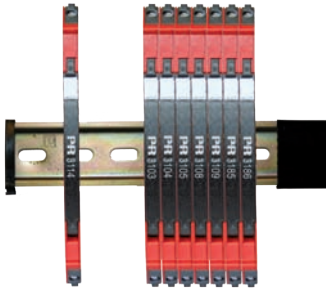




LOOP POWERED ISOLATOR



- 1 or 2 channel input loop powered isolator
- Signal 1:1 functional range 0...23 mA
- Low input voltage drop and fast response time
- Excellent accuracy and high load stability
- Slimline 6 mm housing

Application

- 1:1 input loop powered isolator of current signals in the range 0(4)...20 mA.
- 3185 is an easy mounting DIN rail unit.
- A very competitive choice in terms of both price and technology for galvanic isolation of current signals.
- Provides surge suppression and protects control systems from transients and noise.
- 3185 eliminates ground loops and can be used for measuring floating signals.
- The device can be mounted in Safe area or in Zone 2 and Cl. 1 Div 2. area.

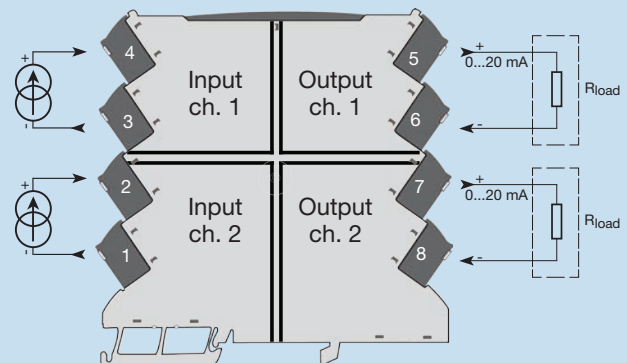
Technical characteristics

- 3185 is powered by the analogue input current signal loop.
- Low input voltage drop, typ 1.35V + V_{out}.
- Excellent conversion accuracy, better than 0.1% in the range 0...20.5 mA.
- Functional range is 0...23 mA which means that 3185 is NAMUR NE43 compliant.
- Inputs and outputs are floating and galvanically separated.
- The output is voltage limited to 17.5 VDC.
- High galvanic isolation of 2.5 kVAC.
- Fast response time < 5 ms.
- Excellent signal/noise ratio > 60 dB.

Mounting / installation / programming

- DIN rail mounting with upto 330 channels per metre.
- Temperature operation range is from -25...+70°C.

CONNECTIONS



Safe Area or
Zone 2 & Cl. 1, Div. 2, gr. A-D

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

Order codes for 3185:

Type	Unit channels
3185A1	1
3185A2	2

Accessories for 3185:

Type	Function
9404	Module stop

Environmental conditions:

Specifications range..... -25°C to +70°C
 Storage temperature -40°C to +85°C
 Calibration temperature..... 20...28°C
 Relative humidity < 95% RH (non-cond.)
 Protection degree IP20
 Installation in pollution degree 2 & measurement / overvoltage category II

Mechanical specifications:

Dimensions (HxWxD)..... 113 x 6.1 x 115 mm
 Weight approx. 70 g
 DIN rail type..... DIN EN 60715 - 35 mm
 Wire size 0.13...2.5 mm² / AWG 26...12 stranded wire
 Screw terminal torque 0.5 Nm

Common electrical specifications:

Internal consumption 30 mW per channel
 Isolation voltage, test 2.5 kVAC
 Working isolation voltage 300 VAC / 250 VAC (Ex)
 Signal / noise ratio..... > 60 dB
 Response time (0...90%, 100...10%)..... < 5 ms
 Cut-off frequency (3 dB)..... 100 Hz

Accuracy values		
Input type	Absolute accuracy	Temperature coefficient
mA	≤ ± 10 µA + 0.05% of max value of selected span	≤ ± 2 µA / °C

EMC immunity influence < ±0.5% of span
 Extended EMC immunity:
 NAMUR NE 21, A criterion, burst < ±1% of span

Input and output specifications:

Signal range, input to output..... 0...20.5 mA
 Signal conversion 1:1
 Functional range..... 0...23mA
 Start up current, typ 10 uA
 Current input overload, max..... 50 mA
 Input to output voltage drop, typ 1.25 V + (0.015 x V_{out})
 (V_{out} = I_{out} x R_{output load})
 (Unit voltage drop) + V_{out}
 Input voltage drop
 Output load, max 600 Ω
 Output load stability < 0.01% of span / 100 Ω
 Voltage limit 17.5 V

*of span = 0...20 mA

Approvals:

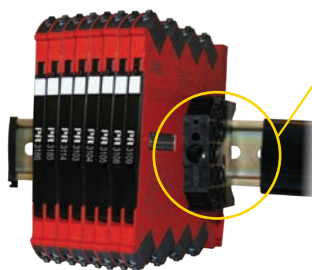
EMC 2004/108/EC EN 61326-1
 LVD 2006/95/EC EN 61010-1
 UL, Standard for Safety..... UL 61010-1
 Safe Isolation..... EN 61140
 GOST R

Marine:

Det Norske Veritas, Ships & Offshore Stand. f. Certific. No. 2.4
 Germanischer Lloyd VI-7-2

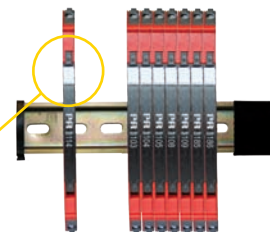
Ex:

ATEX 94/9/EC KEMA 10ATEX0147 X
 IECEx..... KEM 10.0068 X
 c FM us..... 3041043-C



Installation on a 35 mm DIN rail

The system 3000 devices must be supported by module stops for marine applications - PR part number 9404.



Marking

The front cover of the system 3000 units 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. Weidmüller's MultiCard System markers, type MF 5/7.5, are suitable.

