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ISOLATED TRANSDUCER OF DC CURRENT OR VOLTAGE

FOR RAILWAY APPLICATIONS

- **PX24/R** 4-20mA loop-powered
- **PXN/R** auxiliary power supply

- measures and separates input DC current or voltage
- allows bipolar input and output signal
- rated impuls voltage 8kV
- input, output and supply circuits are isolated ($5kV_{RMS}$ tested)
- designed for DIN 35 rail mounting
- conversion accuracy $< 0.1\%$
- time constant typ.1ms, for order up to 300ms

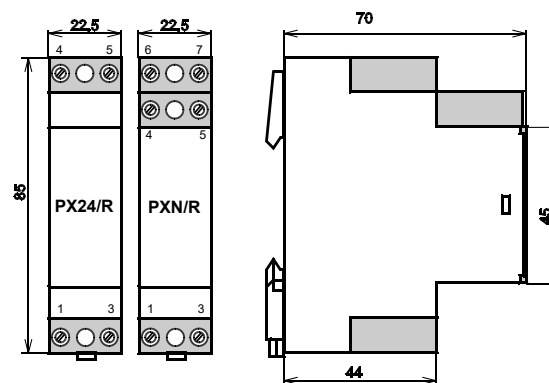
The module has been designed to convert DC current ($\pm 50\mu A \dots \pm 10A$) or voltage ($\pm 10mV \dots \pm 1500V$) from shunt resistors and sensors into a series of unified ranges (0..10V, 0..20mA, 4..20mA, 0..± 20mA, 0..± 10V). The converter output-to-input response is linear. The converter is particularly well-suited for heavy electromagnetic interference environment operation and features input-to-output isolation.



Electrical specifications:

- | | |
|--|--|
| - operating temperature range: | OT4 (-40...+ 70°C) |
| - storage temperature:: | -40...+ 80°C |
| - supply voltage: | PX24/R: 24V DC (12..30V DC)
PXN/R: 16-300VDC 90-250VAC
for order: 20 – 60VAC |
| - supply without interruption: | class S1 art. 5.2.4 |
| - consumption: | max. 1,5VA |
| - input signal: | voltage from ±10mV to ±1500V
current from ±50uA to ±10A |
| - output signal: | PX24/R: 4..20mA Loop-powered
PXN/R: 0..20mA, 4..20mA, 0..10V
0..±20mA, 0..±10V |
| - output voltage amplitude: | min. 15V |
| - voltage output load: | max. 10mA |
| - input resistance of voltage input: | typ. 100kohm / V |
| - voltage drop of current input: | $< 0,54V$ |
| - output current limit: | typ. 30mA (electronic fuse) |
| - measurement error: | $< 0,1\%$ |
| - linearity error: | $< 0,1\%$ |
| - temperature induced error: | $< 50ppm / ^\circ C$ |
| - time constant: | 1ms , for order up to 300ms |
| - enclosure (casing / terminal board): | IP40 / IP20 |
| - weight: | 90g |
| - working environment: | pollution level PD1,PD2 |
| - max.working voltage across isolation | isolation level: |
| overvoltage category installation | basic reinforced |
| OVI | up 1000V _{RMS} up 1000V _{RMS} |
| OVII | up 1000V _{RMS} up 600V _{RMS} |
| OVIII | up 1000V _{RMS} up 300V _{RMS} |
| -clearances and creepage distances | |
| input / output + supply: | min. 8mm |
| output / supply: | min. 6,5mm |
| -insulation test voltage U_a : | |
| input / output + supply: | 5kV _{RMS} |
| output / supply: | 4kV _{RMS} |
| -rated impuls voltage U_{NI} : | 8kV |

Converter dimensions:



Terminal designation:

- 1,3...input signal (3 is +)
- 4,5...output signal (5 is +)
- 6,7...auxiliary power supply without polarity

Type tests:

ČSN EN 50155 ed.5:2022

ČSN EN 50121-3-2 ed.4:2017+A1:2019

ČSN EN 50124-1

ČSN EN 61373 ed.2

ČSN EN 45545-2+A1

Electronic equipment for rail vehicles

Electromagnetic compatibility

Coordination of insulation

Impact and vibration test (Category 1, Class B)

Fire protection meets the set of requirements for monitored products according to Table 2

- the printed circuit board meets the set of R24 requirements
- the box meets the R24 and R26 requirements

Connections:

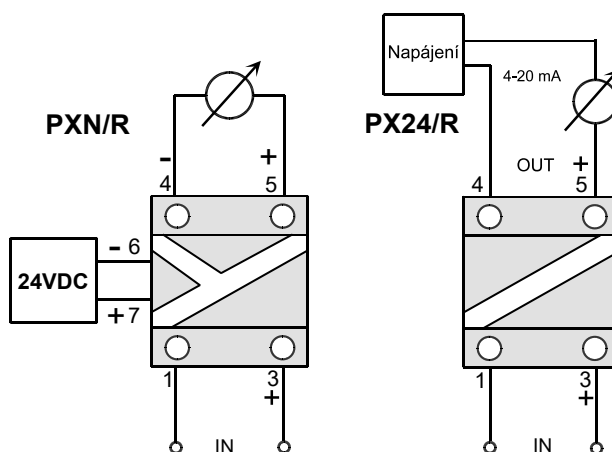
The terminals accept wires with 2,5mm². We recommend using a cable with a minimal cross 0,5mm². In the interfering environments use shielded or twisted cable.

Ordering instructions:

Your order should include:

- module type
- quantity
- input and output signal
- time response (if it is different from 1ms)

Application variants:



Likvidaci po ukončení životnosti provést odděleným sběrem.
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