

SCREW-IN TEMPERATURE SENSOR RADIO



- RADIO 868 MHZ
- PT100 UP TO +400 °C
- BATTERY, 6 MONTHS
- 20 M OR 100 M
- IP 65



KEY DATA

Property	Value	Property	Value
Input	Pt100, 4-wire, class A	Medium	-50 ... +400 °C
Output	radio, SRD band 868 MHz, FSK	Ambient	-20 ... +60 °C (1)
Range	20 m internal · 100 m external (2)	Charging	0 ... +45 °C (3)
Accuracy	0.15 % of span	Service life	approx. 6 months (4)
Supply	lithium-ion battery 3.6 V, 2600 mAh	Product code	NC

Screw-in temperature sensor that sends its reading by radio and lives on a battery — for measuring points no cable reaches. The service life depends on the measuring rate, see note (4).



TECHNICAL DATA

INPUT AND OUTPUT

Sensor	Pt100, 4-wire, class A
Maximum range	-50 ... +400 °C
Pt100 module	MS-RTD, 16 bit, 0.1 °C
Measuring rate	8 measurements/s
Filter	0 ... 1 s
Accuracy	0.15 % of span
Temperature coefficient	50 ppm/K
Radio module	MS-RDE, up to 5 dBm (approx. 3.2 mW)
Transmission rate	19.2 kb/s
Frequency	SRD band 868 MHz, FSK

PERFORMANCE

Range internal	20 m in free line of sight (2)
Range external	100 m in free line of sight (2)
External antenna	SMA connector, panel socket (option)
Signalling	2 LEDs red/green under the lens
Battery	lithium-ion, 3.6 V, 2600 mAh
Life 1 measurement/min	approx. 6 months (4)
Life 6 measurements/min	approx. 50 days (4)
Charging	24 VDC, max. 1 A, approx. 2 hours
Power consumption	14 ... 24 mA in transmit mode
ON/OFF	on top, switched with a magnet

SUPPLY AND ENVIRONMENT

Supply	battery, option 24 VDC permanent
Ambient	-20 ... +60 °C (1)
Charging the battery	0 ... +45 °C (3)
Medium	-50 ... +400 °C
Storage	-20 ... +50 °C
Humidity	max. 80 % rH at 20 °C

MECHANICS

Process connection	1/4" · 3/8" · 1/2" · 3/4" · 1" · 1/4NPT · 3/8NPT · 1/2NPT
Neck tube	100 mm (option)
Sheath	1.4571, standard Ø 6 × 0.5 mm
Housing	PBT GF30
Mounting position	any
System pressure	PN 25
Protection	at least IP 65, boards potted
Neck tube	100 mm to 200 °C · 200 mm to 400 °C (5)
Lens	PMMA · screw cap PA6.6 GF30
Weight	approx. 400 g

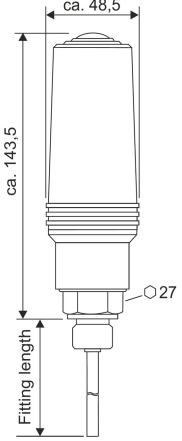
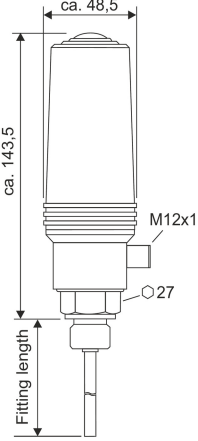
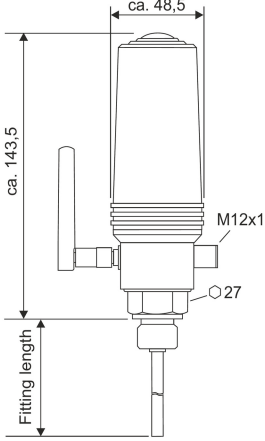
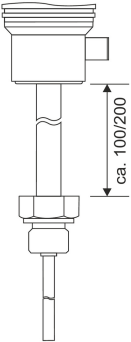
- (1) The ambient temperature is not the medium temperature: the medium may be hotter than the electronics in the head.
 (2) The range applies in free line of sight; walls, metal and plant structures shorten it.
 (3) The battery charges only between 0 and +45 °C while the device works up to +60 °C. Above +45 °C it can measure but not charge.
 (4) The service life depends on the measuring rate: one measurement per minute gives about six months, six per minute about 50 days.
 (5) The neck tube decides the medium temperature: with 100 mm up to 200 °C, with 200 mm up to 400 °C.

ELECTRICAL CONNECTION

Without a connector the battery is exchanged for charging. With the four-pole M12x1 connector it can be charged in the device, or the device can be supplied permanently from 24 VDC. It is switched on and off on top with a magnet.



DIMENSIONS

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

Dimensions in mm.



CONFORMITY

Conformity	ETSI directive and EMC directive 2014/30/EU
Protection	at least IP 65 at the electronics

ORDER INFORMATION

Accessories

- USB transceiver USB-RC, order number 700-00122. Without it the sensor can neither be read out nor configured remotely — it is transmitter and receiver in one and plugs into the PC. Range 100 m in free line of sight.

ORDER KEY

Field	Value	Meaning
Product code	NC	stands at the beginning of every order code
Input	1	Pt100, 4-wire
Sensor class	1	class A
Sheath	6 · L · M	Ø 6 mm · with 100 mm neck · with 200 mm neck
Fitting length	050 ... A00	50 · 100 · 200 · 250 · 400 · 600 · 1000 mm
Process connection	1 ... 9	1/4" · 3/8" · 1/2" · 3/4" · 1" · 1/4NPT · 3/8NPT · 1/2NPT
Electrical connection	0 · 1 · 2	none · M12 without battery · M12 with permanent supply
Antenna	1 · 2	internal · external, 868 MHz each
Configuration	1 · 2	factory setting -50...250 °C · customer-specific
Special model	0 · 1	no · yes, please state

The order code is formed from the product code and the fields of the key.

