

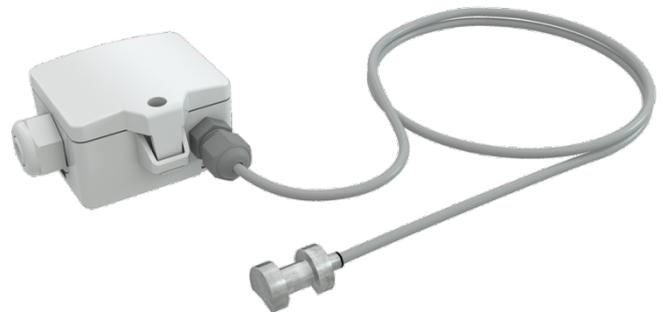
PR25+

Contact temperature sensor

thermokon[®]
HOME OF SENSOR TECHNOLOGY

Datasheet

Subject to technical alteration
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» APPLICATION

Sensor for temperature measurement of pipes and round surfaces. Designed for control and monitoring applications.

» TYPES AVAILABLE

Contact sensors -50..+180 °C – active 0..10 V | 4..20 mA

- PR25+ TRV MultiRange T180 L1000
- PR25+ TRA MultiRange T180 L1000

PR25+ TRV:

Product designation

MultiRange:

Measuring range adjustable at the transducer

T180:

max. temperature, 180 °C

L1000:

standard cable length 1000 mm, additional cable lengths on request

PR25+ TRV MultiRange T180 L1000

» SECURITY ADVICE – CAUTION

The installation and assembly of electrical equipment should only be performed by authorized personnel.



The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

The declaration of conformity of the products are available on our website
<https://www.thermokon.de/direct/en-gb/categories/pr25plus>

» NOTES ON DISPOSAL



The crossed-out wheeled bin symbol indicates that the product or removable batteries must not be disposed of with household or commercial waste. Within the EU, you are legally obliged to dispose of the product separately and appropriately in accordance with the national laws of your country. Alternatively, please contact your supplier or Thermokon Sensortechnik GmbH. Further information can be found at: www.thermokon.com

» BUILD-UP OF SELF-HEATING BY ELECTRICAL DISSIPATIVE POWER

The electrical power loss of sensors with electronic components can influence the temperature measurement and is dependent on the respective operating voltage. This power loss must be taken into account in the temperature measurement. With a fixed operating voltage (± 0.2 V), this is usually done by adding or subtracting a constant offset value.

Thermokon transmitters can be operated with variable operating voltages. The transmitters are set at the factory with a reference operating voltage of 24 V =.

At this voltage, the expected measurement deviation of the output signal is at its lowest. Other operating voltages can cause a measurement deviation.

Recalibration can be carried out directly on the device or via a software variable (APP or BUS).

Remark: Occurring draft leads to a better carrying-off of dissipative power at the sensor. Thus temporally limited fluctuations might occur upon temperature measurement.

» TECHNICAL DATA

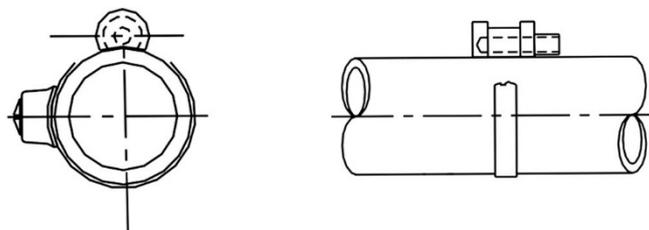
Measuring values	temperature		
Output voltage	TRV 1x 0..10 V or 0..5 V, configurable via jumper, min. load 5 k Ω		
Output ampere	TRA 1x 4..20 mA, max. load 500 Ω		
Power supply	TRV 15..24 V = ($\pm 10\%$) or 24 V ~ ($\pm 10\%$) SELV	TRA 15..24 V = ($\pm 10\%$) SELV	
Power consumption	TRV typ. 0,4 W (24 V =) 0,8 VA (24 V ~)	TRA typ. 0,5 W (24 V =)	
Output signal range temp. <i>*Scaling analogue output</i>	TRV TRA default setting: 0..+160 °C selectable from 8 temperature ranges -50..+50 -20..+80 -15..+35 -10..+120 0..+50 0..+100 0..+160 0..+250 °C, adjustable at the transducer		
Operating temperature range <i>* Max. permissible operating temperature</i>	sensor pocket -50..+180 °C	enclosure -35..+70 °C	mounting base -35..+90 °C
Accuracy temperature	$\pm 0,5$ K (typ. at 21 °C within default measuring range)		
Enclosure	enclosure USE-S, PC, pure white, UV resistant		
Protection	IP65 according to EN 60529		
Cable entry	Flextherm M20, for wire $\varnothing=4,5..9$ mm, removable		
Connection electrical	removable plug-in terminal, max. 2,5 mm ² , sensor wire active silicone, 1 m (default), 2 m, 4 m, 6 m		
Pocket	aluminium, $\varnothing=11$ mm, mounting length 28 mm		
Ambient condition	max. 85% rH short term condensation		
Notes	other cable lengths on request		

» USE ENCLOSURE WITH UV AND WEATHER RESISTANCE

After some time, outdoor mounted plastics can lose their color and quality. Therefore, all USE housings are made of special white polycarbonate (PC). The light-stable colorants and additives are used to achieve optimum protection of the polymer while maintaining color stability. The titanium dioxide used is specially developed for polycarbonate and offers excellent UV protection through the reflection of the entire light spectrum including the UV component by 340 nm. This effectively counteracts the otherwise occurring photochemical polymer degradation. The colors stay full for a long time without fading. The material is also resistant to cold and frost.

» MOUNTING ADVICE

Fixing is done by tightening strap. Use contact fluid for better heat transfer between sensor and measuring medium.



» CONNECTION PLAN AND CONFIGURATION

The adjustment of the measuring ranges is made by changing the jumpers in a de-energized state. The output value of the new measuring range is available after 2 seconds.

TRV
0..10V | 0..5V

UB+ AOU1
GND

TRA
4..20mA

UB+ AO11

Temperature
Offset

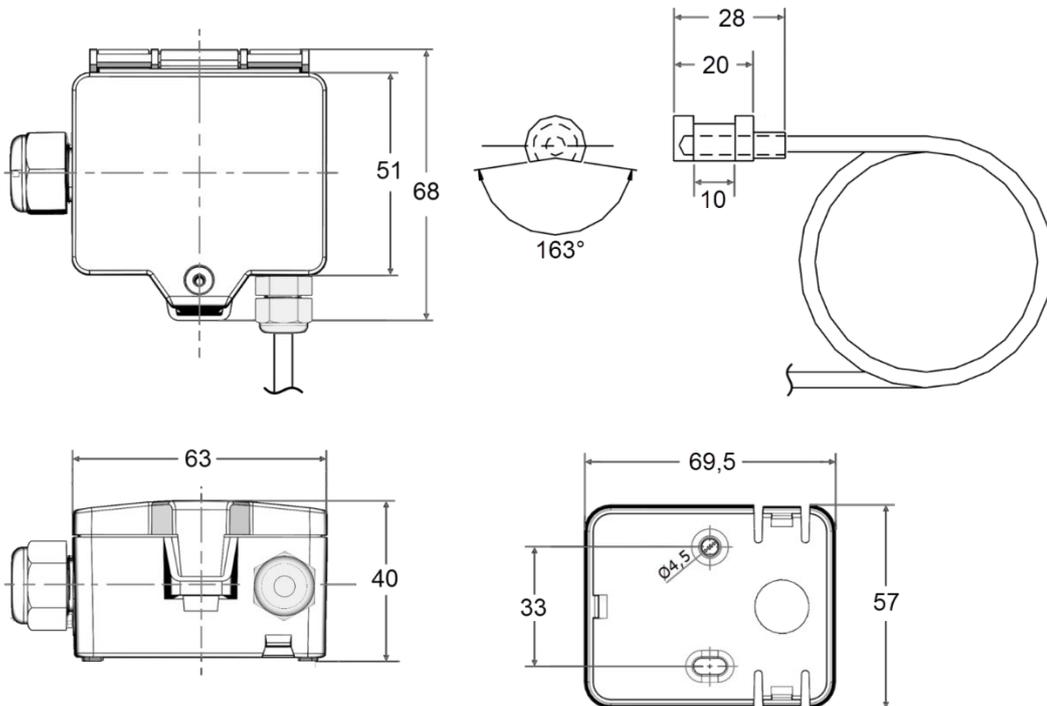
0 K
-3 K +3 K

Jumper
1-5

1		°C		°F (further information below)	
2		0..10V		0..5 V <i>only TRV</i>	
3		-50 °C..+50°C	3		0°C..+100°C
4			4		
5		-10°C..+120°C	3		-20°C..+80°C
4			4		
3		0°C..+50°C	3		0°C..+250°C
4			4		
5		-15°C..+35°C	3		0°C..+160°C
4			4		
5			5		

EN-US Datasheet with additional information about °F

» DIMENSIONS (MM)



» ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base enclosure USE pure white
 Montageset Universal
 • Deckelschraube + Schraubenabdeckung • 2 Dübel • 2 Bohrschrauben (Senkkopf) • 2 Bohrschrauben (Linsenkopf)

Item No. 667722
 Art.-Nr.: 698511

» ACCESSORIES (OPTIONAL)

Mounting clip enclosure USE-S pure white
 Tension clamp for pipes Ø up to 110 mm with contact fluid
 Tension clamp for pipes Ø up to 250 mm with contact fluid
 Tightening strap PA for pipes Ø up to 100 mm with contact fluid
 Syringe thermal contact fluid
 Sealing insert M20 USE white, 2x Ø=7 mm (for 2 wire; PU 10 pieces)
 Conduit Adapter for M20x1,5

Item No. 667739
 Item No. 658911
 Item No. 648103
 Item No. 668071
 Item No. 102308
 Item No. 641333
 Item No. 834834