


Screw-in Resistance Temperature Sensor Radio **METS-WR**

● Characteristics

1500 - RTD - THERMOMETER - MODULAR - ECONOMIC

	- Input:	RTD Pt100 (maximum range -50...+400 °C)
	- Output:	Radio transceiver
	- Voltage supply:	Lithium-ion battery pack
	- Accuracy:	ca. 0,2% FS
	- Process connection:	Several options
	- Electrical connection:	Without / M12x1, 4-pole (charge, supply)
	- Radio range:	20 m / 100 m
	- Temperature range:	-20...+45...60 °C (ambient)
	- Configuration:	Factory setting
	- Material:	Stainless steel 1.5471 (medium contact)
	- Protection:	At least IP65

● Technical Data

Input

Sensor	RTD Pt100, 4-wire
Maximum range:	-50...+400 °C
Ranges:	0...50, ...100, ...150, ...200, ...250, ...300, ...400 °C / -50...400, ...100, ...200 °C / -40...60 °C / -30...60, ...70, ...150, ...170 °C / -10...40, ...200 °C / -20...20, ...60 °C

Output

Input / Output:	Radio signal
Radio range:	Antenna internally: 20 m (on clear visibility) Antenna externally: 100 m (on clear visibility)
External antenna:	Connection plug: SMA plug (female), built-in, optional
Frequency:	SRD-Band 868 MHz
Modulation	FSK

Performance

Sensor:	RTD Pt100:	Class A
RTD module:	Name:	MS-RTD
	Resolution:	16 bit, 0,1 °C
	Measuring rate:	8 measurements/s
	Filter/Damping:	0...1 s
	Accuracy:	0,15% FS
	Temperature coefficient:	50 ppm/K
	Internal bus:	I ² C
	Connection:	in SIM slot

● Applications

For use in the whole range of industrial application where measuring point and evaluation has to be bridged by radio. With distance configuration and evaluation software the temperature sensor METS-WR is also suitable for demanding applications.



● Technical Data (Continued)

Performance (Continued)

Radio module:	Name:	MS-RDI, MS-RDE
	RF output power:	up to 5 dBm (ca. 3,2 mW)
	Transmission rate:	19,2 kb/s
	Signalisierung:	2 LED (red, green), visible under lens on top
	Internal bus:	I ² C
	Connection:	in SIM slot

Supply

Accumulator:	Voltage:	3,6 V
	Capacity:	2600 mAh
	Type:	Lithium-ion battery pack
	Operating time:	1 measurement / minute: ca. 6 months 6 measurements / minute: ca. 50 days
Charging and external supply:	Voltage:	24 VDC
	Current:	1 A maximum
	Charging time:	circa 2 hours

Power Management:

Optimization:	In factory
Radio module:	Power consumption: 14...24 mA (TX-mode) 0,8...7,5 µA (Sleep mode)
RTD module:	Power consumption: 7 mA maximum (active)

Environmental Conditions

Temperature:	Operating range:	-20...+60 °C
		0...+45 °C (Charging of accumulator)
	Medium:	-50...+400 °C
	Storing:	-20...+50 °C
Humidity:	max. 80% rh at 20 °C	

Mechanics

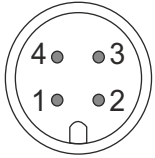
Dimensions:	see page 3
Process connection:	1/4" / 3/8" / 1/2" / 3/4" / 1" / 1/4NPT / 3/8NPT / 1/2NPT
Extension:	100 mm, temperature medium: up to 200 °C (option) 200 mm, temperature medium: up to 400 °C (option)
Electrical connection:	Without: accumulator to replace Option: M12x1, 4-pole, without accumulator Option: M12x1, 4-pole (permanent supply, accumulator parallel and charging)
ON/OFF switch:	On top, switching with magnet
Material:	Protecting tube: stainless steel 1.4571 (standard 6 mm) Extension: stainless steel 1.4571 Process connection: stainless steel 1.4571 Lens: PMMA Screw cap: PA6.6 GF30
Weight:	approx. 400 g (50 mm, 1/2", M12x1)
Fitting position:	any
System pressure:	PN 25
Protection of device:	Ingress protection: at least IP 65 (electronics)
Conformity:	ETSI-directive, EMC directive: 2014/30/EU

Accessories

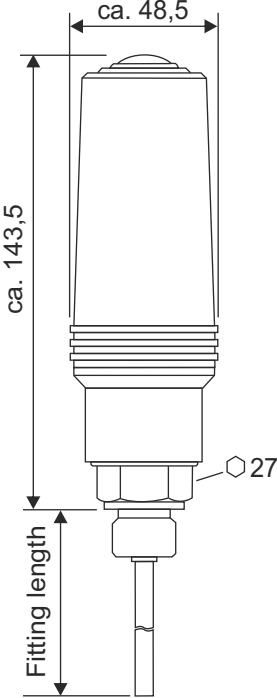
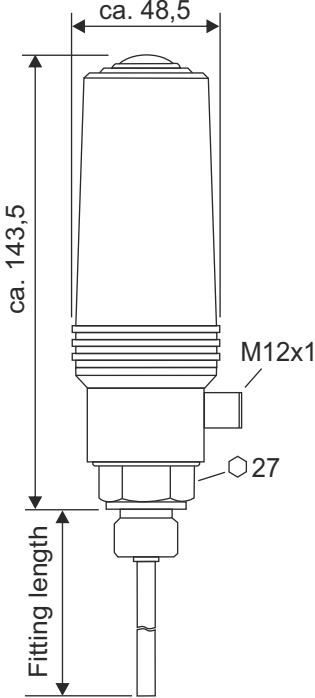
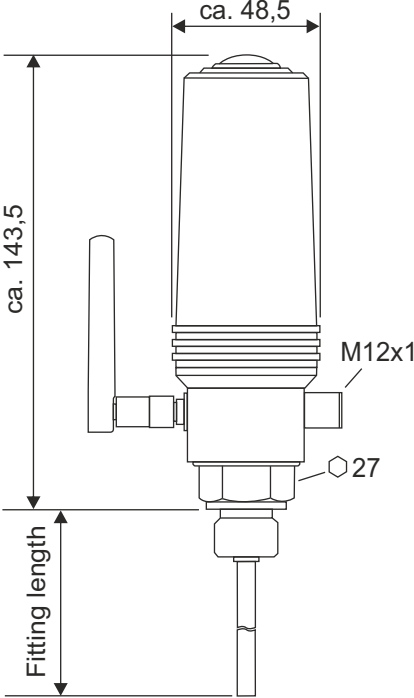
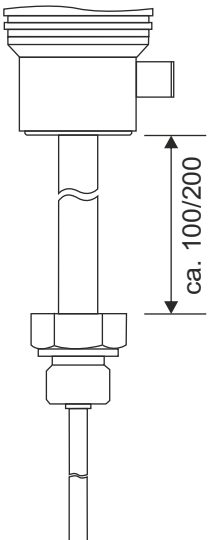
USB transceiver:	Name:	USB-RC
	Connection:	PC or notebook
	Use:	transmit-receive device remote configuration and read out
	Range:	100 m (free visibility)
	Frequency:	SRD band 868 MHz

● Electrical Connection

View: plug pins of male connector

Charging or permanent supply M12x1, 4-pole				
				
1 = +24 VDC 3 = -				

● Dimensions (in mm)

Accumulator to replace	With plug M12x1 and internal antenna	With plug M12x1 and external antenna	Extension
			

● **Order Code**

N	C	X	X	X	X	-	X	-	X	X	X	X	X	X
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Input:	Pt100, 4-wire	1
Sensor type:	Class A	1
Range:¹⁾	0...50 °C 0...100 °C 0...150 °C 0...200 °C 0...250 °C 0...300 °C 0...400 °C -50...100 °C -30...60 °C -30...70 °C -30...150 °C -10...40 °C -20...20 °C -20...60 °C	1 2 3 4 5 6 7 8 9 A B C D E
Protecting tube:	Ø6 mm Ø6 mm with extension 100 mm Ø6 mm with extension 200 mm	6 L M
Fitting length²⁾	50 mm 100 mm 200 mm 250 mm 400 mm 600 mm 1000 mm	050 100 200 250 400 600 A00
Process connection:	1/4" 3/8" 1/2" 3/4" 1" 1/4NPT 3/8" NPT 1/2" NPT	1 2 3 4 5 7 8 9
Electrical connection:	without (accumulator to replace) M12x1, 4-pole, without accumulator M12x1, 4-pole (perm. supply, accumulator parallel and charging)	0 1 2
Antenna:	Internally, 868 MHz Externally, 868 MHz	1 2
Configuration:	Factory setting ³⁾ Customized (please specify)	1 2
Custom model:	No Yes (please specify)	0 1

1) Other ranges: -30...170 °C = F / -10...200 °C = G / -40...60 °C = H / -50...200 °C = I / -50...400 °C = J

2) Other length see in price list (every 5 mm)

3) RTD Pt100, 4-wire, set range: -50...250 °C

Accessories:

USB transceiver Transmit and receive of data from and to device (USB-RC) Order No.: