



MINITHERM Self-limiting Heater

1 Application

The self-limiting electric finned heater is designed to be used in small enclosures or cabinets where measuring instruments, control valves or similar equipment in hazardous areas must be heated. Finned heaters heat the area by transferring the heat from the heater to the surrounding air, creating a convection current. This type of heater is recommended when it is not possible to mount a heating block to a flat surface.

In order to maintain a constant temperature in the housing, it is recommended to use a temperature controller TC ... or thermostat KR



2 Features

- Self-limiting, no limiter, no fusible link
- Vertical or horizontal installation, with almost no difference in heat output
- Adjusts automatically to voltage

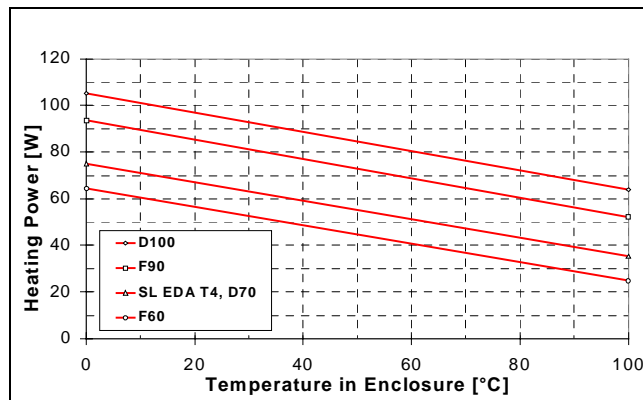
3 Description

The MINITHERM heater consists of a block with fins and a connection cable, which is heated by a PTC cartridge. The heat is transferred from the fins to the surrounding air.

Explosion-proof types of heaters are equipped with a ground terminal and a different nameplate.

4 Performance

The output of an explosion-proof PTC heater depends on the temperature. The diagramme, below, shows the output at different internal air temperatures.



5 Technical Data

Type	CFA T3	CDA T3	CFA T4	CDA T4
Approval	Cl. 1, Div.1, Groups A,B,C,D			
Temperature Class	T3	T3	T4	T4
Certificate of Conformity	CSA NRTL/C, LR 43764			
Nominal Voltage	100 to 265 VAC			
Nominal Power	110W	140W	60W	70W
Max. Ambient Temperature	390 °F (200 °C)			
Protection Degree	IP68, NEMA 4X			

All INTERTEC heaters for hazardous areas can also be supplied to North American NEC standards (CSA/NRTL/FM/UL) .

The standard version is made from black-anodized seawater-proof aluminium. It is also available in stainless steel Mat. No. 1.4571 (designated by an 'S' in the model number).



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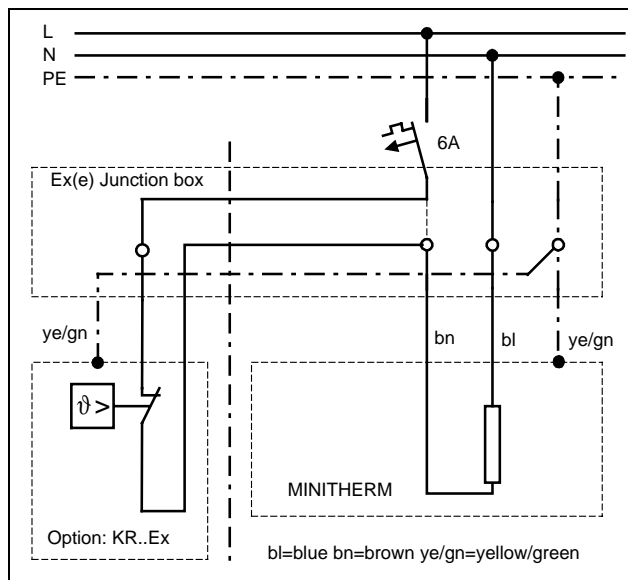
6 Temperature Limitation

PTC-elements (Positive Temperature Coefficient) raise their electric resistance with rising temperature. High resistance means low heating power. The heating power gets very low at high temperatures so that the temperature cannot exceed the maximum temperature of the respective temperature class. The PTB Certificate of Conformity stipulates that the heat transfer coefficient of the surrounding enclosure must not be less than $K=0,5 \text{ W/K}$. All INTERTEC enclosures meet these requirements.

7 Supply Voltage

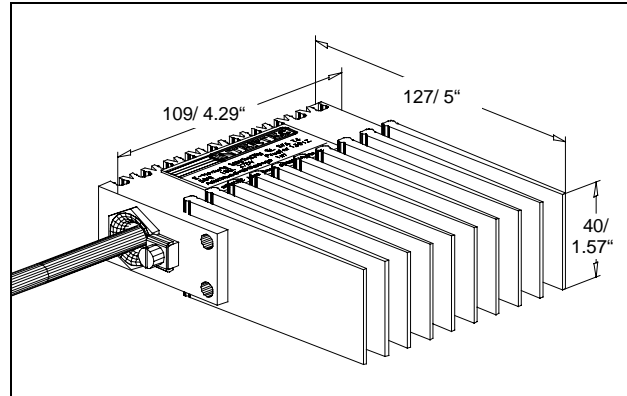
In addition to the above-mentioned temperature characteristics, the PTC-elements show a varistor effect. They control their resistance in accordance to the supply voltage. The nominal power supply voltage may be 100 V to 265 V with the same heater. The output may be a maximum of 15% higher than that shown in the diagramme overleaf.

8 Wiring Diagramme

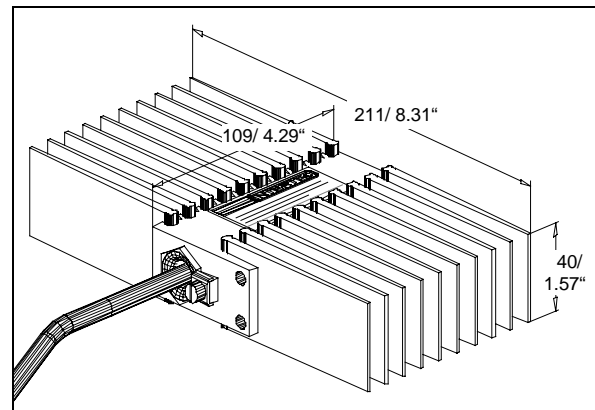


Connection cable Silflex-EWKF 3x1,0mm², 1m long. Other lengths available upon request (at an extra charge).

9 Dimensions

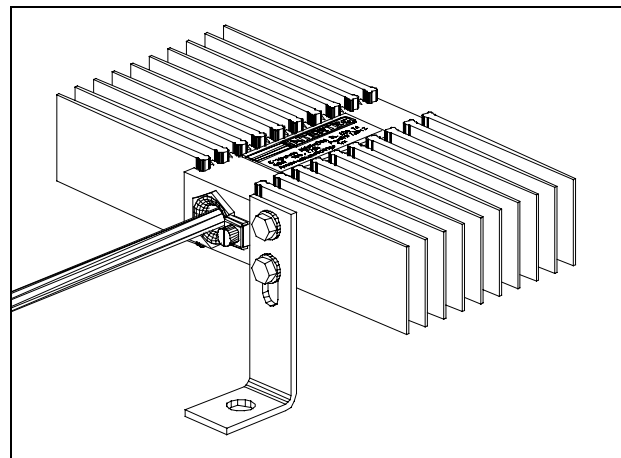


MINITHERM Fxx



MINITHERM SL EDA, MINITHERM Dxx

10 Mounting



The mounting bracket can be installed on either end of the block. The heater may also be mounted with the fins positioned vertically.