

# PULSE ISOLATOR



- 2 channels - 2 or 4 outputs
- Dual output
- 5-port 3.75 kVAC galvanic isolation
- Cable error detection
- Universal AC or DC supply



### Application:

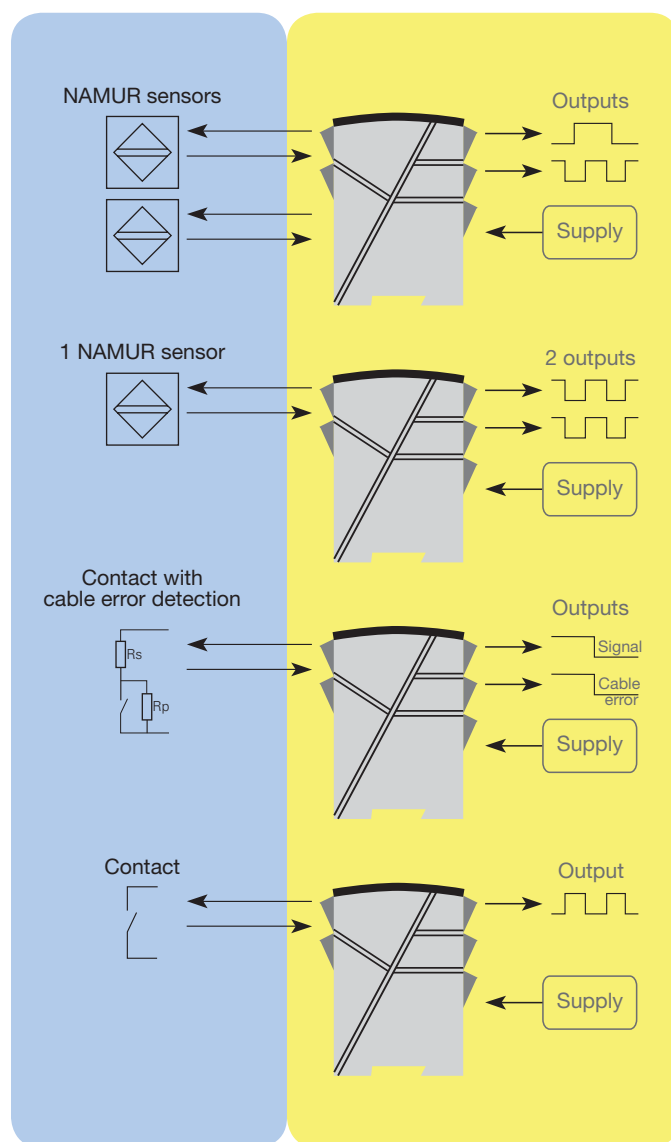
- Pulse isolator with safety barrier for the supply of NAMUR sensors installed in the hazardous area.
- Pulse isolator with safety barrier for the detection of mechanical contacts installed in the hazardous area.
- One input signal can be used on two separate outputs.
- A cable error alarm can be detected on a separate output.

### Technical characteristics:

- PR5202B1 and 5202B2 have relays with change-over contacts or open NPN collectors available in the safe area.
- PR5202B4 has 4 SPST relays, which are activated simultaneously two and two, available in the safe area. Each relay can be programmed to the function N.O. or N.C.
- Inputs, outputs and supply are floating and galvanically separated.
- 5202B is designed according to strict safety requirements and is thus suitable for application in SIL 2 installations.

### Mounting / installation:

- Mounted vertically or horizontally on a DIN rail. Up to 84 channels per metre can be mounted.



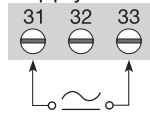
Order: 5202B

**Connections:**

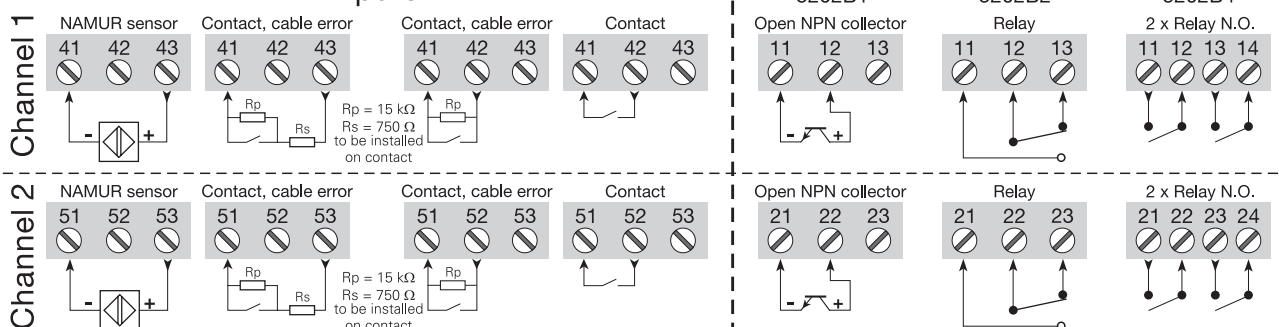
All connection options are shown in the user manual.

Type	Output
5202B	Open collector NPN : 1
	2 x 1 Relay : 2
	2 x 2 Relays : 4

**Supply:**



**Inputs:**



**Outputs:**

**Electrical specifications:**

**Specifications range:**

-20 to +60°C

**Common specifications:**

- Supply voltage, universal ..... 21.6...253 VAC, 50...60 Hz  
19.2...300 VDC
- Internal consumption, 5202B1 and 5202B2 ..... ≤ 1.5 W (2 channels)
- Max. consumption, 5202B1 and 5202B2 ..... ≤ 1.5 W (2 channels)
- Internal consumption, 5202B4 ..... ≤ 2.0 W (2 channels)
- Max. consumption, 5202B4 ..... ≤ 2.0 W (2 channels)
- Fuse ..... 400 mA SB / 250 VAC
- Isolation voltage, test / operation ..... 3.75 kVAC / 250 VAC
- Calibration temperature ..... 20...28°C

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

- Auxiliary voltage:
- NAMUR supply ..... 8 VDC / 8 mA
- Max. wire size ..... 1 x 2.5 mm<sup>2</sup> stranded wire
- 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
- Protection degree ..... IP20
- Weight ..... 230 g

**Input:**

- Sensor types:
- NAMUR acc. to ..... EN 60947-5-6
- Mechanical contact
- Frequency range ..... 0...5 kHz
- Pulse length ..... > 0.1 ms
- Input resistance ..... 1 kΩ
- Trig level, signal ..... < 1.2 mA, > 2.1 mA
- Trig level, cable error ..... < 0.1 mA, > 6.5 mA

**Outputs:**

**Relay outputs:**

- Max. frequency ..... 20 Hz
- Max. voltage ..... 250 VRMS
- Max. current ..... 2 A / AC
- Max. AC power ..... 100 VA
- Max. load at 24 VDC ..... 1 A

**Open NPN collector outputs:**

- Max. frequency ..... 5 kHz
- Pulse length ..... > 0.1 ms
- Load, max. current / voltage ..... 80 mA / 30 VDC
- Voltage drop at 25 mA / 80 mA ..... < 0.75 VDC / < 2.5 VDC

**EEx / I.S. approval:**

- DEMKO 99ATEX127186 ..... II (1) GD  
[EEx ia] IIC
- Applicable for zone ..... 0, 1, 2, 20, 21 or 22

**Ex / I.S. data, ATEX:**

- Terminal 41...43, (51...53)
- U<sub>m</sub> ..... : 250 V
- U<sub>o</sub> ..... : 10.6 VDC
- I<sub>o</sub> ..... : 13.8 mADC
- P<sub>o</sub> ..... : 0.038 W
- L<sub>o</sub> ..... : 160 mH
- C<sub>o</sub> ..... : 1.9 μF
- UL ..... IS, Cl. I, Div. 1, Gr. A, B, C, D  
IS, Cl. I, zone 0 / 1, Gr. IIC  
IS, Cl. II, Div. 1, Gr. E, F, G
- UL Control Drawing No. .... 5202QU01

**GOST R approval:**

- VNIIFTRI, Cert. No. .... See homepage

**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
- ATEX 94/9/EC ..... EN 50014, EN 50020 and  
EN 50281-1-1
- UL ..... UL 913, UL 508