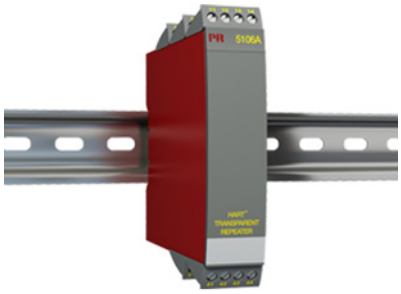
PERFORMANCE MADE SMARTER



HART transparent repeater

5106A

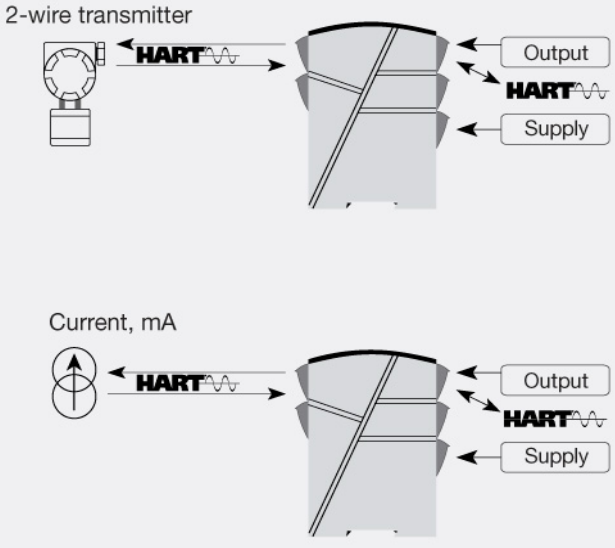
– 3- / 5-port 3.75 kVAC galvanic isolation
– Low response time
– 2-wire supply > 17 V
– 1- or 2-channel version
– Universal supply by AC or DC

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 than 25 ms.
- 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.

Applications



Order:

Type	Input	Output	Channels
5106A	4…20 mA : B	4…20 mA : 2 20…4 mA : 9	Single : A Double : B

Environmental Conditions

Operating temperature ..... -20°C to +60°C
Calibration temperature ..... 20...28°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 ..... DIN EN 60715/35 mm
Wire size ..... 0.13...2.08 mm^2 AWG 26...14 stranded wire
Screw terminal torque ..... 0.5 Nm

Common specifications

Supply

Supply voltage, universal ..... 21.6...253 VAC, 50...60 Hz or 19.2...300 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

2-wire supply (pin 44...42 and 54...52) ..... 25...17 VDC / 0...20 mA
Signal / noise ratio ..... Min. 60 dB (0...100 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 ..... 4...20 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 ..... 4…20 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 ..... 4...20 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 span ..... = of the presently selected range

Observed authority requirements

EMC 2014/30/EU
LVD 2014/35/EU
EAC ..... TR-CU 020/2011
EAC LVD ..... TR-CU 004/2011

Approvals

c UL us, UL 508 ..... E231911