

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 analogue 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

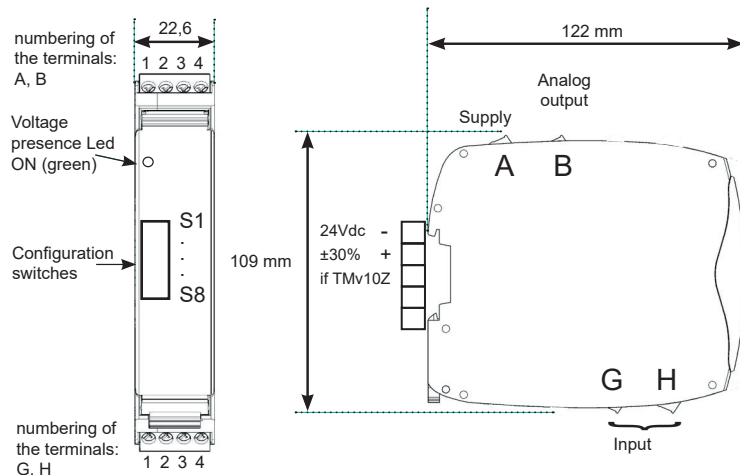
Marking:

CE
Ex II 3 G Ex nA IIC T4 Gc

Safeties

	Blinking of the voltage presence LED	Return value of the analogue 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	±300V		●		●	●	●	
	±450mV				±150V		●		●	●		
		±11V		±50V	0-300V		●		●		●	
					0-150V		●		●			
	±25mV	±5V				●			●	●		
	±15mV	±10V				●			●	●		
	±2.5mV	±1,1V		0-5V		●				●		
				0-10V		●						
±1.5mV	±500mV			●	●							
mV	±250μv	±110mV	±1V	±100mV			●					
	±150μV			0-100mV				●	●	●		
mA	±40μA	±22mA	Max. drop 0.9V	±100mA	±5mA				●	●		
					±10mA			●		●		
					±20mA			●				
					0-5mA				●	●		
					0-10mA				●			
	±30μA				0-20mA					●		
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						●	●		●	●		
Thermocouple K (standard IEC581)	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				●			●		●	
Sensor Pt100 4 wire Standard IEC751 (DIN 43760) (line resistance <25Ω)	±0.7°C				●		●		●			
		0 to 500°C	●			●	●		●			
		0 to 800°C	●			●	●	●	●			
	±0.9°C				●		●					
		-50 to 50°C	●		●							
		-50 to 100°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	●	●			●	●
		±25Ω	0/10kΩ			0 to 400Ω	●	●		●		
						0 to 500Ω	●	●		●		●
0 to 1000Ω						●	●		●	●		
	0 to 5000Ω	●	●		●	●	●					
	0 to 10000Ω	●	●	●			●					

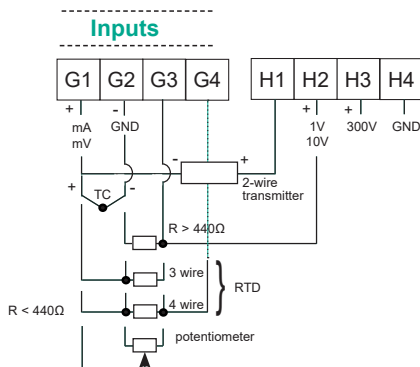
- Supply for 2-wire sensor: 24 Vdc ±15% (protection from short-circuits 30mA max)
- Measurable overrange: ±10% of the caliber
- Standard sampling time: 100ms (1ms if option F)
- Common mode rejection rate: 130 dB
- Serial mode rejection rate: 70 dB 50/60Hz
- Sensor break detection active for the inputs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

Coding

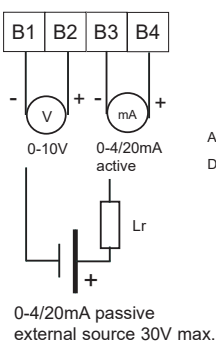
if bus supply version 24Vdc ±30% if electrical strength 5KV if option faster response time

TMv10 Z HI F

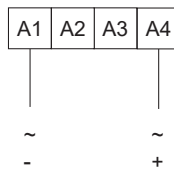
Wiring



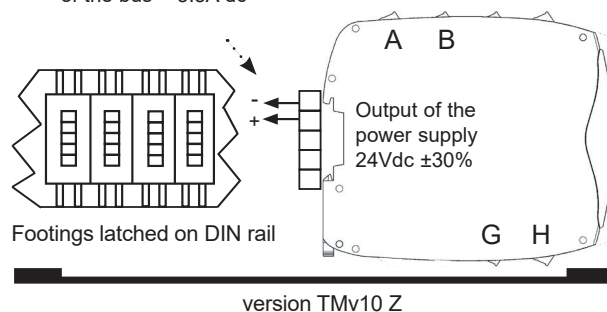
Analogue output



Supply



Max. supply current of the bus = 3.5A dc



your representative

ARDETEM

RCS Lyon 444-429-476 - Printed in France.

e-mail : info@ardetem.com

<http://www.ardetem.com>

Route de Brindas
Parc d'activité d'Arbora N°2
69510 SOUCIEU EN JARREST
- FRANCE -

Tél. : 33 (0)4 72 31 31 30

Fax. : 33 (0)4 72 31 31 31