

HART transparent repeater

5106A

- 3- / 5-port 3.75 kVAC galvanic isolation
- Low response time
- -2-wire supply > 17 V
- 1- or 2-channel version
- Universal supply by AC or DC









Application

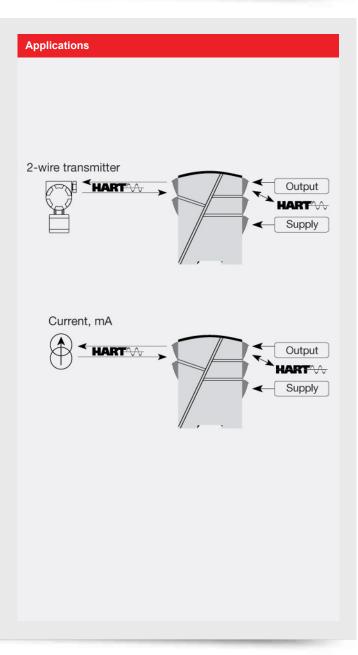
- Power supply and signal isolator with 2-way HART communication for 2-wire transmitters installed in the hazardous area.
- · Signal isolator with 2-way HART communication for supplied current transmitters installed in the hazardous area.
- Signal isolator with low response time on analog current signals.

Technical characteristics

- PR5106A primarily processes current signals of 4...20 mA.
- PR5106A is based on microprocessor technology for gain and offset. The analog signal is transmitted at a response time of less
- Inputs, outputs, and supply are floating and galvanically separated.
- · The output can be connected either as an active current transmitter or as a 2-wire transmitter.

Mounting / installation

• Mounted vertically or horizontally on a DIN rail. As the devices can be mounted without distance between neighboring units, up to 84 channels can be mounted per meter.



Order:

Туре	Input		Output		Chann	els
5106A	420 mA	: B	420 mA	: 2	Single	: A
			204 mA	: 9	Double	: B

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
Weight approx	65 g
Weight approx	245 g
DIN rail type	
Wire size	1 x 2.5 mm ² stranded wire
Screw terminal torque	0.5 Nm

Common specifications

Supply

Supply voltage, universal	21.6253 VAC, 5060 Hz o 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 /	
working	3.75 kVAC / 250 VAC
PELV/SELV	IEC 61140

Response time

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

Auxiliary supplies

Auxiliary Supplies	
2-wire supply (pin 4442	
and 5452)	2517 VDC / 020 mA
Signal / noise ratio	Min. 60 dB (0100 kHz)
Accuracy	Better than 0.1% of sel. range
Effect of supply voltage change	< ±10 µA
EMC immunity influence	< ±0.5% of span
Extended EMC immunity: NAMUR	
NE21. A criterion, burst	< +1% of span

Input specifications

Current input

Measurement range	420 mA
Min. measurement range (span)	16 mA
Input resistance: Supplied	
unit	Nom. 10 Ω

Input resistance: Non-supplied unit...... Rshunt = ∞, Vdrop < 4 V

Output specifications

Current output Signal range.....

Current output	
Signal range	420 mA
Min. signal range	16 mA
Load (@ current output)	≤ 600 Ω
Load stability	≤ 0.01% of span / 100 Ω
Current limit	≤ 28 mA
Passive 2-wire mA output	
Signal range	420 mA
Effect of external 2-wire	
supply voltage variation	< 0.005% of span / V
Max. external 2-wire supply	29 VDC
Output ripple	< 3 mVRMS on HART communication

= of the presently selected

range

Observed authority requirements

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

Approvals

UL us,	UL	508	E231911