



# Operating Instructions for Heaters SL ...THERM



## 1 Application

SL ...THERM Heaters are manufactured in accordance with Directive 94/ 9EC (ATEX 100a) and are approved as conduction heaters (direct heating via flange-mounting to the instrument) and/or as convection heaters (heat transfer to the ambient air by natural convection) for use in Ex-zones 1 and 2 for explosion groups G/ D in temperature classes T3 to T6.

Optional thermostats can be integrated in the connecting cable.

The respective operating instructions have to be observed.

EC Type Examination Certificate

PTB 02 ATEX 1116X with Schedule and Supplements in German and English as well as IEC Scheme Certificate IECEX PTB 07.0055X please see [www.intertec.info](http://www.intertec.info).

## 2 Technical Data

Rated voltage	110 to 250 V AC or DC
Permissible operating voltage	Max. 265 V AC or DC
Rated current (taking into account VDE 0298)	Max. 10 A
Ambient temperature	- 60 to + 60 °C
Max. permissible operating temperature range at normal rating	- 60 to + 180 °C
Switching capacity of failure alarm	10 A/ 250 V AC

## 3 Installation

Take care not to bend or exert any load on the connection cable during the transportation or unpacking of the heater.

To ensure effective convection, the heater should be installed in accordance to the installation and minimum clearance requirements described in the data sheets.

Please note that the absolute heat transfer coefficient of the surrounding enclosure must not be smaller than 0.5 W/ K. Also make sure to comply with the permissible operating temperature range.

Before entry in the customer-supplied junction box, the cable must be firmly installed, observing the permissible bending radius of 5 times the outside cable diameter.

In the dust - hazardous area with the applicable requirements of the EN 60079-14 have to be observed.

## 4 Connection

The heater must only be connected and secured by personnel technically qualified in accordance with the label specifications "rated voltage" and "rated current":

If operating voltage = rated voltage, the heater will generate the specified nominal output, with an allowance to voltage fluctuations of up to 10 %.

Circuit breakers suitable for up to 16 A can be used for short circuit and line protection.

A ground terminal is provided for the purpose of ensuring potential equalization. The terminal is marked as such.

In a TT or TN system, a residual current operated protective device (RCD) must be used whose rated response fault current does not exceed 100 mA. Residual current devices with a rated response fault current of 30 mA are to be preferred.

In an IT system, an insulation monitor must be used that switches off the power supply as soon as the insulation resistance falls to 50 ohms per volt of the rated voltage or lower (see DIN EN 60079-14:2008; section 7.4).

## 5 Initial Operation

The heater can be switched on as soon as it is properly installed in accordance with the installation instructions specified in points 3 and 4, ensuring free convection and the necessary clearances.

## 6 Maintenance

Due to the type of construction, the heater requires no maintenance.

Performance and safety tests can be conducted at intervals to be determined by the operator in compliance with current regulations.

Repair work must only be carried out by the manufacturer. In the dust - hazardous area with the applicable requirements of EN 60079-17 and the EN 60079-19 have to be observed.

## 7 Safety instructions

Installation of the heater in an exposed position involves a certain risk of injury, with especially the ends of the fins and hot surfaces posing a potential danger.

- Max. 160°C with T3 Heaters
- Max. 100°C with T4 Heaters
- Max. 70°C with T5 heaters
- Max. 50°C with T6 heaters