Characteristics



- 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:	50 m / 200 m					
- Temperature range:	-20+4560 °C (ambient)					
- Configuration:	Factory configuration					
- 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: 50 m (free visibility)
Antenna externally: 200 m (free visibility)

External antenna: Connection plug: SMA plug (female), built-in

Frequency: SRD-Band 868 MHz

ISM-Band 916 MHz

Modulation FSK

Performance

CPU module:

Sensor: RTD Pt100: Class A
RTD module: Name: MS-RTD
Resolution: 16 bit, 0,1 °C
Measuring rate: 8 mesurements/s

Filter/Damping: 0...1 s
Accuracy: 0,15% FS
Temperature coefficient: 50 ppm/K

Internal bus: I2C

Connection: in SIM slot Name: MS-CPU-C

Clock rate: 8 MHz
Internal bus: I2C
Connection: soldered
Additional task: Voltage control

Applications

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









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: 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: Voltage: 5 VDC

Current: 1 A maximum

External permanent: Voltage: 5 VDC

Current: 1 A maximum

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)

?? µA (sleep mode)

CPU module: Power consumption: 10 mA maximum (active)

200 µA (sleep mode)

Ambient conditions

Temperature: Operating range: -20...+60 °C

0...+45 °C (Charging of accumulator)

Medium: -50...+400 °C Storing: -20...+50 °C

Air humidity: ????

Mechanics

ON/OFF switch:

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 (charge)

Option: M12x1, 4-pole (permanent supply, accumulator parallel)
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 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)

PCB: potted by parts

Conformity: ETSI-directive, EMC directive: 2004/108/EG

Accessories

Weight:

PC software: Operating system: XP, W7, W8

Channels: 32

Use 1: storage, indication, evaluation and export of data received from

radio devices

Use 2: Configuration of radio devices from a distance

USB transceiver: Name: USB-RC

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

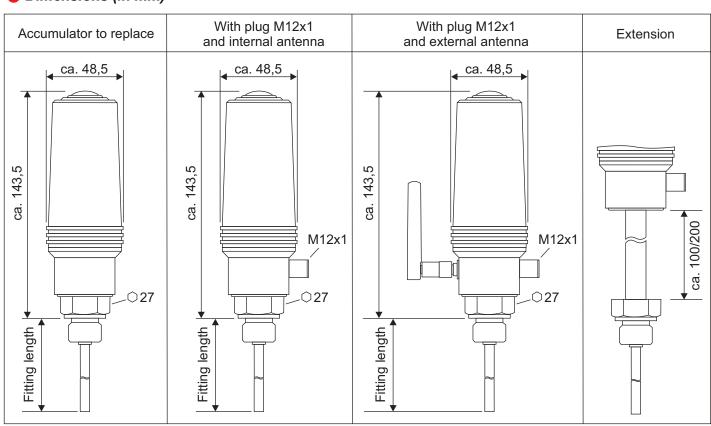
ISM band 916 MHz

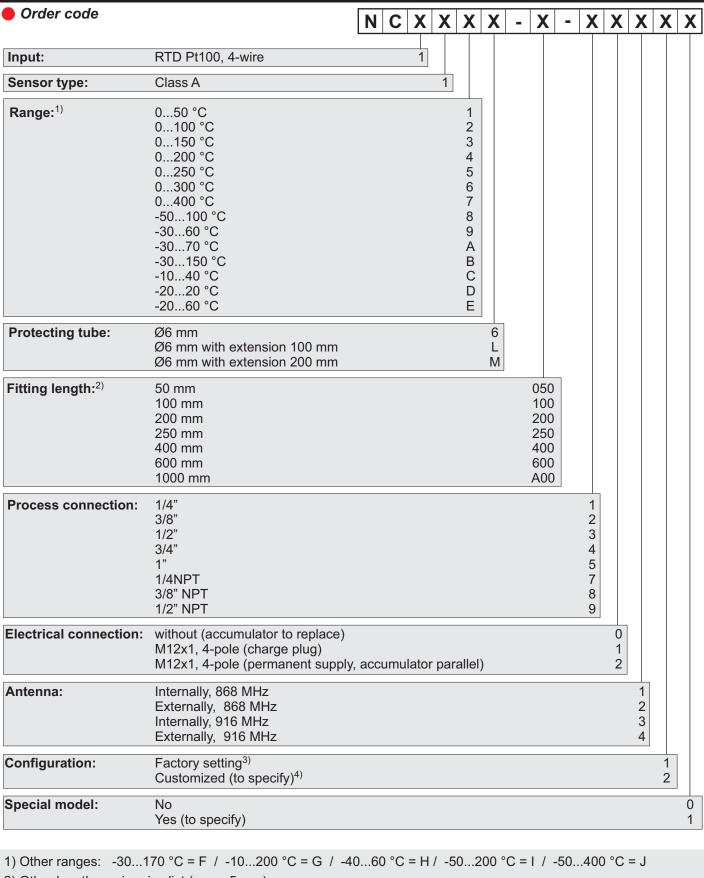
Electrical connection

View: plug pins of male connector

Charging M12x1, 4-pole	Supply permanent M12x1, 4-pole		
4 • • 3	4 • • 3		
1 = +5 VDC 3 = -	1 = +5 VDC 3 = -		

Dimensions (in mm)





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

3)

4)

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PC software Storage, indication, evaluation, export, configuration Order No.: USB transceiver Transmit and receive of data from and to device (USB-RC) Order No.: