P17GX2  2 Channel 4-20mA self powered loop isolator

- Simple to install and commission
- No power supply needed
- Avoids current loop errors
- Ultra slim, only 12.4mm wide.

One of the most common causes of difficulty with 4-20mA systems is to do with current loop errors, caused by commoned -ve or +ve terminals.

Some devices, such as PLCs, can accept several 4-20mA inputs, and it is not unusual to find that all -ve terminals are connected to the same point.

Because 4-20mA is a current signal, it can only be properly shared with several devices by connecting them in series, but the common -ve connections in PLCs and other similar devices can upset a series loop. An isolator or two can solve this problem.

As an example, this PLC and data logger both need to receive 4-20mA signals from a temperature transmitter and a humidity transmitter. It is easy enough getting the 2 signals to the PLC, but how do you connect the datalogger also?

The solution to our connection problem is to wire input 1 of both devices in series, so that they share this current.

Input 2 of both devices cannot also be wired in series, because there is only one common connection, so we use a P17G to create a copy of Current 2, which we connect directly to input 2 of the datalogger.

Note that we cannot just connect our inputs in parallel because the input resistances of the PLC are different to the Datalogger, so currents would not be equally shared.

Ordering Code:  P17GX2

Specifications

- Conversion error: ± 0.2% of the range
- Thermal error: ± (0.05% of range /10°C)
- Load error: ± (0.15% range/100 Ohms)
- Conversion bandwidth: 70 Hz
- Isolation: 500V DC - 50Hz 1 minute
- Adjustments: No adjustment available
- Warmup time: not required
- Operating temperature: -20 to 55°C
- Storage temperature: -25 to +85°C
- Humidity: <95% non condensing
- Operating position: any
- Sustained overload capacity: 40mA
- Sealing: IP50 (housing)
- IP20 (electrical)
- Dimensions: 76.9 x 99.1 x 12.4 mm
- Weight: 160 g
- Mounting: DIN rail acc. to EN 60715
- Analog input: 2 x 4...20 mA
- Input voltage drop: I_in x R_load x 1.25
- Output resolution: 0.005 mA
- Output load (Rload): < 500 Ohms
- Installation category: III
- Pollution grade: 2

ISO9001:2008