



# SL BLOCKTHERM C Self-limiting Block Heater

## 1 Application

The self-limiting electric conduction heater is designed to be attached directly to manifolds, measuring or analyzing instruments, control valves and similar equipment installed in hazardous areas. It heats the device by conduction. This is the easiest, safest and most economical method of freeze protection or temperature maintenance.

## 2 Features & Advantages

- Energy saving, high output
- Self-limiting, no fusible link or limiter
- Compact, requires very little space
- Adjusts automatically to the voltage

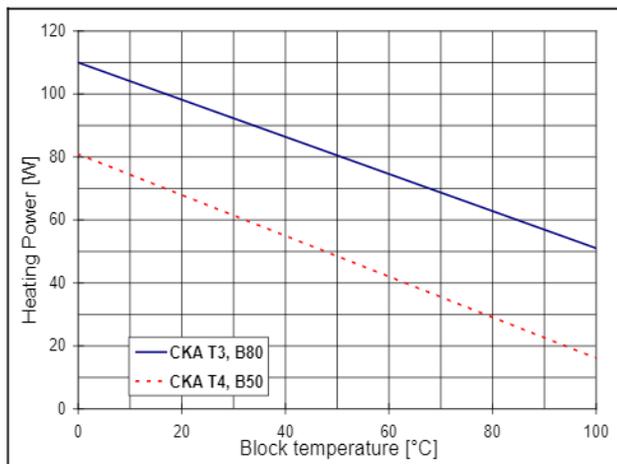
## 3 Description

BLOCKTHERM is a metal heating block with a ½" NPT thread to connect to a conduit. The PTC cartridge provides the heat that is transferred through the heater block to the device to which it is attached.

## 4 Performance

A conduction heater requires considerably less power than a finned convection heater, as the heat conduction qualities of metal are much better than those of air. The air surrounding the whole installation in the enclosure serves as additional insulation.

The diagram below shows the heating power at different block temperatures.



## 5 Explosion Protection

CSA Certificate	1655545 (LR43674)
CSA Type of Protection	Cl. 1, Div. 1, Grp, ABCD Cl. 2, Grp, EFG

## 6 Technical Data

Ingress Protection	IP 68
Nominal voltage	110 to 277 V
Ambient Temperature	-76 F to 302 F / -60° C to +150° C
Connection cable	3x AWG16; Ø 0,37" / 9,4 mm
Conduit connection	½" NPT
Length of Cable	39" / 1 m
Dimensions	see Types and drawings page 2
Material	seawater-proof aluminium, black anodized

SL BLOCKTHERM				
Profile	CKA T3	CLA T3	CKA T4	CLA T4
Temperature Class	T3		T4	
Nominal Power	80 W		50 W	
Length of Block (see Pt.11)	3.5" / 90 mm	4.1" / 105 mm	3.5" / 90 mm	4.1" / 105 mm
Weight	ca. 1,1lb/ 500g		ca. 1,1 lb/ 500g	

All INTERTEC explosion-proof heaters can also be supplied

- European standard (ATEX)  
e.g.: SL BLOCKTHERM **DKA** T3
- as Bi-Standard (see datasheet [HDS10605](#))
- in a less expensive, **Non**-explosion-proof design  
e.g.: SL BLOCKTHERM **NKA**

## 7 Options

TSxx JC	Thermostat kit with 3 port junction box
AM	Failure alarm, opens at < 41 F / 5 °C and can only be ordered on the "L" version body
3M	Connection cable 10' / 3m long

Not all options can be combined.



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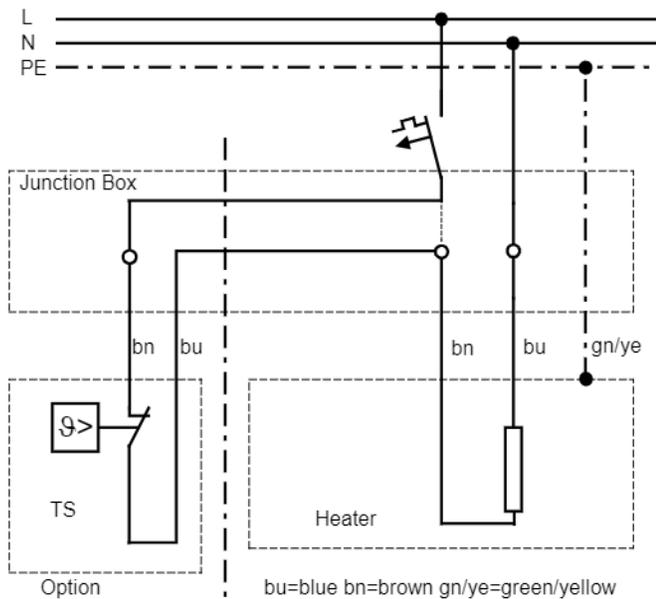
## 8 Temperature Limitation

PTC-Elements (**P**ositive **T**emperature **C**oefficient) raise their electric resistance with rising temperature. High resistance results in low heating power. The heating power is very low at high temperatures so that the temperature cannot exceed the maximum temperature of the respective temperature class.

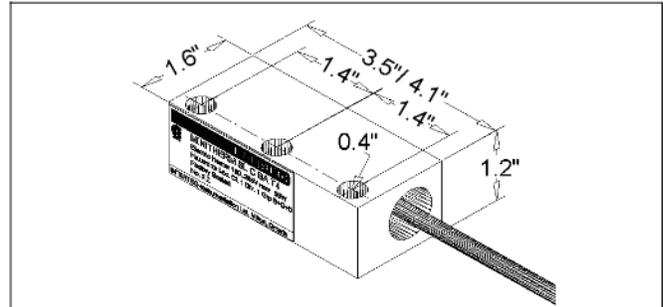
## 9 Supply Voltage

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 110 to 277 V with the same heater. The output may be a maximum of 15% higher than that shown on the diagram on page 1.

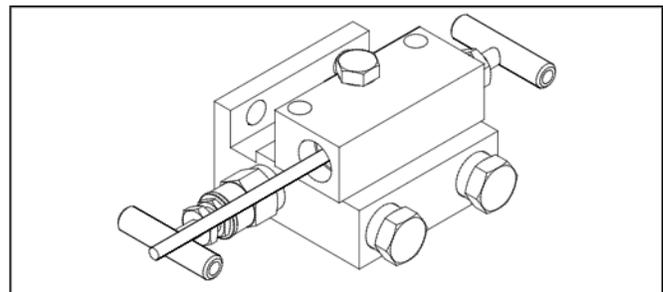
## 10 Electric Wiring



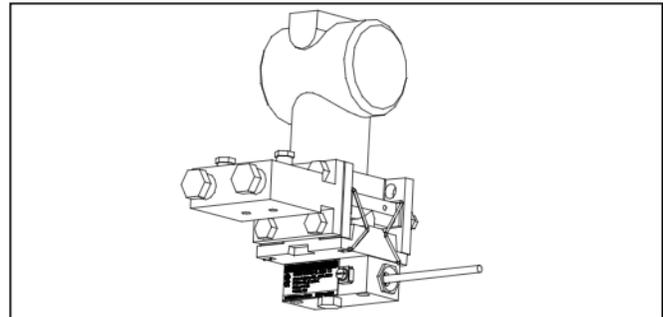
## 11 Dimensions



## 12 Mounting



The BLOCKTHERM heater dissipates the heat by conduction. It should be mounted to a flat surface of a heat conducting material (e.g. metal). One bolt is sufficient to mount the heater.



### Example:

The SL BLOCKTHERM CKA T4, which is attached to a Fisher-Rosemount 3051H Transmitter by means of an aluminum adapter block, guarantees freeze protection for the transmitter, manifold and impulse lines installed in an INTERTEC Instrument Enclosure at an outside temperature as low as -13 °F/ -25 °C.

As well the SL BLOCKTHERM CKA T3 will provide protection to -49 °F/ -45 °C.