

RADIO TRANSMITTER, UNIVERSAL INPUT

TPIvW401-AR

Used for the remote control, the watching, the telemetering in applications where the wiring is delicate and costly.



Features

- **Universal power supply:**
20 to 250 Vac and 20 to 250 Vdc
- **Universal input:**
 $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 270\text{V}$, $\pm 20\text{mA}$, Pt100/Ni 100 (2, 3 or 4 wire), $\Delta\text{Pt}100$, thermocouple, resistance and potentiometer.
- Average response time: 150ms
- Supply for 2-wire sensor
- **Isolated analog output (A)**
0-4-20mA current (active/passive) or 0-10V voltage.
- **Output 2 relays (R)**
(8A/250 VAC on resistive load).
- **Radio output:**
Mode sender or receiver
Band 433-434 MHz, 16 channels
RATED power 10mW
License free use
- **Menu help to the installation of the radio link**
Display of the reception level
Display of the sequence error rate
Counter of link losses
- **Isolation:** input / outputs / supply.
- **Safety:**
Checking of the radio sequence validity by CRC16
Non-reception time out with setting in safety position
Self-diagnosis
Sensor break detection (depending on input)
Checking of the configuration data
Passcode protected programming
- **Test functions:**
Simulation of the input measure
Simulation of the analog output

Configuration

Easy programming on front face with the tactile micro-console or with the PC software SlimSET.

Programming by tactile Micro-console

Graphical rear-lit LCD, allows visualising the following information:

- The value of the measure and its unit.
- The value of the analog output.
- The product tag name.
- The status of the relay outputs.

Programming by PC: SlimSET

Programming software (Windows environment) allows:

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.

- 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.

Dimensions: 22.6 x 109 x 136 mm

Operating temperature: -20° to 60°C

Storage temperature: -20 to 70°C

Installation: Pollution degree 2 / Voltage surge II

♦ **CE** Marking

♦ Compliance with standards:

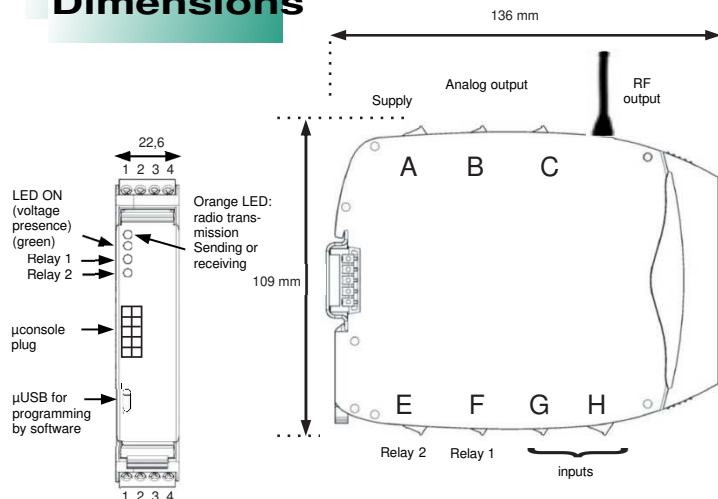
Directive LV 2014/35/UEEN 61010-1

Directive EMC 2014/30/UEEN 61326-1

Directive RED 2014/53/UE

Directive ROHS 2011/65/UE

Dimensions



Coding

Type	TPIvW 401 AR
Universal inputs	
Outputs:	A Analog R 2 relays

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

Consumption : 3 W max. 6 VA max.

Dielectric withstanding : 3 kV-50Hz-1min.

Galvanic isolation:

3kV-50Hz-1min. between supply, input, analog output, relay outputs

Features

Inputs

Types of INPUTS	Measure range adjustable from:		Permanent overload	Intrinsic error	Console resolution	Input impedance
mA*	-22 to +22mA		±100mA	< ±0.05% of the MR	10 µA	Max. drop 0.9V
mV*	-110 to +110mV		±1V		100 µV	≥ 1MΩ
V	-1.1 to +1.1 V		±50V		1 mV	
	-11 to +11V				10 mV	
	-270 to +270V		±300V		100 mV	
Thermocouples* Stand. IEC 581	°C	°F	-	<±0.1% of the MR or 30µV typical (60µV max.) ⁽²⁾	0.1° or 1° C or 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				
Pt100Ω sensor (1)* Standard IEC 751 (DIN 43760)	°C	°F	-	<±0.1% of the MR	0.1° or 1° C or F	Current 250µA
	-200/850	-328/1562	-			
Ni100 sensor (1)*	-60/260	-76/500	-			
Resistive sensors	Calibers 0-440 Ω* and 0-10 kΩ		-	<±0.1% of the MR	0.1Ω (400Ω) 1Ω (10kΩ)	Max. current 250µA
Potentiometer	From 100Ω to 10 kΩ		-		0.1%	Max. voltage 100mV
2-wire sensor supply	24 Vdc ±15% protected from short-circuits 25 mA max.					
Special linearisation, programming up to 20 points	On inputs: mV, V, mA. Resistive sensors and potentiometer					
Extraction of the square root	On inputs: mV, V or mA					

- * Sensor break detection:
mA input (if down scale ≥ 3.5mA)
Other inputs: A 12µA pulsed current allows the Detection of line or sensor break.
- (1) Wiring in 2, 3 or 4 wire possible
The influence of the line resistance ($0 < R_l < 25\Omega$) is included in the announced intrinsic error.

CJC efficiency (-20°C to 60°C)

Internal CJC: $\pm 2^\circ\text{C} \pm 0.03^\circ\text{C}/^\circ\text{C}$

CJC (option terminal): $\pm 1^\circ\text{C}$

MR = Measure range

Thermal drift <150ppm /°C

Outputs

Code	Types of OUTPUTS	Features
A	Active/passive current	Current: Direct or reversed 0-20mA Load impedance ≤ Lr 600Ω
	Voltage	Voltage: Direct or reversed 0-10V Load impedance ≥ Lr 5kΩ
R	2 change-over relays	2 setpoints per relay, configurable over the whole MR. Hysteresis programmable from 0 to 100%. Time delay programmable from 0 to 999.9 sec. (8A/250VAC on resistive load)

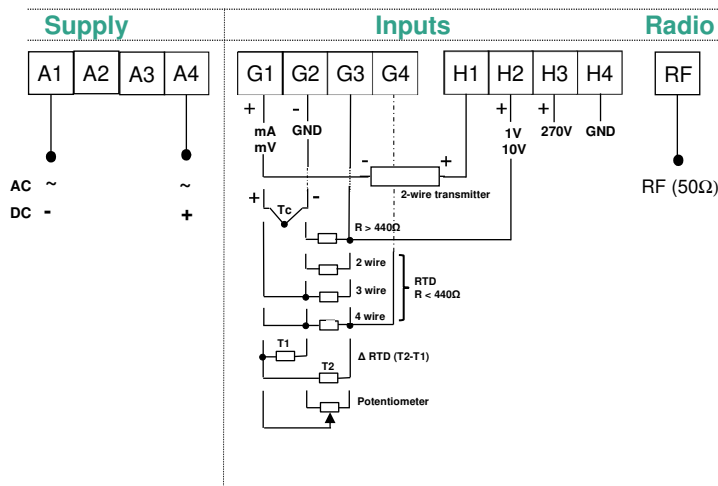
Typical response time: 150 ms (for a variation from 10 to 90% of the input signal) (1)

(1) Add 40 ms for the response time on the analog output, 10 ms for the response time on the relay outputs.

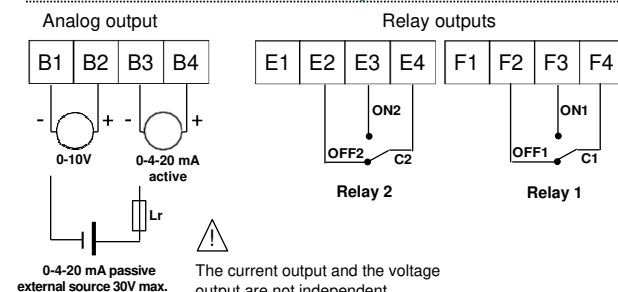
Radio

Frequency	433 to 434.790 MHz (16 channels of 100kHz)
Radio flow:	10 kbauds
Sending power	10 dBm (10mW)
Reception power	-104 dBm
Aerial impedance	50Ω
Aerial connector	SMA Reverse type

Connectings



Outputs

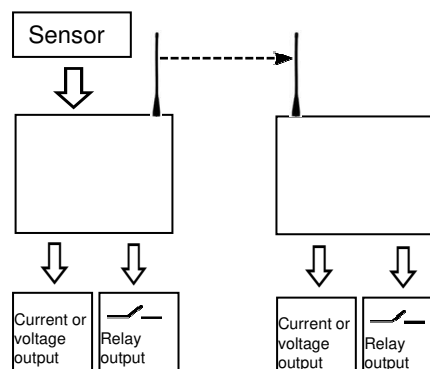


0-4-20 mA passive external source 30V max.

The current output and the voltage output are not independent. One type of output only can be activated, by programming (V or mA).

Mode sender:

The TPIvW operates like a classical transmitter. Measurement of the input and positioning of its outputs. It transmits by radio its measure and the status of its outputs.



Mode receiver:

The TPIvW transmits on its outputs the values received by radio and displays the measure value on its µconsole

Free field reach: from 1 to 10 kms depending on the aerial you will use (consult with us).

Your representative



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