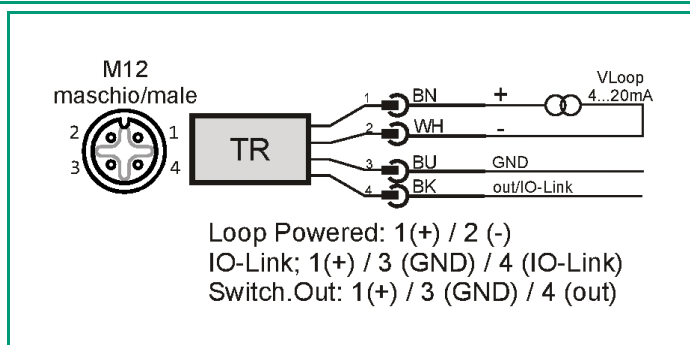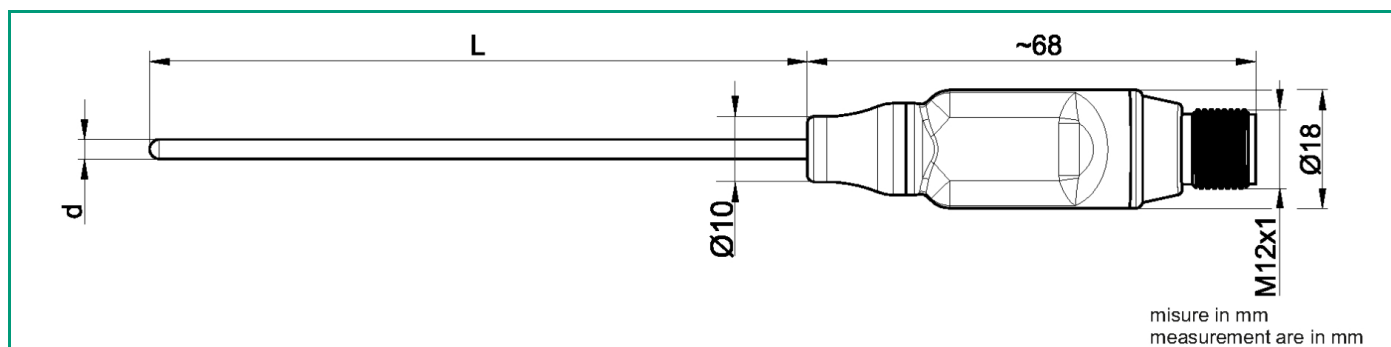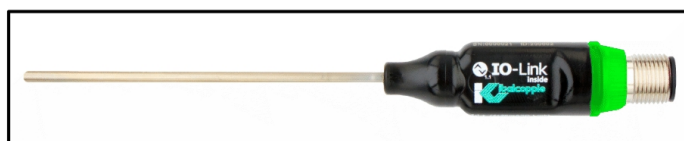# EVOMINI IOI-

Temperature transmitter with IO-Link interface and integrated mineral insulated (MgO) cable probe

Can be configured in three operating modes: IO-Link, 4-20mA loop powered and switching output with alarm thresholds (SIO). Moulded body with M12 output connector and IP67 protection degree. Very good alternative to traditional thermometric assemblies with connection head.

CE

UKCA

RoHS

misure in mm
measurement are in mm

Loop Powered: 1(+) / 2 (-)
IO-Link; 1(+) / 3 (GND) / 4 (IO-Link)
Switch.Out: 1(+) / 3 (GND) / 4 (out)

WE SENSE

TEMPERATURE

TECHNICAL SPECIFICATION

Ambient temperature	-40 ÷70°C
Storage temperature	-40 ÷70°C
Operating humidity	0 ÷100%
Operating Voltage	18÷30 Vdc reverse polarity protection (IO-Link operating mode) 8÷32 Vdc reverse polarity protection (Loop Powered operating mode)
Current consumption	0.65 W (IO-Link operating mode) 0.8 W (SIO operating mode)
Input/Output insulation	None
Sensor input signal filter (*) **(*) time to reach 90% of signal**	Configurable from 0.1s to 3.7s
Output signal type	Configurable between: 4÷20mA analogue signal; IO-Link; switching PNP or NPN output (SIO);
Permitted load	727Ω @ 24 Vdc [Rload= (Vpw. - 8) / 0,022] (Loop Powered operating mode)
Sensor break or short-circuit monitoring	According to NAMUR NE43, selectable between: Upper scale (≥ 21.0 mA) Lower scale (≤ 3,6 mA) (Loop Powered operating mode)
Communication interface	IO-Link Vers. 1.1 (COM2 - 38,4Kbaud) Class A port M12x1 - 4 pos. A-coded
IO-Link Smart Sensor Profile (2nd ed.)	According to SSP type 3.1
Switching output (*) **(*) SIO operating mode**	NO/NC programmable, PNP/NPN Overload and short circuit protection Hysteresis or window function Maximum current: 150mA Programmable output activation/deactivation delay RGB LED for output status signaling (configurable color for OFF state and ON state)
Display elements (*) **(*) IO-Link operating mode**	Green color LED (IO-Link), RGB LED with configurable color (Locator), RGB LED with configurable color (SIO)
Temperature influence (*) **(*) deviation from 20°C**	Maximum value between ±0,3°C/25°C and ±0,3% of span/25°C (Loop powered operating mode) ±0,3°C/25°C (IO-Link and SIO operating mode)
Long-term stability	Maximum 0.1% of span per year
Linear error	Negligible
Sensor error compensation	Offset or over two points
EMC	In accordance to EN 61326-1 (CE) In accordance to BS EN 61326-1 (UKCA)
Measurement range	-50 ÷350°C
Accuracy (*) **(*) @25°C**	Maximum value between ±0.15K and ±0.15% of span (Loop Powered operating mode) ±0.1K (IO-Link operating mode)
Connection body material	THERMOPLASTIC
Type of connector	male 4-pin connector with M12x1 metal screw lock (in accordance with IEC 61076-2-101 STANDARDS)
Stem length L	150 mm 250 mm 350 mm Other lengths on request
Insulation resistance	100 M Ω@ 100 Vdc.
Dimensional notes	Lengths other than those listed can be produced for minimum quantities to be agreed (after our feasibility study)
Sheet material	AISI 316L
Sheath diameter d	Ø 3 mm Ø 3.17 mm Ø 6 mm Ø 6.35 mm
M.I.C. min. bending radius	3 times the outer diameter (except the sensing tip which length is ~30 mm)
Pt100 sensor accuracy	Class A up to 300°C according to IEC 751
Response time (*) **(*) test in water in accordance with IEC 751. Time taken to reach 63.2% of temperature step**	less than 3.5 seconds for Ø 3 mm and less than 13 seconds for diameter Ø 6 mm

WE SENSE
TEMPERATURE

TECHNICAL SPECIFICATION

International protection marking (*) **(*) According to IEC 60529**	IP67
Programming	With any IO-Link programmation platform and the relative master.
Option	On request adjustment on 1 or 2 points
Factory default	Loop powered operating mode: (4÷20)mA output / Range 0÷150°C / Sensor break ≥21mA / Sensor short-circuit ≤3.6mA Switching output operating mode (SIO): PNP type output with hysteresis function NO, SP=80°C, RSP=70°C, no delay, output status signaling: LED color red

ORDER CODES

IOI-			X

Diameter d (mm)

Ø3	**30**
Ø3.17	**32**
Ø6	**60**
Ø6.35	**63**

Lenght L (mm)

100	**100**
150	**150**
250	**250**
350	**350**
500	**500**
750	**750**

Other lengths on request

WE SENSE
TEMPERATURE