

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).

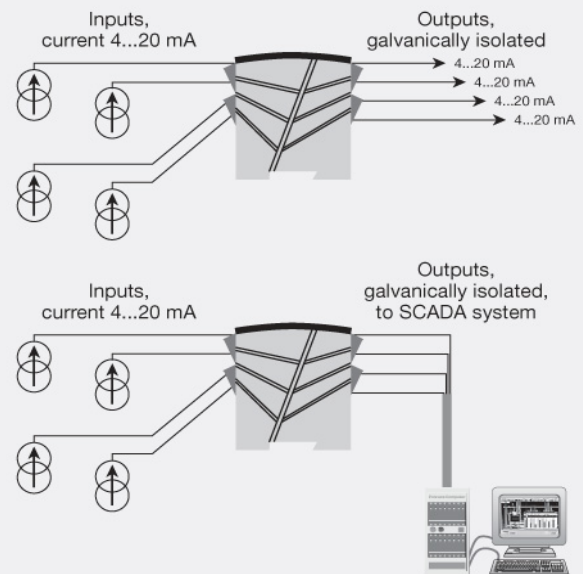
Technical characteristics

- 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
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Isolation voltage

Test voltage.....	2 kVAC
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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 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
EAC.....	TR-CU 020/2011