

MINI MCR-SL-U-I-0-SP - Signal conditioner



2813570
<https://www.phoenixcontact.com/us/products/2813570>

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MCR 3-way signal conditioner, for electrical isolation of analog signals, with spring-cage connection, input signal: 0 V...10 V, output signal: 0 mA...20 mA. Replacement part: 2902023 MINI MCR-2-U-I0-PT.

Your advantages

- Power supply possible via the foot element (TBUS)
- Entry-level alternative to configurable signal conditioners
- Low power consumption
- Highly-compact isolating amplifier for electrical isolation, conversion, amplification, and filtering of standard analog signals
- 3-way isolation
- Fixed signal combinations

Commercial data

Item number	2813570
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	CK1211
Catalog page	Page 97 (C-7-2015)
GTIN	4046356101936
Weight per piece (including packing)	79 g
Weight per piece (excluding packing)	60 g
Customs tariff number	85437090
Country of origin	DE

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Technical data

Product properties

Product type	Signal conditioner
Product family	MINI Analog
No. of channels	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Rated insulation voltage	30 V AC 50 V DC
Electrical isolation	Basic insulation in accordance with EN 61010
Electrical isolation between input and output	yes
Limit frequency (3 dB)	approx. 100 Hz
Test voltage, input/output/supply	1.5 kV AC (50 Hz, 60 s)
Step response (10-90%)	$\approx$  ms
Maximum temperature coefficient	$< 0.01\text{ \%/K}$
Temperature coefficient, typical	$< 0.002\text{ \%/K}$
Maximum transmission error	$\leq 0.1\text{ \%}$ (of final value)

Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (The DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, item no. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail in accordance with EN 60715)
Max. current consumption	$< 28\text{ mA}$
Power consumption	$< 600\text{ mW}$

Input data

Signal

Number of inputs	1
Configurable/programmable	no
Voltage input signal	0 V ... 10 V
Max. voltage input signal	30 V
Input resistance of voltage input	approx. 100 k Ω

Output data

Signal

Number of outputs	1
Configurable/programmable	no

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Non-load voltage	approx. 12.5 V
Current output signal	0 mA ... 20 mA
Max. current output signal	28 mA
Load/output load current output	$\leq 500 \Omega$
Ripple	$< 20 \text{ mV}_{\text{PP}}$ (at 500Ω)

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section rigid	$0.2 \text{ mm}^2 \dots 2.5 \text{ mm}^2$
Conductor cross section flexible	$0.2 \text{ mm}^2 \dots 2.5 \text{ mm}^2$
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)
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
Housing material	PBT

Environmental and real-life conditions

Ambient conditions	
Degree of protection	IP20
Ambient temperature (operation)	$-20 \text{ }^{\circ}\text{C} \dots 65 \text{ }^{\circ}\text{C}$
Ambient temperature (storage/transport)	$-40 \text{ }^{\circ}\text{C} \dots 85 \text{ }^{\circ}\text{C}$
Altitude	$\leq 2000 \text{ m}$
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approvals

CE	
Certificate	CE-compliant

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ATEX

Identification	II 3 G Ex nA IIC T4 Gc X
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UL, USA/Canada

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T4

GL

Identification	GL EMC 2 D
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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

Comments	Safety measures must be taken to prevent electrostatic discharge.
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Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %

Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %

Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	5 %

Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010
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Mounting

Mounting type	DIN rail mounting
Assembly instructions	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

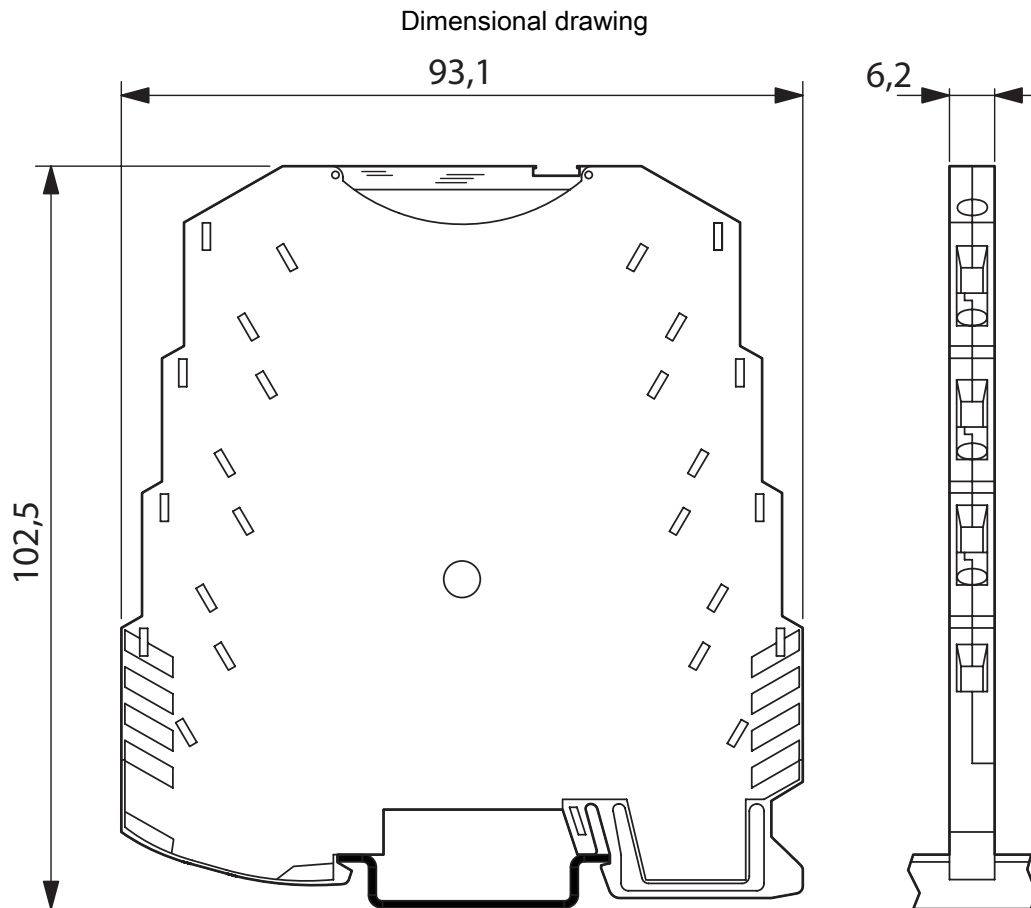
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Drawings



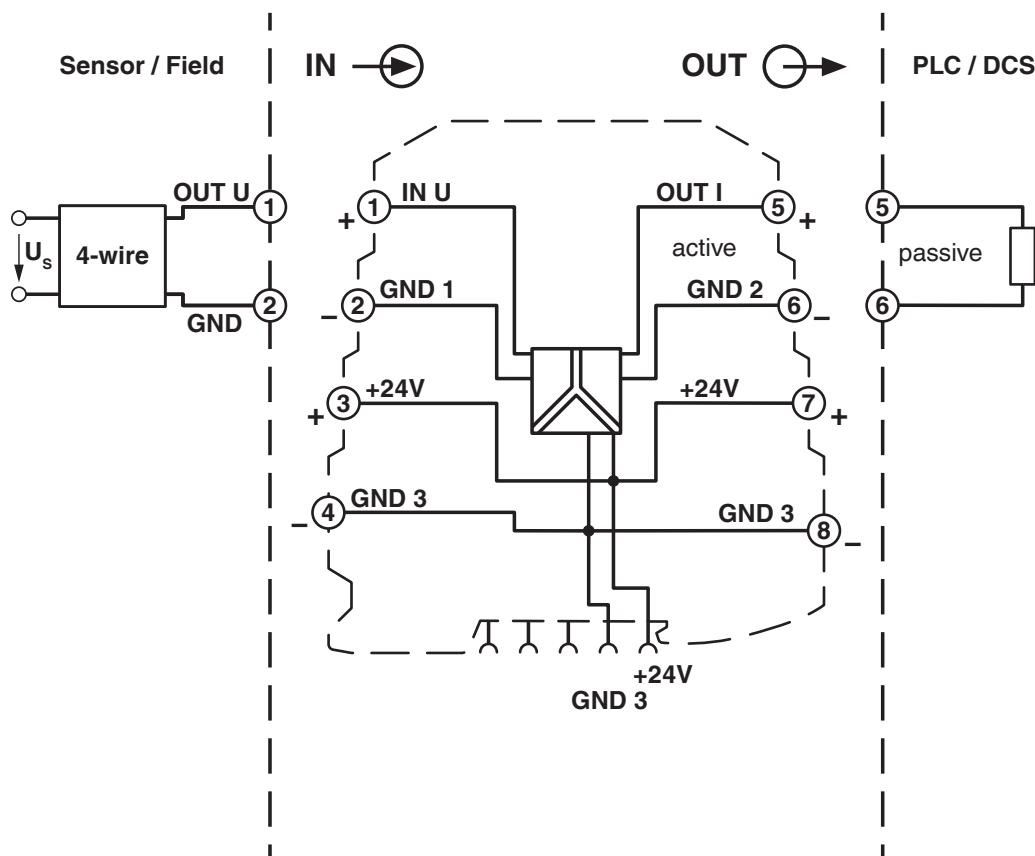
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Block diagram



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Classifications

ECLASS

ECLASS-11.0	27210120
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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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