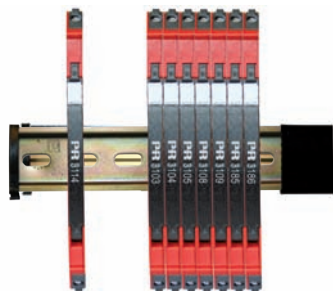


2-WIRE TRANSMITTER ISOLATOR



- 1 or 2 channel 2-wire transmitter isolator
- Signal 1:1 functional range 3.5...23 mA
- Low channel voltage drop and fast response time
- Excellent accuracy
- Slimline 6 mm housing

Application:

- 1:1 output loop powered isolator of 2-wire transmitter 4...20 mA signals.
- 3186 is an easy mounting DIN rail unit.
- A very competitive choice in terms of both price and technology for galvanic isolation of 2-wire transmitter signals.
- Provides surge suppression and protects control systems from transients and noise.
- 3186 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.

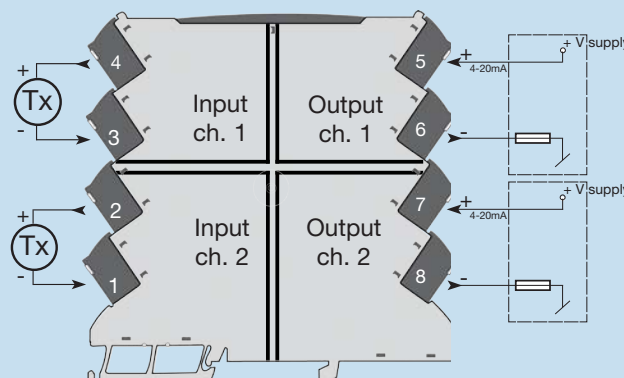
Technical characteristics:

- 3186 is powered by the host loop voltage.
- Wide supply range from 6...35 V.
- Low input to output voltage drop typ. 2.5 V.
- Excellent conversion accuracy, better than 0.05% in the range 3.8...20.5 mA.
- Functional range is 3.5...23 mA which means that 3186 is NAMUR NE43 compliant.
- Inputs and outputs are floating and galvanically separated.
- 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 up to 330 channels per metre.
- Temperature operation range between -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 3186A:

Type	Unit channels
3186A	Single: 1 Double: 2

Accessories:

9404 = Module stop for rail

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 - 35mm
Wire size..... 0.13...2.5 mm² / AWG
26...12 stranded wire
Screw terminal torque 0.5 Nm

Common electrical specifications:

Supply voltage..... 6...35 VDC
Voltage drop, input to output, typ. 2.5 V
Internal consumption..... 50 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 $\Delta^\circ\text{C} = [T_{\text{amb}} - 25^\circ\text{C}]$
mA	$\leq \pm 8 \mu\text{A}$	$\leq \pm 0.02 \mu\text{A} \times (\Delta^\circ\text{C} \times V_{\text{supply}}) @ T_{\text{amb.}} > 25^\circ\text{C}$ $\leq \pm 0.07 \mu\text{A} \times (\Delta^\circ\text{C} \times V_{\text{supply}}) @ T_{\text{amb.}} < 25^\circ\text{C}$

Accuracy calculation example -> $T_{\text{amb.}} = 50^\circ\text{C}$ and $V_{\text{supply}} = 24 \text{ VDC}$:
Total accuracy = Absolute accuracy + Temperature coefficient

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

$= \pm (8 \mu\text{A} + (0.02 \mu\text{A} \times (50 - 25^\circ\text{C} \times 24 \text{ V}))) = \leq \pm 20 \mu\text{A}$

Input and output specifications:

Available input transmitter (Tx) supply 3.5...32.5 V
Signal range, input to output..... 3.8...20.5 mA
Signal conversion 1:1
Functional range..... 3.5...23 mA
Output loop current limitation, typ. 24 mA
Current output overload, max. 50 mA

Of span = 4...20 mA

Approvals:

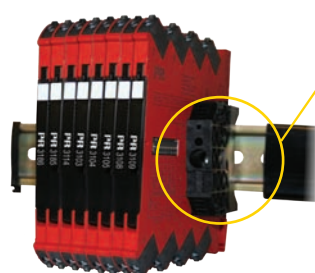
EMC 2004/108/EC EN 61326-1
LVD 2006/95/EC EN 61010-1
UL, Standard for Safety..... UL 61010-1
Safe Isolation..... EN 61140
GOST R

Marine:

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

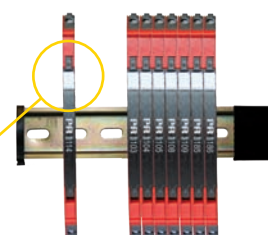
Ex:

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.

