


## ● 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:	clamping magnet
	- Electrical connection:	Without / M12x1, 4-pole (charge, supply)
	- Radio range:	50 m / 200 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, 2-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: 50 m (free visibility) Antenna externally: 200 m (free 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 <sup>2</sup> 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 magnetic surface temperature sensor METS-WRM is also suitable for demanding applications.



## ● Technical Data (Continued)

### Performance (Continued)

Radio module:	Name:	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:	I2C
	Connection:	in SIM slot

### Supply

Accumulator:	Voltage:	3,6 V
	Capacity:	2600 mAh
	Type:	Lithium-ion battery pack
	Operating time:	1 measurement / minute: ca. 1 year 6 measurements / minute: ca. 100 days
Charging and external supply:	Voltage:	24 VDC
	Current:	1 A maximum
	Charging time:	approx. 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

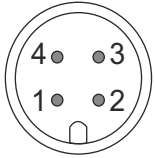
Dimensions:	see page 3
Process connection:	clamping magnet
Extension:	100 mm, temperature medium: up to 200 °C (option) 200 mm, temperature medium: up to 400 °C (option)
Electrical connection:	Without: accumulator to replace Option: M12x1, 4-pole (charge) Option: M12x1, 4-pole (permanent supply, accumulator parallel)
ON/OFF switch:	On top, switching with magnet
Material:	Screw cap: PA6.6 GF30 Sensor body: stainless steel 1.4571 Magnet: Alnico 500 Lens: PMMA
Weight:	approx. 514 g
Fitting position:	any
System pressure:	PN 25
Protection of device:	Ingress protection: at least IP 65 (electronics) PCB: potted by parts
Conformity:	ETSI-directive, EMC directive: 2014/30/EU

### Accessories

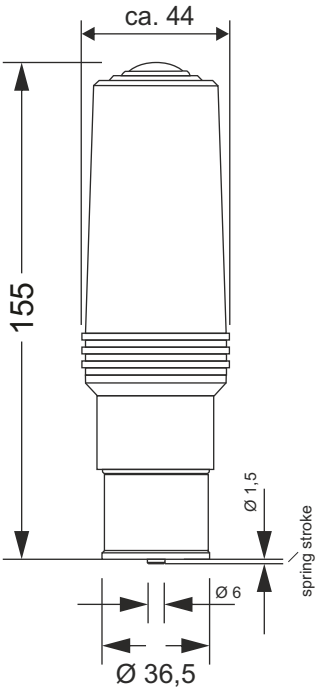
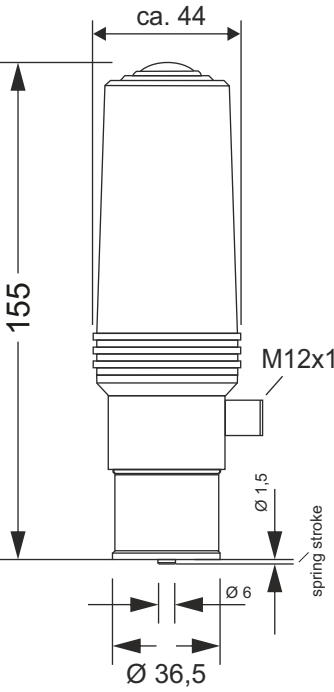
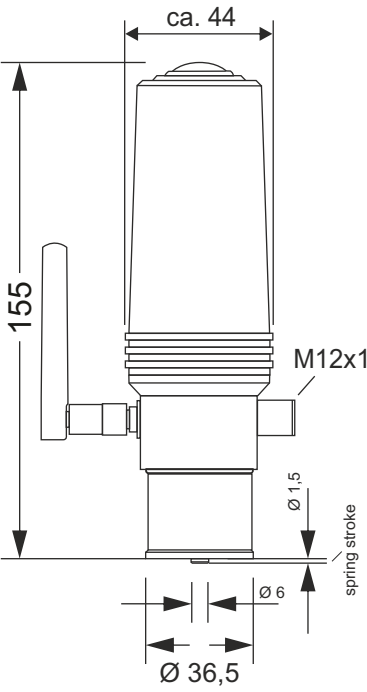
USB transceiver:	Name:	USB-RC
	Connection:	PC or notebook
	Use:	transmit-receive device
	Range:	200 m (free visibility)
	Frequency:	SRD band 868 MHz

**● 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	
			

● **Order Code**

**Y A X X X X - X - X X X X X**

<b>Input:</b>	Pt100, 4-wire	1																		
<b>Sensor type:</b>	Class A	1																		
<b>Range:<sup>1</sup></b>	0...50 °C	1																		
	0...100 °C	2																		
	0...150 °C	3																		
	0...200 °C	4																		
	0...250 °C	5																		
	0...300 °C	6																		
	0...400 °C	7																		
	-50...100 °C	8																		
	-30...60 °C	9																		
	-30...70 °C	A																		
	-30...150 °C	B																		
-10...40 °C	C																			
-20...20 °C	D																			
-20...60 °C	E																			
<b>Process connection:</b>	clamping magnet	1																		
<b>Electr. connection:</b>	without (accumulator to replace)	0																		
	M12x1, 4-pole, without accumulator (charge plug)	1																		
	M12x1, 4-pole (permanent supply, accumulator parallel)	2																		
<b>Antenna:</b>	Internal, 868 MHz	1																		
	External, 868 MHz	2																		
<b>Configuration:</b>	Factory setting <sup>2</sup>	1																		
	Customized (please specify)	2																		
<b>Special model:</b>	No	0																		
	Yes (please specify)	1																		

1) Other ranges: -30...170 °C = F / -10...200 °C = G / -40...60 °C = H / -50...200 °C = I / -50...400 °C = J  
 3) RTD Pt100, 4-wire, set range: -50...250 °C

<b>Accessories:</b>		
USB transceiver	Transmit and receive of data from and to device (USB-RC)	Order No.: