

# MEASURE TRANSMITTERS

AC/DC current or voltage

## Series TMvA/TMvP

◆ This range is declined into 2 versions

**TMvA: AC current or voltage input**

**TMvP: DC current or voltage input**

which will accept a non-standard signal and convert it into a 0/10V voltage or 0-4/20mA current (active or passive) standardized isolated output signal.

For processing or transmission of signals...

◆ **Options:** (specify on order)

-Shifted or reversed scales.

-Bidirectional inputs.

-5A dc input (TMvP)

-Bidirectional voltage input  $\pm 10V$ .  $L_r > 1k\Omega$

-Bidirectional current input  $\pm 20mA$ .  $L_r < 320\Omega$

-Passive current output 0-4/20mA U:30V max.

-Standard response time: 200ms

Option shorter response time: 7ms to 200ms

Option longer response time: 200ms to 30s (specify on order)

-Version HI: High isolation 5kV



TMvA

◆ **Accessibilities:**

Plug-off connectors for screwed connections.

Internal selection of the input and output calibers by jumpers, accessible behind the front face.

5Aac Current input, safened by a screwed connector.

### Transfer

- ◆ Accuracy rating :  $\leq 0.3$  (ac) and  $\leq 0.2$  (dc)
- ◆ Ripple :  $\leq 0.5\%$
- ◆ Galvanic isolation : 3kV eff. 50Hz 1min. (input / output / power supply) version Hi (5kV eff. - 50Hz - 1 min.)
- ◆ Response time :  $\leq 200ms$  [Tr] (in standard)
- ◆ Pass-band : 1,7Hz (-3 decibels) [PB:0.35/Tr]
- ◆ T° coefficient :  $\leq 0.015\%/^{\circ}C$

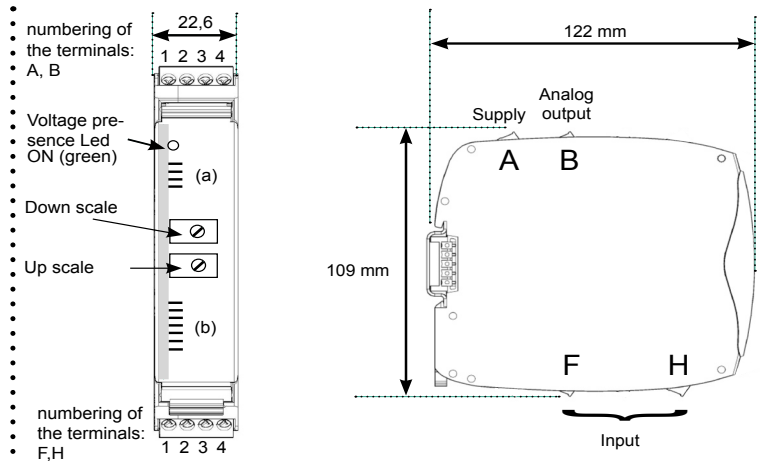
### Environment

- ◆ Operating temperature :  $-20^{\circ}C$  to  $+60^{\circ}C$ .
- ◆ Storage temperature :  $-20^{\circ}C$  to  $+70^{\circ}C$ .
- ◆ Installation: Pollution degree 2 / voltage surge II
- ◆ Compliance with standards:  
Electrical safety EN 61010-1  
ATEX 2014/34/UE (area 2) ... EN 60079-0, EN 60079-15  
Directive EMC 2014/30/UE ... EN 61326-1

Marking:



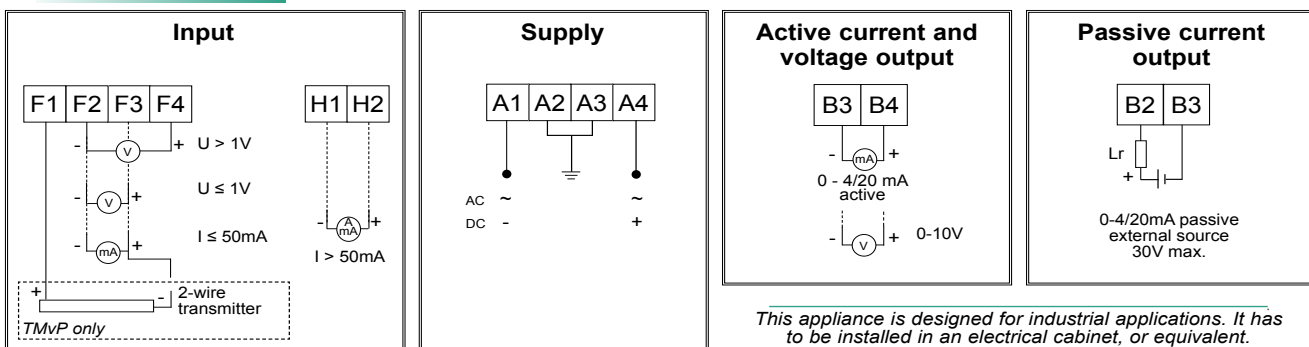
II 3 G Ex nA IIC T4 Gc



Selection of the calibers:  
(a): output  
(b): input

- Protection: housing / terminals: IP20
- Removable terminal blocks for screwed connections (2.5 mm<sup>2</sup>, flexible or rigid)
- Weight: 290g (with packaging)
- Housing: self-extinguishing case of black UL 94VO PA66.
- Mounting in cabinet: latching on symmetrical DIN rail

### Wiring



This appliance is designed for industrial applications. It has to be installed in an electrical cabinet, or equivalent.

# Features

Names of the transmitters	Ranges	Max. sensitivity	Min. sensitivity	Impedance	Permanent overload	Features
<b>AC current and voltage</b> <b>TMvA</b>	100 mVac	0/100 mV	0/100 mV	100 kΩ	25 V	Internal selection of the range by removable jumpers, and fine settings by multi-turn potentiometers ( * range to be defined on order) Voltage: 100mV / 1V / 10V / 100V / 650V ac Current: 5mA / 5A ac Possibility to perform shifted scales.
	1 Vac	0/0.1 V	0/1 V	100 kΩ	75 V	
	10 Vac	0/1 V	0/10 V	1 MΩ	750 V	
	100 Vac	0/10 V	0/100 V	1 MΩ	750 V	
	650 Vac	0/100 V	0/650 V	1 MΩ	750 V	
	50 mAac	0/5 mA	0/50 mA	20 Ω	100 mA	
	5Aac	0/500 mA *	0/5 A	0.02Ω	7.5 A	
<b>DC current and voltage</b> <b>TMvP</b>	±100 mVdc	0/10 mV	0/100 mV	100 kΩ	25 V	Internal selection of the range by removable jumpers, and fine settings by multi-turn potentiometers. Voltage: ±10mV / ±100mV / ±1V / ±10V / ±100V / ±500V dc Current: ±5mA / ±50mA dc Possibility to perform shifted scales. Integrated supply for 2-wire sensors 24V ±15% protected from short-circuits (Imax: 25mA). Bidirectional inputs.
	±1 Vdc	0/0.1 V	0/1 V	100 kΩ	75 V	
	±10 Vdc	0/1 V	0/10 V	1 MΩ	750 V	
	±100 Vdc	0/10 V	0/100 V	1 MΩ	750 V	
	±500 Vdc	0/75 V	0/750 V	1 MΩ	750 V	
	±5 mAdc	0/0.5 mA	0/5 mA	20 Ω	100 mA	
	±50 mAdc	0/5 mA	0/50 mA	20 Ω	100 mA	

Designation	Description
<b>Current outputs</b> mA	0/20 mA 4/20 mA Load resistance: < 750Ω ±20mA Load resistance: < 320Ω
<b>Voltage outputs</b> V	0 / 10 V ±10V Load resistance: > 1kΩ
<b>Power supply</b>	20 to 250 Vac and 20 to 250 Vdc Max. consumption < 2.5W (8VA) (50/60/400Hz in AC)

# Coding

**TMv xx E [x/xx] Sx [x/xx] Tx [xx]**

P ... DC current/voltage input  
A ... AC current/voltage input

- ... Galvanic isolation 3KV/50Hz/1min  
HI ... Galvanic isolation 5KV/50Hz/1min

Input caliber to be defined:  
down scale / up scale unit

Example for a transmitter with

- DC voltage input from -10 to 100 V
- Current output from -5 to 5mA
- Galvanic isolation 5KV
- Response time 30s

Order a:

TMvP HI E [-10/100V] S 8 [-5/5mA] T3 [30s]

	Analog output			
	current			voltage
	active	passive		
1	0/20mA			
2	4/20mA			
3	-20/20mA			
4		0/20mA		
5		4/20mA		
6			0/10V	
7			-10/10V	
8	down scale / up scale unit (if caliber to be defined)			

	Response time
1	Standard: 200ms
2	Fast: 7ms (TMvP) / 60ms (TMvA)
3	value unit (if value to be defined: 30s max.)