

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).

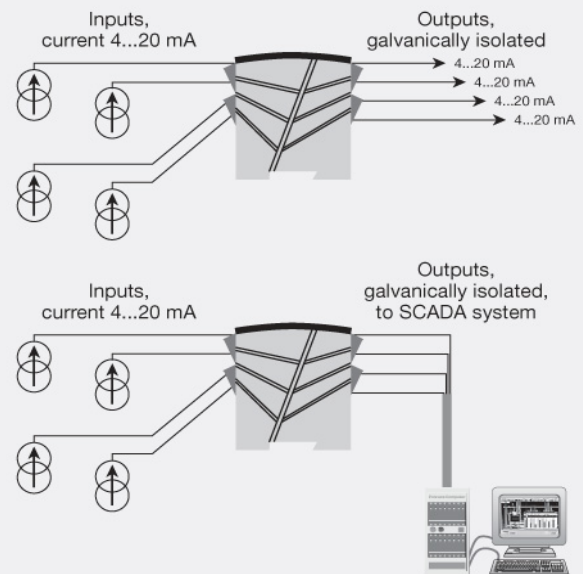
Technical characteristics

- 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.

Connections



Order:

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

Environmental Conditions

Specifications range..... -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 mm² stranded wire
Screw terminal torque..... 0.5 Nm

Common specifications

Isolation voltage

Test voltage..... 2 kVAC

Response time

Response time (0...90%, 100...10%)..... < 4 ms

Internal consumption, per channel..... 40 mW
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 selected 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

Approvals

EAC..... TR-CU 020/2011