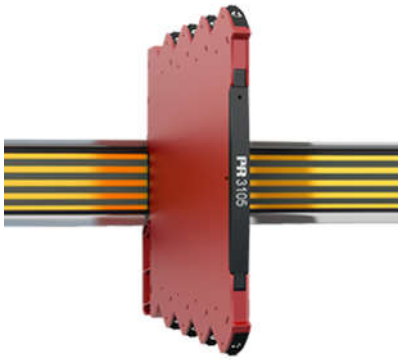
PERFORMANCE MADE SMARTER



Isolated converter

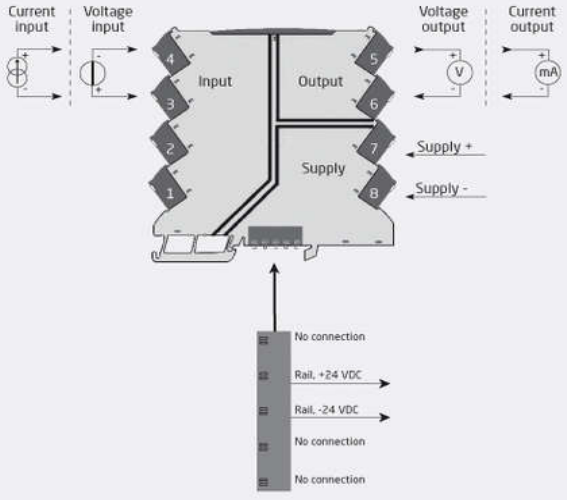
3105

– Isolation and conversion of standard DC signals
– Slimline housing of 6.1 mm
– Response time <7 ms
– Low cost
– 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.
- 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.

Applications



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Order

Type	Version	
3105	With power rail connector / terminals	: -
	Supplied via terminals	: -N

Example: 3105-N

Environmental Conditions

Operating temperature..... 0°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 & meas. / 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...2.5 mm^2 / AWG 26...12 stranded wire
Screw terminal torque..... 0.5 Nm
Vibration..... IEC 60068-2-6
2...25 Hz..... ±1.6 mm
25...100 Hz..... ±4 g

Common specifications

Supply
Supply voltage..... 16.8...31.2 VDC
Max. required power..... 0.80 W
Max. power dissipation..... 0.52 W

Isolation voltage
Isolation voltage, test / working..... 2.5 kVAC / 300 VAC (reinforced)

Response time
Response time (0...90%, 100...10%)..... < 7 ms

Programming..... DIP-switches
Signal / noise ratio..... > 60 dB
Cut-off frequency (3 dB)..... > 100 Hz
Signal dynamics, input..... Analog signal chain
Signal dynamics, output..... Analog signal chain
Accuracy..... Better than 0.2% of selected range
Temperature coefficient..... < ±0.015% of span / ˚C
EMC immunity influence..... < ±0.5% of span
Extended EMC immunity: NAMUR NE21, A criterion, burst..... < ±1% of span

Input specifications

Current input
Measurement range..... 0...23 mA
Programmable measurement ranges..... 0...20 and 4...20 mA
Input voltage drop..... < 1.5 VDC

Voltage input
Measurement range..... 0...10.25 V
Measurement range..... 0...11.5 V / 0...5.75 V
Programmable measurement ranges..... 0/1...5 and 0/2...10 V
Input resistance..... ≥ 500 kΩ

Output specifications

Current output
Signal range..... 0...23 mA
Programmable signal ranges..... 0 / 4...20 mA
Load (@ current output)..... ≤ 600 Ω
Load stability..... ≤ 0.002% of span / 100 Ω
Current limit..... ≤ 28 mA

Voltage output
Signal range..... 0...10 VDC
Programmable signal ranges..... 0/1...5 and 0/2...10 V
Load (@ voltage output)..... ≥ 10 kΩ

of span..... = of the DIP-switch selected output range

Observed authority requirements

EMC..... 2014/30/EU & UK SI 2016/1091
LVD..... 2014/35/EU & UK SI 2016/1101
RoHS..... 2011/65/EU & UK SI 2012/3032
EAC..... TR-CU 020/2011

Approvals

c UL us, UL 61010-1..... E314307
DNV Marine..... TAA00001RW