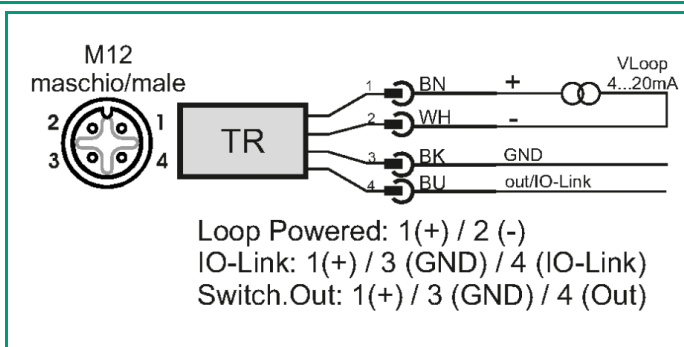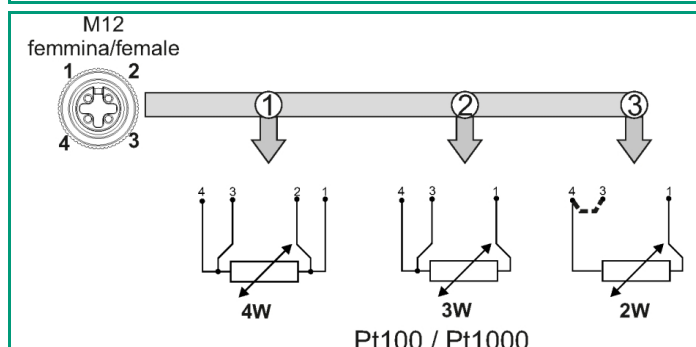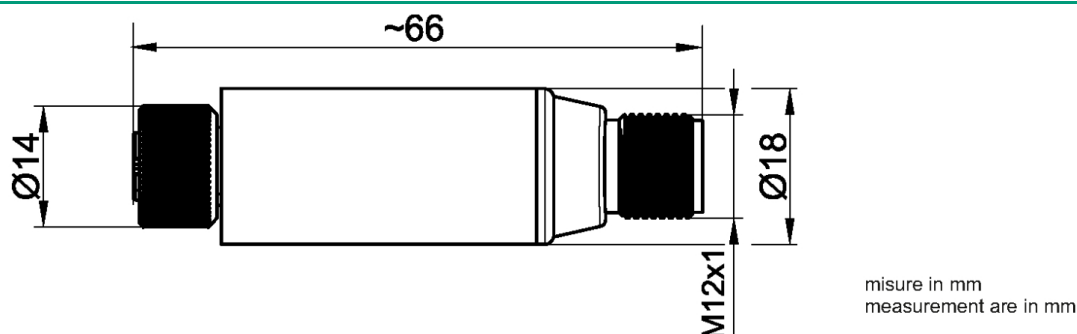# EVOMINI IOCM

## Signal converter for RTD Pt100 and Pt1000 temperature sensors with IO-Link interface, metallic body

Can be configured in three operating modes: IO-Link, 4÷20mA loop powered and switching output with alarm thresholds (SIO). Stainless steel body with dual M12 connector and IP67 protection degree. External influences such as ambient temperature, vibrations, moisture and EMC interference have minimal influence on the measurement thanks to the compact and robust design. Compatible with Italcoppie TRM and TRC sensors series.

UK CA

CE

RoHS

HM 2503





~66

Ø14

Ø18

M12x1

misure in mm
measurement are in mm

M12
femmina/female

① ② ③

4W    3W    2W

Pt100 / Pt1000

M12
maschio/male

TR

1  BN  +        VLoop
2  WH  -        4...20mA
3  BK  GND
4  BU  out/IO-Link

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

## TECHNICAL SPECIFICATION

| | |
|---|---|
| **Ambient temperature** | -40 ÷80°C |
| **Storage temperature** | -40 ÷80°C |
| **Operating humidity** | 0 ÷100% |
| **Operating Voltage** | 18÷32 Vdc reverse polarity protection (IO-Link operating mode)<br>8÷32 Vdc reverse polarity protection (Loop Powered operating mode) |
| **Current consumption** | 0.65 W (IO-Link operating mode)<br>0.8 W (SIO operating mode) |
| **Input/Output insulation** | None |
| **Electronic board input** | RTD Pt100/Pt1000 (α= 0,00385) 2, 3 o 4 wire connection |
| **Sensor input signal filter (*)**<br>**(*) time to reach 90% of signal** | Configurable from 0.1s to 3.7s |
| **Sensor exciting current** | ~100 uA |
| **Sensor wire maximum resistance** | 20 ohm / wire |
| **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:<br>Upper scale (≥ 21.0 mA)<br>Lower scale (≤ 3,6 mA)<br>(Loop Powered operating mode ) |
| **Communication interface** | IO-Link Vers. 1.1  (COM2 - 38,4Kbaud)<br>Class A port<br>M12x1 - 4 pos. A-coded |
| **IO-Link Smart Sensor Profile (2nd ed.)** | According to SSP type 3.1 |
| **Switching output (*)**<br>**(*) SIO operating mode** | NO/NC programmable, PNP/NPN<br>Overload and short circuit protection<br>Hysteresis or window function<br>Maximum current: 150mA<br>Programmable output activation/deactivation delay<br>RGB LED for output status signaling (configurable color for OFF state and ON state) |
| **Display elements (*)**<br>**(*) IO-Link operating mode** | Green color LED (IO-Link), RGB LED with configurable color (Locator), RGB LED with configurable color (SIO) |
| **Temperature influence (*)**<br>**(*) deviation from 20°C** | Maximum value between ±0,3°C/25°C and ±0,3% of span/25°C (Loop powered operating mode)<br>±0,3°C/25°C in the range -200...500°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 61326-1:2013 (CE)<br>In accordance to BS EN 61326-1:2013 (UKCA) |
| **Measurement range** | -200 ÷800°C |
| **Accuracy (*)**<br>**(*) @25°C** | Maximum value between ±0.15K and ±0.15% of span (Loop Powered operating mode)<br>±0.1K between -200÷400°C and ±0.2K >400°C (IO-Link operating mode) |
| **Connection body material** | AISI 316L Stainless Steel |
| **Type of connector** | female 4-pin connector (INPUT SENSOR), 4-pin male connector (OUTPUT), both with M12x1 metal screw lock (in accordance with IEC 61076-2-101) |
| **International protection marking (*)**<br>**(*) 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** | 4-wire Pt100 input<br>Loop powered operating mode: (4÷20)mA output / Range 0÷150°C / Sensor break ≥21mA / Sensor short-circuit ≤3.6mA<br>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

| IOCM | X |
|---|---|

---