

REPEATER / POWER SUPPLY



- 1- or 2-channel version
- 3- / 5-port 3.75 kVAC galvanic isolation
- Loop supply > 17.1 V
- 20 programmable measurement ranges
- Universal supply by AC or DC



Application:

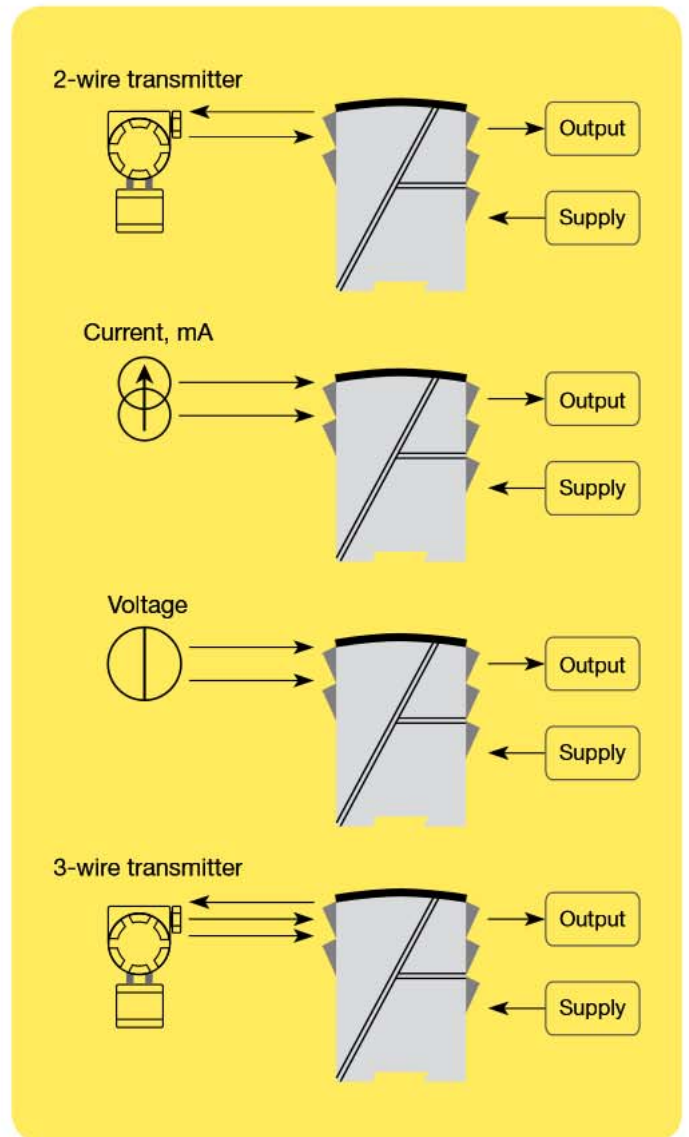
- Power supply and signal isolator for 2-wire transmitters.
- Signal isolator for analogue current / voltage signals.
- 1 : 1 or signal conversion of analogue current / voltage signals.

Technical characteristics:

- The 20 factory-calibrated measurement ranges in the 5104A can be selected by the internal DIP-switches without the need for recalibration. Special measurement ranges can be delivered.
- PR5104A is based on microprocessor technology for gain and offset. The analogue signal is transmitted at a response time of less than 25 ms.
- Inputs, outputs, and supply are floating and galvanically separated.
- The output can be connected either as an active current / voltage transmitter or as a 2-wire transmitter.

Mounting / installation:

- Mounted vertically or horizontally on a DIN rail. By way of the 2-channel version up to 84 channels per metre can be mounted.

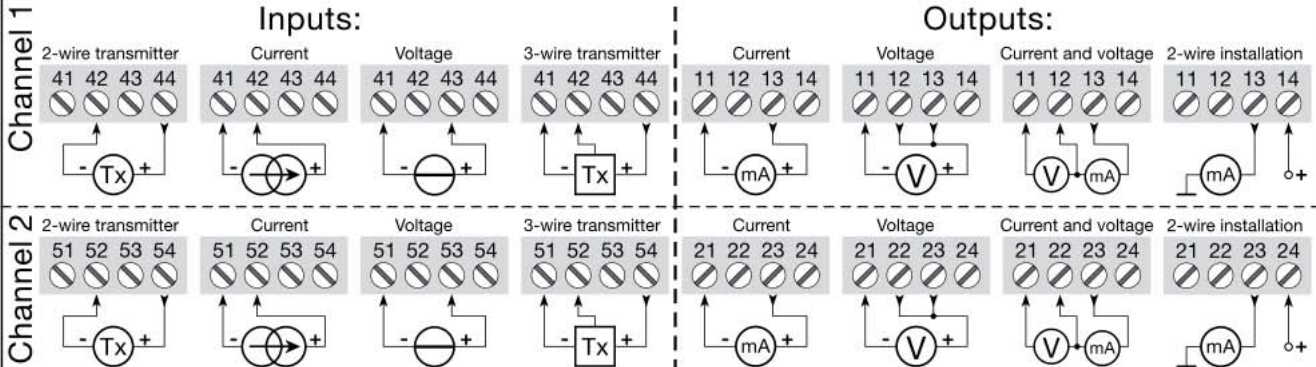
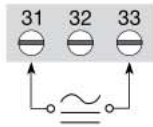


Order: 5104A

Type	Input	Output	Channels
5104A	0...20 mA : A	Special : 0	Single : A
	4...20 mA : B	0...20 mA : 1	Double : B
	0...10 V : E	4...20 mA : 2	
	2...10 V : F	0...1 V : 4	
	Special : X	0.2...1 V : 5	
		0...10 V : 6	
		2...10 V : 7	

Connections:

Supply:



Electrical specifications:

Specifications range:

-20°C to +60°C

Common specifications:

Supply voltage, universal 21.6...253 VAC
 50...60 Hz
 19.2...300 VDC
 Internal consumption ≤ 2 W (2 channels)
 Max. consumption ≤ 3 W (2 channels)
 Fuse 400 mA SB / 250 VAC
 Isolation voltage, test / operation 3.75 kVAC / 250 VAC
 Signal / noise ratio Min. 60 dB (0...100 kHz)
 Response time (0...90%, 100...10%).. < 25 ms
 Calibration temperature 20...28°C
 Accuracy, the greater of the general and basic values:

General values		
Input type	Absolute accuracy	Temperature coefficient
All	≤ ±0.1% of span	≤ ±0.01% of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	≤ ±16 µA	≤ ±1.6 µA/°C
Volt	≤ ±8 mV	≤ ±0.8 mV/°C

EMC immunity influence < ±0.5% of span
 Extended EMC immunity:
 NAMUR NE 21, A criterion, burst < ±1% of span

Auxiliary supply:

Loop supply (pin 44...42 and 54...52). 28...17.1 VDC/0...20 mA
 Max. wire size 1 x 2.5 mm² stranded wire
 Screw terminal torsion 0.5 Nm
 Relative humidity < 95% RH (non-cond.)
 Dimensions (HxWxD) 109 x 23.5 x 130 mm
 DIN rail type DIN 46277
 Protection degree IP20
 Weight 225 g

Current input:

Measurement range 0...20 mA
 Min. measurement range (span) 16 mA
 Max. offset 20% of max. value
 Input resistance Nom. 10 Ω + PTC 10 Ω

Voltage input:

Measurement range 0...10 VDC
 Min. measurement range (span) 8 VDC
 Max. offset 20% of max. value
 Input resistance > 2 MΩ

Current output and 2-wire 4...20 mA output:

Signal range (span) 0...20 mA
 Min. signal range (span) 16 mA
 Max. offset 20% of max. value
 Load (max.) 20 mA / 600 Ω / 12 VDC
 Load stability ≤ 0.01% of span / 100 Ω
 Current limit ≤ 28 mA
 Max. external loop supply 29 VDC
 Effect of external loop supply voltage change < 0.005% of span / V

Voltage output:

Signal range (span) 0...1 VDC / 0...10 VDC
 Min. signal range (span) 0.8 VDC / 8 VDC
 Max. offset 20% of max. value
 Load (min.) 500 kΩ

Marine approval:

Det Norske Veritas, Ships & Offshore... Stand. for Certific. No. 2.4

GOST R approval:

VNIIM, Cert. No. www.prelectronics.com

Observed authority requirements: Standard:

EMC 2004/108/EC EN 61326-1
 LVD 2006/95/EC EN 61010-1
 PELV/SELV IEC 364-4-41 and EN 60742
 UL, general safety UL 508

Of span = Of the presently selected range