

TEMPERATURE & HUMIDITY CONTROLS

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Digital Thermostat

Type ALE

SAGINOMIYA releases new digital thermostat type ALE.

Features

- High brightness white backlight LCD display
- Available 0.1°C pitch display (select 0.1°C / 0.5°C / 1°C)
- Max. 4 ON/OFF points during 24 hours model available.
- Free power supply (85 to 264V.AC)
- MODBUS communication
- Forced ON/OFF

Applications

- Prefabricated refrigerator / Freezer
- Cold storage
- Kitchen equipment
- Commercial gardening installations
- Food processing equipment
- Laboratory
- Industries application, etc.

Specifications

Power supply voltage	: 85 to 264V.AC
Power consumption	: 5VA or less
Contact function	: SPST
Contact capacity	: 250V.AC 10A (cos φ=1) : 250V.AC 6A (cos φ=0.7) : 250V.AC 3A (cos φ=0.4)

Ambient temperature	: -10 to 50°C
Ambient humidity	: 90%RH or less
Back up data	: Preset values, Calibration values
Setting method	: Independent ON/OFF set point, Set by UP/DOWN keypads



Standard (1 Step)

2 Step



1 Step +
Hi/Lo Limit with time delay

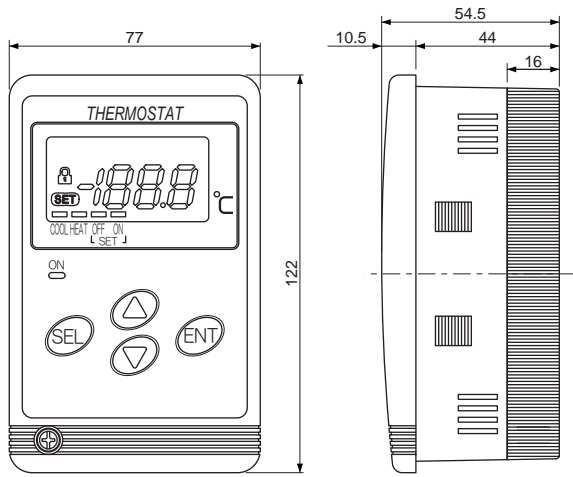
1 Step +
Programmable

Standard Type Number Selection

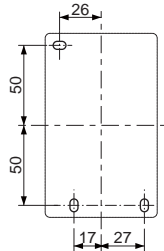
Catalog No.	Temp. Set Range (°C)	Differential (°C)	Temp. Indication (°C)	Function	Sensor Part No. (Standard)	Wt. (kg)
ALE-SD11-011	-50 to 30	Min. 0.5	-55 to 40	Standard(1 Step)	TEK-83H609 (with 2m lead)	0.2
ALE-SD12-011				2 Step		
ALE-SD13-011				Hi/Lo Limit with time delay		
ALE-SD14-011				Programmable		
ALE-SD21-011	0 to 100	Min. 0.5	0 to 110	Standard(1 Step)	TEK-83H601 (with 2m lead)	0.2
ALE-SD22-011				2 Step		
ALE-SD23-011				Hi/Lo Limit with time delay		
ALE-SD24-011				Programmable		

Temperature sensor and sensor holder are supplied as standard accessory.

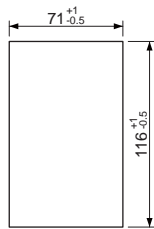
Dimensions



Wall Mount
Installation Dimension

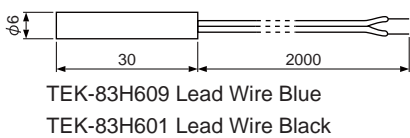


Panel Cut Dimension

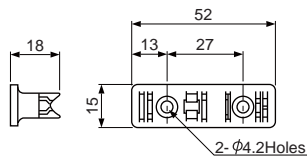


Standard Accessory

Standard Sensor

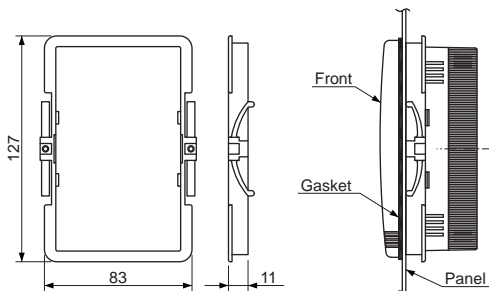


Sensor Holder



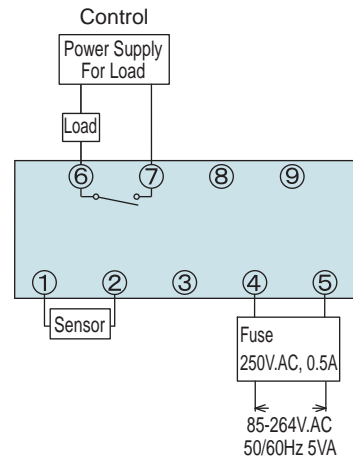
Option Parts (ALE-AA02)

Panel Mount Bracket
including Gasket

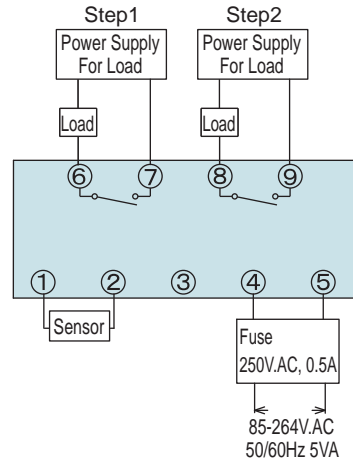


Wiring Diagram

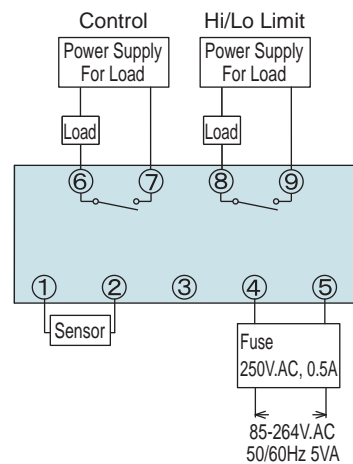
Standard (1 Step)
1 Step + Programmable



2 Step



1 Step +
Hi/Lo Limit with time delay



NOTES FOR SAFETY

Failure to read and follow all instruction carefully before installing or operating the product could cause personal injury and/or property damage.

Specifications are subject to change without notice.

TEMPERATURE CONTROLS

REMOTE / DIRECT SENSING

Type LWS, FWS, RWS & EWS

SAGInoMIYA

GENERAL DESCRIPTION

- Most suitable model can be selected from the variations of wide temperature range with either adjustable or fixed differential. Narrow differential is further advantageous.
- Sensing elements are air sensed and liquid sensed type depending on control media. Also, sensing element can be selected from remote or direct type depending on application.
- Single pole double throw contacts allows use for either heating or cooling application, with large contact rating as well.
- Adjusting mechanism is driver adjusting type as standard on delivery, but a knob assembly and a concealed plate are also supplied as standard accessories.

UL listed (available upon request)



Type LWS



Type EWS

TYPE NUMBER SELECTION (SPECIFICATIONS)

Type LWS – Set high type with standard remote sensing element

Unit: °C

Catalog No.						Temp. Adjusting Range		Differential		Bulb Size (mm)	Ambient Temp.	Limit of Bulb Temp.	Wt. (kg)
Type	Contact	Model	Differential	Rating	Capillary Length	Min.	Max.	Min.	Max.				
LWS-	C1	030	A (Variable)	G	Standard L1 (L = 1m) Option L2 (L = 2m) L3 (L = 3m) L5 (L = 5m)	-35	30	2	7	φ 9.5 × 100	-20 to 70	60	0.45
		060				-5	60					2.5	
		090				25	90	120					
		120				40	120	150					
		160				95	160	φ 9.5 × 70	185				
		200				135	200		230				
		240				175	240	265					
		030	F (Fixed)	R	Standard L1 (L = 1m) Option L2 (L = 2m) L3 (L = 3m) L5 (L = 5m)	-35	30	2 (Fixed)	φ 9.5 × 100	60			
		060				-5	60			2.5 (Fixed)		φ 9.5 × 70	
		090				25	90	120					
		120				40	120	150					
		160				95	160	φ 9.5 × 70	185				
		200				135	200		230				
		240				175	240	265					

• Manual Reset Models of LWS-C1030F and LWS-C1060F for low limit application are available upon request.

Type FWS – Air Sensed type with standard remote sensing element

Unit: °C

Catalog No.						Temp. Adjusting Range		Differential		Bulb Size (mm)	Ambient Temp.	Limit of Bulb Temp.	Wt. (kg)	
Type	Contact	Model	Differential	Rating	Capillary Length	Min.	Max.	Min.	Max.					
FWS-	C1	030	A (Variable)	G	Standard L1 (L = 1m)	-35	30	2	7	Max. φ 37 × 58	-20 to 70	60	0.52	
		060				-5	60					2.5		8
		090				25	90	φ 37 × 58	120					
		120				40	120		150					
		160				-35	30	2 (Fixed)	60					
		200	-5	60	90									
		240	25	90	2.5 (Fixed)	120								
		030	40	120		150								

Type RWS – with coiled capillary sensing element

Unit: °C

Type	Catalog No. Designation				Temp. Adjusting Range		Differential		Sensing Element (mm)	Ambient Temp.	Limit of Tube Temp.	Wt. (kg)
	Contact	Model	Differential	Rating	Min.	Max.	Min.	Max.				
RWS-	C1	060	F (Fixed)	R	-5	60	2 (Fixed)		Coiled Tube Max. $\phi 42 \times 40$	-20 to 70	70	0.43
		034			-10	35	1.4 (Fixed)			-20 to 60	60	
		054			10	55				-20 to 70	70	
		060	A (Variable)		-5	60	2	7		-20 to 70	70	
		034			-10	35	1.4	5		-20 to 60	60	
		054			10	55				-20 to 70	70	

Type EWS – with direct immersion sensing element

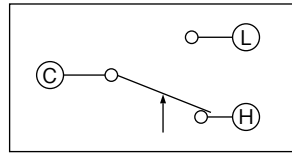
Unit: °C

Type	Catalog No. Designation				Temp. Adjusting Range		Differential		Sensing Element (mm)	Ambient Temp.	Limit of Tube Temp.	Wt. (kg)
	Contact	Model	Differential	Rating	Min.	Max.	Min.	Max.				
EWS-	C1	080	F (Fixed)	R	0	80	2.5 (Fixed)		$\phi 10.8 \times 70$	-20 to 70	110	0.51
		120			40	120					150	
		160			95	160					185	
		080	A (Variable)		0	80	2.5	8			110	
		120			40	120					150	
		160			95	160					185	

ELECTRICAL RATINGS

Electrical Rating Code	Rated Voltage (V)		Power Factor (cos ϕ)	125V. AC	250V. AC
	Rated Amps. (A)				
G	Non-Inductive Current		1.0	0.5 to 16	0.5 to 8
	Inductive Current	Full Load	0.75		
		Locked Rotor	0.45	96	48
R	Non-Inductive Current		1.0	0.05 to 8.5	0.05 to 4.5
	Inductive Current	Full Load	0.75		
		Locked Rotor	0.45	51	27

CONTACT STYLE



Models "set high"

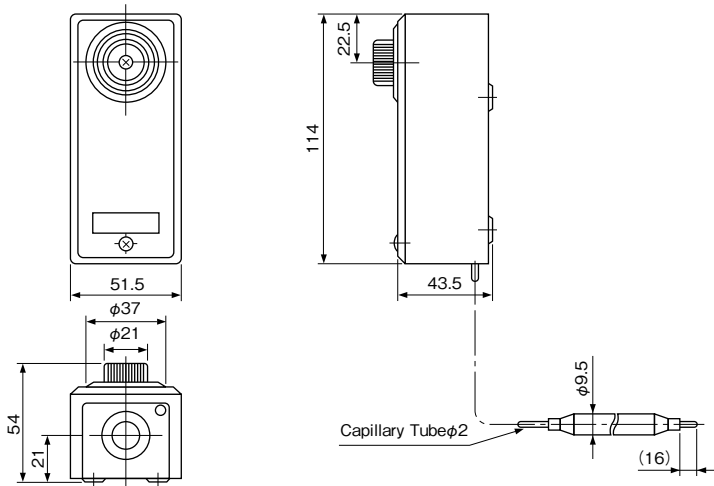
The dial indicates the high switch point (C - L close, C - H open).

The low switch point (C - L open, C - H close) is obtained by deducting the differential from the high switch point.

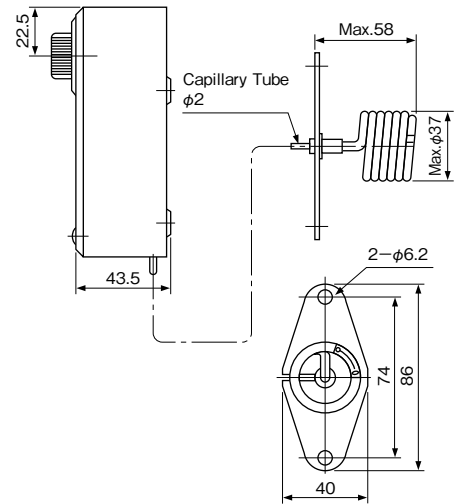
Arrow mark indicates a direction of switch action on temperature increase.

DIMENSIONS

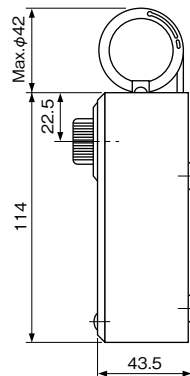
Type LWS



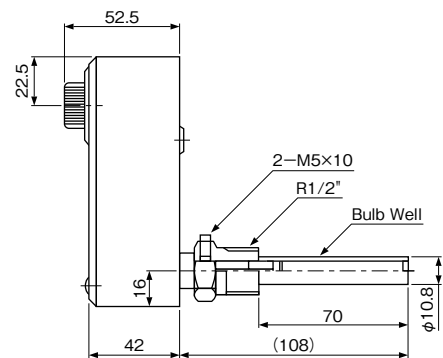
Type FWS



Type RWS



Type EWS



Unit: mm

ACCESSORY : Available upon request. (Refer to page 45.)

TEMPERATURE CONTROLS

GENERAL PURPOSE

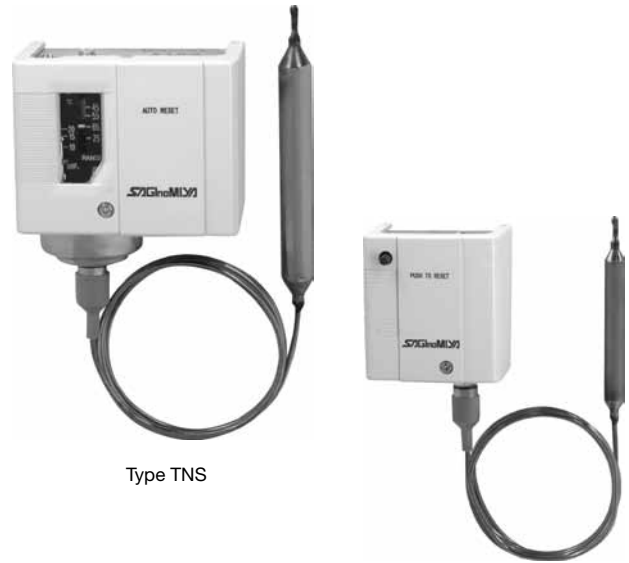
Type TNS, CNS & INS

SAGInoMIYA

GENERAL DESCRIPTION

- Type TNS is provided with a differential adjustable mechanism.
- Type CNS is provided with a fixed differential. Also manual reset models are available.
- Type INS provides automatic High-cut temperature control with manual reset.
- Narrow and adjustable temperature differential for more accurate control model Type BNS is available.
- Available drip proof enclosure for marine application or explosion proof enclosure for special application.
- A mounting bracket is supplied as standard.
- With SPDT contact mechanism.
- IP44 with upper lid (option).

CE mark applicable (available upon request)
UL recognized (available upon request)



Type TNS

Type INS

TYPE NUMBER SELECTION (SPECIFICATIONS)

Type TNS – Automatic Reset Type

Unit: °C

Catalog No.	Range		Differential		Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)						
	Min.	Max.	Min.	Max.	Off (On)	On (Off)		φ A	B								
TNS-C100X	-25	0	Bottom 4.5 Top 3	15	-18	-15	70	6	80	Ts > Tb	0.34						
TNS-C114X	-15	15			-3	0											
TNS-C134X	0	35			17	20											
TNS-C1070X	45	75	4	20	61	65	115	12.7	100	Ts < Tb	0.37						
TNS-C1100X	65	105			71	75	140										
TNS-C1120X	95	125			110	115	160										
TNS-C1150X	115	150	5	4	140	145	180	12.7	100	Ts ≅ Tb	0.37						
TNS-C1010XC	-45	10	-4		0	45											
TNS-C1034XC	-20	35	16		20	70											
TNS-C1070XC	15	70	4	20	36	40	115	12.7	100	Ts ≅ Tb	0.37						
TNS-C114XQ009	-30	15			Bottom 5 Top 2	15	-8					-5	120	12.7	100	Ts > Tb	0.37
TNS-C114XQ010	-30	15					12					15					
TNS-C134XQ009	-5	35	12	15													
TNS-C134XQ010	-5	35	12	15	12	15	120	12.7	100	Ts > Tb	0.37						

- Bottom...Differential when the switch is set at minimum of range.
- Top...Differential when the switch is set at maximum of range.
- Ts...Ambient temp. of switch body. • Tb...Sensing bulb temp.
- Drip proof models: Available upon request. (Refer to page 51.)
- Enclosure: IP20

Type CNS – Automatic Reset Type

Unit: °C

Catalog No.	Range		Differential	Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)
	Min.	Max.		Off	On		φ A	B		
CNS-C115X	-35	-15	Bottom 4 Top 3	-28	-25	70	6	80	Ts > Tb	0.34
CNS-C100X	-25	0		-18	-15					
CNS-C114X	-15	15		-3	0					
CNS-C134X	0	35		17	20					

- Bottom...Differential when the switch is set at minimum of range.
- Top...Differential when the switch is set at maximum of range.
- Ts...Ambient temp. of switch body. • Tb...Sensing bulb temp.
- Enclosure: IP20

TYPE CNS – Manual Reset Type

Unit: °C

Catalog No.	Range		Manual Reset	* Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)
	Min.	Max.		Off	On		φ A	B		
CNS-C115XM2	-35	-15	Automatic operation on temperature decrease and manual reset	-28	Manual Reset	70	6	80	Ts > TB	0.34
CNS-C100XM2	-25	0		-18						
CNS-C114XM2	-15	15		-3						
CNS-C134XM2	0	35		17						

- * Based on the 1-3 terminal connection.
- Ts...Ambient temp. of switch body. • TB...Sensing bulb temp.
- Enclosure: IP20

TYPE INS – Manual Reset Type

Unit: °C

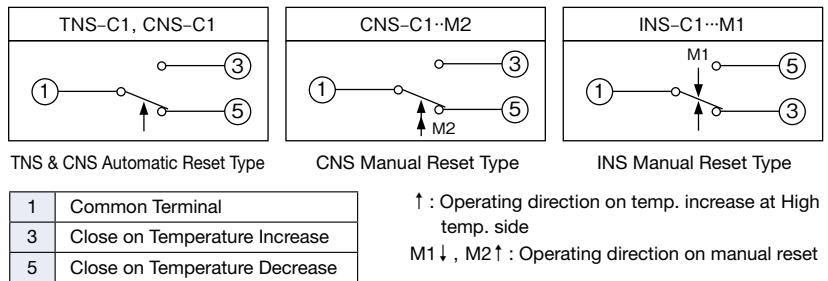
Catalog No.	Range		Manual Reset	* Factory Setting		Limit Temp.	Bulb Size (mm)		Usage Condition	Wt. (kg)
	Min.	Max.		Off	On		φ A	B		
INS-C1070XM1	25	75	Automatic operation on temperature increase and manual reset.	Manual Reset	65	115	9.5	80	Ts < TB	0.26
INS-C1120XM1	70	120			115	160				
INS-C1150XM1	115	150			140	180				

- * Based on the 1-3 terminal connection.
- Ts...Ambient temp. of switch body. • TB...Sensing bulb temp.
- Enclosure: IP20

ELECTRICAL RATINGS

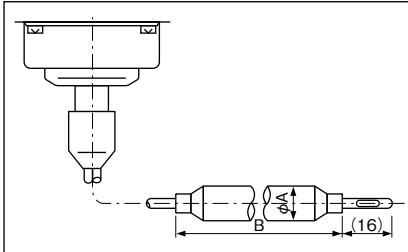
Rated Amps. (A)	Rated Voltage (V)		Power Factor (cos φ)	125/250 V. AC
	Non-Inductive Current	Inductive Current		
Full Load	1	0.75	12	72
	Locked Rotor	0.45		

CONTACT FUNCTIONS

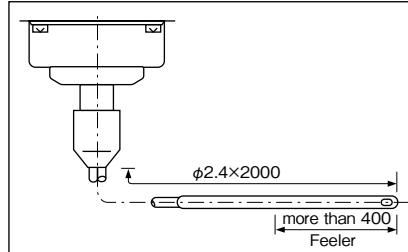


SENSING ELEMENT STYLE

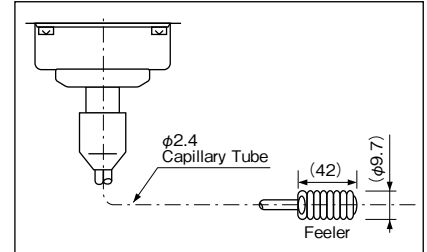
Sensing Bulb Type



Capillary Tube Type



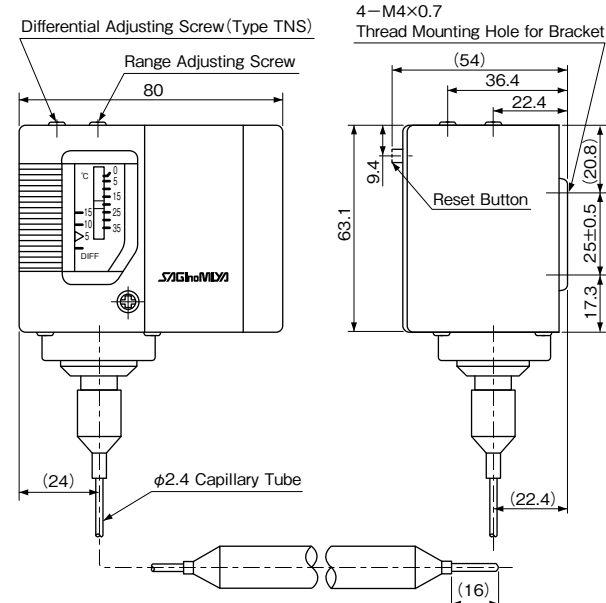
Capillary Coil Type



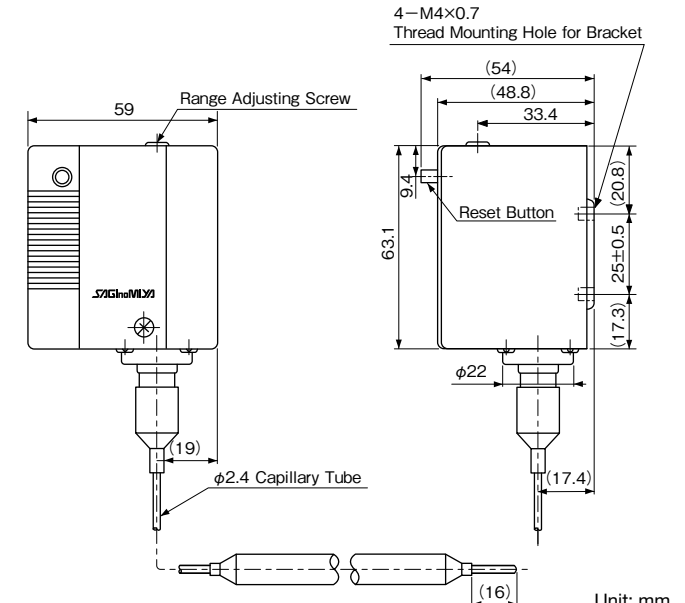
Standard: 1000mm Capillary tube. Other capillary length are available upon request.

DIMENSIONS

Type TNS, CNS



Type INS



TEMPERATURE CONTROLS

Type ALS & BLS

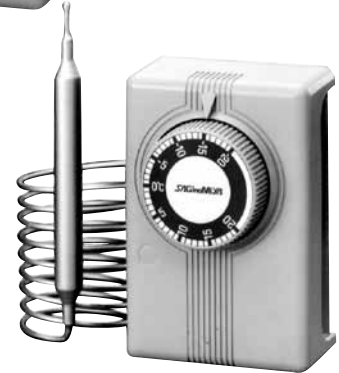
SAGInoMIYA

GENERAL DESCRIPTION

- Wide temp. range and narrow fixed differential. One control can meet most of your refrigeration or heating applications.
- Easy and accurate setting with large external knob.
- Tin Plating of bulb and capillary for food.
- SUS of main body for anti-corrosion and high durability, ABS resin of cover for anti-static.
- With SPDT contact mechanism.
- Insert holder is available upon request.
- Can mount horizontal and vertical position.



Type ALS



Type BLS

TYPE NUMBER SELECTION (SPECIFICATIONS)

Unit: °C

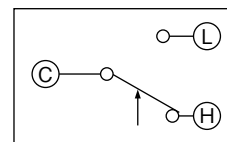
Catalog No.	Range		Differential	Limit of Bulb Temp.	Bulb Size (mm)	Capillary Tube Length (mm)	Wt. (kg)
	Min.	Max.					
BLS-C1020L1	-20	20	Approx. 2.0 (Fixed)	60	φ10×100	φ2.4×1000	0.3
ALS-C1011L1	-60	-10					
ALS-C1020L1	-40	20	Approx. 2.5 (Fixed)	80			
ALS-C1050L1	-10	50		110			
ALS-C1090L1	40	90		150			

- When order model with earth terminal, add a suffix "x" to Catalog No.
- Other capillary length is available upon request.

ELECTRICAL RATINGS

Rated Amps. (A)	Rated Voltage (V)		125V.AC	250V.AC	450V.AC	24V.DC	125V.DC
	Power Factor (cos φ)						
Non-Inductive Current		1	10	5	2	5	0.5
Inductive Current	Full Load	0.75	8.5	4.5	1	3	0.2
	Locked Rotor	0.45	50	37	10	10	5

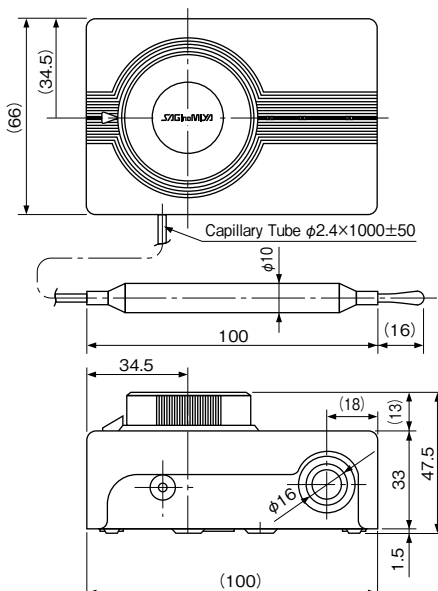
CONTACT FUNCTIONS



Arrow Mark indicates direction of operation on temperature increase.

C	Common Terminal
L	Close on Temperature Increase
H	Close on Temperature Decrease

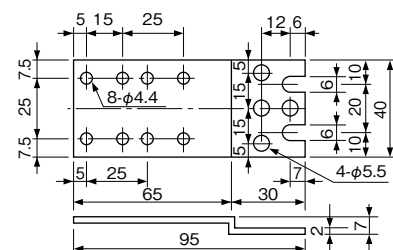
DIMENSIONS



Unit: mm

ACCESSORY

Mounting Bracket



Part No. ALS-AE02

PROPORTIONAL TEMPERATURE CONTROLS

Type PWS

SAGINOMIYA

GENERAL DESCRIPTION

- Designed for accurate control for air and liquid temperature in duct and boiler.
- Incorporates a potentiometer which produces a variable voltage signal to actuate AWK/EGK type damper motor or MJV/WGK type motor valve.
- Proportional band (throttling range) is adjustable.
- Electrical rating: 24V. AC, 50mA.
Potentiometer resistance 0 to 135Ω.

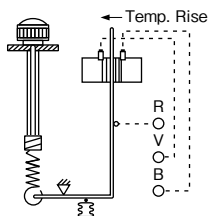


TYPE NUMBER SELECTION (SPECIFICATIONS)

Unit: °C

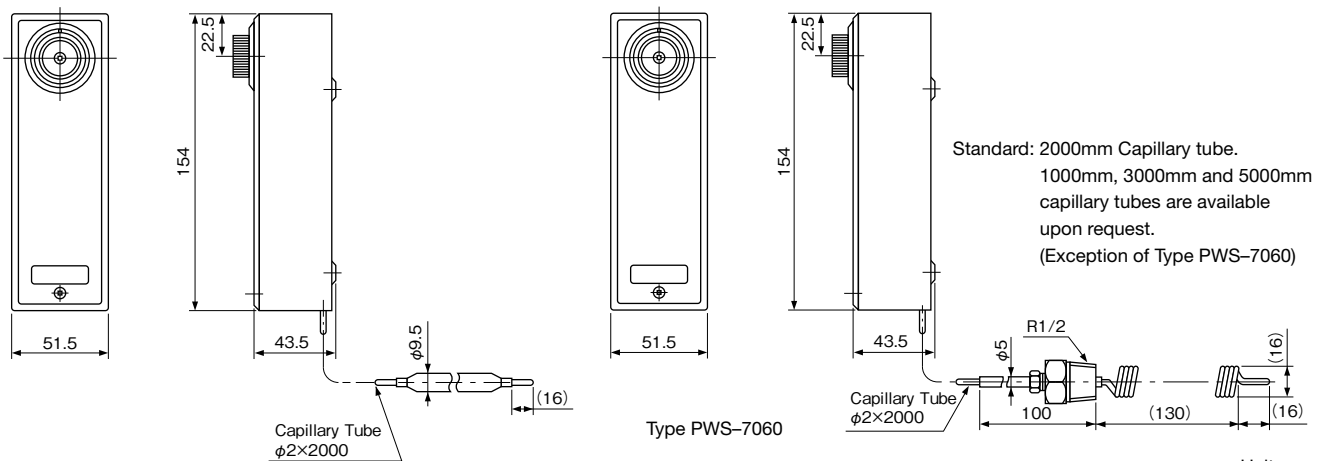
Catalog No.	Construction	Adjustable Temp. Range	Proportional Band		Usage Condition	Max. Ambient Temp.		Wt. (kg)
			Min.	Max.		At Switch Body	At Sensing Bulb	
PWS-7034	With One Potentiometer	-10 to 35	2.5	14	Ts ≡ Tb	-20 to 70	60	0.52
PWS-7054		10 to 55					80	
PWS-7074		30 to 75					100	
PWS-7094		50 to 95	120					
PWS-7120		40 to 120	4	20			150	
PWS-7060		-5 to 60	35	15			90	

INTERNAL WIRINGS (POTENTIOMETER ARRANGEMENT)



Resistance variation at potentiometer with increase of temperature:
 Increase between R and B
 Decrease between R and V
 R...Common terminal

DIMENSIONS



Unit: mm

ROOM THERMOSTATS

Type **ARS**

SAGInoMIYA

GENERAL DESCRIPTION

- High quality room thermostat for heating or cooling.
- Used for low or line voltage.
- Easy to adjust with dial knob.
- Dial stopper screw prevents unauthorized change of setting.



SPECIFICATIONS

- Ambient temperature: -20 to 50°C (Double-digit type)
-10 to 50°C (Proportional type)

TYPE NUMBER SELECTION

Double-digit type

Catalog No.				Range		Differential	Step Differential	Factory Setting		Wt. (kg)
Type	Contact Type	Temp.	Special Application	Min.	Max.			Off (On)	On (Off)	
ARS-	C1	20	S	0	20	Approx. 1.5	-	(8.5)	10	0.17
		30		10	30			(18.5)	20	
		40		20	40			(23.5)	25	
	S6	30	-	10	30			Approx. 2	Heat Side (18.5) Low Side (16.5)	20 18

Proportional type

Catalog No.				Range		Differential (°C)	Factory Setting (°C)	Wt. (kg)
Type	Contact Type	Temp.	Special Application	Min.	Max.			
ARS-	P1	30	S	10	30	Approx. 2	25 Center value of Proportional band	0.17

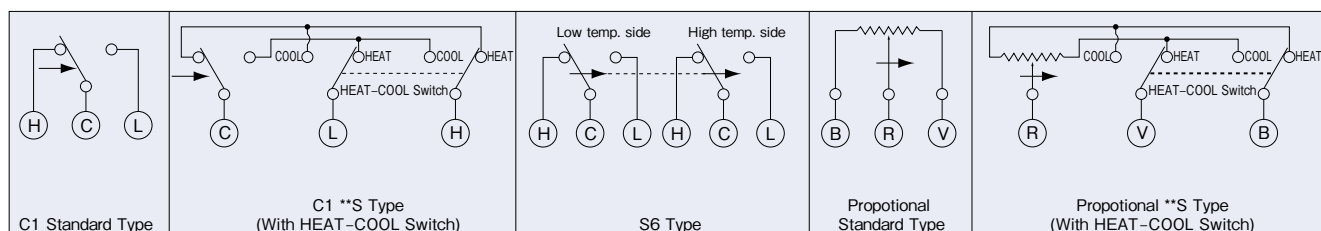
ELECTRICAL RATINGS

Catalog No.			ARS-C1			ARS-S6		
Rated Amps. (A)	Rated Voltage (V)	Power Factor (cos φ)	AC		DC	AC		
			125	250	24	125	250	
Non-Inductive Current			1.0	6	3	2	4	2
Inductive Current	Full Load	0.75	6	3	1	4	2	
	Locked Rotor	0.45	24	12	10	16	8	

Catalog No.		ARS-P1
Rated Amps. (A)	Rated Voltage (V)	AC
Allowable current value		50mA
Resistance of the potentiometer		135Ω

Minimum contact capacity: 50mA

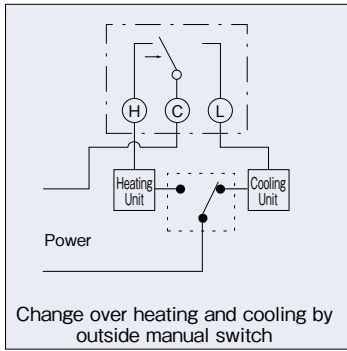
CONTACT FUNCTIONS



Arrow indicates temp. rise.

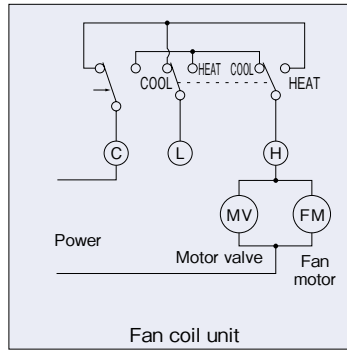
APPLICATION SAMPLES

-C1

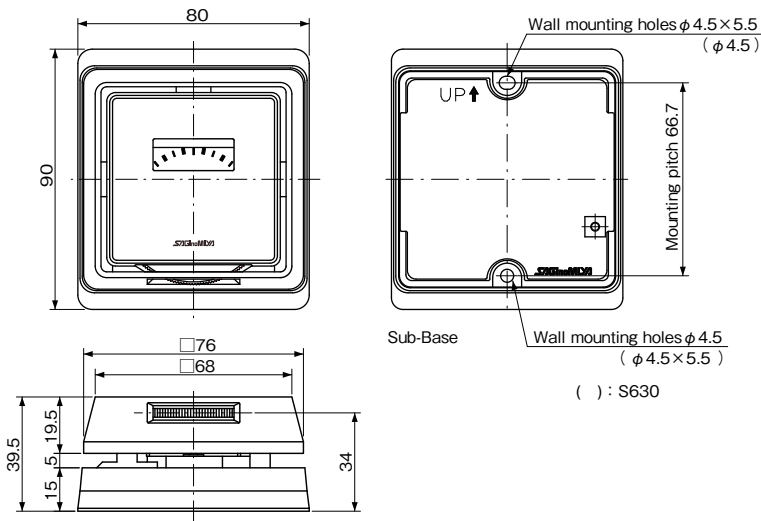


Arrow indicates temp. rise.

-C1**S



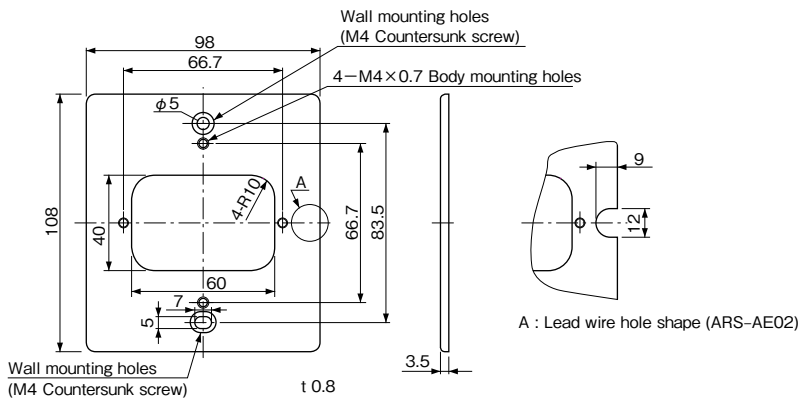
DIMENSIONS



Unit: mm

OPTIONAL PARTS

Mounting pitch 83.5mm plate (ARS-AE01, ARS-AE02)



Unit: mm

Parts No.	Lead wire hole
ARS-AE01	Not Exist
ARS-AE02	Exist

ROOM THERMOSTATS

Type **WRS**

SAGInoMIYA

GENERAL DESCRIPTION

- For fan coil units and air conditioners.
- Used for low or line voltage.
- Various models available with Fan Selector switch and/or Heat-Off-Cool change over switching.
- Using a diaphragm element, it assures high reliability and accurate control.
- Ambient temperature: - 20 to 50°C



TYPE NUMBER SELECTION (SPECIFICATIONS)

Unit: °C

Catalog No.			Sub-Base Function		Range		Differential	Wt. (kg)
Type	Contact & Temp. Range	Special Application	Change over Switch	Fan Switch	Min.	Max.		
WRS-	C130	X1	ON-OFF, HEAT-COOL	HIGH-MED-LOW	10	30	Approx. 1.5 (Fixed)	0.25
		X2	ON-OFF					
		X7	ON-OFF, HEAT-COOL					

- Change over switch of HEAT-COOL on WRS-C130X1 is only for changing switch mechanism of room thermostat itself between HIGHCUT (HEATING) and LOWCUT (COOLING) according to system requirement.
- Please refer to the application sample and wiring diagram.

ELECTRICAL RATINGS

Rated Amps. (A)	Rated Voltage (V)		125V. AC	250V. AC
	Full Load	Locked Rotor		
Non-Inductive Current	1	0.75	6	3
Inductive Current	0.45	0.45	24	12

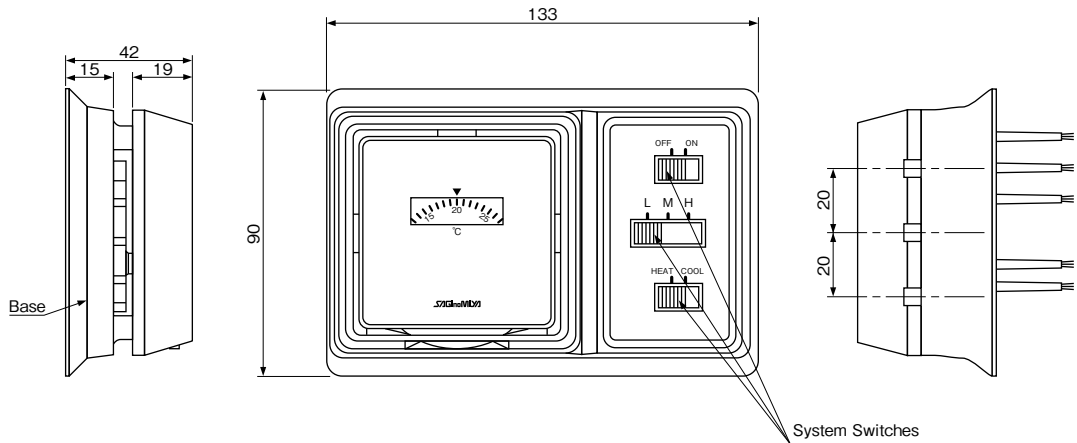
Minimum contact capacity: 50mA

CONTACT FUNCTIONS

Type	Internal Wiring
WRS-C130X1	
WRS-C130X2	
WRS-C130X7	

Arrow indicates temp. rise.

DIMENSIONS



System Switches

Unit: mm

ROOM HUMIDISTATS

Type **AHS**

SAGInoMIYA

GENERAL DESCRIPTION

- Accurate humidity control assured by nylon ribbon.
- Used for low or line voltage.
- Easy adjustment by dial knob.
- Dial stopper screw prevents unauthorized change of setting.



SPECIFICATIONS

Unit: % RH

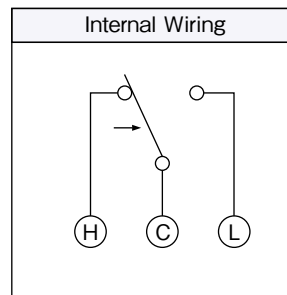
Catalog No.	Contact	Range		Differential	Ambient Temp. on Use (°C)	Wt. (kg)
		Min	Max.			
AHS-C1090	SPDT	30	90	Approx. 5	10 to 40	0.17

ELECTRICAL RATINGS

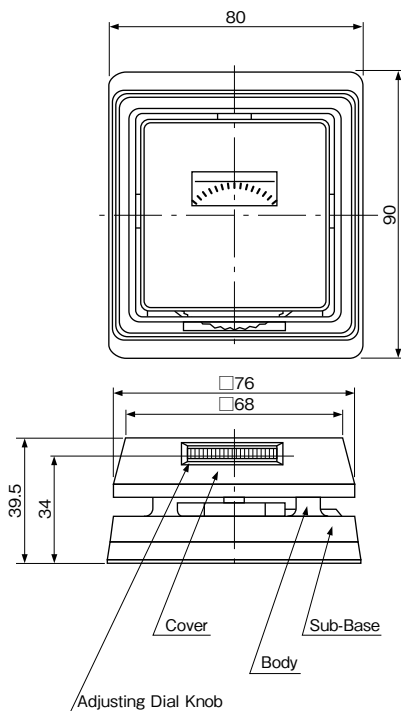
Rated Amps. (A)	Rated Voltage (V)	Power Factor (cos φ)	125V. AC	250V. AC	24V. DC
			Non-Inductive Current	1.0	4.5
Inductive Current	Full Load	0.75	3	1.5	0.4
	Locked Rotor	0.45	12	6	2

Minimum Contact Capacity: 50mA

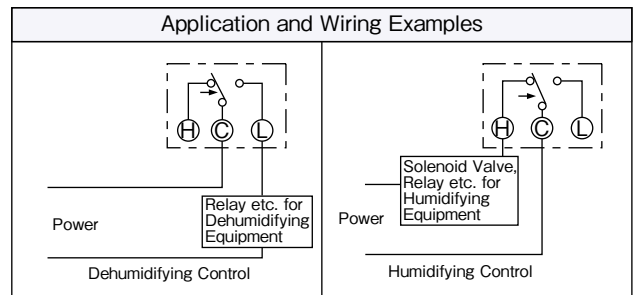
CONTACT FUNCTIONS



DIMENSIONS



Unit: mm



Arrow mark indicates humidity increase.



Digital Humidistat

Type BLE

SAGINOMIYA releases new digital humidistat type BLE.

Features

- High brightness white backlight LCD display
- 2 Step model
- Free power supply (85 to 264V.AC)
- Forced ON/OFF

Applications

- Various air conditioning equipment
 - Office, Computer room, Laboratory, Library, etc.
- Agricultural facility
 - Cultivation house, Grain warehouse
 - Tea and tobacco, etc.
- Manufacturing facility
 - Chemical, Paper, Textile, Confectionery, etc.



Specifications

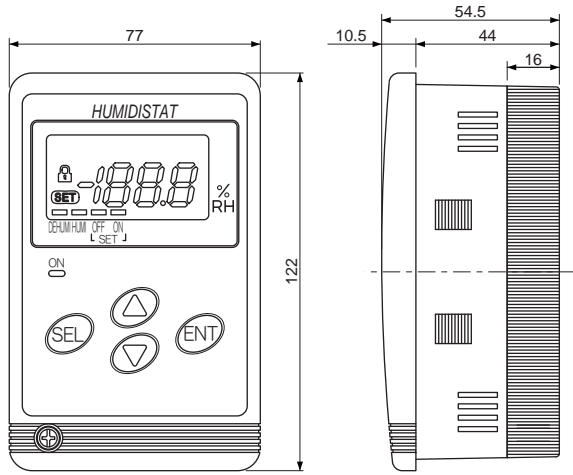
Power supply voltage	: 85 to 264V.AC	Ambient temperature	: -10 to 50°C (controller)
Power consumption	: 5VA or less		: 0 to 50°C (sensor)
Contact function	: SPST	Ambient humidity	: 30 to 90%RH
Contact capacity	: 250V.AC 10A (cos φ=1) : 250V.AC 6A (cos φ=0.7) : 250V.AC 3A (cos φ=0.4)	Back up data	: Preset values, Calibration values
		Setting method	: Independent ON/OFF set point, Set by UP/DOWN keypads

Standard Type Number Selection

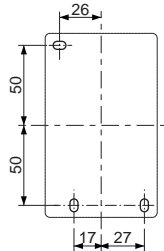
Catalog No.	Humidity Set Range (%RH)	Differential (%RH)	Humidity Indication (%RH)	Calibration (%RH)	Function	Sensor Part No.	Wt. (kg)
BLE-SD11-011	30 to 90	Min. 3	20 to 99	±10	Standard(1 Step)	HEK-I1R001	0.2
BLE-SD12-011					2 Step		

Humidity sensor and sensor mount bracket are supplied as standard accessory.

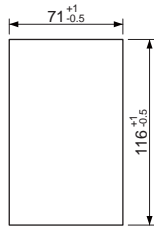
Dimensions



Wall Mount
Installation Dimension

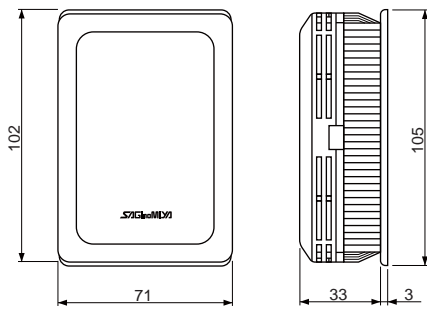


Panel Cut Dimension

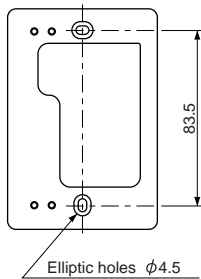


Standard Accessory

Sensor(HEK-I1R001)

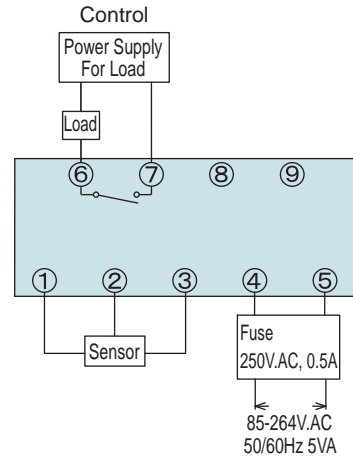


Sensor Mount Bracket

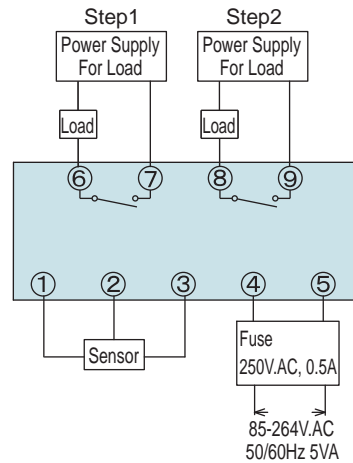


Wiring Diagram

Standard (1 Step)

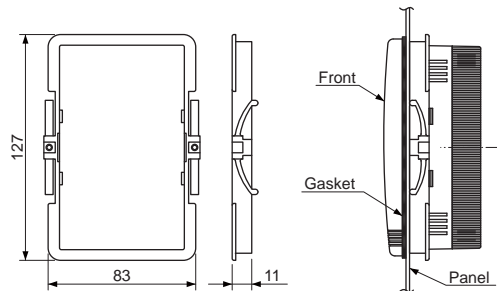


2 Step



Option Parts (ALE-AA02)

Panel Mount Bracket
including Gasket



NOTES FOR SAFETY

Failure to read and follow all instruction carefully before installing or operating the product could cause personal injury and/or property damage.

Specifications are subject to change without notice.

DIGITAL THERMOSTATS & DIGITAL HUMIDISTAT

Type ULE & FLE

SAGInoMIYA

GENERAL DESCRIPTION

- Large LED, easy to see
- Back up memory on power failure
- Easy operation with a combination of setting knob and \triangle/∇ keypads
- Either for wall or panel mounting.
- Power source voltage: 85 to 264V. AC 50/60Hz
- Relay output: 250V. AC, 6A (cos ϕ = 0.7)
- Ambient temperature: Controller... - 10 to 50°C
Humidity sensor...0 to 50°C



Type ULE



Type FLE

TYPE NUMBER SELECTION (SPECIFICATIONS)

Type ULE – Digital Thermostats

Unit: °C

Catalog No.	Temp. Set Range	Differential	Temp. Indication	Function	Sensor Part No. (Standard)	Wt. (kg)
ULE-SD11-011	-50 to 30	Min. 0.5	-55 to 40	Standard	TEK-83H609 with 2m lead	0.2
ULE-SD12-011				2 Step		
ULE-SD13-011				Hi/Lo Limit with time delay		
ULE-SD21-011	0 to 100	Min. 0.5	0 to 110	Standard	TEK-83H601 with 2m lead	0.2
ULE-SD22-011				Hi/Lo Limit with time delay		
ULE-SD23-011				2 Step		

• Temperature sensor type TEK-83H609 or TEK-83H601, sensor holder and panel mounting brackets are supplied as standard accessory.

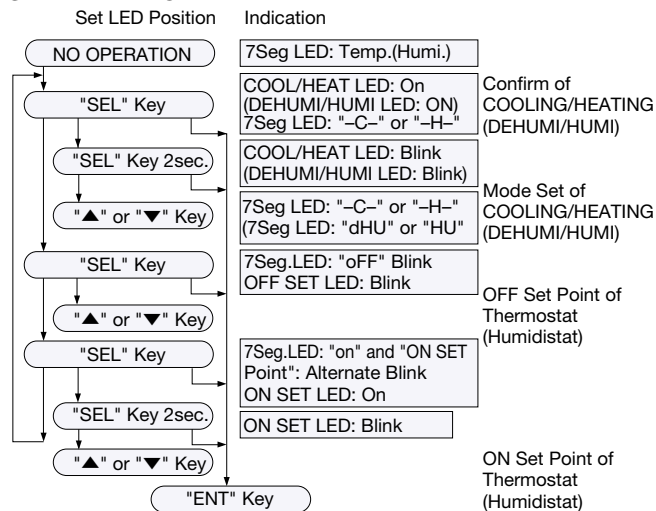
Type FLE – Digital Humidistat

Unit: %RH

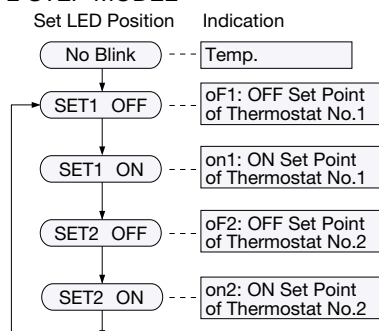
Catalog No.	Humidity Set Range	Differential	Humidity Indication	Calibration	Sensor Part No.	Wt. (kg)
FLE-SD11-011	30 to 90	Min. 3	20 to 99	± 10	HEK-11R001	0.3

MODE & SETTING

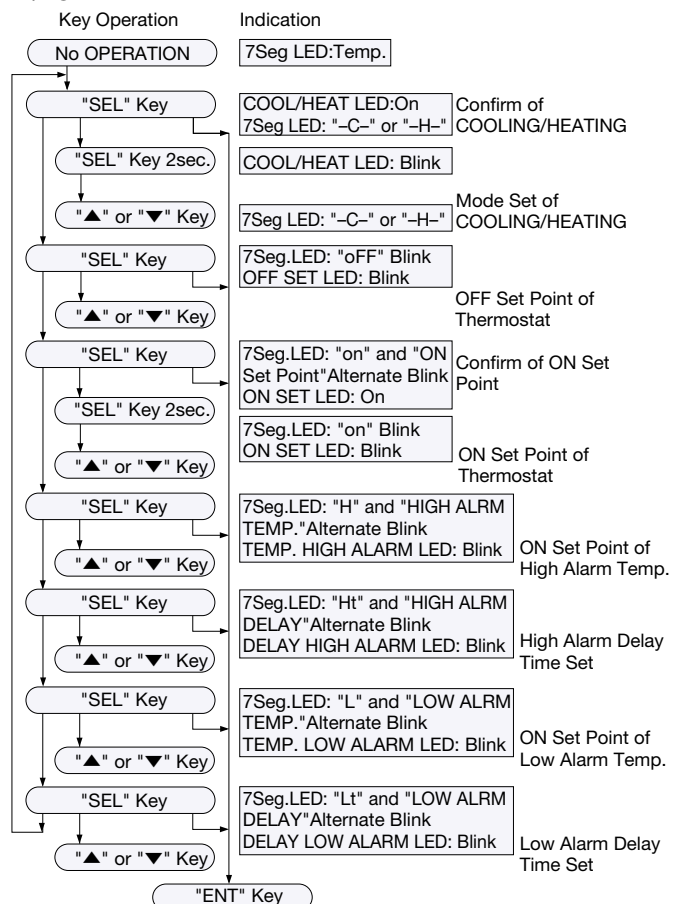
STANDARD MODEL



2 STEP MODEL



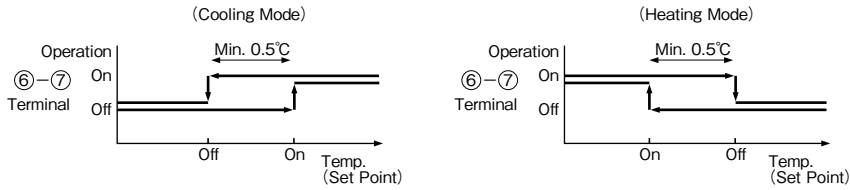
HI/LO LIMIT WITH TIME DELAY



OPERATION

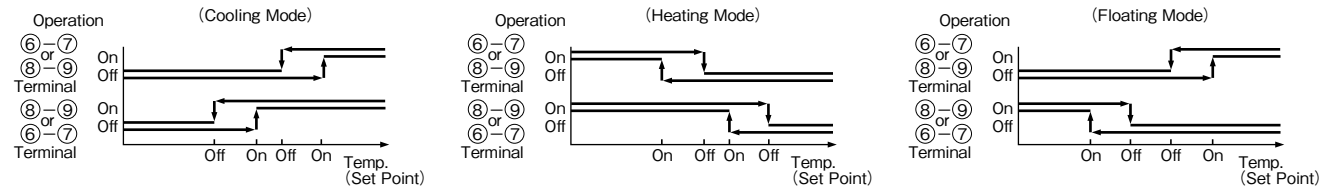
Type ULE – Digital Thermostats

STANDARD MODEL

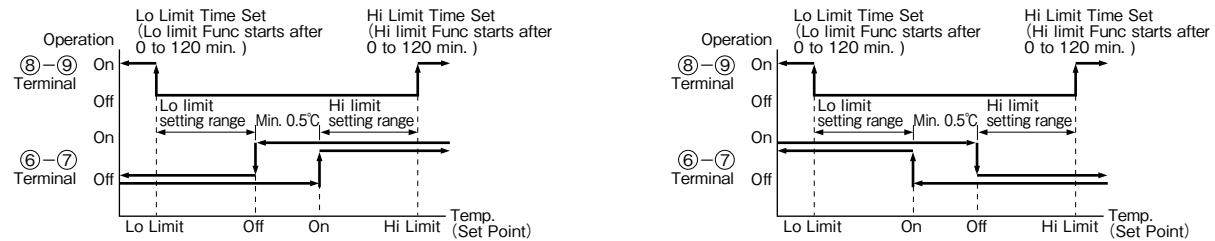


- Free to set On/Off set point independently within the range.
- When Off set point is changed, On set point automatically shifts. (Diff. remains same)
- When On set point is changed, Off set point remains unchanged. (Diff. changes)

2 STEP MODEL



Hi/Lo LIMIT W/TIMER MODEL



- Hi/Lo limit output is reset manually (Push reset: Push **ENT** Key in 2 sec or power off)
- Delay Timer can be set in the time range from 0 to 120 min respectively.

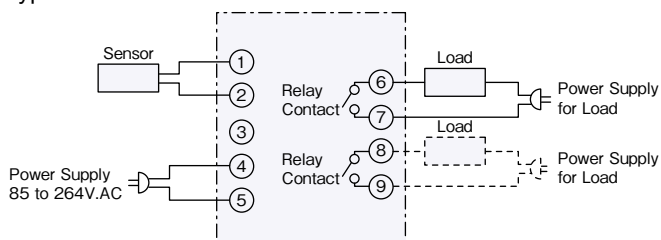
Type FLE – Digital Humidistat



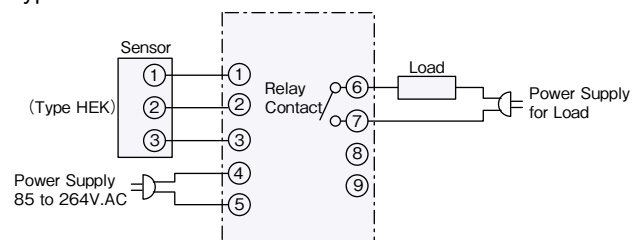
- Free to set On/Off set point independently within the range.
- When Off set point is changed, On set point automatically shifts. (Diff. remains same)
- When On set point is changed, Off set point remains unchanged. (Diff. changes)

WIRING DIAGRAM

Type ULE



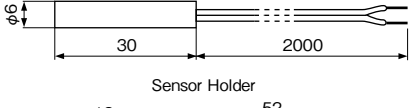
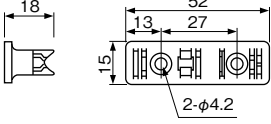
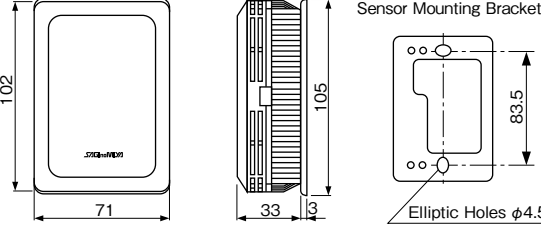
Type FLE



- ⑥-⑦: STANDARD, 2 STEP & Hi/Lo Model Control Output
- ⑧-⑨: 2 STEP Control Output Hi/Lo Limit Alarm Output

SENSORS

STANDARD

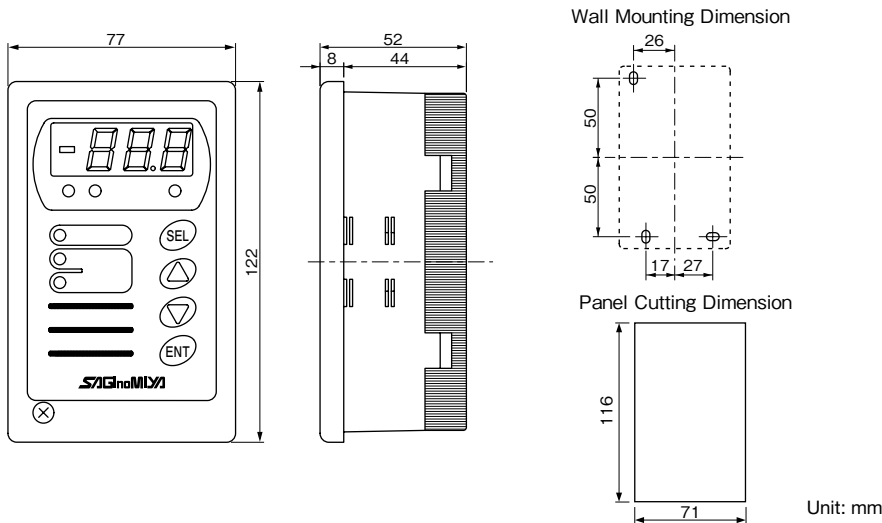
Sensor Part No.	Applicable Model	Dimension	Remarks
TEK-83H601 (Temperature) Lead Wire:Black	ULE-SD21-011 ULE-SD22-011 ULE-SD23-011		<ul style="list-style-type: none"> Ambient temp. on usage: - 40 to 110°C When the sensor is in use under the condition of dew, water dripping or outdoor, the sensor should be vertically installed with lead wire outlet downward. Sensor holder is supplied as standard.
TEK-83H609 (Temperature) Lead Wire:Blue	ULE-SD11-011 ULE-SD12-011 ULE-SD13-011		<ul style="list-style-type: none"> Ambient temp. on usage: - 55 to 80°C When the sensor is in use under the condition of dew, water dripping or outdoor, the sensor should be vertically installed with lead wire outlet downward. Sensor holder is supplied as standard.
HEK-I1R001 (Humidity)	FLE-SD11-011		<ul style="list-style-type: none"> Designed to accord room interior. Designed to be installed where certain air flow runs and the room humidity is represented. Depending on load or other conditions, humidity control may become difficult. Especially when the FLE is used under 10°C or above 40°C, contact manufacturer.

Following sensors are available as option. (Ambient temperature sensors are available upon request.)

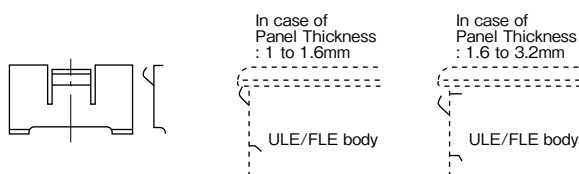
- Direct immersion sensor with nipple TEK-83N
- Wall mounting sensor TEK-83R
- Surface temp. sensor TEK-83E
- Direct immersion sensor with terminal cover TEK-83B
- Bulb well TEK-00N

DIMENSIONS

Type ULE, FLE



PANEL MOUNTING BRACKET



DIGITAL THERMOSTATS

Type **TNE**

SAGInoMIYA

GENERAL DESCRIPTION

- Compact digital temperature controller (48mm×48mm) for many applications.
- High quality temperature control with platinum and thermo couple temperature sensor (option).
- Two kinds of output - current output and relay output - are available.
- Various function such as PID Control, Auto/Manual Changeover and Lock Function are installed.
- Two points output for High/Low limit alarm.
- Power source voltage: 100 to 240 V.AC 50/60Hz
- Adaptive temperature sensor: Pt100, JPt100
Thermocouple
(Type K, J, R, T, N, S, B)

- Indicator: Temperature ... 7Seg. Green LED 4 digits
Temperature set point ... 7Seg. Red LED 4 digits
Control output ... Red LED×3

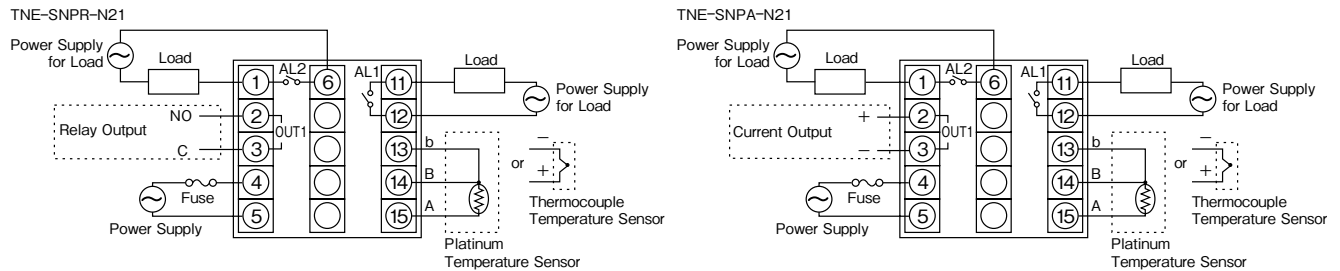


TYPE NUMBER SELECTION (SPECIFICATIONS)

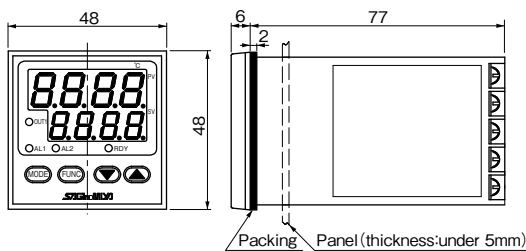
Catalog No.	Temp. Set Range	Control Type	Control Output	Alarm Output (Relay)	Wt. (kg)
TNE-SNPR-N21	based on a connection sensor	On/Off	Relay (SPST 250V.AC 3A)	SPST 250V.AC 2A×2	0.18
TNE-SNPA-N21		PID (Self tuning)	Current (4 to 20 mA DC)		

• Ambient temperature 0 to 50°C

WIRING DIAGRAM

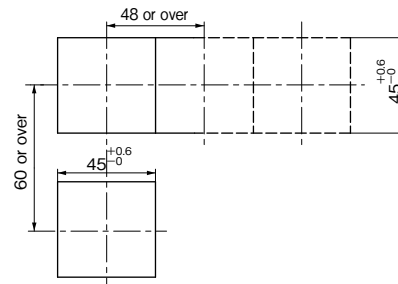


DIMENSIONS



MOUNTING SIZE

Panel Cutout Size



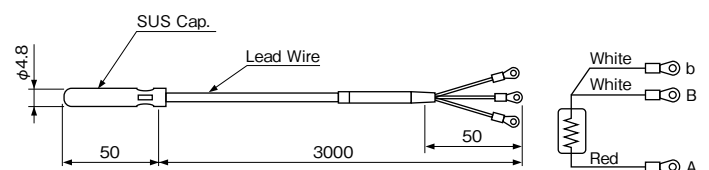
ACCESSORY

Fixing Bracket



OPTIONAL PARTS

Platinum Temperature Sensor (Type: PEK-02H001)



Temperature range: -70 to 140°C
Resistance value: 100Ω(0°C)

Unit: mm