



CP VARITHERM ... BI Electric heater



1 Application

Heating of instrument enclosures in hazardous areas, designed for

- freeze protection
- condensation protection
- temperature maintenance
- preferably horizontal installation.

2 Special Features and Advantages

- Horizontal design allows for optimum installation of the heater underneath the instruments in the enclosure
- High heat transfer capabilities due to large surface area of black anodized aluminium fins
- Heater fins can be removed and modified by INTERTEC, if necessary for installation purposes

3 Description

VARITHERM heaters are finned heaters, heating the air in the enclosure by convection.

A non-resettable temperature limiter built to ATEX design specifications is integrated in the core block, cutting off the power in case of a technical failure or excessive heating resulting from an external heat source. For this reason and for reasons of operational safety the heater must only be operated under conditions that ensure that the trip temperature of the limiter will not be exceeded:

- The ambient temperature in the enclosure must not exceed the maximum permissible values.
- An additional external TAE or TS thermostat or must be connected in series and installed on the surface of the heater to enhance thermal coupling (see 7). Alternatively, a TC temperature controller can be used.
- Ensure effective convection by observing the necessary clearances as per section 7 on the next page. Take care not to cover the fins.

A residual-current-operated protective device with a rated value of not more than 300 mA, preferably 30 mA should be installed.

A temperature indicator shows potential problems and failures at an early stage (e.g. incorrect installation). Please check the application if more than 3 fields have irreversibly changed to black.



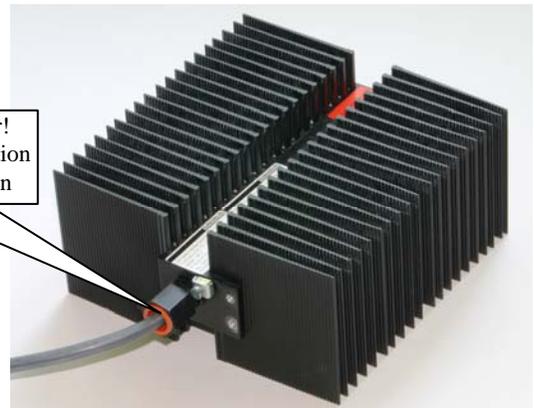
Warranty null and void if Heater strip has been removed from Heater.

All INTERTEC explosion-proof heaters can also be supplied

- in a less expensive, non-explosion-proof design
- to American NEC standard (CSA/ NRTL).
- to ATEX/ IEC standards

Other types upon request.

Don't remove the adapter!
Remove just the red protection cap for conduit installation



For any specific applications requiring high temperature maintenance we will be pleased to select the suitable combination of heater and controller.

4 Technical data

EC-Type-Examination Certificate	PTB 02 ATEX 1041X
IEC Scheme Certificate	IECEX PTB 07.0052 X
Marking	II 2 G Ex d IIC T4, T3, T6 II 2 D Ex td A21 IP65 T135°C, T200°C
CSA Certificate	1655545 (LR43674)
CSA Type of Protection	Cl. 1, Div. 1, Gp ABCD T3/T4
Ingress Protection	IP 68
Nominal voltage	230V AC
Connection cable	EWKF 3x 1,5mm ² 8,1mm Ø
Connection cable for heaters with alarm ...AM	EWKF 5x 1,0mm ² 8,8mm Ø
Conduit connection	½" NPT
Length of connect. cable	39"/ 1 m
Length, width	8.7"/ 220 mm, 8.4"/ 213 mm
Material	seawater-proof aluminium, black anodized

5 Types

5.1 for freeze protection

CP VARITHERM DPA ... BI	200 T3 40	300 T3 80	400 T3 100	500 T3 100
Nom. Power	200 W	300 W	400 W	500 W
Temp. class	T3	T3	T3	T3
Height	1.6"/40mm	3.1"/80mm	3.9"/100mm	3.9"/100mm

5.2 for temperature maintenance to 40° C

CP VARITHERM DPA ... BI	200 T3 100	300 T3 100	125 T4 100
Nominal power	200 W	300 W	125 W
Temperature class	T3	T3	T4
Height	3.9"/100mm	3.9"/100mm	3.9"/100mm

Temperature control must be provided by an additional TAE thermostat or TC temperature controller.



CP VARITHERM ... BI Electric heater



6 Options

AM	Failure alarm opening at < 5 °C
3M	Connection cable 10'/ 3 m long
120V	Nominal voltage 120V AC
240-265V	Nominal voltage 240-265V AC
MB	Stainless steel mounting bracket (bow-type)
MW	Stainless steel mounting brackets

7 Installation

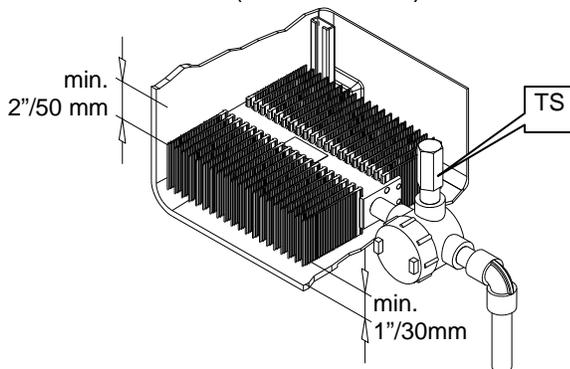
Trouble-free installation, e.g. on a mounting plate or the INTERTEC mounting system (C-rails) in the instrument enclosures or protective cabinets, is possible.

During installation, attention should be paid to the following:

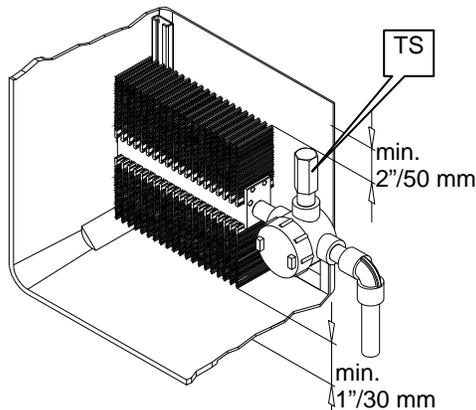
- Follow the installation and operating instructions supplied with the VARITHERM heater.
- The fins must be positioned vertically
- Please note minimum clearances to the enclosure, as per 7.1 and 7.2
- For temperature maintenance install the TAE thermostat on the heater, see 7.2
- The label must be clearly legible

7.1 For North America with conduit

Horizontal installation (recommended)

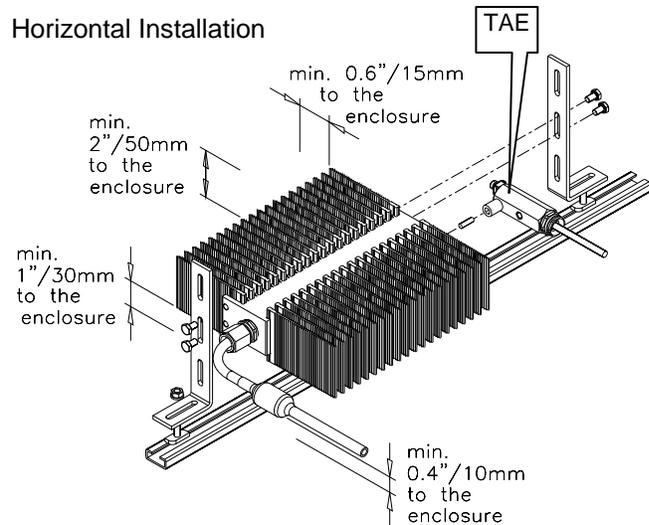


Vertical Installation

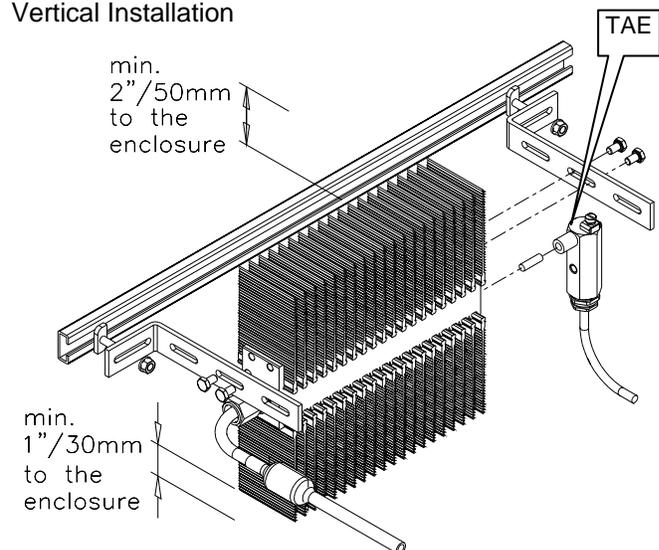


7.2 IEC/ ATEX, with external TAE

Horizontal Installation



Vertical Installation



Note: The convection is about 20% less at vertical installation. Due to earlier switching of the thermostat the effective heating power may be lower.

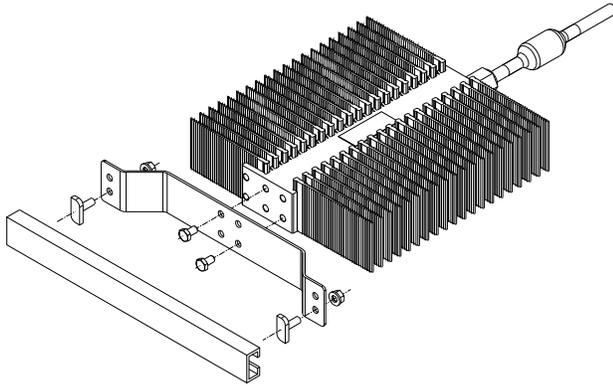
The brackets in zinc coated steel and fixing bolts illustrated above are included with the heater. Furthermore, a short threaded rod for mounting the TAE thermostat on the heater is supplied with the TAE.



CP VARITHERM ... BI Electric heater

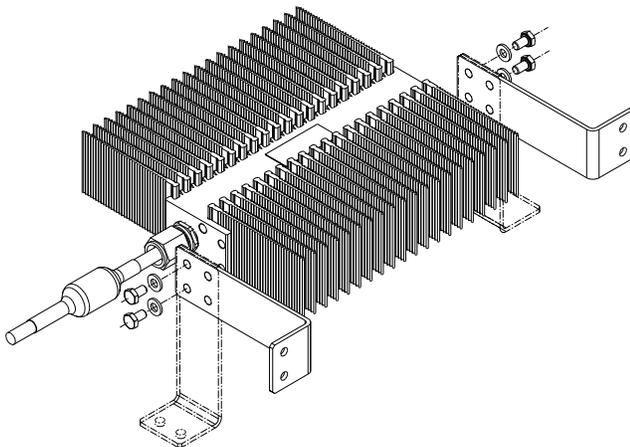


7.3 With one bow-type stainless steel mounting bracket (MB) - Special Accessories -



Please note the minimum clearances for the VARITHERM heater, as illustrated in 7.1 and 7.2.

7.4 With two stainless steel mounting brackets (MW) - Special Accessories -

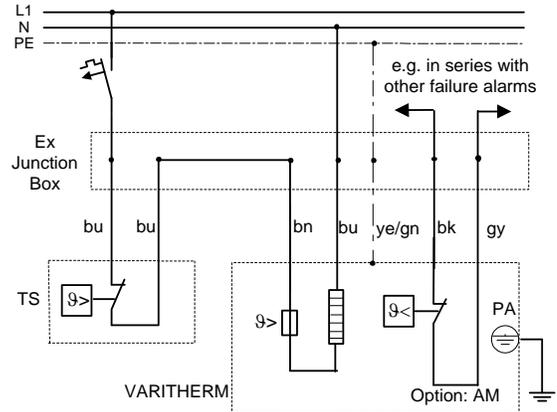


Please note the minimum clearances for the VARITHERM heater, as illustrated in 7.1 and 7.2.

The MB or MW mounting brackets can be ordered as an option.

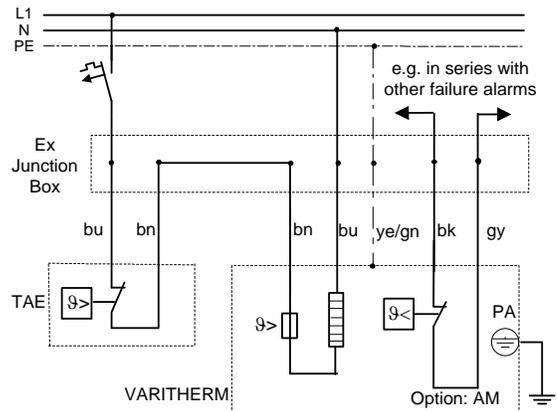
8 Electric Wiring

8.1 For North America with conduit



bu=blue bn=brown ye/gn=yellow/green bk=black gy=grey

8.2 IEC/ ATEX, with external TAE



bu=blue bn=brown ye/gn=yellow/green bk=black gy=grey