

# MEASURE TRANSMITTERS

AC/DC current or voltage

# TMvA/TMvP AVTNv/CAPvPLUS

ARDETEM

SFERE



◆ This range is declined into 2 versions  
**TMvA/AVTNv AC current or voltage input**  
**TMvP/CAPvPLUS 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 insulated output signal.

For processing or transmission of signals...

◆ **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.

-Version HI: High isolation 5kV

- ◆ **Options:** (specify on order)
- Reversed or shifted scales.
- Bidirectional inputs.
- 5Aac input (TMvP/CAPvPLUS)
- Bidirectional voltage output  $\pm 10V$ .  $L_r > 1k\Omega$
- Bidirectional current output  $\pm 20mA$ .  $L_r < 320\Omega$
- Passive current output 0-4/20mA  $U: 30V$  max.
- Standard response time: 200ms
- Option shorter response time: from 7ms to 200ms
- Option longer response time: from 200ms to 30s (specify on order)

## Transfer

- ◆ Accuracy rating :  $\leq 0.3$  (ac) and  $\leq 0.2$  (dc)
- ◆ Ripple :  $\leq 0.5\%$
- ◆ Galvanic isolation : 3kV eff. 50Hz 1min. (input / output / supply)  
Version HI (5kV eff. - 50Hz - 1 min.)
- ◆ Response time :  $\leq 200ms$  [Tr] (in standard)
- ◆ Pass-band : 1.7Hz (-3 decibels) [BP:0,35/Tr]
- ◆ Temperature coeff. :  $\leq 0.015\%/^{\circ}C$

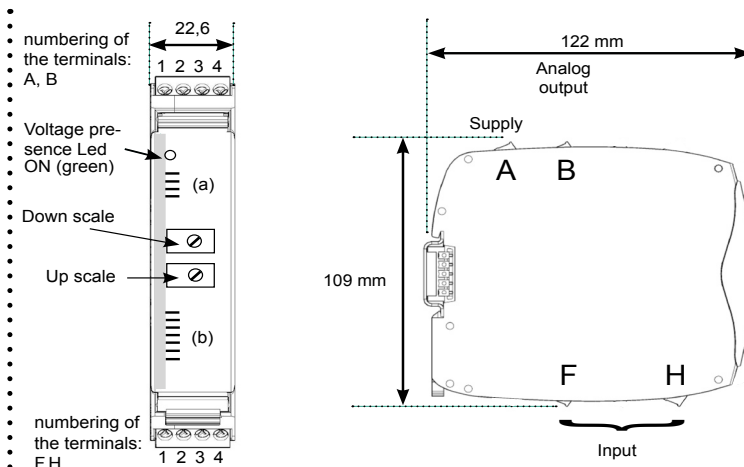
## Environment

- ◆ 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

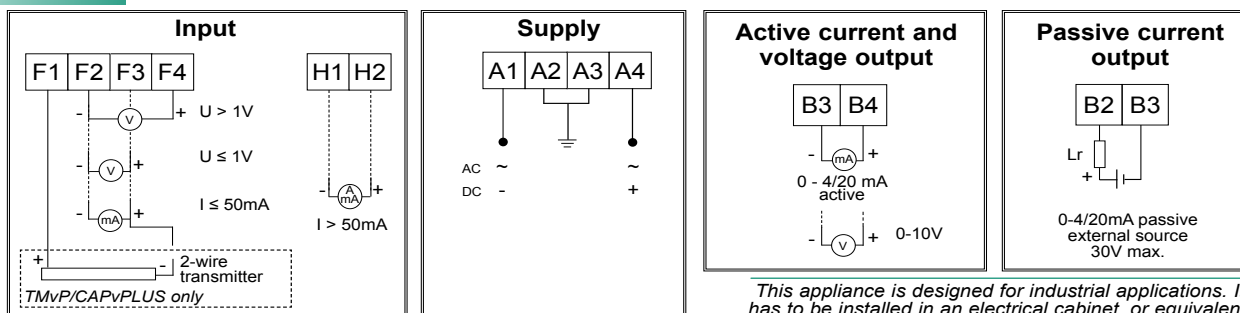


Selection of the calibers:

- (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)
- 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. sensi- vity	Min. sensi- vity	Impedance	Permanent overload	Features
<b>AC current and voltage</b> <b>TMvA/AVTNv</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/CAPvPLUS</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 mAac	0/0.5 mA	0/5 mA	20 Ω	100 mA	
	±50 mAac	0/5 mA	0/50 mA	20 Ω	100 mA	

Name	Description
<b>Current output</b> mA	0/20 mA 4/20 mA Load resistance: < 750Ω ±20mA Load resistance: < 320Ω
<b>Voltage output</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

AC current/voltage input ARDETEM reference: TMvA SFERE reference: AVTNv
DC current/voltage input ARDETEM reference: TMvP SFERE reference: CAPv PLUS

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

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

	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)			

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

Example for a transmitter with

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

Order a:

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

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



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