# Calefactor y Termostato

Calefactor

1. Calefactor de Aluminio.
2. Potencia de 60 y 100W en tamaño normal y 30W en tamaño reducido
3. Tensión 230Vac, 50/60Hz
4. Montaje a riel DIN

Termostato

1. Contacto Auxiliar NC
2. Montaje a riel DIN
3. Regulación 0-60ºC

| Código | CAL-100W | CAL-60W | CAL-30W |
|---|---|---|---|
| Potencia | 100W | 60W | 30W |

# HG140

# PTC Heater 15-150W HG140

Compact heater in PTC technology
Maintains minimum operating temperatures in enclosures
Helps to prevent failure of electronic components caused by condensation and corrosion
Heating power adjusts to ambient temperature
Push connectors for quick and easy wiring
DIN rail mountable
CE

## Technical Data HG140

| | |
|---|---|
| Operating voltage | AC/DC 110-250V(also available in 12-48VDC) |
| Heating element | PTC resistor, self-regulating |
| Heating body | Anodized extruded aluminum |
| Protection class | I, test voltage 1600V |
| Protection type | IP20 |
| Connection | Push-type terminals for stranded and solid wire 3 x AWG 20-16 (0.5-1.5mm²) |
| Mountina | Clio for 35mm DIN rail(EN 50022) |

| Part.No. | Power[1] | Max.Current[2] | L | Weight |
|---|---|---|---|---|
| 14000.0-00 | 15W | 1.5A | 2.6"/65mm | 0.56 lbs(0.3kg) |
| 14001.0-00 | 30W | 3.0A | 2.6"/65mm | 0.66 lbs(0.3kg) |
| 14003.0-00 | 45W | 3.5A | 2.6"/65mm | 0.66 lbs(0.3kg) |
| 14005.0-00 | 60W | 2.5A | 5.5"/140mm | 1.10 lbs(0.5kg) |
| 14006.0-00 | 75W | 4.0A | 5.5"/140mm | 1.10 lbs(0.5kg) |
| 14007.0-00 | 100W | 4.5A | 5.5"/140mm | 1.10 lbs(0.5kg) |
| 14008.0-00 | 150W | 9.0A | 8.7"/220mm | 1.76 lbs(0.8kg) |

[1] at 68°F(20°C) ambient temparature. [2]Inrush current

## Applications

Electrical & Electronic enclosures
Telecommunications systems
Display panels
Automatic teller machines(ATM'S)
Access & Parking control systems
Ticket dispensers

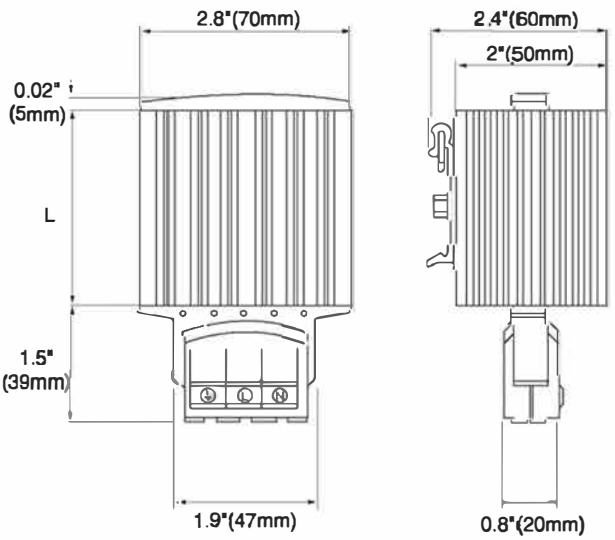
## Determining the required heater size

$$P_H=(A \times \Delta T \times K)-P_v$$

$P_H$ =Required heating power for your application in Watts(W)
$P_v$ =Heating power generated by existing components(e.g.a transformer)in Watts(W)
A =Exposed enclosure surface area in square meters(m²)
ΔT =Temperature differential between the desired minimum interior temperature and the Lowest possible external temperature of the enclosure in Kelvin(K), 1.8°F=1°C=1K
K= Heat transmission coefficient of the enclosure material used:

Painted steel: 5.5W/m²K
Stainless steel: 3.7W/m²K
Aluminum: 1.2W/m²K
Polyester/Plastc: 3.5W/m²K

For outdoor applications it is recommended to double the heating power




Specifications are subject to change without notice. Suitability of this product for its intended use and any associated risks must be determined by the end custome/buyer in its final application.

# HGK047

## Small PTC Heater

Compact heater in PTC technology
Maintains minimum operating temperatures in enclosures
Helps to prevent failure of electronic components caused by condensation and corrosion
Heating power adjusts to ambient temperature
DIN rail mountable
CE

### Technical Data HGK047

| | |
|---|---|
| Voltage/heating power | See table |
| Heating element | PTC resistor, self regulating |
| Heat sink | Anodized extruded aluminum |
| Protection class | 1(grounded) |
| Protection type | IP54 |
| Connection | 3xAWG30(0.5mm²),12"(300mm)length |
| Mounting | Clip for 35mm DIN rail (EN50022) |

| Part.No. | Voltage | Power[1)] | Max.Amps[2)] | Length | VDE | UL |
|---|---|---|---|---|---|---|
| 04700.0-00 | 140-250 VAC | 10W | 1.0A | 2.0"(50mm) | ● | |
| 04701.0-00 | 140-250 VAC | 20W | 2.5A | 2.4"(60mm) | ● | |
| 04702.0-00 | 140-250 VAC | 30W | 3.0A | 2.8"(70mm) | ● | |
| 04700.9-00 | 110-120 VAC | 10W | 1.0A | 2.0"(50mm) | | ● |
| 04701.9-00 | 110-120 VAC | 20W | 1.5A | 2.8"(70mm) | | ● |
| 047029-00 | 110-120 VAC | 30W | 1.5A | 4.0"(100mm) | | ● |

[1)] at 68°F(20°C) ambient temperature. [2)]Inrush

### Applications

Electrical & Electronic enclosures
Telecommunications systems
Display panels
Personnel booths
Automatic teller machines(ATM'S)
Access & Parking control systems
Ticket dispensers

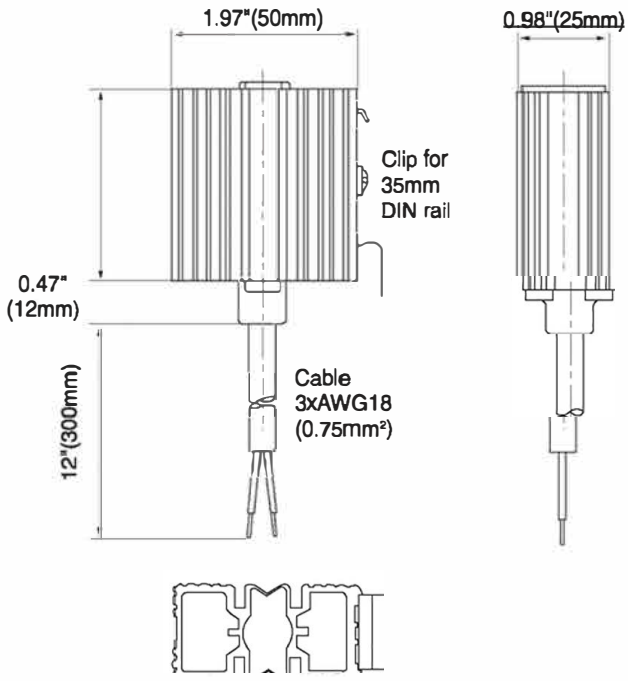
### Determining the required heater size

$$P_H=(A \times \Delta T \times K)-P_V$$

$P_H$ =Required heating power for your application in Watts(W)
$P_V$ =Heating power generated by existing components(e.g.a transformer)in Watts(W)
A =Exposed enciosure surface area in square meters(m²)
ΔT =Temperature differential between the desired minimum interior temperature and the Lowest possible external temperature of the enclosure in Kelvin(K), 1.8°F=1°C=1K
K= Heat transmission coefficient of the enclosure material used:

| | |
|---|---|
| Painted steel: | 5.5W/m²K |
| Stainless steel: | 3.7W/m²K |
| Aluminum: | 1.2W/m²K |
| Polyester/Plastic: | 3.5W/m²K |

For outdoor applications it is recommended to double the heating power




Specifications are subject to change without notice. Suitability of this product for its intended use and any associated risks must be determined by the end custome/buyer in its final application.

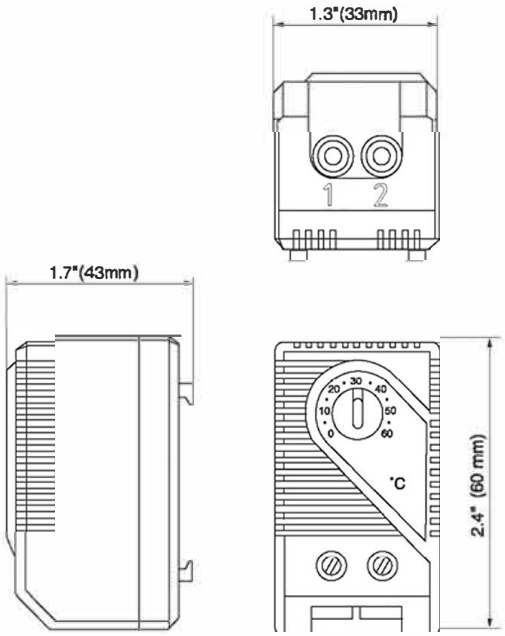
# KT011


## Small Thermostat KT011

Compact design
Wide adjustment range
Available with °F or °C scale
Color coded trmperature dials
DIN rail mountable

Thermostat "NC" (normally closed):
Thermostat opens at temperature rise.
Comes with a red temperature dial.

Thermostat "NO" (normally open):
Thermostat closes at temperature rise.
Comes with a blue temperature dial.

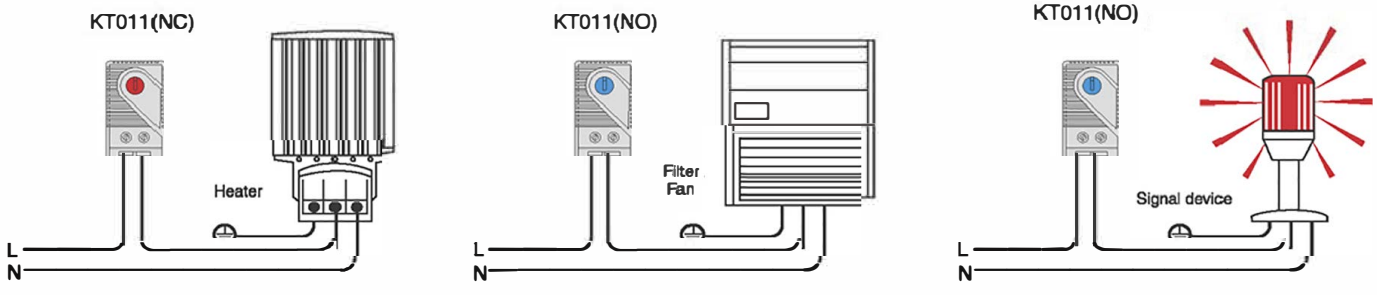



### Technical Data KT011

| Part.No. | Contact type | Scale on housing |
|---|---|---|
| 01140.9-00 | normally closed | 30-140°F |
| 01141.9-00 | normally open | 30-140°F |
| 01146.9-00 | normally closed | 0-60°C |
| 01147.9-00 | normally open | 0-60°C |

| | |
|---|---|
| Sensor element: | Thermostatic bi-metal |
| Maximum tolerance: | ± 7.2°F(4K) |
| Switching difference(hysteresis): | 12.6°F ± 5.4°F(7°C ± 3K) |
| Service life: | 100.000 cycles |
| Swiching capacity(max.load): | 15A resistive/2A inductive @ 120 VAC |
| | 10A resistive/2A inductive @ 250 VAC |
| | DC 30W |

| | |
|---|---|
| EM/EMC compliance: | EN55014-1-2,EN16000-3-2,EN61000-3-3 |
| Connections: | 2-pole terminal for AWG 14 max.(2.5mm²) |
| Mounting: | Clip for 35mm DIN rail(EN50022) |
| Dimensions(H x W x D): | 2.4 x 1.3 x 1.7"(60 x 33 x 43mm) |
| Housing | Plastic |
| Weight: | 1.4oz(40g) |
| Protection type: | IP20 |
| Operatng temperature: | -4 to 176°F(-20 to 80°C) |




Wiring examples