

Loop-powered isolators - MINI MCR-SL-1CP-I-I - 2864419

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MCR loop-powered isolator, 1-channel, for the electrical isolation of current signals without auxiliary power, with screw connection

Product Description

The 6.2 mm narrow passive loop-powered isolator MINI MCR-SL-...CP-I-I... is used for the electrical isolation and filtering of 0...20 mA and 4...20 mA standard current signals without additional supply voltage.

Your advantages

- ✓ Voltage drop at isolating amplifier of just 1.7 V
- ✓ Does not require additional auxiliary voltage
- ✓ Supplied by an input loop
- ✓ Two channels on a design width of just 6.2 mm
- ✓ Highly-compact 2-wire passive isolators for electrical isolation and filtering of standard analog signals

RoHS



Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 974848
GTIN	4017918974848
Weight per Piece (excluding packing)	68.600 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Dimensions

Width	6.2 mm
Height	93.1 mm

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Technical data

Dimensions

Depth	101.2 mm
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Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

Input data

Description of the input	Current input
Number of inputs	1
Configurable/programmable	no
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA
max. input voltage	18 V
Max. input current	40 mA
Response current	approx. 190 µA
Input voltage limitation	< 2 V (20 mA)
Voltage dissipation	1.9 V (I = 20 mA)

Output data

Output name	Current output
Number of outputs	1
Configurable/programmable	no
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA
Load/output load current output	< 600 Ω (at I = 20 mA output signal)
Ripple	< 10 mV _{rms} (at 600 Ω)
Transmission Behavior	1:1 to input signal

Power supply

Supply voltage range	no separate supply voltage necessary
Power consumption	34 mW

Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²

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Technical data

Connection data

Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	26 ... 12

General

No. of channels	1
Maximum transmission error	≤ 0.1 % (of final value)
Maximum temperature coefficient	≤ 0.002 %/K (of measured value / 100 Ω load)
Temperature coefficient, typical	< 0.002 %/K (of measured value / 100 Ω load)
Cold junction errors	≤
Typical cold point errors	≤
Additional error, load-dependent	< 0.03 % (of measured value / 100 Ω load)
Limit frequency (3 dB)	75 Hz
Step response (10-90%)	5 ms (at 600 Ω load)
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	50 V AC/DC
Test voltage input/output	1.5 kV (50 Hz, 1 min.)
Test voltage channel/channel	1.5 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	green
Housing material	PBT
Mounting position	any
Assembly instructions	The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715.
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Evaluation criterion	B

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Technical data

EMC data

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Evaluation criterion	A

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A
Standards/regulations	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Evaluation criterion	A
Electrical isolation	Basic insulation according to EN 61010
Conformance	CE-compliant
ATEX	# II 3 G Ex nA II T6 X
UL, USA/Canada	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D
GL	GL EMC 2 D

Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# II 3 G Ex nA II T6 X
Designation	UL, USA/Canada
Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D
Designation	GL
Identification	GL EMC 2 D

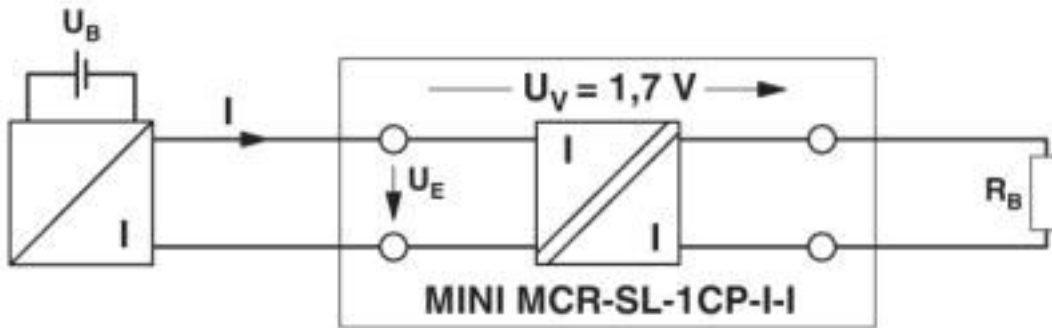
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

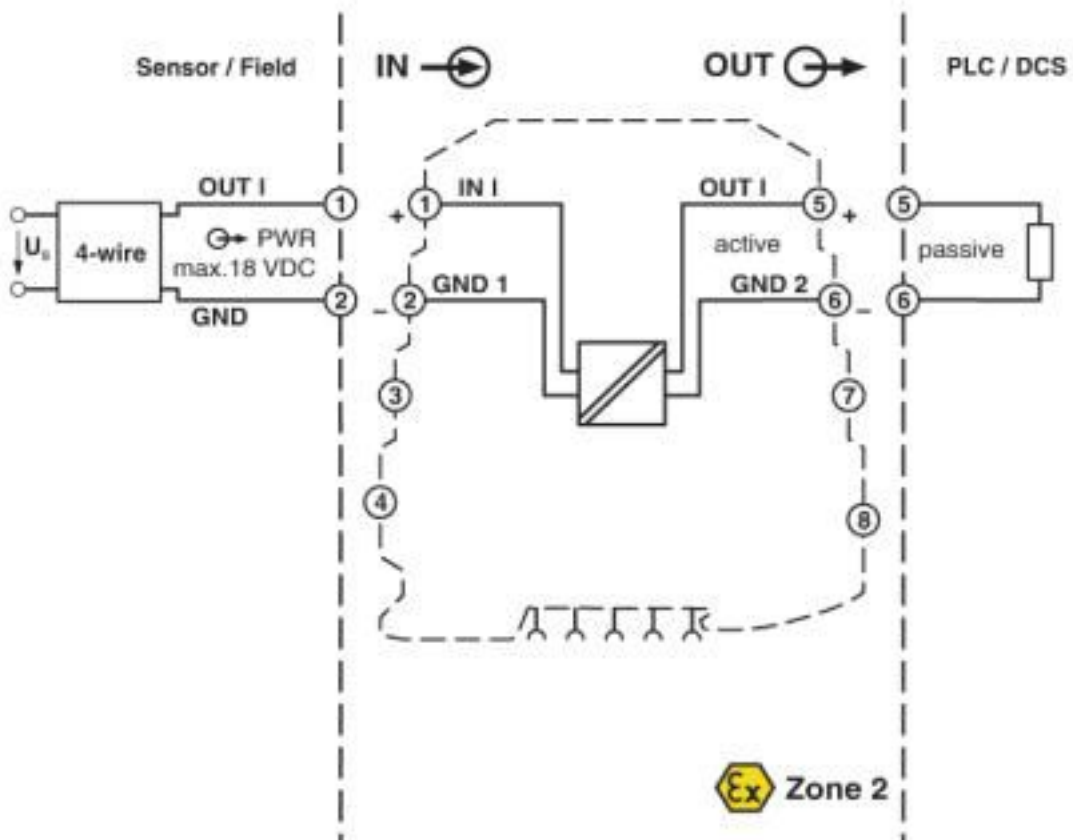
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Drawings

Application drawing

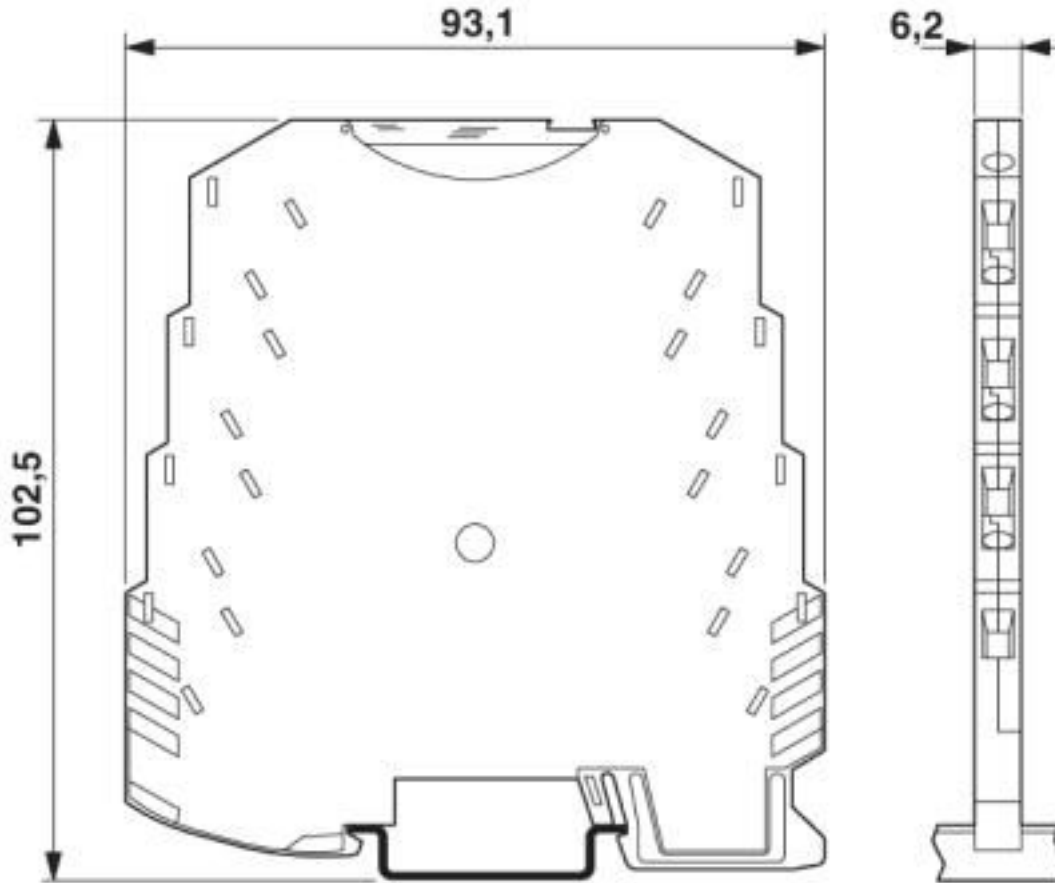


Block diagram



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Dimensional drawing



Classifications

eCl@ss

eCl@ss 4.0	27210100
eCl@ss 4.1	27210100
eCl@ss 5.0	27210100
eCl@ss 5.1	27210100
eCl@ss 6.0	27210100
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

ETIM

ETIM 4.0	EC002653
ETIM 5.0	EC002653

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Classifications

ETIM

ETIM 6.0	EC002653
ETIM 7.0	EC002653

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008
UNSPSC 18.0	39121008
UNSPSC 19.0	39121008
UNSPSC 20.0	39121008
UNSPSC 21.0	39121008

Approvals

Approvals

Approvals


DNV GL / UL Recognized / cUL Recognized / cULus Recognized

Ex Approvals

ATEX / UL Recognized / cUL Recognized / EAC Ex / cULus Recognized

Approval details

DNV GL		https://approvalfinder.dnvgl.com/	TAA00000BW
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UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 123528
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Approvals

cULus Recognized



Accessories

Accessories

Marking material

Marking label - MINI MCR-DKL-LABEL - 2810272



Label for extended marking of MINI MCR modules in connection with the MINI MCR-DKL

Transparent cover - MINI MCR DKL - 2308111



Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm

System adapter

System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.