

LOOP-POWERED ISOLATOR



- Galvanically isolated input-output
- 1:1 conversion
- No separate supply
- 3.75 kVAC / 1.4 kVAC isolation voltage
- 1 or 2 channels
- Standard 11-pole relay socket



Application:

Galvanic separation of analogue current signals. ● For elimination of ground loops and measurement of floating signals. ● Especially useful in applications where an external power supply is not readily available, since the unit is powered by the measured signal. ● The unit loads the loop with max. 1.8 V (90 Ω) at 20 mA.

Technical characteristics:

Input: DC current signal in the range 0...20 mA. The input is protected against overvoltage and polarity error. Voltage limit: 15 VDC.

The drop voltage for the system can be calculated according to the following expression: $V_{drop} = 1.8 + (I_{out} \times R_{load})$.

Output:

The current output (pin 3) tracks the input current 1:1.

Current limit: typ. 50 mA.

Output voltage: 0/0.2...1 V, or 0/2...10 VDC (programmable through internal jumpers) is established by short-circuiting (pins 3 and 2) or (pins 11 and 10). The built-in shunt resistor (50 Ω, 500 Ω) creates the desired output voltage between (pins 2 and 1) or (pins 10 and 9).

Current and voltage signals refer to output gnd, but if both signals are used simultaneously, only the voltage signal refers to output gnd.

Electrical specifications:

Specifications range:

(@ -20°C to +60°C)

Common specifications:

Internal consumption	Max. 40 mW per channel
Vdrop internal	< 1.8 V
Isolation, 1 channel, test / operation...	3.75 kVAC / 250 VAC
Isolation, 2 channels, test / operation...	1.4 kVAC / 150 VAC
Warm-up time.....	5 min.
Signal / noise ratio.....	> 60 dB (0...100 kHz)
Response time (0...90%/100...10%)...	≤ 4 ms
Calibration temperature.....	20...28°C
Temperature coefficient.....	< ±0.01% of span /°C
Linearity error	< ±0.1% of span
EMC immunity influence	< ±0.5% of span
Humidity	< 95% RH (non-cond.)
Dimensions (HxWxD).....	80.5 x 35.5 x 84.5 mm (excl. pins)
Tightness (enclosure)	IP50
Weight 1 ch. / 2 ch.	120 g / 240 g

Input:

Measurement range	0/4...20 mA
Min. signal range	1:1
Input resistance at 20 mA	≈ 90 Ω + Rload

Current output:

Signal range	0 / 4...20 mA
Min. signal range (span)	1:1
Max. load	20 mA / 600 Ω / 12 VDC
Load error on linearity	< 0.03% of span / 100 Ω

Voltage output:

Signal range	0/0.2...1 V, or 0/2...10 V
Min. signal range (span)	1:1
Min. load resistance	500 kΩ
Voltage limit.....	15 VDC

Observed authority requirements: Standard:

EMC 89/336/EEC, Emission	EN 50 081-1, EN 50 081-2
Immunity	EN 50 082-2, EN 50 082-1
Emission and immunity	EN 61 326
LVD 73/23/EEC.....	EN 61 010-1
PELV/SELV	IEC 364-4-41 and EN 60 742

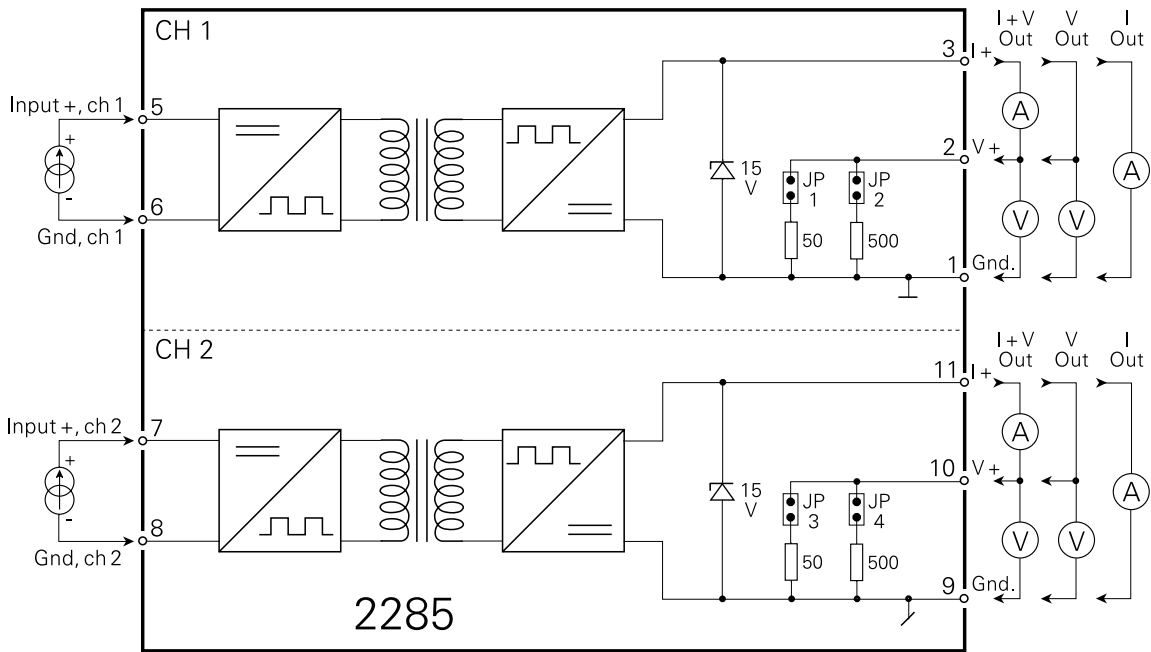
The 1-channel version can be installed as PELV/SELV circuit.

Of span = Of the presently selected range

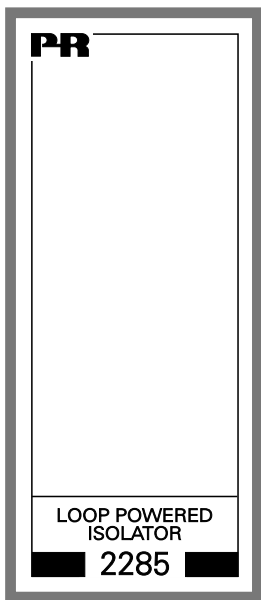
Order: 2285

Type	Channels	
2285	1 channel	: A
	2 channels	: B

Block diagram:



Front layout:



Load schedule:

