

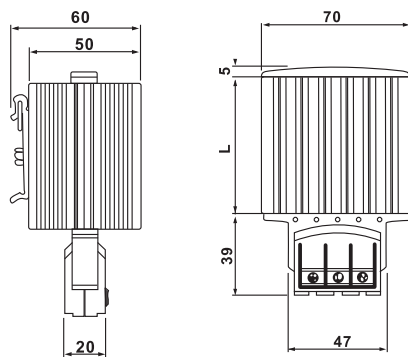
HG140 Type Heater



- Pressure clamp connectors
- Dynamic heating up
- wide voltage range
- Temperature limiting
- Energy saving
- Clip fixing
- Quick installation

These heaters are used in enclosures where damage from condensation must be prevented or where the temperature may not fall below a minimum value. The aluminium profile heater body design has a chimney effect and distributes the heat evenly. The pressure clamp connectors save time and simplify installation.

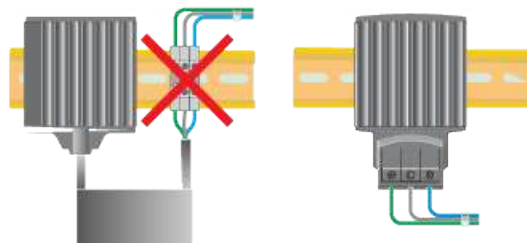
Size chart



Operating voltage	120-250V AC/DC
Heating element	PTC resistor, self regulating and temperature limiting
Heater body	extruded aluminium profile, anodised
Connection casing	3 pressure clamps for stranded wire 0.5-1.5mm ² (with wire and ferrule) and rigid wire 0.5-2.5mm ² plastic according to UL94 V-0, black
Mounting	clip for 35mm DIN rail, EN 50022
Fitting position	vertical
Operating/Storage temperature	-45 to +70°C (-49 to +158°F)
Protection type/Protection class	IP20/I(earthed)
Certificate	CE

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

Type	Heating capacity	Inrush current max.	Length(L) (mm)	Weight (approx)
HG 140	15W	1.5	75	0.3
HG 140	30W	3	75	0.3
HG 140	45W	3.5	75	0.3
HG 140	60W	2.5	75	0.3
HG 140	75W	4	75	0.3
HG 140	100W	4.5	145	0.5
HG 140	150W	9	145	0.5

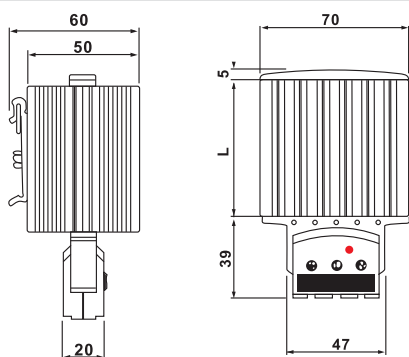




- Screw terminal connector
- Dynamic heating up
- wide voltage range
- Temperature limiting
- With indicator showing on/off
- Energy saving
- Clip fixing
- Quick installation

These heaters are used in enclosures where damage from condensation must be prevented or where the temperature may not fall below a minimum value. The aluminium profile heater body design has a chimney effect and distributes the heat evenly. The pressure clamp connectors save time and simplify installation.

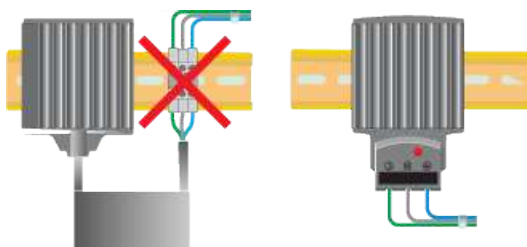
Size chart



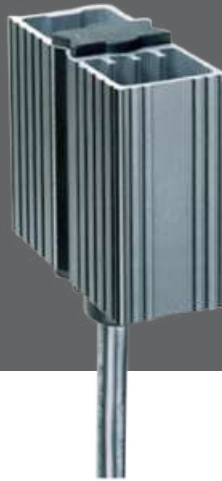
Operating voltage	120-250V AC/DC
Heating element	PTC resistor, self regulating and temperature limiting
Heater body	extruded aluminium profile, anodised
Connection casing	3 pressure clamps for stranded wire 0.5-1.5mm ² (with wire and ferrule) and rigid wire 0.5-2.5mm ² plastic according to UL94 V-0, black
Mounting	clip for 35mm DIN rail, EN 50022
Fitting position	vertical
Operating/Storage temperature	-45 to +70°C (-49 to +158°F)
Protection type/Protection class	IP20/I(earthed)
Certificate	CE

Operating with voltages below 140V AC/DC reduces heating performance by approx, 10%

Type	Heating capacity	Inrush current max.	Length(L) (mm)	Weight (kg)
LK 140	15W	1.5	65	0.2
LK 140	30W	2.5	65	0.2
LK 140	45W	3	65	0.2
LK 140	60W	3.5	65	0.2
LK 140	75W	4	65	0.2
LK 140	100W	4.5	145	0.4
LK 140	150W	9	145	0.4



Small semiconductor Heater HGK 047 Series 10W to 30W

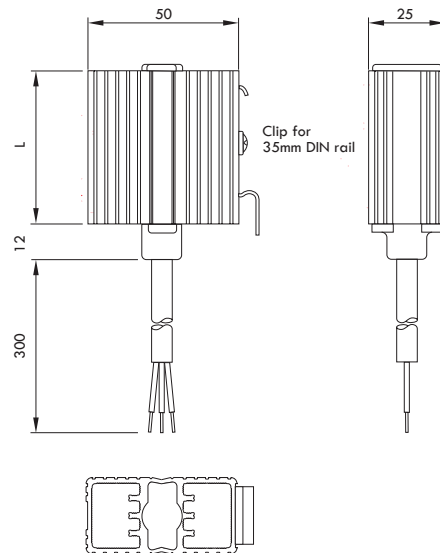
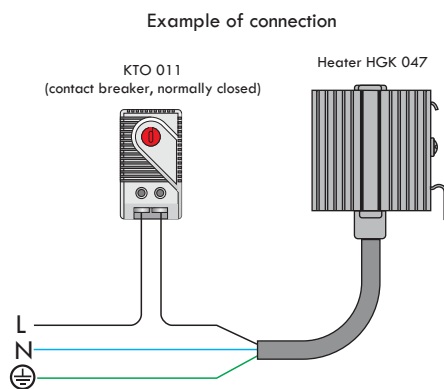


- Dynamic heating up
- Energy saving
- Wide voltage range
- Clip fixing

The heaters are used in enclosures where condensation is to be prevented or the temperature may not fall below a minimum value. In this way corrosion is avoided and an even temperature is ensured. The heaters are designed for permanent operation.

Heating element	PTC resistor - temperature limiting
Heater body	extruded aluminium profile, anodised
Mounting	clip for 35mm DIN rail, EN 60715
Fitting position	vertical airflow (air outlet up, connection on bottom)
Operating / Storage	-45 to +70°C (-49 to +158°F)
Operating / Storage humidity	max. 90% RH (non-condensing)
Protection type / Protection class	IP44 / I (earthed)
Accessories	screw fixing
Note	other voltages on request

Heater/Thermostat/Hygrostat



Art. No.	Operating voltage	Heating capacity ¹⁾	Inrush current max.	Pre-fuse T (time-delay)	Length (L)	Weight (approx.)	Connection	Approvals
04700.0-00	120-240V AC/DC ²⁾	10W	1.0A	1A	52mm	0.1kg	3 x 0.5mm ² x 300mm cable (silicone)	CE
04701.0-00	120-240V AC/DC ²⁾	20W	2.5A	2A	60mm	0.2kg	3 x 0.5mm ² x 300mm cable (silicone)	CE
04702.0-00	120-240V AC/DC ²⁾	30W	3.0A	2A	70mm	0.2kg	3 x 0.5mm ² x 300mm cable (silicone)	CE
04700.9-00	110-120V AC/DC	10W	1.0A	1A	52mm	0.1kg	3 x AWG 20 x 300mm cable	CE
04701.9-00	110-120V AC/DC	20W	1.5A	2A	70mm	0.2kg	3 x AWG 20 x 300mm cable	CE
04702.9-00	110-120V AC/DC	30W	1.5A	2A	100mm	0.2kg	3 x AWG 20 x 300mm cable	CE

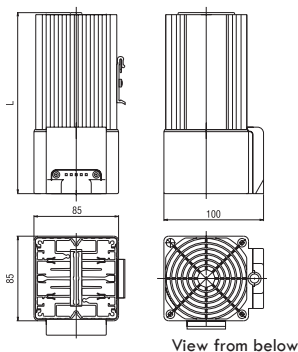
¹⁾ at 20°C (68°F) ambient temperature; ²⁾ (min. 110V, max 265V) Operating with voltages below 140V AC/DC reduces heating performance by approx. 10%.



- Compact Design
- Clip fixing
- Long service life
- Maintenance free
- Temperature safety cut-out

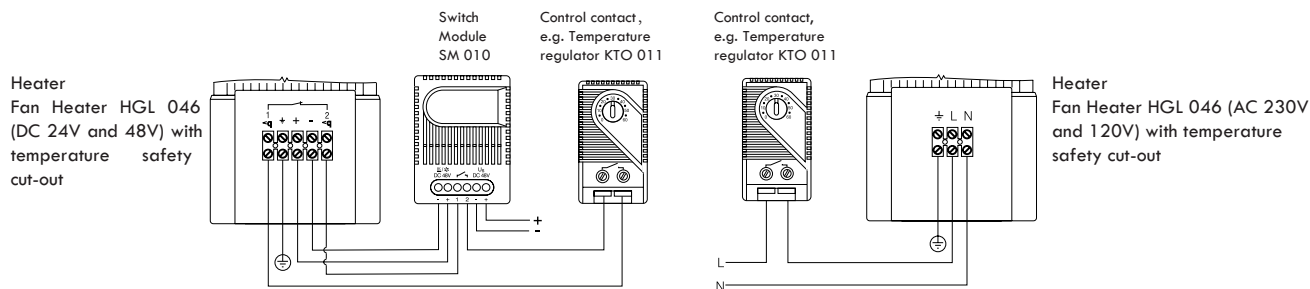
Compact fan heater prevents formation of condensation. The integrated high performance axial fan provides forced air circulation and so guarantees an even temperature in enclosures. With internal terminal connector.

Size chart



Operating voltage	230V AC 50/60Hz
Heating element	PTC resistor, self regulating and temperature limiting
Temperature safety cut-out	to protect against overheating in case of fan failure
Heater body	anodised extruded aluminium profile
Surface temperature	max. 75 °C(400W)
Axial fan, ball bearing	Airflow, free flow AC: 45m ³ /h (50HZ) or 54m ³ /h (60Hz) DC: 54m ³ /h service life 50 000h at 25°C (77°F)
Connection	internal connection terminal 1.5mm ² with strain relief clamping torque 0.8Nm max.
Connection casing	plastic according to UL94 V-0,black
Mounting	clip for 35mm DIN rail, EN 50022
Fitting position	vertical
Operating/Storage temperature	-45 to +70 °C(-49 to +158°F)
Protection type/Protection class	IP20 / I (earthed)

Type	Operating voltage	Heating capacity	Length (L)	Weight (approx.)
HGL046-250	230VAC, 50/60HZ	250W	85x182x85mm	1.10kg
HGL046-400	230VAC, 50/60HZ	400W	85x222x85mm	1.40kg



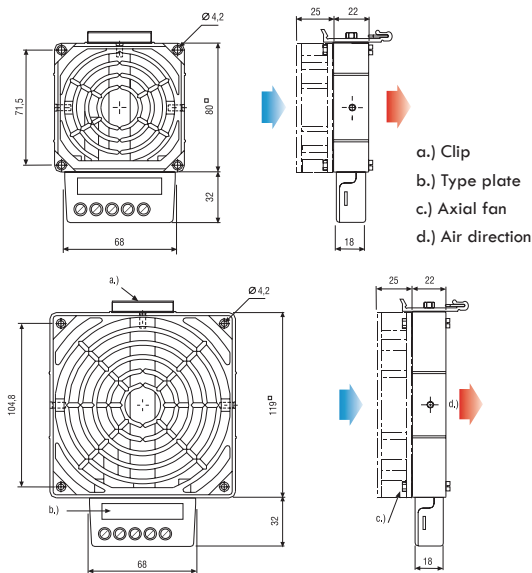
HV/HVL 031 Heater



- Compact / Flat design
- High air through-flow
- Temperature safety cut-out
- Clip fixing

Compact high-performance fan heater prevents formation of condensation and frost and provides an evenly distributed interior air temperature in enclosures with electric/electronic components. This fan heater is available without fan (HV 031) and with fan (HVL 031).

Size chart



HV 031	Heater without fan (fan mounting kit included)
HVL 031	Heater with fan
Heating element	high performance cartridge
Temperature safety cut-out	to protect against overheating in case of fan failure
Heater body	die-cast aluminium(glass bead blasted)
Connection	3-pole screw connector 2.5mm ² , clamping torque 0.8Nm max
Connection casing	plastic according to UL94 V-0, BLACK
Mounting	clip for 35mm DIN rail, EN50022
Fitting position	horizontal
Operating/Storage temperature	-45 to +70°C / (-49 to +158°F)
Protection type/Protection class	IP20 / I (earthed)
Service life	service life 50,000h at 25°C / (77°F)
Connection(axial fan)	2-pole screw connector 2.5mm ² (L2 / N2)

Art.no.HV 031	Art.no.HV 031	Heating capacity	Dimensions	Weight(approx.)
230vac,50/60Hz	120 vac,50/60Hz			
03100.0-00	03100.9-00	100W	80×112×22mm	0.40kg
03101.0-00	03101.9-00	150W	80×112×22mm	0.40kg
03110.0-00	03110.9-00	200W	119×151×22mm	0.50kg
03111.0-00	03111.9-00	300W	119×151×22mm	0.50kg
03112.0-00	03112.9-00	400W	119×151×22mm	0.50kg

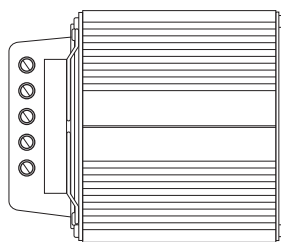
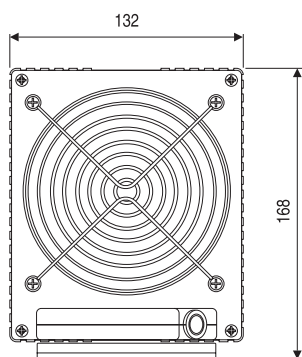
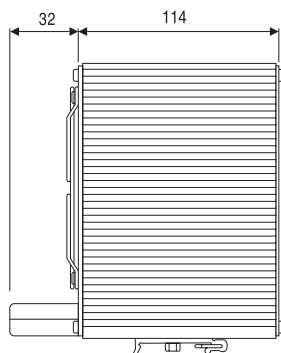
Art.no.HVL 031	Art.no.HVL 031	Heating capacity	Airflow min	Dimensions	Weight(approx.)
230vac,50/60Hz	120 vac,50/60Hz		free flow		
03102.0-00	03102.9-00	100W	35m ³ /h	80×112×47mm	0.60kg
03103.0-00	03103.9-00	150W	35m ³ /h	80×112×47mm	0.60kg
03113.0-00	03113.9-00	200W	108m ³ /h	119×151×47mm	0.90kg
03114.0-00	03114.9-00	300W	108m ³ /h	119×151×47mm	0.90kg
03115.0-00	03115.9-00	400W	108m ³ /h	119×151×47mm	0.90kg



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



Fan Assisted PTC Heaters



Heating Capacity		W	800W	1000W	1200W	1500W
Aticle number	230	V/HZ	800.0-00	1000.0-00	1200.0-00	1500.0-00
	110		800.9-00	1000.9-00	1200.9-00	1500.9-00
Max. current		A	8.0	9.0	12.0	13.0
Heating element			PTC			
Thermal protection			Thermal out out fuse in cose of fan failure			
Radiator			Extruded aluminium profile, anodized			
Axial fan			Ball bearing, service life 50.000 hrs at 25°C(77°F), air flow rate 35m³/h, free flow			
Electrical connections			5 screw terminals for stranded or rigid wire 2.5mm²			
Terminal block			plastic according to V-0, black			
Protection class IEC			Class°C ,Earthed			
Protection degree EN80529			IP20			
Operating/Storage temperature			-25/+70°C			
Mounting			clip for 35MM DIN rail, EN 50022			
Fitting position			vertical			
Dimensions H*W*D		mm	132×168×146			
Weight		KG	1.5			
Conformity			CE			



■ High degree of protection

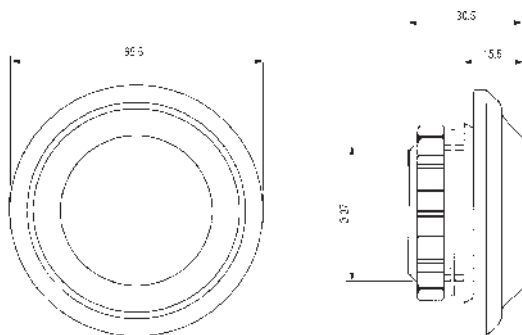
■ Easy to install

It has become more and more important to provide a protected enclosure environment for valuable and crucial electrical and electronic components. In a tightly closed enclosure, pressure differentials can occur during extreme temperature variations. The specially designed pressure compensation device DA 084 permits a controlled change in pressure and avoids the entering of dust and water. The pressure compensation device is suitable for the use in enclosures and housings in accordance with DIN EN 62208.

Mounting	PG 29 thread with union nut
Material	plastic according to UL94 V-0
Air interface	approx. 7cm ²
Dimensions	φ 65.5×30.5mm
Operating / Storage temperature	-45 to +70°C (-49 to +158°F)
Art. No.	DA 084
Description	mount pressure compensation device
Protection type	IP45
1 packing unit	2 pieces
Weight	31 g/pieces

Installation

Make cut-out φ 37.1mm 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.



Art. No.	Protection type	1 packing unit	Weight (approx.)
08400.0-04	IP55	2 pieces	62g (31g/piece)

■ High degree of protection

■ Waterproof membrane

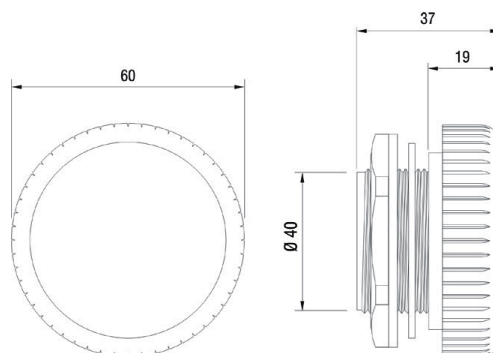
■ Easy to install

Pressure differentials in enclosures with a high degree of protection are a result of internal and external temperature changes. In the case of negative pressure or partial vacuum, dust and humidity can enter the enclosure through the door seal. When the air inside the enclosure cools down, condensation may occur because the humidity cannot escape the enclosure. The easy-to-install pressure compensation device DA 284 provides compensation of pressure at a protection degree of IP66. 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.

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

Installation

Make cut-out Ø 40.5+0,5mm 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.



Art. No.	Protection type	1 packing unit	Weight (approx.)
28400.0-00	IP66/IPX9K	2 pieces	90g (45g/piece)