

Pulse isolator

5202B

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



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 provides the required failure data (SFF and PFDAVG) for SIL 2 applications as per IEC 61508 / IEC 61511.

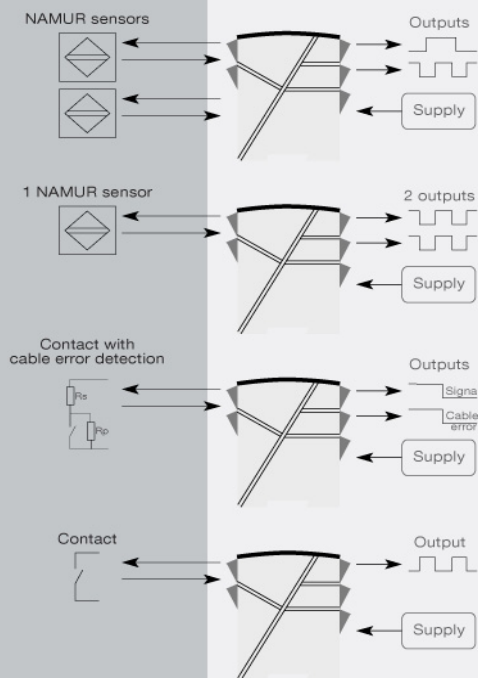
Mounting / installation

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

Note

- Not suitable for new installations requiring certification to the latest ATEX standards - see ATEX certificate DEMKO 99ATEX127186 and EU Declaration of Conformity for details.

Applications



Order:

Type	Output
5202B	Open collector NPN : 1
	2x1 relay : 2
	2x2 relays : 4

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.....	230 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.....	≤ 1.5 W (2 channels), 5202B1 and 5202B2
Max. required power.....	≤ 2.0 W (2 channels), 5202B4
Internal power dissipation.....	≤ 1.5 W (2 channels), 5202B1 and 5202B2
Internal power dissipation.....	≤ 2.0 W (2 channels), 5202B4

Isolation voltage

Isolation voltage, test / working.....	3.75 kVAC / 250 VAC
PELV/SELV.....	IEC 61140

Auxiliary supplies

NAMUR supply.....	8 VDC / 8 mA
EMC immunity influence.....	< ±0.5%
Extended EMC immunity: NAMUR NE21, A criterion, burst.....	< ±1%

Input specifications

Sensor types.....	NAMUR according 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 fault.....	< 0.1 mA, > 6.5 mA

Output specifications**Relay output**

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

NPN output

Max. switching frequency.....	5 kHz
Min. pulse length.....	> 0.1 ms
Max. load, current / voltage.....	80 mA / 30 VDC
Voltage drop at 25 mA / 80 mA.....	< 0.75 VDC / < 2.5 VDC

Observed authority requirements

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

Approvals

ATEX.....	DEMKO 99ATEX127186, II (1) GD [EEEx ia] IIC
c UL us, UL 913.....	E233311
EAC Ex.....	EAEU KZ 7500361.01.01.08756
SIL.....	Hardware assessed for use in SIL applications