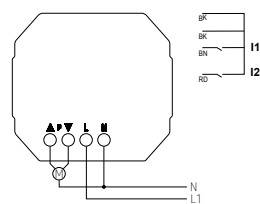
## Technical data

	SU 1 RF KNX	DU 1 RF KNX	JU 1 RF KNX	HU 1 RF KNX
Operating voltage	230–240 V AC	230 V AC	230–240 V AC	230 V AC
Frequency	50–60 Hz			
Switching capacity	10 A	–	5 A	max. 1 A or 4 actuators 230 V AC (ALPHA 5)
Incandescent/halogen lamp load	1800 W	250 W	–	–
LED lamp (typ.)	600 W	Trailing edge (RC-mode): 250 W	–	–
Ambient temperature	–5 °C... +45 °C			
Protection rating	IP 20			
Protection class	II			

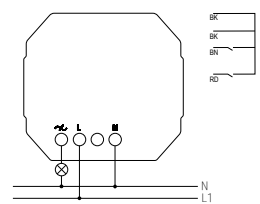
## Connection examples



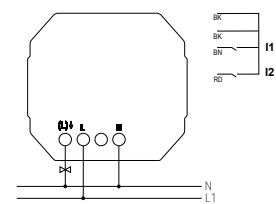
SU 1 RF KNX



JU 1 RF KNX



DU 1 RF KNX



HU 1 RF KNX

## Accessories



**Temperature sensor RAMSES  
IP 65**  
↳ Art.No.: 9070459  
Details page 341



**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341

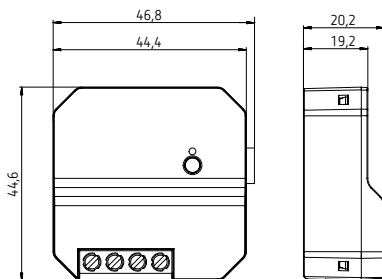


**Flush-mounted temperature  
sensor**  
↳ Art.No.: 9070469  
Details page 342



**Actuator ALPHA 5 230 V  
for HU 1 RF KNX**  
↳ Art.No.: 9070441  
Details page 342

## Scale drawings



# Home and building control

## KNX, Binary inputs / Media coupler



### Description

#### TU 4 RF KNX

- 4-way flush-mounted wireless push-button interface
- Secure communication via with support of „KNX Data Secure“
- 4 binary inputs for potential-free buttons and signaling contacts
- 1 additional input for temperature sensor
- Free assignment of the functions switching, dimming, blinds, temperature measurement and transmission
- Easy installation due to the compact housing
- Can be used with 4-way push-button module (9070806)

#### Media coupler TP-RF KNX

- Connects KNX RF devices of a radio line with the twisted-pair bus
- Power supply via KNX bus voltage
- Supports long frames for „KNX Secure“ and enables faster download of large applications in parallel
- Ranges of max. 30 m within the building are possible
- Has a repeater function, i.e. received telegrams are sent again to increase the range

### Product selection

Type	Article number
TU 4 RF KNX	4961604 *
Media coupler TP-RF KNX	9070868

\* Available june 2020



### Technical data

	TU 4 RF KNX	Media coupler TP-RF KNX
Operating voltage	230–240 V AC	Bus voltage
Frequency	50–60 Hz	–
Stand-by consumption	< 0,4 W	–
Length connecting wires	25 cm	–
Interface extension max.	3 m	–
Ambient temperature	–5 °C ... +45 °C	
Protection class	II	–

### Accessories



#### 4-way push-button module

For TU 4 RF KNX, with integrated temperature sensor  
Details page 341

#### Cover frame

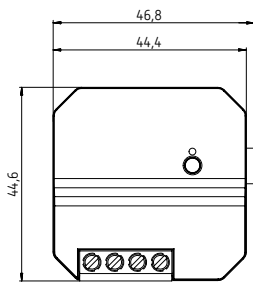
For 4-way push-button module, for common switch ranges  
Details page 341

#### Flush-mounted temperature sensor

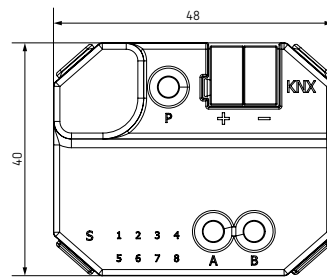
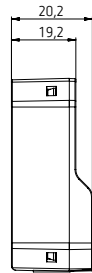
↳ Art.No.: 9070469

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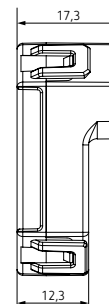
### Scale drawings



TU 4 RF KNX



Medienkoppler TP-RF KNX



# Home and building control

## KNX, Push-button sensors



### Description

#### ION 102 KNX

- Push-button sensor with 2 buttons and 2 status LEDs with integrated temperature sensor
- Secure communication via KNX-RF with support of „KNX Data Secure“
- For controlling of the functions switching, dimming, blinds, value transmitter, operating mode, scene, color control, sequence
- Up to 3 different telegrams per button
- Sending different telegrams with a short, long or double click
- Multi-colored status LEDs with adjustable colors for each LED separately
- Behavior of each status LED can be set: static, flashing or pulsing
- Brightness of each status LED can be individually adjusted via object or parameter
- Automatic brightness control of the status LEDs depending on the ambient brightness

- Integrated temperature sensor for visualization and temperature control via heating actuators
- Function monitoring via object (signaling dismantling)
- Installation of two ION push button sensors on standard double socket with accessories 9070822 possible
- Transparent cover for individual labeling in the scope of delivery

#### ION 104 KNX

As ION 102 KNX, but:

- Push-button sensor with 4 buttons and 4 status LEDs

#### ION 108 KNX

- Room controller with integrated bus unit
- Secure communication via KNX-RF with support of „KNX Data Secure“
- Access to the room controller via Bluetooth and operation with the IONplay app

- LC display for displaying functions, icons and values
- Integrated temperature controller for regulating and controlling the operating mode, temperature and fan level
- 20 freely parameterizable functions
- Free assignment of icons to the functions (40 icons to choose from)
- For controlling of the functions switching, dimming, blinds, value transmitter, operating mode, scene, color control, sequence
- Display brightness individually adjustable via object or parameter
- Automatic brightness control of the display depending on the ambient brightness
- Function monitoring via object (signaling dismantling)
- Installation of two ION push button sensors on standard double socket with accessories 9070822 possible

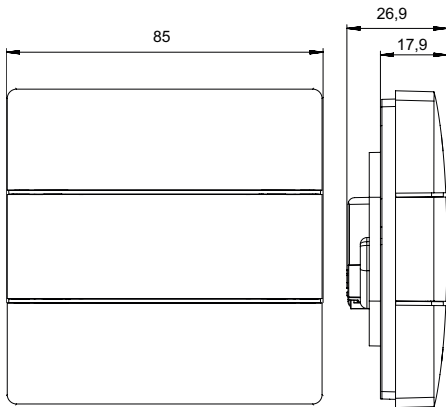
### Product selection

Type	Article number
iON 102 KNX	4969232
iON 104 KNX	4969234
iON 108 KNX	4969238

### Technical data

	iON KNX
Operating voltage	Bus voltage, $\leq 12,5$ mA
Ambient temperature	$-5$ °C ... $+45$ °C
Type of protection	IP 20
Protection class	III

### Scale drawings



### Accessories

#### 2-way mounting plate ION

↳ Art.No.: 9070822

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# Home and building control

## KNX, Push-button sensors



### Description

#### Common functions

- Binary input
- LED switching status display for each channel
- Manual operation on device (even without bus connection)
- Manual operation per channel for simulating the input states
- All inputs can be operated with different voltages and at different potentials
- Connectable cable length up to 100 m
- Free allocation of functions: switch/push button, dimming, blinds/roller blinds, counter, repeat telegram, sequences

#### BMG 6 T KNX

- 6-way binary input MIX2
- Base module MIX2
- Can be upgraded to maximum of 18 channels
- 6 floating universal and wide-range voltage inputs (10–240 V AC/DC or internally generated auxiliary voltage of approx. 12 V DC)
- 2 additional channels operable by buttons on the device, but without input
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of actuator is possible without KNX bus module

#### BME 6 T KNX

- 6-way binary input MIX2
- Extension module MIX2
- For upgrading to maximum of 18 channels

#### BM 6 T KNX

- 6-way binary input FIX1
- 6 floating universal and wide-range voltage inputs (10–240 V AC/DC or internally generated auxiliary voltage of approx. 12 V DC)
- 2 additional channels operable by buttons on the device, but without input

#### BM 12 T KNX

- 12-way binary input FIX2
- 12 floating universal and wide-range voltage inputs (10–240 V AC/DC or internally generated auxiliary voltage of approx. 12 V DC)
- 4 additional channels operable by buttons on the device, but without input

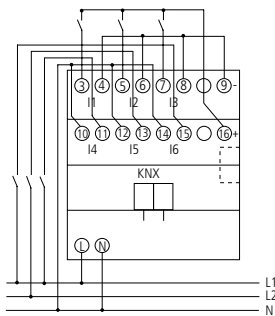
### Product selection

Function	Type	Article number
MIX2 Base module	BMG 6 T KNX	4930230
MIX2 Extension module	BME 6 T KNX	4930235
FIX1 module	BM 6 T KNX	4940230
FIX2 module	BM 12 T KNX	4940235

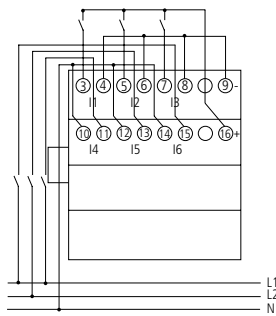
### Technical data

	BMG 6 T KNX	BME 6 T KNX	BM 12 T KNX	BM 6 T KNX
Operating voltage KNX	Bus voltage, $\leq 4$ mA	–	Bus voltage, $\leq 4$ mA	
Operating voltage	110–240 V AC	–	110–240 V AC	
Frequency	50–60 Hz	–	50–60 Hz	
Stand-by consumption	0,3 W	–	0,5 W	0,3 W
Width	4 modules		8 modules	4 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>			
Voltage inputs	10 V DC – 240 V AC 2 mA			
Ambient temperature	–5 °C ... +45 °C			
Type of protection	IP 20			
Protection class	II according to EN 60 730-1			

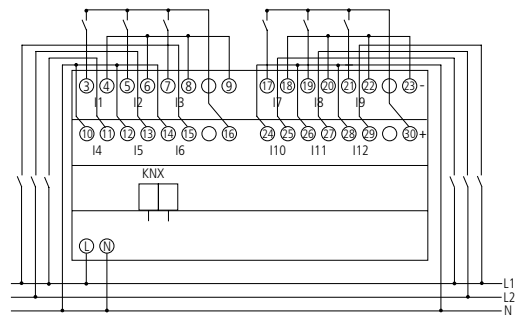
### Connection diagrams



BMG 6 T KNX, BM 6 T KNX



BME 6 T KNX



BM 12 T KNX

# Home and building control

## KNX, Binary inputs



### Description

#### Common functions

- Binary input/binary output sensor interfaces
- Can be installed in flush-mounted sockets with conventional sensors/switches
- Flexible LED controlling, thanks to increased output current of 3 mA commercially available LEDs and low current LEDs can be controlled
- Inputs can be reconfigured to outputs with parameterizable flashing and pulsing function
- Colour coding of wiring pairs

#### TA 2 S KNX

- 2-way key interface
- 4-pole cable connection
- Free allocation of functions: Switch/key, dimming, blinds, valuator, sequences, controlling LED

#### TA 4 S KNX

- 4-way key interface
- 6-pole cable connection
- Free allocation of functions: Switch/key, dimming, blinds, valuator, sequences, measuring temperature, controlling LED

- 2 NTC inputs for detection of the actual temperature

#### TA 6 S KNX

- As TA 4 S KNX, but:
- 6-way key interface
  - 8-pole cable connection
  - Can be used with 4-way push-button module (9070806)

#### TA 8 S KNX

- As TA 4 S KNX, but:
- 8-way key interface
  - 10-pole cable connection

### Product selection

Type	Article number
TA 2 S KNX	4969222
TA 4 S KNX	4969224
TA 6 S KNX	4969226
TA 8 S KNX	4969228

### Technical data

	TA S KNX
Operating voltage KNX	Bus voltage, ≤10 mA
Length connecting wires	25 cm
Contact current	0,5 mA
Ambient temperature	-5 °C ... +45 °C
Type of protection	IP 20
Protection class	III

12

### Accessories

#### Flush-mounted temperature sensor

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#### Temperature sensor

Details page 341

#### Temperature sensor RAMSES IP 65

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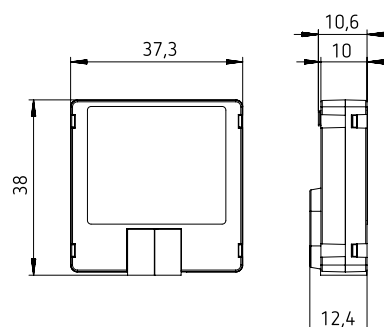
#### Contact temperature sensor

Details page 343

#### 4-way push-button module (for TA 6 S KNX)

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### Scale drawings





### Description

- Multi-functional display with room thermostat
- Glass front in white
- Freely configurable for displaying and controlling functions e.g. light settings, sun protection systems
- Backlit display and integrated time switch
- For control and regulation of heating, fan coils, air conditioning systems
- Up to 7 different display pages
- Automatic summer/winter time adjustment with power reserve
- Controls up to 8 rooms via own temperature profiles
- Weekly time switch with 8 channels with up to 3 different statuses, e.g. for light, shutters, fans etc.
- 3 heating programs
- Alternative continuous or on/off control
- Operation modes: comfort, stand-by, temperature reduction at night, frost protection
- Weather data from Theben weather stations can be displayed
- Free choice of programming via the ETS without plug-in
- Installation in flush-mounted socket

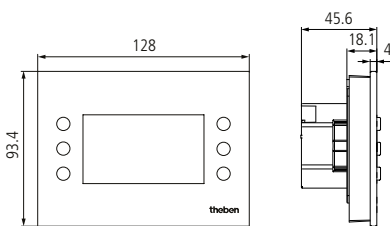
### Product selection

Colour	Type	Article number
Glass front in white	VARIA 826 S WH KNX	8269210

### Technical data

	VARIA 826 S WH KNX
Operating voltage KNX	Bus voltage, $\leq 15$ mA, ( $< 25$ mA without power supply)
Operating voltage	230 V AC
Frequency	50 Hz
Stand-by consumption	0,4 W
Power reserve	1,5 years
Display	Display with 132 x 72 points (8 lines with various functions) e.g. title, switching, dimming, blinds/shutters, % value, HVAC, counter value, temperature, 2-byte value, 8/16 bit counter value etc.
Ambient temperature	0 °C ... +45 °C
Type of protection	IP 20
Protection class	II according to EN 60 730-1

### Scale drawings



# Home and building control

## KNX, HVAC controller



RAMSES 718 P KNX

### Description

- Individual room thermostat
- For controlling heating actuators or motorised actuators
- Can be used as a continuous or two point control (can also be combined).
- Continuous PI control can be configured for 2 stage heating (basic and additional stage, e. g. underfloor heating and radiators) or for heating and cooling (radiators and cooling surfaces)
- Two front panels are included in delivery: a numerical scale and a relative scale
- Rotary control can be limited via parameters
- Manual override button for presence or operation modes: comfort, stand-by, temperature reduction at night, frost protection
- 4 binary inputs for conventional switches/sensors (switching, dimming, blinds), also for external temperature sensor, window contact or presence signal
- Temperature sensor can be connected to give remote temperature reading
- LED (red) for heating mode, (blue) for cooling mode, LEDs for operation mode

### Product selection

Type	Article number
RAMSES 718 P KNX	7189210

### Technical data

RAMSES 718 P KNX			
Operating voltage KNX	Bus voltage, ≤12 mA	Setting range temperature	+10 °C ... +30 °C
Interface extension max.	30 m	Type of protection	IP 20
Ambient temperature	+5 °C ... +40 °C	Protection class	III according to EN 60 730-1
Measuring range temperature	-5 °C ... +45 °C		

### Accessories

#### Flush-mounted temperature sensor

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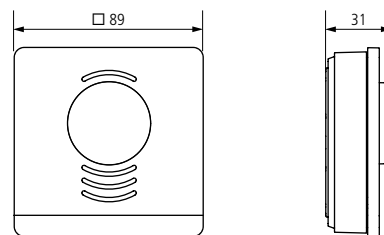
#### Temperature sensor

Details page 341

#### Temperature sensor RAMSES IP 65

Details page 341

### Scale drawings



RAMSES 718 P KNX





### Description

- Individual room thermostat
- For controlling heating actuators or motorised actuators
- Can be used as a continuous or two point control (can also be combined)
- Temperature sensor can be connected to give remote temperature reading
- Objects for night operation (only with „old“ operation mode selection) presence, window/frost
- LED (red) for heating mode, (blue) for cooling mode
- 4 binary inputs for conventional switches/sensors (switch/sensor, dimmer, blinds, valuator, LED control)

### Product selection

Type	Article number
RAMSES 718 S KNX	7189200

### Technical data

RAMSES 718 S KNX			
Operating voltage KNX	Bus voltage, ≤12 mA	Setting range temperature	+10 °C ... +30 °C
Interface extension max.	30 m	Type of protection	IP 20
Ambient temperature	+5 °C ... +40 °C	Protection class	III according to EN 60 730-1
Measuring range temperature	-5 °C ... +45 °C		

### Accessories

#### Flush-mounted temperature sensor

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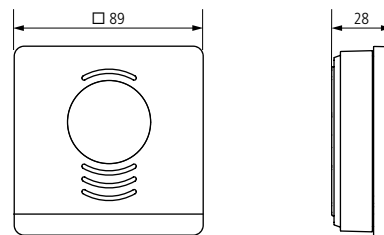
#### Temperature sensor

Details page 341

#### Temperature sensor RAMSES IP 65

Details page 341

### Scale drawings



RAMSES 718 S KNX

# Home and building control

## KNX, HVAC controller



### Description

#### Common functions

- Heating actuator
- Short-circuit-proof and overcharge protected
- Continuous or switching actuating value selectable
- Valve protection function can be deactivated
- With the modes: comfort, standby, night as well as frost/heating protection
- Changeover to summer mode possible
- LED switching status display for each channel
- Manual operation on device (even without bus connection)

#### HMG 6 T KNX

- 6-way heating actuator MIX2
- With 6 temperature controllers (P/PI) for heating and cooling
- Base module MIX2
- Can be upgraded to maximum of 18 channels
- For controlling 6 thermal actuators 24 V–240 V AC in 2 groups with 3 outputs and 450 mA each
- Up to two extension modules MIX or MIX2 can be connected to one base module
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module enables devices to be changed without reprogramming
- Manual set-up and use of actuator is possible without KNX bus module

#### HME 6 T KNX

- 6-way heating actuator MIX2
- With 6 temperature controllers (P/PI) for heating and cooling
- Extension module MIX2
- For upgrading to maximum of 18 channels

#### HM 6 T KNX

- 6-way heating actuator FIX1
- With 6 temperature controllers (P/PI) for heating and cooling
- For controlling 6 thermal actuators 24 V–240 V AC in 2 groups with 3 outputs and 450 mA each

#### HM 12 T KNX

- 12-way heating actuator FIX2
- With 12 temperature controllers (P/PI) for heating and cooling
- For controlling 12 thermal actuators 24 V–240 V AC in 4 groups with 3 outputs and 450 mA each

### Product selection

Function	Type	Article number
MIX2 Base module	HMG 6 T KNX	4930240
MIX2 Extension module	HME 6 T KNX	4930245
FIX1 module	HM 6 T KNX	4940240
FIX2 module	HM 12 T KNX	4940245

Technical data

	HMG 6 T KNX	HME 6 T KNX	HM 12 T KNX	HM 6 T KNX
Operating voltage KNX	Bus voltage, ≤ 4 mA	–	Bus voltage, ≤ 12 mA	Bus voltage, ≤ 4 mA
Operating voltage	110–240 V AC	–	110–240 V AC	
Frequency	50–60 Hz	–	50–60 Hz	
Stand-by consumption	0,3 W	0,2 W	0,5 W	0,3 W
Width	4 modules		8 modules	4 modules
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>			
Switching output	Not potential-free			
Output	Triac, 0,45 A			
Ambient temperature	–5 °C ... +45 °C			
Type of protection	IP 20			
Protection class	II according to EN 60 669			

Accessories

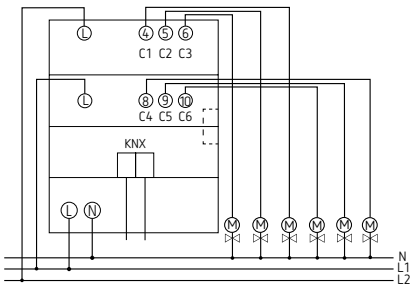


Actuator ALPHA 5 230 V  
↳ Art.No.: 9070441  
Details page 342

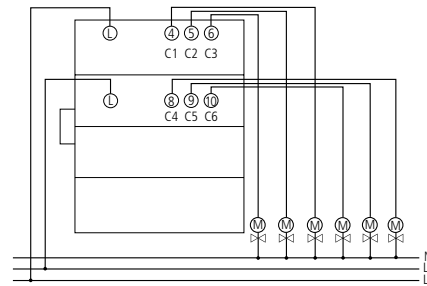


Actuator ALPHA 5 24 V  
↳ Art.No.: 9070442  
Details page 342

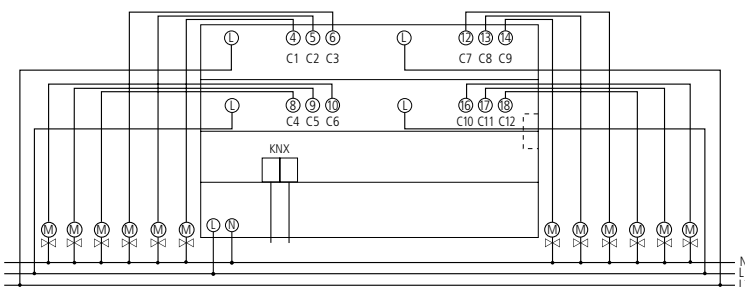
Connection diagrams



HMG 6 T KNX, HM 6 T KNX



HME 6 T KNX



HM 12 TKNX

# Home and building control

## KNX, HVAC controller



HMT 6 S KNX

### Description

- Heating actuator for controlling thermal actuators, switching 24 V DC or permanently 0–10 V DC
- Integration of up to 2 heating circuit pumps
- Flow temperature adjustment to meet requirements: Automatic calculation of the maximum actuating value for energy-efficient adjustment of the actuating value to actual requirements
- No KNX room thermostat needed: Flexible use of each channel as a heating actuator or heating controller
- Can be installed directly on a rail in the heating circuit distributor
- Screwless terminal technology
- Integrated power supply for a maximum of 12 thermal actuators
- Silent semiconductor switch (triac)
- For integrating boiler control
- Continuous or switching actuating value selectable

HMT 6 KNX

- 6-way

HMT 12 KNX

- 12-way

### Product selection

Type	Article number
HMT 6 S KNX	4900373
HMT 12 S KNX	4900373

### Technical data

	HMT 6 S KNX	HMT 12 S KNX
Operating voltage KNX	Bus voltage, ≤10 mA	
Operating voltage	230–240 V AC	
Stand-by consumption	< 1 W	
Frequency	50–60 Hz	
Number of channels	6	12
Switching capacity	Valve output: 24 V SELV; 0.4 A peak; 0.12 A permanent or 0-10 V at at least 1250 ohm 24 V output terminal: max. 1.4 A	
Switch output	5 A, 240 V AC floating (pump)	
Ambient temperature	-5 °C ... +50 °C	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	

### Accessories

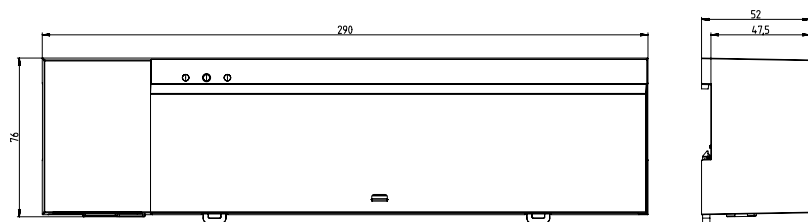


Actuator ALPHA 5 24 V

↳ Art.No.: 9070442

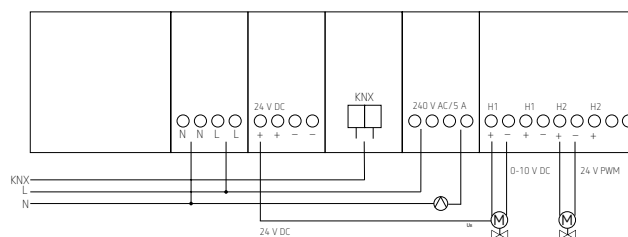
Details page 342

### Scale drawings



HMT 6 S KNX, HMT 12 S KNX

### Connection diagrams



HMT 6 S KNX



## Description

### Common functions

- Motorised actuator for heater valve or for controlling the heating valves
- Display of valve stroke
- Automatic valve stroke recognition
- 2 inputs for window contact, presence detector, remote sensor (remote sensor only for CHEOPS control and only 9070191)
- Simple installation by clicking onto valve adapter
- Can be used in heating circuit distributor

- Integrated bus coupling unit
- With summer mode and valve protection
- 2 different valve adapters included (VA 10, VA 78)

### CHEOPS control KNX

- Independent room thermostat and integrated temperature sensor
- Manual operation possible via 2 keys on the device
- Display via LEDs (red/blue for hotter/colder)
- Configurable as: Heating control (continuous control), two stage heating, heating and cooling

### CHEOPS drive KNX

- Without integrated control
- Display via LEDs (red)

## Product selection

Type	Article number
CHEOPS control KNX	7329201
CHEOPS drive KNX	7319200

## Technical data

	CHEOPS control KNX	CHEOPS drive KNX
Operating voltage KNX	Bus voltage, ≤ 10 mA	
Max. valve stroke	7,5 mm	
Controlling torque details	120 N	
Ambient temperature	0 °C... +50 °C	
Dimensions	50 mm, 82 mm, 65 mm	
Protection class	III according to EN 60730-2-14	
Type of protection	IP 20	IP 21

## Accessories

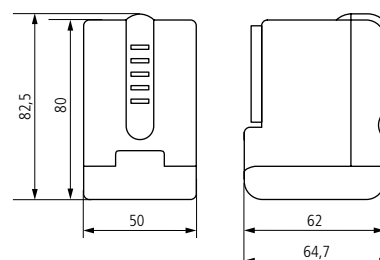
### External temperature sensor 1

Details page 341

### Valve adapter VA 80

Details page 342

## Scale drawings



# Home and building control

## KNX, HVAC controller



### Description

- CO<sub>2</sub> airquality sensor with integrated individual room thermostat
- Measures CO<sub>2</sub> level, relative humidity, temperature and barometric air pressure
- Three independent, configurable thresholds for the CO<sub>2</sub> level and relative humidity
- CO<sub>2</sub> setting range of 300-5000 ppm
- Actions can be carried out if thresholds are exceeded or not reached (send, priority, switching, value)
- For controlling heating actuators or motorised actuators
- Two front panels are included in delivery: a numerical and a relative scale
- Manual override button for presence or operation modes: comfort, stand-by, temperature reduction at night, frost protection
- 4 binary inputs for conventional switches/sensors (switching, dimming, blinds), also for external temperature sensor, window contact or presence signal
- Display of the current operating mode and heating/cooling mode through multi-colored LED

### Product selection

Type	Article number
AMUN 716 S KNX	7169230

### Technical data

AMUN 716 S KNX			
Operating voltage KNX	Bus voltage, ≤15 mA	Contact voltage	5 V, Internal provided
Measuring range CO <sub>2</sub>	300–5000 ppm	Contact current	0,5 mA
Measuring range temperature	-5 °C ... +45 °C	Number of inputs	4
Measuring range humidity	1–100 % rH	Ambient temperature	+5 °C ... +40 °C
Measuring range air pressure	30000–110000 Pa	Type of protection	IP 20
Interface extension max.	30 m	Protection class	III according to EN 60 730-1

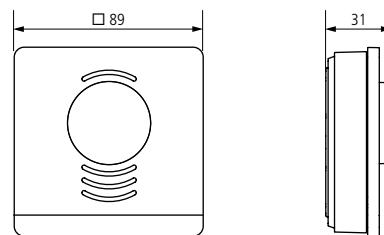
### Accessories

**Flush-mounted temperature sensor**  
Details page 342

**Temperature sensor**  
Details page 341

**Temperature sensor RAMSES IP 65**  
Details page 341

### Scale drawings



AMUN 716 KNX



### Description

- Individual room thermostat fan coil
- For control of fan coil
- Continuous PI controller for heating and cooling
- Two rotary controls are included in delivery: an absolute scale (mounted) and 1 relative scale (enclosed)
- Rotary control can be limited mechanically or via parameters.
- Manual button for OFF, Auto, fan stages 1, 2, 3 operation modes
- 3 binary inputs for conventional switches/sensors (switching, dimming, blinds), also for external temperature sensor, window contact or presence signal
- LED (red) for heating mode, (blue) for cooling mode
- With integrated bus coupling unit

### Product selection

Type	Article number
RAMSES 713 FC KNX	7139202

### Technical data

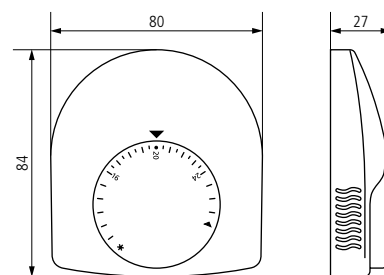
RAMSES 713 FC KNX			
Operating voltage KNX	Bus voltage, ≤10 mA	Setting range temperature	+10 °C ... +28 °C
Ambient temperature	+0 °C ... +50 °C	Type of protection	IP 20
Measuring range temperature	+0 °C ... +40 °C	Protection class	II according to EN 60 730-1

### Accessories

#### External temperature sensor 1

Details page 341

### Scale drawings



RAMSES 713 FC KNX

# Home and building control

## KNX, HVAC controller



FCA 1 KNX

FCA 2 KNX

### Description

#### Common functions

- Fan coil actuator
- For controlling fan coils
- For 2 and 4 pipe systems
- For up to three fan stages
- Additional relay for electrical heater or cooler bank
- Potential-free input for window contacts or temperature sensor
- Potential-free, condensation monitoring
- Display of operation status via 9 LEDs
- Manual operation on device (fan satges, switching between heating and cooling)
- Adjustment of setpoint value for cooling in relation to external temperature
- Potential-free switching contact for either cooler or heater bank
- With emergency program

#### FCA 1 KNX

- For 2-way and 3-way valves

#### FCA 2 KNX

- Optionally with 0-10 V fan control
- For proportional 0-10 V valves

### Product selection

Type	Article number
FCA 1 KNX	4920200
FCA 2 KNX	4920210

### Technical data

	FCA 1 KNX	FCA 2 KNX
Operating voltage KNX	Bus voltage, ≤10 mA	Bus voltage, ≤8 mA
Operating voltage	220–230 V AC	100–240 V AC
Frequency	50–60 Hz	
Stand-by consumption	1,9 W	0,5 W
Width	4 modules	
Max. cable cross section	Solid wire: 0.5 mm <sup>2</sup> to 6 mm <sup>2</sup>   Stranded wire with end sleeve: 0.5 mm <sup>2</sup> to 4 mm <sup>2</sup>	
Type of contact	Triac	NO contact
Switching capacity additional relay	16 A	
Switching capacity blower relay	8 A	6 A
Ambient temperature	-5 °C ... +45 °C	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	



Accessories



Temperature sensor RAMSES  
IP65  
↳ Art.No.: 9070459  
Details page 341

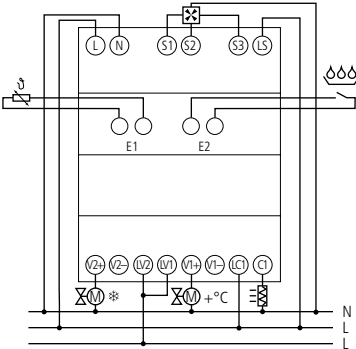


Temperature sensor  
↳ Art.No.: 9070321  
Details page 341

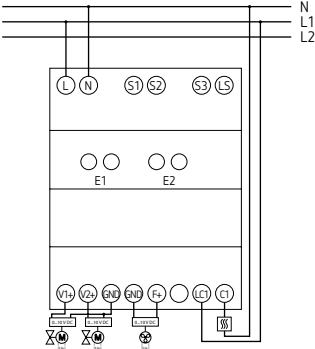


Flush-mounted temperature  
sensor  
↳ Art.No.: 9070496  
Details page 342

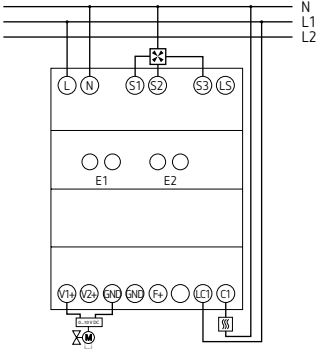
Connection diagrams



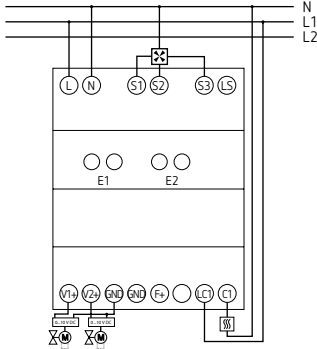
FCA 1 KNX



FCA 2 KNX



FCA 2 KNX



FCA 2 KNX

# Home and building control

## KNX, Presence detectors



### Description

- Presence detector (PIR)
- Automatic control of lighting depending on presence and brightness
- Square detection area allows accurate and simple planning
- IP 54 for versatile use
- 2 channels light for controlling one or two lighting groups
- Mixed light measurement, suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Switching or constant light control with stand-by function
- Adjustable sensitivity
- Choice of fully or semi automatic operation: In „Semi-automatic“ mode the light must be switched on manually and switches off automatically
- Short presence; Reduced switch-off delay time in case of a short presence
- Self-learning time delay
- Channel presence with switch-off delay and switch-on delay time and send values
- Function „monitoring“ with reduced sensitivity only to detect walking persons
- Channel brightness (Lux)
- Set brightness level via bus object
- Scene functionality (8-bit scenes)
- Selected parameters can be configured remotely using the theSendä B remote control. Parameter settings are made via ETS
- Optional user remote control
- Ready for use by ex-factory set items
- Test operation to check detection area and installation
- Parallel switching of several presence detectors (master-slave or master-master) possible
- Ceiling mounting in flush-mounted box
- Possibility of surface mounting by using a surface frame

### Product selection

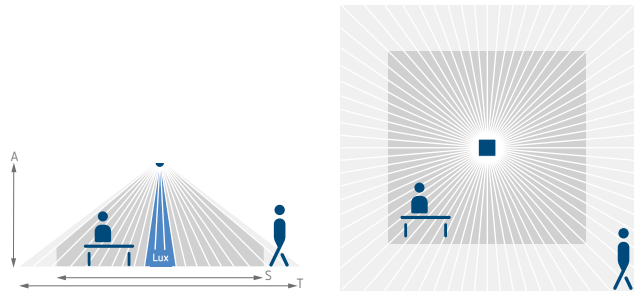
Installation type	Colour	Type	Article number
Ceiling installation	Pure white (similar to RAL 9010)	PresenceLight 360B-KNX WH	2009000

### Technical data

	PresenceLight 360B-KNX
Operating voltage KNX	Bus voltage, approx. 13 mA (17 mA LED on)
Installation height	2–3,5 m
Setting range brightness	approx. 5–2000 lx/measuring off
Light switch-off delay	30 s–60 min
Stand-by time	30 s–60 min, on, inactive
Presence switch-off delay	10 s–120 min
Presence switch-on delay	10 s–30 min/inactive
Ambient temperature	–10 °C ... +50 °C
Type of protection	IP 54

### Detection range (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	20 m <sup>2</sup>   4,5 m x 4,5 m ± 0,5 m	9 m <sup>2</sup>   3 m x 3 m
2,5 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	16 m <sup>2</sup>   4 m x 4 m
3 m	49 m <sup>2</sup>   7 m x 7 m ± 1 m	20 m <sup>2</sup>   4,5 m x 4,5 m
3,5 m	64 m <sup>2</sup>   8 m x 8 m ± 1 m	-



### Accessories



**Surface frame PresenceLight**

↳ Art.No.: 9070513  
Details page 334



**theSenda B**

↳ Art.No.: 9070985  
Details page 339



**QuickSafe**

↳ Art.No.: 9070531  
Details page 336



**theSenda P**

↳ Art.No.: 9070910  
Details page 339



**theSenda S**

↳ Art.No.: 9070911  
Details page 339

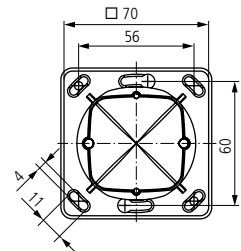
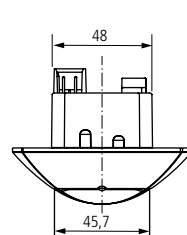
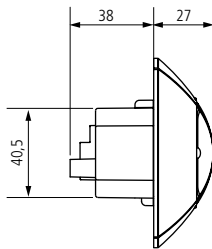
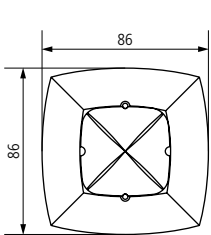
**Cover frame PresenceLight 360 SR**  
Details page 334

**Cover frame PresenceLight 360 BK**  
Details page 334

**Surface frame PresenceLight BK**  
Details page 334

**Surface frame PresenceLight SR**  
Details page 334

### Scale drawings





### Description

- KNX Passive infrared presence detector for ceiling mounting
- Square detection area for corridors and storage areas
- Detection area with 2 individually connectable and disconnectable detection zones, each 15 x 5 m (total 30 x 5 m)
- 2 channel light and 2 channel presence
- 2 channel light C1, C2 with 2 light measurements
- 2 presence channels can be parametrized individually
- Adaptable 2 channel light measurement
- Function aura effect, switches on the lighting group when there is a person in its detection area and dims the adjacent lighting groups
- Function chaser light, recognises the direction of movement of the people in the room and „predictively“ switches on the adjacent lighting group
- Function walking direction recognition
- Mixed light measurement suitable for LEDs, fluorescent lamps (FL/PL/ESL) and halogen/incandescent lamps
- Can be used as fully or semi-automatic, switchable
- Switch or constant light control mode with stand-by function
- Dimmable lighting in switch mode with stand-by function
- Brightness switching value or set point value can be set in lux using parameters, on the device itself or via remote control
- Teaching in of the brightness switching value or the set point value
- Room correction factor setting for brightness measurement calibration
- Light time delay can be set using parameters, on the device itself or via remote control
- Switch on delay and time delay for presence can be set
- Detection sensitivity can be set
- Reduced time delay in the event of a shorter stay in the room (short presence)
- Scenario functions
- Test mode for checking function and detection range
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Manual override using telegram or remote control
- Parallel switching of several detectors in Master/Slave or Master/Master possible
- Ceiling installation in flush-mounted socket
- Ceiling installation also possible with surface-mounted frame
- User remote control and management-remote control (optional)

### Product selection

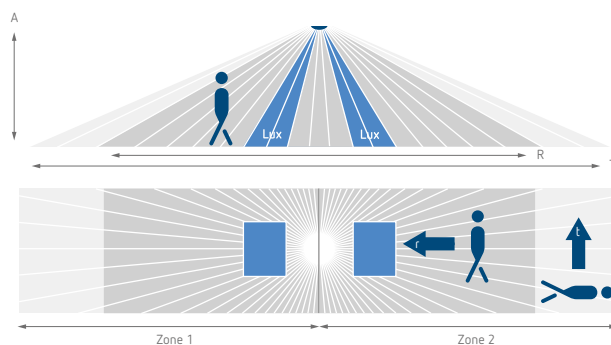
Installation type	Colour	Type	Article number
Ceiling installation	White	thePassa P360 KNX UP WH	2019300

### Technical data

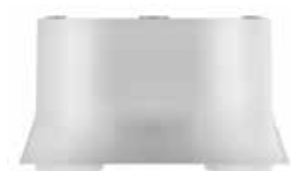
	thePassa P360 KNX UP WH
Operating voltage KNX	Bus voltage, ca. 9 mA
Installation height	2 – 15 m
Minimum height	> 1,7 m
Setting range brightness	10–3000 lx
Light switch-off delay	30 s–60 min
Presence switch-off delay	10 s–120 min
Switch-on delay presence	10 s–30 min / inactive
Ambient temperature	–15 °C ... +50 °C
Type of protection	IP 54 (when fitted)

### Detection range (Rectangular)

Mounting height (A)	Head on to (r)	Diagonally (t)
2 m	56 m <sup>2</sup>   16 m x 3,5 m	56 m <sup>2</sup>   16 m x 3,5 m
2,5 m	72 m <sup>2</sup>   18 m x 4 m	88 m <sup>2</sup>   22 m x 4 m
3 m	90 m <sup>2</sup>   20 m x 4,5 m	135 m <sup>2</sup>   30 m x 4,5 m
3,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
4 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
4,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
5,5 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m
6 m	100 m <sup>2</sup>   20 m x 5 m	150 m <sup>2</sup>   30 m x 5 m



### Accessories



**Surface frame 110A WH**

↳ Art.No.: 9070912

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**theSenda P**

↳ Art.No.: 9070910

Details page 339



**theSenda S**

↳ Art.No.: 9070911

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#### QuickSafe

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#### theSenda B

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#### Surface frame 110A GR

Details page 334

#### Ceiling installation box 68A

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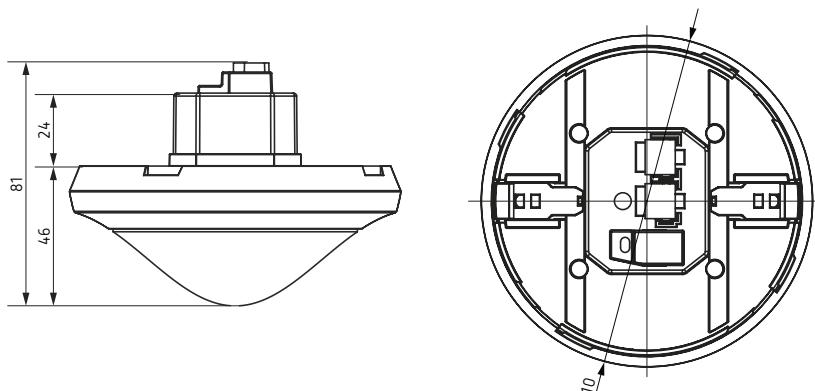
#### Masking clip

Details page 335

#### Cover 110 GR

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### Scale drawings



# Home and building control

## KNX, Presence detectors



### Description

- KNX Passive infrared presence detector for ceiling installation
- Circular detection area 360°, up to Ø 9 m (64 m<sup>2</sup>)
- Automatic presence- and brightness-dependent control for lighting and HVAC
- Mixed light measurement suitable for fluorescent (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- 2 light channels C1, C2
- Switching operation or constant light control with standby function (orientation light)
- Switching mode with dimmable lighting
- Choice of fully or semi-automatic
- Brightness switching value or set point value can be set in lux by using parameters, the object or via remote control
- Teach-in of the brightness switching value or the set point value
- Reduction of time delay when present briefly (short-term presence)
- Manual override by telegram or remote control
- 2 presence channels C4, C5, individually configurable
- Switch-on delay and time delay configurable
- Setting the room correction factor for brightness measurement comparison
- Adjustable sensitivity
- Test mode for checking function and detection area
- Scenes
- Parallel switching of multiple presence detectors (Master/Slave or Master/Master)
- User remote control «theSenda S» (option)
- Management remote control «theSenda B» (option)
- Installation remote control «theSenda P» (option)

### Product selection

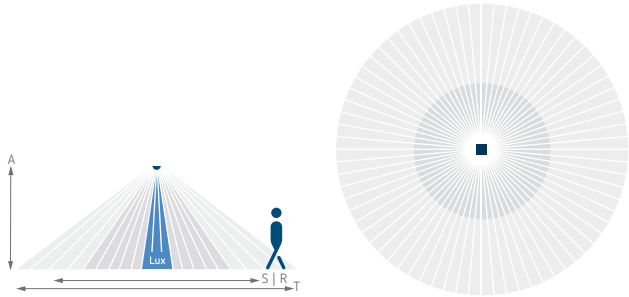
Installation type	Colour	Type	Article number
Ceiling installation	White	theRonda S360 KNX AP WH	2089550
	Grey	theRonda S360 KNX AP GR	2089551
	White	theRonda S360 KNX FLAT DE WH	2089560

### Technical data

	theRonda S360 KNX AP	theRonda S360 KNX FLAT DE
Operating voltage KNX	Bus voltage, 9 mA	
Installation height	2–4 m	
Setting range brightness	approx. 30–3000 lx/measuring off	
Light switch-off delay	30 s–60 min	
Presence switch-off delay	10 s–120 min	
Presence switch-on delay	10 s–30 min/inactive	
Ambient temperature	–15 °C ... +50 °C	
Type of protection	IP 54 (when fitted)	

Detection range (Round)

Mounting height (A)	Sitting (S)	Walking (T)
2 m	5 m <sup>2</sup>   2,5 m	38 m <sup>2</sup>   7 m
2,5 m	7 m <sup>2</sup>   3 m	38 m <sup>2</sup>   7 m
3 m	13 m <sup>2</sup>   4 m	50 m <sup>2</sup>   8 m
3,5 m	-	50 m <sup>2</sup>   8 m
4 m	-	64 m <sup>2</sup>   9 m



Accessories



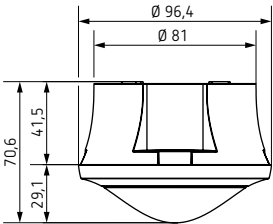
**theSenda B**  
↳ Art.No.: 9070985  
Details page 339



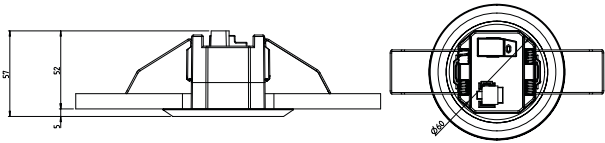
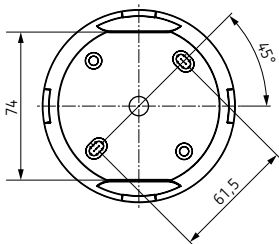
**theSenda P**  
↳ Art.No.: 9070910  
Details page 339

**theSenda S**  
Details page 339  
**Cover 85 FLAT GR**  
Details page 334

Scale drawings



theRonda S360 KNX AP



theRonda S360 KNX FLAT DE

# Home and building control

## KNX, Presence detectors



### Description

- KNX Passive infrared presence detector for ceiling mounting
- Round detection area 360°, up to Ø 24 m (452 m²)
- 2 channels light and 2 channels presence
- 2 channels light C1, C2 with 1 light measurement
- 2 presence channels can be parametrized individually
- Adaptable 1 channel light measurement
- Mixed light measurement suitable for LEDs, fluorescent lamps (FL/PL/ESL) and halogen/incandescent lamps
- Can be used as fully or semi-automatic, switchable
- Switch or constant light control mode with stand-by function
- Dimmable lighting in switch mode with stand-by function
- Brightness switching value or set point value can be set in lux using parameters, on the device itself or via remote control
- Teaching in of the brightness switching value or the set point value
- Room correction factor setting for brightness measurement calibration
- Light time delay can be set using parameters, on the device itself or via remote control
- Switch on delay and time delay for presence can be set
- Detection sensitivity can be set
- Reduced time delay in the event of a shorter stay in the room (short presence)
- Scenario functions
- Test mode for checking function and detection range
- Sensitivity adjustable
- Detection area can be limited using cover clip
- Manual override using telegram or remote control
- Parallel switching of several detectors in Master/Slave or Master/Master possible
- Ceiling installation in flush-mounted socket
- Ceiling installation also possible with surface-mounted frame
- User remote control and management-remote control (optional)

### Product selection

Installation type	Colour	Type	Article number
Ceiling installation	White	theRonda P360 KNX UP WH	2089000

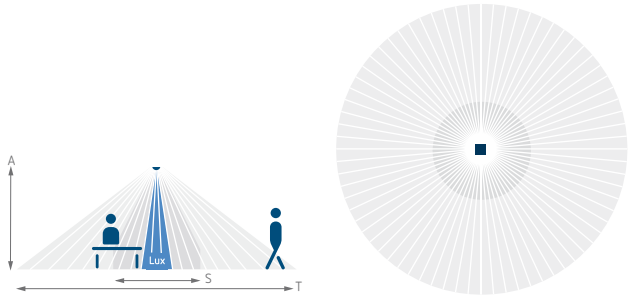
### Technical data

	theRonda P360 KNX UP
Operating voltage KNX	Bus voltage, approx. 8 mA (9 mA LED on)
Installation height	2 – 15 m
Setting range brightness	10 – 3000 lx/measuring off
Light switch-off delay	30 s – 60 min
Stand-by dimming value	1 – 25 % of the lamp output
Stand-by time	30 s – 60 min/inactive/permanently on
Presence switch-off delay	10 s – 120 min
Presence switch-on delay	10 s – 30 min/inactive
Ambient temperature	– 15 °C ... +50 °C
Type of protection	IP 54 (when fitted)



Detection range (Round)

Mounting height (A)	Sitting (S)	Walking diagonally (T)	Walking head on to
2 m	16 m <sup>2</sup>   4,5 m	380 m <sup>2</sup>   22 m	28 m <sup>2</sup>   6 m
2,5 m	24 m <sup>2</sup>   5,5 m	415 m <sup>2</sup>   23 m	38 m <sup>2</sup>   7 m
3 m	28 m <sup>2</sup>   6 m	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
3,5 m	38 m <sup>2</sup>   7 m	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
6 m	-	452 m <sup>2</sup>   24 m	50 m <sup>2</sup>   8 m
10 m	-	491 m <sup>2</sup>   25 m	50 m <sup>2</sup>   8 m



Accessories



**Surface frame 110A WH**  
↳ Art.No.: 9070912  
Details page 334



**theSenda P**  
↳ Art.No.: 9070910  
Details page 339



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339

**QuickSafe**  
Details page 336

**theSenda B**  
Details page 339

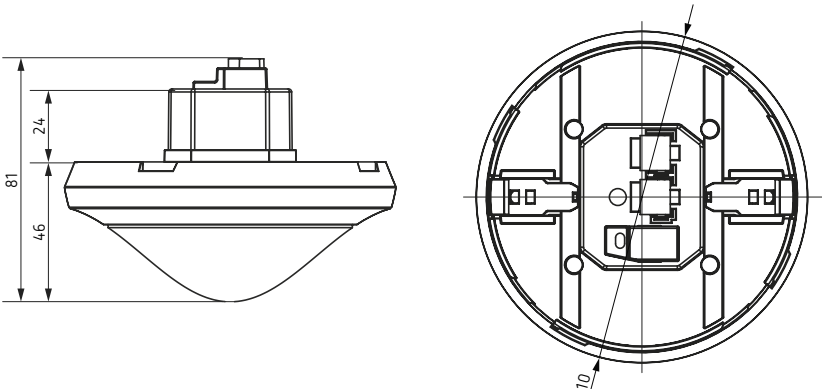
**Surface frame 110A GR**  
Details page 334

**Ceiling installation box 68A**  
Details page 334

**Masking clip**  
Details page 335

**Cover 110 GR**  
Details page 334

Scale drawings



# Home and building control

## KNX, Presence detectors



### Description

#### Common functions

- KNX Passive infrared presence detector for ceiling mounting
- Square detection range of 360° for safe and easy planning
- Mixed light measurement suitable for LEDs, fluorescent lamps (FL/PL/ESL) and halogen/incandescent lamps
- Can be used as fully or semi-automatic, switchable
- Switch or constant light control mode with stand-by function
- Dimmable lighting in switch mode with stand-by function
- Brightness switching value or set point value can be set in lux using parameters, on the device itself or via remote control
- Teaching in of the brightness switching value or the set point value

- Room correction factor setting for brightness measurement calibration
- Light time delay can be set using parameters, on the device itself or via remote control
- Switch on delay and time delay for presence can be set
- Detection sensitivity can be set
- Self-learning time delay
- Reduced time delay in the event of a shorter stay in the room (short presence)
- Scenario functions
- Extremely easy setting of energy saving characteristics with the new „eco plus“ function
- Test mode for checking function and detection range
- Parallel switching of several detectors in Master/Slave or Master/Master possible

- User remote control and management-remote control (optional)
  - Room monitoring
- thePrema P360 KNX UP**
- 3 channels light and 2 channels presence
  - 2 channels light C1, C2 with 2 light measurements and additional lighting channel C3 without brightness factor
  - 2 presence channels can be set individually
  - Adaptable 3 channels light measurement
- thePrema S360 KNX UP**
- 2 channels light and 2 channels presence
  - 2 channels light C1, C2 with 1 light measurement
  - 2 presence channels can be set individually with parallel offset
  - Adaptable 1 channel light measurement

\* According to warranty terms and conditions, see [www.theben.de/en/guarantee](http://www.theben.de/en/guarantee)

### Product selection

Channels	Colour	Type	Article number
3x light / 2x presence	White	thePrema P360 KNX UP WH	2079000
	Grey	thePrema P360 KNX UP GR	2079001
2x light / 2x presence	White	thePrema S360 KNX UP WH	2079500
	Grey	thePrema S360 KNX UP GR	2079501

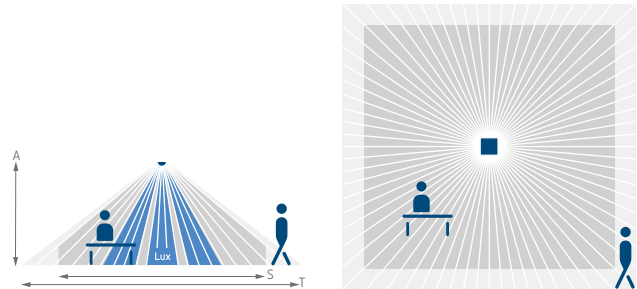
### Technical data

	thePrema P360 KNX UP	thePrema S360 KNX UP
Operating voltage KNX	Bus voltage, approx. 9 mA (13 mA LED on)	Bus voltage, approx. 8 mA (12 mA LED on)
Installation height	2–10 m	2–3,5 m
Setting range brightness	approx. 5–3000 lx/measuring off	
Light switch-off delay	30 s–60 min	
Stand-by dimming value	1–25 % of the lamp output	
Stand-by time	30 s–60 min/inactive/permanently on	

	thePrema P360 KNX UP	thePrema S360 KNX UP
Presence switch-off delay	10 s – 120 min	
Presence switch-on delay	10 s – 30 min / inactive	
Ambient temperature	0 °C ... +50 °C	
Type of protection	IP 40 (when fitted)	

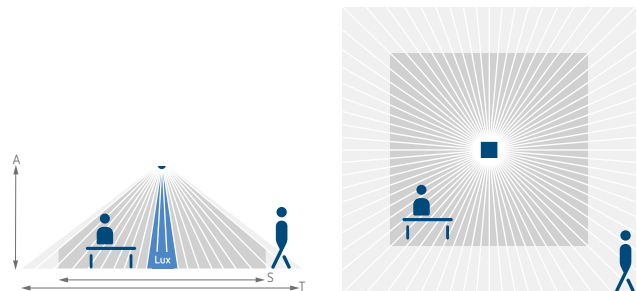
### Detection range thePrema P360 KNX (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	20 m <sup>2</sup>   4,5 m x 4,5 m
2,5 m	64 m <sup>2</sup>   8 m x 8 m ± 0,5 m	36 m <sup>2</sup>   6 m x 6 m
3 m	81 m <sup>2</sup>   9 m x 9 m ± 1 m	49 m <sup>2</sup>   7 m x 7 m
3,5 m	100 m <sup>2</sup>   10 m x 10 m ± 1 m	64 m <sup>2</sup>   8 m x 8 m
6 m	144 m <sup>2</sup>   12 m x 12 m ± 1,5 m	–
10 m	400 m <sup>2</sup>   20 m x 20 m ± 2 m	–



### Detection range thePrema S360 KNX (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	20 m <sup>2</sup>   4 m x 4 m ± 0,5 m	9 m <sup>2</sup>   3 m x 3 m
2,5 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	16 m <sup>2</sup>   4 m x 4 m
3 m	49 m <sup>2</sup>   7 m x 8 m ± 1 m	25 m <sup>2</sup>   5 m x 5 m
3,5 m	64 m <sup>2</sup>   8 m x 8 m ± 1 m	–



### Accessories



Surface frame 110B WH

↳ Art.No.: 9070918  
Details page 334



theSenda P

↳ Art.No.: 9070910  
Details page 339



theSenda S

↳ Art.No.: 9070911  
Details page 339

#### QuickSafe

Details page 336

#### theSenda B

Details page 339

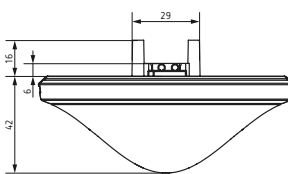
#### Ceiling installation box 68A

Details page 334

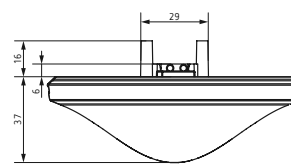
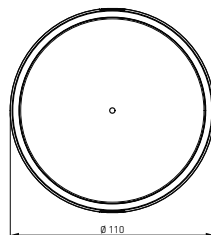
#### Surface frame 110B GR

Details page 334

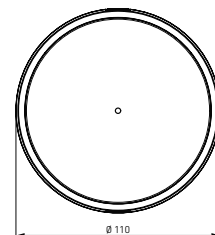
### Scale drawings



thePrema P360 KNX



thePrema S360 KNX





### Description

#### PlanoSpot 360 KNX DE WH

- Passive infrared presence detector for ceiling installation
- Flat design, cover frame in white included in delivery
- Square detection area 360° (up to 64 m<sup>2</sup>) for reliable and easy planning
- Automatic presence- and brightness-dependent control for lighting and HVAC
- Two differently sized detection zones for greater flexibility. Adjustable via parameters or remote control.
- Manual alignment of the detection area (swivel mechanism)
- Mixed light measurement suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- 3 directed light measurements
- 2 light channels C1, C2 with 2 light measurements and additional lighting channel C3 without brightness factor
- Switched or constant light control with 2 independent control systems and standby function (orientation light)
- Switching mode with dimmable lighting
- Fully or semi-automatic
- Brightness switching value or set point value can be set in lux by using parameters, the object or via remote control
- Teach-in of the brightness switching value or the set point value
- Light time delay configurable
- Self-learning time delay can be set using parameters, object or via remote control
- Reduction of time delay when present briefly (short-term presence)
- Manual override by telegram or remote control
- 2 presence channels C4, C5, individually configurable
- Switch-on delay and time delay configurable
- Room monitoring with selective movement detection
- Setting the room correction factor for brightness measurement comparison
- Configurable sensitivity
- Extremely simple setting of the energy-saving ratio with the new «eco plus» function
- Test mode for checking function and detection area
- Scenarios
- Parallel switching of multiple presence detectors (Master/Slave or Master/Master)
- Installation in false ceilings with springs
- Surface mounting on ceilings possible with surface frame (optional)
- User remote control «theSenda S» (optional)
- Management remote control «theSenda B» (optional)
- Installation remote control «theSenda P» (optional)

### Product selection

Swivel mechanism	Colour	Type	Article number
✓	Pure white (similar to RAL 9010)	PlanoSpot 360 KNX DE WH	2039100

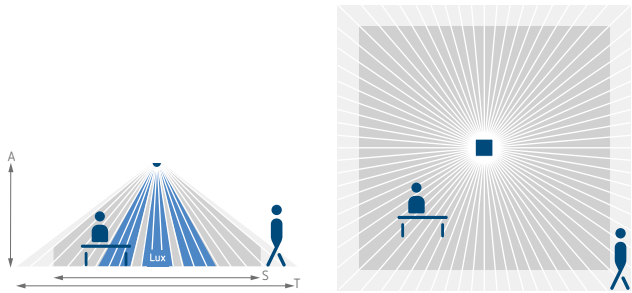
### Technical data

	PlanoSpot 360 KNX DE
Operating voltage KNX	Bus voltage, approx. 8 mA (9 mA LED on)
Installation height	2–3,5 m
Setting range brightness	approx. 10–3000 lx/measuring off
Light switch-off delay	30 s–60 min
Stand-by dimming value	1–25 % of the lamp output
Stand-by time	30 s–60 min/on/inactive
Presence switch-off delay	10 s–120 min
Presence switch-on delay	10 s–30 min/inactive
Ambient temperature	0 °C ... +50 °C
Type of protection	IP 40 (when fitted)

Detection range (Square)

Detection zone standard		
Mounting height (A)	Sitting (S)	Walking (T)
2 m	9 m <sup>2</sup>   3 m x 3 m	20 m <sup>2</sup>   4,5 m x 4,5 m ± 0,5 m
2,5 m	16 m <sup>2</sup>   4 m x 4 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m
3 m	20 m <sup>2</sup>   4,5 m x 4,5 m	49 m <sup>2</sup>   7 m x 7 m ± 1 m
3,5 m	-	64 m <sup>2</sup>   8 m x 8 m ± 1 m

Detection zone reduced		
Mounting height (A)	Sitting (S)	Walking (T)
2 m	4 m <sup>2</sup>   2 m x 2 m	4,4 m <sup>2</sup>   2,1 m x 2,1 m ± 0,5 m
2,5 m	6,3 m <sup>2</sup>   2,5 m x 2,5 m	9 m <sup>2</sup>   3 m x 3 m ± 0,5 m
3 m	9 m <sup>2</sup>   3 m x 3 m	14,4 m <sup>2</sup>   3,8 m x 3,8 m ± 1 m
3,5 m	-	22,1 m <sup>2</sup>   4,7 m x 4,7 m ± 1 m



Accessories



theSenda B  
↳ Art.No.: 9070985  
Details page 339



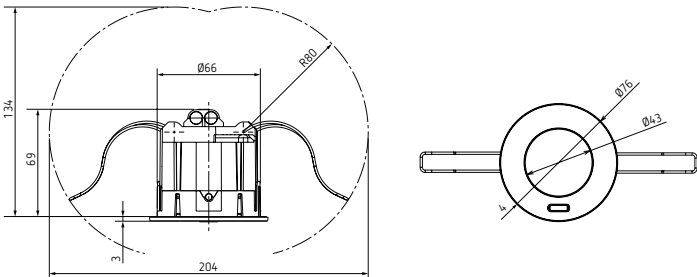
theSenda P  
↳ Art.No.: 9070910  
Details page 339



theSenda S  
↳ Art.No.: 9070911  
Details page 339

- Surface frame 75B WH  
Details page 335
- PlanoCover 76 BK  
Details page 335
- PlanoCover 76 SR  
Details page 335

Scale drawings



# Home and building control

## KNX, Presence detectors



### Description

- Presence detector (PIR)
- Automatic control of lighting depending on presence and brightness
- Flat design, cover frame in white included in delivery
- Square detection area allows accurate and simple planning
- 2 channels light for controlling one or two lighting groups
- Mixed light measurement, suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Switching or constant light control with stand-by function
- Adjustable sensitivity
- Choice of fully or semi automatic operation: In „Semi-automatic“ mode the light must be switched on manually and switches off automatically
- The self-learning switch-off delay time adjusts to occupants' behavior
- Short presence; Reduced switch-off delay time in case of a short presence
- Channel presence with switch-off delay and switch-on delay time and send values
- Function „monitoring“ with reduced sensitivity only to detect walking persons
- Selected parameters can be configured remotely using the theSenda B remote control. Parameter settings are made via ETS
- Optional user remote control
- Test operation to check detection area, installation and brightness settings
- Parallel switching of several presence detectors (master-slave or master-master) possible
- Individual covers available on request

#### PlanoCentro EWH-A KNX

- For ceiling installation (false ceilings)
- With installation for false ceilings and cover

#### PlanoCentro UWH-A KNX

- For flush-mounting (concrete ceiling)
- With metal installation frame for screwed fixing in wooden ceilings or in flush-mounted sockets, incl. cover

### Product selection

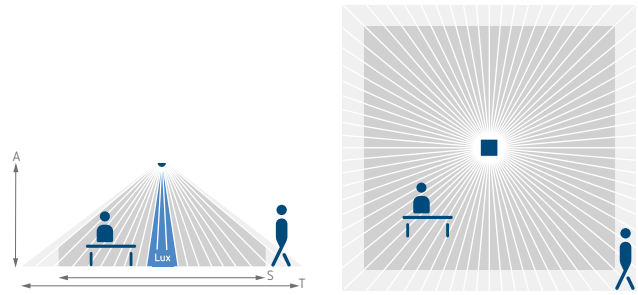
Installation type	Colour	Type	Article number
Ceiling mounting with mounting frame	Pure white (similar to RAL 9010)	PlanoCentro EWH-A KNX	2059102
Ceiling installation (flush-mounting concrete)	Pure white (similar to RAL 9010)	PlanoCentro UWH-A KNX	2059202

### Technical data

	PlanoCentro KNX
Operating voltage KNX	Bus voltage, approx. 14 mA (18 mA LED on)
Installation height	2–3,5 m
Setting range brightness	approx. 5–2000 lx/measuring off
Light switch-off delay	30 s–60 min
Stand-by dimming value	5–10 %
Stand-by time	30 s–60 min/on
Presence switch-off delay	10 s–120 min
Presence switch-on delay	10 s–30 min/inactive
Ambient temperature	0 °C ... +50 °C
Type of protection	IP 40 (when fitted)

## Detection range (Square)

Mounting height (A)	Walking (T)	Sitting (S)
2 m	36 m <sup>2</sup>   6 m x 6 m ± 0,5 m	20 m <sup>2</sup>   4,5 m x 4,5 m
2,5 m	64 m <sup>2</sup>   8 m x 8 m ± 0,5 m	36 m <sup>2</sup>   6 m x 6 m
3 m	81 m <sup>2</sup>   9 m x 9 m ± 1 m	49 m <sup>2</sup>   7 m x 7 m
3,5 m	100 m <sup>2</sup>   10 m x 10 m ± 1 m	64 m <sup>2</sup>   8 m x 8 m



## Accessories



**PlanoSets**  
for PlanoCentro-E  
↳ Art.No.: 9070736  
Details page 335



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339



**theSenda B**  
↳ Art.No.: 9070985  
Details page 339

**theSenda P**  
Details page 339

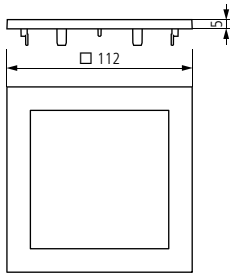
**PlanoBox**  
for PlanoCentro U  
Details page 335

**QuickSafe**  
Details page 336

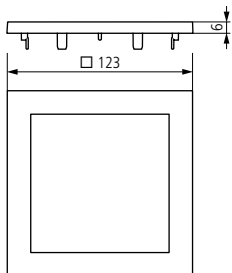
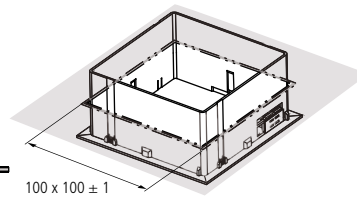
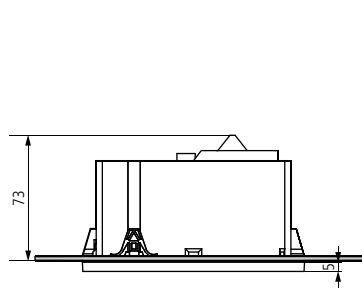
**PlanoCover 112 x 112**  
for PlanoCentro E  
Details page 335

**PlanoCover 123 x 123**  
for PlanoCentro U  
Details page 335

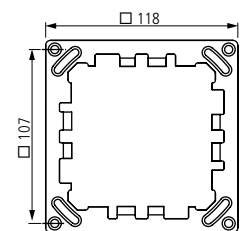
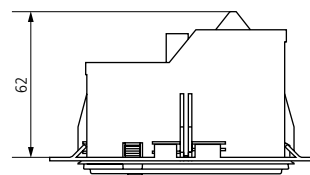
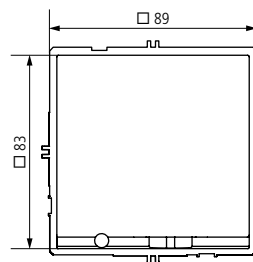
## Scale drawings



PlanoCentro E KNX



PlanoCentro U KNX



# Home and building control

## KNX, Presence detectors



PresenceLight 180B-KNX

### Description

- Presence detector (PIR)
- Automatic control of lighting depending on presence and brightness
- IP 54 for versatile use
- 2 channels light for controlling one or two lighting groups
- Mixed light measurement, suitable for fluorescent lamps (FL/PL/ESL), halogen/ incandescent lamps and LEDs
- Switching or constant light control with stand-by function
- Adjustable sensitivity
- Choice of fully or semi automatic operation: In „Semi-automatic“ mode the light must be switched on manually and switches off automatically
- Short presence; Reduced switch-off delay time in case of a short presence
- Channel presence with switch-off delay and switch-on delay time and send values
- Function „monitoring“ with reduced sensitivity only to detect walking persons
- Channel brightness (Lux)
- Set brightness level via bus object
- Scene functionality (8-bit scenes)
- Selected parameters can be configured remotely using the theSenda B remote control. Parameter settings are made via ETS
- Optional user remote control
- Ready for use by ex-factory set items
- Test operation to check detection area and installation
- Parallel switching of several presence detectors (master-slave or master-master) possible
- Wall mounting in flush-mounted box
- Possibility of surface mounting by using a surface frame

### Product selection

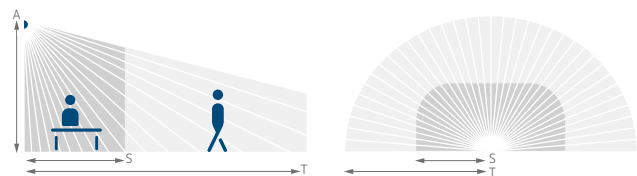
Installation type	Colour	Type	Article number
Wall installation	Pure white (similar to RAL 9010)	PresenceLight 180B-KNX WH	2009050

### Technical data

	PresenceLight 180B-KNX
Operating voltage KNX	Bus voltage, approx. 13 mA (17 mA LED on)
Installation height	1,7–2,2 m
Setting range brightness	approx. 5–2000 lx/measuring off
Light switch-off delay	30 s–60 min
Stand-by dimming value	5–10 %
Stand-by time	30 s–60 min/on/inactive
Presence switch-off delay	10 s–120 min
Presence switch-on delay	10 s–30 min/inactive
Ambient temperature	–10 °C ... +50 °C
Type of protection	IP 54

### Detection range (Semicircular)

Mounting height (A)	Walking (T)	Sitting (S)
2,2 m	100 m <sup>2</sup>   8 m	25 m <sup>2</sup>   7 m x 3,5 m





Accessories



**Surface frame PresenceLight**  
↳ Art.No.: 9070513  
Details page 334



**theSenda B**  
↳ Art.No.: 9070985  
Details page 339



**QuickSafe**  
↳ Art.No.: 9070531  
Details page 336



**theSenda P**  
↳ Art.No.: 9070910  
Details page 339



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339

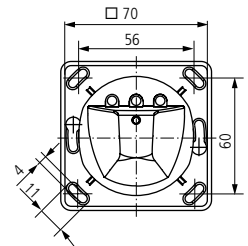
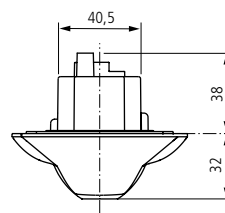
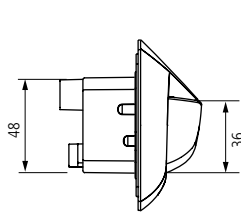
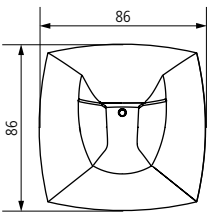
**Cover frame PresenceLight 180 SR**  
Details page 334

**Cover frame PresenceLight 180 BK**  
Details page 334

**Surface frame PresenceLight BK**  
Details page 334

**Surface frame PresenceLight SR**  
Details page 334

Scale drawings



# Home and building control

## KNX, Motion detectors



### Description

- Motion detector (PIR)
- Automatic lighting control based on presence and brightness
- For integration into KNX building systems
- For outdoor use
- For installation on walls and ceilings
- Integrated temperature sensor
- For larger, commercial outdoor applications such as offices, public buildings, hotels, schools, car parks and warehouses
- Easy to program with KNX ETS software
- Adjustable brightness switching value and switch-off delay
- Sensitivity can be reduced
- Area limit via lens attachment
- Mixed light measurement
- Teach-in of current brightness value possible
- Pulse function
- Test function for checking detection area
- Installation on flush-mounted socket possible (60 mm)
- Single-handed plug-in installation
- Instant start-up possible via factory preset
- Controls are place protected
- Spacer and corner angle included

### Product selection

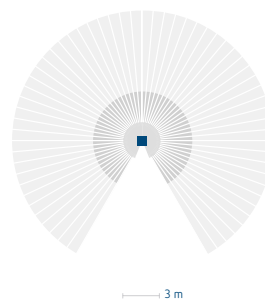
Installation type	Colour	Type	Article number
Wall and ceiling installation	White	theLuxa P300 KNX WH	1019610
	Black	theLuxa P300 KNX BK	1019611

### Technical data

	theLuxa P300 KNX
Operating voltage KNX	Bus voltage, < 10 mA
Setting range brightness	1 – 3000 lx
Light switch-off delay	1 s – 60 min
Ambient temperature	-25 °C ... +45 °C
Protection class	III
Type of protection	IP 55

### Detection range

Mounting height	Head on to	Diagonally
2 m	4 m	12 m
2,5 m	5 m	16 m
3 m	5 m	16 m
3,5 m	5 m	16 m
4 m	4 m	12 m



- Walking diagonally to the detector
  - Walking head on to the detector
  - Creep under protection
- Mounting height: 2,5 m

Accessories



**Corner angle theLuxa P WH**  
↳ Art.No.: 9070904  
Details page 336



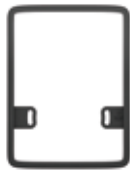
**Corner angle theLuxa P BK**  
↳ Art.No.: 9070905  
Details page 336



**theSenda P**  
↳ Art.No.: 9070910  
Details page 339



**Spacer theLuxa P WH**  
↳ Art.No.: 9070908  
Details page 336

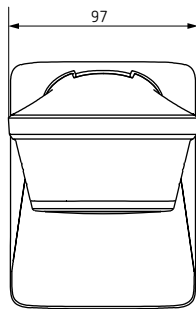
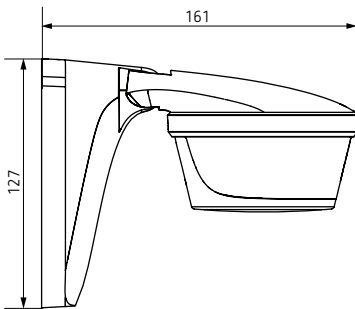


**Spacer theLuxa P BK**  
↳ Art.No.: 9070909  
Details page 336



**theSenda S**  
↳ Art.No.: 9070911  
Details page 339

Scale drawings



# Home and building control

## KNX, Weather station, brightness sensor



### Description

#### Meteodata 140 S KNX

- Self-contained outdoor weather station
- For measuring wind, rain, brightness and temperature
- For fully automatic blinds and sun protection control with automatic adjustment of blinds according to position of the sun
- Rain sensor with integrated heating
- The weather station can also be operated without mains supply. The heating of the rain sensor will not function then
- Measurement and evaluation directly on device
- Sun protection for up to eight facades via 3 integrated brightness sensors
- 8 sun protection channels
- 4 additional threshold channels for connection of external KNX sensors
- 6 logic channels
- Display of weather data e.g. with VARIA 826 KNX multi-function display

#### Meteodata 140 S GPS KNX

- As Meteodata 140 S KNX, but
- Integrated GPS receiver (provides additionally time information)
  - Automatic calculation of elevation and azimuth
  - The weather station can also be operated without mains supply. The GPS module will not function then

#### Meteodata 140 basic KNX

- As Meteodata 140 S KNX, but:
- Without rain sensor
  - No automatic adjustment of blinds according to position of the sun
  - 3 sun protection channels

### Product selection

Detection	GPS module integrated	Operating voltage	Type	Article number
Wind, Rain, Brightness, Temperature	-	110–230 V AC	Meteodata 140 S KNX	1409207
Wind, Brightness, Temperature	-	-	Meteodata 140 basic KNX	1409205
Wind, Rain, Brightness, Temperature, Time	✓	110–230 V AC	Meteodata 140 S GPS KNX	1409208
Wind, Rain, Brightness, Temperature	-	15–34 V DC	Meteodata 140 S 24V KNX	1409201
Wind, Rain, Brightness, Temperature, Time	✓	15–34 V DC	Meteodata 140 S 24V GPS KNX	1409204

### Technical data

	Meteodata 140 S GPS KNX	Meteodata 140 S KNX	Meteodata 140 S 24V GPS KNX	Meteodata 140 S 24V KNX	Meteodata 140 basic KNX
Operating voltage	110–230 V AC		15–34 V DC		-
Frequency	50–60 Hz		-		
Operating voltage KNX	Bus voltage, ≤ 10 mA				
Stand-by consumption	< 0,5 W				
Measuring range brightness	1–100000 lx				
Measuring range temperature	-30 °C ... +60 °C				
Measuring range wind speed	2–30 m/s				
Ambient temperature	-20 °C ... +55 °C				
Protection class	II		III		II
Type of protection	IP 44				

## Accessories

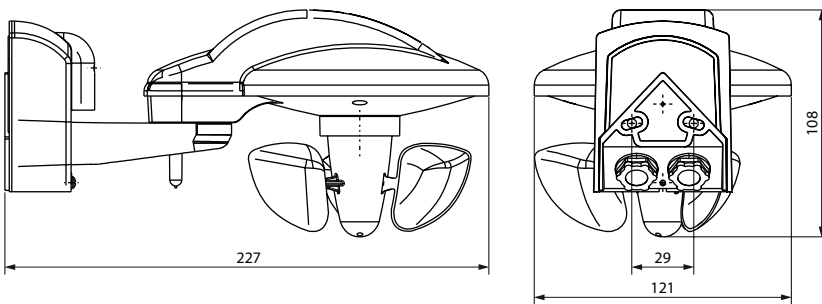


**Mast mounting S**  
↳ Art.No.: 9070928  
Details page 343



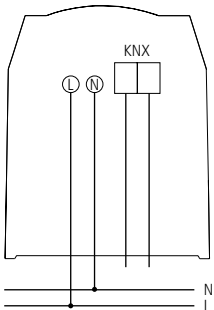
**Power unit 24 V DC**  
for Meteodata 140 KNX  
↳ Art.No.: 9079330  
Details page 343

## Scale drawings



Meteodata 140 KNX

## Connection diagrams



# Home and building control

## KNX, Weather station, brightness sensor



### Description

- Weather forecast receiver
- Receives weather data from the HKW via longwave on hours of sunlight, probability of rain, wind speeds and temperatures
- (This service is not available in all European countries. Find out more at [www.efr.de/en](http://www.efr.de/en))
- Weather forecasts for the next 3 days are shown in 6 hour blocks
- In addition, weather scenarios such as „fine“, „cloudy“, „rainy“, among others, and storm warnings are also received
- Data can be visualised purely for information purposes
- By using the data, heating and shade can be controlled with foresight
- Exact time entry in the KNX system thanks to a time signal sent with the weather data
- Provision and transmission of the weather data by HKW is currently guaranteed until 2021-12-31. Any termination of the transmission will be announced on the website, at least 5 years in advance

### Product selection

Type	Article number
Meteodata 139 KNX	1399200

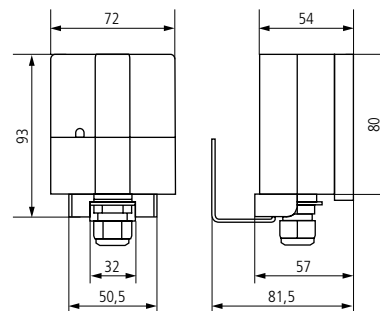
### Technical data

Meteodata 139 KNX			
Operating voltage KNX	Bus voltage, ≤12 mA	Protection class	III
Ambient temperature	-20 °C ... +55 °C	Type of protection	IP 54

### Accessories

**Mast mounting S**  
Details page 343

### Scale drawings



Meteodata 139 KNX



LUNA 134 KNX

## Description

- Light level controller
- External light sensor included in delivery
- For brightness-dependent controlling
- 10 channels
- 4 threshold values channels for connecting external KNX-sensors (e.g. temperature)
- 6 logic channels
- Up to 3 lights sensors can be connected
- Manual operation on device
- 4 keys for setting threshold and switch on/off delay
- DuoFix spring terminals
- Display back light (can be turned off)
- Thresholds can be shown or changed on display
- PIN coding

## Product selection

Type	Article number
LUNA 134 KNX	1349200

## Technical data

LUNA 134 KNX			
Operating voltage	110–240 V AC	Width	3 modules
Frequency	50–60 Hz	Ambient temperature	-5 °C ... +45 °C
Operating voltage KNX	Bus voltage, ≤10 mA	Ambient temperature sensor	-40 °C ... +70 °C
Stand-by consumption	0,8 W	Protection class	II
Measuring range brightness	1–100000 lx	Type of protection	IP 20
On/off switching delay	0–20 min		

## Accessories



### Digital surface-mounted light sensor

↳ Art.No.: 9070415

Details page 340



### Digital flush-mounted light sensor

↳ Art.No.: 9070456

Details page 340

# Home and building control

## KNX, Weather station, brightness sensor



LUNA 131 S KNX

### Description

- Brightness and temperature sensor
- For brightness and temperature dependent controlling in outdoor areas
- 5 freely configurable channels: 1 sun protection channel and 4 universal channels
- Sun protection channel with automated sun protection especially for blind, awning and shutter applications
- Universal channels allow linking of brightness and temperature
- Brightness range from 1 - 100,000 lux
- Temperature range -20 °C to + 55 °C
- Learning object for brightness threshold

### Product selection

Type	Article number
LUNA 131 S KNX	1319201

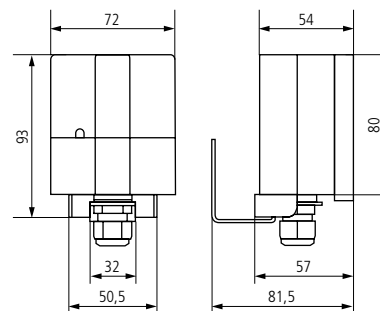
### Technical data

LUNA 131 S KNX			
Operating voltage KNX	Bus voltage, $\leq 5$ mA	Ambient temperature	-25 °C ... +55 °C
Measuring range brightness	1 - 100000 lx	Type of protection	IP 54
Measuring range temperature	-20 °C ... +55 °C		

### Accessories

**Mast mounting S**  
Details page 343

### Scale drawings



LUNA 131 S KNX





## Description

- Brightness sensor
- For brightness dependent controlling in outdoor areas
- Brightness range from 1 - 100,000 lux
- Ideally combinable with the Theben weather stations for individual control of several facades

## Product selection

Type	Article number
LUNA 133 KNX	1339200

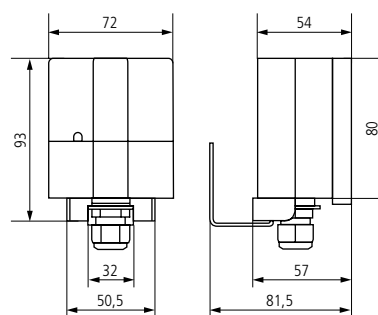
## Technical data

LUNA 133 KNX			
Operating voltage KNX	Bus voltage, $\leq 5$ mA	Ambient temperature	-25 °C ... +55 °C
Measuring range brightness	1 – 100000 lx	Type of protection	IP 54

## Accessories

**Mast mounting S**  
Details page 343

## Scale drawings



LUNA 133 KNX

# Home and building control

## KNX, Digital time switches



TR 648 top2 RC KNX

TR 648 top2 RC-DCF KNX

### Description

#### Common functions

- Digital time switch with yearly and astronomical time program
- 8 channels
- DuoFix spring terminals for 2 conductors each
- Text-oriented user guidance in display
- 800 memory locations
- Interface for OBELISK top2 memory card (PC programming)
- 8 year power reserve (lithium battery)
- ON-OFF switching times
- Pulse program
- Cycle program
- Extensive yearly clock functions

- Astronomical switching function (automatic calculation of sunrise and sunset times for the whole year)
- Switching preselection
- Permanent switching ON/OFF
- Count-down timer
- Integrated hour counter
- Holiday program
- 2 random programs
- Display backlight (can be turned off)
- PIN coding
- Automatic summer/winter time changeover
- Time and date synchronisation of other bus participants

#### TR 648 top2 RC KNX

- Time synchronisation via connection of external DCF or GPS antennas, additional positioning for astronomical program with GPS

#### TR 648 top2 RC-DCF KNX

- Time synchronisation via connection of external DCF antenna
- Can be operated without mains supply

### Product selection

Type	Article number
TR 648 top2 RC KNX	6489212
TR 648 top2 RC-DCF KNX	6489210

### Technical data

	TR 648 top2 RC KNX	TR 648 top2 RC-DCF KNX
Operating voltage KNX	Bus voltage, $\leq 12$ mA	
Operating voltage	110–240 V AC	–
Frequency	50–60 Hz	–
Stand-by consumption	0,2 W	–
Width	3 modules	
Number of channels	8	
Number of memory locations	800	
Time accuracy at 25 °C	$\leq \pm 0,5$ s/day (quartz) or DCF77/GPS	$\leq \pm 0,5$ s/day (quartz) or DCF77
Shortest switching times	1 s	
Display	LCD	
Ambient temperature	–5 °C ... +45 °C	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	III according to EN 60 730-1

### Accessories



**Antenna RC-GNSS**  
for TR 648 top2 RC KNX  
↳ Art.No.: 9070823  
↳ Details page 333



**Antenna RC-DCF**  
↳ Art.No.: 9070410  
Details page 333

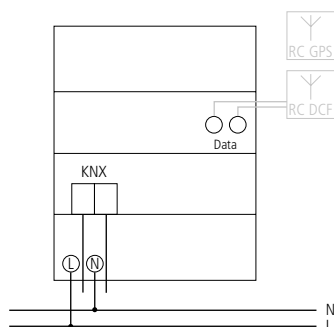


**PC set OBELISK top2**  
↳ Art.No.: 9070409  
Details page 332

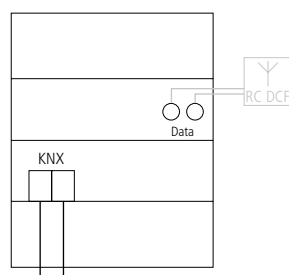


**Memory card OBELISK top2**  
↳ Art.No.: 9070404  
Details page 333

### Connection diagrams



TR 648 top2 RC KNX



TR 648 top2 RC-DCF KNX

# Home and building control

## KNX, Time transmitter



### Description

- Time transmitter for hour and date
- Can also be used with DCF77 antenna
- LED for status display DCF reception
- Integrated voltage supply for DCF77 antenna
- Preset time and date (CET or CEST)
- Automatic summer/winter time switchover

### Product selection

Type	Article number
ZS 600 DCF KNX	6009200

### Technical data

ZS 600 DCF KNX			
Operating voltage KNX	Bus voltage, ≤10 mA	Ambient temperature	-10 °C ... +50 °C
Width	2 modules	Protection class	III according to EN 60 730-1
Power reserve	10 years	Type of protection	IP 20
Time accuracy at 25 °C	≤ ± 1 s/day (quartz) or DCF77 synchronous		

### Accessories

#### Antenna DCF77 KNX

↳ Art.No.: 9070271  
 Details page 333





### Description

- The DALI Gateway KNX serves as an interface between the the DALI and the KNX system
- A maximum of 64 DALI members can be connected to a DALI output
- Control in 16 groups or in individual control
- Color light control with Device Type 8 (DT8) for 16 groups: Color temperature, XY, RGB, HSV, RGBW
- Time-dependent color control (also for human centric lighting applications)
- Scene module for 16 scenes (including color setting DT8)
- Effects module for sequential controls (including color setting DT8): Color temperature, XY, RGB, HSV, RGBW
- Energy saving by switching off the electronic ballast power supply in the groups (communication object)
- Easy replacement of ECGs in the event of an error
- Support of single-battery emergency lights (DT1) and emergency light systems with central battery
- LC display (2x 12 characters) for menu guidance during start-up and parameter settings
- Commissioning using the controls on the device, the integrated web server or the free ETS app (DCA)

### Product selection

Type	Article number
DALI-Gateway KNX plus	9070929

### Technical data

DALI-Gateway KNX plus			
Operating voltage KNX	Bus voltage, <10 mA	Ambient temperature	-5 °C ... +45 °C
Operating voltage	100 – 240 V AC/DC	Protection class	I
Frequency	50 – 60 Hz	Type of protection	IP 20
Width	4 modules		



KNX-OT-Box S

### Description

- The KNT-OT-Box S serves as an interface between the boilers with OpenTherm (bus system in heating and ventilation technology) and the KNX system (building system technology)
- This enables the bidirectional exchange of data between the OpenTherm boiler and the heat distribution via the KNX system (individual room control)
- In combination with the OT-Box (9070712) from the RAMSES 856 top2 OT (8569132) also heating systems without OpenTherm interface can be controlled
- Device and KNX bus module can be swapped independently of each other
- Removable KNX bus module
- Button for OT-test-program
- The following functions are available with the KNT- OT-box:
  - Customised flow control
  - Weather-compensation flow control
  - Control of domestic hot water
  - Energy optimization of domestic hot water with solar support
  - Legionella protection program
  - Screed drying program

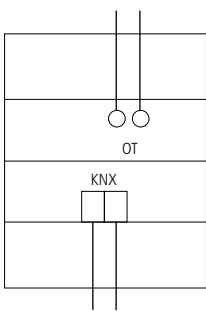
### Product selection

Type	Article number
KNX-OT-Box S	8559201

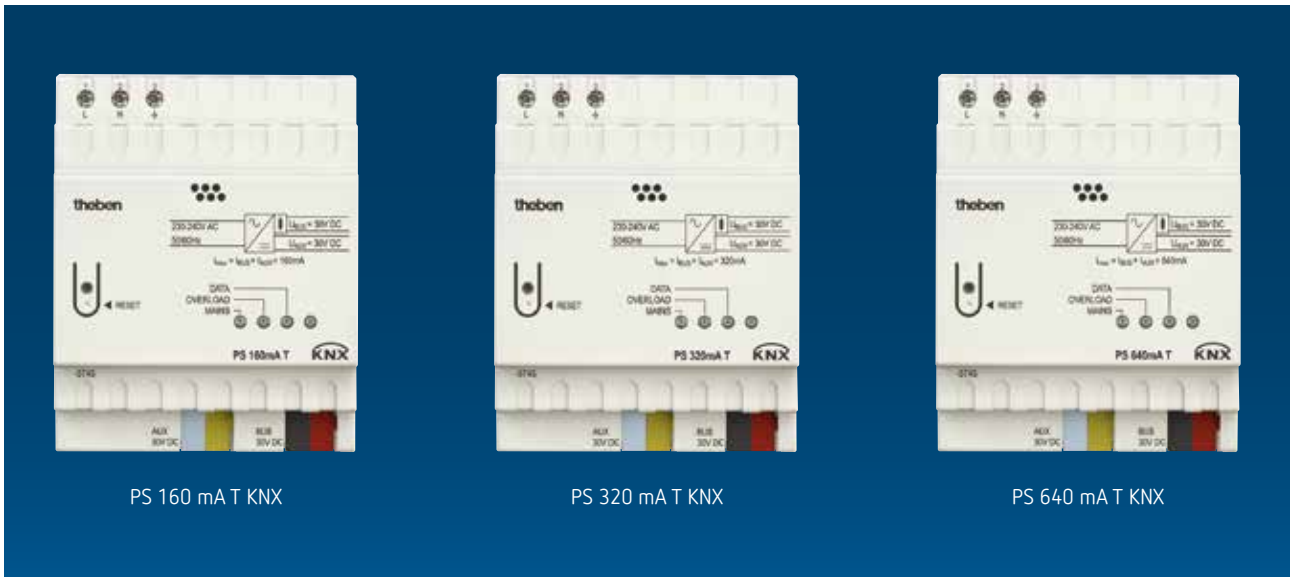
### Technical data

KNX-OT-Box S			
Operating voltage KNX	Bus voltage, ≤10 mA	Ambient temperature	+0 °C ... +45 °C
Width	4 modules	Protection class	III
Rated impulse with stand voltage	4 kV	Type of protection	IP 20

### Connection diagrams



KNX-OT-Box S



PS 160 mA T KNX

PS 320 mA T KNX

PS 640 mA T KNX

## Description

### Common functions

- 30 V DC auxiliary supply
- Power-supplying and monitoring of the KNX system voltage
- Reset key for 20 sec. bus reset

- Continuous short-circuit protection

### PS 160 mA T KNX

- 160 mA supply voltage
- 320 mA supply voltage

### PS 640 mA T KNX

- 640 mA supply voltage

## Product selection

Type	Article number
PS 160 mA T KNX	9070956
PS 320 mA T KNX	9070957
PS 640 mA T KNX	9070958

## Technical data

	PS 160 mA T KNX	PS 320 mA T KNX	PS 640 mA T KNX
Operating voltage KNX	Bus voltage, $\leq 12$ mA		
Operating voltage	230–240 V AC		
Frequency	50–60 Hz		
Stand-by consumption	$\leq 0,8$ W		
Width	4 modules		
KNX output	1 line with integrated throttle drive		
Nominal voltage KNX	30 V DC, $\pm 2$ V, SELV		
Nominal current KNX	160 mA	320 mA	640 mA
Uninterrupted short-circuit current	max.0,5 A	max.0,8 A	max.1,4 A
Mains failure bridging time	min.130 ms		
Ambient temperature	-5 °C ... +45 °C		
Protection class	II according to EN 60 730-1		
Type of protection	IP 20		



## Description

### IP Interface KNX

- Interface IP and KNX
- Tunneling: Up to 5 Tunneling Server
- Firmware update possible (Theben IP Tool Software)
- Power supply: 12–30 V DC / PoE - IEEE 802.3af class 1

### IPsecure Router KNX

- Router / interface / line coupler IP and KNX
- For data exchange between KNX and IP networks
- Support of KNX IP Secure
- Meets the requirements of the KNXnet / IP standard
- Complete filter table for all main groups (0... 31)

- Display of power failures on the bus (KNX IP Service)
- Unicast: Up to 10 devices can communicate via unicast
- Tunneling: 5 tunneling servers available (visualization, app ...)
- Firmware update possible (Theben IP Tool Software)
- Power supply: 12–30 V DC / PoE - IEEE 802.3af class 1

## Product selection

Type	Article number
IP Interface KNX	9070981
IPsecure Router KNX	9070770

## Technical data

	IP Interface KNX	IPsecure Router KNX
Operating voltage KNX	Bus voltage, ≤10 mA	
Operating voltage	12–30 V DC	
Width	2 modules	
Ambient temperature	-5 °C ... +45 °C	
Protection class	II according to EN 60 730-1	
Type of protection	IP 20	





Interface USB KNX

Line coupler S KNX

### Description

#### Interface USB KNX

- For communication between the PC and the KNX system to be programmed
- Fast download of applications by supporting long frames (from ETS 5)
- Support of KNX Data Secure communication

#### Line coupler S KNX

- For the connection of KNX lines or areas
- Galvanic separation of the lines / areas
- Long frame support (from ETS 5)
- Support of KNX Data Secure communication

- Telegrams can be forwarded, filtered or blocked
- Can also be used as a line amplifier (repeater)

### Product selection

Type	Article number
Interface USB KNX	9070397
Line coupler S KNX	9070880

### Technical data

	Interface USB KNX	Line coupler S KNX
Operating voltage KNX	Bus voltage, ≤10 mA	
Operating voltage	-	24 V DC
Width	2 modules	
Ambient temperature	-5 °C ... +45 °C	
Protection class	II according to EN 60 730-1	III
Type of protection	IP 20	



OSIRIA 220/230/240 AR KNX

OSIRIA 230 SR KNX, OSIRIA 240 SR KNX

OSIRIA 241 BR KNX, OSIRIA 241 AR KNX

## Description

OSIRIA 220 AR KNX, OSIRIA 230 AR KNX, OSIRIA 240 AR KNX

- KNX indoor clock, round, single-sided
- Black bar hour and minute hands, red second hand
- White metallic dial with black arabic numerals
- Impact-resistant plastic housing
- Matte border
- Flat, shock-resistant Plexiglas
- Diameter dial: 250 mm/300 mm/400 mm

OSIRIA 230 SR KNX, OSIRIA 240 SR KNX

- KNX indoor clock, round, single-sided
- Black bar hour and minute hands, red second hand
- White metallic dial with black fine-line numerals
- Impact-resistant plastic housing
- Matte border
- Flat, shock-resistant Plexiglas
- Diameter dial: 300 mm/400 mm

OSIRIA 241 BR KNX, OSIRIA 241 AR KNX

- KNX indoor clock, round, single-sided
- Silver metallic painted metallic housing (RAL 9006 white-aluminium)
- Black bar hour and minute hands, red second hand
- White metallic dial with black DIN bar numerals or arabic numbers
- Curved, shock-resistant Plexiglas
- Diameter dial: 400 mm

## Product selection

Dial dimensions	Housing material	Type of numerals	Type	Article number
Ø 250 mm	Plastic housing	Arabic numerals	OSIRIA 220 AR KNX	5009200
Ø 300 mm	Plastic housing	Arabic numerals	OSIRIA 230 AR KNX	5009210
		Fineline numerals	OSIRIA 230 SR KNX	5009211
Ø 400 mm	Plastic housing	Arabic numerals	OSIRIA 240 AR KNX	5009230
		Fineline numerals	OSIRIA 240 SR KNX	5009231
	Silver metallic painted metallic housing	Arabic numerals	OSIRIA 241 AR KNX	5009240
		Bar numerals	OSIRIA 241 BR KNX	5009241



OSIRIA 242 AR KNX, OSIRIA 242 SR KNX

OSIRIA 251 BQ KNX

OSIRIA 232 BQ KNX

## Description

### OSIRIA 242 AR KNX, OSIRIA 242 SR KNX

- KNX indoor clock, round, double-sided
- With wall or ceiling holder (150 mm)
- White dials
- Black Arabic numerals
- Black bar hour and minute hands, red second hand
- White painted metallic housing
- Shock-resistant plexiglass
- Diameter dial: 400 mm

### OSIRIA 251 BQ KNX

- KNX indoor clock, square, single-sided
- Wall clock limited protected against thrown balls e.g. for sports halls, schools, etc.
- White metallic dial with black DIN bar numerals
- Black bar hour and minute hands, red second hand
- Single-faced, robust, white painted metallic housing (RAL 9016) for heavy-duty applications
- Laminated safety glass
- 3-point fastening resistant to being pried out
- Dial: 400 mm x 400 mm

### OSIRIA 232 BQ KNX

- KNX indoor clock, square, single-sided, for flush-mounted installation (for OP rooms)
- White metallic dial with black DIN bar numerals
- Black bar hour and minute hands, red second hand
- Stainless steel housing frame flush with tiles or wall V4A for wall installation (flush-mounted)
- Resistant to acids, cleaning agents and disinfectants; in the installed state protected against dust and water in acc. with protection rating IP 54 (DIN 40050)
- 3 mm flat mineral lens
- Dial: 250 x 250 mm

## Product selection

Dial dimensions	Housing material	Type of numerals	Type	Article number
Ø 400 mm	White painted metallic housing	Arabic numerals	OSIRIA 242 AR KNX	5009250
		Fineline numerals	OSIRIA 242 SR KNX	5009251
400 mm x 400 mm	White painted metallic housing	Bar numerals	OSIRIA 251 BQ KNX	5009252
250 mm x 250 mm	Rustproof high quality steel housing	Bar numerals	OSIRIA 232 BQ KNX	5009223

# Home and building control

## KNX, Display units



### Description

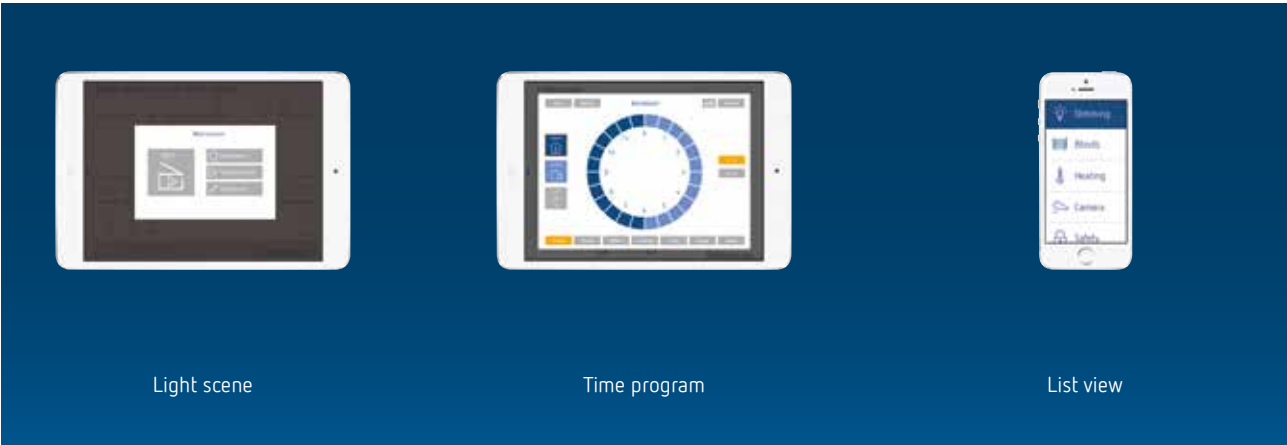
- theSera S110 is a high-performance KNX visualisation solution for lighting, awning and climate control via smartphone and tablet
- The intuitive app user interface is able to control devices, and also:
  - Display status and alarm messages and measured values as text or via pre-defined symbols
  - Show energy consumption in graphic format
  - Mix colours of RGB LEDs using a colour wheel
  - Integrate images from IP cameras
  - Control audio/video devices from almost all leading manufacturers via IR transmitter from IRTans
  - Display current weather data and forecasts from the Internet or via KNX weather stations
  - Program time switch and calendar functions, as well as scenes
- In addition to the functions above, theSera offers a complete range of other functions that run in the background, including:
  - Presence simulation
  - Solar position calculation with sunrise and sunset
  - Logic, multiplexer and filter functions
  - Linear combination
  - Calculation of complex mathematical functions
  - Notification via email and push notifications (iOS only)
  - Load management for automatic shut-down of consumers
- Configuration is via theSera configurator. A theSera S110 miniserver from Theben is required to operate the software. Further information is available from the Theben website at [www.theben.de/en](http://www.theben.de/en)

### Product selection

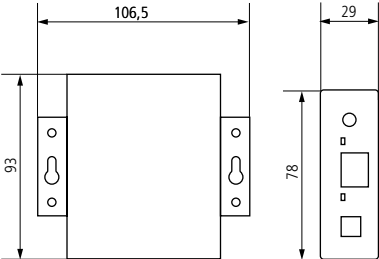
Type	Article number
theSera S110	8254100

### Technical data

	theSera S110
Operating voltage	110–240 V AC
Frequency	50–60 Hz
Stand-by consumption	< 1 W
Ambient temperature	0 °C ... +50 °C
Type of protection	IP 20



Scale drawings



More information















App download



## Open to new perspectives

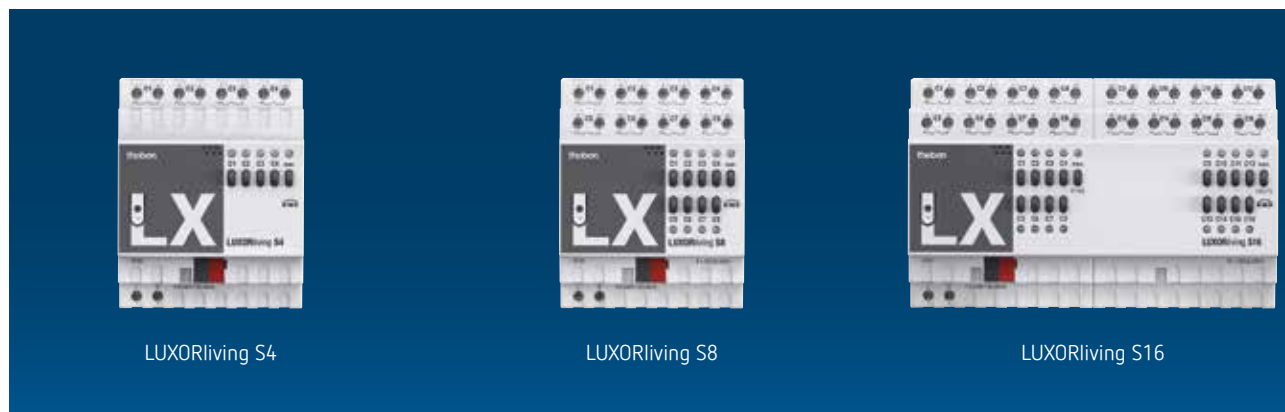
Sometimes you need to change perspective to discover new possibilities. Then you establish that you're not just going further, but upwards. Theben always takes the viewpoint of its customers. First, to develop products that meet the requirements of people who will use them. Second, to be open to new technologies. So we are, as it were, programmed to change perspective systematically. For us it's a central value: openness.



Description	Type	Page
<b>LUXORliving Actuators</b>		
 LUXORliving Switching actuators	LUXORliving S4 / LUXORliving S8 / LUXORliving S16	296
LUXORliving Dimming actuators	LUXORliving D2 / LUXORliving D4	300
LUXORliving Blinds actuators	LUXORliving J4 / LUXORliving J8	298
LUXORliving Flush-mounted actuators	LUXORliving D1 / LUXORliving J1 / LUXORliving S1 / LUXORliving H1 / LUXORliving D1 RF / LUXORliving J1 RF / LUXORliving S1 RF / LUXORliving H1 RF	299
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# Home and building control









## Smart Home system LUXORliving, Switching actuators



### Smart Home system LUXORliving

- LUXORliving is the simple smart home system from Theben, offering all-round home comfort, whilst avoiding unnecessary waste. Switching lights on and off. Dimming. Regulating heating and controlling blinds.
- That's what it's all about. And the best thing: LUXORliving is so easy to assemble, install and use that you don't need to be a specialised fitter – unless you really want to!
- Anyone who is building or renovating should include LUXORliving in their plans. The smart home system makes houses and flats more comfortable and provides a pleasant working atmosphere in offices and doctor's surgeries too. What's more, it creates optimum conditions for you to use your energy-saving potential.

### Highlights of LUXORliving at a glance

 Simple start-up	 Free push button selection	 Certified KNX system	 Flexible BUS wiring
 Safe panic function	 Control centre OFF	 Individual scenarios	 Clever presence simulation

### Description Switching actuators

<b>Common functions</b> - Switching actuator LUXORliving - LED switching status display for each channel - Manual operation on device - Switching functions: On/Off, pulse, On/Off delay, staircase light with warning	<b>LUXORliving S4</b> - 4-way switching actuator LUXORliving	<b>LUXORliving S16</b> - 16-way switching actuator LUXORliving
	<b>LUXORliving S8</b> - 8-way switching actuator LUXORliving	

### Product selection

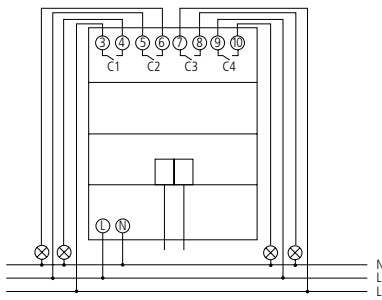
Number of channels	Type	Article number
4	LUXORliving S4	4800420
8	LUXORliving S8	4800425
16	LUXORliving S16	4800429



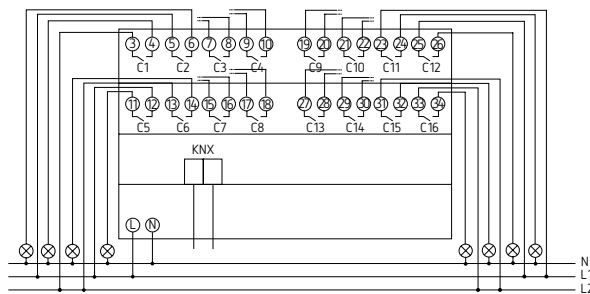
### Technical data

	LUXORliving S4	LUXORliving S8	LUXORliving S16
Operating voltage	110–240 V AC		
Frequency	50–60 Hz		
Stand-by consumption	< 0,3 W		
Width	4 modules		8 modules
Type of contact	NO contact, 16 A ( $\cos \varphi = 1$ ), 3 A ( $\cos \varphi = 0,6$ )		
Inrush current	max. 800 A / 200 $\mu$ s		
Resistive load	3680 W		
Incandescent lamp load	2000 W		
Fluorescent lamp load (electronic ballast)	1200 W		
Energy saving lamps	300 W		
LED lamp < 2 W (typ.)	55 W		
LED lamp > 2 W (typ.)	600 W		
Unrush current	max. 800 A / 200 $\mu$ s		
Operating temperature	-5 °C ... +45 °C		
Type of protection	IP 20		
Protection class	II		

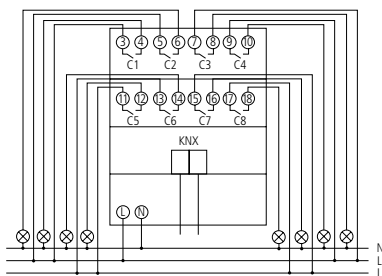
### Connection diagrams



LUXORliving S4



LUXORliving S16



LUXORliving S8

# Home and building control

## Smart Home system LUXORliving, Dimming actuators



LUXORliving D2

LUXORliving D4

### Description

#### Common functions

- Universal dimmer actuator LUXORliving
- For dimming dimmable LED, incandescent lamps, LV, HV halogen lamps and energy saving lamps
- Also suitable for dimming of dimmable energy-saving lamps

- LED switching status display for each channel

- Manual operation on device

#### LUXORliving D2

- 2-way universal dimmer actuator LUXORliving

- Dimming output: 400 W per channel, dimming area 0-100%

#### LUXORliving D4

- 4-way universal dimmer actuator LUXORliving

- Dimming output: 200 W per channel, dimming area 0-100%

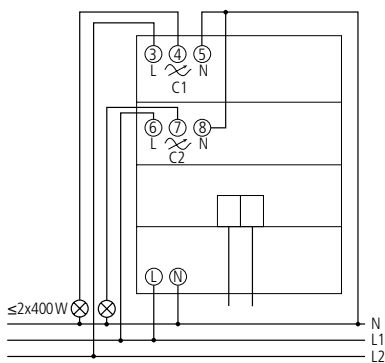
### Product selection

Number of channels	Switching capacity per channel	Type	Article number
2	400 W	LUXORliving D2	4800470
4	200 W	LUXORliving D4	4800475

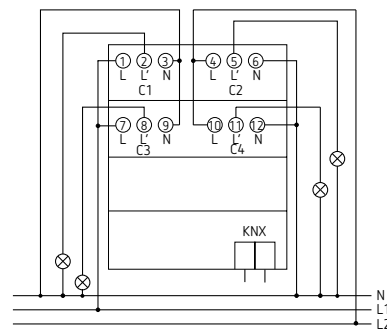
### Technical data

	LUXORliving D2	LUXORliving D4
Operating voltage	230 V AC	
Stand-by consumption	0,9 W	< 1 W
Width	4 modules	
Lamp types	Incandescent, low-voltage and high-voltage halogen and dimmable energy saving lamps and LED	
Switching capacity dimmable energy saving lamps per channel	400 W	200 W
Switching capacity dimmable 230 V LED (typ.) per channel	Trailing edge (RC-mode): 400 W	Trailing edge (RC-mode): 200 W
Incandescent/halogen lamp load	400 W	200 W
Type of protection	IP 20	
Protection class	II according to EN 60 669	

### Connection diagrams



LUXORliving D2



LUXORliving D4



LUXORliving J4

LUXORliving J8

### Description

#### Common functions

- Blind actuator LUXORliving
- For controlling drives for blinds, shutters, sun and vision protection devices
- Manual operation on device

- LED Up and Down switching status display for each channel

#### LUXORliving J4

- 4-way blind actuator LUXORliving

#### LUXORliving J8

- 8-way blind actuator LUXORliving

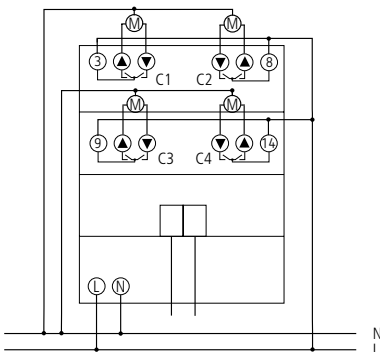
### Product selection

Number of channels	Type	Article number
4	LUXORliving J4	4800450
8	LUXORliving J8	4800455

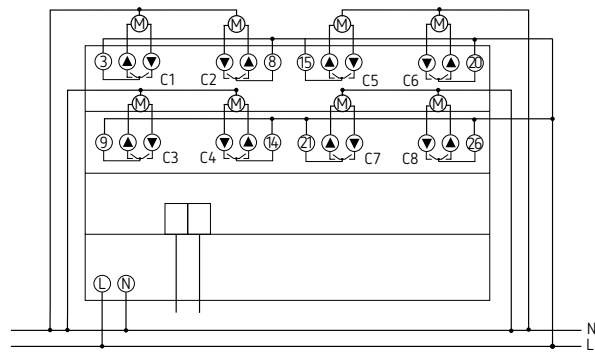
### Technical data

	LUXORliving J4	LUXORliving J8
Operating voltage	110–240 V AC	
Stand-by consumption	< 0,3 W	< 0,5 W
Width	4 modules	8 modules
Type of contact	NO contact	
Type of protection	IP 20	
Protection class	II according to EN 60 669	

### Connection diagrams



LUXORliving J4



LUXORliving J8

# Home and building control

## Smart Home system LUXORliving, Flush-mounted actuators



### Description

#### Common functions

- 1-way flush-mounted actuator LUXORliving
- Easy installation due to the compact housing
- 2 binary inputs for floating contacts such as buttons, switches, temperature sensor (I2)
- Integrated temperature monitoring for increased operating safety, e.g. in the event of overload

#### LUXORliving D1

- 1-way flush-mounted dimming actuator LUXORliving
- Optimised dimming output for dimmable energy-saving lamps, LEDs, incandescent and halogen lamps, and dimmable transformers
- Easy to adapt to different lamps thanks to automatic load detection

- Adjustable dimming curve for precise and flicker-free dimming
- The binary inputs are assigned to the dimming output as standard (function test before programming)

#### LUXORliving J1

- 1-way flush-mounted blind actuator LUXORliving
- For controlling drives for blinds, roller blinds, sun and vision protection devices, skylights, and ventilation flaps
- The binary inputs are assigned to the output as standard (function test before programming)

#### LUXORliving S1

- 1-way flush-mounted switching actuator LUXORliving

- 1x NO contact & 1x NC contact with common control
- Adjustable features: NC/NO contact, switching, delayed switching, pulse function
- The binary inputs are assigned to the switch output as standard (function test before programming)

#### LUXORliving H1

- 1-way flush-mounted heating actuator LUXORliving
- Noiseless control of thermal actuators 230 V AC
- Integrated temperature controller heating / cooling
- Valve protection function

### Product selection

Number of channels	Type	Article number
1	LUXORliving D1	4800570
1	LUXORliving J1	4800550
1	LUXORliving S1	4800520
1	LUXORliving H1	4800540 *

\* Available june 2020

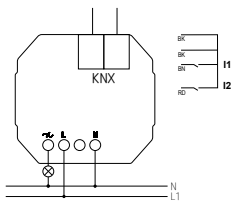
# Home and building control

## Smart Home system LUXORliving, Flush-mounted actuators

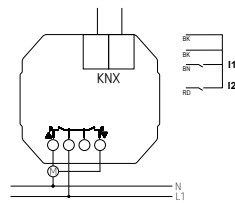
### Technical data

	LUXORliving D1	LUXORliving J1	LUXORliving S1	LUXORliving H1
Operating voltage KNX	Bus voltage, $\leq 4$ mA			
Energy saving lamps	-		300 W	-
LED lamp < 2 W	Trailing edge (RC-mode): typ. 250 W	-	50 W	-
LED lamp > 2 W (typ.)	Trailing edge (RC-mode): 250 W	-	600 W	-
Inrush current	-		max. 740 A / 200 $\mu$ s	-
Switching capacity	-	10 A	16 A	max. 1 A or 4 actuators 230 V AC (ALPHA 5)
Ambient temperature	-5 °C ... +45 °C			
Protection class	II			

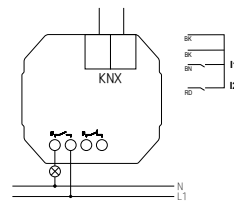
### Connection examples



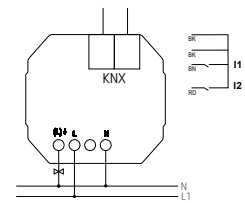
LUXORliving D1



LUXORliving J1



LUXORliving S1



LUXORliving H1

### Accessories



**Temperature sensor RAMSES IP 65**  
↳ Art.No.: 9070459  
Details page 341



**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341

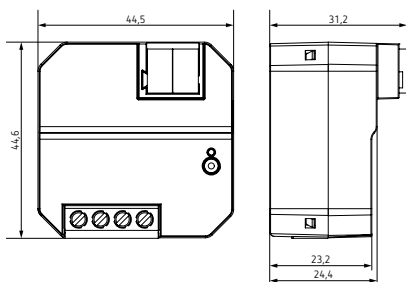


**Flush-mounted temperature sensor**  
↳ Art.No.: 9070469  
Details page 342



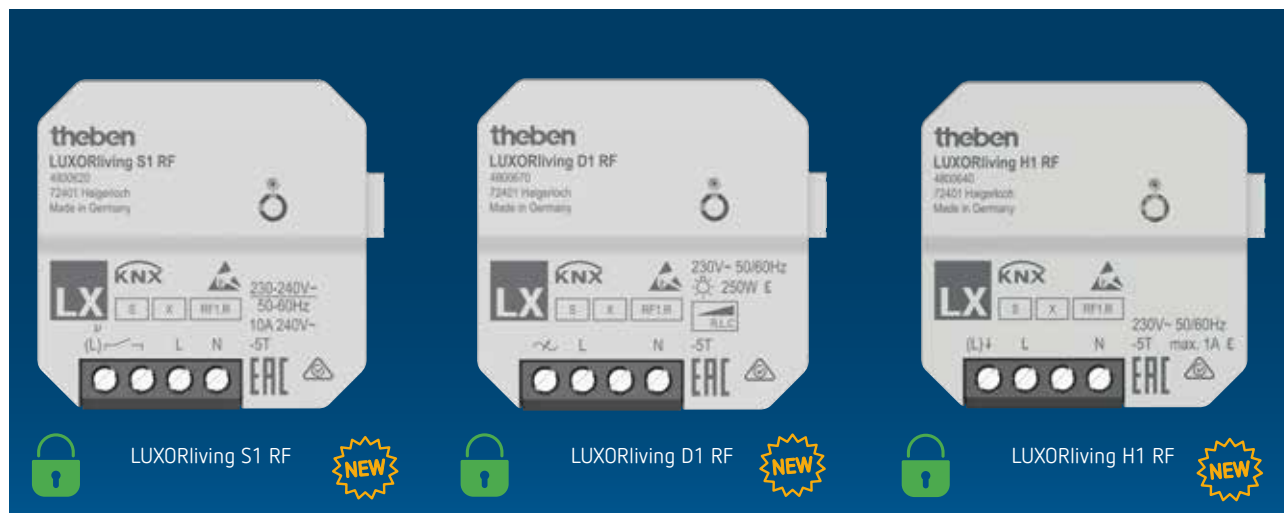
**Actuator ALPHA 5 230 V**  
for LUXORliving H1  
↳ Art.No.: 9070441  
Details page 342

### Scale drawings



# Home and building control

## Smart Home system LUXORliving, Flush-mounted actuators



### Description

#### Common functions

- 1-way wireless flush-mounted actuator LUXORliving
- Encrypted wireless communication
- Easy installation due to the compact housing
- 2 binary inputs for floating contacts such as buttons, switches, temperature sensor (I2)
- Integrated temperature monitoring for increased operating safety, e.g. in the event of overload

#### LUXORliving S1 RF

- 1-way wireless flush-mounted switch actuator
- Adjustable features: NC/NO contact, switching, delayed switching, pulse function

- The binary inputs are assigned to the switch output as standard (function test before programming)

#### LUXORliving D1 RF

- 1-way wireless flush-mounted dimming actuator
- Optimised dimming output for dimmable energy-saving lamps, LEDs, incandescent and halogen lamps, and dimmable transformers.
- Easy to adapt to different lamps thanks to automatic load detection
- Adjustable dimming curve for precise and flicker-free dimming
- The binary inputs are assigned to the dimming output as standard (function test before programming)

#### LUXORliving J1 RF

- 1-way wireless flush-mounted blind actuator
- For controlling drives for blinds, roller blinds, sun and vision protection devices, skylights, and ventilation flaps
- Integrated automatic ventilation function
- The binary inputs are assigned to the output as standard (function test before programming)

#### LUXORliving H1 RF

- 1-way wireless flush-mounted heating actuator LUXORliving
- Noiseless control of thermal actuators 230 V AC
- Integrated temperature controller heating / cooling
- Valve protection function

### Product selection

Configuration type	Number of channels	Type	Article number
Switch actuator	1	LUXORliving S1 RF	4800620
Dimming actuator	1	LUXORliving D1 RF	4800670
Blind actuator	1	LUXORliving J1 RF	4800650
Heating actuator	1	LUXORliving H1 RF	4800650 *

\* Available june 2020

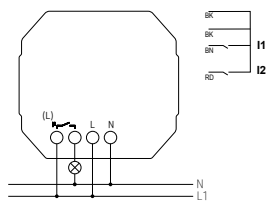
# Home and building control

## Smart Home system LUXORliving, Flush-mounted actuators

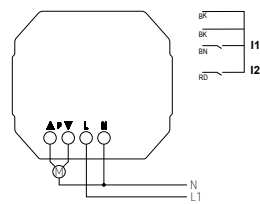
### Technical data

	LUXORliving S1 RF	LUXORliving D1 RF	LUXORliving J1 RF	LUXORliving H1 RF
Operating voltage	230–240 V AC	230 V AC	230–240 V AC	230 V AC
Frequency	50–60 Hz			
Switching capacity	10 A	–	5 A	max. 1 A or 4 actuators 230 V AC (ALPHA 5)
Incandescent/halogen lamp load	1800 W	250 W	–	–
LED lamp (typ.)	600 W	Trailing edge (RC-mode): 250 W	–	–
Ambient temperature	–5 °C... +45 °C			
Protection rating	IP 20			
Protection class	II			

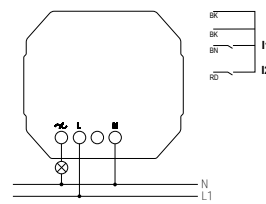
### Connection examples



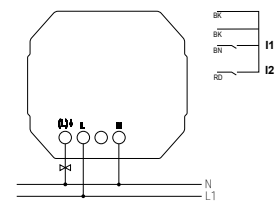
LUXORliving S1 RF



LUXORliving J1 RF



LUXORliving D1 RF



LUXORliving H1 RF

### Accessories



**Temperature sensor RAMSES  
IP 65**  
↳ Art.No.: 9070459  
Details page 341



**Temperature sensor**  
↳ Art.No.: 9070321  
Details page 341

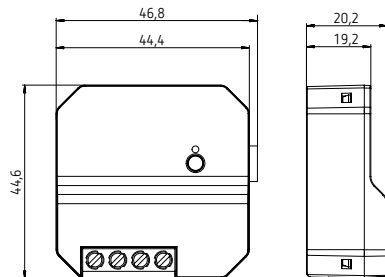


**Flush-mounted temperature  
sensor**  
↳ Art.No.: 9070469  
Details page 342



**Actuator ALPHA 5 230 V  
for LUXORliving H1 RF**  
↳ Art.No.: 9070441  
Details page 342

### Scale drawings



# Home and building control

## Smart Home system LUXORliving, Binary input



### Description

#### LUXORliving T4 RF

- 4-way flush-mounted wireless push-button interface
- Encrypted wireless communication
- 4 binary inputs for potential-free buttons and signaling contacts
- 1 additional input for temperature sensor
- Free assignment of the functions switching, dimming, blinds, temperature measurement and transmission
- Easy installation due to the compact housing
- Can be used with 4-way push-button module (9070806)

#### LUXORliving RF1

- Connects LUXORliving RF devices of a radio line with the twisted-pair bus
- Power supply via KNX bus voltage
- Supports long frames for „KNX Secure“ and enables faster download of large applications in parallel
- Ranges of max. 30 m within the building are possible
- Has a repeater function, i.e. received telegrams are sent again to increase the range

### Product selection

Type	Article number
LUXORliving T4 RF	4800604 *
LUXORliving RF1	4800868

\* Available june 2020



### Technical data

	LUXORliving T4 RF	LUXORliving RF1
Operating voltage	230–240 V AC	Bus voltage
Frequency	50–60 Hz	–
Stand-by consumption	< 0,4 W	–
Length connecting wires	25 cm	–
Interface extension max.	3 m	–
Ambient temperature	–5 °C ... +45 °C	
Protection class	II	–

### Accessories



#### 4-way push-button module

For LUXORliving T4 RF, with integrated temperature sensor  
Details page 341

#### Cover frame

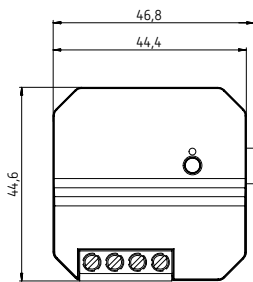
For 4-way push-button module, for common switch ranges  
Details page 341

#### Flush-mounted temperature sensor

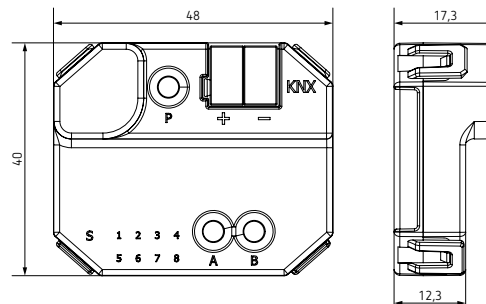
↳ Art.No.: 9070469

Details page 342

### Scale drawings



LUXORliving T4 RF



LUXORliving RF1



### Description

#### LUXORliving iON2

- Push-button sensor with 2 buttons and 2 status LEDs with integrated temperature sensor
- For controlling of the functions switching, dimming, blinds, scene in the LUXORliving system
- Multi-colored status LEDs
- Automatic brightness control of the status LEDs depending on the ambient brightness
- Integrated temperature sensor for room temperature control with LUXORliving heating actuators
- Transparent cover for individual labeling in the scope of delivery
- Installation of two ION push-button sensors on standard double socket with accessory 9070822 possible (standard combination distance 71 mm)

#### LUXORliving iON4

As LUXORliving iON2, but:

- Push-button sensor with 4 buttons and 4 status LEDs with integrated temperature sensor

#### LUXORliving iON8

- Room controller with integrated room temperature controller
- LC display for displaying functions, icons and values
- 10 freely parameterizable functions
- Display of various icons for the respective functions
- For controlling of the functions switching, dimming, blinds, scene, temperature control in the LUXORliving system
- Automatic brightness control of the display depending on the ambient brightness

- Installation of two ION push-button sensors on standard double socket with accessory 9070822 possible (standard combination distance 71 mm)

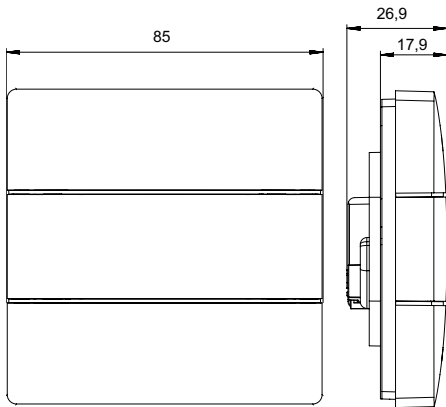
### Product selection

Type	Article number
LUXORliving iON2	4800412
LUXORliving iON4	4800414
LUXORliving iON8	4800418

### Technical data

	LUXORliving iON
Operating voltage	Bus voltage, $\leq 12,5$ mA
Ambient temperature	$-5$ °C ... $+45$ °C
Type of protection	IP 20
Protection class	III

### Scale drawings



### Accessories

#### 2-way mounting plate ION

↳ Art.No.: 9070822

Details page 343

# Home and building control

## Smart Home system LUXORliving, Binary input



LUXORliving B6

### Description

- 6-way binary input LUXORliving
- 6 floating universal and wide-range voltage inputs (10-240 V AC/DC or internally generated auxiliary voltage of approx. 12 V DC)
- Software functions: Switch/push-button, dimming, blinds
- LED switching status display for each channel
- Manual operation on device

### Product selection

Number of channels	Type	Article number
6	LUXORliving B6	4800430

### Technical data

LUXORliving B6			
Operating voltage	110–240 V AC	Type of protection	IP 20
Stand-by consumption	< 0,3 W	Protection class	II according to EN 60 730-1
Width	4 modules		



## Description

### Common functions

- Binary input sensor interface LUXORliving
- Can be installed in flush-mounted sockets with conventional sensors/switches
- Software functions: Switch/push-button, dimming, blinds
- Colour coding of wiring pairs

### LUXORliving T2

- 2-way binary input sensor interface
- 4-pole cable connection

### LUXORliving T4

- 4-way binary input sensor interface
- 6-pole cable connection

- 2 NTC inputs for detection of the actual temperature

### LUXORliving T8

- 8-way binary input sensor interface
- 10-pole cable connection
- 2 NTC inputs for detection of the actual temperature

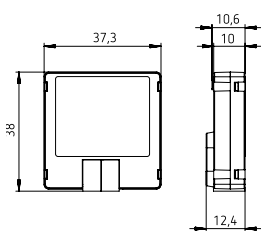
## Product selection

Number of channels	Type	Article number
2	LUXORliving T2	4800402
4	LUXORliving T4	4800404
8	LUXORliving T8	4800408

## Technical data

	LUXORliving T2	LUXORliving T4	LUXORliving T8
Interface extension max.		30 m	
Length connecting wires		25 cm	
Contact current		0,5 mA	
Type of protection		IP 20	
Protection class		III	

## Scale drawings



## Accessories



### Flush-mounted temp. sensor

↳ Art.No.: 9070469  
Details page 342



### Temperature sensor

↳ Art.No.: 9070321  
Details page 341



### Temp. sensor RAMSES IP65

↳ Art.Nr.: 9070459  
Details siehe Seite 341

# Home and building control

## Smart Home system LUXORliving, Heating actuator



### Description

- 6-way heating actuator LUXORliving
- For controlling 6 thermal actuators  
24 V–240 V AC in 2 groups with 3 outputs  
and 450 mA each
- Valve protection
- LED switching status display for each  
channel
- Manual operation on device

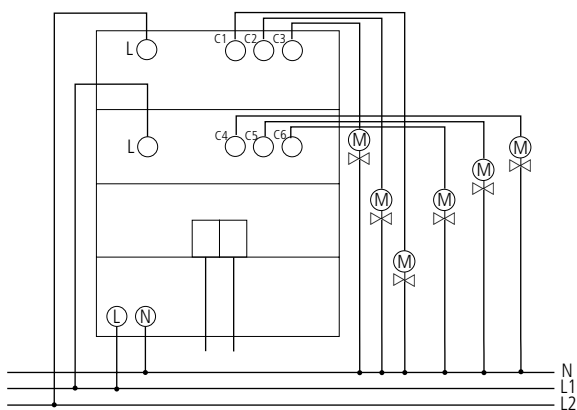
### Product selection

Number of channels	Type	Article number
6	LUXORliving H6	4800440

### Technical data

LUXORliving H6			
Operating voltage	110–240 V AC	Output	Triac
Stand-by consumption	0,3 W	Type of protection	IP 20
Width	4 modules	Protection class	II according to EN 60 669
Switching output	Not potential-free		

### Connection diagrams



### Accessories

#### Actuator ALPHA 5 230 V

↳ Art.No.: 9070441

Details page 344

#### Actuator ALPHA 5 24 V

↳ Art.No.: 9070442

Details page 344

# Home and building control

## Smart Home system LUXORliving, Heating actuator



LUXORliving H6 24V

### Description

- LUXORliving heating actuator for controlling thermal actuators
- Option of channel-based actuator control: 24 V DC switching or 0–10 V DC continuous
- Integrated relay for demand-based control of heating circuit pump
- No room thermostat required: each channel has a temperature control
- Can be installed directly in the heating circuit distributor
- Screwless terminal technology
- Integrated power supply for max. 12 thermal actuators
- Continuous or switching actuating value can be selected
- Integrated valve protection - Manual operation on device

### Product selection

Number of channels	Type	Article number
6	LUXORliving H6 24V	4800441

### Technical data

	LUXORliving H6 24V
Operating voltage KNX	Bus voltage, ≤10 mA
Operating voltage	230–240 V AC
Stand-by consumption	< 1 W
Frequency	50–60 Hz
Switching capacity	Valve output: 24 V SELV; 0.4 A peak; 0.12 A permanent or 0–10 V at at least 1250 ohm 24 V output terminal: max. 1.4 A
Switch output	5 A, 240 V AC floating (pump)
Ambient temperature	-5 °C ... +50 °C
Type of protection	IP 20
Protection class	II according to EN 60 730-1

### Accessories

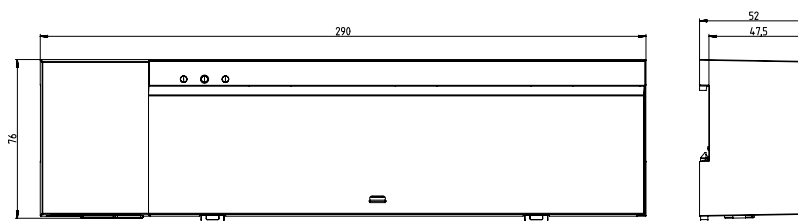


Actuator ALPHA 5 24 V

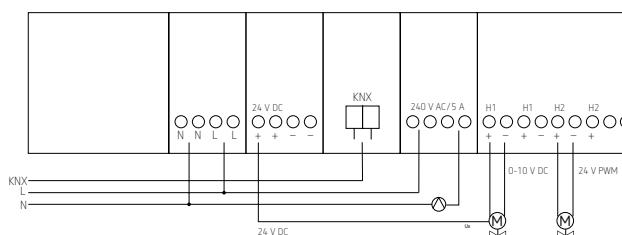
↳ Art.No.: 9070442

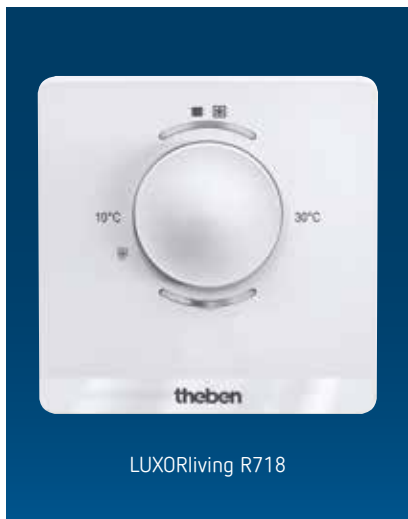
Details page 342

### Scale drawings



### Connection diagrams





LUXORliving R718

### Description

- Individual room thermostat LUXORliving
- Setting range 5 - 30°C
- Applications: heating via radiator or underfloor heating, heating and cooling e.g. radiator or cooling ceiling
- Integrated 4-way binary input sensor interface

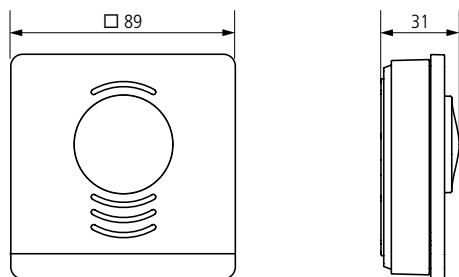
### Product selection

Type	Article number
LUXORliving R718	4800480

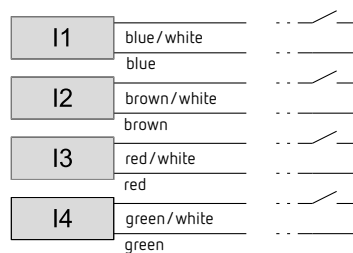
### Technical data

LUXORliving R718			
Interface extension max.	5 m	Setting range temperature	+5 °C ... +30 °C
Ambient temperature	+5 °C ... +40 °C	Type of protection	IP 20
Measuring range temperature	-5 °C ... +45 °C	Protection class	III according to EN 60 730-1

### Scale drawings



### Connection diagrams





# Home and building control

## Smart Home system LUXORliving, Weather station



### Description

- Self contained outdoor weather station LUXORliving
- For measuring wind, rain, brightness and temperature
- Rain sensor with integrated heating
- For fully automatic blinds and sun protection control
- Measurement and evaluation directly on device
- Sun protection for up to 4 facades via 3 integrated brightness sensors
- Display of weather data e.g. with LUXORliving-App „LUXORplay“

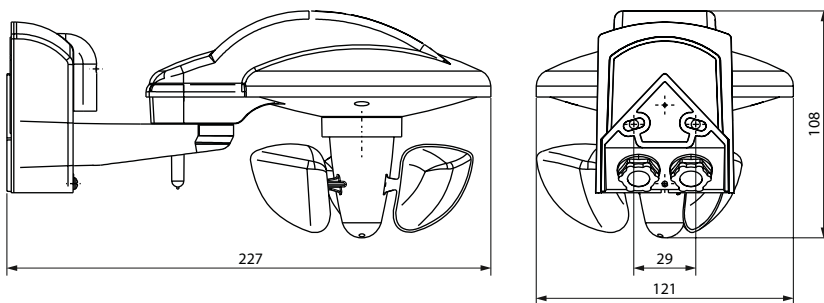
### Product selection

Type	Article number
LUXORliving M140	4800490

### Technical data

LUXORliving M140			
Operating voltage	110–230 V AC	Measuring range temperature	-30 °C ... +60 °C
Frequency	50–60 Hz	Measuring range wind speed	2–30 m/s
Operating voltage KNX	Bus voltage, ≤10 mA	Ambient temperature	-20 °C ... +55 °C
Stand-by consumption	< 5,5 W	Protection class	II
Measuring range brightness	100000 lx	Type of protection	IP 44

### Scale drawings



LUXORliving M140

### Accessories



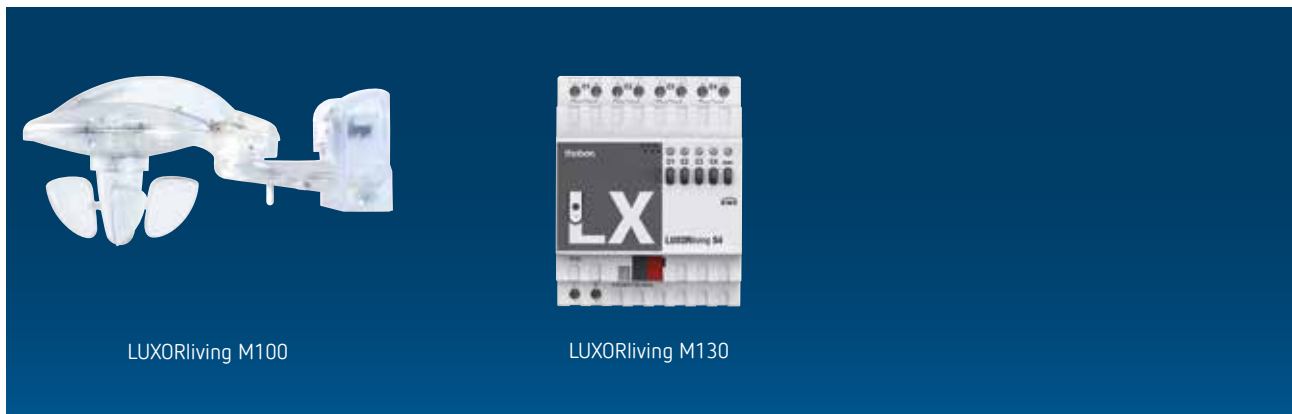
#### Mast fixing S

↳ Art.No: 9070928

Details page 343

# Home and building control

## Smart Home system LUXORliving, Weather station



LUXORliving M100

LUXORliving M130

### Description

#### LUXORliving M100

- Weather sensor for use with the weather station LUXORliving M130
- Forwarding of the measured values to up to 20 weather stations LUXORliving M130
- For measuring wind, rain, temperature and brightness (3 directions)
- Rain sensor with integrated heating

#### LUXORliving M130

- Weather station for use with the weather sensor LUXORliving M100
- Receiving and evaluating the measured values from a LUXORliving M100 weather sensor
- Evaluation of wind, rain, temperature and brightness (3 directions)
- For fully automatic blinds and sun protection control
- Sun protection for up to 4 facades
- Display of weather data e.g. with LUXORliving app „LUXORplay“

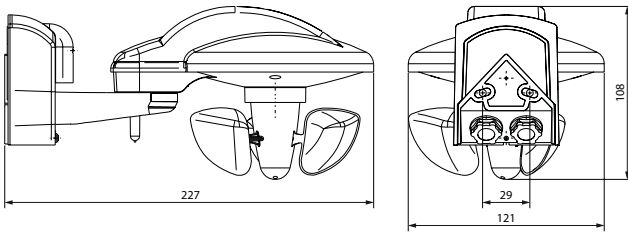
### Product selection

Type	Type	Article numer.
Weather sensor	LUXORliving M100	4800491
Weather station	LUXORliving M130	4800492

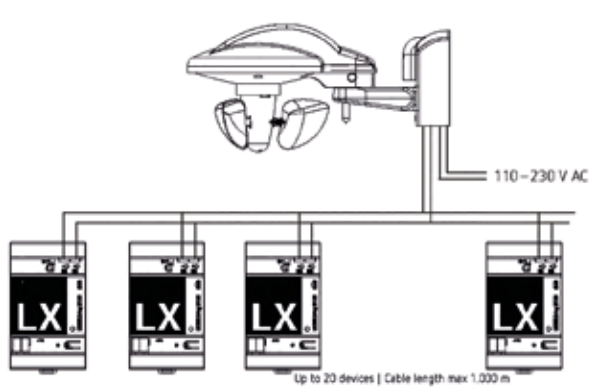
### Technical data

	LUXORliving M100	LUXORliving M130
Operating voltage	110–230 V AC	–
Frequency	50–60 Hz	–
Operating voltage KNX	–	Bus voltage, < 20 mA
Stand-by consumption	< 5 W	< 0,5 W
Width	–	4 modules
Measuring range brightness	1–100.000 lx	–
Measuring range temperature	–30 °C ... +60 °C	–
Measuring range wind speed	2–30 m/s	–
Ambient temperature	–20 °C ... +55 °C	–
Type of protection	II	II
Protection class	IP 44	IP 20

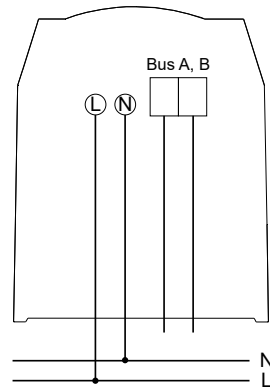
### Scale drawings



### Connection diagrams



LUXORliving M100



LUXORliving M130

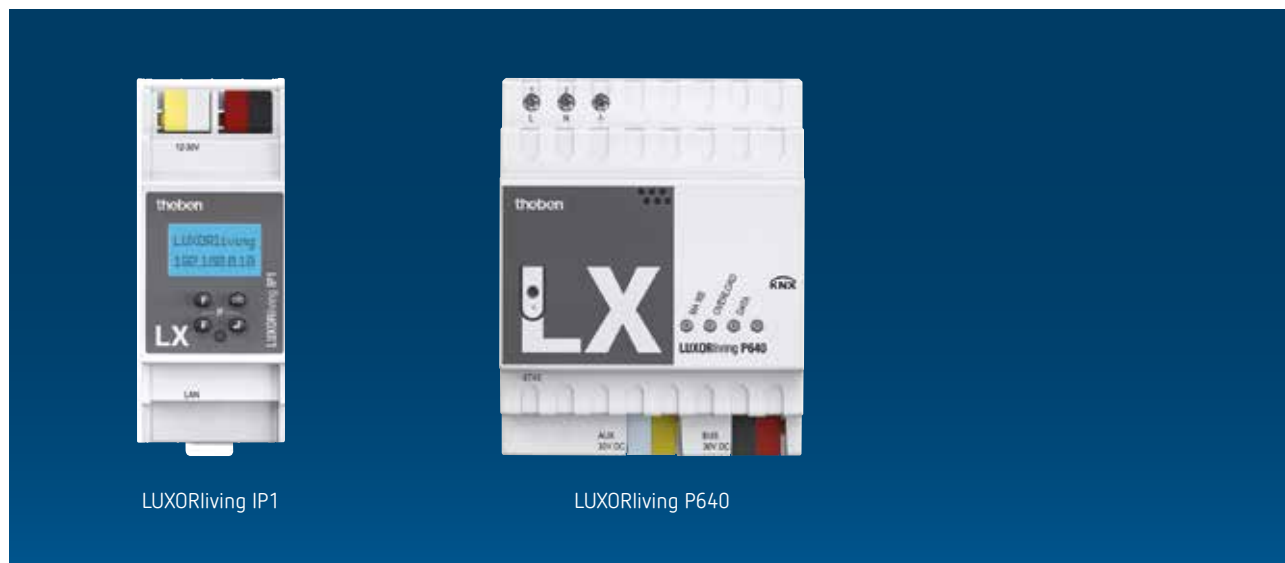
### Accessories



#### Mast fixing S

↳ Art.No: 9070928

Details page 343



LUXORliving IP1

LUXORliving P640

### Description

#### LUXORliving IP1

- System Center LUXORliving
- With Ethernet and bus interface
- For setting-up the LUXORliving system via LUXORplug software
- Storage of project data for visualization via LUXORplay App

#### LUXORliving P640

- 640 mA supply voltage LUXORliving
- 30 V DC auxiliary supply
- Power-supplying and monitoring of the system voltage

### Product selection

Function	Type	Article number
System Center	LUXORliving IP1	4800495
Power supply	LUXORliving P640	4800990

### Technische Daten

	LUXORliving IP1	LUXORliving P640
Operating voltage	12-24 V DC	230-240 V AC
Stand-by consumption	< 1,5 W	< 0,8 W
Width	2 modules	4 modules
KNX output	-	1 line with integrated throttle drive
Mains failure bridging time	-	min.100 ms
Type of protection	IP 20	
Protection class	III	II



## Description

### LUXORliving set drives

- Containing:
  - LUXORliving IP1
  - LUXORliving P640
  - LUXORliving M140
  - LUXORliving J8
  - 2x LUXORliving T4

### LUXORliving set lighting

- Containing:
  - LUXORliving IP1
  - LUXORliving P640
  - LUXORliving S8
  - LUXORliving D4
  - 2x LUXORliving T4

### LUXORliving set drives and lighting

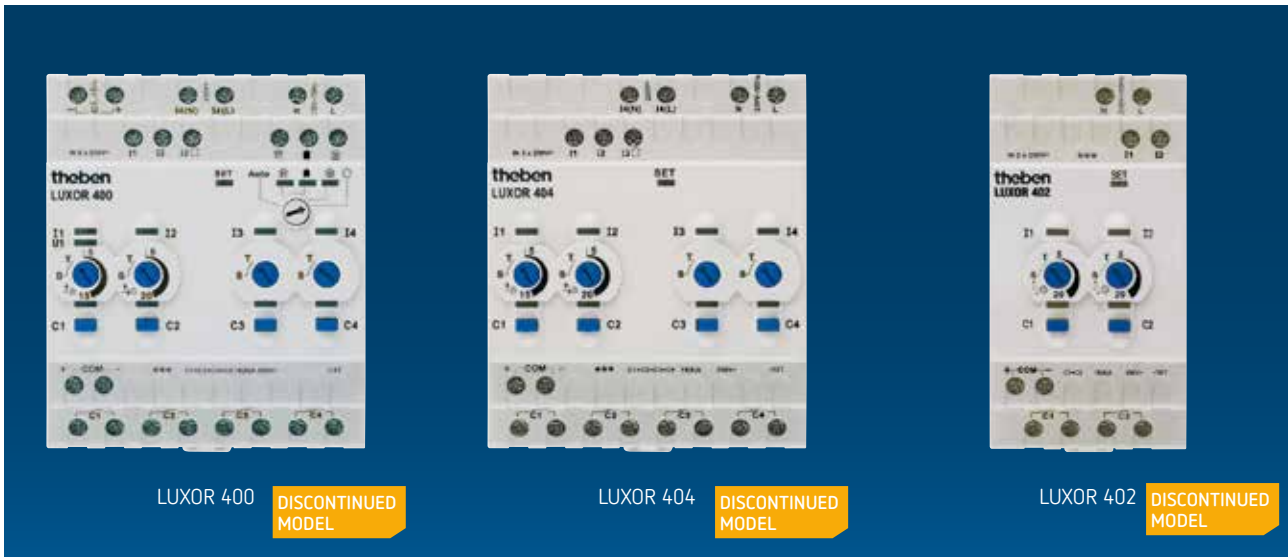
- Containing:
  - LUXORliving IP1
  - LUXORliving P640
  - LUXORliving M140
  - LUXORliving S8
  - LUXORliving D4
  - LUXORliving J8
  - 4x LUXORliving T4

### LUXORliving set drives basic

- Containing:
  - LUXORliving IP1
  - LUXORliving P640
  - LUXORliving J8
  - 4x LUXORliving T4

## Product selection

Type	Article number
LUXORliving set drives	4990010
LUXORliving set lighting	4990011
LUXORliving set drives lighting	4990012
LUXORliving set drives basic	4990013



## Description

### Common functions

- Modular expandable system with central functions
- For switching electrical consumers
- Manual switch on device
- LEDs to display
- 2 time functions (staircase light function with switch-off warning, lag function)
- Upgradeable for up to 16 LUXOR modules
- Central ON/OFF, panic function and presence simulation
- LUXOR modules are connected via 2-wire bus cable (COM bus)
- Max. input cable length up to 100 m
- Input separate for connecting RCD
- Universal voltage input: 8–48 V AC/DC (e.g. for intercoms)
- Control for configuring central functions

### LUXOR 400

- 4-channel base device for lighting control
- Selector switch for configuring central functions
- Inputs U1 and I4 floating

### LUXOR 404

- 4-channel upgrade device for lighting control
- Input I4 potential-free

### LUXOR 402

- 2-channel upgrade device for lighting control

## Product selection

Type	Article number
LUXOR 400	4000000
LUXOR 404	4040000
LUXOR 402	4020000

### Technical data

	LUXOR 400	LUXOR 404	LUXOR 402
Operating voltage	230 V AC		
Frequency	50 Hz		
Width	4 modules		2,5 modules
Installation type	DIN rail		
Stand-by consumption	1,7 W	1,3 W	
Number of channels	4		2
Type of contact	NO contact		
Connecting cable	230 V phase-independent supply cable, max. cable length 100 m		
Connection for COM	EIB/KNX bus line type YCYM or Y(ST)Y or communication line J-Y(ST)Y/length up to 100 m		
Switching capacity	16 A (at 250 V AC, cos φ = 1), 6 A (at 250 V AC, cos φ = 0.6)		
Ambient temperature	-10 °C ... +50 °C		
Type of protection	IP 20		
Protection class	II according to EN 60 730-1		

### Accessories



#### Diode module

↳ Art.No.: 9070367

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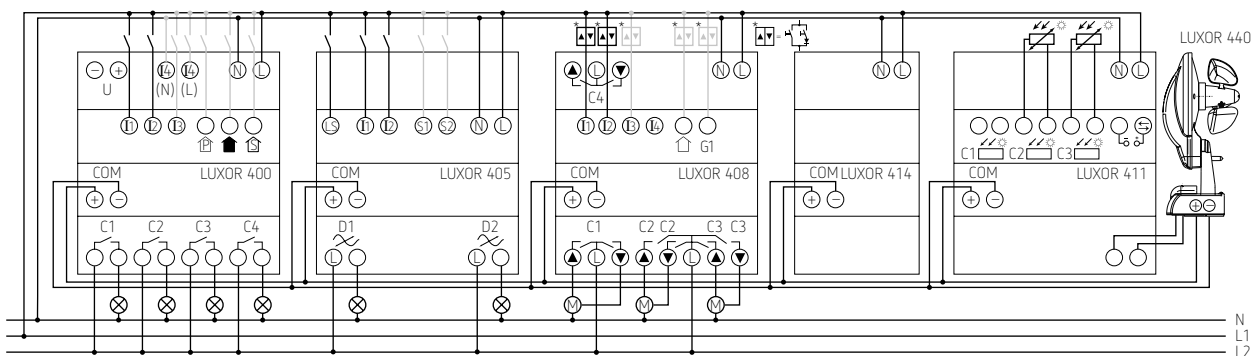


#### Front panel kit

↳ Art.No.: 9070001

Details page 332

### Connection diagrams





LUXOR 405 S

DISCONTINUED  
MODEL

## Description

- 2-channel universal dimmer
- For dimming electric consumers such as LED, ESL, incandescent lamps, halogen lamps
- Switching capacity per channel:
  - Incandescent and halogen lamp load: 200 W
  - Compact fluorescent lamps (trailing edge): 200 W
  - LED lamps (trailing edge): 200 W
- Capacity in parallel operation of both channels: 1 x 400 W
- Can also be used without base module
- Manual switch on device
- LEDs to display
- Upgradeable for up to 16 LUXOR modules
- LUXOR modules are connected via 2-wire bus cable (COM bus)
- One additional input per channel for motion detector
- With overcurrent display
- Input for up to 3 light settings
- 4 program options for dimming response
- Central functions: Presence simulation, central OFF, panic function, central ON

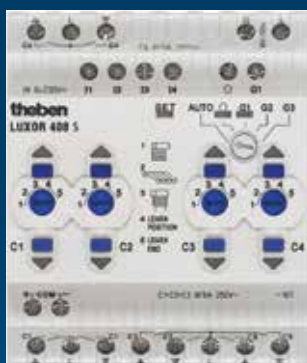
## Product selection

Type	Article number
LUXOR 405 S	4050100

## Technical data

	LUXOR 405
Operating voltage	230 V AC
Frequency	50 Hz
Width	4 modules
Installation type	DIN rail
Stand-by consumption	1,3 W
Number of channels	2
Type of contact	Triacs
Connecting cable	230 V phase-independent supply cable, max. cable length 100 m
Connection for COM	EIB/KNX bus line type YCYM or Y(ST)Y or communication line J-Y(ST)Y/length up to 100 m
Ambient temperature	-5 °C ... +45 °C
Type of protection	IP 20
Protection class	II according to EN 60 730-1





LUXOR 408 S **DISCONTINUED MODEL**



LUXOR 409 S **DISCONTINUED MODEL**

## Description

### Common functions

- For controlling shutters, awnings or blinds
- Separate control of 4 shutters with UP / DOWN / STOP
- Manual switch on device
- LEDs to display
- Controllable via standard shutter sensor
- Upgradeable for up to 16 LUXOR modules
- LUXOR modules are connected via 2-wire bus cable (COM bus)

- Setting option for panic function (via LUXOR 400)
- Storable intermediate position and turn for shading and ventilation
- 2 diode modules (9070367) supplied in delivery

### LUXOR 408 S

- 4-channel roller shutter base module
- Central UP / DOWN, panic 1 group

- With three group functions (individual, group and central control)
- Expandable via channel upgrade modules, time and sensor module and weather station

### LUXOR 409 S

- 4-channel shutter upgrade module

## Product selection

Type	Article number
LUXOR 408 S	4080100
LUXOR 409 S	4090100

## Accessories



### Diode module

↳ Art.No.: 9070367  
Details page 340

## Technical data

	LUXOR 408 S	LUXOR 409 S
Operating voltage	230 V AC	
Frequency	50 Hz	
Width	4 modules	
Installation type	DIN rail	
Stand-by consumption	1,3 W	
Number of channels	4	
Type of contact	NO contact	
Connecting cable	230 V phase-independent supply cable, max. cable length 100 m	
Connection for COM	EIB / KNX bus line type YCYM or Y(ST)Y or communication line J-Y(ST)Y / length up to 100 m	
Switching capacity	6 A (at 250 V AC, $\cos \varphi = 1$ )	
Channel Functions	Shutter, blinds and awning control	
Ambient temperature	-10 °C ... +50 °C	
Type of protection	IP 20	
Protection class	II according to EN 60 730-1	



## Description

### LUXOR 411

- Sensor module
- For controlling awnings, shutters and blinds in combination with LUXOR 440, LUXOR 408 S and/or LUXOR 409 S and integrated light sensors
- Setting threshold values on device
- LEDs to display
- Max. input cable length of sensor line is 100 m
- LUXOR modules are connected via 2-wire bus cable (COM bus)

### LUXOR 440

- Weather sensor
- For controlling awnings, shutters and blinds depending on rain, wind velocity, temperature and brightness in combination with sensor module LUXOR 411, LUXOR 408 S and/or LUXOR 409 S
- Optional connection of up to two additional light sensors for additional facades

## Product selection

Type	Article number
LUXOR 411	4110000
LUXOR 440	4400000

### Technical data

	LUXOR 411	LUXOR 440
Operating voltage	230 V AC	COM-Bus
Frequency	50 Hz	–
Width	4 modules	–
Stand-by consumption	1,1 W	–
Installation type	DIN rail	Wall installation or mast bracket
Connection for COM	EIB / KNX bus line type YCYM or Y(ST)Y or communication line J-Y(ST)Y / length up to 100 m	
Setting range twilight value	1 – 100 lx	
Setting range sun protection	1000 – 100000 lx	
Measuring range wind speed	2 – 20 m/s	
Measuring range temperature	0 °C ... +60 °C	–30 °C ... +60 °C
Ambient temperature	–10 °C ... +50 °C	–20 °C ... +55 °C
Type of protection	IP 20	IP 44
Protection class	II according to EN 60 730-1	

### Accessories



#### Surface-mounted light sensor

for LUXOR 411

↳ Art.No.: 9070008

Details page 340



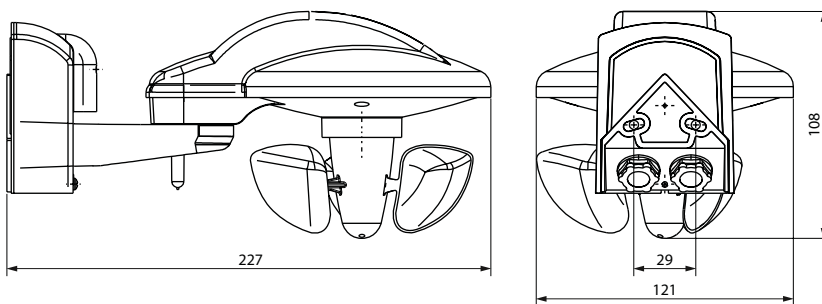
#### Mast mounting S

for LUXOR 440

↳ Art.No.: 9070928

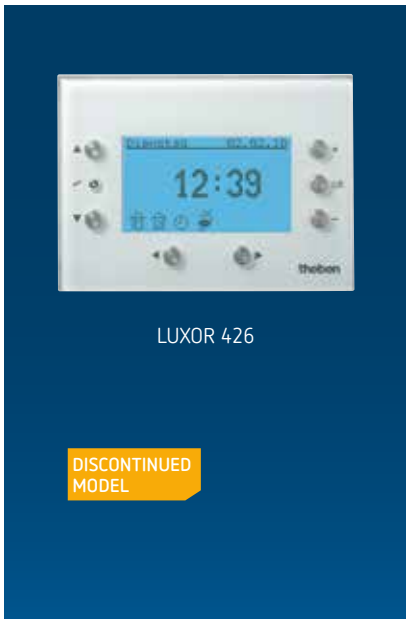
Details page 343

### Scale drawings



# Home and building control

## Living comfort control, Multifunction display



### Description

- Central display and control unit for the LUXOR system
- Time, weekday, date as well as central and automatic functions are displayed
- Current weather conditions are displayed as well as min/max values
- Display with back-lighting
- Favourite sites can be selected from 6 pages
- 8 channel time switch
- Heating temperature reduction in combination with a RAMSES room thermostat
- Manual switching on the device for central and group functions as well as manual and automatic mode
- Daily and weekly programs
- Astronomical program (dependent on sunrise and sunset)
- Freely programmable switching times as well as pre-programmed astronomical switching times
- Offset setting  $\pm 120$  min
- Easy location input via city list
- Individual link of time switch channels with the outputs
- Time controlled positioning of drives (LUXOR 408 S/409 S) as well as transmission of dimming values (LUXOR 405) as percentage values
- Blocking times for suppression of brightness or twilight signals from sensor module (LUXOR 411)
- Astronomical blocking times for time shifts for moving shutters/awnings up and down
- Automatic changeover summer/winter time
- PIN code
- Installation in flush-mounted socket

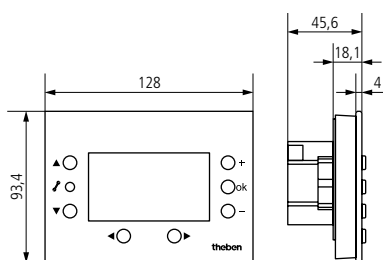
### Product selection

Type	Article number
LUXOR 426	4260000

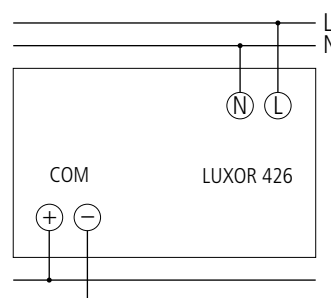
### Technical data

	LUXOR 426
Operating voltage	230 V AC
Frequency	50 Hz
Installation type	Wall installation or on flush-mounted socket
Stand-by consumption	1,1 W
Number of channels	8
Connection for COM	EIB / KNX bus line type YCYM or Y(ST)Y or communication line J-Y(ST)Y/length up to 100 m
Number of memory locations	350
Program	Weekly program
Ambient temperature	$-5\text{ }^{\circ}\text{C} \dots +45\text{ }^{\circ}\text{C}$
Type of protection	IP 20
Protection class	II according to EN 60 335

### Scale drawings



### Connection diagrams





### Description

- Set for shutter and blind controlling
- 8 drives can be manually or automatically controlled according to time program or sunrise or sunset
- Blocking times for time shifts for moving shutters/awnings up and down in the early morning
- Additional comfortable central functions
- Suitable for shutter and blind 8 drives, 8 drives and 8 time channels with weekly program with astronomical function
- Consisting of: Box, 1 LUXOR 408 S, 1 LUXOR 409 S, 1 LUXOR 414







### Product selection

Type	Article number
LUXOR Set 5	4990005



## Meet people on an equal footing

Theben is present in more than 60 countries throughout the world. We are successfully active in numerous markets. It's not just our persuasive product portfolio that accounts for that. What is decisive is the attitude of people who meet one another on an equal footing and agree about challenges that must be overcome – by solutions that offer a concrete benefit. This openness to markets and people we call open-mindedness.

	Number of inputs	Number of outputs	Operating voltage	Type	Page
	6	4	100–240 V AC	PHARAO-II 10 (AC)	328
			24 V DC	PHARAO-II 11 (DC)	328
	8	6	100–240 V AC	PHARAO-II 14 (AC)	328
			24 V DC	PHARAO-II 15 (DC)	328
	15	9	100–240 V AC	PHARAO-II 24 (AC)	328
			24 V DC	PHARAO-II 25 (DC)	328
	–	4	220–240 V AC	PHARAO-II extension 4AR (AC)	328
	–	–	24 V DC	LUNA 131 DDC	330
	1	1	100–240 V AC	SUD 228 II	330

# Home and building control

## Controller, Controller



### Description

#### Common functions

- Small control unit for house automation and industry
- Programming directly on device via eight buttons without interface cable
- Display back light with operator guidance in clear text
- Input and output switching status display
- Lifespan of relay contacts is 100,000 switching cycles at nominal current
- Assignment of programmed functions on front keys
- Internal EEPROM memory for max. 200 function blocks (5,000 bytes)
- Optional plug-in EEPROM for program transfer or dual programming of internal and plugged-in EEPROM
- 3-level password protection
- Realtime year clock with 1,000 switching times
- Graphical programming software for Windows 95/98/NT/2000/ME/XP with detailed online Help documentation
- Remote control/remote monitoring possible via modem/GSM modem
- Transmission of SMS, email or fax

#### PHARAO-II 10 (AC)

- Small control unit for house automation and industry
- Operating voltage 100–240 V AC
- 6 digital inputs, e.g. for keys, brightness and temperature switches
- 4 relay outputs

#### PHARAO-II 11 (DC)

- Operating voltage 24 V DC
- 6 digital/analogue inputs
- 4 relay outputs

#### PHARAO-II 14 (AC)

- Operating voltage 100–240 V AC
- 8 digital inputs, e.g. for keys, brightness and temperature switches
- 6 relay outputs

#### PHARAO-II 15 (DC)

- Operating voltage 24 V DC
- 8 digital/analogue inputs
- 6 relay outputs

#### PHARAO-II 24 (AC)

- Operating voltage 100–240 V AC
- 15 digital inputs, e.g. for keys, brightness and temperature switches
- 9 relay outputs

#### PHARAO-II 25 (DC)

- Operating voltage 24 V DC
- 15 inputs, including 8 analogue/digital options
- 9 relay outputs

#### PHARAO-II extension 4AR (AC)

- 4 channel relay output extension
- For PHARAO-II 14 (AC), PHARAO-II 24 (AC)

### Product selection

Number of inputs	Number of outputs	Operating voltage	Type	Article number
6	4	100–240 V AC	PHARAO-II 10 (AC)	5750210
		24 V DC	PHARAO-II 11 (DC)	5759211
8	6	100–240 V AC	PHARAO-II 14 (AC)	5750014
		24 V DC	PHARAO-II 15 (DC)	5759015
15	9	100–240 V AC	PHARAO-II 24 (AC)	5750024
		24 V DC	PHARAO-II 25 (DC)	5759025
-	4	220–240 V AC	PHARAO-II extension 4AR (AC)	5759102



## Technical data

	PHARAO-II 10 (AC)	PHARAO-II 11 (DC)	PHARAO-II 14 (AC)	PHARAO-II 15 (DC)	PHARAO-II 24 (AC)	PHARAO-II 25 (DC)	PHARAO-II extension 4AR (AC)
Operating voltage	100–240 V AC	24 V DC	100–240 V AC	24 V DC	100–240 V AC	24 V DC	220–240 V AC
Frequency	50–60 Hz	–	50–60 Hz	–	50–60 Hz	–	50–60 Hz
Stand-by consumption	1,2 W	0,4 W	1,3 W	0,4 W	1,3 W	0,4 W	–
Width	4 modules		7 modules				–
Installation type	DIN rail						Encajable
Type of contact	NO contact						
Switching capacity	8 A (at 250 V AC, $\cos \phi = 1$ ), 373 VA (at 250 V AC, inductive load)				4 x 8 A (250 V AC, $\cos \phi = 1$ ), inductive load max. 373 VA, 5 x 2 A (250 V AC, $\cos \phi = 1$ ), inductive load max. 93 VA		2 A (at 250 V AC, $\cos \phi = 1$ )
Power reserve	20 days						–
Time accuracy at 25 °C	$\leq \pm 5$ s/day (quartz)						–
Input frequency	5 Hz	20 Hz				–	
Ambient temperature	-25 °C ... +55 °C						–
Type of protection	IP 20						–
Protection class	II according to EN 60 730-1						–

## Accessories



**Power unit 24 V DC**  
↳ Art.No.: 9079330  
Details page 343

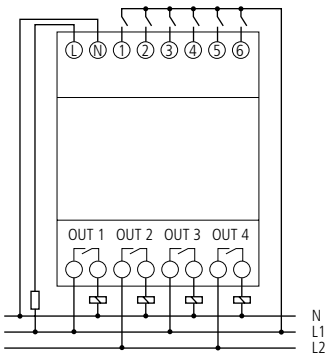


**Memory module PHARAO-II**  
↳ Art.No.: 9070328  
Details page 343

**GSM cable PHARAO-II**  
Details page 343

**Programming cable PHARAO**  
Details page 343

## Connection diagrams



PHARAO-II 10 (AC)

# Home and building control

## Controller, Controller



LUNA 131 DDC

SUD 228 II

### Description

#### LUNA 131 DDC

- Combination sensor with analogue output signal
- Can be used for brightness and temperature measurement
- Each of the two measurement outputs represents a 0-10 V analogue output signal
- The sensor can be connected directly to the analogue inputs of the PHARAO devices (24 V DC)
- Controls and regulators can be programmed with the signal converter, range compare and Schmitt trigger function modules
- External 24 V DC power unit required

#### SUD 228 II

- Charging switch for electric storage heaters
- Adjustable charging time and backward control
- If the ripple control receiver or the tariff time switch have been released for nighttime off-peak tariff, the device starts the charging program for storage heating
- Charging time can be set from 0–9 hours
- Onscreen display of charging time which is repeated every 24 hours
- Backward control stops charging process at the end of off-peak period
- Manual switch can be connected for daytime charging

### Product selection

Type	Article number
LUNA 131 DDC	1319700
SUD 228 II	2280577

## Technical data

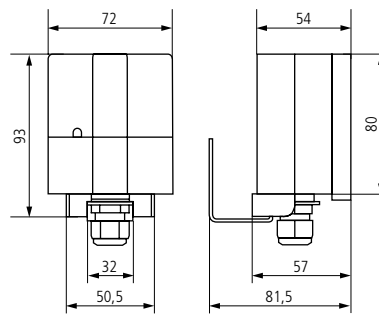
	LUNA 131 DDC	SUD 228 II
Operating voltage	24 V DC	100–240 V AC
Frequency	–	50–60 Hz
Stand-by consumption	–	1,2 W
Width	–	4 modules
Installation type	Surface-mounted	DIN rail
Type of contact	–	NO contact
Switching capacity	–	8 A (at 250 V AC, $\cos \phi = 1$ )
Measuring range brightness	10–50000 lx	–
Measuring range temperature	-30 °C ... +70 °C	–
Ambient temperature	-30 °C ... +70 °C	+0 °C ... +55 °C
Type of protection	IP 54	IP 20
Protection class	–	II according to EN 60 730-1

## Accessories



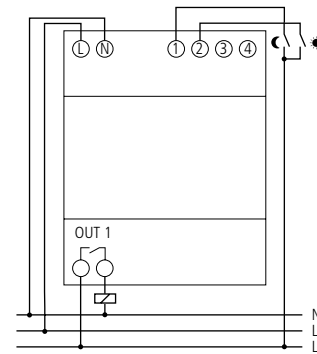
Power unit 24 V DC  
↳ Art.No.: 9079330  
Details page 343

## Scale drawings



LUNA 131 DDC

## Connection diagrams













SUD 228 II









## Accessories

	Description	Suitable for	Type	Article number
	<b>Wall mounting kit 17,5 mm</b> - Terminal box cover plate for assembly, sealable	- All DIN rail installation devices - width 1 module	Wall mounting kit 17,5 mm	9070065
	<b>Wall mounting kit 35 mm</b> - Terminal box cover plate for assembly, sealable	- All DIN rail installation devices - width 2 modules	Wall mounting kit 35 mm	9070064
	<b>Wall mounting kit 52,5 mm</b> - Terminal box cover plate for assembly, sealable	- All DIN rail installation devices - width 3 modules	Wall mounting kit 52,5 mm	9070050
	<b>Wall mounting kit 70 mm</b> - Terminal box cover plate for assembly, sealable	- All DIN rail installation devices - width 4 modules	Wall mounting kit 70 mm	9070049
	<b>Terminal cover 52,5 mm</b> - Terminal box cover plate for assembly, sealable	- SUL 188 g - SUL 188 hw	Terminal cover 52,5 mm	9070061
	<b>Front panel kit</b> - The front panel installation set is suitable for Theben distributor installation devices of 17.5 to 107.5 mm width - Walls from 1 to 5 mm thick	- All DIN rail installation devices	Front panel kit	9070001
	<b>Snap-on mounting 72 x 72</b> - Quick fastening for 35 mm DIN-rail	- All devices for front panel/wall installation	Snap-on mounting 72 x 72	9070071
	<b>PC set OBELISK top2/3</b> - Switching programs created on the PC by means of the convenient OBELISK top2/3 software can be transferred via USB interface to the OBELISK top2 memory card and from the card to the time switch and vice versa. Thus no PC or laptop is required on-site. Programming and the program printout can be done comfortably from the desk - For Windows XP/Vista/7/8/10 (32/64 Bit) - Consisting of: Memory card, USB plug adapter, software - Updates of existing OBELISK top2 software are available as free downloads at <a href="http://www.theben.de">www.theben.de</a>	- TR top2 - TR top3 - LUNA top3 - SELEKTA top2 - SELEKTA top3 - TR top2 KNX	PC set OBELISK top2	9070409










	Description	Suitable for	Type	Article number
	<b>Bluetooth OBELISK top3</b> - Bluetooth low-energy dongle for the transfer of switching programs and direct commands from the app to the time switch - Maximum manipulation security, Time switch programs can only be transferred from the app to the time switch when the Bluetooth OBELISK top3 is plugged into the time switch - Low consumption on standby compared with permanently installed Bluetooth components	- TR top3 - SELEKTA top3 - LUNA top3	Bluetooth OBELISK top3	9070130
	<b>Memory card OBELISK top2</b> - Individual memory card	- TR top2 - LUNA top2 - LUNA top3 - SELEKTA top2 - TR top2 KNX	Memory card OBELISK top2	9070404
	<b>Antenna DCF77 KNX</b> - Radio control via DCF antenna with KNX time switches: To ensure good reception, do not install the antenna in cellars or on distribution boxes. Connection is made via separate 2-wire, unshielded high-voltage power cable (max. 100 m), up to 10 Theben top2 RC devices can be connected. Polarity, short-circuit and interruption of the antenna circuit are each visually displayed to help with installation.	- ZS 600 DCF-KNX	Antenna DCF77 KNX	9070271
	<b>Antenna RC-DCF</b> - Radio control via DCF antenna with top2 RC devices: To ensure good reception, do not install the antenna in cellars or on distribution boxes. Connection is made via separate 2-wire, unshielded high-voltage power cable (max. 100 m), up to 10 Theben top2 RC devices can be connected. Polarity, short-circuit and interruption of the antenna circuit are each visually displayed to help with installation.	- TR top2 RC - TR top3 RC - LUNA top3 RC - LUNA top2 RC - SELEKTA top2 RC - TR top2 KNX	Antenna RC-DCF	9070410
	<b>Antenna RC-GNSS</b> - Worldwide time synchronisation and positioning via receiving GPS satellite signal - The antenna is connected by a 2 wire cable (max. 100 m) to Theben top2/3 RC devices (up to 5 devices can be connected depending on device type) - Positioning is only possible when connecting to TR 641 top2 RC, TR 642 top2 RC, TR 644 top2 RC and SELEKTA 171 top2 RC devices - Can not be used with TR 611 top2 RC 24 V and SELEKTA 171 top2 RC 24V	- TR top2 RC - TR top3 RC - LUNA top2 RC - SELEKTA top2 RC - TR top2 KNX	Antenna RC-GNSS	9070823
	<b>Antenna RC-GNSS R</b> - As antenna RC-GNSS, but: - Rugged encapsulated housing - Impact resistance IK 8, protection degree IP 65	- TR top2 RC - TR top3 RC - LUNA top2 RC - SELEKTA top2 RC - TR top2 KNX	Antenna RC-GNSS R	9070807
	<b>Cover 55 x 55 for BZ</b> - Cover for hour counter	- BZ 142-1	Cover 55 x 55 for BZ	9070041
	<b>Cover 72 x 72 for BZ</b> - Cover for hour counter	- BZ 142-1	Cover 72 x 72 for BZ	9070074

## Accessories

	Description	Suitable for	Type	Article number
	<b>Surface frame PresenceLight</b> - Presence detector surface frame	- PresenceLight 180 - PresenceLight 360	Surface frame PresenceLight (white)	9070513
			Surface frame PresenceLight BK (black)	9070634
	<b>Cover frame PresenceLight 360</b> - Cover frame for presence detector PresenceLight 360	- PresenceLight 360	Cover frame PresenceLight 360 WH (white)	9070510
			Cover frame PresenceLight 360 BK (black)	9070632
			Cover frame PresenceLight 360 SR (silver)	9070631
	<b>Cover frame PresenceLight 180</b> - Cover frame for presence detector PresenceLight 180	- PresenceLight 180	Cover frame PresenceLight 180 WH (white)	9070629
			Cover frame PresenceLight 180 BK (black)	9070628
			Cover frame PresenceLight 180 SR (silver)	9070627
	<b>Surface frame compact</b> - Presence detector surface frame	- compact office - compact passage - compact passimo	Surface frame compact (white)	9070514
			Surface frame compact BK (black)	9070637
			Surface frame compact SR (silver)	9070638
	<b>Surface frame 110A</b> - Presence detector surface frame	- thePrema - theRonda P - theMova P - thePassa	Surface frame 110A WH (white)	9070912
			Surface frame 110A GR (grey)	9070913
	<b>Surface frame 110B</b> - Presence detector surface frame	- thePrema KNX	Surface frame 110B WH (white)	9070918
			Surface frame 110B GR (grey)	9070919
	<b>Ceiling installation box 68A</b> - Ceiling installation unit, ensures strain relief and contact protection at the same time. The installation diameter is 68 mm	- thePrema - theRonda P - theMova P - thePassa	Ceiling installation box 68A	9070992
	<b>Cover 110 GR</b> - Cover in grey	- theRonda UP - theMova P - thePassa P	Cover 110 GR	9070591
	<b>Cover 85 GR</b> - Cover in grey	- theRonda DE - theMova DE	Cover 85 GR	9070594
	<b>Cover FLAT 85 GR</b> - Cover in grey	- theRonda S60 KNX FLAT DE WH	Cover FLAT 85 GR	9070597

	Description	Suitable for	Type	Article number
	<b>Masking clip</b> - For limiting the detection area - 5 pieces included in delivery	- theRonda P - theMova P - thePassa	Masking clip	9070921
	<b>Surface frame 75B</b> - Presence detector surface frame	- PlanoSpot	Surface frame 75B WH (white)	9070796
			Surface frame 75B BK (black)	9070824
	<b>Cover frame PlanoCover</b> - Cover frame for presence detector PlanoSpot - Diameter 76 mm	- PlanoSpot	PlanoCover 76 WH (white)	9070976
			PlanoCover 76 BK (black)	9070977
			PlanoCover 76 SR (silver)	9070978
	<b>PlanoBox 1WH</b> - Presence detector surface frame - Dimensions: 100 x 123 x 123 mm	- PlanoCentro U	PlanoBox 1WH (white)	9070731
			PlanoBox 1BK (black)	9070732
			PlanoBox 1SR (silver)	9070733
			PlanoBox 1EL (anodized)	9070735
	<b>PlanoSet RQ</b> - Mounting set consisting of round flush-mounting box PlanoFix E, white matching square cover PlanoCover and assembly parts - Easy and fast mounting in false-ceilings - Cut-out can be easily realized with a standard drill bit diameter 127 mm (5 inches) - The following installation and alignment of the presence detector PlanoCentro is implemented very easily and quickly - Frame PlanoCover: 142 x 142 mm	- PlanoCentro E	PlanoSet RQ EWH (white)	9070736
			PlanoSet RQ EBK (black)	9070737
			PlanoSet RQ ESR (silver)	9070738
	<b>PlanoSet RR</b> As PlanoSet RQ, but: - Round cover PlanoCover - Frame PlanoCover: Ø 172 mm	- PlanoCentro E	PlanoSet RR EWH (white)	9070740
			PlanoSet RR EBK (black)	9070741
			PlanoSet RR ESR (silver)	9070742
	<b>Cover frame PlanoCover E</b> - Cover frame for presence detector PlanoCentro E - Dimensions 112 x 112 mm	- PlanoCentro E	PlanoCover EWH-112x112 (white)	9070677
			PlanoCover EBK-112x112 (black)	9070678
			PlanoCover ESR-112x112 (silver)	9070679
	<b>Cover frame PlanoCover U</b> - Cover frame for presence detector PlanoCentro U - Dimensions 123 x 123 mm	- PlanoCentro U	PlanoCover UWH-123x123 (white)	9070680
			PlanoCover UBK-123x123 (black)	9070681
			PlanoCover USR-123x123 (silver)	9070682

## Accessories




	Description	Suitable for	Type	Article number
	<b>QuickSafe</b> - QuickSafe safety cover - Secure protection against mechanical damage - Robust and solid design - Particularly impact resistant - 6 screws, 3 rawplugs and three spacers - Protection class IK07	- All ThebenHTS presence detectors	QuickSafe	9070531
	<b>RC filter</b> - Suppression filter for presence and motion detectors	- All presence and motion detectors	RC filter	9070523
	<b>Corner angle theLuxe E</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLuxe E180	Corner angle theLuxe E WH (white)	9070974
			Corner angle theLuxe E BK (black)	9070975
	<b>Spacer theLuxe S BK</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLuxe S150 - the LuxaS180 - theLuxe S360	Spacer theLuxe S BK	9070907
	<b>Spacer theLuxe S WH</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLuxe S150 - the LuxaS180 - theLuxe S360	Spacer theLuxe S WH	9070906
	<b>Spacer theLuxe P BK</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLuxe P220 - theLuxe P300 - theLuxe P300 KNX	Spacer theLuxe P BK	9070909
	<b>Spacer theLuxe P WH</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLuxe P220 - theLuxe P300 - theLuxe P300 KNX	Spacer theLuxe P WH	9070908
	<b>Corner angle theLuxe S BK</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLuxe S150 - theLuxe S180 - theLuxe S360	Corner angle theLuxe S BK	9070903
	<b>Corner angle theLuxe S WH</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLuxe S150 - theLuxe S180 - theLuxe S360	Corner angle theLuxe S WH	9070902












	Description	Suitable for	Type	Article number
	<b>Corner angle theLuxe P BK</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLuxe P220 - theLuxe P300 - theLuxe P300 KNX	Corner angle theLuxe P BK	9070905
	<b>Corner angle theLuxe P WH</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLuxe P220 - theLuxe P300 - theLuxe P300 KNX	Corner angle theLuxe P WH	9070904
	<b>Corner angle 10 AL</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLeda P - theLeda D	Corner 10 AL	9070970
	<b>Corner angle 10 BK</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLeda S - theLuxe R	Corner angle 10 BK	9070987
	<b>Corner angle 10 WH</b> - For corner installation of motion detectors - Wall installation, external corner installation	- theLeda S - theLuxe R	Corner angle 10 WH	9070969
	<b>Spacer 10 AL</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLeda P - theLeda D	Spacer 10 AL	9070972
	<b>Spacer 10 BK</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLeda S - theLuxe R	Spacer 10 BK	9070988
	<b>Spacer 10 WH</b> - Additional spacer for flexible installation (cable entry below, side, top and more space for cables)	- theLeda S - theLuxe R	Spacer 10 WH	9070971
	<b>Surface frame LUXA 103-100</b> - Motion detector surface frame	- LUXA 103-100 UA	Surface frame LUXA 103-100 U	9070986
	<b>Surface frame LUXA 103-200</b> - Motion detector surface frame	- LUXA 103-200	Surface frame LUXA 103-200	9070504
	<b>Cover theMura BJBSI WH</b> - Cover for frames Busch-Jäger balance SI	- theMura - 4-way push button module	Cover theMura BJBSI WH	9070788










## Accessories

	Description	Suitable for	Type	Article number
	<b>Cover theMura JAS WH</b> - Cover for frames Jung Serie A (A 500, A plus, A creation, AS 500)	- theMura - 4-way push button module	Cover theMura JAS WH	9070789
	<b>Cover theMura MMP WH</b> - Cover for frames Merten System M (1-M, Atelier-M, M-Smart, M-Pure, M-Plan, M-Creativ)	- theMura - 4-way push button module	Cover theMura MMP WH	9070790
	<b>Cover theMura GS WH</b> - Cover for frames Gira System 55 (Standard 55, E2, Event, Esprit)	- theMura - 4-way push button module	Cover theMura GS WH	9070791
	<b>Cover theMura BS WH</b> - Cover for frames Berker S.1	- theMura - 4-way push button module	Cover theMura BS WH	9070792
	<b>Motion module RC theLeda B WH</b> - theLeda B radio-controlled motion detector module - 180° detection angle at 12 m range - Additional light switch output - Sensor can turned horizontally by $\pm 90^\circ$ and downwards/backwards by $90^\circ$ - IP 55 protection rating - theLeda B remote control included in scope of supply for the motion detector module - A remote control can be combined with different motion detector modules - Up to 6 remote controls can be combined with a single motion detector module - Remote control range up to 100 m on open air test site	- theLeda B	Motion module RC theLeda B WH	9070800
	<b>Motion module RC theLeda B BK</b> - As Motion module RC theLeda B WH, but: - Black vesion	- theLeda B	Motion module RC theLeda B BK	9070801
	<b>Motion module theLeda B WH</b> - theLeda B motion detector module - 180° detection angle at 12 m range - Additional light switch output - Sensor can turned horizontally by $\pm 90^\circ$ and downwards/backwards by $90^\circ$ - Protection rating IP 55	- theLeda B	Motion module theLeda B WH	9070760
	<b>Motion module theLeda B BK</b> - As Motion module theLeda B WH, but: - Black vesion	- theLeda B	Motion module theLeda B BK	9070761
	<b>Light module theLeda B WH</b> - theLeda B light sensor module - Duty cycle range: 2, 4, 6, 8 hours, on / permanent on at night - Switch-on brightness can be set from 2–200 lux - Additional light switch output - Protection rating IP 55	- theLeda B	Light module theLeda B WH	9070762

	Description	Suitable for	Type	Article number
	<p><b>Light module theLeda B BK</b></p> <ul style="list-style-type: none"> <li>- As Light module RC theLeda B WH, but:</li> <li>- Black vesion</li> </ul>	<ul style="list-style-type: none"> <li>- theLeda B</li> </ul>	Light module theLeda B BK	9070763
	<p><b>Spike theLeda D</b></p> <ul style="list-style-type: none"> <li>- Spike for ground mounting of the LED bollard light theLeda D B</li> <li>- Length 405 mm</li> </ul>	<ul style="list-style-type: none"> <li>- theLeda D B</li> </ul>	Spike theLeda D	9070765
	<p><b>theSenda B</b></p> <ul style="list-style-type: none"> <li>- Remote control for communication of theSenda Plug App with the detectors</li> <li>- Functions remote control theSenda B:</li> <li>- Universally applicable remote control for many indoor and outdoor detectors</li> <li>- Integrated lux meter</li> <li>- Easy comparison of brightness measurement with theSenda Plug App</li> <li>- Flexible infrared communication with the detector and via Bluetooth with the smartphone</li> <li>- Wide range of functions: Switching and dimming for three light channels, two scenes, customizable buttons</li> <li>- Features theSenda Plug App:</li> <li>- Universal app free of charge for iOS and Android smartphones</li> <li>- All detectors are pre-installed and automatically updated</li> <li>- Automatic detector search via filter function or via stored parameter sets</li> <li>- Parameter sets can be saved on a customer-specific basis, stored in parameter libraries and created and read externally</li> </ul>	<ul style="list-style-type: none"> <li>- thePrema</li> <li>- theRonda</li> <li>- theLuxa P</li> <li>- theMova</li> <li>- theLeda P</li> <li>- PlanoCentro</li> <li>- compact office DALI</li> <li>- PresenceLight KNX</li> <li>- PlanoSpot</li> <li>- thePassa</li> </ul>	theSenda B	9070985
	<p><b>theSenda P</b></p> <ul style="list-style-type: none"> <li>- Service remote control</li> <li>- ON/OFF</li> <li>- Teach-in function for teaching in the current brightness value</li> <li>- Predefined brightness values and switch-on times</li> <li>- Impulse, reset and test function</li> </ul>	<ul style="list-style-type: none"> <li>- thePrema</li> <li>- theRonda</li> <li>- theLuxa P</li> <li>- theMova</li> <li>- theLeda P</li> <li>- PlanoCentro</li> <li>- compact office DALI</li> <li>- PresenceLight KNX</li> <li>- PlanoSpot</li> <li>- thePassa</li> </ul>	theSenda P	9070910
	<p><b>theSenda S</b></p> <ul style="list-style-type: none"> <li>- User remote control</li> <li>- ON/OFF</li> <li>- Automatic</li> <li>- Presence simulation</li> <li>- Twilight switch</li> <li>- Call up of light scenes</li> </ul>	<ul style="list-style-type: none"> <li>- thePrema</li> <li>- theRonda</li> <li>- theLuxa P</li> <li>- theMova</li> <li>- theLeda P</li> <li>- PlanoCentro</li> <li>- compact office DALI</li> <li>- PresenceLight KNX</li> <li>- PlanoSpot</li> <li>- thePassa</li> </ul>	theSenda S	9070911
	<p><b>Adapter plate LUNA star</b></p> <ul style="list-style-type: none"> <li>- The adapter plate simplifies the replacement of faulty twilight switches from Eberle, ESYLUX, Legrand, Grässlin, Hager, Merten, Senmatic, Theben etc. As the plate has standard fixing holes, no further holes need to be drilled in the facade, 2 installation screws included.</li> </ul>	<ul style="list-style-type: none"> <li>- LUNA 126 star</li> <li>- LUNA 127 star</li> <li>- LUNA 128 star</li> <li>- LUNA 129 star-time</li> </ul>	Adapter plate LUNA star	9070486
	<p><b>LUNA star adapter mast fixing</b></p> <ul style="list-style-type: none"> <li>- Adapter for attaching the LUNA star products to the mast fixing S</li> </ul>	<ul style="list-style-type: none"> <li>- LUNA 126 star E</li> <li>- LUNA 127 star S</li> <li>- LUNA 129 star-time</li> </ul>	LUNA star adapter mast fixing	9070793

## Accessories

	Description	Suitable for	Type	Article number
	<b>Surface-mounted light sensor plus</b> - Sensor rotatable - With mounting bracket and screw terminals - Protection class IP 55 - Dimensions: 95 x 48 x 45 mm	- LUNA 108 plus	Surface-mounted light sensor plus	9070991
	<b>Flush-mounted light sensor plus</b> - Spring terminals - Protection class IP 66	- LUNA 108 plus	Flush-mounted light sensor plus	9070990
	<b>Digital flush-mounted light sensor</b> - Spring terminals - Protection class IP 66	- LUNA 110 plus - LUNA 111 top3 - LUNA 112 top3 - LUNA 121 top3 RC - LUNA 122 top3 RC - LUNA 134 KNX	Digital flush-mounted light sensor	9070456
	<b>Digital surface-mounted light sensor</b> - Sensor rotatable - With mounting bracket and screw terminals - Protection class IP 55 - Dimensions: 95 x 48 x 45 mm	- LUNA 110 plus - LUNA 111 top3 - LUNA 112 top3 - LUNA 121 top3 RC - LUNA 122 top3 RC - LUNA 134 KNX	Digital surface-mounted light sensor	9070415
	<b>Surface-mounted light sensor</b> - Sensor rotatable - With mounting bracket and Screw terminals - Protection class IP 54 - Dimensions: 116 x 27 x 61 mm	- LUXOR 411	Surface-mounted light sensor	9070008
	<b>Diode module</b> - Required for special functions (group/central function) with LUXOR - DIMAX: Light scenes, two button operation - 2 modules supplied in delivery	- LUXOR 400 - LUXOR 402 - LUXOR 404 - LUXOR 405 - LUXOR 408 S - LUXOR 409 S - DIMAX 534 plus	Diode module	9070367
	<b>Adapter RAMSES 72x/78x</b> - Wallpaper / wall cover plate for replacement of RAMSES 3...devices with new clock thermostats, e.g. RAMSES 722	- RAMSES 722 - RAMSES 722 S - RAMSES 782 - RAMSES 782 S - RAMSES 784 - RAMSES 784 S - RAMSES 721 - RAMSES 725	Adapter RAMSES 72x/78x	9070245
	<b>Socket RAMSES</b> - Plug-in socket for installing the RAMSES HF clock thermostat on the wall	- RAMSES 813 top2 Set A/ Set S/Set 1 - RAMSES 833 top2 Set 1/2	Socket RAMSES	9070605
	<b>Adapter plate RAMSES 70x</b> - Adapter plate for flush-mounted socket 79 x 79 mm	- RAMSES 701-709	Adapter plate RAMSES 70x	9070480

	Description	Suitable for	Type	Article number
	<b>Adapter plate RAMSES 714</b> - Adapter plate for flush-mounted socket 79 x 79 mm	- SOTHIS 715 - RAMSES 714 - RAMSES 714 A - RAMSES 714 A/FH	Adapter plate RAMSES 714	9070212
	<b>External temperature sensor 1</b> - External temperature sensor	- RAMSES 366/1 top2 - RAMSES 718 S/P KNX - RAMSES 713 FC KNX - CHEOPS control KNX - AMUN 716 S KNX	External temperature sensor 1	9070191
	<b>External temperature sensor 2</b> - With temperature adjustment of $\pm 3$ K	- RAMSES 366/1 top2	External temperature sensor 2	9070192
	<b>Temperature sensor RAMSES IP 65</b> - External room temperature sensor - Protection class IP 65	- RAMSES top2 - RAMSES 816 top2 OT - RAMSES 856 top2 OT - AMUN 716 S KNX - RAMSES 718 KNX - RAMSES BLE - Flush-mounted actuators	Temperature sensor RAMSES IP 65	9070459
	<b>Temperature sensor</b> - Temperature sensor for laying in floor - Type of protection IP 65	- RAMSES top2 - RAMSES 816 top2 OT - RAMSES 856 top2 OT - AMUN 716 S KNX - RAMSES 718 KNX - RAMSES BLE - Flush-mounted actuators	Temperature sensor	9070321
	<b>OT-Box Standard</b> - For expansion of the RAMSES 856 top2 OT system	- RAMSES 856 top2 OT	OT-Box Standard	9070712
	<b>Flow temperature sensor RAMSES</b> - Also required for applications with 2 feed sensors	- RAMSES 816 top2 OT - RAMSES 856 top2 OT	Flow temperature sensor RAMSES	9070371
	<b>External temperature sensor RAMSES</b> - Type of protection IP 65	- RAMSES 816 top2 OT	External temperature sensor	9070463
	<b>Plunge sensor RAMSES</b> - Additionally required for applications with domestic water control or boiler plunge sensor	- RAMSES 816 top2 OT - RAMSES 856 top2 OT	Plunge sensor RAMSES	9070379

	Description	Suitable for	Type	Article number
	<b>Flush-mounted temperature sensor</b> - Temperature sensor for flush-mounting - Compact design for easy installation in switch / distribution boxes - For use in combination with various KNX products	- Flush-mounted actuators	Flush-mounted temperature sensor	9070496
	<b>Actuator ALPHA 5 230 V</b> - Actuator for radiators, heating circuit distributors or individual heating circuits - Operating voltage 230 V AC - For opening and closing of valves in the fields of heating, ventilation and air conditioning - The actuator control is by a room thermostat with two-point output or pulse-width-modulation - Inrush current: < 550 mA for max. 100 ms - Dimensions: 48,4 x 44,3 x 52,2 mm - „First open function“ for easy installation and heating start-up - Plug-in installation on valve adapter to suit the most common valve bottoms and heating circuit distributors - Normally closed (Valve is closed when the operating voltage is cut) - Simple snap-on mounting to a valve adapter - Valve adapter not included in delivery - 100 % protection against damaging drives through leaking valves - Function and adjustment checking - Installation vertical, horizontal and up-side-down possible - Up-side-down position may reduce product life through special circumstances (e.g. contaminated water) - Protection against disassembly by means of removable SaveGuard - Guaranteed overvoltage protection	- All clock thermostats - RAMSES 701 – 709 - RAMSES 741 – 748 - RAMSES 714 - RAMSES 751 - HMG 6 T - HME 6 T KNX - HM 6 T KNX - HM 12 T KNX	Actuator ALPHA 5 230 V	9070441
	<b>Actuator ALPHA 5 24 V</b> As Actuator ALPHA 5 230 V, but: - Operating voltage 24 V AC/DC - Inrush current: < 300 mA for max. 2 min.	- All clock thermostats - HMG 6 T - HME 6 T KNX - HM 6 T KNX - HM 12 T KNX - HMT 6 S KNX - HMT 12 S KNX	Actuator ALPHA 5 24 V	9070442
	<b>Valve adapter VA 80</b> - Valve adapters for Onda, Schlösser(from 1993), Oventrop (M 30 x 1.5), Heimeier, Herb, Therm-Concept, Frank, Roth (distributor), Dinotherm (distributor) - Other adapters available upon request	- ALPHA 5 230 V - ALPHA 5 24 V - CHEOPS control KNX - CHEOPS drive KNX	Valve adapter VA 80	9070437
	<b>Valve adapter VA 78</b> - Valve adapters for Danfoss RA - Other adapters available upon request	- ALPHA 5 230 V - ALPHA 5 24 V - CHEOPS control KNX - CHEOPS drive KNX	Valve adapter VA 78	9070436
	<b>Frame RAMSES 74x</b> - Frame for mechanical room thermostats - Without central part	- RAMSES 741 - RAMSES 746 - RAMSES 748	Frame RAMSES 74x	9070603
	<b>Central part RAMSES 741/748</b> - Central part without switch section and setting button	- RAMSES 741 - RAMSES 748	Central part RAMSES 741/748	9070602

	Description	Suitable for	Type	Article number
	<b>Central part RAMSES 746</b> - Central part with switch section and setting button	- RAMSES 746	Central part RAMSES 746	9070601
	<b>Power unit CO<sub>2</sub>-sensor</b> - 24 V/12 W flush-mounted power unit (SELV)	- AMUN 716 R	Power unit CO <sub>2</sub> -sensor	9070494
	<b>Contact temperature sensor</b> - Contact temperature sensor in the cover flap housing for measuring the temperature at pipes and curved surfaces	- TA 4 S KNX - TA 6 S KNX - TA 8 S KNX	Contact temperature sensor	9070489
	<b>Mast mounting S</b> - For mast or corner installation of max. 2 weather stations Meteodata, LUXOR or LUNA - Diameter 48–60 mm	- LUXOR 440 - LUXORliving M140 - Meteodata KNX - LUNA 131 S KNX - LUNA 133 KNX	Mast mounting S	9070928
	<b>2-way mounting plate ION</b> - For the mounting of two ION push-button sensors on a standard double socket (standard combination distance 71 mm)	- ION KNX - LUXORliving ION	2-way mounting plate ION	9070822
	<b>4-way push button module</b> - 4-way push button module with integrated temperature sensor - For use with the TU 4 RF KNX / LUXORliving T4 RF and TA 6 S KNX - Cover frame included - Adapter frames for integration in common switching ranges available as accessory	- TU 4 RF KNX - TA 6 S KNX - LUXORliving T 4 RF	4-way push button module	9070806
	<b>GSM cable PHARAO-II</b> - PHARAO-II GSM interface cable - Enables connection to be established and SMS data to be transmitted to mobile telephone, email address or fax machine. The interface for connecting the GSM cable is located below the plug-in upgrade modules.	- PHARAO-II	GSM cable PHARAO-II	9070329
	<b>Memory module PHARAO-II</b> - Plug-in EEPROM memory module (5 kByte) - External memory module for transferring and/or downloading the program from or to the internal EEPROM system memory. Internal program is deactivated for as long as the external memory module is plugged in (dual programming).	- PHARAO-II	Memory module PHARAO-II	9070328
	<b>Power unit 24 V DC</b> - Power pack for supply voltage from PHARAO controllers and sensors. Power unit sufficient for 5 x PhARAO-II 14/15 or 4 x PHARAO-II 24/25 controls - Width: 3 modules	- LUNA 131 DDC - PHARAO-II	Power unit 24 V DC	9079330
	<b>Programming cable PHARAO</b> - For series connection (RS 232) to enable control programs to be configured and parameterised. This cable is used to connect an analogue model for remote maintenance and remote control.	- PHARAO-II	Programming cable PHARAO	9070252

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9070906	Spacer theLuxe S WH	4003468900338	336
9070907	Spacer theLuxe S BK	4003468900345	336
9070908	Spacer theLuxe P WH	4003468900413	336
9070909	Spacer theLuxe P BK	4003468900420	337
9070910	theSenda P	4003468900475	339
9070911	theSenda S	4003468900505	339
9070912	Surface frame 110A WH	7612748004900	334
9070913	Surface frame 110A GR	7612748004917	334
9070918	Surface frame 110B WH	7612748005464	334
9070919	Surface frame 110B GR	7612748005471	334
9070921	Masking clip	7612748005495	335
9070928	Mast mounting S	4003468901687	343
9070929	DALI-Gateway KNX plus	4003468902394	285
9070956	PS 160 mA T KNX	4003468902271	287
9070957	PS 320 mA T KNX	4003468902288	287
9070958	PS 640 mA T KNX	4003468902295	287
9070969	Corner angle 10 WH	4003468901700	337
9070970	Corner angle 10 AL	4003468901717	337
9070971	Spacer 10 WH	4003468901724	337
9070972	Spacer 10 AL	4003468901830	337
9070974	Corner angle theLuxe E WH	4003468901939	336
9070975	Corner angle theLuxe E BK	4003468900994	336
9070976	PlanoCover 76 WH	7612748006133	335
9070977	PlanoCover 76 BK	7612748006140	335
9070978	PlanoCover 76 SR	7612748006157	335
9070981	IP Interface KNX	4003468901991	288
9070985	theSenda B	4003468902073	339
9070986	Surface frame LUXA 103-100 U	4003468902080	337
9070987	Corner angle 10 BK	4003468902110	337
9070988	Spacer 10 BK	4003468902707	337
9070990	Flush-mounted light sensor plus	4003468902226	340
9070991	Surface-mounted light sensor plus	4003468902332	340
9070992	Ceiling installation box 68A	4003468905180	334
9079330	Power unit 24 V DC	4003468903520	343

Type	Art-No.	Type	Art-No.
Discontinued model		Successor	
theRolla S031	0310100	no successor	-
theRolla P032	0320100	no successor	-
LUXA 103-200	1030030	theMura S180-100 UP WH	2060650
LUNA 110 AL	1100100	LUNA 110 plus AL	1100910
LUNA 110 EL	1100200	LUNA 110 plus EL	1100900
LUNA 111 top2 AL	1110100	LUNA 111 top3 AL	1110130
LUNA 111 top2 EL	1110200	LUNA 111 top3 EL	1110230
LUNA 112 top2 AL	1120100	LUNA 112 top3 AL	1120130
LUNA 112 top2 EL	1120200	LUNA 112 top3 EL	1120230
LUNA 120 top2 AL	1200100	LUNA 121 top3 RC AL	1210130
LUNA 120 top2 EL	1200200	LUNA 121 top3 RC EL	1210230
LUNA 121 top2 RC AL	1210100	LUNA 121 top3 RC AL	1210130
LUNA 121 top2 RC EL	1210200	LUNA 121 top3 RC EL	1210230
LUNA 121 top2 RC AL 24V	1214100	no successor	-
LUNA 122 top2 RC AL	1220100	LUNA 122 top3 RC AL	1220130
LUNA 122 top2 RC EL	1220200	LUNA 122 top3 RC EL	1220230
LUNA 127 star	1270700	LUNA 127 star S	1270900
LUNA 128 star	1280700	LUNA 127 star S	1270900
SUL 184 h	1840908	no successor	-
PresenceLight 360 PLLON WH	2009100	no successor	-
PresenceLight 180 PLLON WH	2009150	no successor	-
compact passage 24V	2014090	no successor	-
PlanoCentro 101-EWH	2030102	thePrema P360-101 E UP	2070105
PlanoCentro 101-UWH	2030202	thePrema P360-101 E UP	2070105
PlanoCentro 300-EWH	2030302	no successor	-
PlanoCentro 300-UWH	2030402	no successor	-
PlanoCentro 201-EWH	2030502	no successor	-
PlanoCentro 201-UWH	2030602	no successor	-
PlanoSpot 360 PSLON DE WH	2039200	no successor	-
PlanoSpot 360 KNX S DE WH	2039300	PlanoSpot 360 KNX DE WH	2039100
PlanoCentro 000-EWH	2040102	thePrema P360 Slave E UP WH	2070130
PlanoCentro 000-UWH	2040202	thePrema P360 Slave E UP WH	2070130
PlanoCentro EWH PCLON	2069102	no successor	-
PlanoCentro UWH PCLON	2069202	no successor	-
DIMAX 544 plus	5440001	DIMAX 544 plus P	5440130
EM LAN top2	6490900	no successor	-
Wandmontage-Set BZ 142-3	9070075	no successor	-
SpeicherK. OBELISK KNX 16 K	9070223	no successor	-
PC-Set OBELISK KNX	9070305	no successor	-
SPHINX RC 104 Pro	9070536	no successor	-
SPHINX RC 104	9070538	no successor	-
AP-Rahmen PräsenzLight SR	9070635	no successor	-
UP Dose 115x115x100 mm	9070689	no successor	-
Lichtsensor theRolla	9070926	no successor	-
AP-Rahmen 75A WH	9070949	AP-Rahmen 75B WH	9070796
AP-Rahmen 75A BK	9070950	no successor	-
AP-Rahmen 75A SR	9070951	no successor	-
Steckkontaktleiste	9075141	no successor	-
Schaltreiter gelb	9343287	no successor	-
clic	9070515	no successor	-
LUXA LED Eckwinkel WH	9070756	no successor	-
LUXA LED Eckwinkel BK	9070757	no successor	-
Spannungsvers. 160 mA S KNX	9070922	PS 160 mA T KNX	9070956
Spannungsvers. 320 mA S KNX	9070923	PS 320 mA T KNX	9070957
Spannungsvers. 640 mA S KNX	9070924	PS 640 mA T KNX	9070958
HMT 6 KNX	4900273	HMT 6 S KNX	4900373
HMT 12 KNX	4900274	HMT 12 S KNX	4900374

# Theben AG

## Packaging units

For the optimization of your logistical processes, we offer you the following packaging units in addition to individual packages:

Art.-No.	Type	Number Unit 1	Number Unit 2
0010002	ELPA 1	10	-
0030002	ELPA 3	10	-
0060002	ELPA 6	10	-
0060003	ELPA 6 PLUS	10	-
0080002	ELPA 8	10	300
0090001	ELPA 9	10	-
0200000	THEBEN-ELTIMO 020 S	5	-
0200300	THEBEN-ELTIMO 020 S DCF	5	-
0260030	THEBEN-TIMER 26	10	-
0260855	THEBEN-TIMER 26 IP 44	5	-
0270930	THEBEN-TIMER 27	10	-
0770802	FRI 77 H-2	5	-
0770832	FRI 77 G-2	5	-
1010200	THELUXA R180 WH	48	-
1010201	THELUXA R180 BK	48	-
1010500	THELUXA S150 WH	24	-
1010501	THELUXA S150 BK	24	-
1010505	THELUXA S180 WH	24	-
1010506	THELUXA S180 BK	24	-
1010510	THELUXA S360 WH	24	-
1010511	THELUXA S360 BK	24	-
1010605	THELUXA P220 WH	18	-
1010606	THELUXA P220 BK	18	-
1010610	THELUXA P300 WH	18	-
1019610	THELUXA P300 KNX WH	18	-
1019611	THELUXA P300 KNX BK	18	-
1020681	THELEDA B100L WH	6	-
1020682	THELEDA B100L BK	6	-
1020683	THELEDA B20L WH	12	-
1020684	THELEDA B20L BK	12	-
1020685	THELEDA B30L WH	6	-
1020686	THELEDA B30L BK	6	-
1020687	THELEDA B50L WH	6	-
1020688	THELEDA B50L BK	6	-
1020701	THELEDA D SL AL	16	-
1020702	THELEDA D SUL AL	16	-
1020703	THELEDA D UL AL	16	-
1020704	THELEDA D UDL AL	8	-
1020705	THELEDA D BL AL	6	-
1020706	THELEDA D BL PLUS AL	4	-
1020721	THELEDA S10L WH	24	-
1020722	THELEDA S10L BK	24	-
1020723	THELEDA S20L WH	16	-
1020724	THELEDA S20L BK	16	-
1020741	THELEDA P12L WH	8	-
1020742	THELEDA P12L AL	8	-
1020743	THELEDA P24L WH	8	-
1020744	THELEDA P24L AL	8	-
1020901	THELEDA D S AL	16	-
1020902	THELEDA D SU AL	16	-
1020903	THELEDA D U AL	16	-
1020904	THELEDA D UD AL	8	-
1020905	THELEDA D B AL	6	-
1020906	THELEDA D B PLUS AL	4	-
1020907	THELEDA D B PLUS S AL	4	-
1020921	THELEDA S10 WH	24	-
1020922	THELEDA S10 BK	24	-

Art.-No.	Type	Number Unit 1	Number Unit 2
1020923	THELEDA S20 WH	16	-
1020924	THELEDA S20 BK	16	-
1020931	THELEDA S10 W WH	24	-
1020932	THELEDA S10 W BK	24	-
1020933	THELEDA S20 W WH	16	-
1020934	THELEDA S20 W BK	16	-
1020941	THELEDA P12 WH	8	-
1020942	THELEDA P12 AL	8	-
1020943	THELEDA P24 WH	8	-
1020944	THELEDA P24 AL	8	-
1030031	LUXA 103-200 T	60	-
1030045	LUXA 103-100 UA WH	24	-
1030550	THEMOVA S360-100 AP WH	60	-
1030551	THEMOVA S360-100 AP GR	60	-
1030555	THEMOVA S360-101 AP WH	60	-
1030556	THEMOVA S360-101 AP GR	60	-
1030560	THEMOVA S360-100 DE WH	72	-
1030565	THEMOVA S360-101 DE WH	72	-
1030600	THEMOVA P360-100 UP WH	60	-
1260901	LUNA 126 STAR E	40	-
1420721	BZ 142-1	10	-
1510011	SYN 151 H	5	-
1600001	SYN 160 A	10	-
1610011	SYN 161 D	5	100
1690801	SYN 169 S	5	-
1700130	SELEKTA 170 TOP3	100	-
1710330	SELEKTA 171 TOP3 RC	100	-
1720130	SELEKTA 172 TOP3	100	-
1720330	SELEKTA 172 TOP3 RC	100	-
1740130	SELEKTA 174 TOP3	100	-
1790008	TM 179 H	5	-
1800001	SUL 180 A	10	-
1810011	SUL 181 D	5	100
1880108	SUL 188 HW	5	-
1890108	SUL 189 HW	5	-
1890801	SUL 189 S	5	-
1891801	SUL 189 S 110V	5	-
1900001	MEM 190 A	10	-
1910011	SUL 191 W	5	-
2000050	PRÄSENZLIGHT 180	45	-
2009000	PRESENCELIGHT 360B-KNX WH	45	-
2009050	PRESENCELIGHT 180B-KNX WH	45	-
2010001	COMPACT OFFICE DIM	45	-
2010300	THEPASSA P360-101 UP WH	60	-
2010330	THEPASSA P360 SLAVE UP WH	60	-
2010340	THEPASSA P360-221 DALI UP WH	60	-
2019300	THEPASSA P360 KNX UP WH	60	-
2030110	PLANOSPOT 360 DALI DE WH	72	-
2039100	PLANOSPOT 360 KNX DE WH	72	-
2059102	PLANOCENTRO EWH-A KNX	48	-
2060650	THEMURA S180-100 UP WH	60	-
2060750	THEMURA S180-100 B UP	60	-
2060755	THEMURA S180-101 B UP	60	-
2060760	THEMURA S180 SLAVE B UP	60	-
2060770	THEMURA S180-100 2W B UP	60	-
2070105	THEPREMA P360-101 E UP WH	60	-
2070106	THEPREMA P360-101 E UP GR	60	-

Art.-No.	Type	Number Unit 1	Number Unit 2
2070130	THEPREMA P360 SLAVE E UP WH	60	-
2070131	THEPREMA P360 SLAVE E UP GR	60	-
2070525	THEPREMA S360 DALI UP WH	60	-
2070600	THEPREMA S360-100 E UP WH	60	-
2070601	THEPREMA S360-100 E UP GR	60	-
2070605	THEPREMA S360-101 E UP WH	60	-
2070606	THEPREMA S360-101 E UP GR	60	-
2070630	THEPREMA S360 SLAVE E UP WH	60	-
2070631	THEPREMA S360 SLAVE E UP GR	60	-
2079000	THEPREMA P360 KNX UP WH	60	-
2079001	THEPREMA P360 KNX UP GR	60	-
2079500	THEPREMA S360 KNX UP WH	60	-
2079501	THEPREMA S360 KNX UP GR	60	-
2080020	THERONDA P360-100 M UP WH	60	-
2080025	THERONDA P360-101 M UP WH	60	-
2080030	THERONDA P360 SLAVE UP WH	60	-
2080040	THERONDA P360-110 DALI UP WH	60	-
2080045	THERONDA P360-330 DALI UP WH	60	-
2080520	THERONDA S360-100 UP WH	60	-
2080525	THERONDA S360-101 UP WH	60	-
2080530	THERONDA S360 SLAVE UP WH	60	-
2080550	THERONDA S360-100 AP WH	60	-
2080555	THERONDA S360-101 AP WH	60	-
2080560	THERONDA S360-100 DE WH	72	-
2080565	THERONDA S360-101 DE WH	72	-
2080580	THERONDA S360-110 DALI UP WH	60	-
2089000	THERONDA P360 KNX UP WH	60	-
2690008	SYN 269 H	5	-
4930279	DMB 1 T KNX	40	-
5320001	DIMAX 532 PLUS	40	-
5340001	DIMAX 534 PLUS	5	-
5410130	DIMAX 541 PLUS E	44	-
5420130	DIMAX 542 PLUS S	44	-
6100130	TR 610 TOP3	100	-
6110130	TR 611 TOP3	100	-
6110330	TR 611 TOP3 RC	100	-
6120130	TR 612 TOP3	100	-
6220130	TR 622 TOP3	100	-
7010001	RAMSES 701	10	-
7020001	RAMSES 702	10	-
7030001	RAMSES 703	10	-
7040001	RAMSES 704	10	-
7050001	RAMSES 705	10	-
7060001	RAMSES 706	10	-
7070001	RAMSES 707	10	-
7080001	RAMSES 708	10	-
7090001	RAMSES 709	10	-
7150002	SOTHIS 715	5	-
7410130	RAMSES 741	5	-
7460130	RAMSES 746	5	-
7480130	RAMSES 748	5	-
9070504	AP-RAHMEN LUXA 103-200	90	-
9070510	ABDECKRAHMEN PRÄSENZLIGHT 360	10	-
9070513	AP-RAHMEN PRÄSENZLIGHT	5	-
9070514	AP-RAHMEN COMPACT	5	-
9070627	ABDECKRAHMEN PRÄSENZLIGHT 180	10	-
9070628	ABDECKRAHMEN PRÄSENZLIGHT 180	10	-

Art.-No.	Type	Number Unit 1	Number Unit 2
9070629	ABDECKRAHMEN PRÄSENZLIGHT 180	10	-
9070635	AP-RAHMEN PRÄSENZLIGHT SR	5	-
9070637	AP-RAHMEN COMPACT BK	5	-
9070638	AP-RAHMEN COMPACT SR	5	-
9070760	THELEDA B MOTION MODULE WH	36	-
9070761	THELEDA B MOTION MODULE BK	36	-
9070762	THELEDA B LIGHT MODULE WH	64	-
9070763	THELEDA B LIGHT MODULE BK	64	-
9070765	ERDSPIß THELEDA D	12	-
9070788	ABDECKUNG THEMURA BJBSI WH	126	-
9070789	ABDECKUNG THEMURA JAS WH	126	-
9070790	ABDECKUNG THEMURA MMP WH	126	-
9070791	ABDECKUNG THEMURA GS WH	126	-
9070792	ABDECKUNG THEMURA BS WH	126	-
9070800	THELEDA B MOTION MODULE RC WH	36	-
9070801	THELEDA B MOTION MODULE RC BK	36	-
9070802	THELEDA B REMOTE CONTROL	10	-
9070902	ECKWINKEL THELUXA S WH	96	-
9070903	ECKWINKEL THELUXA S BK	96	-
9070904	ECKWINKEL THELUXA P WH	96	-
9070905	ECKWINKEL THELUXA P BK	96	-
9070906	ABSTANDSRAHMEN THELUXA S WH	156	-
9070907	ABSTANDSRAHMEN THELUXA S BK	156	-
9070908	ABSTANDSRAHMEN THELUXA P WH	168	-
9070909	ABSTANDSRAHMEN THELUXA P BK	168	-
9070910	THESENDA P	80	-
9070911	THESENDA S	80	-
9070969	ECKWINKEL 10 WH	96	-
9070970	ECKWINKEL 10 AL	96	-
9070971	ABSTANDSRAHMEN 10 WH	168	-
9070972	ABSTANDSRAHMEN 10 AL	168	-
9070985	THESENDA B	80	-
9070986	AP-RAHMEN LUXA 103-100 U	54	-
9070987	ECKWINKEL 10 BK	96	-
9070988	ABSTANDSRAHMEN 10 BK	168	-

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# Theben AG

## General Delivery and Sales Conditions

For use with companies (status 2016-09-01)

### Preamble

All deliveries and services are based - also in the future - exclusively on the following conditions, even if we do not refer to them specifically in the individual case. Their validity can only be partly or totally excluded by express written agreement for an individual transaction. General terms and conditions, especially purchase conditions of the purchaser, shall not apply to our deliveries and services. We shall not be bound by these terms and conditions even if we do not object to them expressly in an individual case; we herewith object to them. Our General Delivery and Sales Conditions are regarded as accepted, at the latest with the acceptance of the goods or the service.

### I. SCOPE OF DELIVERY OBLIGATIONS

1. Our offers are non-binding, even if made on the purchaser's request. A legally binding contractual relationship with the purchaser shall only be constituted once we have confirmed the order in writing, which may also be possible by fax, by letters created automatically without signature, or e-mail; the same applies to modifications or amendments to the contract. As far as scope, type and time of the delivery are concerned, our written order confirmation shall be binding.
2. We reserve the right to any modifications of construction, production and design of our products. Our catalogues and our product presentations published on the Internet are continually being updated. Any illustrations and drawings contained therein shall not be binding and shall not be part of the properties agreed upon. They neither represent any guarantee for durability nor quality.
3. The documents belonging to the offer, such as drawings, data sheets, figures, diagrams, files, etc., shall only be approximates where not expressly described as being binding. The documents shall remain our property; we reserve all rights to them. Without our written consent, they must not be disclosed to any third party and they must be returned to us at any time on request.
4. Call orders must be placed and accepted in due time and with the partial quantities agreed. In case of call orders where term, production batch quantities and release times have not been agreed, we shall be entitled to request a binding definition of the releases 3 months after the date of the order confirmation, at the latest. If the purchaser does not comply with this request within 3 weeks, we shall be entitled to grant him a last additional period of two weeks for doing so and when this additional period has lapsed as well, we shall be entitled to withdraw from the contract or to refuse delivery and claim damages. In any case, the entire quantity ordered in the call order has to be accepted and to be paid by the purchaser 18 months after the order, except when otherwise stipulated. If the contractual quantity should be exceeded by the individual calls, we shall be entitled to deliver the surplus, but not obligated to do so. We can charge for the excess at the prices valid at the time of the call or the delivery.

### II. PRICE

1. All prices are quoted in EURO. The applicable value added tax shall be charged separately.
2. The prices quoted apply to delivery ex works, without insurance and packaging.
3. Surcharges and a recalculation of the agreed remuneration shall be admissible as far as they are necessitated by the circumstances, e.g. material costs, wage or energy cost increases, an increase of the public charges etc., and if the goods or services are to be provided later than 4 months after the contract date. In case of any other price increases, the purchaser shall be entitled to withdraw from the contract if the list price has been increased far more than the general costs of living. Any deliveries for subsequent orders that are placed after the date of the price adjustment shall be charged at the new prices without the purchaser being entitled to withdraw from the contract.

### III. DELIVERY

1. The delivery term shall start with the dispatch of the order confirmation, but not before all details of the perfor-

mance of the order have been clarified and not before receipt of an agreed advance payment or provision of material; the delivery terms are always stated by us subject to our own supply by our suppliers. The delivery term shall be deemed to have been complied with when the delivery item has been dispatched or collected before the expiration of this term or when a ready-for-dispatch note has been issued in cases where the goods could not be dispatched or collected without our being responsible for this.

2. In case of force majeure or other events beyond our responsibility that would threaten the smooth processing of the order, in particular delivery delays of our suppliers, disturbances of traffic or operation, industrial disputes, shortage of materials or energy, we shall be entitled to withdraw, entirely or partially, from the contract or to postpone delivery without the purchaser being entitled to claim damages. The purchaser may request from us a statement specifying whether we want to withdraw or whether we want to fulfil the contract within an adequate period of time. If we do not make such a statement, the purchaser shall be entitled to withdraw from the contract. We shall not be liable for the events or circumstances referred to above even if they occur during an existing delay of delivery.
3. In case of a delivery delay for which we are responsible, the purchaser shall grant us an adequate grace period. Once this period has expired, the purchaser may claim damages and/or withdraw from the contract insofar as the goods have not been delivered or indicated as being ready for dispatch until the end of this period. The purchaser is not entitled to withdraw from the contract if delivery delay has not been caused by us.

4. The purchaser is only entitled to claim damages as a replacement for the services if the cause of the damage is based on intent or gross negligence on our part. This does not apply if it is a firm deal.

5. The delivery obligations and the delivery terms shall be suspended as long as the purchaser is in delay with acceptance of the goods or any other obligation, without our rights from the purchaser's delay being thereby affected, or without him exceeding the credit limit granted by us. In this case, the risk of accidental loss or accidental deterioration shall pass to the purchaser from the date he is in delay.

6. The delivery term originally agreed shall no longer apply if the order is modified with our written consent.

7. Adequate partial deliveries as well as deviations from the order quantities (max. +/- 5 %) shall be admissible if the purchaser can be reasonably expected to accept this and as long as the latter's interests are taken into account.

8. The weight and the number of pieces of the goods delivered determined by us shall be decisive for the invoicing.

### IV. DISPATCH

1. The goods shall be dispatched at the purchaser's costs and risk from a location to be determined by us.

2. Unless the purchaser has submitted any special requests, we shall choose, at our own discretion, the packaging, as well as type and channel of dispatch. The additional costs for special wishes of the purchaser shall be borne by the latter. We shall not be obliged to choose the cheapest type of dispatch.

3. If the dispatch or the delivery is delayed upon the purchaser's request, we shall be entitled to set him an adequate period of time for accepting the goods and to demand immediate acceptance as well as a compensation for the damage caused by the delay once this period has lapsed.

### V. TERMS OF PAYMENT

1. Payments shall be made in accordance with the conditions specified in our order confirmation.

2. The purchaser bears the costs for his payment, especially all kinds of banking charges and expenses.

3. Cheques shall be accepted only with the usual proviso. With any type of payment, the settlement date shall be the

day on which we can dispose over the amount due.

4. If a deferment of payment is granted or if the purchaser is in default with his obligations to pay, he shall, in the meantime, be liable to pay interests of 9 percent above the respective basic interest rate, without the need for a reminder notice. We reserve the right to claim further damages due to the delay. The purchaser reserves the right to prove that lower damages have been incurred. Furthermore, we are entitled to charge the purchaser a fixed rate of € 40.00 for the reminder.

5. The purchaser shall not be entitled to offset payments against any counter claims or rights unless his claims or rights are acknowledged by us, uncontested or final and absolute. The purchaser is not entitled to retain payments on account of disputed counterclaims either.

6. All our claims are due immediately if terms of payment are not adhered to, or we become aware of circumstances which appear to impair the creditworthiness of the purchaser. In this case, we are also entitled to supply outstanding consignments on cash-in-advance terms or security deposit, or to withdraw from the contract after a reasonable grace period and/or claim damages for non-fulfilment. In addition, we may prohibit the resale or processing of the goods delivered and request that the purchaser, at his costs, return the goods to us or assign the indirect possession of the goods delivered, and withdraw the authorization to collect claims pursuant to Section IX. 7. Already now, the purchaser agrees that we shall, in the mentioned cases, be authorized to enter into his premises and to take away the goods delivered.

7. Payments shall generally be set off against the oldest invoice that is due for payment. As long as an older invoice has not been paid, the purchaser is not entitled to discount on later invoices.

### VI. COMPLAINTS AND NOTICES OF DEFECT

1. Complaints because of incomplete or incorrect delivery or notices of evident defects must be delivered to us in writing immediately, at the latest, however, within 2 weeks after receipt of the goods. Any other defects must be reported to us in writing immediately, at the latest, however, within 2 weeks after they have been detected. If we have not received the complaint or notice of defect in due time, any warranty claims of the purchaser shall be excluded. In case of defects reported in due time, the purchaser shall be entitled to the claims according to Section VII.

2. In case of damage in transit, the purchaser must procure an ascertainment of the damage by the railroad company, the postal service or the transport company.

3. If a part of the goods delivered is defective, the purchaser shall not be entitled to reject the entire delivery, unless the partial delivery is of no interest to the purchaser.

### VII. WARRANTY

1. The purchaser's claims for supplementary performance shall be time-barred within 12 months from the statutory start of the limitation period. The same applies for withdrawal and diminution. This time limit does not apply if:
  - the law according to § 438 section 1 no. 2 BGB and § 634a section 1 no. 2 BGB requires longer time periods,
  - in case of intent,
  - in case of fraudulent concealment, and
  - in case of non-compliance with a quality guarantee.We shall be obliged, at our option, to eliminate any defects or make a replacement delivery if the delivery items are defective. The purchaser's reimbursement claims for expenses according to § 445a BGB shall also be time-barred within 12 months from the statutory start of the limitation period, provided that the last contract in the supply chain is not a consumer goods purchase. Any legal provisions regarding suspension of expiration, suspension and recommencement of the limitation period remain unaffected. Reimbursement claims against us according to § 445a BGB are only valid if the purchaser has not made an agreement with his customer which goes beyond the statutory claims for defects.

2. The purchaser shall grant us the time and opportunity that, in our equitable discretion, is required for the elimination of the defects. Any parts that are replaced shall become our property.

3. If the supplementary performance fails, if we let the adequate period granted to us for this purpose expire without making a new delivery or without eliminating the defect, or if subsequent performance is impossible or refused by us, the purchaser shall be entitled to withdraw from the contract or demand a reduction of the purchase price, the same shall apply to cases where we are unable to provide supplementary performance.

4. The warranty shall neither apply to defects and/or damage due to normal wear and tear nor defects and/or damage caused by inappropriate or negligent use, excessive stress, improper use, wrong handling etc. or circumstances that are not provided for in the contract unless the damage is due to our fault.

5. Without our consent, warranty claims may not be assigned to any third party.

6. We shall not be liable for any defects caused by improper modifications or repairs that are carried out by the purchaser or a third party.

7. Our liability for essential third-party products shall be restricted to the assignment of the warranty claims we are entitled to from the supplier of the third-party product unless satisfaction from the assigned right fails or the assigned claim cannot be enforced for any other reasons.

8. Unless otherwise provided below, any further claims of the purchaser against us, irrespective of the legal cause thereof, shall be excluded, in particular claims for the compensation of a damage that does not exist and/or occur in the goods delivered themselves (e.g. loss of profit, consequential damage or other economic losses); this exemption from liability shall not apply if liability is required by law because of deliberate action, gross negligence or a promise of guarantee or if an essential contractual obligation has been violated or in case of injuries to life and limb or health.

In case of negligent, but not grossly negligent violation, our liability shall be restricted to the replacement of the typical foreseeable damage.

9. The above provisions shall apply accordingly to the delivery of other goods than those agreed upon in the contract.

#### VIII. LIABILITY, PERIOD OF LIMITATION

1. The exclusion and the limitations of our liability for damages as set forth in Section VII. 8 shall apply accordingly to all cases of our liability for damages due to violation of contractual, or quasi-contractual obligations and tortious act. They shall not apply to claims pursuant to Paragraphs 1 and 4 of the Product Liability Law and to claims due to initial inability to perform at the point of conclusion of the contract or impossibility for which we are responsible. This exemption from liability shall not apply if liability is required by law because of deliberate action, gross negligence or a promise of guarantee or if an essential contractual obligation has been violated or in case of injuries to life and limb or health.

2. If our liability for damages is excluded or restricted, this shall apply in the same way to the personal liability of our executive bodies, employees or authorized agents.

3. The claims of the purchaser referred to in Sec. 1 shall become time-barred after 24 months, calculated from the end of the year of the passing of the risk. If the statutory period of limitation is shorter than 24 months, this statutory period shall be applicable to the relevant claims on the part of the purchaser. This reduction of the period of limitation shall not apply to claims for reasons of tortious act or product liability.

4. The statutory provisions concerning the burden of proof shall remain unaffected.

#### IX. RETENTION OF TITLE

1. All goods delivered (goods subject to retention of title) shall remain our property until all and any claims to which we are entitled because of the business relationship, in particular the outstanding balance claims, have been fully settled by the purchaser. This shall also apply when payments are made on specially designated claims.

2. If the goods subject to retention of title are combined with other goods by the purchaser, we shall acquire co-ownership of the new object pro rata of the invoice value of the goods subject to retention of title to the invoice value of the other goods used. If our ownership lapses due to a combination, the purchaser herewith agrees to assign to us his property rights to the new objects to the amount of the invoice value of the goods subject to retention of title and keeps them for us, free of charge. The resulting co-ownership rights shall be considered as goods subject to retention of title within the meaning of Section 1. We accept the assignment.

3. The purchaser may sell the goods subject to retention of title in the normal course of business at his terms and conditions only if these contain a comprehensive retention of title in accordance with the provisions set forth herein, and as long as he is not in default, provided that the claims from the resale pass to us pursuant to Sections 4. and 6. hereof. The purchaser does not have any other right of disposition of the goods subject to retention of title, in particular the authorisation to dispose of the goods subject to retention of title shall be automatically revoked if insolvency proceedings are applied for or liquidation commenced regarding the assets of the purchaser

4. The claims of the purchaser from reselling the goods subject to retention of title are herewith assigned to us. They serve as security to the same extent as the goods subject to retention of title. We herewith accept the assignment.

5. If the purchaser sells the goods subject to retention of title together with other goods not obtained from us, the assignment of claims from the resale shall only correspond to the amount of the invoice value of the goods subject to retention of title that are sold in the individual case. When goods in which we have a co-ownership share pursuant to Sec. 2. are sold, the claims shall be deemed to have been assigned corresponding to the value of this co-ownership shares.

6. If the purchaser uses the goods subject to retention of title for the execution of a contract for work, Sections 4. and 5. shall apply accordingly to the claims from this contract.

7. The purchaser shall be entitled to collect claims from sales according to Sections 3., 5., and 6. until this permission is revoked by us, which shall be admissible at any time. We will only make use of the right of revocation in the cases specified in Section 3., as well as V. 5. Any other assignment of the claims by the purchaser shall not be permitted. Upon our request, the purchaser shall be obliged to inform his customers immediately about this assignment to us – unless we do it ourselves – and to provide any information and documents required for the collection of claims to us. The purchaser is prohibited from hypothecation or transfer of the goods by way of security.

8. Our retention of title implies that, once all our claims have been fully paid, the title to the goods subject to retention of title shall ipso jure pass to the purchaser and he shall be entitled to the assigned claims without any restrictions. If the value of the existing securities exceeds the secured claims by more than 20 % in total, we shall be obliged to release securities accordingly, at our option, on request of the purchaser. The assessment of securities shall be based on their realizable value.

9. The purchaser shall inform us immediately about any seizure or any other threat or impairment to our ownership rights or claims by a third party and provide the bailiff's return or any other documents to us and he shall do anything within his power to protect our rights.

10. We shall be entitled at any time to enter into the warehouse and the business premises of the purchaser, in order to remove, separate or label the goods subject to retention of title. At our request, the purchaser shall provide any relevant information concerning the goods subject to retention of title and hand over the related documents. The purchaser, at his costs, shall be obliged to provide comprehensive insurance coverage for the goods subject to retention of title in our favour and to supply evidence thereof on request. He herewith assigns all claims from these insurances to us; we accept the assignment.

11. The assertion of our retention of title or the revocation of the authorizations granted herein shall not be considered as a withdrawal from the contract. The purchaser's right of possession in the goods subject to retention of title expires if he does not meet his obligations arising from this or another contract. We shall then be entitled to take possession of the goods subject to retention of title ourselves and to exploit them in the best possible way by means of a private sale or an auction, without prejudice to the payment obligations or any other duties of the purchaser. The proceeds thus realized shall be appropriated to the purchaser's outstanding payments after the costs have been deducted. Should there be any surplus, this shall be paid to the purchaser.

12. If the retention of title or the assignment is not effective under the law to which the goods belong, the corresponding security valid in this field of law shall be deemed as agreed. If the cooperation of the purchaser is required in this context, he shall take any measures that are necessary for the constitution and preservation of such rights.

#### X. TOOLS

1. Tools, moulds, appliances and the like - in the following referred to as "tools" - are in principle our assets, even if the purchaser had paid for these wholly or partially. This shall apply irrespective of whether the tools were manufactured by us or by commissioned third parties.

2. We undertake not to manufacture any parts for third parties using tools for which the purchaser has paid the entire cost, providing the purchaser supplies us with follow-up orders. This obligation expires without a claim for reimbursement of any type against us arising for the purchaser if we do not receive further orders within two years after the last order.

3. We shall store the tools in good condition free of charge. The purchaser shall bear the costs of maintenance and repairs. Our obligation to store the tools shall come to an end after expiry of the two-year period stated in Sec. 2. We shall be entitled to dispose of the tools afterwards.

4. The provisions above (Sections 1 to 3) shall not apply to tools for common and generally usable items.

#### XI. PROTECTIVE RIGHTS OF THIRD PARTIES

Insofar as we have to manufacture products on the basis of drawings, specifications, models, or samples given to us by the purchaser, the purchaser takes upon himself the responsibility of guaranteeing to us that the rights of third parties are not infringed upon. In case of violation, the purchaser will indemnify us in full from any claims by third parties and fully reimburse us for any resulting damages. If a third party claims its industrial property rights we are entitled to stop the manufacturing or delivering of the items immediately without checking the legal situation.

#### XII. MISCELLANEOUS PROVISIONS

1. The place of performance and jurisdiction for both parties under the contract is D-72401 Haigerloch, Germany. We are also entitled to file an action against the purchaser at the purchaser's general place of jurisdiction.

2. All legal relations between the purchaser and us shall be governed exclusively by law of the Federal Republic of Germany.

3. Should one or several of the provisions of these terms and conditions or the other contractual provisions be or become invalid, this shall not affect the validity of the remaining provisions. The invalid provisions shall be interpreted in such a way that the legal and economic purpose intended with them is achieved to the greatest possible extent. The same shall apply if, during the execution of the agreement, a gap in the agreement requiring an amendment becomes evident. The contracting parties undertake to replace the ineffective provisions immediately by legally valid provisions or to close the contractual gap.

4. We shall store the purchaser's data for the purposes of the contractual relationship.

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+49 7474 692-369  
KNX-Hotline: +49 7474 692-394  
Monday to Thursday 7.00 am to 6.00 pm,  
Fr 7.00 am to 4.00 pm

9900600 0620 We reserve the right to make technical modifications and improvements.

