PROGRAMMABLE CONVERTER

TPI 10

Features

- **Power supply**:
  20 to 270 Vac and 20 to 300 Vdc
- **Universal input**:
  100mV, 1V, 10V, 300V, 20mA, 3-wire Pt100, Ni 100, 2-wire ΔPt100, thermo-couple, resistance and potentiometer.
  Typical response time: 300 ms
- Supply for 2-wire sensor
- **1 insulated analog output** (A) programmable in 0-4-20mA current (active/passive) or in 0-10V voltage.

Relay outputs (option R): 2 change-over relays (8A/250 VAC on resistive load).
Detection of the sensor rupture.

Insulation between input / outputs / supply.
Self-zero and self-diagnosis.

Mode driver : the analog output is piloted by the micro-console.
Function simulation of the input measure.
Programming either with the micro-console or by PC with the software SUPERVISION.

Configuration

Easy programming on front face with a micro-console or with the PC software SUPERVISION.

Programming with the Micro-console

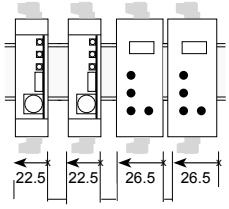
This minaturised micro-console connected on the front face of the instruments allows:
- the visualisation of the measure and the status of the analog and relay outputs,
the visualisation and the modificationof the programming,
- the teleloading of programming files for duplication to other converters.

Programming by PC: SUPERVISION

Programming software (Windows environment) allowing:
- the storage of configurations as files which can be consulted, modified, duplicated or loaded into the converters,
- the edition and printing of files with or without having a converter connected.

Dimensions

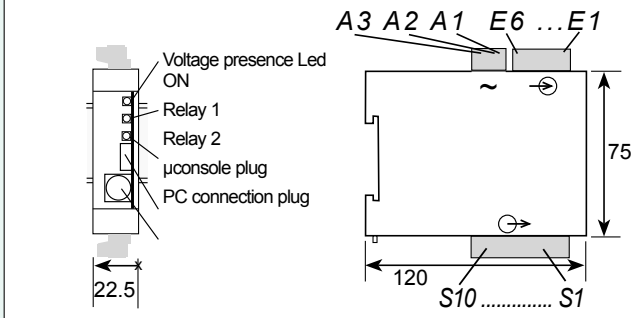
Self-extinguishing case of black UL 94VO ABS.
Mounting in switchbox: latching on symmetrical DIN rail.
Rack version: consult.
Plug-off connectors for screwed connectings
(2.5mm², flexible or rigid)



Dimensions: 22.5x75x120 mm
avec µconsole: 26.5x80x130 mm
To allow the inserting of the µconsole: mount the instruments vertically (horizontal DIN rail) leaving a 5mm space between each.
Operating T°: -10° to 50°C
Storage T°: -20 to 70°C

♦ CE according to the directive EMC 2004/108/CE.
Conform with standards:
IEC 61000-6-4 on emissions, IEC 61000-6-2 immunity (industrial environment)
IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-6 (level 3)
Sensitiveness < ±1% of the measure range

Dimensions



Coding

Type TPI 10 AR

Outputs:
A I/U analog insulated
R 2 change-over relays

Power supply:

20 to 270 VAC and 20 to 300 Vdc

Power draw : 3.5 W max. 6 VA max.
Dielectric withstanding : 2 kV-50Hz-1min.

*Order example: **For a universal input converter** + analog output + 2 relays, request reference **TPI 10 AR**.*

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Features

Inputs

Types of inputs	Measure range adjustable from:		Permanent overload	Intrinsic error	Console resolution	Input impedance
mA	-2 to +22mA with √♣		± 100mA	< ±0.1% of the MR	10 µA	Max. drop 0.9V
mV♠	-10 to +110mV with √♣		± 1V		10 µV	≥ 1MΩ
V	- 0.1 to +1.1V with √♣		± 50V		1 mV	
	-1 to +11V with √♣				1 mV	
	-30 to +330V with √♣		± 600V		10mV	
Thermocouples ♠ Standard IEC 581	°C	°F	-	♦(2) <±0.1% of the MR	0.1°C / 0.1°F	≥ 1 MΩ
J	-160/1200	-256/2192				
K	-270/1370	-454/2498				
B	200/1820	392/3308				
R	-50/1770	-58/3218				
S	-50/1770	-58/3218				
T	-270/410	-454/770				
E	-120/1000	-184/1832				
N	0/1300	-32/2372				
L	-150/910	-238/1670				
W	1000/2300	1832/4172				
W3	0/2480	32/4496				
WRE5	0/2300	32/4172				
Sensor Pt100Ω (1)♠ 3 wire, Stand. IEC 751 (DIN 43760)	°C	°F	-	<±0.1% of the MR	0.1°C / 0.1°F	Current 250µA
	-200/850	-328/1562				
Sensor Ni 100 3 wire (1)♠	-60/260	-76/500	-			
Differential measures from 2 sensors Pt100Ω 2 wire Norme IEC 751 ♠**	-200/270	-328/518	-			
Resistive sensors	Calibers 0-440 Ω and 0-2.2 kΩ ♣ (0-8.8 kΩ optional)		-	<±0.1% of the MR (0.5% for 0-2KΩ)	-	
Potentiometer	from 100Ω to 10 kΩ ♣		-			
Supply for 2-wire sensor	24 VDC ±15% with protection from short-circuits. 25 mA max.					
Special linearisation *programming up to 20 points*	On input: mV, V, mA. Resistive sensors and potentiometer					

(1) Line resistance <25Ω
(2) Or 30 µV typical (60µV Max.)
♦ CJC efficiency : ±0.03°C/°C ±0.5°C from -5°C to +55°C
MR Measure range
** Line resistance <10Ω and R. max. 400Ω
√ Extraction of the square root

♠ A 12 µA pulsed current allows the detection of line or sensor rupture
♣ Cut off: the display of the console and the output of the TPI remain at down scale for an input signal < to the cut off value, programmable from 0% to 100% of the input range.

Thermic drift <150ppm /°C

Outputs

Code	Types of OUTPUTS		Features
A	1 analog	Active/ passive current	Current: Direct or reverse 0-20mA Load impedance ≤ Lr 600Ω
		voltage	Voltage: Direct or reverse 0-10V Load impedance ≥ Rc 5000Ω
R	2 change-over relays		2 setpoints per relay, configurable on the whole MR. Hysteresis programmable from 0 to 100%. Time delay programmable from 0 to 25 sec. (8A/250VAC on resistive load)

Typical response time: 300 ms (for a variation from 0 to 90 % of the input signal)

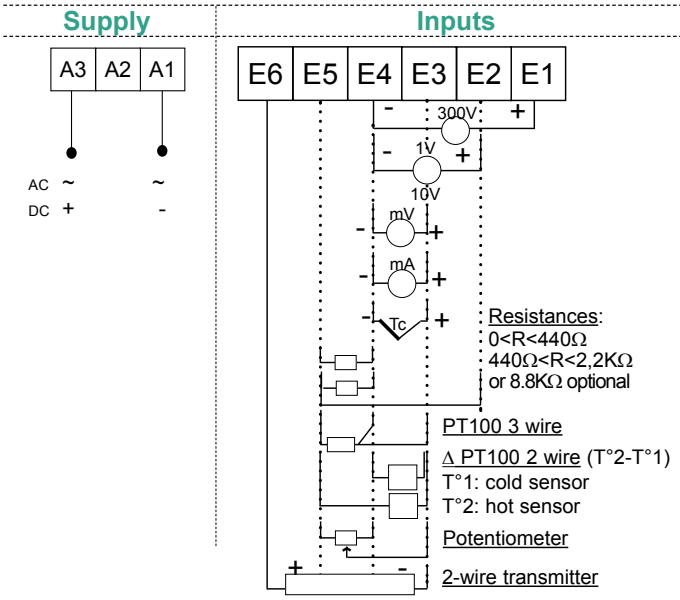
(1) Add 40 ms for the response time on the analog output.

Galvanic partition:

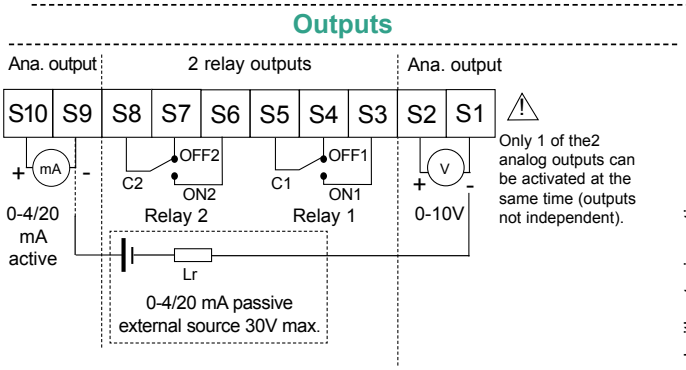
2kV-50Hz-1min. between supply, input, analog output, relay outputs

Connectings

Upper connectors



Lower connector



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