

## HART® transparent driver

### 5107B

- 1- or 2-channel version
- 3- / 5-port 3.75 kVAC galvanic isolation
- < 1.3 V voltage drop on input
- 16 V driving voltage on Ex / I.S. output
- Universal supply by AC or DC



#### Application

- Safety barrier for current signals and 2-way HART® communication transmitted to I/P converters mounted in hazardous area.
- Safety barrier for 2-way HART® communication and analog current signals transmitted to hazardous area.
- Signal isolator with low response time on analog current signals transmitted to hazardous area.

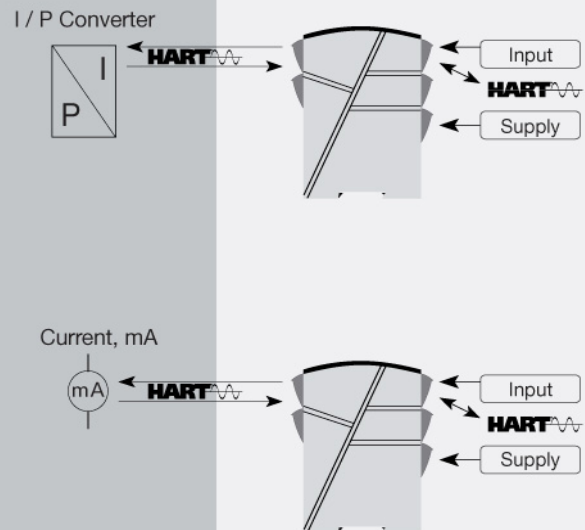
#### Technical characteristics

- PR's HART® transparent driver primarily processes current signals of 4...20 mA.
- PR5107B 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.

#### 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.

#### Connection



## Environmental Conditions

Specifications range.....	-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.....	260 g
DIN rail type.....	DIN 46277
Wire size.....	1 x 2.5 mm <sup>2</sup> stranded wire
Screw terminal torque.....	0.5 Nm

## Common specifications

Supply voltage, universal.....	21.6...253 VAC, 50...60 Hz or 19.2...300 VDC
Fuse.....	400 mA SB / 250 VAC
Max. power consumption.....	≤ 2 W (2 channels)
Internal consumption.....	≤ 2 W (2 channels)
Isolation voltage, test / working.....	3.75 kVAC / 250 VAC
Signal / noise ratio.....	Min. 60 dB (0...100 kHz)
Response time (0...90%, 100...10%).....	< 25 ms
Long-term stability, better than.....	±0.1% of span / Year
Effect of supply voltage change.....	< ±10 µA
EMC immunity influence.....	< ±0.5% of span
Extended EMC immunity: NAMUR NE 21, A criterion, burst.....	< ±1% of span

## Input specifications

Current input: Measurement range.....	4...20 mA
Min. measurement range (span), current input.....	16 mA
Input resistance: Supplied unit.....	10 Ω + PTC, Vdrop < 1.3 V
Input resistance: Non-supplied unit.....	Rshunt = ∞, Vdrop < 3.5 V

## Output specifications

Current output: Signal range.....	4...20 mA
Min. signal range.....	16 mA
Load (max.).....	20 mA/800 Ω/16 VDC
Load stability, current output.....	≤0.01% of span/100 Ω
Current limit.....	≤ 28 mA
*of span.....	= Of the presently selected range

## Approvals

EMC.....	EN 61326-1
LVD.....	EN 61010-1
PELV/SELV.....	IEC 364-4-41 and EN 60742
ATEX.....	DEMKO 01ATEX127484
UL.....	UL 913, UL 508
GOST R.....	Yes
GOST Ex.....	Yes