

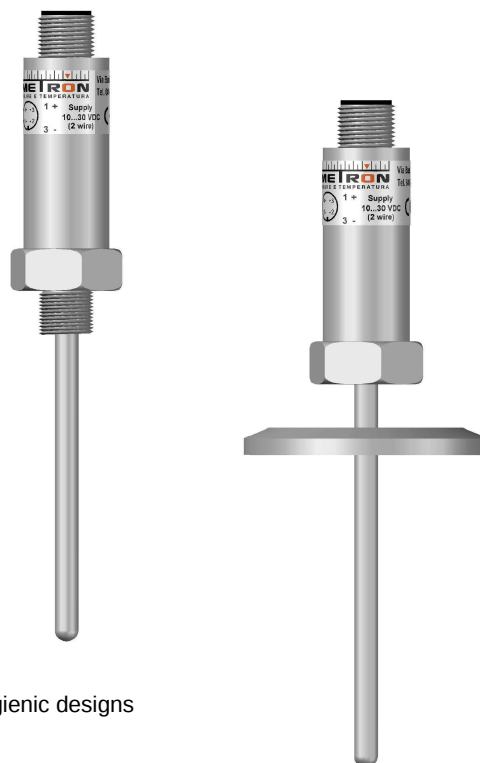
COMPACT TEMPERATURE TRANSMITTERS MTR-12

APPLICATIONS

- Machine building, plant and vessel construction
- Propulsion technology, hydraulics
- Food and beverage industry
- General applications
- Pharmaceutic and sanitary application

DETAILS

- 4 ... 20 mA output
- PC programmable temperature range
- High stability
- Free configuration software
- Materials and surface finish quality in accordance with standards of hygienic designs
- Measuring range -50 ... +250°C
- Accuracy according to DIN EN 60751



PREVIEW

The MTR-12 is a compact system used to measure liquid and gaseous fluid.

PC configuration allows the user to select Range, units and Burnout direction, without requiring calibration equipment.

Configuration is performed quickly using our new USB port driven configurator by simply connecting METRON loop terminals and following the software instructions. Calibration set up may be saved as a file on the PC for late use.

The MTR-12 incorporates the latest digital technology to ensure accurate drift free performance.

If required the desired range can be specified at the time order, removing the need for user configuration.

If the range is not specified then the transmitter will be shipped with the default range of (0 to 100) °C and upscale burnout.

The electrical connection is made via an M12 x 1 circular connector.

ENVIRONMENTAL

Ambient operating range	(-40 to +85) °C (Full accuracy only between (-30 to 75) °C)
Ambient storage temperature	(-50 to +90) °C
Ambient humidity range	(10 to 90) % RH non condensing

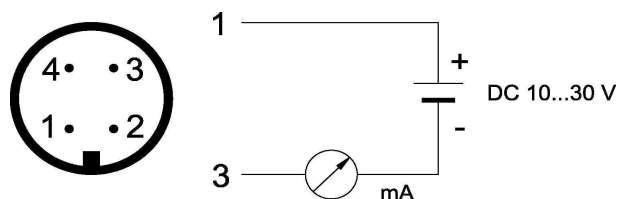
PHYSICAL

Dimensions	18 mm diameter; 50 mm height
Weight	31 g (encapsuled) depending of construction
Body material	AISI 316L
Process connection	AISI 316L
Stem material	AISI 316L
Protection	IP 66 / 67
Surface finish	Standard: Ra < 0,8 µm Optional: Ra < 0,4 µm electropolished

APPROVALS

EMC - BS EN 61326	Electrical equipment for measurement control and laboratory use.
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CONNECTOR WIRING



SPECIFICATIONS AT 20 °C

INPUT

Sensor Type	PT100 100 Ω at 0 °C 3 wire (Class AA)
Sensor Range	-50 ... 250 °C
Minimum Span (*1)	25 °C
Linearisation	BS EN 60751 (IEC 751) standard/JISC 1604
Measurement Accuracy (*2)	0.3 °C ± 0.05 % of Reading
Thermal Drift	±0.02 °C / °C
Excitation current	<200 µA

OUTPUT

Output Type	2 wire 4 to 20 mA current loop powered
Output Temperature Range	Programmable
Output connection	M12x1 circular connector
Maximum output	21.5 mA (in high burnout condition)
Minimum output	<3.9 mA (in low burnout condition)
Accuracy	(mA output /2000) or 5 µA (Whichever is the greater)
Loop Voltage effect	0.2 µA / V
Thermal drift	2 µA / °C
Maximum output load	[(Vsupply-10)/21] K Ohms (Example: 700 Ohms @ 24 V)

GENERAL SPECIFICATION

Update time	500 ms
Transmitter Response Time	1 second
Start up time	4 seconds (I out < 4 mA during start up)
Probe response time	T ₆₃ <3s with stem Ø 3mm. (small tip version) T ₆₃ <4s with stem Ø 6mm.
Warm-up time	1 minutes to full accuracy
Power Supply	10...30 Volts dc

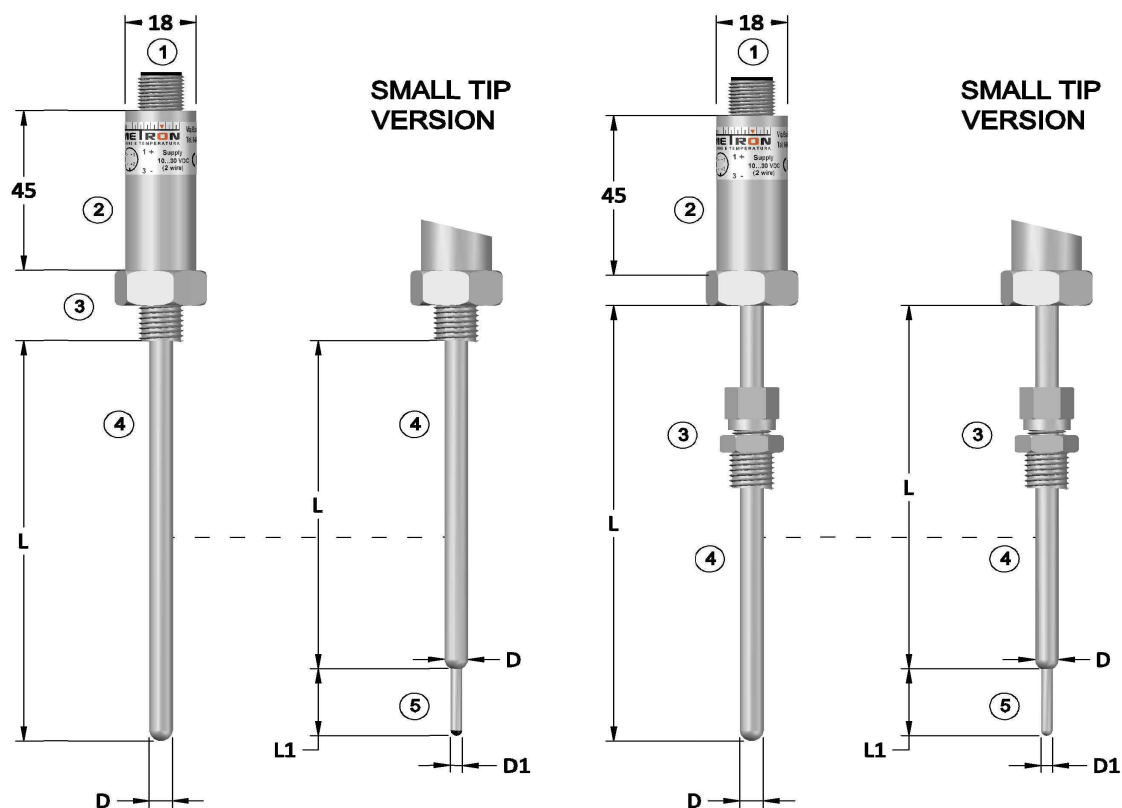
Note *1

Any span may be selected, full accuracy is only guaranteed for spans greater than the minimum recommended

Note *2

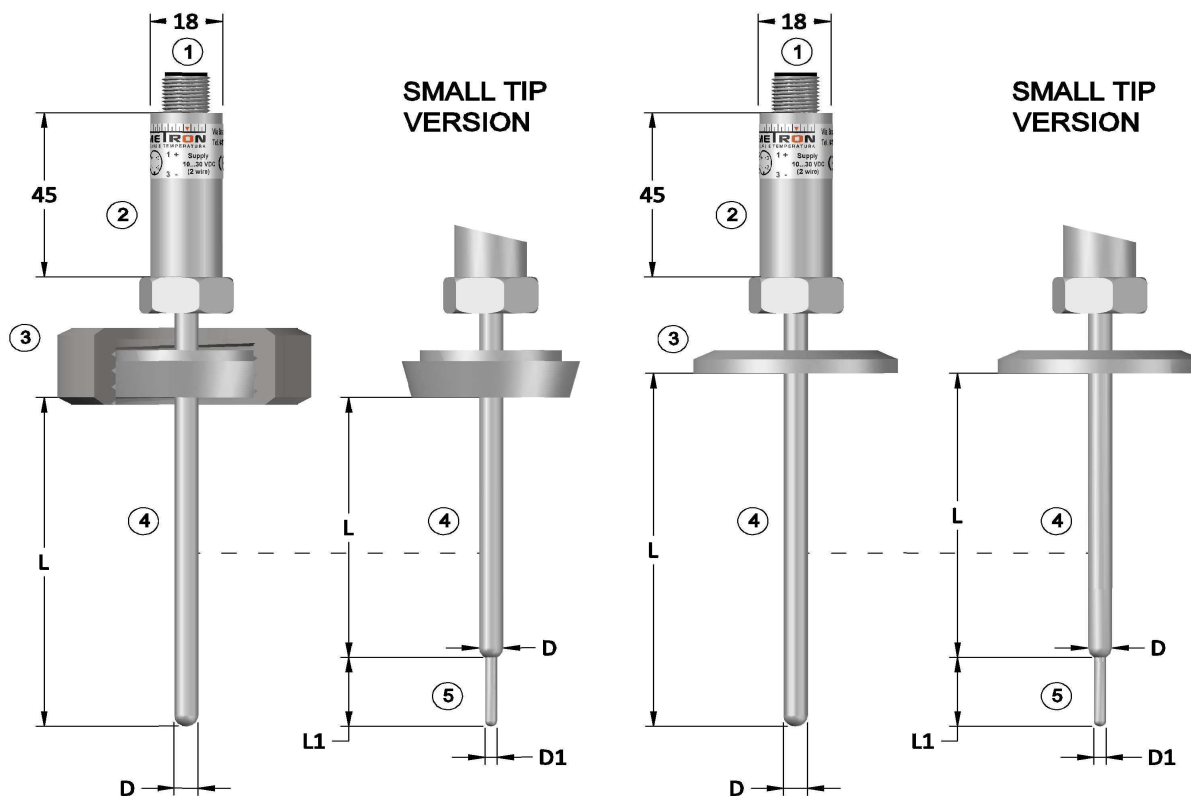
Basic measurement accuracy includes the effects of calibration, linearisation and repeatability

THREADED PROCESS CONNECTION



- ① M-12 Connector
- ② SS AISI 316L body
- ③ SS AISI 316L Process connection
- ④ SS AISI 316L sheath
- ⑤ SS AISI 316L small tip version

SANITARY PROCESS CONNECTION



- ① M-12 Connector
- ② SS AISI 316L body
- ③ SS AISI 316L Process connection
- ④ SS AISI 316L sheath
- ⑤ SS AISI 316L small tip version

PROGRAMMING KIT



- ① M-12 plug connector for directly connection of MTR-12
- ② Configuration kit
- ③ USB connector to PC

ACCESSORIES

CONFIGURATION KIT



- Configuratin unit complete with software
- Easy to connect with USB connector
- No further power supply needed for programming transmitter
- This unit can program, read and create logging file of temperature readed from MTR-12

EXTENDED CONNECTION CABLE



- Linear connector version with 2 - 5 - 10 mtr of cable
- Angular connector version with 2 - 5 - 10 mtr of cable
- Self-assembly connectors