ELVARME

VARMESLANGER











EX ELECTRICAL HEATERS TYPE HT-EXBR

ELECTRONIC CONTROLLER-LIMITER COMBINATION FOR USE IN EXPLOSION HAZARD AREAS

The electronic Ex-controller is a combination of controller and limiter. The settings of the controller parameters are adjustable via precision Potentiometers. The combination of controller and limiter allows easy and space-saving operation of an electrical tracer heater or a heating hose in explosion hazard areas.

- Compact design
- 16 A switching power
- Protection type IP65 / 230 V
- Min. temperature monitoring
- Fault signal lamp

Ambient temperature

Ambient temperature	-20 to +40 °C
Temperature class	Т4
Marking	🐼 II 2G Ex e mb d II C T4
Control ranges	Controller: 0200 °C Limiter: 0. 200 °C

Voltage	230 V AC 50-60 Hz
Current	16 A / 3680 W
Switching point accuracy	≤ 1,5 %
Switching hysteresis	≤ 3 K
Protection type	IP65
Sensor connection	2 x EX-PT100
Housing dimension L x W x H (mm)	260 x 160 x 90
M25/M16 screw connections	3/2
Terminal cross section (mm ²)	4
Error message	fault signal lamp
Alarm connector	Relais 5A
Option EX-PT100	HBR-IRPT100Ex





EX ELECTRICAL HEATERS TYPE HT-IRM2EX/AG

MECHANICAL FROST PROTECTION THERMOSTAT IN THE HOUSING

The M2Ex/AG is characterised as a bimetal thermostat through its compact dimensions combined with a high switching power. It is outstanding for frost protection monitoring with a heating tape or also suitable for heating plates.

The thermostat is cast into an M20 screw connection, which is installed in a glass-fibre reinforced polyester housing. Up to two heating circuits can be connected in this pre-wired housing.

- Compact dimensions
- For up to two heating circuits
- 16 A switching power
- Low switching hysteresis
- Protection type IP65

Voltage	250 V AC
Switching power	16A
Switching points outside temperature	On 4°C, Off 11°C
Switching accuracy	+/- 3K
Min. ambient temperature	-40°C
Max. ambient temperature	+40°C (T6) +50°C (T5)
Dimensions	122 x 122 x 90 mm (LxWxH)



TYPE HT-IRM2EX/AG GLASS-FIBRE REINFORCED POLYESTER HOUSING FOR USE IN EXPLOSION HAZARD AREAS

Ex connection housing made of glass-fibre reinforced polyester for connecting self-limiting heating conductors, single-wire heating conductors and mineral-insulated heating conductors. The connection housings are available in many different versions for all common uses. Usage under extreme environmental conditions, aggressive chemical media and severe mechanical stresses are no problem for these robust distributor housings.

- Temperature stable
- Chemical resistant
- Antistatic
- 2 + 6 + 8 terminals 4 mm2
- Corrosion resistant / UV-resistant

Dimensions HBR-QX-P1 HBR-QX-P5	80 x 75 x 55 mm (LxWxH) 122 x 120 x 90 mm
Protection type	IP65
Min. ambient temperature	-40°C (-55°C on request)
Temperature class	T6 at +50℃ T5 at +55℃ T4 at +60℃
Marking	🐼 II 2G D, II 1G-D, T6 Exe/Exi





EX ELECTRICAL HEATERS TYPE HT-IR2M

MECHANICAL CAPILLARY THERMOSTAT FOR USE IN EXPLOSION HAZARD AREAS

The IRM series Ex controllers are mechanical 2-point temperature monitors. The black glass-fibre reinforced polyester housing is mechanically robust and serves as a connection for self-limiting heating conductors. The controllers switch the heating circuit directly up to a current of 16 A. If the set temperature is exceeded, the contact opens.

- Compact design
- 16 A switching power / 230 V
- Protection type IP65
- 4 mm sensor thickness
- Resistant against chemical influences

HT-IR2MEx	Туре 0120	Туре 0200
Setting range (°C)	0120	0200
Measurement voltage (VAC)	230	230
Measurement current (A)	16	16
Switching difference	7%	7%
max. sensor temperature (°C)	138	225
Protection type	IP65	IP65
Capillary length (mm)	1000	1000
Sensor diameter (mm)	4.0	4.0
Housing dimensions L x D x H (mm)	122x120x90	122x120x90
M25 screw connections	1x	1x
M20 screw connections	1x	1x
Terminal cross section (mm²)	4	4

Marking	🐼 II 2G Ex ed IIC T6
	🖾 II 2D Ex tb IIIC T=80°C IP65

Further information

Please observe wiring instructions!





EX ELECTRICAL HEATERS TYPE HT-IRB2M

DUAL DEVICE WITH MECHANICAL CAPILLARY THERMOSTAT AND MECHANICAL CAPILLARY LIMITER FOR USE IN EXPLOSION HAZARD AREAS

The Ex controllers / limiters are mechanical 2-point controllers. The glass-fibre reinforced polyester housing is mechanically robust. The combination of controller and limiter allows easy and space-saving operation of an electrical tracer heater in explosion hazard areas. The sensors with just 4 mm outer diameter are especially well suited for electrical trace heaters.

- Compact design
- 16 A switching power
- Protection type IP65 / 230 V
- 4 mm sensor thickness
- Resistant against chemical influences

Minimum ambient temperature:	-40°C
Temperature class	T6 at +50°C
Marking	ⓓ II 2G Ex ed IIC T6 ⓓ II 2D Ex tb IIIC T=80℃ IP65

	Control ranges
HT-IRB2M0120/130190Ex	Controller: 0120°C Limiter: 130190°C
HT-IRB2M0200/0200Ex	Controller: 0200°C Limiter: 0200°C

0120/130190	0200/0200
230	230
16	16
7%	7%
138/215	225/215
IP65	IP65
1000/1000	1000/1000
4/4	4/4
220 x 120 x 90	220 x 120 x 90
1/2	1/2
6-13/7-17	6-13/7-17
4	4
	0120/130190 230 16 7% 138/215 IP65 1000/1000 4/4 220 x 120 x 90 1/2 6-13/7-17 4





EX ELECTRICAL HEATERS HBR-IRPT 100EX

PT100 FOR USE IN EXPLOSION HAZARD AREAS

The PT100 temperature sensor has a PTFE connecting cable. It serves to record temperature and is attached directly to the object to be heated. It's flexible design makes it outstandingly well suited to also be attached to small components.

- Small design
- Very flexible through PTFE cable
- Up to 200°C
- 4-wire technology
- Latest standards

Voltage	max. 60 V
Measuring range	up to 200°C
Signal circuit	max. 10 mA AC/DC
Sensor diameter	6 mm
Sensor length	60 mm
Connecting cable	length 1.5 / 10 m
Measurement method	4-wire
Marking	 (☑) II2GD Ex e II T1-T6 / (☑) II2GD Ex td A21 IP66T 60°C



HBR-HTI 100

PT 100 sensor +200°C

PT 100 sensor +250°C

The HTI type PT100 sensor is available as Exi intrinsically safe.







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