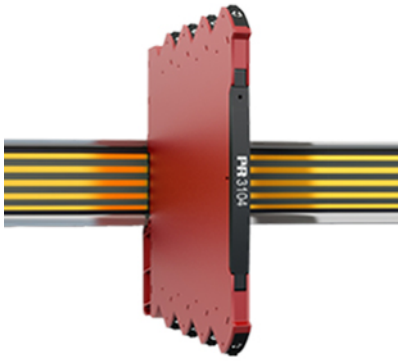
PERFORMANCE MADE SMARTER



Isolated converter

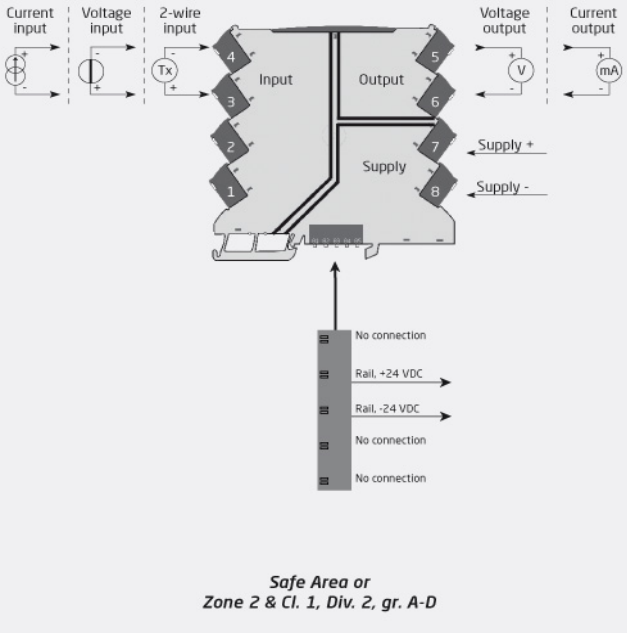
3104

– Isolation and conversion of standard DC signals
– Slimline housing of 6 mm
– Power supply and signal isolator for 2-wire transmitter
– Loop supply >17 V
– DIP-switch configured

Application
- Isolation and conversion of standard DC signals.
- Galvanic separation of analog current and voltage 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 and voltage signals to SCADA systems or PLC equipment.
- Installation in ATEX Ex zone 2 / IECEx zone 2 / FM division 2.
- Suitable for environments with high vibration stress, e.g. ships.

Technical characteristics
- Easy configuration via DIP-switches.
- The input is protected against overvoltage and polarity error.
- Factory-calibrated measurement ranges.
- Inputs and outputs are floating and galvanically separated.

Connections



Order:

Type
3104

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^2 / AWG 26...12 stranded wire
Screw terminal torque	0.5 Nm
Vibration: 2...25 Hz	±1.6 mm
Vibration: 25...100 Hz	±4 g

Common specifications

Supply voltage	16.8...31.2 VDC
Max. power consumption	1.2 W
Internal consumption	0.4 W (typ.) / 0.65 W (max.)
Isolation voltage, test	2.5 kVAC
Isolation voltage, working	300 VAC (reinforced) / 250 VAC (Zone 2, Div. 2)
Signal / noise ratio	> 60 dB
Response time (0...90%, 100...10%)	< 7 ms
Accuracy	Better than 0.05% of selected range
Temperature coefficient	< ±0.01% of span / °C
EMC immunity influence	< ±0.5% of span
Extended EMC immunity: NAMUR NE 21, A criterion, burst	< ±1% of span

Input specifications

Current input: Measurement range	0...20.5 mA
Functional range, current input	0...23 mA
Current input: Programmable measurement ranges	0...20 and 4...20 mA
Input voltage drop	< 1.5 VDC
2-wire transmitter supply	> 17 V / 20 mA
Voltage input: Measurement range	0...10.25 V
Functional range, voltage input	0...11.5 V / 0...5.75 V
Programmable measurement ranges, VDC	0/1...5 and 0/2...10 V
Input resistance, voltage input	≥ 500 kΩ

Output specifications

Current output: Signal range	0...20.5 mA (span)
Programmable current ranges	0 / 4...20 mA
Load (max.)	23 mA/600 Ω
Load stability, current output	≤0.01% of span / 100 Ω
Current limit	≤ 28 mA
Voltage output: signal range	0...10 VDC
Programmable voltage ranges	0/1...5 and 0/2...10 V
Load (min.)	> 10 kΩ

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
DNV Marine	Stand. f. Certific. No. 2.4
GL	V1-7-2
UL	UL 61010-1
EAC TR-CU 020/2011	EN 61326-1
EAC Ex TR-CU 012/2011	RU C-DK.GB08.V.00410
CCOE	P337347/1