

Ex repeater / power supply

5104B

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













Application

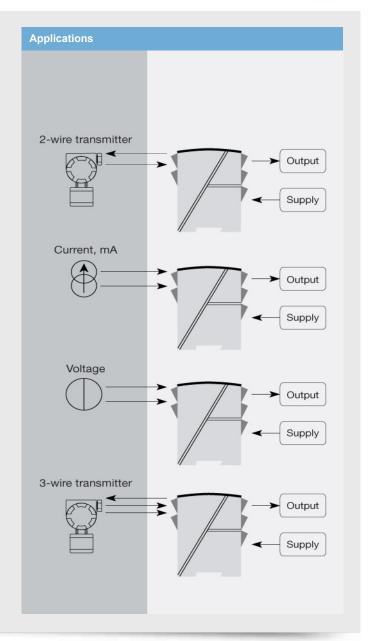
- · Supply voltage and safety barrier for 2-wire transmitters mounted in a hazardous area.
- · Safety barrier for analog current / voltage signals from a hazardous area.
- 1:1 or signal conversion of analog current / voltage signals.

Technical characteristics

- The 20 factory-calibrated measurement ranges in the 5104B can be selected by the internal DIP-switches without the need for recalibration. Special measurement ranges can be
- PR5104B is based on microprocessor technology for gain and offset. The analog 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 meter can be
- NB: 5104B is recommended as I.S. barrier for 5331D, 5333D, 5334B, 5343B, 6331B, 6333B, and 6334B.



Order:

Туре	Input		Output		Channe	els
5104B	020 mA	: A	Special	: 0	Single	: A
	420 mA	: B	020 mA	: 1	Double	: B
	010 V	: E	420 mA	: 2		
	210 V	: F	01 V	: 4		
	Special	: X	0.21 V	: 5		
	100		010 V	: 6		
			210 V	: 7		

Environmental Conditions

Operating temperature	-20°C to +60°C
Calibration temperature	2028°C
Relative humidity	< 95% RH (non-cond.)
Protection degree	IP20

Mechanical specifications

Dimensions (HxWxD)	109 x 23.5 x 130 mm
DIN rail type	DIN 46277
Weight approx	225 g
Wire size	1 x 2.5 mm ² stranded wire
Screw terminal torque	
Vibration	IEC 60068-2-6
213.2 Hz	±1 mm
13.2 100 Hz	+0.7 a

Common specifications

Su	pply
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Supply voltage, universal	21.6253 VAC. 5060 Hz or
117	19.2300 VDC
Fuse	400 mA SB / 250 VAC
Max. required power	≤ 3 W (2 channels)
Internal power dissipation	≤ 2 W (2 channels)

Isolation voltage Isolation voltage, test /

Auxiliary supplies

2-wire supply (pin 44...42 and 54...52)..... 28...17.1 VDC / 0...20 mA

Response time

Response time (0...90%, 100...10%)...... < 25 ms

Signal / noise ratio..... Min. 60 dB (0...100 kHz)

Input specifications

Common input specifications

Current input

Measurement range..... 0...20 mA Min. measurement range (span)...... 16 mA Input resistance...... Nom. 10 Ω + PTC 10 Ω

Voltage input

Measurement range	010 VDC
Min. measurement range (span)	8 VDC
Input resistance	> 2 MΩ

Output specifications

Current output

Signal range	020 mA
Min. signal range	16 mA
Load (@ current output)	≤ 600 Ω
Load stability	\leq 0.01% of span / 100 Ω
Current limit	≤ 28 mA

Passive 2-wire mA output

Effect of external 2-wire supply voltage variation...... < 0.005% of span / V

Voltage output

Signal range	01 VDC / 010 VDC
Min. signal range	0.8 VDC / 8 VDC
Load (@ voltage output)	≥ 500 kΩ

External loop supply...... 29 VDC of span..... = of the presently selected range

Observed authority requirements

EMC	2014/30/EU
LVD	2014/35/EU
FAC	TR-CU 020/2011

Approvals

ATEX 2014/34/EU	DEMKO 99ATEX126013, II (1)
	GD [EEx ia] IIC
UL	UL 913, UL 508
EAC Ex TR-CU 012/2011	RU C-DK.GB08.V.00410
DNV-GL Marine	Stand. f. Certific. No. 2.4