

TPIvJ/J4



Features

- Universal power supply:**
20 to 250 Vac and 20 to 250 Vdc
- 4 bidirectional voltage calibers:**
 $\pm 10\text{mV}$, $\pm 20\text{mV}$, $\pm 50\text{mV}$, $\pm 100\text{mV}$
- Supply of the bridge:**
Programmable: 5 or 10V
30mA max. (TPIvJ), 120mA max. (TPIvJ4)
- Response time:**
average: 150ms in standard
(5ms max. if option F)
- Isolated analog output (A)**
current: 0-4-20mA (active/passive)
or voltage: 0-10V.
- Relay outputs (R):** 2 change-over relays
(8A/250 VAC on resistive load).
- Digital communications (N)** isolated
RS485 Modbus/Jbus
- Self-diagnosis.**
- Isolation input / outputs / supply.**
Mode simulation: allows validating the configuration or the installation.
- Programming either with micro-console or with the PC software SlimSET via a standard USB / μ USB cable.*

Configuration

Easy programming with a micro-console or with the PC software SlimSET (via a standard USB / μ USB cable).

Programming with Micro-console

The rear-lit graphical LCD with tactile keyboard allows the visualization of the following information :

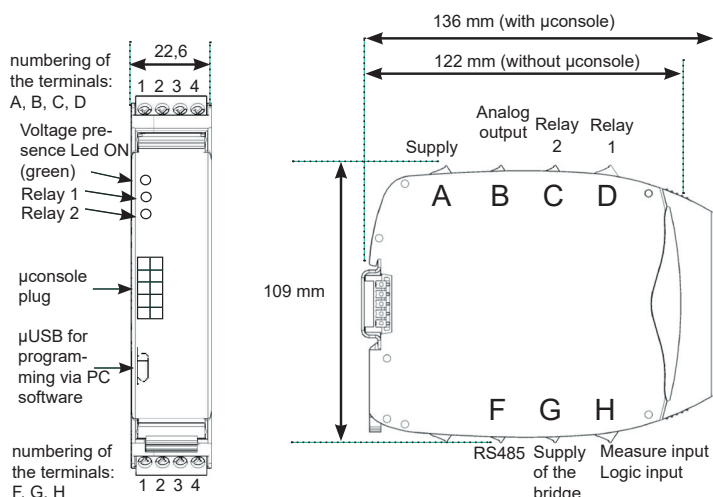
- the value of the measure with its unit,
- the value of the analog output,
- the tag name of the product,
- the status of the relay outputs and the RS485 communication.
- Scrolling messages for help to the programming in several languages
- Passcode protected programming

Programming by PC: SlimSET

Software for programing (Windows environment) allowing:

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.

Dimensions



FEATURES

- Power supply:** 20 to 250 Vac and 20 to 250 Vdc
- Consumption:** 4 W max. 7 VA max. TPIvJ4
2.5 W max. 5 VA max. TPIvJ
- Dielectric withstanding:** 3.0 kV-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:

- Low Voltage Directive 2014/35/UE EN 61010-1
- Directive 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

Coding

Type

TPIvJ
TPIvJ4

Outputs:

- A** analog I/U isolated
- R** 2 change-over relays
- N** digital RS 485
- F** fast version
- T24** logic input 24V $\pm 30\%$
- T5** logic input 5V TTL

Available versions:

TPIv J/J4 (F)	A	AR	ARN	N
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(consult with us for different configurations)

Order example: For a converter with gauge bridge input 350 Ω + 1 analog output + 2 relays request the reference: **TPIvJ AR**

- Standard programming cable USB type A male to μ USB type B male: reference **C1- μ USB**

Features

Measure input

- 4 bidirectional voltage calibers:
 $\pm 10\text{mV}$, $\pm 20\text{mV}$, $\pm 50\text{mV}$, $\pm 100\text{mV}$
 - Accuracy 0.05% of the measure range (MR) at 23°C
 - Thermal drift $< 150\text{ppm}$ of the MR/ $^\circ\text{C}$
 - Measurable overrange from -5% to +5% of the MR
 - Input impedance $> 100\text{M}\Omega$
 - Common mode rejection rate: 120dB
 - Serial mode rejection rate: 70dB
 - (in standard version, response time 200ms max.)
 - Zero drift compensation
 - Enlarging effect
 - Function special linearization in 20 points

Supply of the 4 or 6-wire bridge:

- Programmable $5\text{V} \pm 0.1\%$ or $10\text{V} \pm 0.1\%$
- For a bridge of 350Ω , 30mA max. (TPIVJ)
- For 4 bridges of 350Ω , 120mA max. (TPIVJ4)
- Line resistance: 20Ω max.

Logic input (option T.O.R.)

- 1 isolated logic input
 - $24\text{Vdc} \pm 30\%$ (option T24), or 5V TTL (option T5)
 - Programmable function:
 display hold,
 moving of the decimal point,
 function tare,
 0 reset of the min. max.

Outputs

Code	Types of OUTPUTS	Features
A	1 analog Current active/passive	Current: Direct or reversed 0-20mA Load impedance $\leq L_r 600\Omega$ Voltage: Direct or reversed 0-10V Load impedance $\geq L_r 5\text{K}\Omega$
	Voltage	Accuracy: 0.1% in relation to the display Ripple: 0.2%
R	2 change-over relays	2 setpoints per relay configurable over the whole measure range. Hysteresis programmable from 0 to 100%. Time delay programmable from 0 to 999.9 sec. (8A/250 VAC on resistive load)
N	Digital data link RS485	Protocole Modbus/Jbus (EIA RS485) isolated.

Response time of the outputs:

(for a variation from 10 to 90% of the input signal)

Max. response time: 200ms in standard version (5ms if option F)

Add 10 ms for the response time on the relay outputs.

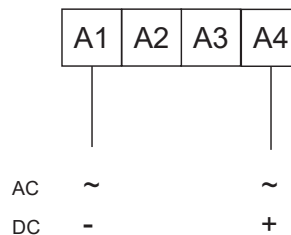
Galvanic isolation:

3.0kV-50Hz-1min. between supply, measure input, logic input, analog output, relay output 1, relay output 2, RS485.

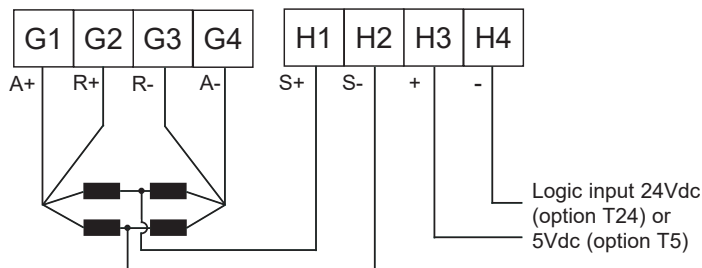
1kV-50Hz-1min. between analog output and RS485.

Connecting

Power supply



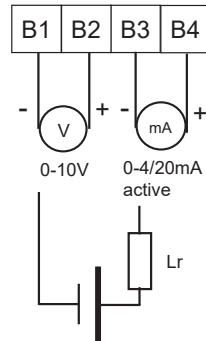
Inputs



For a connection in 4-wire connect the terminal G1 to the terminal G2, and the terminal G3 to the terminal G4.

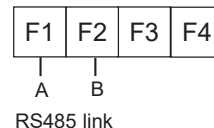
Outputs

Analog output (option A)



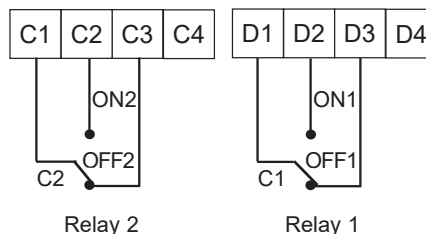
0-4/20mA passive
external source 30V max.

RS485 output (option N)



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

relay outputs (option R)



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