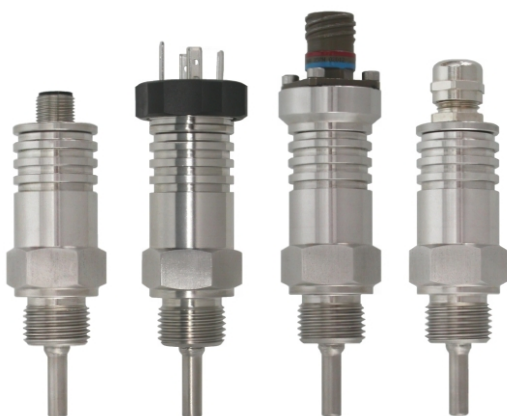


# Modular and compact temperature sensors

## Characteristics



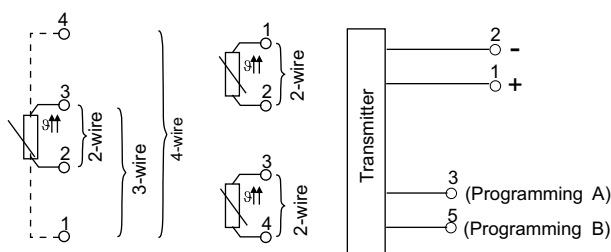
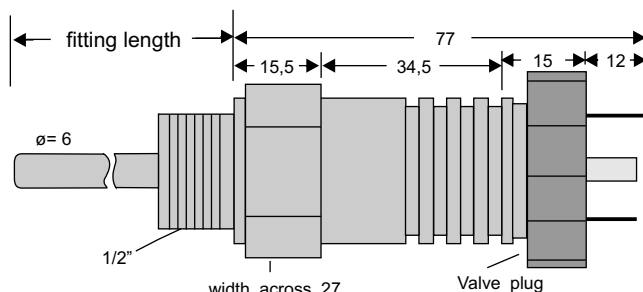
### CANopen

- Measuring element RTD: Pt 100, Pt 1000 (2-, 3-, 4-wire)
- Process terminal thread: several options available
- Optional transmitter 4...20 mA (1x Pt100)
- Optional connection to CANopen bus (1x Pt100)
- Measuring range programmable, Windows necessary
- Degree of protection IP 67, inside of case completely potted
- Protection tube and case made of stainless steel 1.4571
- Connection: several options available

## Dimensions, connection

Example dimensions: MKTS with valve plug

Example connection MIL-plug D38999



## Technical data

### Input

Resistance thermometer 1 x Pt 100(0) (types 2-, 3- or 4-wire)  
2 x Pt 100(0) (type 2-wire)  
Semiconductor NTC

### Output

Transmitter 4...20 mA, 2-wire

### Accuracy

Resistance thermometer: class B, optional class A, 1/2 DIN, 1/3 DIN, 1/5 DIN or 1/10 DIN

Transmitter: 0,1% of end scale value  
CANopen: resolution 0,1K, +/-0,1K

### Usability and measuring range

Pt 100(0) usability -50...+200°C  
Transmitter/CANopen: measuring range programmable (standard: 0...100°C)

### Power supply

Transmitter: 10...35 V, supply out of current loop  
CANopen: 18...36 VDC, reverse battery protected

### Temperature conditions

Operating: -50...+100°C, with transmitter/CANopen: -40...+85°C  
Storing: -50...+100°C, with transmitter/CANopen: -40...+85°C

### Mechanics

Case: with MIL plug: Ø 31 x 86 mm + fitting length  
with valve plug: Ø 31 x 77 mm + fitting length  
with plug M12x1: Ø 31 x 63 mm + fitting length  
with cable entry: Ø 31 x 73 mm + fitting length

Material: protection tube, body of case: stainless steel 1.4571  
Colour: stainless steel natural

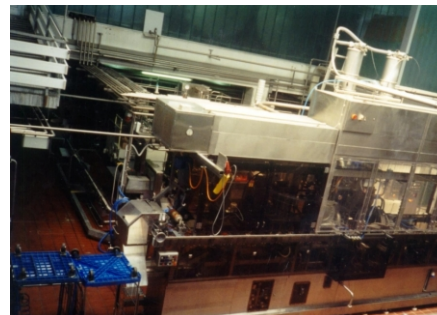
Weight: with MIL plug, fitting length 50 mm: approx. 240 g  
with valve plug, fitting length 50 mm: approx. 200 g  
with plug M12x1, fitting length 50 mm: approx. 200 g  
with cable entry, fitting length 50 mm: approx. 200 g

Connections: MIL plug D 38999, 6-pole  
valve plug DIN EN 175301-803, 4-pole  
plug M12x1, RSE4 compatible, 4/5-pole  
cable entry M12x1,5 MS-SC-M, 2 m cable

Protection: degree IP 67

## Applications

For use in climating, ventilating and heating installations and the whole range of industrial application. Due to the used materials and the compact design, this sensor with its small dimensions is very robust. The programmable transmitter reduces storekeeping considerably.



Ordering code

M	K	X	X	X	X	X	X	-	X	X	X
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<b>Sensor element:</b>	Pt 100	0									
	Pt 1000 (without transmitter)	1									
	2x Pt 100 (2-wire only)	2									
	2x Pt 1000 (2-wire only)	3									
<b>Type:</b>	2-wire	0									
	3-wire	1									
	4-wire	2									
	CANopen, input 1x Pt100 2-wire	6									
	transmitter, input 1x Pt100 2-wire	7									
	transmitter, input 1x Pt100 3-wire	8									
	transmitter, input 1x Pt100 4-wire	9									
<b>Accuracy:</b>	class B, DIN	0									
	class B, 1/2 DIN	1									
	class B, 1/3 DIN	2									
	class B, 1/5 DIN	3									
	class B, 1/10 DIN	4									
	class A, DIN	5									
<b>Fitting length:</b>	50 mm	0									
	100 mm	1									
	160 mm	2									
	200 mm	3									
	250 mm	4									
	400 mm	5									
	600 mm	6									
	1000 mm	7									
	other fitting length (please indicate)	8									
<b>Terminal thread:</b>	1/4"	0									
	3/8"	1									
	1/2"	2									
	3/4"	3									
	1"	4									
	1/4" NPT	5									
	3/8" NPT	6									
	1/2" NPT	7									
	without thread	8									
<b>Terminal connector:</b>	Cable entry with 2 m cable	0									
	MIL-plug D3899, 6-pole	1									
	Valve plug DIN EN 175301-803, 4-pole	2									
	RSE4 compatible plug M12x1, 4-pole	3									
<b>Range transmitter:</b>	standard 0...100 °C	0									
	special (please indicate)	1									
<b>Accessories:</b>	programming adaptor, cable set MIL, software	0									
	programming adaptor, cable set other (please indicate), software	1									
	programming adaptor, software	2									
	cable set MIL	3									
	cable set other (please indicate)	4									
<b>Customized type:</b>	on request										0

More options see price list

Transmitter

- Presentable parameters:**
- connection (2-, 3-, 4-wire)
  - compensation resistance
  - damping (0... 60s)
  - simulation (on/off)
  - units (°C/°F)
  - fault condition reaction
  - offset (-9,9...+9,9 K)
  - measurement ranges
  - output (analog standard/inverse)
  - measurement point identification/TAG

CANopen

- Technical data:**
- Channels: 1
  - Operating temperature: -40...+85 °C
  - Protocol: CANopen DS-404 / DeviceNet / customized
  - Bus connection: 5-wire
  - Supply voltage: 18...36 V, reverse battery protected
  - Transmission rate: 10 kBit/s bis 1 MBit/s
  - Resolution: 16 bit at 20 ms (50 Hz scan rate)
  - Configuration: baud rate and address of module via LSS (with automatical baud rate detection)