



TI180en

Technical Information



TRP1- Series (T)

**Ceiling (pendulum) Temperature Sensor
with Active Output**

The TRP1- Series (T) is designed to measure temperature in large rooms or areas

Professional design suitable for plant or utility rooms

The Sensor is field replaceable

The sensor is available with black cables

The sensor comes with a 1m connection cable, other lengths available

The temperature sensor output is active



Use

Compatible to all common HVAC DDC and Analog Controls systems, with/without Building Automation System

Temperature measuring in rooms and areas

Used in all common HVAC applications

Used in Commercial and Industrial Buildings

Features

Sensor with active output

Sensor output 0...10V and 4...20mA

Multiple (4) measuring ranges on board available

Field Replaceable sensor

Temperature Field calibration potentiometer

Modern and practical product design

Easy to use, install and maintain.

Product Range

Order Codes	Cable lengths	Sensor Accuracy	Power Supply	Active Output	Measuring Ranges	Cable Color	Housing dimension
TRP1.AE	1m	± 0.5K over full measuring range	AC/DC 24V (±10%)	0...10V*	-50...50°C	black	IP65 to IEC60529
TRP1.BE	2m			or	0...50°C*		
				4...20mA	0...100°C		

* default setting

All Information and technical data are subject to alteration

Sensor Specification	Sensor Specification	Measured Sensor Characteristics Sensor Output (s) Output Load 0...10V output 4...20mA output Accuracy Temperature OFF-set Potentiometer Measuring Range (s) Optional Measuring Range (s)	Temperature Active 0...10V or 4...20mA Min. load 5kΩ @ AC/DC 24V Max. load 700Ω @ DC 24V ± 0.5K over full measuring range ± 3k 0°C...50°C -50°C...+50°C ; 0°C...+100°C ; -20°C...+80°C
Technical Information	Electrical Information	Power Supply Frequenc Terminal Cla Power Consumption 0...10V output 4...20mA output	AC/DC 24V (±10%) 50 / 60 Hz at AC 24V Screw terminal, max. 1.5mm² ≤ 0.4W / AC 24V; ≤ 0.85VA / DC 24V ≤ 0.6W / AC 24V; ≤ 1VA / DC 24V
Technical Information	Mechanical Information	Cable Length Cable Lead Diameter Cable Diame Sensor Pocket Lengths Sensor Pocket Diameter Sensing Element Pc Sensor / Housing connection	1m or 2m Ø0.25mm 4.6mm 100mm Ø15mm external, top of the sensor pocket M12 crew-on connection
Technical Information	Color and Materials	Housing Cover Housing Bott Lock Screws Lock Nuts Sensor / Housing connection Gland Rubber Seal Protection Caps sensor Pocket Cable	White ABS, RAL9001 (Cream White) White ABS, RAL9001 (Cream White) US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301 Brass Zink alloy - Nickel plated White TBS, RAL9010 (Pure White) Red ABS, RAL2002 (Vermilion) US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301 Black PVC
Technical Information	Environmental Conditions	Operation Temperature Operation Humidity Transport Temperature Transport Humidity	0°C...+50°C <85 % r.h., no condensation -35°C...+70°C < 90% r.h.
Technical Information	Norms and Directives	Storage Humidity IP- Rating Safety Class CE Conformities to CE Electromagnetic Compatibility Emitted Interference CE Electromagnetic Compatibility Interference resistance RoHS Compatibility Operation Climatic Condition Operation Mechanical Condition Transport to Climatic Condition Transport Mechanical Condition Storage Climatic Condition Storage Mechanical Condition	< 85% r.h., no condensation IP65 to IEC60529 III to EN 60 730 2004/108/EG Electromagnetic Compatibility EMV 2000/EN60730-1 Emitted Interference 2000/EN60730-1 Interference Resistance RoHS 3, Directive 2015/863 IEC 60 721-3-3 IEC 60 721-3-2 to class2M2 IEC 60 721-3-2 IEC 60 721-3-2 to class2M2 IEC 60 721-3-1 IEC 60 721-3-1 to class2M2
Miscellaneous	Accessories	n/a	n/a
	Shipping & Handling	Minimum Order	1 box with 2 pieces
		Rigid Cardboards Packaging	Rigid Cardboards Packaging
Order Notes	Order Code	TRP1.AE	

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Installation Notes

Observe the following general regulation for engineering and implementation:



All relevant national and heavy power regulations

Other country specific regulations

Country-specific regulations

Local electrical supply authority regulations

Schematics, cable listings, dispositions, specification and arrangements from the customer or engineering office in charge

Third party specifications, e.g. general contractors or constructors.

Advices

Mounting Advice



Do not expose to direct sunlight

Mounting distance to the ceiling at least 20cm

Disposal Notes



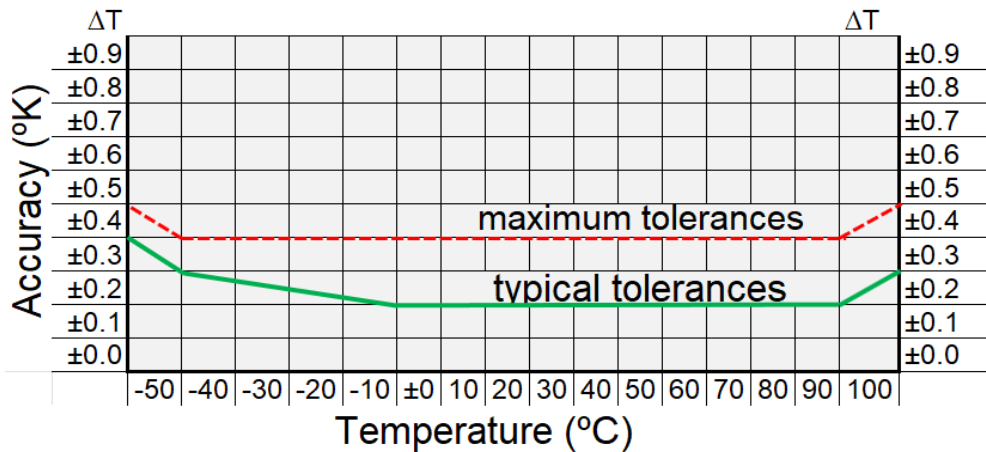
The device is considered an electronic device for disposal in terms of the EUROPEAN DIRECTIVE 2012/19/EU.

The device may not be disposed as domestic garbage.

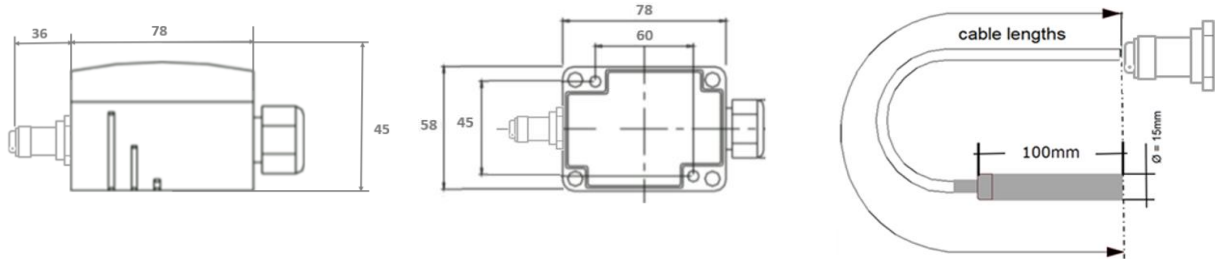
The device must be disposed through channels provided for this purpose.

It is mandatory to comply with local currently applying laws and regulations.

Accuracy Curves



Dimensional Drawing



Connections & Settings

Terminals					
T1	T2	T3	T4	T5	T6
UB+	24V AC/DC	GND	Temperature	not in use	S+
					T passive
				S-	T passive

R1- Off-set potentiometer (TE)



DIP Settings									
Temperature Setting (DIP1 & DIP 2)						DIP3 / DIP4		DIP 5	
DIP1	DIP2	DIP1	DIP2	DIP1	DIP2	DIP3	DIP4	DIP5	DIP5
■	■	■	■	■	■	■	■	■	■
-50...50°C		0...50°C		-20...80°C		0...100°C		not used	
								0...10V	4...20mA