

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

The illustration shows the 2-channel version 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.

Product Features

- 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



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	68.6 g
Country of origin	Germany

Technical data

Dimensions

Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

Ambient conditions

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Technical data

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

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	1.7 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
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Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	12
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Stripping length	12 mm
Screw thread	M3

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Technical data

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.
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

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
Designation	Conducted interferences

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Technical data

EMC data

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
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Classifications

eCl@ss

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

ETIM

ETIM 2.0	EC001485
ETIM 3.0	EC001485

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Classifications

ETIM

ETIM 4.0	EC001485
ETIM 5.0	EC002653

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / EAC / cULus Recognized


Ex Approvals

UL Recognized / cUL Recognized / ATEX / cULus Recognized

Approvals submitted

Approval details

UL Recognized 

cUL Recognized 
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EAC

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Approvals



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

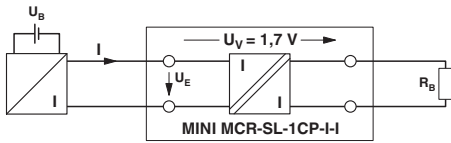


Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.

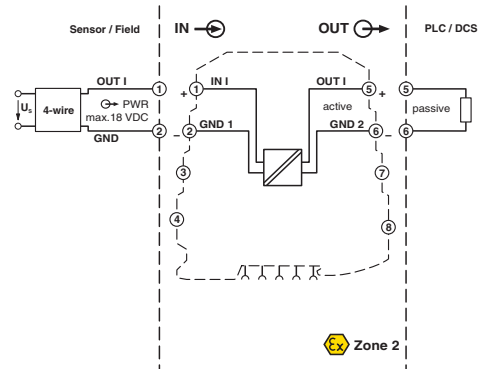
Drawings

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Application drawing



Block diagram



Dimensional drawing

