

PRetrans 5105B Ex-ISOLATED DRIVER



- 1- or 2-channel version
- 3- / 5-port 3.75 kVAC galvanic isolation
- Driver for Ex area
- 20 programmable measurement ranges
- Universal supply by AC or DC



Application:

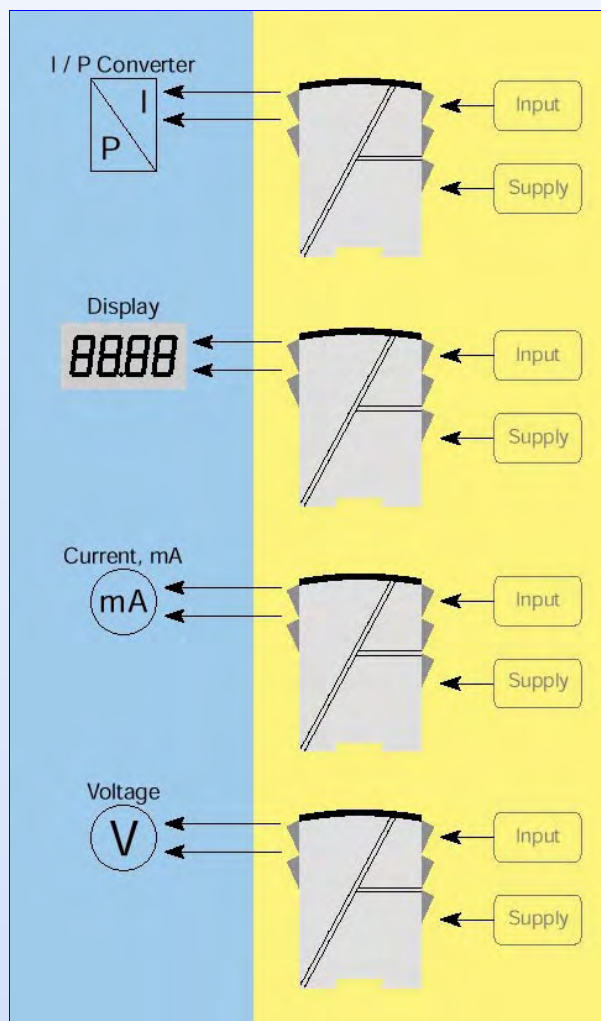
- Safety barrier for current signals transmitted to I/P converters and displays mounted in hazardous area.
- Safety barrier for analogue current / voltage signals transmitted to hazardous area.
- 1 : 1 or signal conversion of analogue current / voltage signals.

Technical characteristics:

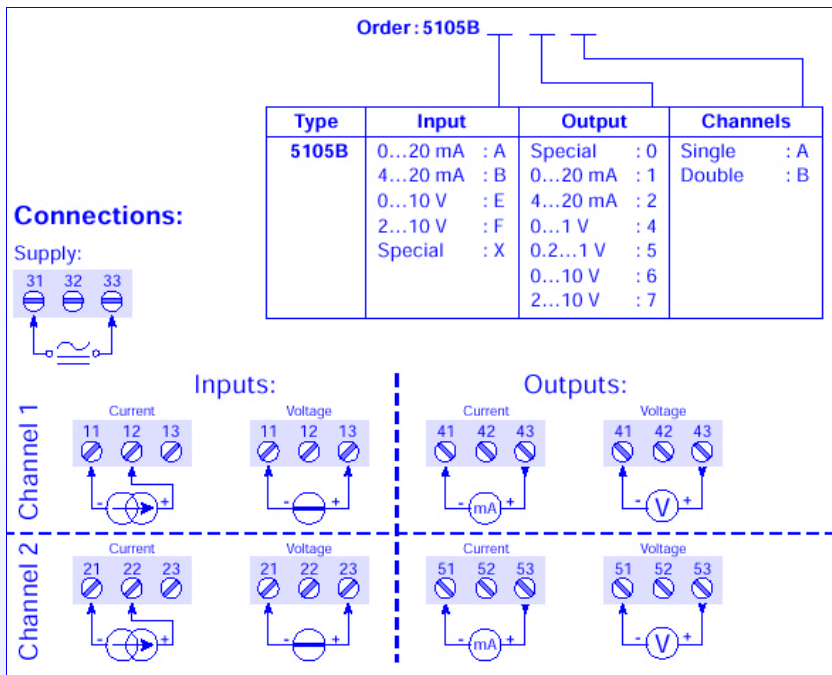
- The 20 factory-calibrated measurement ranges in the 5105B can be selected by the internal dipswitches without the need for a recalibration. Special measurement ranges can be delivered.
- PR5105B is based on microprocessor technology for gain and offset. The analogue signal is transmitted at a response time of less than 25 ms.
- Inputs, outputs, and supply are floating and galvanically separated.

Mounting / installation:

- Mounted vertically or horizontally on a DIN rail. By way of the 2-channel version up to 84 channels can be mounted per metre.



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Electrical specifications:

Specifications range:

(@: -20°C to +60°C)

Common specifications:

- Supply voltage universal 24...230 VAC ±10%
- 50...60 Hz
- 24...250 VDC ±20%
- Internal consumption ≤2 W (2 channels)
- Max. consumption..... ≤2 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
- Accuracy, the greater of the general and basic values:

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

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	≤ ±16 µA	≤ ±1.6 µA/°C
Volt	≤ ±8 mV	≤ ±0.8 mV/°C

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

- Max. wire size..... 1 x 2.5 mm 2
- Screw terminal torsion 0.5 Nm
- Relative humidity..... < 95% RH (non-cond.)
- Dimensions (HxWxD)..... 109 x 23.5 x 130 mm
- DIN rail type..... DIN 46277
- Tightness (enclosure / terminals)..... IP50 / IP20
- Weight 225 g

Current input:

- Measurement range 0...20 mA
- Min. measurement range (span)..... 16 mA
- Max. offset..... 20% of max. value
- Input resistance..... Nom. 10 Ω+ PTC 10 .

Voltage input:

- Measurement range 0...10 VDC
- Min. measurement range (span)..... 8 VDC
- Max. offset..... 20% of max. value
- Input resistance..... > 2 MΩ

Current output:

- Signal range (span)..... 0...20 mA
- Min. signal range (span) 16 mA
- Max. offset..... 20% of max. value
- Load (max.)..... 20 mA / 770 Ω/ 15.4 VDC
- Load stability ≤0.01% of span / 100 .
- Current limit..... ≤28 mA

Voltage output:

- Signal range (span)..... 0...1 VDC / 0...10 VDC
- Min. signal range (span) 0.8 VDC / 8 VDC
- Max. offset..... 20% of max. value
- Load (min.)..... 500 kΩ

Ex data:

- U m : 250 V
- U o : 28 VDC
- I o : 93.0 mADC
- P o : 0.65 W
- L o : 3 mH
- C o : 0.08 µF

EEx approval CENELEC:

- DEMKO 99 ATEX 126014
- ATEX 0539 II (1) G
- [EEx ia] IIC
- Applicable in..... Zone 0, 1, or 2

Observed authority requirements: Standard:

- EMC 89/336/EEC, Emission..... EN 50 081-1, EN 50 081-2
- Immunity..... EN 50 082-2, EN 50 082-1
- Emission and immunity EN 61 326
- LVD 73/23/EEC..... EN 61 010-1
- PELV/SELV IEC 364-4-41
- and EN 60 742
- ATEX 94/9/EC..... EN 50 014 and EN 50 020

Of span = Of the presently selected range



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