

MCR-1CLP-I-I-00 - Loop-powered isolators



2814016

<https://www.phoenixcontact.com/pc/products/2814016>

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MCR passive isolator, for the electrical isolation of current signals without auxiliary power, 1-channel, input signal: 0(4)...20 mA, output signal: 0(4)...20 mA

Your advantages

- 1, 2 or 4-channel version as an option
- Electrical isolation without additional auxiliary voltage
- 0/4 ... 20 mA current signals

Commercial Data

Item number	2814016
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CK1813
Catalog Page	Page 135 (C-7-2013)
GTIN	4017918131722
Weight per Piece (including packing)	100.5 g
Weight per Piece (excluding packing)	100.5 g
Customs tariff number	85437090
Country of origin	DE

Technical Data

Product properties

Product type	Passive isolators
No. of channels	1

Electrical properties

No. of channels	1
Electrical isolation between input and output	yes
Limit frequency (3 dB)	< 75 Hz
Maximum power dissipation for nominal condition	50 mW
Test voltage input/output	510 V AC (50 Hz, 60 s)
Signal transmission behavior	In = Out
Step response (10-90%)	5 ms (with 500 Ω load)
Maximum temperature coefficient	≤ 0.002 %/K (of measured value / 100 Ω load)
Maximum transmission error	≤ 0.1 % (of final value)
Additional error, load-dependent	0.02 % (of measured value)

Supply

Supply voltage range	no separate supply voltage necessary
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Input data

Signal

Description of the input	Current input
Number of inputs	1
Configurable/programmable	no
Max. voltage input signal	30 V (30 V overload)
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA
Max. current input signal	50 mA (100 mA overload)
Response current	< 50 μA
Input voltage limitation	33 V (with Zener diode)
Voltage dissipation	2.5 V (I = 20 mA)

Output data

Signal: Current

Number of outputs	1
Configurable/programmable	no
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA
Max. current output signal	< 50 mA
Load/output load current output	≤ 1375 Ω (at I = 20 mA output signal)
Ripple	< 5 mV (rms)

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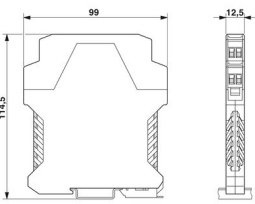
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Connection data

Connection method	Pluggable screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

Dimensions

Dimensional drawing	
Width	12.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Housing material	Polyamide PA non-reinforced
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-10 °C ... 70 °C

Approvals

CE

Certificate	CE-compliant
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UL, USA/Canada

Identification	cULus
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Mounting

Mounting type	DIN rail mounting
Mounting position	any

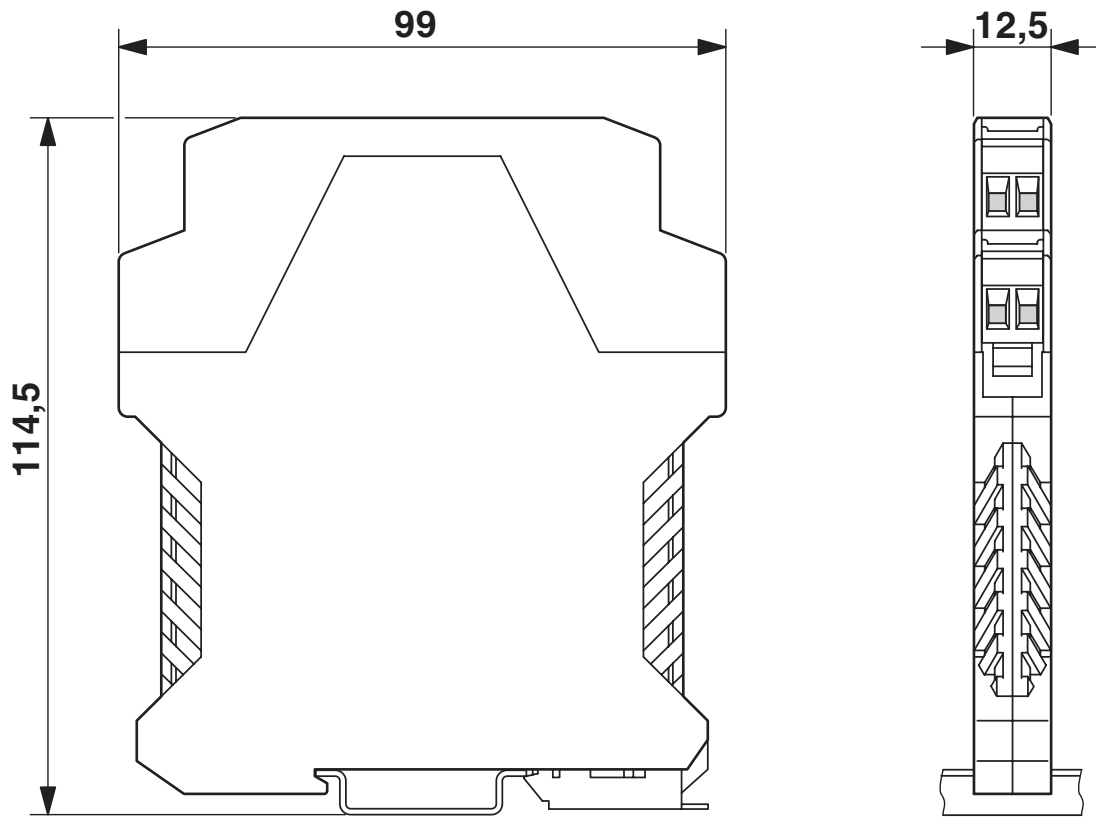
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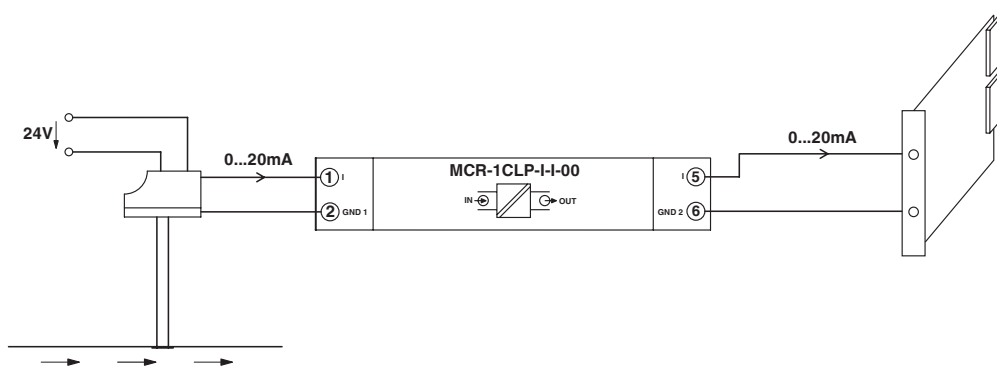
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Drawings

Dimensional drawing



Application drawing



Application example: - flow measurement

1 = magnetic inductive flow gauge

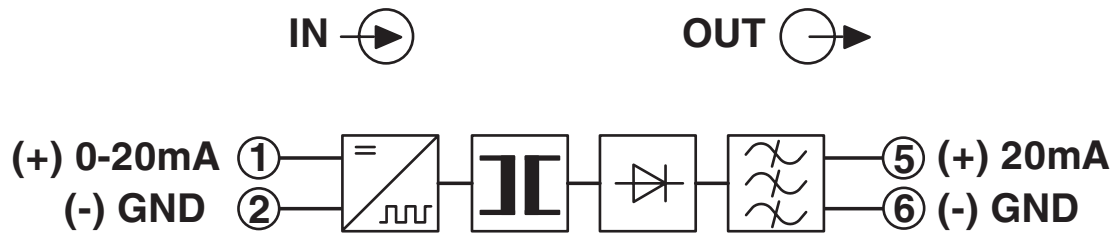
2 = control

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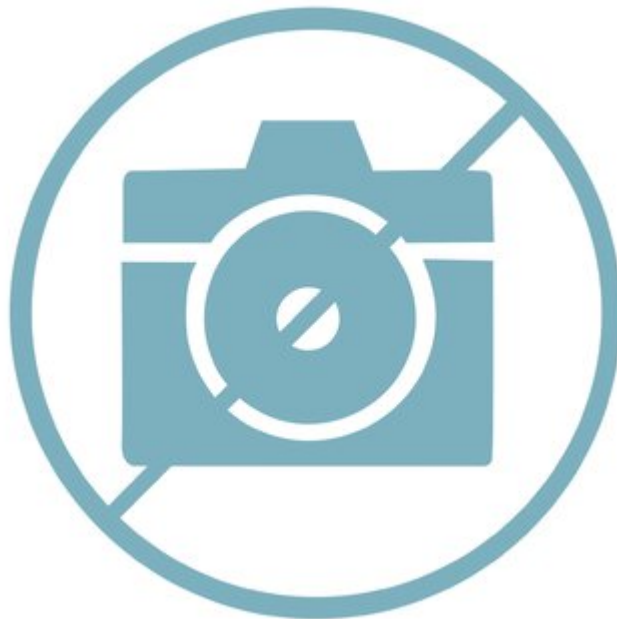
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Circuit diagram



Diagram



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Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"
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