

TMv10



- **Universal power supply:**
20 to 250 Vac and 20 to 250 Vdc
- **Universal input:**
mA, mV, V, Pt100 3 or 4 wire, thermocouple J or K, resistance and potentiometer.
- **Supply for 2-wire sensor**
- **Isolated analog output:**
- active or passive current (0-20 mA or 4-20 mA) or voltage (0-10V).
- **Sensor break detection**
Self-zero and self-diagnosis
- **Configuration:**
A set of 8 switches located behind the front face allows selecting the input and output types and calibers, without any other setting required.

Features

Power supply: 20 to 250 Vac and 20 to 250 Vdc

TMv10 Z: 24 Vdc $\pm 30\%$

Power consumption: 2.2 W max. 5 VA max.

Dielectric withstanding: 3 kV eff. 50Hz-1min. (IN/OUT/supply)

TMv10 HI: 5kV eff. 50Hz-1min.

Operating temperature: -20 to +60°C

Storage temperature: -20 to +70°C

Installation: Pollution degree 2 / voltage surge II

Protection: housing/terminals: IP 20

Removable terminal blocks for screwed connectings (2.5 mm², flexible or rigid)

Weight: 290g (with packaging)

Self-extinguishing case of black UL 94VO PA66.

Mounting in cabinet: latching on symmetrical DIN rail.

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:

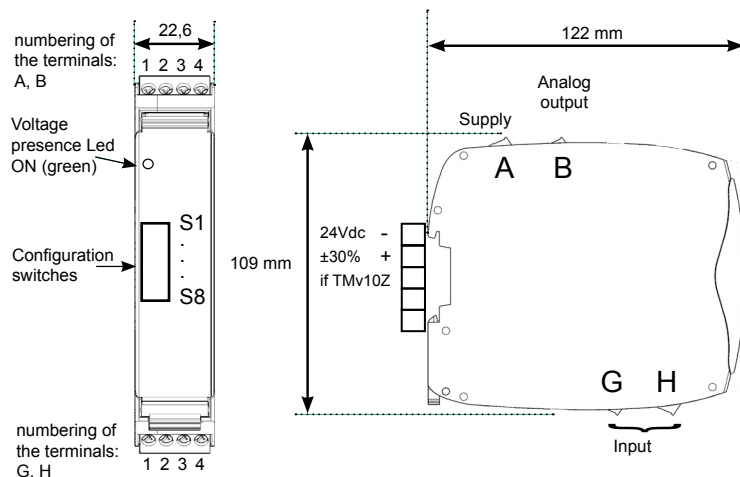


II 3 G Ex nA IIC T4 Gc

Safeties

	Blinking of the voltage presence LED	Return value of the analog output
Self-diagnosis	2s / 2s	22mA for current output 0-20mA
Sensor break	0.5s / 0,5 s	0mA for output 4-20mA 11V for voltage output

Dimensions



Outputs

- Average response time = 150 ms in standard (for a variation from 0 to 90% of the input signal)
- Option F: Faster response time:
< 5ms for the voltage or current inputs and < 8ms for the other inputs
- Response times guaranteed 10 min. after setting the converter on tension and 30 seconds after a revert from measure overrange or a sensor break.
- Temperature coefficient < 100 ppm of the MR°C

Type	Load impedance Lr in Ω	Caliber	Configuration of the micro-switches	
			S7	S8
Current active/passive	active: ≤ 600 passive: $\leq (U-2)/0,022$	0-20 mA		
		4-20 mA		•
Voltage	≥ 5000	0-10V	•	

• → Switch ON

Inputs

● → Switch ON

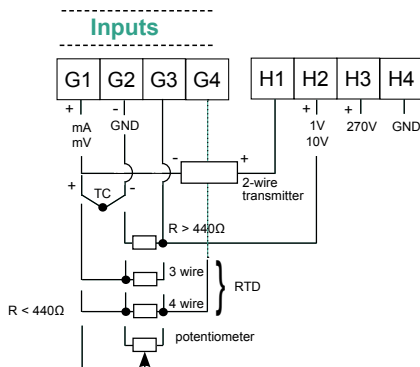
Type	Max. error	Measure range (MR)	Input impedance	Permanent overload	Caliber	Configuration of the micro-switches									
						S1	S2	S3	S4	S5	S6				
V	±750mV	±300V	≥ 1MΩ	±600V	±270V		●		●	●	●				
	±150V					●		●	●	●					
	±450mV	±11V		±50V	0-270V		●		●		●				
	0-150V					●		●		●					
	±25mV				±5V		●		●	●	●				
	±15mV				±10V		●		●	●	●				
	±1,1V				0-5V		●			●	●				
					0-10V		●								
		±500mV					●	●							
	±2.5mV	±1,1V			±1V			●		●	●	●			
±1.5mV	0-500mV					●		●							
mV	±250μV	±110mV		±1V	0-1V			●			●				
	±100mV					●									
mA	±40μA	±22mA	Max. drop 0.9V	±100mA	0-100mV				●	●	●				
					±5mA				●	●					
	±10mA							●			●	●			
	±20mA							●							
	0-5mA								●	●	●	●			
	0-10mA									●	●				
	±30μA	0-20mA								●					
		4-20mA													
Thermocouple J (standard IEC581)	±3.5°C	-50/1200°C	≥ 1MΩ	-	-50 to 200°C			●	●		●				
					0 to 100°C			●	●	●	●				
					0 to 200°C			●	●	●	●				
					0 to 400°C	●	●	●				●			
					0 to 600°C	●	●	●		●		●			
					0 to 800°C	●	●	●		●		●			
					0 to 1000°C	●	●	●							
					0 to 1200°C	●	●	●	●			●			
-50 to 200°C						●	●								
0 to 100°C						●	●				●				
0 to 200°C						●	●			●					
0 to 400°C						●	●		●	●	●				
0 to 600°C						●	●	●			●				
0 to 800°C						●	●	●	●		●				
0 to 1000°C						●	●	●	●	●					
0 to 1200°C						●	●	●	●	●	●				
Sensor Pt100 3 wire Standard IEC751 (DIN 43760) (line resistance <25Ω)					±0.5°C	-200/800°C	Current 250μA	-	-50 to 50°C	●					
									-50 to 100°C	●					
	0 to 100°C	●									●	●			
	0 to 150°C	●								●	●				
	0 to 200°C	●													
	0 to 300°C	●							●		●				
	0 to 500°C	●							●	●	●				
	0 to 800°C	●							●	●	●				
±0.7°C	-50 to 50°C	●			●										
	-50 to 100°C	●			●						●				
	0 to 100°C	●			●					●	●				
	0 to 150°C	●			●					●	●				
	0 to 200°C	●			●				●						
±0.9°C	0 to 300°C	●			●						●				
	0 to 500°C	●			●				●	●	●				
	0 to 800°C	●			●				●	●	●				
Sensor Pt100 4 wire Standard IEC751 (DIN 43760) (line resistance <25Ω)	±0.5°C	-200/800°C	Current 250μA	-	-50 to 50°C				●						
					-50 to 100°C				●						●
					0 to 100°C	●					●	●			
	0 to 150°C				●				●	●	●				
	0 to 200°C				●				●						
0 to 300°C	●							●		●					
0 to 500°C	●							●	●	●					
0 to 800°C	●							●	●	●					
±0.7°C	0 to 100°C				●					●	●				
	0 to 150°C				●				●		●				
±0.9°C	0 to 200°C				●				●	●					
	0 to 300°C				●				●		●				
Potentiometer 100Ω to 10kΩ	±0.2 of the MR				-	-	-		●	●					
Resistive sensor	±0.5Ω				0/440Ω (4 wire)	-	-	0 to 100Ω	●	●				●	
								0 to 200Ω	●	●			●	●	
								0 to 300Ω	●	●			●	●	
								0 to 400Ω	●	●			●		
	±25Ω				0/10kΩ			0 to 500Ω	●	●		●		●	
		0 to 1000Ω	●	●					●	●					
		0 to 5000Ω	●	●					●	●	●				
		0 to 10000Ω	●	●				●			●				

- Supply for 2-wire sensor: 24 Vdc ±15% (protection from short-circuits 30mA max)
- Measurable overrange: ±10% of the caliber
- Standard sampling time: 100ms (1ms if option F)
- Common mode rejection rate: 130 dB
- Serial mode rejection rate: 70 dB 50/60Hz
- Sensor break detection active for the inputs thermocouple, Pt100 and resistance < 440Ω

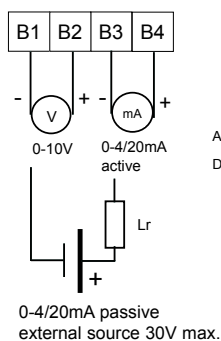
Coding

if bus supply version 24Vdc ±30% if electrical strength 5KV if option faster response time

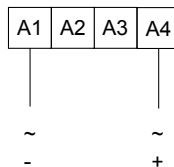
Wiring



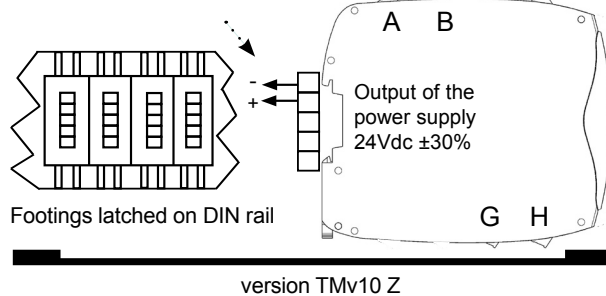
Analog output



Supply



Max. supply current of the bus = 3.5A dc



version TMv10 Z

your representative

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