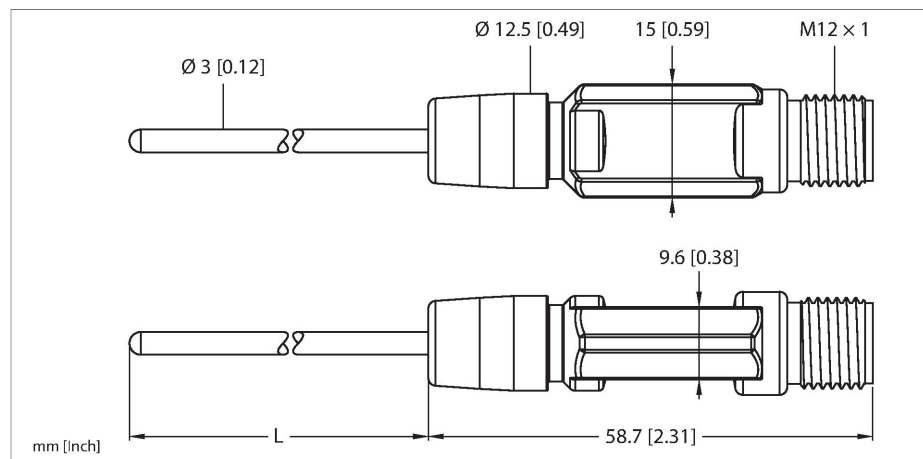


TTM050C-203A-CF-LI6-H1140-L100-50/50°C

Temperature Detection – With Current Output



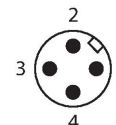
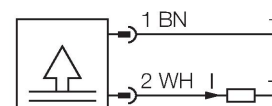
Technical data

Type	TTM050C-203A-CF-LI6-H1140-L100-50/50°C
ID	9910539
Temperature range	
Measuring range	-50...50 °C -58...122 °F
Measuring element	Pt1000, DIN EN 60751, class A
Response time	$t_{05} = 1.5 \text{ s} / t_{09} = 6.0 \text{ s}$ in water @ 0.2 m/s
Immersion depth (L)	100 mm
Process Pressure	100 bar
Power supply	
Operating voltage U_s	5.5...32 VDC
Current consumption	$\leq 20 \text{ mA}$
Short-circuit/reverse polarity protection	yes / yes
Insulation class	III
Analog output	
Current output	4...20 mA
Load	$\leq 0.84 \text{ k}\Omega$ at 24 VDC [$R_{\text{Load}} = (V_{\text{Supply}} - 5.5 \text{ V}) / 22 \text{ mA}$]
Accuracy (Lin. + Hys. + Rep.)	$\pm 0.2 \text{ K}$
Mechanical data	
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)
Process connection	For compression fittings, thermowell or direct mounting

Features

- Miniature design
- Analog output 4...20 mA
- Factory setting -50...50 °C (other settings on request)
- Compression fitting process connection
- Bendable probe (min. bending radius: 3x outer diameter; excluding 30-mm probe tip)

Wiring diagram



Functional principle

The TTM miniature transmitters are available with integrated probe. Due to the integrated electronics, the limited temperature range must be observed, especially in the area of the M12 connector.

Technical data

Electrical connection	Connector, M12 × 1
Protection class	IP67
Environmental conditions	
Ambient temperature	-40...+80 °C
Storage temperature	-40...+80 °C
Tests/approvals	
Reference conditions acc. to IEC 61298-1	
Temperature	15...+25 °C
Atmospheric pressure	860...1060 hPa abs.
Humidity	45...75 % rel.
Auxiliary power	24 VDC
Temperature behaviour	
Temperature coefficient range TK _s	± 0.1 % of full scale/10 K
Temperature coefficient zero point TK ₀	± 0.1 % of full scale/10 K
MTTF	162 years acc. to SN 29500 (Ed. 99) 40 °C

Technical data

Type	TTM050C-203A-CF-LI6-H1140-L100-50/50°C
ID	9910539
Temperature range	
Measuring range	-50...50 °C
	-58...122 °F
Note	Max. temperature of electronics: 80 °C/176 °F
Measuring element	Pt1000, DIN EN 60751, class A
Response time	t ₀₅ = 1.5 s / t ₀₉ = 6.0 s in water @ 0.2 m/s
Immersion depth L	100 mm
Outer diameter	3 mm
Power supply	
Operating voltage U _s	5.5...32 VDC
Current consumption	≤ 20 mA
Short-circuit/reverse polarity protection	yes / yes
Protection class	IP67
Insulation class	III
Analog output	
Current output	4...20 mA

Technical data

Load	$\leq 0.84 \text{ k}\Omega$ at 24 VDC [$R_{\text{Load}} = (V_{\text{Supply}} - 5.5 \text{ V}) / 22 \text{ mA}$]
Accuracy (Lin. + Hys. + Rep.)	$\pm 0.2 \text{ K}$
Temperature behaviour	
Temperature coefficient zero point TK_0	$\pm 0.1 \text{ \% of full scale/10 K}$
Temperature coefficient range TK_s	$\pm 0.1 \text{ \% of full scale/10 K}$
Environmental conditions	
Ambient temperature	-40...+80 °C
Storage temperature	-40...+80 °C
Mechanical data	
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)
Sensor material	Stainless steel, 1.4404 (AISI 316L)
Process connection	For compression fittings, thermowell or direct mounting
Process Pressure	100 bar
Electrical connection	Connector, M12 × 1
Reference conditions acc. to IEC 61298-1	
Temperature	15...+25 °C
Atmospheric pressure	860...1060 hPa abs.
Humidity	45...75 % rel.
Auxiliary power	24 VDC
Tests/approvals	
MTTF	162 years acc. to SN 29500 (Ed. 99) 40 °C