

## 2-wire transmitter isolator

### 3186

- 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.

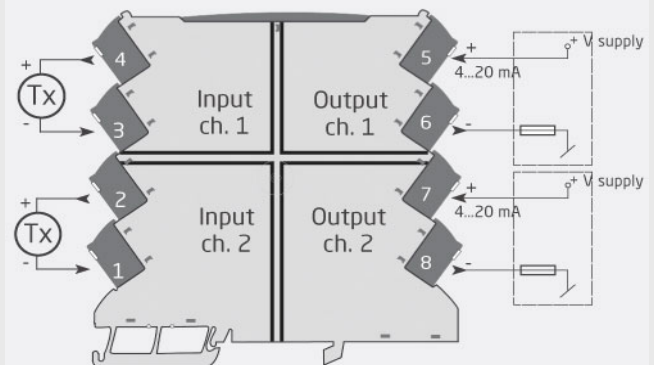
#### Technical characteristics

- 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 meter.
- Temperature operation range is from -25...+70°C.

#### Connections



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

**Order:**

Type	Unit channels	
3186A	Single	1
	Double	2

**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 cat. 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 x 2.5 mm <sup>2</sup> / AWG 26...12 stranded wire
Screw terminal torque.....	0.5 Nm
Vibration.....	IEC 60068-2-6 : 2007
Vibration: 2...25 Hz.....	±1.6 mm
Vibration: 25...100 Hz.....	±4 g

**Common specifications**

Supply voltage.....	6...35 VDC
Internal consumption, per channel.....	50 mW
Isolation voltage, test.....	2.5 kVAC
Isolation voltage, working.....	300 VAC (reinforced) / 250 VAC (Zone 2, Div. 2)
Signal / noise ratio.....	> 60 dB
Accuracy.....	Better than 0.05% of selected range
Cut-off frequency (3 dB).....	100 Hz
Response time (0...90%, 100...10%).....	< 5 ms
EMC immunity influence.....	< ±0.5% of span
Extended EMC immunity: NAMUR NE 21, A criterion, burst.....	< ±1% of span

**Input specifications**

Available 2-wire transmitter (Tx) supply.....	3.5...32.5 V
Signal range, input to output.....	3.8...20.5 mA
Signal conversion.....	1:1
Functional range, current input.....	3.5...23 mA

**Output specifications**

Output loop current limitation, typ.....	24 mA
Current output overload, max.....	50 mA
*of span.....	= 4...20 mA

**Approvals**

EMC.....	EN 61326-1
LVD 2006/95/EC.....	EN 61010-1
ATEX 2004/108/EC.....	KEMA 10ATEX0147 X, II 3 G Ex nA IIC T4 Gc
IECEX.....	KEM 10.0068X
FM.....	3041043-C
CCOE.....	P337347/1
EAC TR-CU 020/2011.....	EN 61326-1
DNV Marine.....	Stand. f. Certific. No. 2.4
GL.....	V1-7-2
UL.....	UL 61010-1