GIRISHEGO®
Electric Panel Heating & Controlling Solutions

ENCLOSURE THERMOSTATS

DUAL THERMOSTAT

PTC HEATER

SPACE SAVING FAN HEATER

ELECTRONIC THERMOSTAT

ELECTRONIC HYGROSTAT

ELECTRONIC DC THERMOSTAT

ELECTRONIC HYGROTHERM

HAZARDOUS AREA THERMOSTAT

SMALL SEMI-CONDUCTOR HEATER

PRESSURE COMP DEVICE

For Panel Board & Switchgear Industries

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

ENCOSURE THERMOSTAT
(With DIN rail mounting)

KSTO-011 / KSTS-011

- *Compact Design*
- *Wide Adjustment Range*
- *Colour Coded Temperature knobs*
- *Din Rail Mountable*

Thermostat (NC): Thermostat opens on temperature rise – for regulating heaters or for switching signal devices. Comes with **red** temperature knob.

Thermostat (NO): Thermostat closes on temperature rise – for regulating filter fans and heat exchangers or for switching signal devices. Comes with **blue** temperature knob.

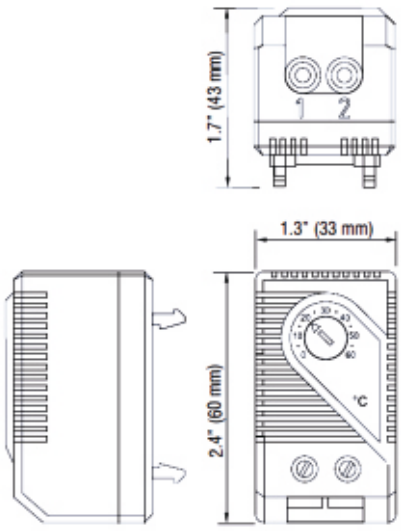
HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

Technical Data KSTO-011 / KSTS-011

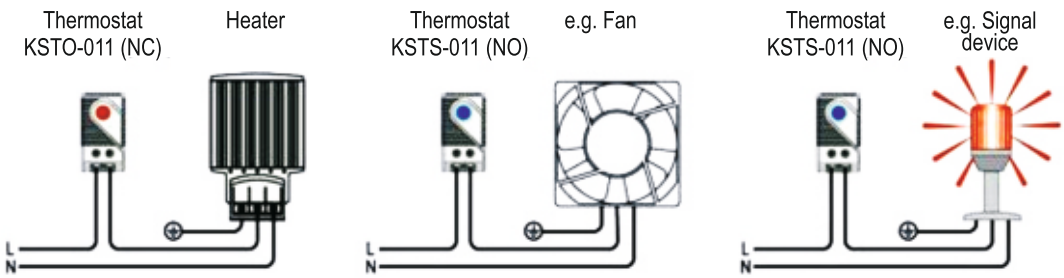
Type	Contact type	Temp. range
KSTO-011	normally closed	0-60°C & 0-80°C
KSTS-011	normally open	0-60°C & 0-80°C

Switching difference	7 C ± 4 K
Sensor element	thermostatic bimetal
Service life	100,000 cycles
Max. switching capacity	15 A resistive / 2 A inductive @ AC 120 V 10 A resistive / 2 A inductive @ AC 250 V DC 30 W (DC 24-72 V)
Minimum load	20mA (All voltages)
Connection	2-pole terminal, clamping torque 0.5 Nm max. solid wire - AWG 14 max. (2.5 mm²) stranded wire1 - AWG 16 max. (1.5 mm²)
Housing	Plastic
Mounting	for 35 mm DIN rail, EN 60715
Operating /Storage temperature	-45 to +80 °C
Operating /Storage humidity	max. 95 %RH (non-condensing)
Dimensions	60 x 33 x 43 mm
Weight approx.	40 g
Protection type	IP20

DIEMENSIONS (Approx) in mm



Wiring Examples



GIRISHEGO®
Electric Panel Heating & Controlling Solutions

DUAL THERMOSTAT
ZSR-011

- *Two thermostats in one unit - one Normally Closed (NC) & one Normally Open (NO)*
- *Each with wide adjustable temperature range*
- *Actual size DIN rail mountable*

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

The **ZSR-011** houses two separate thermostats, allowing the independent control of heating and cooling or other equipment. Both thermostats offer wide adjustment ranges and are color coded for easy function recognition.

Technical Data: ZSR-011

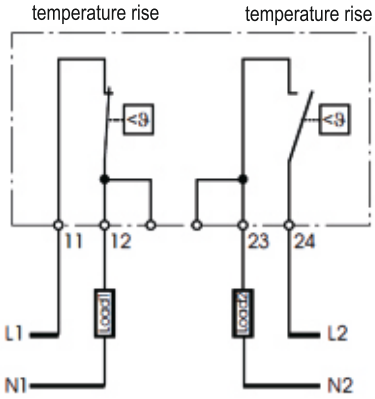
Sensor element:	Thermostatic bi-metal
Maximum tolerance:	± 4K
Switching difference (hysteresis):	7 C ± 4k
Switching capacity (max. load):	NC: 10A resistive/2A inductive @ 250 VAC NO: 5A resistive/2A inductive @ 250 VAC DC 30 W
Minimum load:	20 mA (all voltages)
Connections:	2 4-pole terminal for AWG 14 max. (2.5 mm)
Mounting:	Clip for 35mm DIN rail (EN 50022)
Dimensions (H x W x D):	67 x 50 x 46 mm
Housing:	Plastic,
Weight:	90 g
Protection type:	IP 20
Operating/storage temperature:	-20 to 80°C/ -45 to 70°C

Type	Contact type	Temp. range
ZSR-011	One Normally closed One Normally open	0-60°C 0-60°C

Contacts:

NC (normally closed) - contact will open at temperature rise

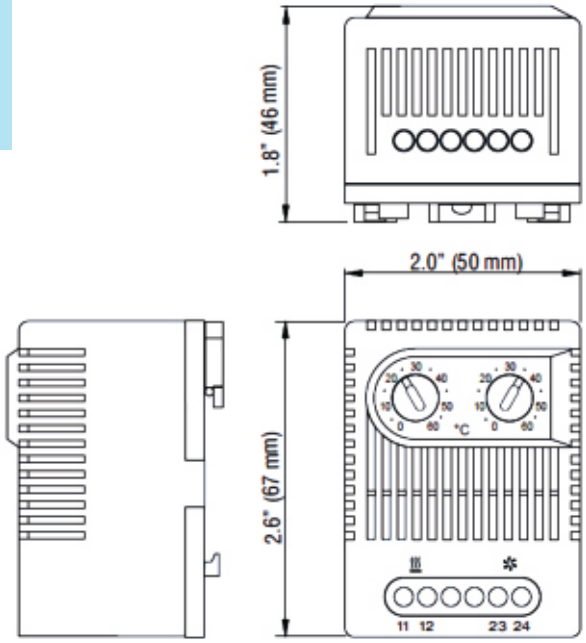
NO (normally open) - contact will close at temperature rise



Load1: Heater
Low temp alarm

Load2: Filter fan,
Cooling equipment,
High temp alarm

DIEMENSIONS (Approx) in mm



GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

TEMPER-PROOF MECHANICAL THERMOSTAT (PRESET)

SFTO-011 / SFTS-011

- ***Small Size***
- ***Default Temp. Setting***
- ***Easy to install***

SFTS-011 (NOC)

SFTO-011

HIGH QUALITY HIGH TECH HIGH SAFETY ENERGY EFFICIENT

SFTO-011

Tamperproof (Pre-set) Thermostat SFTO-011

Contact breaker / NC (red casing) for regulating heaters or for switching signal devices when temperature has fallen below the minimum value. The contact opens when temperature is rising.

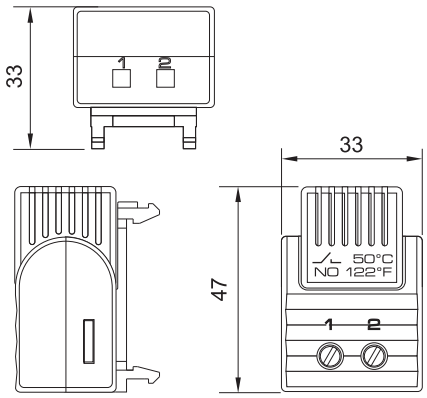
SFTS-011 (NOC)

Tamperproof (Pre-set) Thermostat SFTS-011

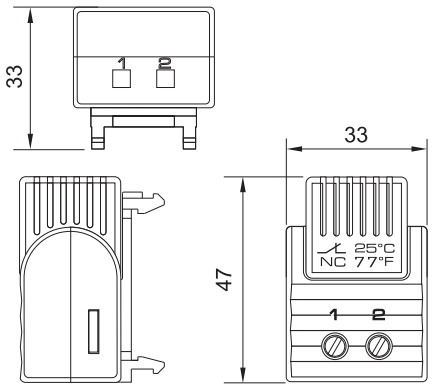
Contact maker / NO (blue casing) for regulating filter fans, heat exchangers, cooling devices or
switching signal devices when temperature limit has been exceeded. The contact closes when
temperaure is rising.

Technical Data

DIEMENSIONS (Approx) in mm

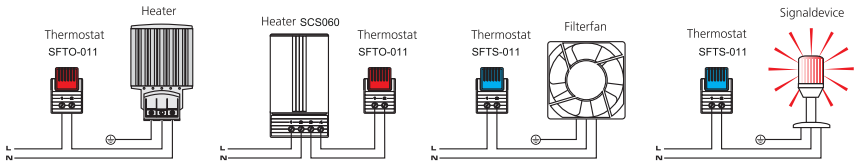


SFTS-011 (NCC) THERMOSTAT



SFTO-011 (NOC) THERMOSTAT

Sensor element	thermostatic bimetal
Contact type	snap–action contact
Contact resistance	< 20mΩ
Service life	> 100,000 cycles
Max. Switching capacity	250V AC, 5 (1.6)A 120V AC, 10 (2)A DC 30W
Max. inrush current	AC 10A
EMC	acc. to EN 55014–1–2, EN 61000–3–2, EN 61000–3–3
Connection	2-pole terminal for 2.5mm ,torque 0.8Nm max.
Mounting	35mm DIN clip for 35mm DIN rail,EN60715 or for exit filter EF 118 Series
Casing	plastic according to UL94 V-0, light grey
Dimensions	47 x 33 x 33mm
Weight	approx. 23g
Installation position	variable
Operating/Storage temperature	–20 to+80℃(–4 to +176°F) /–45 to+80℃(–49 to +176° F)
Protection type	IP20



SFTS-011

Contact	Switch–off temperature	Switch–on temperature
N.C.C	+15℃ / +59℉(± 5K tolerance)	+5℃ / +41°F (± 5K tolerance)
N.C.C	+25℃ / +77°F (± 5K tolerance)	+15℃ / +59°F (± 5K tolerance)

SFTO-011

Contact	Switch–on temperature	Switch–off temperature
N.O.C	+50℃ / +122°F (± 6K tolerance)	+40℃ / +104°F (± 7K tolerance)
N.O.C	+60℃ / +140°F (± 6K tolerance)	+50℃ / +122°F (± 7K tolerance)
N.O.C	+35℃ / +95°F (± 6K tolerance)	+25℃ / +77°F (± 7K tolerance)

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

TEMPER-PROOF DUAL NO-NC THERMOSTAT (PRESET)

SFTD-011

SFTD-011

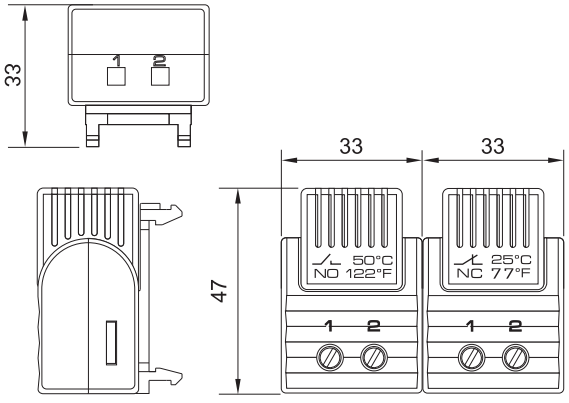
- *NOC & NCC in one casing*
- *Default Temp. Setting*
- *Clip Fixing*

Two thermostats in one casing:
Tamper-proof (Pre-set) Thermostat/Contact breaker (NC) for regulating heaters or for switching signal devices, when temperature has fallen below the minimum value. The contact opens when temperature is rising.
Tamper-proof (Pre-set) Thermostat/Contact maker (NO) for regulating filter fans, heat exchangers or for switching signal devices when temperature limit has been exceeded. The contact closes when temperaTure is rising.
Heaters and cooling equipment can be switched independently from each other with a temperature offset as
opposed to the usual change-over contacts

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

Technical Data

DIEMENSIONS (Approx) in mm

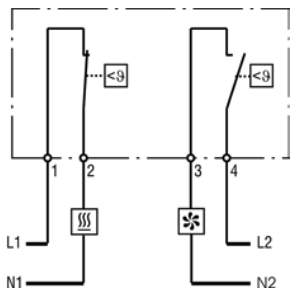


SFTS-011 (NCC) THERMOSTAT

Sensor element	thermostatic bimetal
Contact type	snap-action contact
Service life	> 100,000 cycles
Max. switching capacity	AC 250 V, 5 (1.6) A / AC 120 V, 10 (2) A DC 30 W
Max. inrush current	AC 16 A for 10 sec.
Connection	4-pole terminal, clamping torque 0.8 Nm max.: rigid wire 2.5 mm² (AWG 14) stranded wire[1] 1.5 mm² (AWG 16)
Mounting	clip for 35 mm DIN rail, EN 60715
Casing	plastic according to UL94 V-0, light grey
Dimensions	47 x 63 x 33 mm
Weight	approx. 40 g
Fitting position	variable
Operating/Storage temperaure	-40 to + 80 °C (-40 to +176 °F) / -45 to + 80 °C (-49 to +176 °F)
Operating/Storage humidity	max. 90 % RH (non-condensing)
Protection type	IP20

Connection diagram

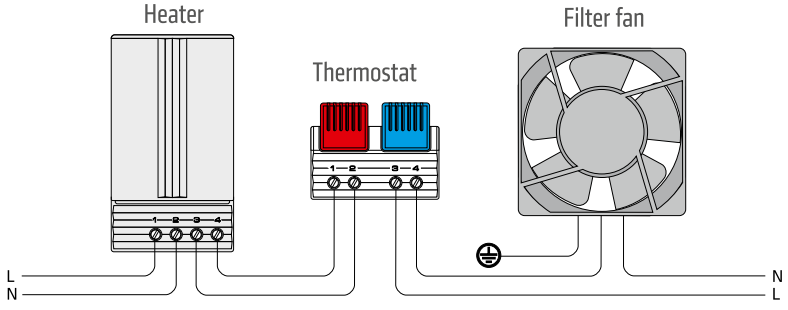
Thermostat SFTD-011
(NC/NO)



Heater
Filter fan, Cooling equipment, Signal device

Contact breaker (NC)		Contact maker (NO)	
Switch-off temperature	Switch-on temperature	Switch-on temperature	Switch-off temperature
+15 °C / +59 °F (±5 K tolerance)	+5 °C / +41 °F (±5 K tolerance)	+50 °C / +122 °F (±7 K tolerance)	+40 °C / +104 °F (±6 K tolerance)
+25 °C / +77 °F (±5 K tolerance)	+15 °C / +59 °F (±5 K tolerance)	+60 °C / +140 °F (±7 K tolerance)	+50 °C / +122 °F (±7 K tolerance)
+15 °C / +59 °F (±5 K tolerance)	+5 °C / +41 °F (±5 K tolerance)	+35 °C / +95 °F (±7 K tolerance)	+25 °C / +77 °F (±6 K tolerance)
+25 °C / +77 °F (±5 K tolerance)	+15 °C / +59 °F (±5 K tolerance)	+50 °C / +122 °F (±7 K tolerance)	+40 °C / +104 °F (±6 K tolerance)

Contact maker (NO)		Contact maker (NO)	
Switch-on temperature	Switch-off temperature	Switch-on temperature	Switch-off temperature
+50 °C / +122 °F (±7 K tolerance)	+40 °C / +104 °F (±6 K tolerance)	+60 °C / +140 °F (±7 K tolerance)	+50 °C / +122 °F (±7 K tolerance)



GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

ELECTRONIC THERMOSTAT

ESTR-011

- ***Adjustable Temperature***
- ***LED status indicator***
- ***High switching capacity***
- ***DIN rail mounted***

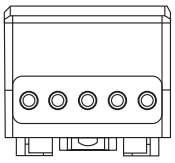
Electronic Thermostats can control the on & off of heater according to the ambient temperature.

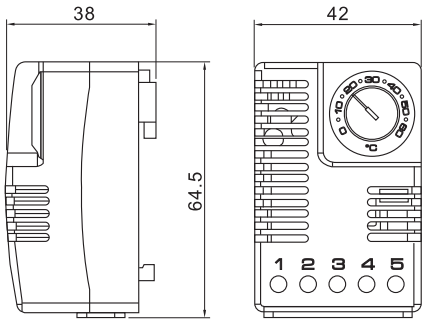
HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

Technical Data ESTR-011

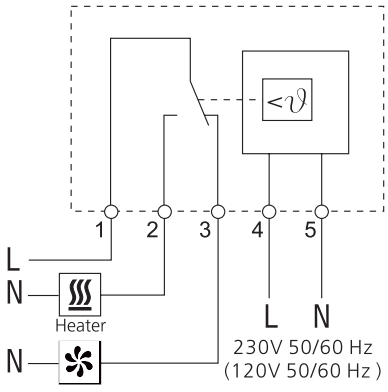
Switch temperature difference	4K (± 1K tolerance)at 25℃/77° F (50% RH)
Reaction time (humidity)	approx. 5 sec.
Contact type	change–over contact (relay)
Contact resistance	< 10mΩ
Service life	NC: > 50,000 cycles NO: > 100,000 cycles
Max. Switching capacity (Relay output)	NC: 240VAC, 6 (1) A NO: 240VAC, 8 (1.6) A NC: 120VAC, 6 (1) A NO: 120VAC, 8 (1.6) A 24VDC, 4A
EMC	acc. to EN 55014–1–2, EN 61000–3–2, EN 61000–3–3
Optical indicator	LED
Connection	5-pole terminal,clamping torque 0.5Nm max.:rigid wire 2.5mm² stranded wire (with wire end ferrule) 1.5mm²
Mounting	35mm DIN rail
Casing	plastic according to UL94 V-0, light grey
Dimensions	64.5 x 42 x 38mm
	approx. 70g
Installation position	vertical
Operating/Storage temperature	0 to +60℃ (+32 to +140° F) / –20 to +80℃ (–4 to +176° F)
Protection type	IP20

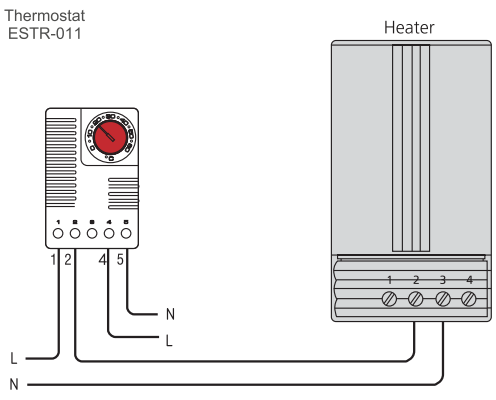
DIEMENSIONS (Approx) in mm





CONNECTION DIAGRAM





GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

ELECTRONIC DC THERMOSTAT

EST-011 24V DC

- ***High DC Breaking capacity***
- ***Low Hysteresis***
- ***Adjustable Temperature***
- ***Changeover contact***
- ***DIN rail mounted***

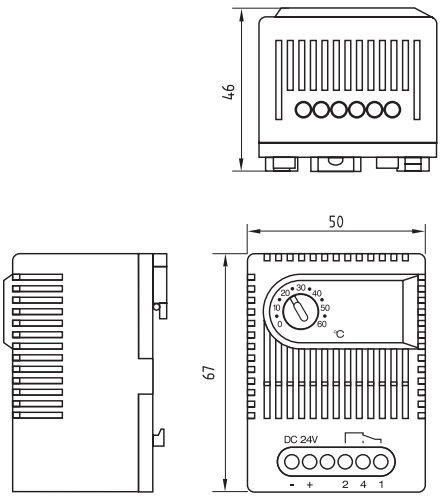
Electronic thermostat for regulating high performance DC 24V equipment. Heating or cooling appliances as well as signal devices can be switched via the potential free change-over contact. In comparison to mechanical thermostats, the ET 011 has a low hysteresis making the switching point

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

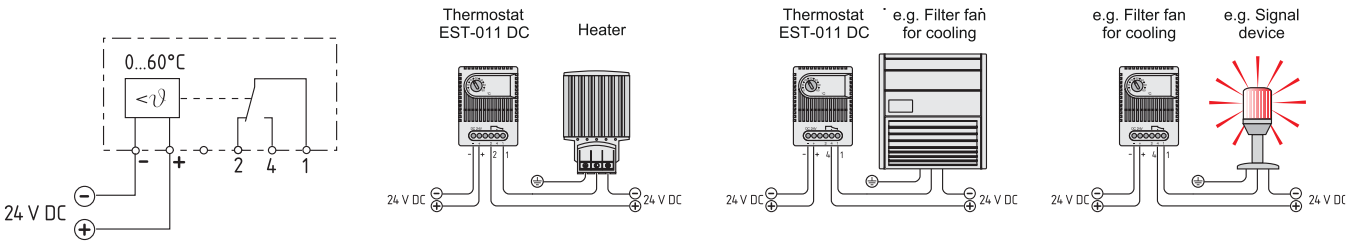
Technical Data ESFR 012

Switch temperature difference	Approx. 3K
Sensor element	PTC
Contact type	Change–over
Contact resistance	< 10m Ω
Service life	> 100,000 cycles
Max. switching capacity	28VDC, 16A
EMC	Acc. To EN 55014–1–2, EN 61000–3–2, EN 61000–3–3
Connection	5 pole terminal,clamping torque 0.5Nm max.:rigid wire 2.5mm² stranded wire (with wire end ferrule) 1.5mm²
Mounting	35mm DIN clip for 35mm DIN rail,EN60715 or for exit filter EF 118 Series
Casing	plastic according to UL94 V-0, light grey
Dimensions	67 x 50 x 46mm
Weight	Approx. 80g
Installation position	variable
Operating/Storage temperature	0 to +60℃ (32 to +140°F) / –45 to +80℃ (–49 to +176°F)
Protection type	IP20

DIEMENSIONS (Approx) in mm



CONNECTION DIAGRAM



GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

HAZARDOUS AREA THERMOSTAT

SREX-011 15ºC / 25ºC

- ***Compact Desogn***
- ***Set Temperature***
- ***High switching capacity***
- ***Clip mounted***

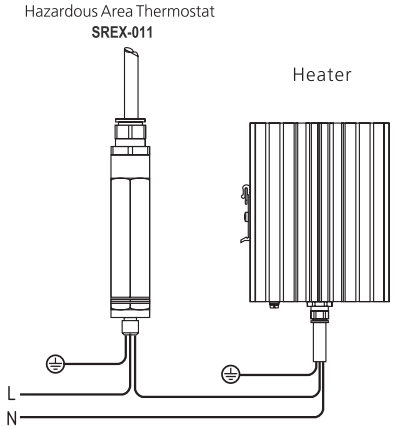
Compact small mechanical thermostat for temperature regulation and monitoring of heaters, for example in transmitter cabinets, control panels and measuring equipment which are deployed in areas with explosion hazard. The special switch construction enables high response accuracy, small switch temperature difference and a very long service life. High switching performance allows direct control of the heaters

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

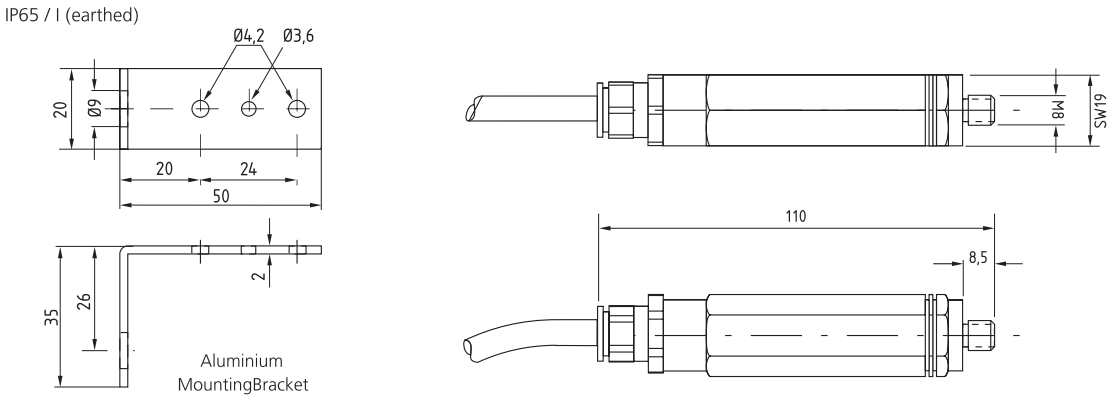
Technical Data SREX-011

Explosion proof according to EN	LCIE
Conformity certificate	01 ATEX 6074/02, LCIE N 06 ATEX Q8011, IECEx LCI 07. 0021
Sensor element	thermostatic bimetal
1P)Contact type (1–pole)	opens with rising temperature
Service life	> 100,000 cycles
Max. Switching capacity	250VAC, 4 (1) A
Connection	Si HF – JZ 3 x 0.75mm²length 1m
Mounting	mounting bracket with nut M8 (see illustration)
Casing	aluminium, black anodised
Dimensions	length 110mm
Weight	approx. 0.20kg
Installation position	variable
Operating/Storage temperature	–20 to +40℃ (–4 to +104 F)/–45 to +70℃ (–49 to +158° F)
Protection type/Protection class	

DIEMENSIONS (Approx) in mm



CONNECTION DIAGRAM



Ex protection type	Switch–off temperature	Switch temperature difference
d IIC T6 - Ex tD A21 IP6X T85℃	+15℃(± 4K tolerance)	4K (± 1K tolerance)
d IIC T6 - Ex tD A21 IP6X T85℃	+25℃(± 4K tolerance)	4K (± 1K tolerance)

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

HAZARDOUS AREA THERMOSTAT

SCRex-011

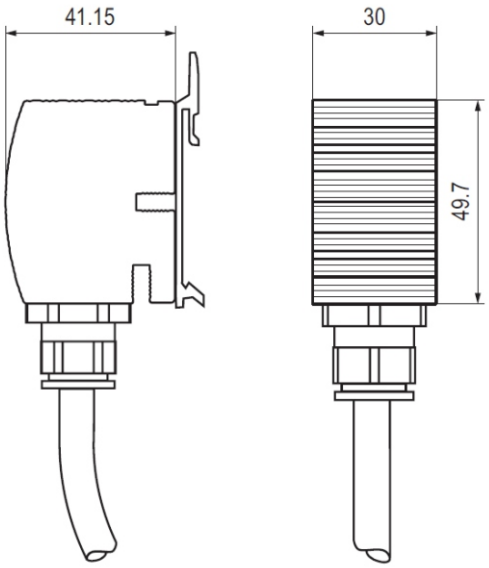
- ***Compact Design***
- ***Set Temperature***
- ***High Switching Capacity***

Compact small mechanical thermostat for temperature regulation and monitoring of heaters, for example in transmitter cabinets, control panels and measuring equipment which are deployed in areas with explosion hazard. The special switch construction enables high response accuracy, small switch temperature difference and a very long service life. High switching performance allows direct control of the heaters.

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

Technical Data

DIEMENSIONS (Approx) in mm



Switch temp. difference	4K (±1K tolerance)
Sensor element	thermostatic bimetal
Contact type (1-pole)	opens with rising temperature
Service life	100000 cycles
Max. switching capacity	250VAC, 1.3 (0.65) A
Max. inrush current	AC 4A for 12 sec.
Connection	Si HF - JZ 3 x 0.5mm², length 1m
Mounting	mounting bracket with nut M8 (see ill.)
Casing	aluminium, black anodised
Dimensions	length 110mm
Weight	approx. 0.2kg
Fitting position	variable
Storage temperature	-45 to +70°C (-49 to +158°F)
Operating/Storage humidity	max. 90% RH (non-condensing)
Protection type/class	Ip65 / I (earthed)

Cable Length 1 meter

Hazardous AreaThermostat
SCREx011

Hazardous Area Heater
SCREx020 T5/T4/T3

Model No.	Ambient Temp.**	Switch Off Temp.	Ex protection type II 2 GD
SCRex-011/15	0-60°C	+15°C(±4K tolerance)	Gases: Ex d IIC T6 Gb / Dusts: Ex tb IIIC T85°C Db IP6X
SCRex-011/15	0-60°C	+25°C(±4K tolerance)	Gases: Ex d IIC T6 Gb / Dusts: Ex tb IIIC T85°C Db IP6X

Ambient Temp. ** = Ambient temperature inside of the cabinet/enclosure

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

MECHANICAL HYGROSTAT

MSFR-012

- ◆*Adjustable relative humidity range*
- ◆*High switching capacity*
- ◆*DIN rail mountable*

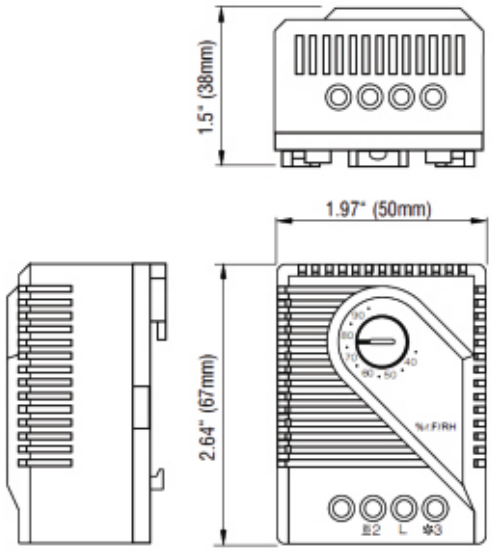
The **MSFR-012** is designed to control the relative air humidity inside of enclosures. When connected to an enclosure heater, (de-humidifier), it will turn the heater on at the set humidity level in order to raise the dew point. This helps prevent damage and malfunction of electronic components caused by condensation and corrosion*. The **MSFR-012** can also be used to control cooling fans, warning lights or other devices.

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

Technical Data MSFR 012

Adjustment range:	35 - 95% relative humidity
Switching difference (hysteresis):	Approx. 4% RH @ 50% relative humidity
Permissible air velocity:	15 m/sec
Maximum switching voltage:	250 VAC
Attention: 250 V should only be switched in a non-condensing environment!	
Contact type:	Change-over contact
Contact resistance:	<10 m ohms
Service life:	100,000 cycles
Minimum switching capacity:	100mA @ AC/DC 20 V
Maximum switching capacity:	5A @ AC 230 V (resistive load) 1.0A @ AC 230 V (inductive load at cos j = 0.8) DC 20W
Connection:	3-pole terminal, 3 x AWG 14 max. (2.5 mm²)
Housing:	Clip for 35 mm DIN rail (EN 50022)
Dimensions (H x W x D):	67 x 50 x 38 mm
Mounting:	Plastic
Weight:	60 g
Operating temperature:	0 to 60°C
Storage temperature:	-20 to 80 °C
Protection type:	IP 20
Application examples:	Electrical & Electronic enclosures Telecommunication systems Display panels Ticket dispensers Automatic teller machines (ATM's) Access & Parking control systems

DIEMENSIONS (Approx) in mm



*The critical relative humidity for most components is 65%.
Above 65% RH, condensation can cause malfunction of electronic equipment. Long-term, this can lead to corrosion and permanent damage of electronic components and systems.

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

ELECTRONIC HYGROSTAT

ESFR-012

- *Adjustable and pre-set relative humidity*
- *LED status indicator*
- *High switching capacity*
- *Clip Fixing*
- *Temperature-compensated*

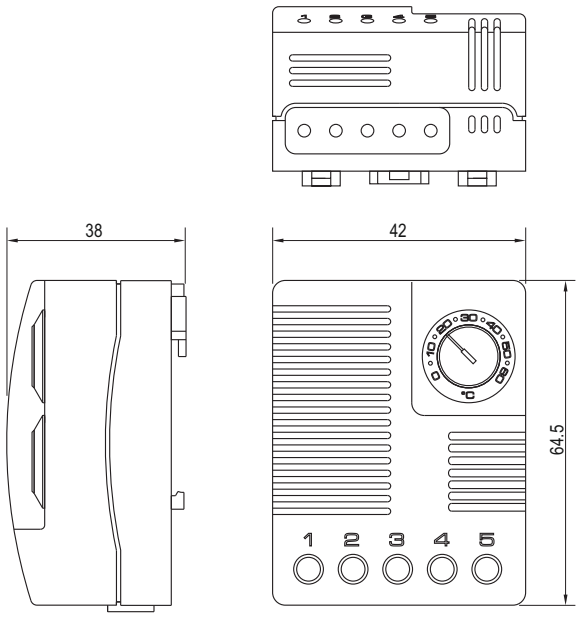
HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

The **ESFR-012** electronic hygrostat senses the relative humidity in an enclosure with electric/electronic components and turns on a heater at the set point, helping prevent the formation of condensation in the enclosure. The LED integrated in the adjustment knob is lit when the connected heater is in operation.

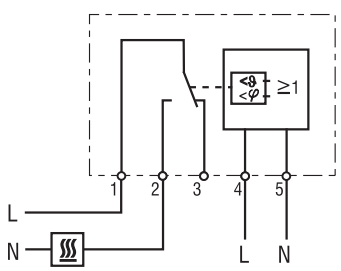
Technical Data ESFR 012

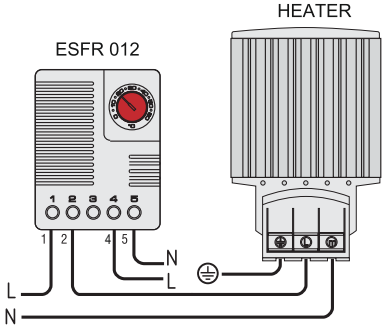
Switch temperature difference	5% RH(±3 RH Tolerance) at 25 Deg c / 77 Deg F (50% RH)
Reaction time(humidity)	approx. 5 sec.
Contact type	change-over contact (relay)
Service life	Aprox. 50,000 cycles*
Max. Switching capacity (Relay output)	240VAC, 8 (1.6) A 120VAC, 8 (1.6) A
Max. Inrush Current	16A AC for 10 sec.
Optical indicator	LED
Connection	5-pole terminal,clamping torque 0.5 Nm max.: rigid wire 2.5mm^2 stranded wire (with wire end ferrule) 1.5mm
Mounting	Clip for 35mm DIN Rail
Casing	plastic according toUL94 V-0, light grey
Dimensions	64.5 x 42 x 38mm
Weight	approx. 70g
Installation position	vertical
Operating/Storage Temperature	0 to +60 Deg C (+32 to + 140 Deg F) / -20 to +70 Deg C (-4 to + 159 Deg F)
Protection type	IP20

DIEMENSIONS (Approx) in mm



CONNECTION DIAGRAM





*Service life may vary depending on its final application

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

ELECTRONIC HYGROSTAT

SKR-3118

- *Compact Design*
- *Set Temperature*
- *High Switching Capacity*
- *Clip Fixing*

The SR-3118 Hygrostat senses the relative humidity in an enclosure with electric/electronic components and turn on a heater at the set point, helping prevent the formation of condensation in the enclosure.

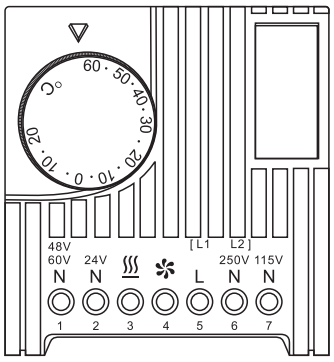
Uses : These are especially used for controlling fan filter, heater and heat exchanger, also could be monitoring the electric cabinet inner temperature when working as signal arouser.

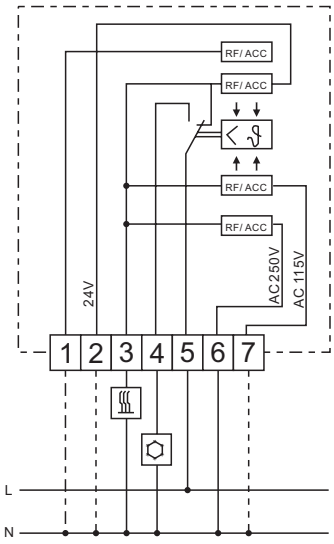
HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

Technical Data

Operating Voltage	24/48/60/115/250vV AC
Max Load	16 A
Temperature Range	-20 to 60 Deg C
Function	heating, cooling
Switching Differential	1K+/-0.8K
Sensor	internal
Ambient Temperature	-5~60°C
Protect Class	IP20
Material	Fireproof UL 94 V-0
Sensor Type	NTC
Size	Aprox. 70 x 70 x 33.5 mm
Weight	Aprox. 105 gms

DIEMENSIONS (Approx) in mm





Important

1. Makebimetal sensor as heat sensitivity set to feedback of heat
2. Contact point scheme:single switchover contact point as instant switch component
3. Voltage scope is wide any type could be used from 24V to 230V
4. Time-saving connection,terminal block could be installed with screw from outside
5. Easy installation,could be installed to 35mm din rail vertically or horizontally according to EN50 022, it could be clipped to NS/35-ES cabinet profile with its accessory adapter.

GIRISHEGO®
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ELECTRONIC HYGROTHERM

ESTF-012 ELECTRONIC HYGROSTAT WITH THERMOSTAT

- *Adjustable and pre-set Temperature & relative humidity*
- *LED status indicator*
- *High switching capacity*
- *DIN rail mounted*
- *Temperature-compensated*

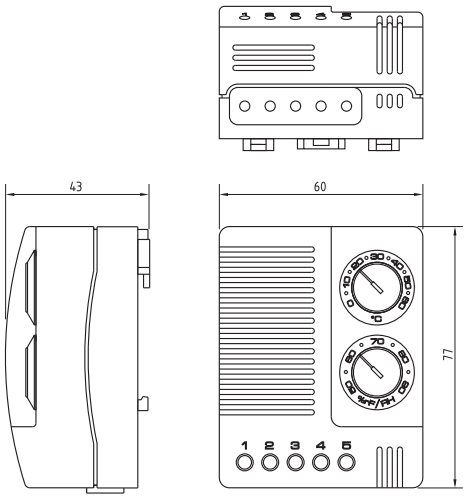
Electronic temperature and humidity sensor can control the on & off of the heater and fan according to ambient temperature and relative humidity

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

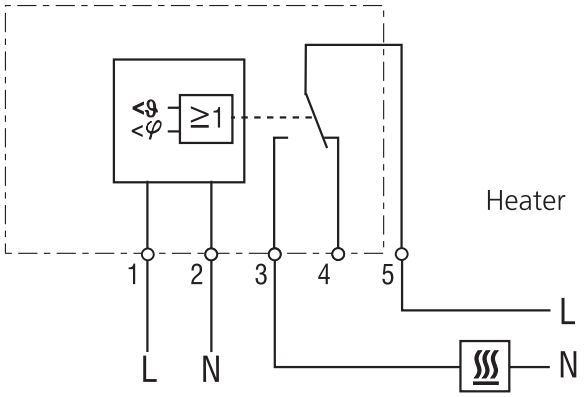
Technical Data ESFR 012

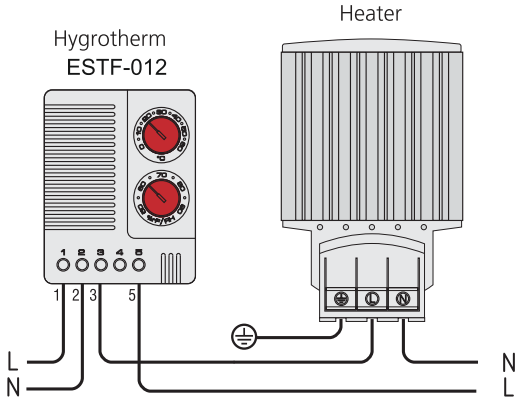
Switch temperature difference	2K (±1K tolerance)at 25℃/77°F (50% RH)
Switch difference(humidity)	4% RH (± 1% tolerance) at 25℃ /77° F (50% RH)
Reaction time (humidity)	approx. 5 sec.
Contact type	change–over contact (relay)
Contact resistance	< 10mΩ
Service life	NC: > 15,000 cycles NO: > 30,000 cycles
Max. Switching capacity (Relay output)	NC: 240VAC, 6 (1) A NO: 240VAC, 8 (1.6) A NC: 120VAC, 6 (1) A NO: 120VAC, 8 (1.6) A 24VDC, 4A
EMC	acc. to EN 55014–1–2, EN 61000–3–2, EN 61000–3–3
Optical indicator	LED
Connection	5-pole terminal,clamping torque 0.5Nm max.:rigid wire 2.5mm² stranded wire (with wire end ferrule) 1.5mm²
Mounting	35mm DIN clip for 35mm DIN rail,EN6075 or for exit filter EF 118 Series
Casing	plastic according to UL94 V-0, light grey
Dimensions	77 x 60 x 43mm
Weight	approx. 0.20kg
Installation position	vertical
Operating/Storage temperature	0 to +60℃ (+32 to +140° F) / –20 to +80℃ (–4 to +176° F)
Protection type	IP20

DIEMENSIONS (Approx) in mm



CONNECTION DIAGRAM





GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

COMBI - SPACE HEATERS with BUILT IN CAPILLARY THERMOSTAT

COMBI model

- *Compact design*
- *Built-in Thermostat*
- *Stainless steel cover*

PRODUCT DESCRIPTION: Girishego Combi Space Heaters with built-in capillary Thermostat are ideal for prevention of condensation, corrosion & Leakage currents in L.T. & H.T. Switchgear panel boards / electronic instruments & panels etc.

PRINCIPLE & FEATURES: In this, a long life and sturdy extruded aluminium sheathed, mica insulated heater and an accurate capillary thermostat are place in a Rust resistant steel perforated body. A 2 x 2.5 sqr. mm porcelain terminal block is provided for electrical connection.

INTENDED USE: Prevention of condensation, corrosion & Leakage currents in L.T. & H.T. Switchgear panel boards, enclosures, switch boards, & electronic instruments etc.

INSTALLATION: Four side slot holes for fixing tabs are provided for fitting the heater in the panel. Installation can be done in vertical or horizontal position although vertical mounting is preferred. Distance from surface of panel should be at least 10mm and distance from plastic parts should be at least 50mm. Connection wire must be on the side or below to avoid warming up of the wire

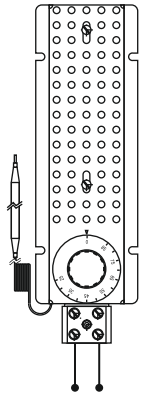
HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

TECHNICAL DATA:

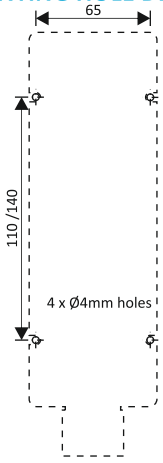
Heating Element	: Invariable Resistor with Extruded Aluminum body
Thermostat	: Capillary thermostat with SS capillary
Cover Body	: Rust resistant Perforated steel body
Operating Voltages	: 230Volts AC (also available in 48v,110v,250v & 415v AC)
Available Wattages	: 40Watts To 100Watts
Tolerance on Watts	: ±5% Max @ Rated Voltage
Temp. Range	: 25 to 85 degree Centigrade
Di-electric Strength	: 2KV for 1 minute
Connections	: 2 Way Porcelain Connector
Terminals	: Suitable for SWG 12 (2.5 Sqr.mm) wires
Size	: L - 220 or 250mm,W - 75mm, H - 38mm (64mm with knob) approx.
Mounting	: Through 4nos. of Ø5mm slot holes on sides
Protection Type	: IP20
Storage Temp.	: -20 to 75°C

Type	Watts	Volts	Temperature Range	Size in mm	Standard Packing
CSHT/004/250	40	230V AC	25 - 85°C	250x75x38	25Nos
CSHT/006/220	60	230V AC	25 - 85°C	220x75x38	25Nos
CSHT/008/220	80	230V AC	25 - 85°C	220x75x38	25Nos
CSHT/010/250	100	230V AC	25 - 85°C	250x75x38	25Nos

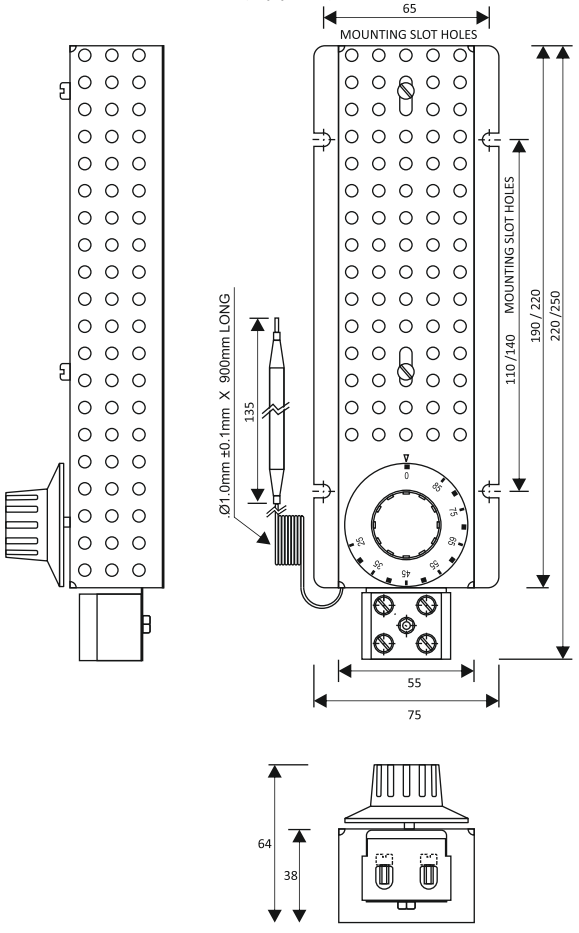
WIRING DIAGRAM



MOUNTING HOLE DETAILS



DIEMENSIONS (Approx) in mm



GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

HEAVY DUTY SLIM SPACE HEATER with COVER FOR CONTINUOUS USE

SJ-III model

- *Flat body takes very less space inside enclosure*
- *Quick and uniform heating*
- *Fast dissipation of heat into air*
- *Withstands mechanical shock and vibration*
- *Very good insulation resistance*

PRODUCT DESCRIPTION: Girishego make SJ-III model is a slim & Heavy duty space heater, it is encased in a specially designed Aluminum broad heat sink channel having a Perforated Protection cover for evenly distributed temperature within the enclosure/cabinet. It is highly recommended for continuous use for prevention of condensation, corrosion, Leakage currents in L.T. & H.T. Switchgears, Panel boards / electronic instruments & panels etc. Its is specially designed for continuos use.

WORKING PRINCIPLE & FEATURES: Heater body is made of anodized heat sink grade extruded aluminium for fast dissipation of heat into air. High quality resistance heating element is insulated with mica for optimum insulation even in extreme humid conditions. Resistance element and insulation are held tight in between aluminium parts and squeezed for quick and uniform heating. Heater can withstand much higher degree of mechanical shock and vibration. Elevated body provides for easy passage of heat directly to air, without heating panel body. A Perforated cover made of Powder coated M.S. sheet is provided for safety.

INTENDED USE: Prevention of condensation, corrosion, Leakage currents in L.T. & H.T. Switchgear panel boards, enclosures, switch boards, & electronic instruments etc.

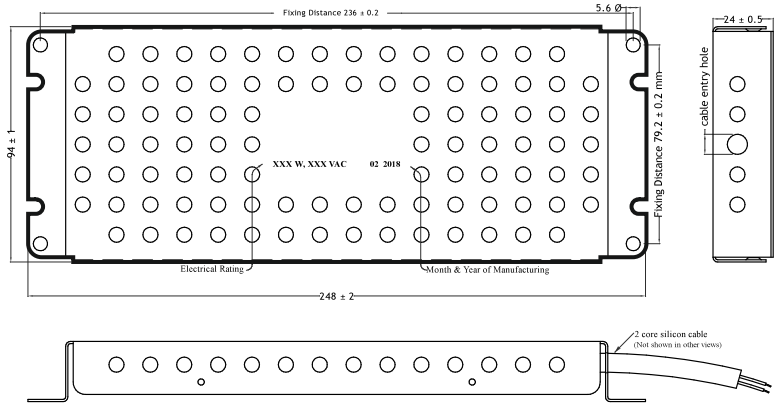
REMARK: It is recommended to use a Girishego thermostat to control the heater.

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

TECHNICAL DATA:

Heating Element	: Invariable Resistor
Heating Body	: Extruded Aluminium
Body Finish	: Black Anodizing
Cover Body	: Mild Steel
Cover Finish	: Black CED Coating
Coating Specifications	: Withstands 504 hrs Salt Spray
Operating Voltage	: Test as per ASTM B-117
Operating Frequency	: 110-120, 220 - 250 V AC
Wattage Output	: 50 & 60 Hz
Tolerance on Watts	: 30, 40, 50, 80, 100, 120, 150, 200 W
Di-electric Strength	: ±5% max @ Rated Voltage
Insulation Resistance	: 2 kV for 1 minute
Relative Humidity	: >500 Mega Ohms
Connection	: <90% rH
Cable Length	: 2 Core Silicone Cable
Service Life	: As Requested by Customer
Operating Surface Temperature	: > 365 days x 24 hours
	: 85 ± 10 °C
Ambient Temperature	: - 10 to 70 °C
Protection Type	: IP20
Mounting	: Through 4 Nos. 5.6 Ø mm Holes in Cover Body

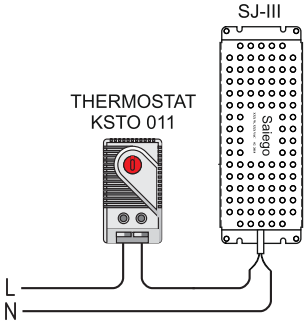
DIEMENSIONS



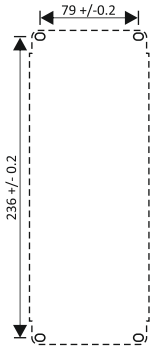
Type No.	Watts (At 230V AC)	Total Length(L)	Fixing Hole C-to-C(A)	Standard Packing	Despatch Packing
SJ-III/003/248	30	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/004/248	40	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/005/248	50	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/006/248	60	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/008/248	80	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/010/248	100	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/012/248	120	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/015/248	150	248mm	236mm ±2	25 Nos.	100 Nos.
SJ-III/020/248	200	248mm	236mm ±2	25 Nos.	100 Nos.

Also Available in 24V, 48V, 110V, 120V, 220V, 240V & 250V

Wiring Example



Mounting Hole Details



GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

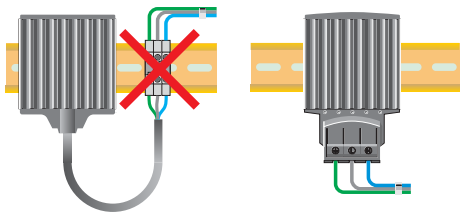
PTC ENCLOSURE HEATER

HGG 140 15W - 150W

- *Pressure clamp connectors*
- *Dynamic heating up*
- *Wide voltage range*
- *Temperature limiting*
- *Energy saving*
- *DIN rail mounted*
- *Quick installation*

These heaters are used in enclosures where damage from condensation must be prevented, or where the temperature must be maintained above a minimum value. The aluminum profile heater body design has a chimney effect to distribute heat evenly. The pressure clamp connectors save time and simplify installation.

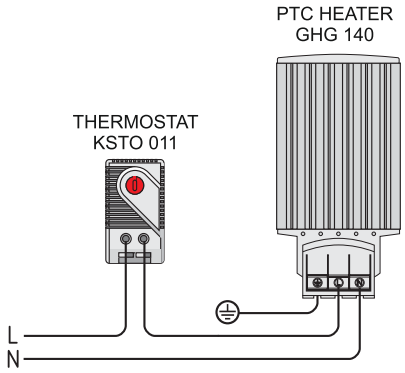
HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT



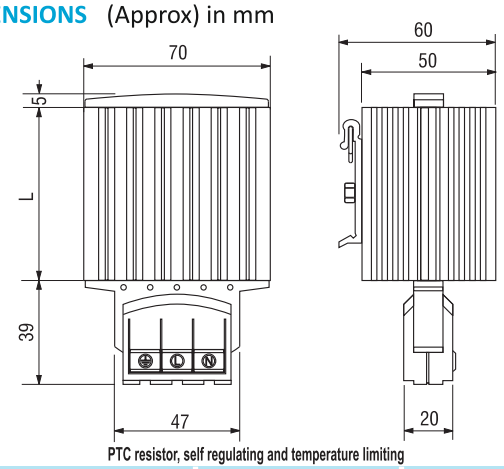
Technical Data HGG 140

Operating voltage	120-240V AC/DC *(min.110V,max265V)
Heating element	PTC resistor, self regulating and temperature limiting
Heater body	Extruded Aluminium profile, anodised
Connection	3 pressure clamps for strandedwire 0.5-1.5 sq mm (with wire end ferrule) and rigid wire 0.5-1.5 sq mm
Connection casing	Plastic according to UL94 V-0,black
Mounting	Clip for 35mm DIN rail, EN 60715
Installation position	Vertical
OperatingStoragetemperature	-20 to +70°C (-4 to +158°F)
Protection type/Protection class	IP 20 / I (EARTHED) I

*Operating with voltages below 140V AC/DC reduses heating performance by approx. 10%



DIEMENSIONS (Approx) in mm



PTC resistor, self regulating and temperature limiting

MODEL NO	PART NO	HEATING CAPACITY	INRUSH CURRENT MAX.	LENGTH (L)	WEIGHT (APPROX.)
HGG/0015/65	14000.0-00	15W	1.5A	65mm	0.30kg
HGG/003/65	14001.0-00	30W	3.0A	65mm	0.30kg
HGG/0045/65	14003.0-00	45W	3.5A	65mm	0.30kg
HGG/0065/65 or 140	14005.0-00	65W	2.5A	65mm / 140mm	0.3kg / 0.40kg
HGG/0075/140	14006.0-00	75W	4.0A	140mm	0.50kg
HGG/010/140	14007.0-00	100W	4.5A	140mm	0.50kg
HGG/015/220	14008.0-00	150W	9.0A	220mm	0.70kg

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

SMALL SEMICONDUCTOR HEATER

SRC-016 8W, 10W, 13W

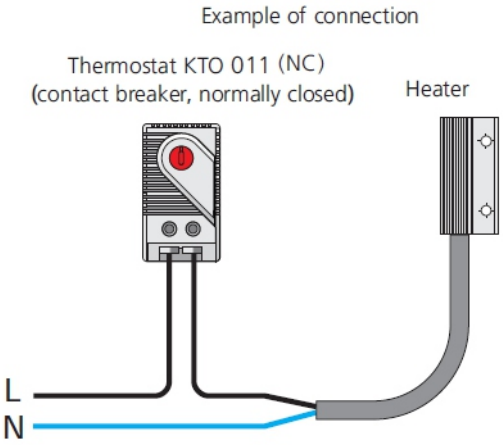
- *Temperature Limiting*
- *Wide Voltage Range*
- *Dynamic Heating*
- *Energy Saving & Compact*

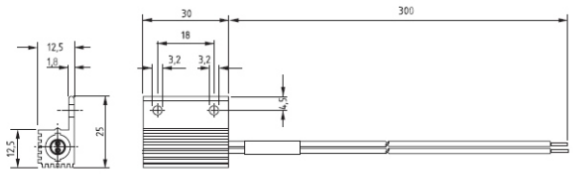
These small heaters are designed to ensure prevention of condensation along with minimum operating temperature in small enclosure like camera enclosure etc

HIGH QUALITY HIGH TECH HIGH SAFETY ENERGY EFFICIENT

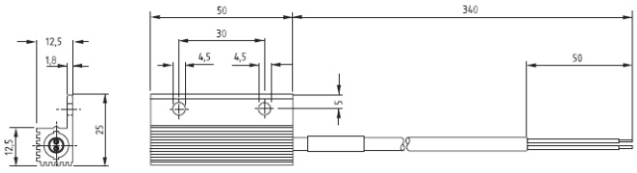
Technical Data	
Operating Voltage	12/24/120-240v AC
Heating Element	PTC self regulating
Heater Body	Aluminium
Connection	Screw Fixing
Installation Position	Variable
Operating / storage Temp.	-45 to +70 Deg C
Protect Class	IP20
with voltage below 140v AC/DC, heating performance may reduce by 10-20%	

DIEMENSIONS

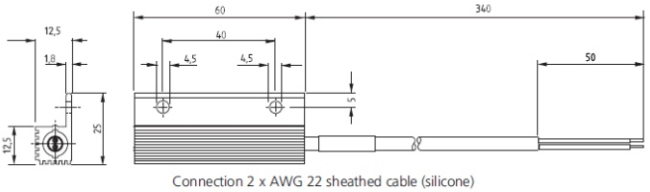




Connection 2 x AWG 18 stranded wire



Connection 2 x AWG 22 sheathed cable (silicone)



Connection 2 x AWG 22 sheathed cable (silicone)

Heating capacity	Inrush current max.	Surface temperature (approx.)	Weight (approx.)
8W	2.0A	150℃	20g
10W	2.5A	155℃	30g
13W	3.0A	170℃	40g

at ambient Temp (20 Deg C)

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

HIGH QUALITY | HIGH TECH | HIGH SAFETY | ENERGY EFFICIENT

HAZARDOUS AREA HEATER

SCREx020T5 | 50W/100W
SCREx020T4 | 50W/100W/150W/200W
SCREx020T3 | 50W/100W/150W/200W/250W

- ***For use in Hazardous Area***
- ***Large convection surface***
- ***Din Rail & Screw mounting***
- ***Ready to use with Strain relief***
- ***Maintenance Free***

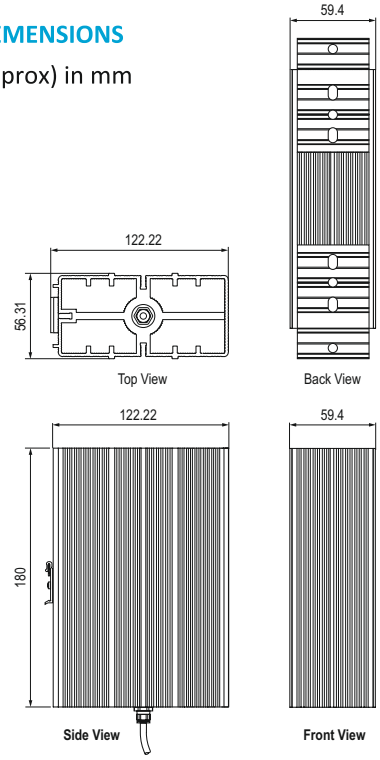
Compact convection heater is for use in hazardous areas for prevention of formation of condensation, temperature fluctuations, and for protection against frost in control and switch cabinets, as well as in measuring equipment.

Technical Data SCREx020T5 / SCREx020T4 / SCREx020T3

Heating element	high performance cartridge
Heater body	aluminium profile, silver anodised
Connection	Si HF-JZ 3×0.5mm² cable, length 1m
Connection PE	4mm²
Mounting	screw fixing
Fitting position	vertical airflow (connection on bottom)
Storage temperature	-45 to +70°C (-49 to +158°F)
Operating/Storage humidity	max. 90% RH (non-condensing)
Protection type/class	IP65/I(earthed)
Ambient temperature	-76 to +122°F (-60 to +50°C)

DIEMENSIONS

(Approx) in mm



Cable Length 1 meter

Thermostat SCREx011

Heater SCREx020 T5/T4?t3

Model No.	Heating Capacity	Temperature Class	Dust Temperature Value	Length (L)	Weight (Approx)
120V/230V					
SCEx050 T5	50W	T5	T100°C	180mm	1.04kg
SCEx100 T5	100W	T5	T100°C	180mm	1.04kg
SCEx050 T4	50W	T4	T135°C	180mm	1.04kg
SCEx100 T4	100W	T4	T135°C	180mm	1.04kg
SCEx150 T4	150W	T4	T135°C	180mm	1.04kg
SCEx200 T4	200W	T4	T135°C	180mm	1.04kg
SCEx050 T3	50W	T3	T200°C	180mm	1.04kg
SCEx100 T3	100W	T3	T200°C	180mm	1.04kg
SCEx150 T3	150W	T3	T200°C	180mm	1.04kg
SCEx200 T3	200W	T3	T200°C	180mm	1.04kg
SCEx250 T3	250W	T3	T200°C	180mm	1.04kg

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

SPACE-SAVING FAN HEATER

HV 031/HVL 031 100W- 400W

- ***Compact***
- ***Flat Design***
- ***High Air throw-Flow***
- ***Temperature safety cut-out***
- ***DIN rail mounted***

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

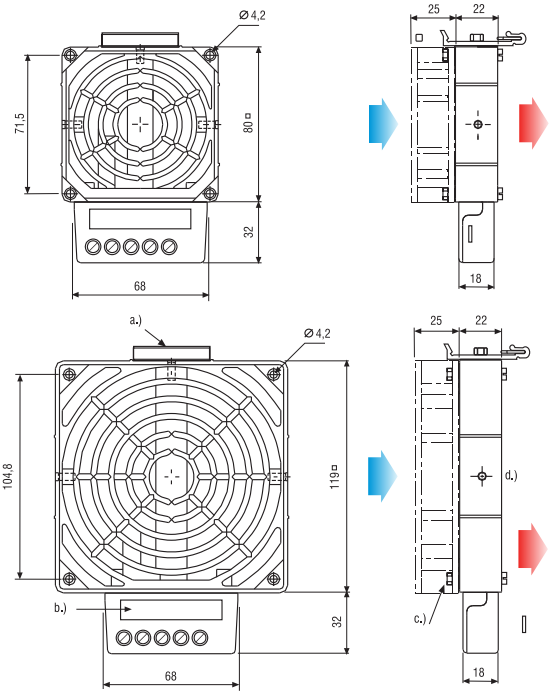
The compact high-performance fan heater prevents formation of condensation in control or systems and provides an evenly distributed interior air temperature in enclosures. This fan heater is available without fan (SHV 031) as well as with fan (SHVL 031)

Technical Data

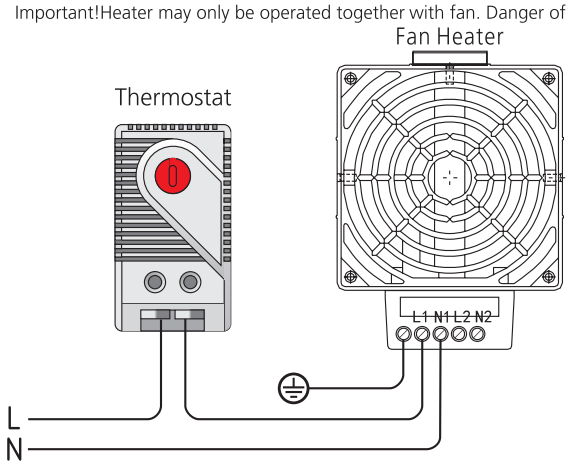
SHV 031	Heater without fan (fan mounting kit included)
SHVL 031	Heater with fan
Heating element	high performance cartridge
Temperature safety cut–out	to protect against overheating in case of fan failure
Heaterbody	die–cast aluminium (glass bead blasted)
Connection	3-pole screw connector 2.5mm²clamping torque 0.8Nm max.
Connection casing	plastic according to UL94 V–0,black
Mounting	clip for 35mm DIN rail, EN 60715
Installation position	horizontal
Operating/Storage temperature	–45 to +70℃ (–49 to +158°F)
Protection type/Protection class	IP20 / I (earthed)
Axial fan, ball bearing	airflow see table service life 50,000h at 25℃(77°F)
Connection & axial fan	2-pole screw connector 2.5mm²(L2/N2)

Important!Heater may only be operated together with fan. Danger of overheating!

DIEMENSIONS (Approx) in mm



a.) Clip b.) Type plate c.) Axial fan d.) Air direction



SHV-031

230VAC, 50/60Hz

Heating capacity	Dimensions	Weight(approx.)
100W	80 x 112 x 22mm	0.40kg
150W	80 x 112 x 22mm	0.40kg
200W	119 x 151 x 22mm	0.50kg
300W	119 x 151 x 22mm	0.50kg
400W	119 x 151 x 22mm	0.50kg

SHVL-031

230VAC, 50/60Hz

Heating capacity	Airflow min.,free flow	Dimensions	Weight(approx.)
100W	35m³/h	80 x 112 x 47mm	0.60kg
150W	35m³/h	80 x 112 x 47mm	0.60kg
200W	108m³/h	119 x 151 x 47mm	0.90kg
300W	108m³/h	119 x 151 x 47mm	0.90kg
400W	108m³/h	119 x 151 x 47mm	0.90kg

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

COMPACT HIGH PERFORMANCE FAN HEATER

SCS0130 700W/900W/1200W

- ***Compact Design***
- ***Double Insulated***
- ***Din Rail & Screw mounting***
- ***High Heating Performance***
- ***Inbuilt Thermostat (Optional)***

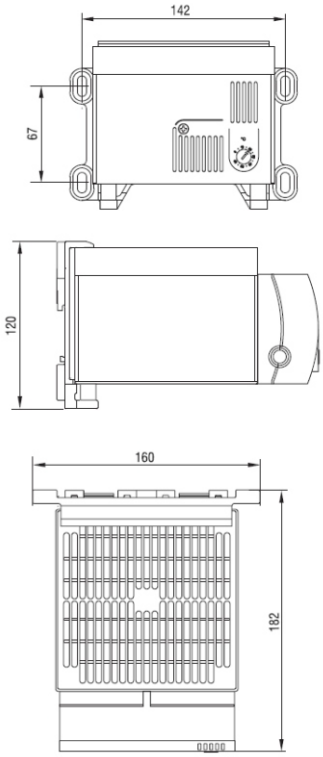
The compact, high-performance fan heater prevents condensation and frost while ensuring evenly distributed interior air temperature in enclosures containing electrical or electronic components. Its plastic housing offers double insulation and contact protection. The fan heater is available with an integrated thermostat for precise temperature control. Designed as a stationary unit, the SCS 0130 is intended for wall mounting, while the SCS 0030 is recommended for installation at the bottom of the enclosure.

HIGH QUALITY · HIGH TECH · HIGH SAFETY · ENERGY EFFICIENT

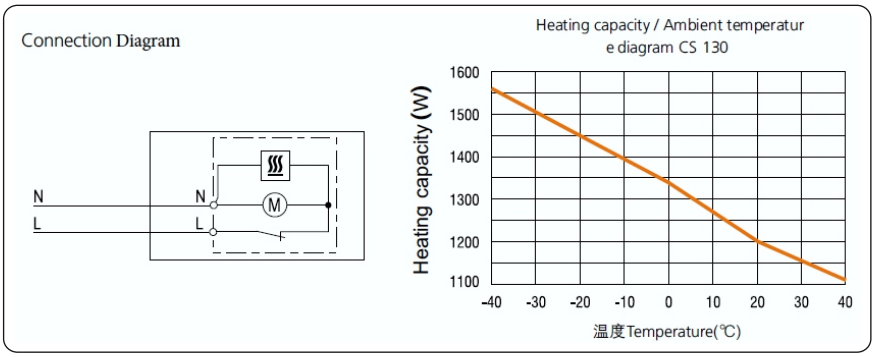
Technical Data SCS0130

DIEMENSIONS

(Approx) in mm



Heating element	PTC resistor, self regulating
Thermal Safety cut-out	to protect overheating in case of fan failure
Axial fan, Ball Bearing	Service Life 50000h at 25 Deg C, In std conditions
Connection	2-pole clamp max 2.5 sq mm,
Mounting	35mm Din clip for 35mm Rail
Casing	Plastic according to UI94 V-0
Storage temperature	-45 to +70°C (-49 to +158°F)
Operating/Storage humidity	max. 90% RH (non-condensing)
Protection type/class	IP20/II(Double Insulated)
Installation Position	Horizontal
Weight	Aprox 1.25 Kg
Dimensions	182 x 160 x 142mm



Model No.	Model	Heating Capacity	Inrush current max.	Pre-fuse T (time delay)	Temp Range
120V/230V.50/60Hz					
SCS0130	without Thermostat	1200W	13A	8-10A	NA
SCS0130/F	with Thermostat	1200W	16A	8-10A	0-60 Deg C

GIRISHEGO®
Electric Panel Heating & Controlling Solutions

Since 1989

PRESSURE COMPENSATION DEVICE

SDA-084 / SDA-284

- *High Degree of Protection*
- *Waterproof Membrane (SDA-284)*
- *Easy to Install*

SDA-084

Inside View

SDA-284

Inside View

HIGH QUALITY HIGH TECH HIGH SAFETY ENERGY EFFICIENT

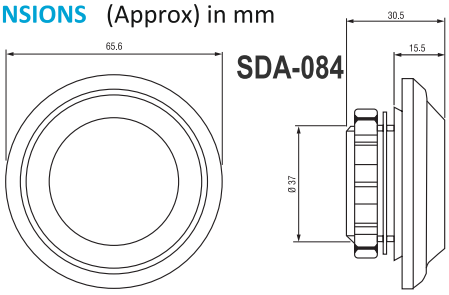
It has become more and more important to provide a protected enclosure environment for and crucial electrical and electronic components.
In a tightly closed enclosure, pressure differentials can occur during extreme temperature variations, such as day/night operation.
When this occurs, the risk of dust and humidity being absorbed into the control panel increases dramatically.
The specially designed pressure compensation plug SDA 084 permits a controlled change in pressure.
It can be installed easily in any enclosure. Because of the pressure compensation plug's high degree of protection (IP45 for SDA-084 & Ip66 FOR SDA-284), the protection type of the enclosure will not be affected
IN SDA-284, Even with a slight overpressure. a waterproof membrane inside the Plug allows the humidity to escape whilst blocking water and dirt from entering the enclosure

Technical Data SDA-084

Mounting	PG 29 thread with union nut
Material	plastic according to UL94 V-0
Air interface	approx. 7cm²
Dimensions	Φ65.5 x 30.5mm
Installation position	variable
Operating/Storage temperature	–45 to +70℃ (–49 to +158°F)
Aprox. weight	31 gms

DIEMENSIONS (Approx) in mm

SDA-084



Installation of SDA-084

Available with gasket
Protection type IP45 & IP55 (with Gasket)

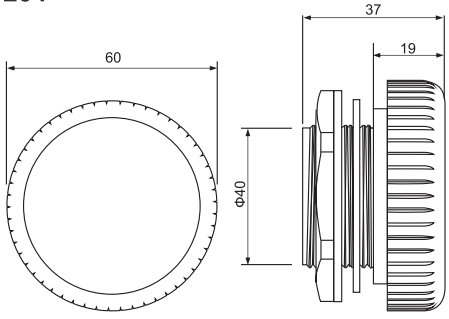
Make cut-out Φ37 +1 mm in enclosure wall and mount pressure compensation device with nut. Please make sure that the sealing gasket is put in place on the outer side panel of the enclosure. For optimal pressure compensation we recommend to use two devices on opposite sides towards the top of the enclosure.

Technical Data SDA-284

Mounting	thread M40 x 1.5with nut
Torque	10Nm)5Nm(max.10Nm)
Depth in enclosure	approx.16mm
Material	plastic light grey
Sealing	sealing gasket NBR
Filter	waterproof membrane
Air permeability	1200l/h at a pressuredifference of min.70mbar
Dimensions	ϕ 60 x 37mm
Fitting position	variable
Operating/Storage temperature	-35 to+70° C(-31 to+158° F)
Aprox. weight	45 gms

DIEMENSIONS (Approx) in mm

SDA-284



Installation of SDA-084

Available with gasket
Protection type IP66

Make cut-out ø40 5 mm in enclosure wall and mount pressure compensation device with nut, Please make sure that the sealing gasket is put in place on the outer side panel of the enclosure, For optimal pressure compensation we recommend to use two devices on opposite sides towards the top of the enclosure

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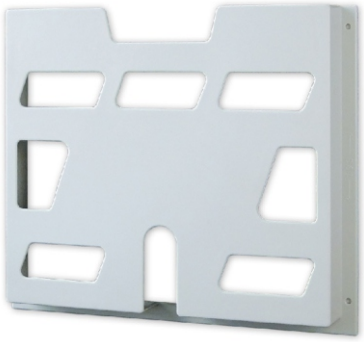
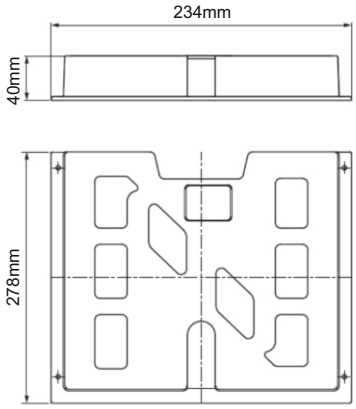
Electric Panel Heating & Controlling Solutions

Since 1989



SEI DOC POCKET



DIEMENSIONS (Approx) in mm

HIGH QUALITY HIGH TECH HIGH SAFETY ENERGY EFFICIENT

DOCUMENT POCKET FOR ENCLOSURE
GEC DOC POCKET

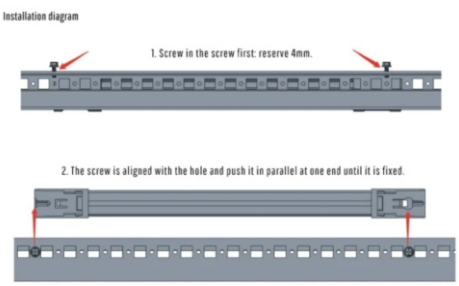
- *ABS new material according to RoHS*
- *A class quality*
- *Holding for documents on cabinet and enclosure*
- *Easy to install onto cabinet and enclosure*

This Doc pocket suitable for use with any enclosure or server cabinet.
The holder allows easy mounting onto any surface to provide convenient storage for valuable and important documents like wiring diagrams, user guides, certifications or catalogues that are used and required alongside the item that is housed in the enclosure.
By using 4 screw holes, the holder provides a strong attachment, even in harsh environments. This document pocket is a versatile server cabinet and enclosure accessory that can be used across a wide range of applications.

Technical Data	
Material	ABS according to RoHS
Color	Off White
Installation Way	Screw mounting or adhesive tape mounting
Weight carrying capacity	5Kgs
Size	234mm x 278mm x 40mm

LED LIGHT FOR PANELBOARD & SWITCHGEAR
GEC LCL LED

- T5 Fluorescent Cabinet Lamp
- High brightness, small size with on/off switch
- High lighting effect, saving 55% power
- Long service life non flicker & can start by low voltage
- Energy Saving with Opal Cover, Or with Striate Cover



Model	LCL-6W.024	LCL-6W.230
Dimensions(L/W/H)	390x30x45	390x30x45
lamp body material	Aluminum+PC	Aluminum+PC
Surface treatment	Oxidation	Oxidation
Flame retardant grade (plastics)	V-1	V-1
power supply	Constant current	Constant current
input power	6W	6W
input voltage	24V	220V
Rated frequency	50/60	50/60
Input current	65mA	65mA
Consumed power	6kW/h	6kW/h
Luminous flux	500LM	500LM
Color temperature	6500±575K	6500±575K
Mean life	20,000h	20,000h
environment temperature	-30 - +50℃	-30 - +50℃