INTRINSIC SAFETY MEASURE TRANSMITTER

for voltage or DC current

TMP-SI

The **TMP-SI** has **intrinsic safety inputs:**
this is an associated equipment, placed in safe area. It has input circuits for connection to a sensor placed in hazardous area and output circuits for connection in safe area only.
This instrument has obtained a **UE** examination certificate of the type according to the prescriptions of the standards EN 60079-0 (2006), EN 60079-11 (2007), EN 60079-26 (2007), EN 61241-0 (2006) and EN 61241-11 (2006), in accordance with the directive ATEX 2014/34/UE:
Marking ⟨Ex⟩ II(1)GD, [Exia]IIC and [Ex iaD]

• ***Type:***

The**TMP-SI** is an **insulated measure transmitter** which accepts:
as INPUT A *standardised* 0-10VDC voltage or 0-4/20mADC current signal, and then converts it into a *standardised* OUTPUT signal:

- voltage: 0-10VDC or bidirectionnal ±10VDC
- current: bidirectionnal ± 20mADC or
  unidirectionnal 0/4-20 mADC active or passive (optional)



TMP-SI

• ***Accessibilities:***

- Reduced casing
- Plug-off connectors for screwed connectings
- Internal selection of the output calibers by jumpers, accessible behind the front face.

• ***Functions:***

- Galvanic partition:

Inputs / [outputs, supply]: 3.8 kV

- Broad supply range
- Low response time: 10ms

Applications

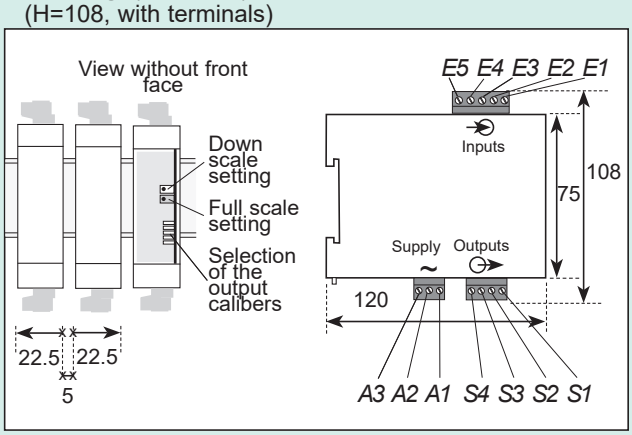
♦ PLC input interface
♦ Data centralisation on PLC
♦ Aquisition, regulation, recording, watching of signals.

Environment

♦ Operating temperature : -10°C to +60°C.
♦ Storage temperature : -30°C to +80°C.
♦ CE according to IEC 61000-6-4, IEC 61000-6-2 (industrial environment).
♦ Disturbance immunity according to the standard IEC 61000-6-2 (IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)

Description

♦ **Housing**: (H x L x D) 75 x 22.5 x 120 mm (H=108, with terminals)



♦ **Protection**: Case / terminals : IP 20
♦ **Housing**: Self-extinguishing case of black UL 94VO ABS, for latching on symmetrical DIN rail (mount the cases vertically and provide a 5 mm space between each).
Plug-off connectors for screwed connectings (2.5mm², flexible or rigid).

Technical features at 23°C

INPUTS

Voltage 0-10VDC (input resistance: 1MΩ)
(±24VDC max. between terminals E1 and E3)

Current 0-20m4, 4-20mA (input resistance: 5Ω)
(|I max.| ≤ [5 x IPE] & |I max.| ≤ 100mA
between terminals E2 and E3)

Integrated supply for 2-wire sensor
23.1V max. / 14V min. at 20mA / 14.5V min. at 22mA
(I max.: 25 mA)
Fine settings by multi-turn potentiometers.
Possibility to achieve shifted scales.

OUTPUTS

Current 0-20mA, 4-20mA, (Lr* < 750Ω)
±20 mA, (Lr* < 320Ω)

Voltage 0-10V (Lr* > 1kΩ)
±10V (Lr* > 1kΩ)

POWER SUPPLY

2 Versions: High or low voltage *(specify on order)*

High voltage 90...265 VAC 50/60/400 Hz
and 88 ...350 VDC

Low voltage 20...40 VAC 50/60/400 Hz
and 20...64 VDC

Power draw: on load < 4 VA (2W)
empty < 3 VA (1.3W)

TRANSFER

Accuracy rating : ≤ 0.2%
Ripple : ≤ 0.5%
Galvanic partition : input / [output, supply]
3.8kV eff. 50Hz 1min.
outputs / supply
2kV eff. 50Hz 1min.

Response time : ≤ 250ms [Tr]
Pass-band : 1.5 Hz (-3 decibels) [Bp = 0.35/Tr]

Temperature coefficient : ≤ 0.015%/°C

OPTIONS

Shifted or reversed scales.
Passive current output 0-20mA, 4-20mA (U: 30V max.)

Short response time : > 10 ms
Long response time : < 40 s

*Lr: load resistance

ELECTRICAL PARAMETERS RELATED TO THE INTRINSIC SAFETY

Inputs	Termi-nals	Uo (Vdc)	Io (mAdc)	Po (mW)	Lo (mH)	Co (µF)
Sensor supply	E5, E2	23.1	100	578	4	0.138
Current	E2, E3	5.5	0.6	0.8	900	58
Voltage	E1, E3	5.5	0.6	0.8	900	58
Um < 375 Vdc et Um < 265 Vac						

Coding

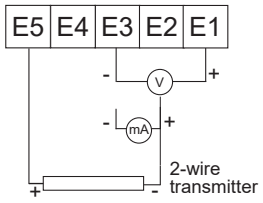
TMP-SI

Supply: *High or low voltage (specify)*
(2) high voltage : 90...265 VAC or 88...350 VDC
(3) low voltage : 20...40 VAC or 20...64 VDC

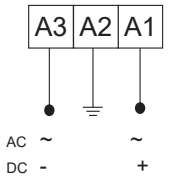
Order example:
For a ***TMP-SI*** powered 230 V / 50Hz
request reference: ***TMP-SI 2***

Wiring

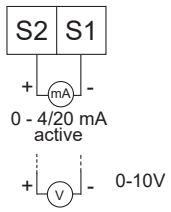
Inputs



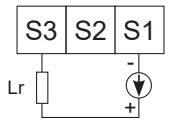
Power supply



Active current and voltage output



Passive current output (optional)



This appliance is dedicated to industrial applications. It has to be installed in an electrical switchbox, or equivalent.

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