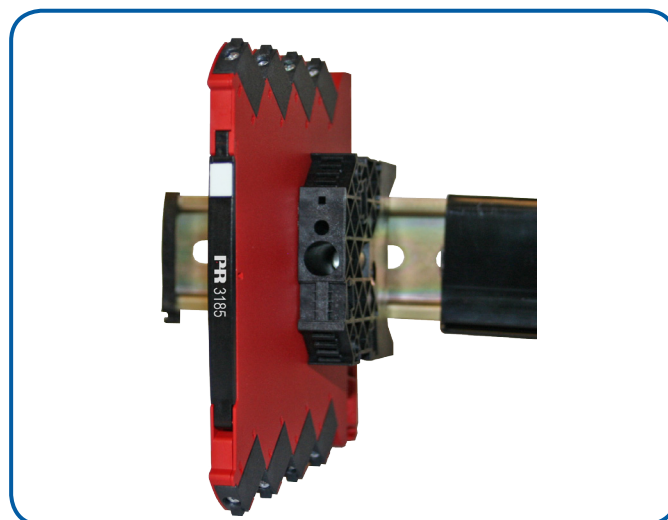


LOOP-POWERED ISOLATOR



- 1 and 2 channel galvanic isolation
- Low drop voltage
- Excellent accuracy
- Fast response time
- Input loop-powered



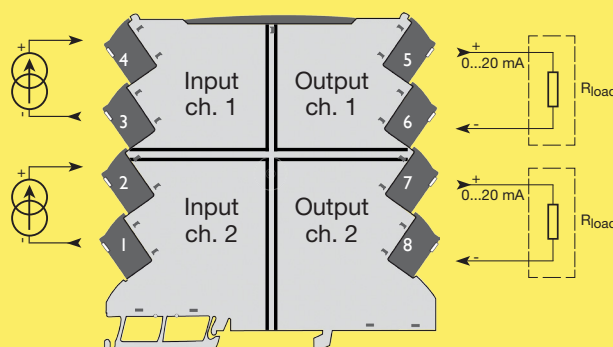
Applications

- Isolation and 1:1 conversion of current signals in the range 0/4...20 mA.
- 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).
- Installation in ATEX Ex zone 2 / IECEx Zone 2/ FM division 2.
- Suitable for environments with high vibration stress, e.g. ships.

Technical characteristics

- 3185 is powered by the control signal connected to the input, and powers the load connected to the output.
- The input is protected against overvoltage and polarity error.
- The output is voltage-limited to 17.5 VDC.
- Inputs and outputs are floating and galvanically separated.

Connections



Order codes:

3185A1 = Loop-powered Isolator, 1 channel
3185A2 = Loop-powered Isolator, 2 channels

9404 = Module Stop

Electrical specifications:

Specifications range:

-20°C to +70°C

Common specifications:

Internal consumption, max..... 30 mW per channel
 Isolation voltage, test 2.5 kVAC
 Working isolation voltage 300 VAC
 Signal / noise ratio..... > 60 dB (0...100 kHz)
 Response time (0...90%, 100...10%).. < 5 ms @100 Ω
 Calibration temperature..... 20...28°C
 Accuracy, the sum of general accuracy and load stability

Signal range (span, input/output)..... 0...20.5 mA
 Min. signal range 1:1
 Drop voltage, typ @25°C..... 1.25 V + 0.015 · V_{out}.
 Max. input current overload 50 mA
 Max. input voltage overload 31.2 V
 Load (max.)..... 23 mA / 600 Ω / 13.2 V
 Load stability < 0.01% of span / 100 Ω
 Voltage limit 17.5 V

Approvals:

Det Norske Veritas, Ships & Offshore.. Stand. f. Certific. No. 2.4
 Germanischer Lloyd VI-7-2
 ATEX 94/9/EC EN 60079-0, -15
 IECEx IEC 60079-0, -15
 c FM us..... FM 3600, 3611, 3810
 CSA E60079-0, -15
 CSA 22.2 -213
 EMC 2004/108/EC EN 61326-1
 LVD 2006/95/EC EN 61010-1
 UL, Standard for Safety..... UL 61010-1
 Safe Isolation..... EN 61140

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

EMC immunity influence < ±1% of span
 Wire size (max.) 0.13 x 2.5 mm²
 stranded wire
 Screw terminal torsion..... 0.5 Nm
 Relative humidity < 95% RH (non cond.)
 Dimensions (HxWxD)..... 113 x 6.1 x 115 mm
 DIN rail type..... EN 60715
 Protection degree IP20
 Weight 70 g

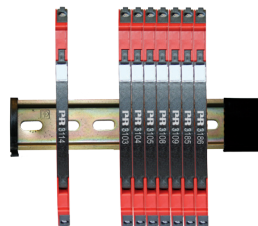
Of span = 0...20 mA

Installation on DIN rail



The 3100 series can be installed on a DIN rail supported, if necessary, by a module stop (PR part number 9404).

Marking



The front cover of the 3100 series has been designed with an area for affixation of a click-on marker. The area assigned to the marker measures 5 x 7.5 mm. Markers from Weidmüller's MultiCard System, type MF 5/7.5, are suitable.