



T1182en

Technical Information**thermokon**[®]
asia pacific

TRC1- Series (T)

**Ceiling Temperature Sensor
with Active Output**

The TRC1- 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 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
TRC1.AE	1m	± 0.5K over full measuring range	AC/DC 24V (±10%)	0...10V	-50...50°C	black	IP20 to IEC60529
TRC1.BE	2m			or	-20...80°C		
				4...20mA	0...100°C		

* default setting

All Information and technical data are subject to alteration

Sensor Specification	Sensor Specification	Measured	Temperature
		Sensor Characteristics	Active
		Sensor Output (s)	0...10V or 4...20mA
		Output Load	
		0...10V output	Min. load 5kΩ @ AC/DC 24V
		4...20mA output	Max. load 700Ω @ DC 24V
		Accuracy	± 0.5K over full measuring range
		Temperature OFF-set Potentiometer	± 3k
	Measuring Range (s)	0°C...50°C	
	Optional Measuring Range (s)	-50°C...+50°C ; 0°C...+100°C ; -20°C...+80°C	
Technical Information	Electrical Information	Power Supply	AC/DC 24V (±10%)
		Frequency	50 / 60 Hz at AC 24V
		Terminal Clamp	Screw terminal, max. 1.5mm ²
		Power Consumption	
		0...10V output	≤ 0.4W / AC 24V; ≤ 0.85VA / DC 24V
		4...20mA output	≤ 0.6W / AC 24V; ≤ 1VA / DC 24V
	Mechanical Information	Cable Length	1m or 2m
		Cable Lead Diameter	Ø0.25mm
		Cable Diameter	4.6mm
		Sensing Element Positic	external, top of the sensor pocket
	Color and Materials	Sensor Housing	Ø30mmx37mm
		Sensor / Housing connection	M12 screw-on connection
		Housing Cover	White ABS, RAL9001 (Cream White)
		Housing Bottom	White ABS, RAL9001 (Cream White)
		Lock Screws	US:AISI 304; EU: EN X 6 CrNi 18 10; GER: W.N. 1.301
		Lock Nuts	Brass
		Sensor / Housing connection	Zink alloy - Nickel plated
		Cable Gland	White ABS, RAL2002 (Vermilion)
		Gland Rubber Seal	White TBS, RAL9010 (Pure White)
		Protection Caps	White ABS, RAL2002 (Vermilion)
	Environmental Conditions	Sensor Housing	White TBS, RAL9010 (Pure White)
		Cable	black, PVC
		Operation Temperature	0°C...+50°C
		Operation Humidity	<85 % r.h., no condensation
	Norms and Directives	Transport Temperature	-35°C...+70°C
		Transport Humidity	< 90% r.h.
		Storage Humidity	< 85% r.h., no condensation
		IP- Rating	IP20 to IEC60529
		Safety Class	III to EN 60 730
		CE Conformities to	2004/108/EG Electromagnetic Compatibility EMV
		CE Electromagnetic Compatibility Emitted Interference	2000/EN60730-1 Emitted Interference
		CE Electromagnetic Compatibility Interference resistance	2000/EN60730-1 Interference Resistance
RoHS Compatibility		RoHS 3, Directive 2015/863	
Operation Climatic Condition		IEC 60 721-3-3	
Operation Mechanical Condition	IEC 60 721-3-2 to class2M2		
Transport to Climatic Condition	IEC 60 721-3-2		
Transport Mechanical Condition	IEC 60 721-3-2 to class2M2		
Storage Climatic Condition	IEC 60 721-3-1		
Storage Mechanical Condition	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	TRC1.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 Advices

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.

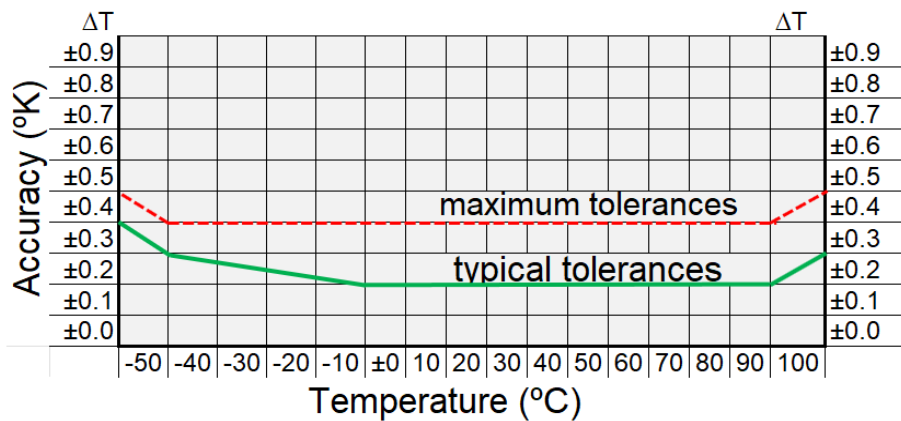


The device may not be disposed as domestic garbage.

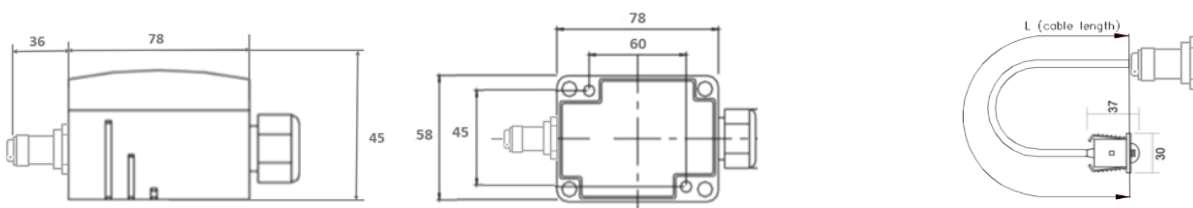
The device must be disposed through channels provided for this purpose.

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 & DIP2)								DIP3 / DIP4		DIP5	
DIP1	DIP2	DIP1	DIP2	DIP1	DIP2	DIP1	DIP2	DIP3	DIP4	DIP5	DIP5
■	■	■	■	■	■	■	■	■	■	■	■
-50...50C°		0...50C°		-20...80C°		0...100C°		not used		0...10V 4...20mA	