6185 Loop-Powered Isolator

- **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:

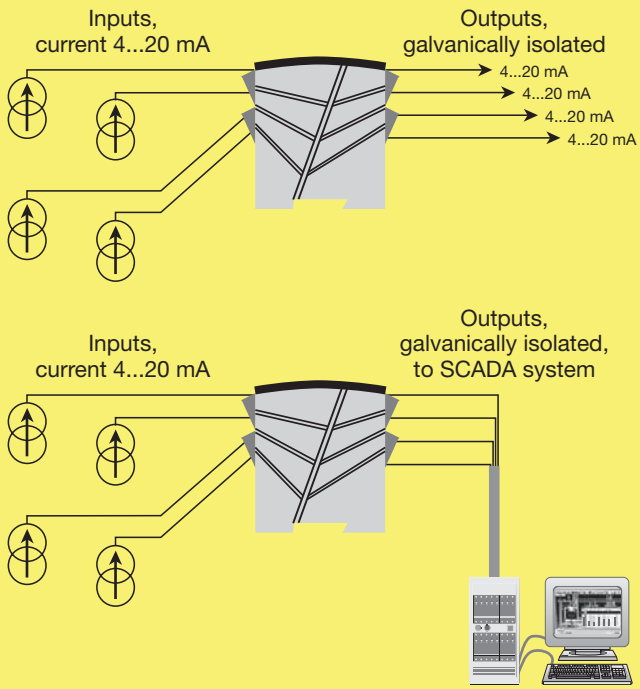
- Galvanic separation of analogue current signals.
- Elimination of ground loops and measurement of floating signals.
- A competitive choice in terms of both price and technology for galvanic isolation of current signals to SCADA systems or PLC equipment.
- Especially useful in applications necessitating 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: $V_{drop} = 1.8 + (I_{out.} * R_{load})$.
- 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 modules can be mounted without distance between neighbouring units, up to 168 channels can be mounted per metre.



For pricing or any further information, please contact Omni Instruments Ltd.

Measurement and data acquisition solutions

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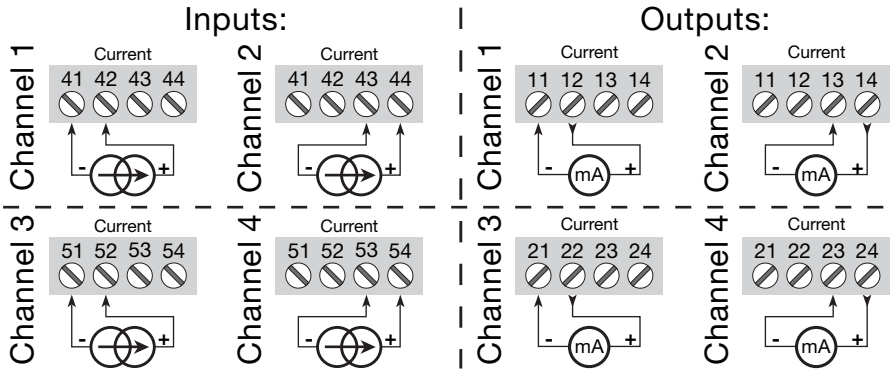
Order: 6185

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

Connections:



Electrical specifications:

Specifications range:
-20 to +60°C

Common specifications:

Internal consumption, max.	40 mW per channel
Drop voltage, min.	< 1.8 VDC
Drop voltage, max.	1.8 V + ($I_{out.}$ * R_{load})
Isolation voltage, test	2 kVAC
Signal / noise ratio	> 60 dB (0...100 kHz)
Response time (0...90%, 100...10%)	< 4 ms
Calibration temperature	20...28°C

Accuracy, the greater of general and basic values:

General values		
Input type	Absolute accuracy	Temperature coefficient
mA	≤ ±0.1% of span	≤ ±0.01% of span / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	≤ ±16 µA	≤ ±1.6 µA/°C

EMC immunity influence	< ±0.5% of span
Wire size (max.)	1 x 2.5 mm² stranded wire
Screw terminal torsion	0.5 Nm
Relative humidity	< 95% RH (non cond.)
Dimensions (HxWxD)	109 x 23.5 x 104 mm
DIN rail type	DIN 46277
Protection degree	IP20
Weight 1 / 2 / 4 channels	155 / 180 / 230 g

Current input:

Measurement range	0...23 mA
Min. span	1:1
Input resistance at 20 mA	≈ 90 Ω + R_{load}

Current output:

Signal range (span)	0...23 mA
Min. signal range	1:1
Load (max.)	20 mA / 600 Ω / 12 VDC
Load stability	< 0.03% of span / 100 Ω
Current limit	50 mA
Voltage limit	15 VDC

GOST R approval:
VNIIM, Cert. No. ..... See homepage

Observed authority requirements:	**Standard:**
EMC 2004/108/EC	EN 61326-1

Of span = of the presently selected range