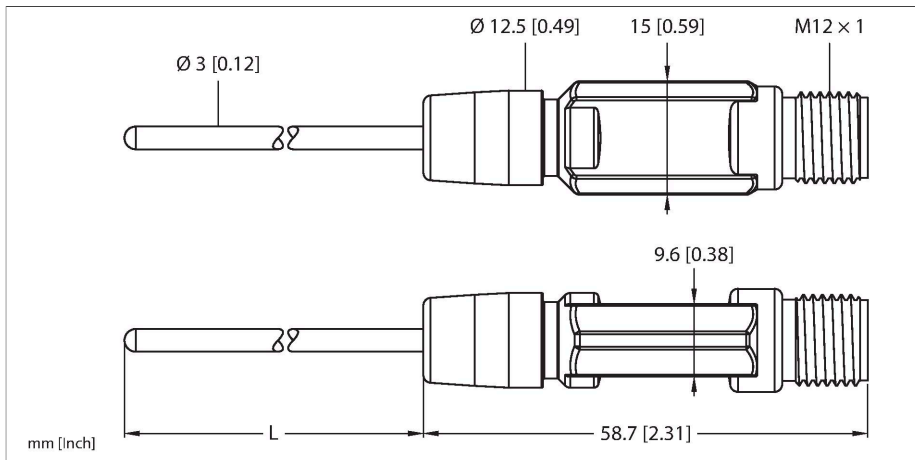


TTM650C-203A-CF-LI6-H1140-L200-10/650°C

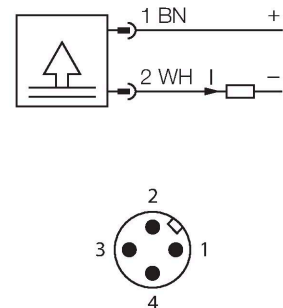
Temperature Detection – With Current Output



Features

- Miniature design
- Analog output 4...20 mA
- Factory setting 10...650 °C
- 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.

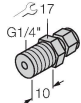
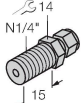
Technical data

Type	TTM650C-203A-CF-LI6-H1140-L200-10/650°C
ID	100046890
Temperature range	
Measuring range	-50...500 °C
	-58...932 °F
Factory setting	10...650 °C
	50...1202 °F
Note	Max. temperature of electronics: 80 °C/176 °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	200 mm
Outer diameter	3 mm
Power supply	
Operating voltage U_B	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
Load	≤ 0.84 kΩ at 24 VDC [$R_{Load} = (V_{Supply} - 5.5 \text{ V})/22 \text{ mA}$]
Accuracy (Lin. + Hys. + Rep.)	± 0.2 K
Temperature behaviour	
Temperature coefficient zero point TK_0	± 0.1 % of full scale/10 K

Technical data

Temperature coefficient range TK _s	± 0.1 % 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
Pressure resistance	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	
Approvals	CE
MTTF	162 years acc. to SN 29500 (Ed. 99) 40 °C

Accessories

CF-M-3-G1/8-A4	9910405	CF-M-3-G1/4-A4	9910407
			
Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection G1/8" male thread		Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection G1/4" male thread	
CF-M-3-N1/8-A4	9910406	CF-M-3-N1/4-A4	9910408
			
Compression fitting for direct mounting of temperature sensors; sensor diameter 6 mm; process connection 1/8" NPT male thread		Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection 1/4" NPT male thread	

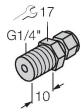
CF-P-3-G1/8-A4 9910409

Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection G1/8" male thread



CF-P-3-G1/4-A4 9910411

Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection G1/4" male thread



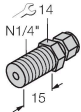
CF-P-3-N1/8-A4 9910410

Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection 1/8" NPT male thread



CF-P-3-N1/4-A4 9910412

Compression fitting for direct mounting of temperature sensors; sensor diameter 3 mm; process connection 1/4" NPT male thread



Accessories

Dimension drawing	Type	ID	
	WK4.4T-2/TEL	6625025	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
	RK4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
	RK4.4T-2/TXL	6625503	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
	WK4.4T-2/TXL	6625515	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval

Dimension drawing	Type	ID	
	RKC4.4T-P7X2-10/TXL	6626184	Connection cable, M12 female connector, straight, 4-pin, LED, cable length: 10 m, jacket material: PUR, black; cULus approval

