


● 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: | 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, 2-wire
 Maximum range: -50...+400 °C

Output

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

Modulation: FSK

Performance Parameters

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: I²C
 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)

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|---------------|--------------------|---|
| 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. 6 months 6 measurements / minute: ca. 50 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

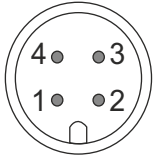
| | |
|------------------------|---|
| Dimensions: | see page 3 |
| Process connection: | clamping magnet |
| Extension: | 100 mm, temperature medium: up to 200 °C (option) 200 mm, temperature medium: up to 400 °C (option) |
| Electrical connection: | Without: accumulator to replace Option: M12x1, 4-pole (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 |
| Device protection: | Protection class: at least IP65 (electronics) PCB: potted by parts |
| Conformity: | ETSI-directive, EMC directive: 2014/30/EU |

Accessories

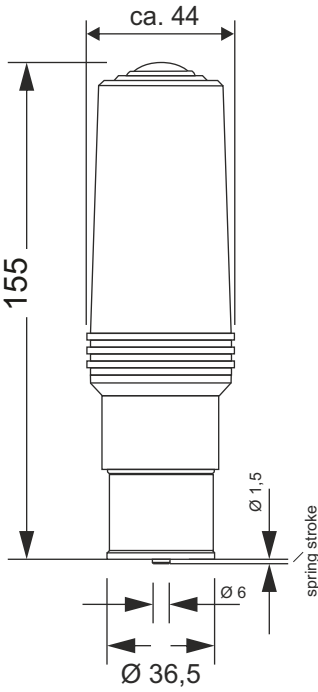
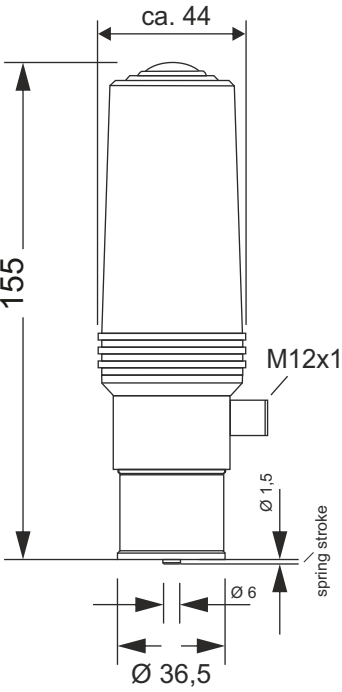
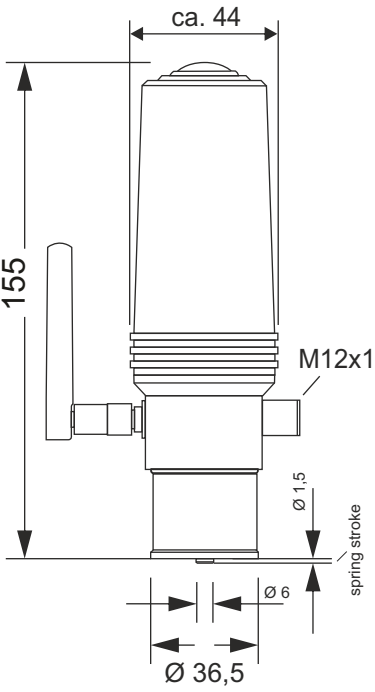
| | | |
|------------------|-------------|-------------------------|
| USB transceiver: | Name: | USB-RC |
| | Connection: | PC or notebook |
| | Use: | transmit-receive device |
| | Range: | 100 m (free visibility) |
| | Frequency: | SRD band 868 MHz |

● Electrical Connection

View: plug pins of male connector

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|---|--|--|--|--|
| 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 | |
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|  |  |  | |

● **Order Code**

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|----------------------------|--|---|--|--|--|--|--|--|--|--|--|--|---|
| Input: | Pt100, 4-wire | 1 | | | | | | | | | | | |
| Sensor type: | Class A | 1 | | | | | | | | | | | |
| Process connection: | clamping magnet | 1 | | | | | | | | | | | |
| Electr. connection: | without (accumulator to replace) | | | | | | | | | | | | 0 |
| | M12x1, 4-pole, without accumulator (charge plug) | | | | | | | | | | | | 1 |
| | M12x1, 4-pole (permanent supply, accumulator parallel) | | | | | | | | | | | | 2 |
| Antenna: | Internal, 868 MHz | | | | | | | | | | | | 1 |
| | External, 868 MHz | | | | | | | | | | | | 2 |
| Configuration: | Factory setting ¹ | | | | | | | | | | | | 1 |
| | Customized (please specify) | | | | | | | | | | | | 2 |
| Special model: | No | | | | | | | | | | | | 0 |
| | Yes (please specify) | | | | | | | | | | | | 1 |

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

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|---------------------|--|----------------------|
| Accessories: | | |
| USB transceiver | Transmit and receive of data from and to device (USB-RC) | Order No.: 700-00122 |