MINI MCR-SL-2CP-I-I-SP - Loop-powered isolators

2864781

https://www.phoenixcontact.com/us/products/2864781

MCR passive isolator, two-channel, for electrical isolation of current signals without supply voltage, with spring-cage connection.
Replacement item: 2864655 MINI MCR-SL-2CP-I-I

Your advantages

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

Commercial data

Item number	2864781
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	CK1213
Catalog page	Page 101 (C-7-2015)
GTIN	4017918974961
Weight per piece (including packing)	80.625 g
Weight per piece (excluding packing)	65.4 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product type	Passive isolators
Product family	MINI Analog
No. of channels	2

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Rated insulation voltage	50 V AC/DC
Electrical isolation	Basic insulation in accordance with EN 61010
Electrical isolation between input and output	yes
Limit frequency (3 dB)	75 Hz
Test voltage input/output	1.5 kV AC (50 Hz, 60 s)
Test voltage channel/channel	1.5 kV AC (50 Hz, 60 s)
Signal transmission behavior	In = Out
Step response (10-90%)	5 ms (at 600 Ω load)
Maximum temperature coefficient	≤ 0.002 %/K (of measured value / 100 Ω load)
Temperature coefficient, typical	< 0.002 %/K (of measured value / 100 Ω load)
Maximum transmission error	≤ 0.1 % (of final value)
Additional error, load-dependent	< 0.03 % (of measured value / 100 Ω load)

Supply

Supply voltage range	loop-powered, no external supply necessary
Power consumption	34 mW (per channel)

Input data

Signal

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

Output data
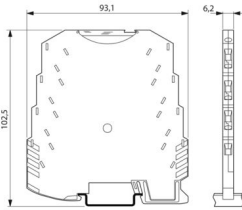
Signal: Current

Number of outputs	2
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)

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section rigid	0.2 mm² ... 2.5 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12

Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

Material specifications

Color	green (RAL 6021)
Housing material	PBT
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

Environmental and real-life conditions

Ambient conditions

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

Approvals

CE

Certificate	CE-compliant

ATEX	
Identification	⬡ II 3 G Ex nA II T6 X

UL, USA/Canada	
Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D

GL	
Identification	GL EMC 2 D

EMC data

Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4

Electrostatic discharge	
Standards/regulations	EN 61000-4-2

Electrostatic discharge	
Comments	Criterion B

Electromagnetic HF field	
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Evaluation criterion	A

Fast transients (burst)	
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Evaluation criterion	B

Surge current load (surge)	
Standards/regulations	EN 61000-4-5

Surge current load (surge)	
Comments	Criterion B

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

Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010

Mounting

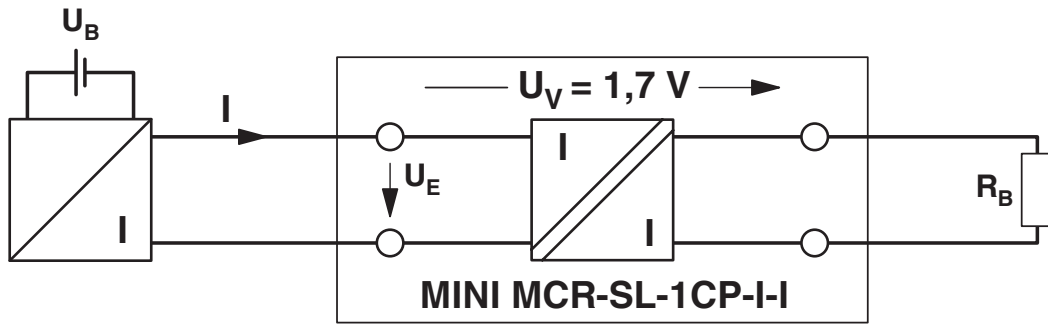| Mounting type	DIN rail mounting
Assembly note	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

Drawings

Application drawing
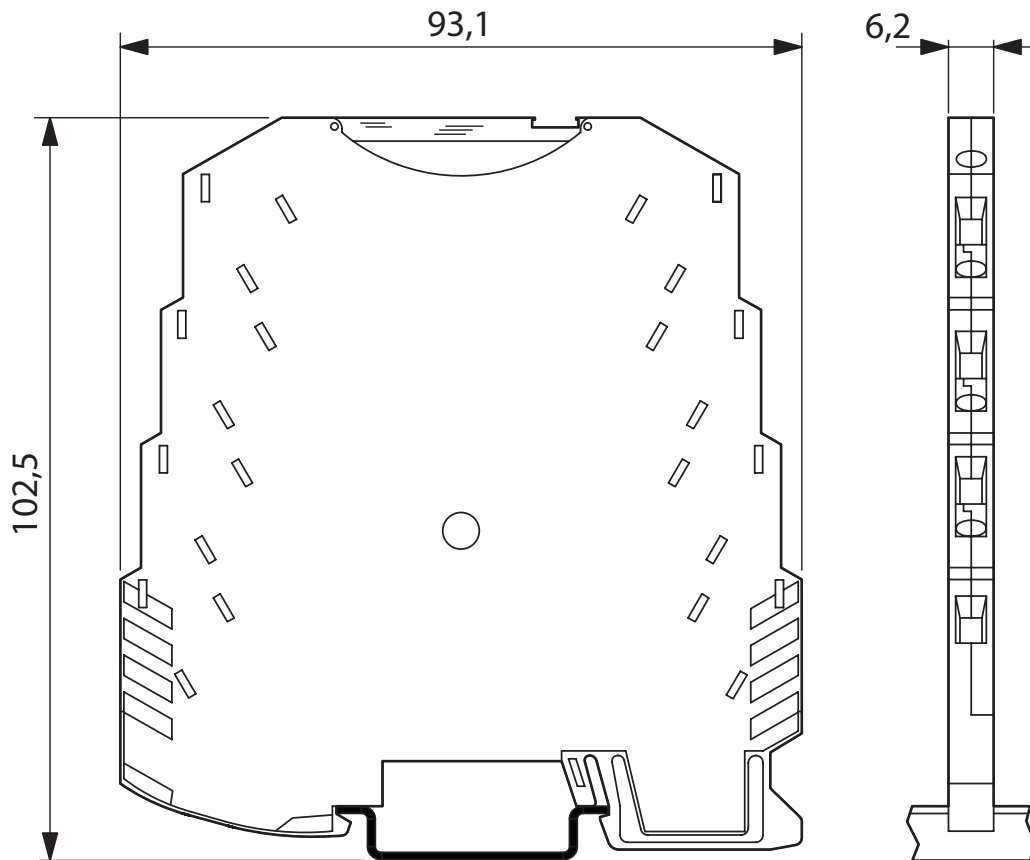
U_B

I

U_E

$U_V = 1,7\ V$

I

I

R_B

MINI MCR-SL-1CP-I-I

Dimensional drawing

93,1

6,2

102,5

Block diagram

Sensor / Field	IN ⊕→	OUT ⊖→	PLC / DCS

4-wire OUT I ① ① IN I 1 OUT I 1 ⑤ ⑤ **passive**
U_s ⊖→ **PWR max. 18VDC** + active +
GND ② ② GND 1 GND 2 ⑥ ⑥ −

4-wire OUT I ③ ③ IN I 2 OUT I 2 ⑦ ⑤ **passive**
U_s ⊖→ **PWR max. 18VDC** + + active +
GND ④ ④ GND 3 GND 4 ⑧ ⑥ −
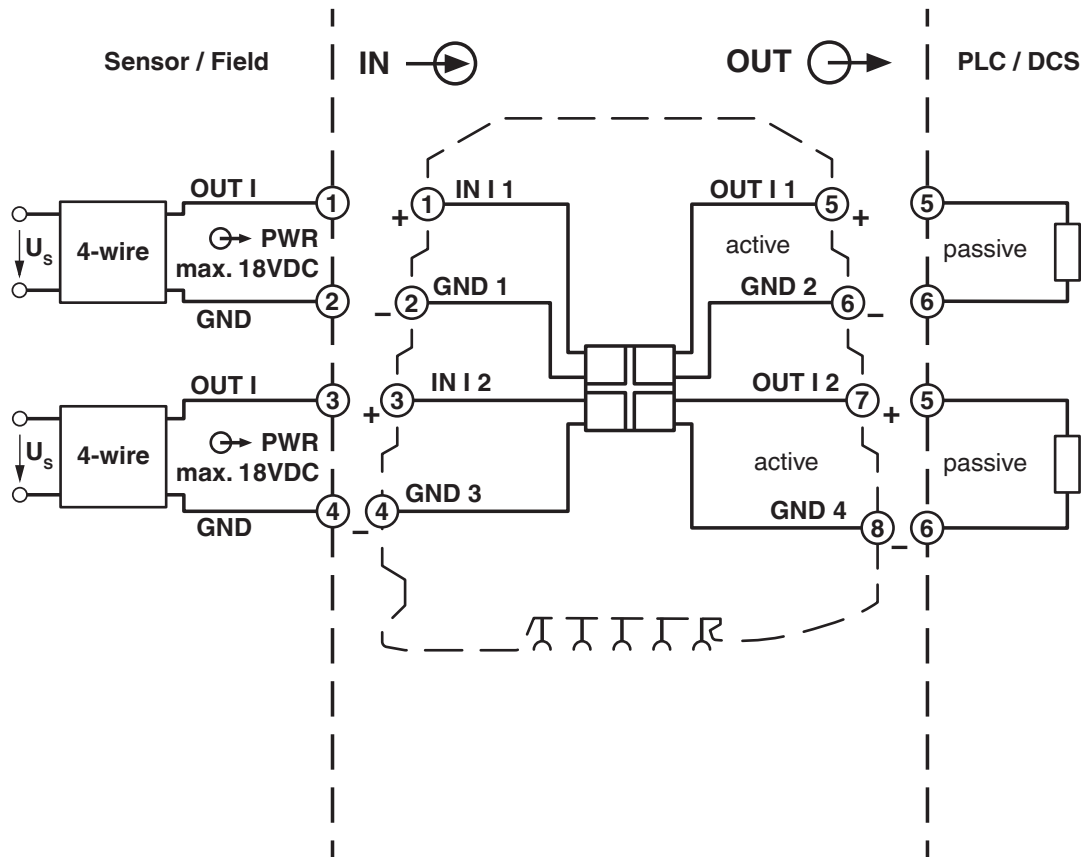
Environmental product compliance

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

MINI MCR DKL - Transparent cover

2308111

https://www.phoenixcontact.com/us/products/2308111

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

MINI MCR-DKL-LABEL - Marking label

2810272

https://www.phoenixcontact.com/us/products/2810272

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

MINI MCR-SL-2CP-I-I-SP - Loop-powered isolators

SZS 0,6X3,5 - Screwdriver

1205053

https://www.phoenixcontact.com/us/products/1205053

Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip