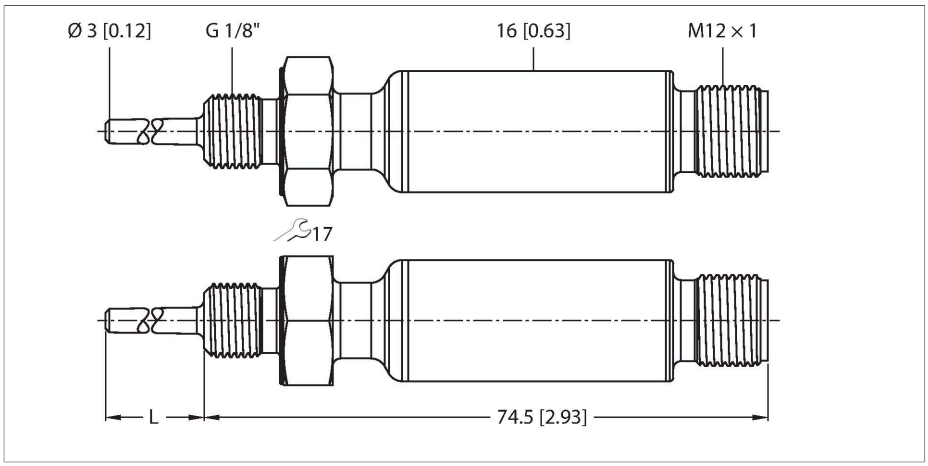
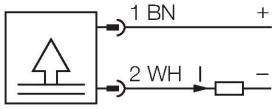
TTMS-103A-G1/8-LI6-H1140-L013 40/85°C Temperature Detection – Stainless Steel Transmitter with Integrated Probe

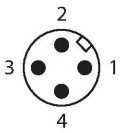


Features

- Miniature design
- Analog output 4…20 mA
- Factory setting 40…85 °C
- Process connection G1/8" male thread

Wiring diagram



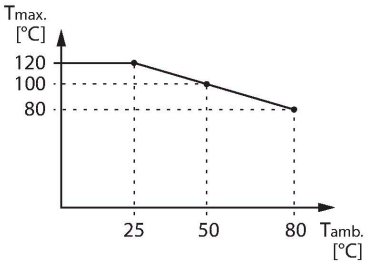


Technical data

Type	TTMS-103A-G1/8-LI6-H1140-L013 40/85°C
ID	100044776
Temperature range	
Measuring range	40…85 °C
	104…185 °F
Factory setting	40…85 °C
	104…185 °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	13 mm
Outer diameter	3 mm
Power supply	
Operating voltage U_B	5…32 VDC
Current consumption	≤ 20 mA
Short-circuit/reverse polarity protection	yes / yes
Protection class	IP67
Insulation class	III
Outputs	
Output 1	Analog output
Output function	Analog output
Analog output	
Current output	4…20 mA

Functional principle

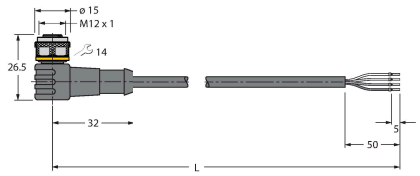
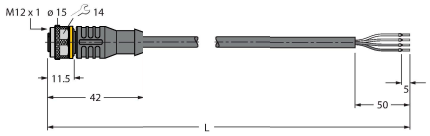
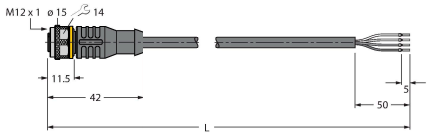
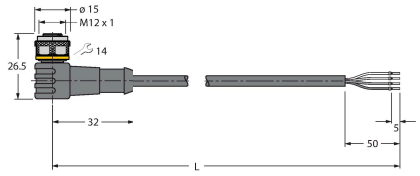
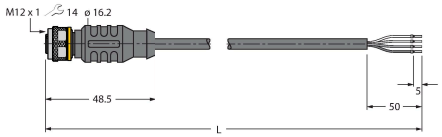
All devices of the miniature transmitter series TTMS are made of stainless steel 1.4404 (AISI 316L). They are available with integrated probe or with M12 probe connection.
Due to the integrated electronics, the limited temperature range must be observed, especially in the area of the M12 connector. Furthermore, the devices feature a current output (2-wire, 4…20 mA), a switching output and communication via IO-Link.



Technical data

Load	≤ 0.86 kΩ at 24 VDC [R_{Load}=(V_{supply} – 5 V)/22 mA]
Accuracy (Lin. + Hys. + Rep.)	± 0.2 K
IO-Link	
IO-Link specification	V 1.1
Programming	FDT / DTM
Transmission physics	corresponds to 3-wire physics (PHY2)
Transmission rate	COM 2 / 38.4 kbps
Process data width	16 bit
Measured value information	15 bit
Switchpoint information	1 bit
Frame type	2.2
Genauigkeit	± 0.2 K
Temperature behaviour	
Temperature coefficient zero point TK_0	± 0.1 % of full scale/10 K
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, 1.4404 (AISI 316L)
Sensor material	Stainless steel, 1.4404 (AISI 316L)
Process connection	G 1/8" male thread
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	
MTTF	162 years acc. to SN 29500 (Ed. 99) 40 °C

Accessories

Dimension drawing	Type	ID	
	WKC4.4T-2/TEL	6625025	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval
	RKC4.4T-2/TXL	6625503	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
	WKC4.4T-2/TXL	6625515	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval
	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