

Loop-powered isolator

6185

- 1-, 2- and 4-channel galvanic isolation
- Slimline channel width of less than 6 mm
- No separate supply necessary
- Low response time
- High noise suppression



Application

- Galvanic separation of analog current signals.
- Elimination of ground loops and measurement of floating signals.
- A competitive choice in terms of both price and technology for galvanic isolation of current signals to SCADA systems or PLC equipment.
- Especially useful in applications necessitating an unproblematic transmission of current signals according to NAMUR (sensor error detection).

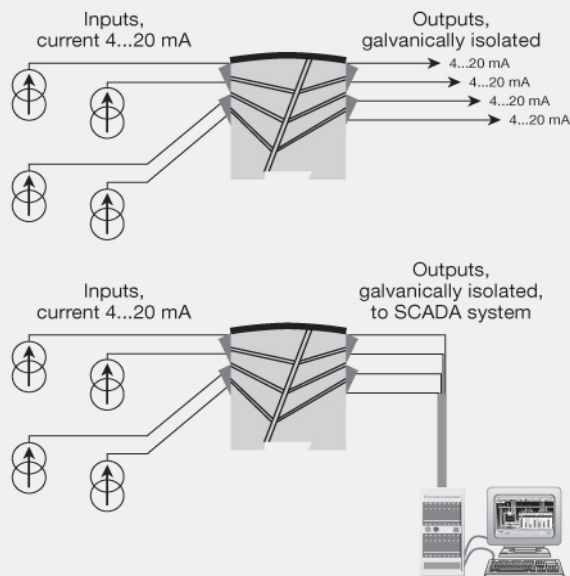
Technical characteristics

- PR 6185 is powered by the measured signal and loads the loop with max. 1.8 VDC.
- The input is protected against overvoltage and polarity error.
- The drop voltage for each channel can be calculated according to the following expression: $V_{drop} = 1.8 + (I_{out} \cdot R_{load})$.
- The output is voltage-limited to 15 VDC.
- Inputs and outputs are floating and galvanically separated.

Mounting / installation

- Mounted vertically or horizontally on a DIN rail. As the devices can be mounted without distance between neighboring units, up to 168 channels can be mounted per meter.

Applications



Order:

| Type | Channels |
|------|---|
| 6185 | 1 channel : A 2 channels : B 4 channels : D |

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 104 mm |
| Weight approx..... | 155 / 180 / 230 g (1 / 2 / 4 channels) |
| DIN rail type..... | DIN 46277 |
| Wire size..... | 1 x 2.5 mm ² stranded wire |
| Screw terminal torque..... | 0.5 Nm |

Common specifications**Supply**

| | |
|-------------------------------------|-------|
| Power dissipation, per channel..... | 40 mW |
|-------------------------------------|-------|

Isolation voltage

| | |
|-------------------|--------|
| Test voltage..... | 2 kVAC |
|-------------------|--------|

Response time

| | |
|---|---|
| Response time (0...90%, 100...10%)..... | < 4 ms |
| Voltage drop..... | < 1.8 VDC, min. |
| Voltage drop..... | 1.8 V + (I _{out} * R _{load}), max. |
| Signal / noise ratio..... | Min. 60 dB (0...100 kHz) |
| Accuracy..... | Better than 0.1% of sel. range |
| EMC immunity influence..... | < ±0.5% of span |

Input specifications**Current input**

| | |
|------------------------|--------------------------------------|
| Measurement range..... | 0...23 mA |
| Input resistance..... | ≈ 90 Ω + R _{load} (@ 20 mA) |

Output specifications**Current output**

| | |
|------------------------------|-----------------------------------|
| Signal range..... | 0...23 mA |
| Min. signal range..... | 1:1 |
| Load (@ current output)..... | ≤ 600 Ω |
| Load stability..... | < 0.03% of span / 100 Ω |
| Current limit..... | 50 mA |
| Voltage limit..... | 15 VDC |
| of span..... | = of the presently selected range |

Observed authority requirements

| | |
|-----------|------------------------------|
| EMC..... | 2014/30/EU & UK SI 2016/1091 |
| RoHS..... | 2011/65/EU & UK SI 2012/3032 |
| EAC..... | TR-CU 020/2011 |