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

Applications

- 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 therefore suitable for application in SIL 2 installations.

Mounting / installation

- Mounted vertically or horizontally on a DIN rail. Up to 84 channels per meter can be mounted.
### 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
- **Wire size**: 1 x 2.5 mm² 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. required power, 5202B1 and 5202B2** ≤ 2.0 W
- **Max. required power, 5202B4**: ≤ 2.0 W
- **Internal power dissipation, 5202B1 and 5202B2**: ≤ 1.5 W
- **Internal power dissipation, 5202B4**: ≤ 2.0 W
- **Isolation voltage**, test / working**: 3.75 kVAC / 250 VAC
- **PELV/SELV**: IEC 61140
- **NAMUR supply**: 8 VDC / 8 mA
- **EMC immunity influence**: < ±0.5%
- **Extended EMC immunity, NAMUR NE 21, 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
- **Min. pulse length**: > 0.1 mA, > 2.1 mA
- **Max. switching frequency**: 5 kHz
- **Max. current / voltage**: > 0.1 mA, > 6.5 mA
- **Internal power dissipation, 5202B1 and 5202B2**: ≤ 1.5 W
- **Internal power dissipation, 5202B4**: ≤ 2.0 W

### 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 outputs**: 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 2014/34/EU**: DEMKO 99ATEX127186, II (1) GD [EEx ia] IIC
- **UL**: UL 913, UL 508
- **EAC Ex TR-CU 012/2011**: RU C-DK.GB08.V.00410