Smart Lighting Illuminating the Extreme Space

KNX Intelligent Control System Product Manual

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Sensor

Brand New "KNX Secure" Security Technical Standard

To address the system control security challenges brought about by the increasing automation, intelligence, and digitization degree of residential and building construction, the KNX Association has launched the KNX Secure security technical standard. Based on the secure encryption communication protocol and EN50090-3-4, the standard complies with AES128CCM encryption standard, and has passed VDE information security certification. KNX Secure provides dual protection, and extends the IP protocol, with the telegrams and data fully encrypted. KNX Data Secure protects user data from unauthorized access and manipulation.

All series products of Honeywell intelligent lighting system comply with the brand new KNX Secure security technical standard and apply to key departments with high security requirements as data centers and financial department. The control security level is increased to the highest international encryption standard to effectively block hacker intrusions, and ensure the control security of building electrical equipment.

Overview

In the current rapidly developing era, the building is not only a work and living space, but also a leading edge of technological innovation. Technologies such as the Internet of Things, big data, and artificial intelligence drive the transformation of building automation systems from traditional single control to intelligent, integrated, and efficient mode, to significantly improve the operational efficiency and management level, and provide users with a comfortable and convenient experience.

In the composition of building automation system, the intelligent lighting system has unique charm and plays an important role. As the advocate and practitioner of KNX international standard, our system seamlessly integrates with various building automation systems due to its high flexibility, extensibility, and strong compatibility. This integration breaks the limits of traditional lighting and adds innovative features such as intelligent dimming, to make the building residents feel convenient and comfort with the intelligent means.







KNX Intelligent Control System

complete building energy management solution with the KNX platform. As an advanced and comprehensive building and home automation system, KNX achieves efficient management and control of the building and smart home through a unified communication protocol and distributed architecture.



Technical Features:

The KNX system is based on bus communication technology, where all equipment is connected through a unified communication line (e.g., twisted pair cable or power wire) to form a communication network. Data is transmitted in the form of telegrams on the bus, and each equipment connected to the KNX system has a unique address for mutual identification and communication.



System Advantages:

Strong compatibility: KNX can be integrated with various equipment, systems, and platforms for easy management and control.

High stability: With years of development and improvement, the KNX system has high stability and reliability.

High level of intelligence: It intelligently controls the equipment through the smart control center.

Good safety: It can be integrated with various security systems to provide the security guarantee.



Control Mode:

It supports scene, schedule, and remote control. For the scene control, it enables users to adjust multiple sets of equipment to the set status by one click. For the schedule control, it allows the equipment to automatically execute specific actions according to the settings. For the remote control, it allows users to control the equipment through mobile phones and tablets, etc. anytime and anywhere.



The Only Open International Standard in the Field of Home and Building Control

KNX has become the standard of Europe (CENELEC EN50090 and CEN EN13321-1), international community (ISO/IEC 14543-3), China (GB/T20965-2013 Control network HBES technical specification - Home and building control system) and the U.S. (ANSI/ASHRAE135) and the only global standard for home and building control systems.

KNX Intelligent Control System

Integrating

Lighting Control, Shading, Temperature Control, **Energy Efficiency**

Honeywell's overall solution connects the best products in various subsystem fields, We invite customers to join us on a new journey of intelligent lighting solutions and create a new chapter in smart buildings together



Lighting Control

- We have achieved the multiple controls of lighting through KNX intelligent technology, including intelligent switch and intelligent dimming.
- It controls the light switch based on the data from existing sensors, adjusts the brightness according to the purpose of the lighting, makes full use of natural light, and uses the illumination Sensor to keep the indoor brightness constant. It achieves the unity of energy conservation and comfort, and creates a good lighting environment.
- It adjusts the intensity of artificial lighting according to the incident sunlight, dynamically adjusts the brightness and color temperature based on factors such as ambient light and personnel activities and achieves the maximized utilization of energy by relying on energy-saving optimization algorithms.

HVAC System Control

- HVAC accounts for 40-60% of commercial buildings' energy consumption, so precise control of HVAC systems can significantly save energy costs. It provides control and connection of building equipment in conjunction with Honeywell building management system.
- Based on the characteristics of the building, it sets a schedule to control the start and stop of the air conditioning system, and adjusts the temperature set point and schedule according to the pedestrian flow and occupancy status, to ensure the optimal balance between air quality, comfort, and energy conservation in the building.







with KNX.







Shading and Curtain Control

- It improves user comfort through the automatic sunshade and time-based louver control, and supports linkage with the air conditioning system.
- Associates the opening and closing status of windows through time scheduling.
- Captures or blocks the sunlight by adjusting the window blinds to ensure that the energy can be saved under illumination.
- Adjusts the blinds based on the sensor to determine the position of the sun to use the natural light to the greatest extent and adjust the brightness of the lighting fixtures.





Visual Analysis Data

The system can be accessed and controlled at a single point from both inside and outside the building at any time.

Performs intelligent control within the area through a 4-inch smart control panel arranged in the area.

You can control the whole intelligent system on a central monitoring interface provided by the Honeywell system on the PC terminal to achieve the intelligent control of the whole office area at one end.

System Full Connection

Honeywell BMS's Building energy Management Suite is perfectly integrated

KNX can easily integrate lighting and curtain control with Honeywell building management system, to ensure the good compatibility and minimize the integration difficulty and costs.

The various parts of the building are interconnected and share data, with the great potential for energy conservation, which is conducive to achieving the energy optimization goal.

Energy Management

All building control subsystems can be connected to Honeywell's Building energy Management Suite.

It breaks down the isolated data island and combines the energy consumption data with lighting, shading, and air conditioning control. It real-timely monitors and records the energy consumption data of each lighting equipment, and also generates the detailed energy consumption reports. These reports provide users with intuitive energy consumption analysis basis, which helps them find energy consumption abnormalities and formulate improvement measures.

Users can also set energy-saving targets based on the energy consumption data in the reports and track their implementation effectiveness.

Security

Honeywell attaches great importance to the network security and adopts the KNX secure encryption communication protocol. The product complies with the high-level encryption standard AES128CCM, has passed VDE security certification and provides dual protection for IP and data to block threats such as hacker intrusion.

It guarantees the system operation security and supports the on-site manual switching. In case of remote control failure or maintenance, engineering personnel can manually turn on and off the power on site. When an emergency alarm is triggered, the curtains can be linked and switched to the emergency lighting system.

System Architecture



SOLUTION

Office Building



- The KNX intelligent system automatically adjusts the operation of air conditioner, lighting, and other equipment based on changes in the internal and external environment of the office building, to thereby achieve the goal of energy conservation and emission reduction;
- Automatically adjusts indoor parameters based on work hours and personnel density, to create a comfortable and efficient environment and visual effect. It supports one click switching between various scenarios such as meetings and breaks to meet various requirements.
- Centrally manages and controls various equipment inside the office building to improve the management efficiency and convenience of engineering personnel;
- A healthy, comfortable, energy-efficient, and environmentally friendly building environment boosts LEED green building certification and WELL healthy building certification for buildings.



- Based on the requirements of different regions and business types, it performs personalized artistic lighting design, and integrates lighting art with commercial space to create a unique, comfortable and attractive atmosphere, and enhance the image and value of the mall.
- It automatically adjusts parameters such as brightness and color temperature of lighting based on factors such as environment, pedestrian flow, time, and user demands to reduce energy consumption.
- It also manages the combination of fresh air and air conditioning based on the building control system to improve the environmental quality and enhance the customer experience.
- It remotely operates and manages all equipment to improve the management efficiency of engineering personnel and reduce store complaints.

Hospital

Airport

manner

- operating room.



Shopping Mall and **Shopping Center**





It controls areas such as the emergency hall, inpatient building, operating room, public passage lobby, and garage in a centralized or decentralized

Adjusts the brightness according to the ambient light and personnel activities, sets the scene modes according to the characteristics and requirements of different departments and also automatically controls the fresh air and air conditioning system based on room temperature and air quality.

Considers the contactless and automatic sensing control methods in priority for waiting and corridors.

In case of emergencies, it maintains sufficient lighting brightness for the

Intelligently controls the areas such as public passage and garage through vehicle movement sensing and brightness sensor, while reducing lighting brightness during off-peak hours to further reduce energy consumption.

With the circuit current detection function, it monitors whether the lighting circuit is faulty to improve the airport operation efficiency; it utilizes the natural light sensing to maximize energy conservation and minimize consumption; Reduces operating costs: The intelligent control system helps to remotely monitor and manage the equipment, timely detect and resolve problems, and reduce maintenance and operating costs;

KNX security protocol certified products greatly improve the security of airport lighting control systems.

SOLUTION

Subway



- It automatically controls through the sensing equipment and provides a comfortable working and travel environment for station staff and passengers taking the subway;
- The KNX intelligent system combines time logic, constant brightness and human body sensing control for full and reasonable use to reduce unnecessary energy consumption;
- With the circuit current detection function, it monitors whether the lighting circuit is faulty to improve the efficiency of subway operation; provides multiple open interfaces for easy access to the subway management platform;

Stadium

Museum



- maintenance costs.

Data Center



- It is unattended and needs to keep the basic illumination to save energy and . also facilitate normal operation.
- Sets scenes according to different areas and creates a soft and comfortable lighting environment by adjusting brightness.
- Saves energy and reduces the power density.
- KNX security protocol certified products greatly improve the security and stability of data center lighting control systems, to ensure the normal operation of lighting equipment even in complex and changing environments.





Implements fiber optic networking through IP routers to solve the wiring problems of large venue area, long distance, and multiple circuits, and greatly reduce cable usage.

By using various control methods such as panel control, sensor control, and timed control, it greatly improves the efficiency of venue management while effectively reducing energy consumption.

It sets the scenes according to different sports events and performance tasks, etc., and meets the lighting requirements of different occasions.

It considers the issue of light damage for the lighting environment of museum to control the illumination and exposure within the standard range, so as to the protect the cultural relics

Divides the areas finely, and controls different exhibits in groups according to different angles and lighting sources;

Meets different cultural relic display requirements with a configuration solution easy to update.

Counts the running time of each group of lights cumulatively, sets thresholds and issues an alarm message before reaching the critical point. The system is fully intelligent and automatically adjusts and controls the exhibition hall environment according to holidays and peak pedestrian flow. Saves the energy during operation to reduce the operation and

SOLUTION

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Industrial Plant



- . The industrial plant is a major energy consumer with prominent requirements for energy conservation and environmental protection. Through intelligent control optimization, energy conservation and consumption reduction, it reduces the electricity fees, and alleviates the power supply pressure.
- It controls centrally to improve the management efficiency:
- . The rotation control of lighting fixtures extends their service life on the basis of basic application lighting;
- Adjusts the brightness of lighting and ambient temperature according to different production environments, time periods, and weather conditions to ensure a suitable lighting environment.
- The system timely alarms in the event of a fault to enable the maintenance personnel to troubleshoot it to reduce the equipment losses accordingly.
- KNX security protocol certified products greatly improve the safety and . stability of lighting control systems in the power plant.
- It centrally controls equipment through the touch screen to improve the plant . management efficiency;
- It displays the environmental monitoring of PM2.5, temperature, humidity and VOC carbon dioxide on the instrument panel to provide a securer production and working environment.



KNX Secure Switch Actuator

HKX-R04-16-N-S HKX-R08-16-N-S HKX-R12-16-N-S

> KNX Secure switch actuator is mainly used in building control systems, and installed together with other loads through the KNX bus to form a system to mainly control switch loads, e.g., lighting, heating control, signal loads, etc.

Product Features

- Manual control switch .
- Time function: Delay on/off .
- Stair lighting function with features of warning and adjustable stair lighting time
- Scene and preset control: 8 bits/1 bit .
- Logical operations: AND, OR, XOR, gate functions .
- Status value query reply •
- Override operation and safety insurance function •
- Threshold function setting
- Control of electric heating valve
- Selection of relay switch position after bus voltage . disconnection and restoration
- Output inversion .
- Supports KNX security

Technical Data

Power Supply			
Bus voltage	21~30VDC, obtained through KNX bus		
Bus current	<6.5mA/24V, <5.5mA/30V		
Bus power consumption	<165mW		
Charging current	<20mA		
Output			
Number of channels	4/8/12		
Un rated voltage	250VAC(50~60Hz)		
In rated current	16A		
Surge impact current	480A/2ms		
Output Lifespan Count			
Mechanical Lifespan Count	>10 ^a cycles		
Electrical Lifespan Count (Resistive load)	>10 ⁵ cycles		



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Connection				
(NX	Bus connection terminal			
oad connection terminal	Screw wiring terminal			
Cable cross section	0.2~6.0mm²			
Operation and indication				
Red LED and button	Physical address distribution			
lashing green LED	It indicates that the equipment application	n layer operates normally		
Contact position indication	Contact closing - channel ON			
contact position indication	Contact opening - channel OFF			
Protection grade				
P20	In accordance with EN60529			
Security level				
I	In accordance with EN61140			
Temperature range				
Operation	−5° C~+45° C			
itorage	-25° C~+55° C			
Fransportation	-25° C~+70° C			
Ambient conditions				
lumidity	<93%, non-condensation			
Installation method				
DIN rail module component	35mmDIN rail, modular installation			
Model	Size	Weight		
HKX-R 04-16 -N-S	72× 90× 64mm	0.35kg		
HKX-R 08-16 -N-S	144× 90× 64mm 0.60kg			
HKX-R 12-16 -N-S	216× 90× 64mm 0.85kg			

* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Model	Load type	Power	Lifespan Count
	Incandescent light	4000W	>30000
HKX-Rxx- 16 -N-S	Standard/Electronic ballast	4000W	>30000
xx=04/08/12	Motor	2200W	>30000
	LED light (surge current 470A/210us)	800W	>30000

*Note: The loads above are only applicable to a single lighting fixture. When multiple lighting fixtures are connected in parallel, the loads which can be carried will be reduced. Although the output power remains unchanged, the instantaneous surge current will increase, which may easily melt the relay contacts. During normal use, the output is capable of carrying 16A resistive load at most and slightly lower inductive and capacitive loads.

Model and Description

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Product model	Product descrip
HKX-R 04-16 -N-S	KNX Secure switch KNX bus, 21-30VD
HKX-R 08-16- N-S	KNX Secure switch KNX bus, 21-30VD
HKX-R 12-16- N-S	KNX Secure switch KNX bus, 21-30VD



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actuator, 4 channels, control switch load, 16A, 250VAC, C power supply, 72X90X64mm, 0.35kg

actuator, 8 channels, control switch load, 16A, 250VAC, C power supply, 144X90X64mm, 0.60kg

actuator, 12 channels, control switch load, 16A, 250VAC, C power supply, 216X90X64mm, 0.85kg

Dimension Diagram (mm)



HKX-R**04⁻ 16**-N-S



64.0 mm

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HKX-R08-16-N-S



HKX-R**012-16**-N-S



HKX-R04-16-C-S HKX-R08-16-C-S HKX-R12-16-C-S

KNX Secure switch actuator with current detection is mainly used in building control systems, and installed together with other loads through the KNX bus to form a system to mainly control switch loads, e.g., lighting, heating control, signal loads, etc.

Product Features

- Manual control switch
- Time function: Delay on/off
- Stair lighting function with features of warning and . adjustable stair lighting time
- Scene and preset control: 8 bits/1 bit
- Logical operations: AND, OR, XOR, gate functions .
- Status value query reply
- Override operation and safety insurance function
- Threshold function setting
- Control of electric heating valve
- Selection of relay switch position after bus voltage disconnection and restoration
- Output inversion .
- Supports KNX security
- Current detection .

Technical Data

Power Supply		
Bus voltage	21~30VDC, obtair	
Bus current	<6.5mA/24V, <5.	
Bus power consumption	<165mW	
Charging current	<20mA	
Output		
Number of channels	4/8/12	
Un rated voltage	250VAC(50~60Hz	
In rated current	16A	
Maximum load loss	1.5W/2.5W/4W	
Current detection range	90mA~16A	
Minimum detection load	20W	
Current detection accuracy	±5% and ± 20mA	





ned through KNX bus .5mA/30V

Connection			
KNX	Bus connection terminal		
Load connection terminal	Screw wiring terminal		
Cable cross section	0.2~6.0mm²		
Operation and indication			
Red LED and button	Physical address distribution		
Flashing green LED	It indicates that the equipment application	n layer operates normally	
Green LED normally ON	It indicates that the relay power supply is ch	arging or during the power-on delay period	
Contact position indication	Contact closing - channel ON		
Contact position indication	Contact opening - channel OFF		
Temperature range			
Operation	−5° C~+45° C		
Storage	–25° C~+55° C		
Transportation	-25° C~+70° C		
Ambient conditions			
Humidity	<93%, non-condensation		
Load type	Power	Lifespan Count	
Incandescent light	4000W	>30000	
Electronic ballast	4000W	>6000	
Motor	2200W	>30000	
LED light (surge current 470A/210us)	800W	>30000	

* Notes:

1. We will not give a further notification in case of any update and change to the product design and specifications.

For relay parameters, the loads above are only applicable to a single lighting fixture. In the case of multiple lighting fixtures connected in parallel, the loads that can be carried will be reduced. Although the power remains unchanged, the instantaneous surge current will increase, which can easily melt the relay contacts. Therefore, the measured current shall prevail during normal use, and the maximum impulse current measured must be within the allowable range.



	-					216.	0 mm	1
1		m	∞	∞	a	~~~	∞	∞
90.0 mm	0	0	0	0	0	0	0	0

Dimension Diagram (mm)





HKX-R**04-16**-C-S

Model and Description

Product model	Product description
HKX-R 04⁻16- C-S	KNX Secure switch actuator with current detection, 4 channels, control switch load, 16A, 250VAC, KNX bus, 21-30VDC power supply
HKX-R 08-16 -C-S	KNX Secure switch actuator with current detection, 8 channels,control switch load, 16A, 250VAC, KNX bus, 21-30VDC power supply
HKX-R 12-16- C-S	KNX Secure switch actuator with current detection, 12 channels, control switch load, 16A, 250VAC, KNX bus, 21-30VDC power supply



HKX-R**08-16**-C-S





HKX-R**012-16**-C-S

KNX Secure Dimming Controller

HKX-D04-16-L-S

KNX Secure 4-channel 1-10V dimming controller directly controls the channel brightness with the data stored in the memory. The brightness data stored in the memory is pre-set by programming software based on the brightness distribution features of the light. The control circuit of the dimmer converts the brightness data value into output voltage or current to achieve the brightness control.



Protection grade	
IP20	
Temperature range	
Operation	−5° C~+45° C
Storage	–25° C~+55° C
Transportation	-25° C~+70 $^{\circ}$ C
Ambient conditions	
Humidity	<93%, non-conde
Installation method	
35mm DIN rail, modular installation	
Size and specification	
144× 90× 64mm	
Weight	

0.5kg

* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Product Features

- Switch lighting function
- Relative dimming function
- It controls the brightness of the lighting fixtures
- Status report
- 15 scenes

- Stair light functionPreset function and preset
- save function
- Bus reset function
- Manual switch/dimming
- Supports KNX security



Technical Data

Power Supply		
Bus voltage	21~30VDC, obtained through KNX bus	
Bus current	<9mA/24V, <8.5mA/30V	
Bus power consumption	<255mW	
Charging current	<20mA	
Output		
Channels	4 channels of independent switch/dimming	
Output voltage	1~10VDC (suction type), max. output 100mA per channel	
Contact switching current	16A/250VAC	
Connection		
KNX	Bus connection terminal	
Output	16 screw binding posts, 8 terminals connected to 4 channels of 1-10V common ground and 1-10V output, 8 terminals connected to 4 channels of switches	
Operation and indication		
Red LED and button	Physical address distribution	
Flashing green LED	It indicates that the equipment application layer operates normally	

Dimension Diagram (mm)



Model and Description

Product model	Product descript
HKX-D 04-16- L-S	Honeywell KNX Sec control, 4 channels,



otion

ecure 4-channel 1-10V dimming controller, brightness s, 1-10V output voltage, KNX bus, 21-30VDC power supply

KNX **Bus Power Supply**

HKX-PW-640

KNX bus power supply is mainly used in the intelligent control system to achieve 640mA bus power supply, provide and monitor the voltage of the KNX system.



Product Features

- 640mA bus power supply •
- Provides and monitors the voltage of KNX system •



Technical Data

Power Supply	
Input voltage	100~240VAC, 50~60Hz
Efficiency	≥80%
Output	
KNX output	1 circuit (with electric reactor)
KNX voltage	30V+1\/-2VDC, SELV
Auxiliuary power supply output	1 circuit (without electric reactor)
Auxiliary voltage	30±1VDC, SELV
Rated current for normal output of KNX and auxiliary power supply	640mA, short circuit protection
Continuous short-circuit current	<1.5A
Power-off output buffer time	>200ms
Operation and indication	
Reset button	22s delayed reset function (press the reset button>0.5s to reset the KNX bus voltage)
Red LED1 (reset)	Reset bus
Green LED2 (ON)	Normal operation
Red LED3(I>Imax)	Overload/ short circuit (I>Imax)
Green LED4	It indicates the current level 1, $0 \le I \le 100$ (± 20) mA

Green LED5	It indicates the current level 2, 160 \leq I<320 (± 20) mA
Green LED6	It indicates the current level 3, 320 \leq I<640 (±20) mA
Green LED7	It indicates the current level 4, 640≤I <imax< td=""></imax<>
Wiring method	
Power input terminal	3 terminals, connected with the screw binding posts
Cable cross section	Single-core 0.5~2.5mm ²
Cable cross section	multi-core 0.5~1.5mm ²
KNX voltage output terminal	Bus connection terminal 1 (red/black)
Auxiliary power supply output terminal	Connection terminal 2 (yellow/white)
Temperature range	
Operation	−5° C~+45° C
Storage	–25° C~+55° C
Transportation	–25° C~+70° C
Ambient conditions	-
Humidity	<93%, non-condensation
Installation method	
35mm DIN rail, modular installation	
Size and specification	
90×72×64mm	
Weight	
0.3kg	
Enclosure, color	
Plastic enclosure, off-white	

* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Dimension Diagram (mm)



Model and Description

Product model	Product descript
HKX-PW- 640	KNX bus power suppl 100-240VAC power





oly, 640mA, auxiliary power supply 30VDC, KNX bus, r supply, 90X72X64mm, 0.3kg

KNX **DALI Gateway**

HKX-DALI-01 HKX-DALI-02

> KNX DALI gateway can achieve functions such as switching, dimming, and scene control for various lighting fixtures with DALI ballasts. Meanwhile, the DALI gateway can guery the status and detect faults of DALI equipment.

Product Features

- Each output channel supports 64 DALI equipments, enabling users to separately perform operations such as switching, dimming and setting brightness values for each DALI equipment.
- Global scene control: Each output channel has 16 scenes available for calling or storage, and the brightness values of the scenes are configured by the commissioning tool (DCA).
- Group control: Each output channel can be configured with 16 different groups, and the allocation of equipment in each group is implemented by ETS or the commissioning tool. The system enables users to perform operations such as switching, dimming and setting brightness values for each group, and supports the color temperature adjustment.
- Group scene control: Each group can be assigned with 8 KNX scenes or 16 DALI scenes. The brightness of KNX scenes is configured by ETS, and the brightness of DALI scenes is configured by the commissioning tool.
- Each output channel can be configured with 8 operation templates, and the switching and dimming control of each DALI equipment and DALI group can be with reference to the template configuration or based on the ECG's own configuration.
- Status inquiry and response, e.g., switch, brightness, running time, etc.
- Error detection of DALI equipment ballasts and lighting fixtures .
- DALI bus voltage, DALI bus current, and DALI bus short circuit monitoring .
- Channel broadcast control: It enables users to perform operations such as switching, dimming and setting brightness values for all DALI equipment in the channel.

Technical Data

Power Supply		
Bus voltage	21~30VDC, obtained through KNX bus	
Bus static current	10.1mA/30VDC, 12.3mA/24VDC	
Bus standby power consumption	<360mW	
Auxiliary supply voltage	100-240VAC, 50/60Hz	
Auxiliary power input current	<55mA,220VAC	
Auxiliary power input power consumption	<12W,220VAC	
DALI output		
1/2 channels	64 DALI equipments per channel	
Single channel current	≤250mA	
Load voltage	15~19VDC	
Distance between gateway and DAL equipment: (Cross section of cable - distance)	0.5mm² ~100 m	
	1.5mm ² ~300 m	





Connection KNX

	Screw binding post
Auxiliary power supply and output	Used wire diameter
	Torque 0.5N·m
Operation and indication	
Programming button and red LED	Physical address d
Flashing green LED	It indicates that the
LED (Tele.)	Quick flashing india Flashing during cor message data The normally ON li
LED (Status)	The ON LED indicates that the entire chann buttons A and B and t for single channel eq Flashing LED, indicato
Test/Set button	Short-pressing <5s: unconnected DALI Long-pressing >5s:
Protection grade	
IP20, EN60529	
Temperature range	
Operation	−5° C~+45° C
Storage	-25° C~+55° C
Transportation	-25° C~+70 $^{\circ}$ C
Ambient conditions	
Humidity	<93%, non-conder
Installation method	
35mm DIN rail, modular installation	
Size and specification	
72×90×64mm	
Weight	
0.25kg	
Enclosure, color	

Plastic enclosure, off-white

* Note: We will not give a further notification in case of any update and change to the product design and specifications.





Model and Description

Product model	Product description
HKX-DALI- 01	Honeywell single-channe KNX bus, DCA, 21-30VD
HKX-DALI- 02	Honeywell dual-channel KNX bus, DCA, 21-30VD

Bus connection terminal

r 0.5~2.5mm²

istribution

e equipment application layer operates normally

cates initiating DALI bus

mmunication indicates that the DALI bus has received the

ght indicates that the DALI bus initiation has been completed

s that the entire channel switch is turned on, and the OFF LED indicates lel is closed. It is only applicable to the control indicators of channel the broadcast switch control indicators of the channel (only A is available quipment) es that the DALI gateway is initializing

: Turn on/off all equipments on the DALI bus, to test the equipment

To re-initialize the DALI bus.

nsation

KNX/DALI gateway, brightness control, dual channel, DALI bus,

KNX RS485 Protocol Gateway

HKX-MODBUS-01

KNX RS485 protocol gateway is mainly used in the intelligent control system, to achieve communication between Modbus/RS485 and KNX bus.



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Product Features

- Configurable communication related basic parameters, e.g., baud rate, data bits, stop bits, parity bits, etc.
- The channel supports 500 unidirectional-function points, with independently configurable direction and the corresponding point's name and data type (supporting 1 bit/2bits/4 bits/1 byte/2 bytes)
- Can serve as Modbus master equipment, read register data from slave equipment, and communicate with KNX
- Can serve as Modbus slave equipment to upload data from KNX equipment to the host equipment or BA system
- Can serve as a regular gateway, only for data conversion, without communication mechanism and logical processing
- Supports electric curtains from the manufacturer Dooya

Technical Data

Power Supply			
Bus voltage	21~30VDC, obtained through KNX bus		
Bus current	<12mA/30VDC		
Bus power consumption	<360mW		
Auxiliary power supply			
Voltage	12-30VDC		
Current	<60mA/30VDC		
Power consumption	<1.8W		
Connection			
KNX	Bus connection terminal		
Auxiliary power supply	Screw binding post		
RS485	Screw binding post		

Cross section of cable	0.2~2.5mm ²	
Torque	0.4N∙m	
Operation and indication		
Channel power indicator LED	Yellow light, norm	
Channel communication indicator LED	Flashing red light,	
	Flashing green ligh	
Programming button and LED	Red light, for phys	
Temperature range		
Operation	−5° C~+45° C	
Storage	−25° C~+55° C	
Transportation	-25° C~+70 $^{\circ}$ C	
Ambient conditions		
Humidity	<93%, non-conde	
Installation method		
35mm DIN rail, modular installation		
Size and specification		
72×90×64mm		
Weight		

0.17kg

* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Dimension Diagram (mm)



Model and Description

Product model	Product descript
HKX-MODBUS- 01	KNX RS485 protocol 21-30VDC power s

al power supply of the corresponding channel

KNX message ->Third-party protocol message

nt, third-party protocol message->KNX message

ical address distribution

nsation

otion

bl gateway, MODBUS, RS485, protocol conversion, KNX bus, supply, 72X90X64mm, 0.17kg

KNX **IP Router**

KNX IP RTR SEC

The compact KNX IP router provides data connectivity between Ethernet KNX IP lines (main or backbone line) and KNX TP bus (branch). The basic functions of an IP router is to couple Ethernet with one or more KNX-TP buses and use electrical isolation between Ethernet and KNX-TP buses. This equipment supports **KNX IP Security protocol.**





* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Connection Diagrams

Product Features

- Efficient connection between KNX IP and TP network, multi-channel communication. •
- The encryption technology and secure authentication are adopted to ensure data security. .
- Strong data processing ability, fast, accurate, stable and reliable. •
- Simple configuration for easy monitoring of operational status.
- Wide compatibility; it can be connected to multiple equipment and integrated with other systems. •

Technical Data

Power Supply		
Bus voltage	30V DC KNX bus	
Bus current	Approximately 20mA/30V DC	
Bus power consumption	Generally 600mW	
Communication	KNX	
Temperature range		
Operation	-5°C ~ +45°C	
Storage	-20° C ~ +70° C	
Ambient conditions		
Humidity (non-condensation)	5-93%	
Installation method		
35mm DIN rail, modular installation		







Coupler Functions (KNXnet/IP Routing)

KNX IP RTR SEC operates as a line or backbone coupler. In both cases, the local area network (IP) is used as the backbone network.

The table below compares the application scope of KNX IP router with classical topology structures.

	Classic topology	Regional IP coupling	Line IP coupling
	structure (without IP)	(IP area coupler)	(IP line coupler)
Area	ТР	IP	IP
(Backbone network)	KNX line coupler	KNX IP router	Directly passing
	(Up to 15 pcs)	(Up to 15 pcs)	LAN switch
Coupler	ТР	ТР	IP
Main line	KNX line coupler	KNX line coupler	KNX IP router
	(up to 15x158 pcs)	(up to 15x158 pcs)	(up to 225 pcs)
Coupler	ТР	ТР	ТР





The independent address assigned to KNX IP RTR SEC determines whether the equipment operates as a line coupler or an area coupler. If the format of the independent address is x.y.0 (x, y: 1. 15), the router will operate as a line coupler. If the format is x.0.0 (x: 1. 15), the router will serve as a backbone coupler.



KNX IP router as an area coupler

If KNX IP RTR SEC is used as an area coupler (x.0.0), there must be no KNX IP routers in the topology below it. For example, when the independent address of a KNX IP router is 1.0.0, there shall not be a KNX IP router with address 1.1.0.

If KNX IP RTR SEC is used as a line coupler (x,y,0), there must be no KNX IP router in the topology above it. For example, when the independent address of a KNX IP router is 1.1.0, there shall not be a KNX IP router with an address of 1.0.0.



KNX IP router has a filtering table that helps to reduce bus load. The filtering table (8kB) supports an extended group address range (main group 0.. 31), and is automatically generated by ETS. Due to the speed difference between Ethernet (10/100 MBit/s) and KNX TP (9.6 kBit/s), more messages can be transmitted on IP. If multiple consecutive messages are transmitted on the same line, they must be cached in the router to avoid message loss. KNX IP RTR SEC can store 150 pieces of messages (from IP to KNX).

Model and Description

Product model	Product descript
KNX IP RTR SEC	KNX IP router, efficie 30V power supply, k

KNX IP router as a line coupler

KNX IP router as an area and line coupler

ion

iently connecting KNX bus and IP network, KNX bus, 90X18X60mm, 0.4kg

KNXSecure Multi-functional Actuator

HKX-C04-S

KNX Secure multifunctional actuators are mainly used in building control systems to connect load equipment to achieve output functions such as switches, curtains and fans, etc.



000000

Product Features

- Switch output; it connects some electrical loads such as lighting, sockets, and . heating control, supporting time functions such as ordinary switch, delay/flashing/stair lighting, scene control, logic operation, status value query and reply, electric heating valve control and manual switch output, etc.
- Curtain AC/DC output; it connects some motorized window blinds, awnings, roller . blinds, curtains and vertical blinds, etc., and supports functions of vertical movement, blinds adjustment, scene control, automatic sun protection, safety protection function and current position status recovery, etc.
- Valve control; it connects 2-pipe or 4-pipe fan coil systems and controls the cooling . valve and the heating valve to separately output by relay. It supports three types of valve control and functions of fault status sending, valve characteristic curve correction/automatic adjustment function (only applicable to continuous valves), heating valve or cooling valve disabling/enabling, valve position status feedback or query and manual or automatic valve cleaning, etc.
- Fan control; it connects single-phase fans, supports up to 3-speed adjustment and supports functions of level 1, level 2, and level 3 fan speed adjustment, step switch, change-over switch operation modes, automatic/manual fan speed operation and status feedback.

Technical Data

Power Supply	
Bus voltage	21-30VDC, obtained through the KNX bus
Bus current	<9mA/24V, <8mA/30V
Bus power consumption	<240mW
Charging current	<20mA
Connection	
KNX	Bus connection terminal (red/black)
Output torminal	Connected with screw binding posts
output terminat	Wire diameter of $0.2-2.5$ mm ² and torque of 0.4 N-m
Operation and indication	
Programming button and red LED	Physical address distribution
Flashing green LED	It indicates that the equipment application layer operates normally
Manual operation button	Switching output
Output LED	It indicates the output status
Manual/Automatic button	Press it to switch the manual/automatic operation mode

Manual/Automatic LED	It indicates the manual/automatic mode st	atus
Protection grade		
IP20 EN60529		
Temperature range		
Operation	−5° C~+45° C	
Storage	-25° C~+55° C	
Transportation	–25° C~+70° C	
Ambient conditions		
Humidity	<93%, non-condensation	
Installation method		
35mm DIN rail, modular installation		
Enclosure, color	Plastic enclosure, off-white	
Installation	35mm DIN rail, modular installation, DIN E	N60715
Size	36 X 90 X 64mm	
Weight	0.20kg	
Output		
Up to 4 channels of switching outputs fan output/2 channels of heating, cool be configured separately	/2 channels of curtain AC outputs/1 chann ing or 2-pipe system outputs/1 channels of	els of curtain DC output/1 channels of 4-pipe system output; each output can
Un rated voltage	230VAC (50~60Hz)	
In rated current	6A	
Surge impact current	192A/1.2ms	
Output Lifespan Count		
Mechanical Lifespan Count	>1×10 ^a	
Electrical Lifespan Count (Resistive load)	>5×10'	
Load type	Power	Lifespan Count
Electronic ballast	600W	>6000
Motor	370W	>20000
LED light (surge current 260A/120us)	450W	>30000
*Notes 1. We will not give a further notification in case of any update and change to the product design and specifications. 2. For relay parameters, the loads above are only applicable to a single lighting fixture. In the case of multiple lighting fixtures connected in parallel, the loads that can be carried will be reduced. Although the power remains unchanged, the instantaneous surge current will increase, which can easily melt the relay contacts. Therefore, the measured current shall prevail during normal use, and the maximum impulse current measured must be within the allowable range.		

Dimension Diagram (mm)

Model and Description

Product model	Product descrip
НКХ-С 04 -S	KNX Secure 4-chann valve output, KNX

anual/	automatic	mode	status	



ion

nel 6A multifunctional actuator, switch, curtain DC/AC, fan, bus, 36X90X64mm, 0.2kg

KNX **General Input Module**

HKX-104

KNX general input module is mainly used in building control systems and is installed together with KNX bus and other equipment to form a system, providing functions easy and intuitive to operate. It enables users to plan and execute these functions according to their own needs.



Product Features

- Switching and dimming . functions
- Controlling the blinds .
- . Sending values, e.g.,
- temperature, water level Invoking and storing scenes
- Triggering LED report operation .
- Multi-operation function
- Fixing the switch sequence operation . Standard counting and differential .
- counting functions



Technical Data

Power Supply	
Operating voltage	21~30VDC, obtained through the KNX bus
Input/Output	
KNX	Bus connection terminal (red/black)
4 channel buttons	Key functions can be configured separately
4 channel LEDs	LED functions can be configured separately
Key scanning voltage	20VDC
Key scanning current	0.5mA
LED output voltage	5VDC
LED output current	Max. 2.5mA, with a resistance limit of $2K\Omega$ in series
Security	Short circuit protection, overload protection, reverse voltage protection
Connection	
Input/Output	Two five-bit lines, approximately a length of 30cm, with a maximum length of 10m
KNX	Bus conenction terminal

Operation and indication	
Programming button and red LED	Physical address
Flashing green LED	It indicates that t
Temperature range	
Operation	−5° C~+45° C
Storage	-25° C~+55 $^{\circ}$ C
Transportation	-25° C~+70 $^{\circ}$ C
Ambient conditions	
Humidity	<93%, non-conde
CE standard	
Compliance with EMC standards and	low-voltage standa
Certification	
KNX certification	
Installation method	
National standard 86 embedded wall b	ottom box or Euro
Size and specification	
46.4×46.4×11.7mm	
Weight	
0.05kg	

*Note: We will not give a further notification in case of any update and change to the product design and specifications.

Dimension Diagram (mm)



Model and Description

Product model	Product descript
НКХ- Ю4	KNX general input i 86/80 embedded w

distribution
he equipment application layer operates normally
ensation
rds, and compliance with EN50491-5-1, -5-2
pean standard 80 embedded wall bottom box



tion

module, 4 channel buttons/LED, KNX bus, 21-30VDC, wall bottom box, 46.4X46.4X11.7mm, 0.05kg

KNX Secure Intelligent Panel

HKX-MP04-D-S HKX-MP06-D-S HKX-MP08-D-S



KNX Secure intelligent panel is mainly used in building control systems to achieve functions such as switching and dimming control of actuator through buttons.



- Switching and dimming
- Curtain control
- Value sending
- Scene control
- Shifting register
- RGB, RGBW and color temperature control
- Multiple operationsDelayed value sending
- RTC sending operation mode
- Character string sending
- Logical output, scene group
- conversionRGB LED indication function
- Hangwell

Technical Data

Power Supply	
Bus voltage	21~30VDC, obtained through the KNX bus
	<12.2mA/24V, <10.0mA/30V(4 keys)
Bus current	<15.1mA/24V, <12.2mA/30V(6 keys)
	<18.4mA/24V, <14.9mA/30V(8 keys)
	<300mW(4keys)
Bus power consumption	<366mW(6keys)
	<447mW(8keys)
Input	
2-channel external inputs; can serve as the dry contact input or 10K NTC input	
Wiring method	
KNX	Bus connectioin terminal

Input	Screw binding post torque 0.4N·m, wire
Temperature range	
Operation	−5° C~+45° C
Storage	–25° C~+55° C
Transportation	−25° C~+70° C
Ambient conditions	
Humidity	<93%, non-conde
Size and specification	
86×86×33mm	
Weight	
0.09kg	

* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Dimension Diagram (mm)

The size of the 4/6/8-key KNX intelligent panel is the same, and only the 8-key panel is used as an example here for description.





Model and Description

Product model	Product descri
HKX-MP 04 -D-S	KNX Secure 4-key <10.0mA/30V, 21-
HKX-MP 06 -D-S	KNX Secure 6-key <12.2mA/30V, 21-
HKX-MP 08 -D-S	KNX Secure 8-key <14.9mA/30V, 21-



ption

- intelligent panel, KNX bus, bus current<12.2mA/24V, -30VDC power supply, 86X86X33mm
- intelligent panel, KNX bus, bus current<15.1mA/24V, -30VDC power supply, 86X86X33mm
- intelligent panel, KNX bus, bus current<18.4mA/24V, -30VDC power supply, 86X86X33mm

KNX **Intelligent Touch Panel**

HKX-TP04-D

KNX intelligent touch panel is mainly used in intelligent control systems to display status and control various KNX equipment.



Product Features

- 4.0-inch color IPS, resolution 480x480, capacitive touch screen design
- Switching, dimming, curtains, scene, value sending, switch indication function .
- Temperature controller function
- Air conditioner control
- Background music module control .
- RGB, RGBW, RGBCW control and color temperature adjustment .
- . Control of fresh air and underfloor heating
- Displays the air quality detection value .
- Displays energy monitoring value
- Cycle timer; it enables users to modify the triggering time of the timer on the screen . Scene group function .
- Logical function; supports AND, OR, XOR, logic gate forwarding, threshold comparator, . conversion of different data types
- Home page navigation function .
- Alarm function .
- Time and date display, temperature and humidity display, daytime/nighttime signal . output
- Proximity sensing, screen brightness adjustment, color light bar indication, touch . vibration feedback
- Functions of password protection, screen saver and screen lock; the clock and electronic . album are optional for the screen saver, or the screen saver may not be used.

Technical Data

Power Supply		
Bus voltage	21~30VDC, obtained by KNX bus	
Bus current	<4.5mA/24VDC, <4mA/30VDC	
Bus power consumption	<120mW	
Auxliliary power supply		
Voltage	24~30VDC	
Current	<86mA/24VDC, <71mA/30VDC	
Power consumption	<2.2W	

Connection	
KNX	Bus connection ter
Auxiliary power supply	KNX auxiliary powe
Temperature range	
Operation	−5° C~+45° C
Storage	-25° C~+55° C
Transportation	-25° C~+70 $^{\circ}$ C
Ambient conditions	
Humidity	<93%, non-condensa
Proximity sensing distance	
Approximately 30 cm	
(This distance is obtained based on hu	man detection as a r
Installation method	
National standard 86 embedded wall b	oottom box or Europ
Size and specification	
86x101.3x10.5mm	
(This size is the thickness of the front p	panel, and the overa
Weight	
0.2kg	

* Note: We will not give a further notification in case of any update and change to the product design and specifications.

Dimension Diagram (mm)



Model and Description

Product model	Product descript
HKX- T P 04 -D	KNX intelligent touc 24-30VDC auxiliary

rminal (red/black)

er supply terminal (yellow/white)

ntion

eference, not obstructions.)

ean standard 80 embedded wall bottom box

Il thickness of the 4-inch intelligent touch panel is 32.2mm.)



ion

ch panel V4, 4.0-inch color IPS, resolution 480x480, power supply, wall mounted installation, 0.2kg

KNX Secure PIR Motion/illumination Sensor

HKX-PIR-A

KNX PIR motion sensor adopts PIR (Pyroelectric Infrared) technology, with built-in motion detection sensor and illumination sensor.

The illumination sensor measures the current illumination. In addition to supporting normal illuminance control functions, it also supports constant illuminance control functions. At the same time, illuminance and motion can be flexibly combined for control. In addition, it also integrates temperature controller function, logic function, and scene group function, to meet more complex and diverse control and application needs. It is mainly used in occasions with requirements for illumination control or motion detection, such as office, hotel or home.



Operation and indication	
Programming button and red LED	Physical address dis
Flashing green LED	It indicates that the
Temperature range	
Operation	-5° C~+45 $^{\circ}$ C
Storage	-25° C~+55 $^{\circ}$ C
Transportation	-25° C~+70 $^{\circ}$ C
Ambient conditions	
Humidity	<93%, non-condens
Installation method	
Ceiling mounted/embedded installation, compatible with 80 or 86 boxes	
Size and specification	
Φ70x51.5mm	
Weight	
0.05kg	
Note: We will not give a further notification	in case of any update an

Product Features

- Ordinary Passive Infrared Sensor, only detects obvious movement behaviors
- Supports master-slave operating mode
- Up to 4 channels of motion detection function configurable, with the first channel supporting three-level control
- Provided with a built-in illumination sensor, and controls the lighting according to the illumination threshold. It can also be linked with motion detection for logical control
- Supports sending different motion detection messages based on day/night configuration
- Supports constant illumination control
- Supports temperature controller function for heating/cooling systems, and also supports additional heating/cooling valve control
- Supports logic and scene group functions
- Supports KNX security protocol

Technical Data

Power Supply

rower Suppry		
Bus voltage	21~30VDC, obtained by KNX bus	
Bus current	<6.5mA/24V; <5.5mA/30V	
Bus power consumption	<165mW	
Connection		
KNX	Bus connection terminal (red/black)	
Detection range		
Illumination	0-2000lux	
Temperature	0-40°C	
Humidity	20~90%	

Dimension Diagram (mm)



Model and Description

Product model	Product descrip
HKX-PIR-A	KNX PIR Motion/ill Ø 70x51.5mm, 0.0



and change to the product design and specifications.

otion

lumination Sensor, PIR, KNX bus, 21-30VDC power supply, D5kg



Excellent Building, **Optimal Response Smart Building, Gives You the Future**

The intelligent lighting system is perfectly integrated with the building management system to achieve efficient unified management, to ensure that the program is validated, runs stably and reliably, and allows you to use it worry free and with peace of mind.

Relying on the full visibility provided by the KNX platform, it is convenient for monitoring; the indicator evaluation is more conducive to optimizing the lighting effects; with the strong controllability, it meets diverse needs to achieve predictive maintenance, and reduce the risk of fault.

Extreme Space

Smart Building, Intelligent Life **Intelligent Lighting, Illuminates the**



KNX INTRODUCTION

What is KNX?

(

International Standard of Home & Building Automation

- KNX controls Light, Shutter and HVAC
- The system is built up from several modules, for Inputs (switches, buttons), Outputs (lights, shutters) and User Interfaces (Touchscreens)
- All modules are communication on data line (BUS) and using the same KNX protocol
- KNX Protocol is internationally standardized and used by more than 500 manufacturers
- All Products from all manufacturer can be connected
- All Modules can be programmed by one software tool ETS



NX protocol nanufacturers

KNX FUNCTION

Lighting Controll

- Time and Sensor controlled lighting
- Light scenes
- Daylight management
- Presence simulation

Temperarure Controll

- User adjustable Setpoint
- Time depending temperature
- Occupancy depending
- Fan Coil controll

Shutter Controll

- Time depending open / close
- Protect blinds by wind
- Sun light blocking

Visulaisation



Connected



Energy Managment





Full controll from one central touchscreen Controll by mobile devices from in and outside the building Weather and Traffic information on screen

• Full integrated in Honeywell Niagara One system for all applications One single point of controll for full building

Connected to Honeywells advanced energy managment systems

TOP LEVEL ARCHITECTURE



Inputs

2/4/8 gang Wall Modules

Thermostat Wall Module

Digital Inputs

Touchscreen / Mobile App

Presence Sensors

System Devices

Power Supply

Line Coupler

IP Gateway

Outputs

Light Switching

Light Dimming

1-10V Analog

Fan Coil Unit

Roller Shutter

Gateways

2CH DALI

USE CASES ENERGY SAVING





Artificial Lighting is constant on 24 hours a day. We waste energy.

Switching the light off / dimming when you don't need it by KNX system. Areas: Staircases, corridors, and

other spontaneously used areas of building

Temperature

Up to

50%



Heating and cooling system is working even in the nonworking time or people are not in the room.

Demand-based energy usage via KNX to combine the heating & cooling system, daylight, and Timer program with temperature profile or even via the presence signals.



Shading



Manually control the shading/shutter according to solar and light intensity.

Presence dependent shading provides cooling while the sun's heat can stream into empty rooms during the winter by KNX system.

USE CASES COMFORT AND SAFETY

Proper Lighting



The light is too bright or too dim, always requires manually adjustment all the time.

Lighting dimming control through sensor or brightness to automatically adjust the lighting strength according to surroundings.

Cozy ambiance



Whole day workshop in the meeting room, for a while, attendances feel too hot and often need to adjust the air condition and shutter height to make the room cooler

Control sun and shade with the options of programming or sensing through the KNX platform. To avoid the sunshine heating the room to rise the temperature. Occupants will enjoy comfort that will make them forget how hot or cold it is outside.

Safety



When I go out for business travel and be absence for a while, I have safety concern on my properties.

Holiday presence, makes you feel comfortable and safety.



TOP LEVEL ARCHITECTURE



Inputs

2/4/8 gang Wall Modules

Thermostat Wall Module

Digital Inputs

Touchscreen / Mobile App

Presence Sensors

System Devices

Power Supply

Line Coupler

IP Gateway

Outputs

Light Switching

Light Dimming

1-10V Analog

Fan Coil Unit

Roller Shutter

Gateways

2CH DALI

KNX SW 0816 - MULTIFUNCTION SWITCH MODULES





One fits all Light, Shutter and FCU Configurable by ETS software



Small width

Only 4 TE (modular spaces) for 8x16A, Smallest in the market e.g., Schneider 8TE Reduces size of Distribution Board



Touch surface

For Manual operation during commissioning No tools required



Fast and easy installation Sustainable due to constant contact pressure



Technical characteristics / Technische Daten

Supply voltage	Versorgungsspannung	30V DC KNX Bus
Min. time between 2 switching operations in series	Mindestintervall zwis- chen 2 aufeinander folgenden Schaltvor- gängen	50 ms
Dimensions	Abmessungen	6x17.5mm
Operating temperature	Betriebstemperatur	-5 °C> + 55 °C
Storage temperature	Lagertemperatur	-20 °C> + 70 °C
Degree of protection	Schutzart	IP 20
Total Power (Max) (cos φ = 1)	Gesamtleistung (Max)	15kW
Standards	Normen	EN 60669-2-1 EN IEC 63044-5-1 EN IEC 63044-5-2
		0.2mm ² ->2.5mm ²

KNX PWR 640 POWER SUPPLY AND KNX DALI 2CH GATEWAY





Technical characteristics / Technische Daten

Supply voltage	Versorgungsspannung	150265 V ~
KNX supply	KNX-Versorgung	30 V DC KNX Bus
Outputs	Ausgänge	DA1: 17V DC DALI Bus (260 mA max) DA2: 17V DC DALI Bus (260 mA max)
Dimensions	Abmessungen	71 x 90 x 59.6 mm
Protection class	Schutzart	IP30
Operating temperature	Betriebstemperatur	-5 °C> + 55 °C
Storage temperature	Langertemperatur	-25 °C -> + 70 °C
Electrical connection	Anschlusskapazität	 D.2mm²→2.5mm²



• Max. 64

-````_`-```_``_`

KNX DIM 4CH 300W DIMMER N (LOW- AND HIGHPOWER MODE)





Technical characteristics / Technische Daten

Supply voltage	Versorgungsspannung	21~30V DC KNX Bus
Working current	Stromaufnahme	20mA/30V DC
Input voltage	Eingangsspannung	AC100~240V, 50/60Hz
Communication	Kommunikationsproto- koll	KNX
User control	Lokle Bedienung	Manual operation for each channel
Output channel	Ausgangskanäle	4CH
Power per channel	Ausgangsleistung pro Kanal	0—> 300W (Resistive/capacitive load)
External Environmen	t / Außenumgebung	
Operating temperature	Umgebungstemperatur	-5°C> +50°C
Operating relative humidity	Umgebungsluft- feuchtigkeit	≤90%
Storage temperature	Lagertemperatur	-20°C> +60°C
Storage relative humidity	Lagerluftfeuchtigket	≤93%
Specifications / Spez	ifikationen	
Dimensions	Abmessungen	90*144*64(mm)
Net weight	Gewicht	412g
Housing material	Gehäuse Material	Flame-retardant nylon
Installation	Installationsart	DIN rail installation
Degree of protection	Schutzart	IP20
Standards	Standards	EN 60669-1 EN 60669-2-1 EN IEC 61000-3-2 EN IEC 61000-3-3 EN IEC 63044-3 EN IEC 63044-5-1 EN IEC 63044-5-2
Diameter of KNX tern Durchmesser KNX Ar	ninal 🔤 🔤	0.6> 0.8mm
Line in/out terminals Durchmesser 230V A	nschlüsse	2.5 -> 4mm ²

KNX DIM 6CH 0-10V1-10V ANALOGUE OUTPUT



Technical characteristics / Technische Daten

Supply voltage	Versorgungspannung	21~30V DC KNX Bus
Working current	Stromaufnahme	15mA/30V
Input voltage	Eingangsspannung	120V/240V AC, 50/60Hz
Output channel	Ausgangskanäle	6CH, 10A/CH
Dimming output	Ausgangstyp	0~10VDC, 24mA/CH
Communication	Kommunikation	KNX
Shut-off way	Shut-off way	Impulse type self-locking relay shut-off way
Electrical life time	Elektrischer Lebenszyklus	>100000
Mechanical life time	Mechanischer Lebenszyklus	>100000
External Environment	/ Außenumgebung	
Operating temperature	Umgebungstempera- tur	-5°C> +50°C
Operating relative humidity	Umgebungsluft- feuchtigkeit	<u>≤90%</u>
Storage temperature	Lagertemperatur	-20°C ->+60°C
Storage relative humidity	Lagerluftfeuchtigket	≤93%
Specifications / Spezi	fikationen	
Dimensions	Abmessungen	144*90*64(mm)
Net weight	Gewicht	449g
Housing material	Gehäuse Material	Nylon
Installation	Installationsart	DIN rail installation
Degree of protection	Schutzart	IP20
Standards	Standards	EN 60730-1 EN IEC 63044-3 EN IEC 63044-5-1 EN IEC 63044-5-2
Diameter of KNX term Durchmesser KNX Ans	inal Schuluss	0.6 -> 0.8mm
Line in/out terminals Durchmesser 230V Ar	nschlüsse	2.5 -> 4mm ²



14



7 independent floor heating control channels Up to 7 digital temperature sensors supported

• 2 DC0-10V output channels (10mA/CH)

HKLS-IO24 AND KNX INP 4/8 INPUT MODULES



	Supply vol
	Dimensior
	Degree of
	Operating
	Storage te
	Standards
СH1 CH2 CH3	
	-
СН7	



Technical Characteristics / Technische Eigenschaften

Contact current	Bestehender Kontakt	0,5 mA	
Supply voltage	Versorgungsspannug	30 V DC (TBTS, SELV,ZLVS)	
Dimensions	Dimensionen	38 x 35 x 12 mm	
Degree of protection	Stärke des Schutzes	IP 20	
Operating temperature	Betriebstemperatur	-5°C + 55 °C	
Storage temperature	Aufbewahrungs temperatur	-20 °C → + 70 °C	
Standards	Elektrische Sicherheit	EN 62368-1 EN 60669-2-1 EN 50491-5-1 EN 50491-5-2	



KNX TIMER



Functions:

- For roller shutter control
- For HVAC control
- Recall light scenes
- Multiple routines:
 - yearly, monthly, weekly, daily
- Master/Slave for syncronisation



Technical characteristics /	/ Technische Daten
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Supply voltage	Versorgungsspannung	21~30V DC KNX Bus	
Working current	Stromaufnahme	10mA/30V DC	
Communication	Kommunikation	KNX	
External Environmen	t / Außenumgebung		
Operating temperature	Umgebungstemperatur	-5°C> +50°C	
Operating relative humidity	Umgebungsluft- feuchtigkeit	≤90%	
Storage temperature	Lagertemperatur	-20°C> +60°C	
Storage relative humidity	Lagerluftfeuchtigket	≤93%	
Specifications / Spez	ifikationen		
Dimensions	Abmessungen	144*90*64(mm)	
Net weight	Gewicht	240g	
Housing material	Gehäuse Material	Nylon	
Installation	Installationsart	DIN rail installation	
Degree of protection	Schutzart	IP20	
Standards	Standards	EN IEC 61000-6-1 EN IEC 61000-6-3	
		0.6> 0.8mm	

KNX LN CPL LINE COUPLER

M Ho	neywe KN			
Main 📢	- Bus-	C Sub		
Main 🔇	Traffic	ົງ 🌍 Sub		
GpA) (О ис	🕑 PhA		
LED		Prog	ľ	
		KNX		

KNX

Technical characteristics / Technische Daten

Supply voltage	Versorgungsspannung	21~30V DC KNX Bus	
Communication	Kommunikation	KNX	
Main line current	Hauplinien Stromaufnahme	<30mA	
Sub line current	Linien Stromaufnahme	3mA	
External Environmen	t / Außenumgebung		
Operating temperature	Umgebungstemperatur	-5°C>+50°C	
Operating relative humidity	Umgebungsluft- feuchtigkeit	≤90%	
Storage temperature	Lagertemperatur	-20°C> +60°C	
Storage relative humidity	Lagerluftfeuchtigket	≤93%	
Specifications / Spez	ifikationen		
Dimensions	Abmessungen	90*36*70(mm)	
Net weight	Gewicht	68.4g	
Housing material	Gehäuse Material	ABS	
Installation	Installationsart	DIN rail installation	
Degree of protection	Schutzart	IP20	
Standards	Standards	EN IEC 63044-5-1 EN IEC 63044-5-2	
		0.6 -> 0.8mm	



KNX IP RTR SEC IP ROUTER SECURE

	Supply voltage	Versorgungsspannung	21~30V DC KNX Bus	
	Working current	Stromaufnahme	5mA/30V DC	
	Power consumption	Leistungsaufnahme	typ. 520mW, max. 800mW	
• •	Communication	Kommunikation	KNX	
External Environment / Außenumgebung				
() Hongwell	Operating temperature	Umgebungstemperatur	-5°C>+50°C	
ANK Mode	Storage temperature	Lagertemperatur	-20°C> +60°C	
С) 197 197	Relative humidity (non-condensing)	Umgebungsluft- feuchtigkeit	≤93%	
RTR • Constant of the second	Specifications / Spezifikationen			
e Pa	Dimensions	Abmessungen	90*36(2SU)*70(mm)	
	Net weight	Gewicht	66g	
	Housing material	Gehäuse Material	ABS	
	Installation	Installationsart	DIN rail installation	
	Degree of protection	Schutzart	IP20	
	Standards	Standards	EN IEC 63044-5-1 EN IEC 63044-5-2	
		>	06-209mm	



KNX BT 2/4/8 AND KNX BT TEMP WALLMODUELS



Nova



Nova Elements



Pure White 2 Gang



Piano Black 8 Gang



Aluminium 4 Gang



Matt Black

SENSORS



- Functions:
 - Presence detection for Lighting Control and HVAC
 - Easy Maintenance due to manual change of parameter
 - Adjustable sensitivity
 - Coverage extension by Master/Slave mode
 - PID Regulation of light level
 - Flush and Surface mount version
 - Long range corridor version

TECHNICAL S

Elect Supply voltage / Versorgungs Current consumption / Strom Funct Lighting output operation tim Brightness threshold / Einste Detection range / Erfassungs Recommended installation di Empfohlener Installationsabs Hole size required / Erforder

Operating temperature / Bet Storage temperature / Lager Safety class / Elektrische Sic Protection index / Mechanisc

SPECIFICATIONS / TECHNISCHE SPEZIFIKATIONEN				
ctrical Specifications / Elektrische Spezifikationen				
sspannung	30VDC			
naufnahme Verbrauch	8mA (max)			
tional characteristics / Funktionale Eigenschaften				
ne / Betriebszeit des Beleuchtungsausgangs	1s 18h			
ellbereich der Lichtstärke	0 65000 lux			
sbereich	9m *			
listance from ground stand vom Boden	2,5m 3,5m			
liche Lochgröße	Ø 80mm			
Environment / Umgebung				
riebstemperatur	-10 °C +45 °C			
temperatur	-20 °C +60 °C			
herheitsklasse	11			
che Sicherheitsklasse	IP20			





Direct KNX Connection

No additional Hardware or Gateway required



Integrated I/Os Local connections can be directly

Local connections can be directly connected



Two LAN adapter

Separate Networks for Cloud service and local maintenance



Integrated Temp sensor Can be used for local temperature control



Integrated Webserver

Mobile devices can be connected, no further server Hardware required

TEC schnical characteristics schnische Eigenschafter PU rözessor AM perterplatz torage ertagerung iperating System etriebssystem upply Voltage peisungsspanng creen Size ildschirmagröße creen Resolution ildschirmagröße resolution ildschirmagröße creen Resolution ildschirmagröße resolution ildschirmagröße creen Resolution ildschirmagröße ildschirmagröße ildschirmagröße ildschirmagröße ildschirmagröße ildschirmagröße resolution ildschirmagröße ildschirmagröße ildschirmagröße resolution ildschirmagröße ild

Protection Class Schutzklasse Operating Temperatur Arbeitstemperatur Operating Humidity Arbeitsfeuchtigkeit Electrical Connectio

CHNICAL SPEC	CIFICATIONS / TECHNISCHE SPEZIFIKATIONEN
n	
	Quad Core ARM Cortex - A35 CPU
	2GB
	8GB eMMC
	Android 8.1
	12V DC
	10,1.
	1280px x 800px
	Capacitive Touch / Kapazitive Berührung
	2 x 8 Ohm - 2 Watt
	5Digital Inputs / 5 Digitale Eingabe
	2 x 8A Latching Relay / 2 x 8A Stromstoßrelais
zung	2 x 10/100 Base-Tx Ports / 2 x 10/100 Base-Tx-Anschlüsse
	10K NTC
	Yes / JA
	285,2mm x 190mm x 48,2mm
	IP 20
	0°C - +45°C
	5% - 90% at 25°C
	0.2mm ² ->2.5mm ²









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Conference Room				
8	8	U	¢.	
SmartHome	Scenarios	Security	Settings	

WHY KNX



- High Quality designed in UK
 Well accepted in the market
 British Standard design for
 - Wallmodules common installation



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- World leading supplier for Building Technology
- Used in more than 10 Million Buildings
- Global Footprint, but local feed on the street
- Connect to HBT Niagara Framework
- Integrated into Honeywell advanced cloud solutions
- Advanced Energy management functions





Single point of control No Server Hardware required No License fees Encrypted mobile connection



One fits all Light, Shutter and FCU Reduced stock at partner Small width to reduce cost DB Touch surface for Manual operation Screwless Connectors Fast, easy and safe

One fits all 300W – 1400W per Channel Reduced stock at partner Min. Load <1W

Small diameter of 88mm Integrated analog light sensor for daylight depending dimming Screwdriver Adjustment for easy maintenance