

HART[®] TRANSPARENT REPEATER



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



Application:

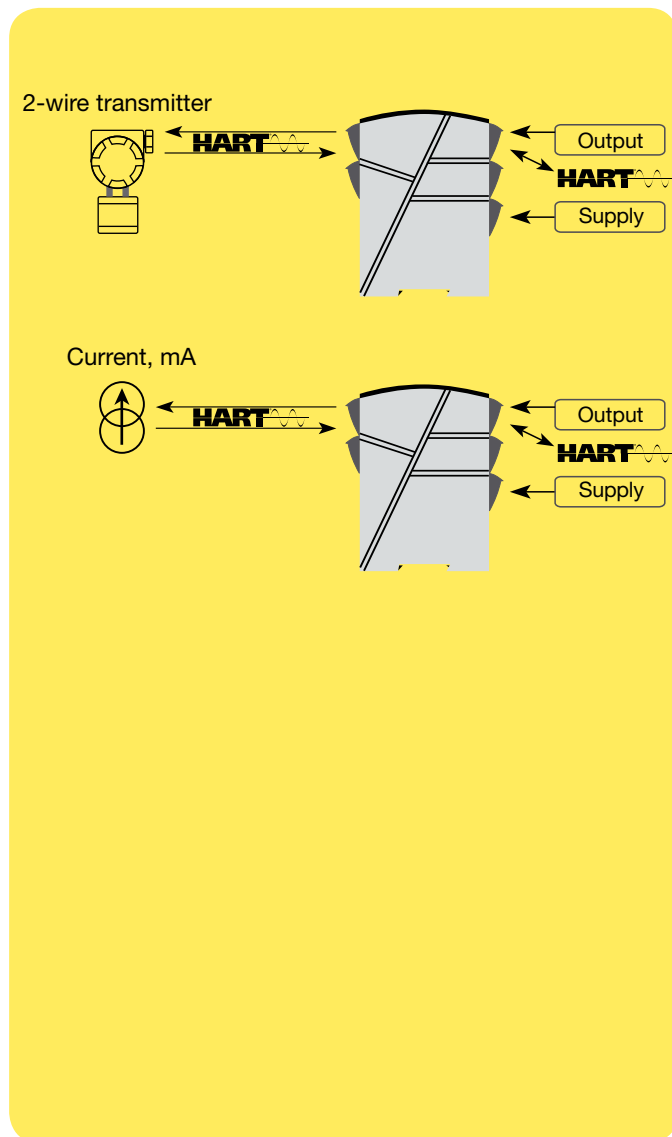
- Power supply and signal isolator with 2-way HART[®] communication for 2-wire transmitters.
- Signal isolator with 2-way HART[®] communication for supplied current transmitters.
- Signal isolator with low response time on analogue current signals.

Technical characteristics:

- PR5106A primarily processes current signals of 4...20 mA.
- PR5106A 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 transmitter or as a 2-wire transmitter.

Mounting / installation:

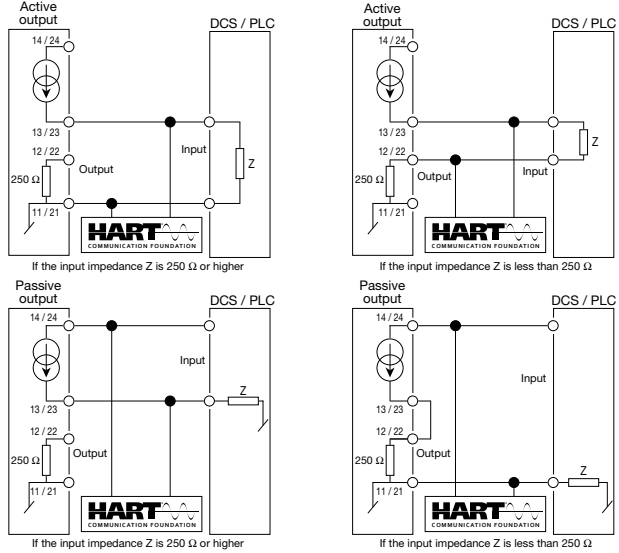
- Mounted vertically or horizontally on a DIN rail. As the modules can be mounted without distance between neighbouring units, up to 84 channels can be mounted per metre.



Order: 5106A

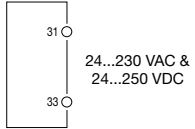
Type	Input	Output	Channels
5106A	4...20 mA : B	4...20 mA : 2 20...4 mA : 9	Single : A Double : B

Outputs:



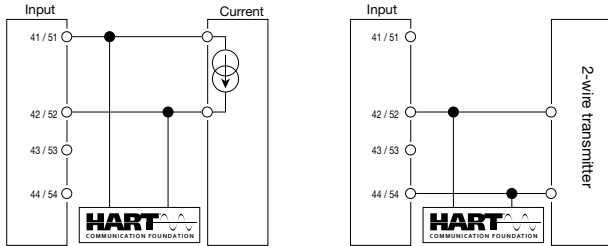
Connections:

Supply:



Connections are identical for channel 1 and channel 2

Inputs:



Electrical specifications:

Specifications range:

-20 to +60°C

Common specifications:

Supply voltage universal 21.6...253 VAC, 50...60 VZ
or 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
Effect of supply voltage
change (24...250 V)..... < ±10 µA
Accuracy, the greater of general and basic values:

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

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

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

Auxiliary supply:

2-wire supply
(pin 44...42 and 54...52)..... 25...17 VDC / 0...20 mA
Max. wire size..... 1 x 2.5 mm² stranded wire
Screw terminal torsion..... 0.5 Nm
Relative humidity..... < 95% R H (non-cond.)
Dimensions (HxWxD)..... 109 x 23.5 x 130 mm
DIN rail type..... DIN 46277
Protection degree..... IP20
Weight 246 g

Current input:

Measurement range 4...20 mA
Min. measurement range (span)..... 16 mA
Input resistance:
Supplied unit..... Nom. 10 Ω
Non-supplied unit..... Rshunt = ∞, Vdrop < 4 V

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

Signal range (span)..... 4...20 mA
Min. signal range (span) 16 mA
Load (max.)..... 20 mA / 600 Ω / 12 VDC
Load stability ≤ 0.01% of span / 100 Ω
Current limit..... ≤ 28 mA
Ripple on HART® communication < 3 mVRMS
Max. external 2-wire supply 29 VDC
Effect of external 2-wire supply
voltage change..... < 0.005% of span / V

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