The Art of Measuring.

Knick

Passive Standard Signal Isolators
with Functional Safety up to SIL 3

ProLine P 22400

ProLine P 22400

Functional Safety And Maximum Availability Can Go Together

Passive isolators with a technological advantage: fewer parts mean rare failures.

For measurement and safety reasons, analog signals are routinely isolated in industrial facilities.

The requirements on plant and safety-related circuits are continuously increasing, for instance because of a growing awareness of occupational safety. Thereby, the technical requirements on components are also being raised. However, higher functional safety is often bought by more effort and at the expense of availability. This does not have to be the case, as proven by the new ProLine P 22400 passive isolator for standard signals.

Its operating principle enables the implementation of a product that combines high functional safety with high availability in a unique way – a balancing act that would otherwise be hard to achieve.

SIL 3 even in single-channel structure

ProLine P 22400's safety functionality is the highly precise, linear transmission of 4 ... 20 mA signals.

A high level of functional safety can be achieved even in single-channel structure and without diagnostics. For instance, sensors and actuators in safety circuits can be directly connected, requiring no elaborate evaluation equipment for redundant structures. At the same time, the device has a low total failure rate and provides high availability.

After all, what good is a safety device that will keep turning off (switch to a safe state) and thereby regularly close down the facility it is meant to monitor?

ProLine P 22400 is safe and highly available.

ProLine P 22400 – at one glance

- Functional safety up to SIL 3 according to EN 61508, certified by an accredited authority
- MTBF: 965 years
- Low transmission error of 0.08% full scale
- High isolation including protection against electric shocks through reinforced insulation up to 600 V AC/DC
- Test voltage: 5.4 kV AC
- Minimal losses and reduced installation efforts thanks to loop-powered operation
- Robust design
  - Mechanically stable, approved by an independent testing lab, suitable for marine applications
  - Ambient temperature range during operation: –40 ... +85°C
  - Resistant against electromagnetic interferences, meeting stringent SIL requirements

www.knick-international.com/proline

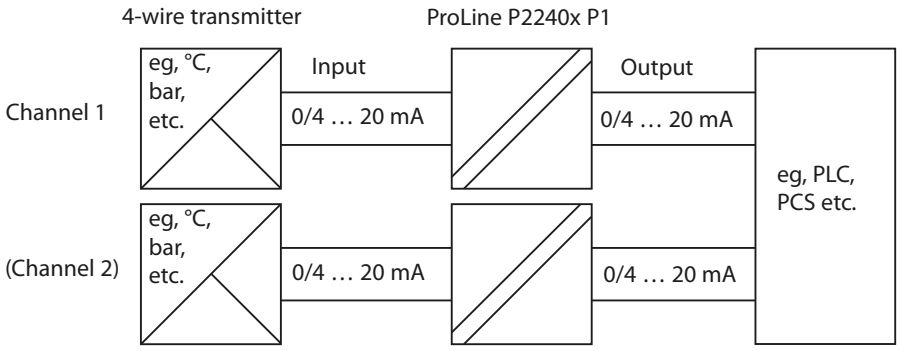
Loop-Powered Isolators for Standard Signals

5 Year Warranty!

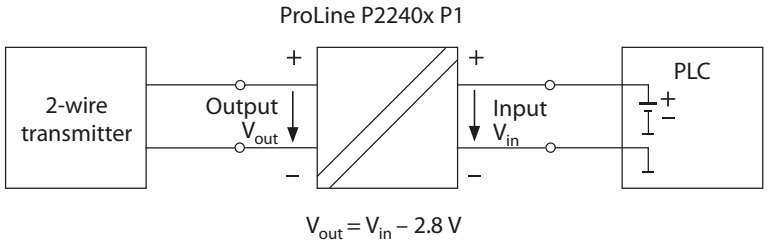
SIL 3 IEC 61508

Typical Wiring

Electrical isolation (1 or 2 channels)



Operation as repeater power supply (1 or 2 channels)



$V_{out} = V_{in} - 2.8\ V$

Ex, UL and DNV GL pending

Knick

Interface Technology
Indicators
Process Analytics
Portables
Laboratory
Sensors
Fittings

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