

Signal conditioner - MINI MCR-SL-UI-UI-SP



2864710

<https://www.phoenixcontact.com/pc/products/2864710>

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MCR 3-way signal conditioner, I/O can be configured via DIP switches, for the electrical isolation of analog signals, with spring-cage connection, order configuration. Replacement part: 2902039 MINI MCR-2-UI-UI-PT-C.

Your advantages

- Power supply possible via the foot element (TBUS)
- Up to 36 signal combinations can be configured using DIP switches
- Low power consumption
- 3-way isolation
- Highly-compact isolating amplifier for electrical isolation, conversion, amplification, and filtering of standard analog signals

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Commercial Data

Item number	2864710
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CK1211
Catalog Page	Page 92 (C-7-2015)
Weight per Piece (including packing)	82 g
Weight per Piece (excluding packing)	65.3 g
Customs tariff number	85437090
Country of origin	DE

Technical Data

Product properties

Product type	Signal conditioner
No. of channels	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

No. of channels	1
Rated insulation voltage	50 V AC/DC
Electrical isolation	Basic insulation according to 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)
Protective circuit	Transient protection
Step response (10-90%)	approx. 3.2 ms
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Maximum transmission error	≤ 0.1 % (of final value)

Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (The DIN rail bus 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 according to EN 60715))
Max. current consumption	< 19 mA (Current output, at 24 V DC incl. load) < 9 mA (Voltage output, at 24 V DC incl. load)
Power consumption	< 450 mW (Current output) < 200 mW (Voltage output)

Input data

Signal

Number of inputs	1
Configurable/programmable	Yes, preconfigured
Voltage input signal	0 V ... 10 V 0 V ... 5 V 1 V ... 5 V 2 V ... 10 V
Max. voltage input signal	30 V
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA

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Max. current input signal	50 mA
Input resistance of voltage input	approx. 100 k Ω
Input resistance current input	approx. 50 Ω

Output data

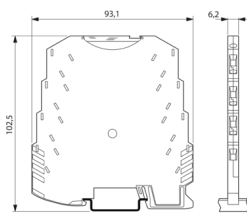
Signal:

Number of outputs	1
Configurable/programmable	Yes, preconfigured
Voltage output signal	0 V ... 10 V 0 V ... 5 V 1 V ... 5 V 2 V ... 10 V
Max. voltage output signal	approx. 12.5 V
Non-load voltage	approx. 12.5 V
Current output signal	0 mA ... 20 mA (please indicate if different setting when ordering) 4 mA ... 20 mA
Max. current output signal	28 mA
Short-circuit current	approx. 22 mA
Load/output load voltage output	≥ 10 k Ω
Load/output load current output	< 500 Ω (at 20 mA)
Ripple	< 20 mV _{PP} (at 500 Ω) < 20 mV _{PP} (at 10 k Ω)

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section solid	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 ... 12

Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

Material specifications

Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
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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 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approval data

CE

Certificate	CE-compliant
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ATEX

Identification	<input type="checkbox"/> 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 T5

GL

Identification	GL EMC 2 D
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EMC data

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

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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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 %

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Surge current load (surge)

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

Comments	Criterion B
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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 according to EN 61010
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Mounting

Mounting type	DIN rail mounting
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.
Mounting position	any

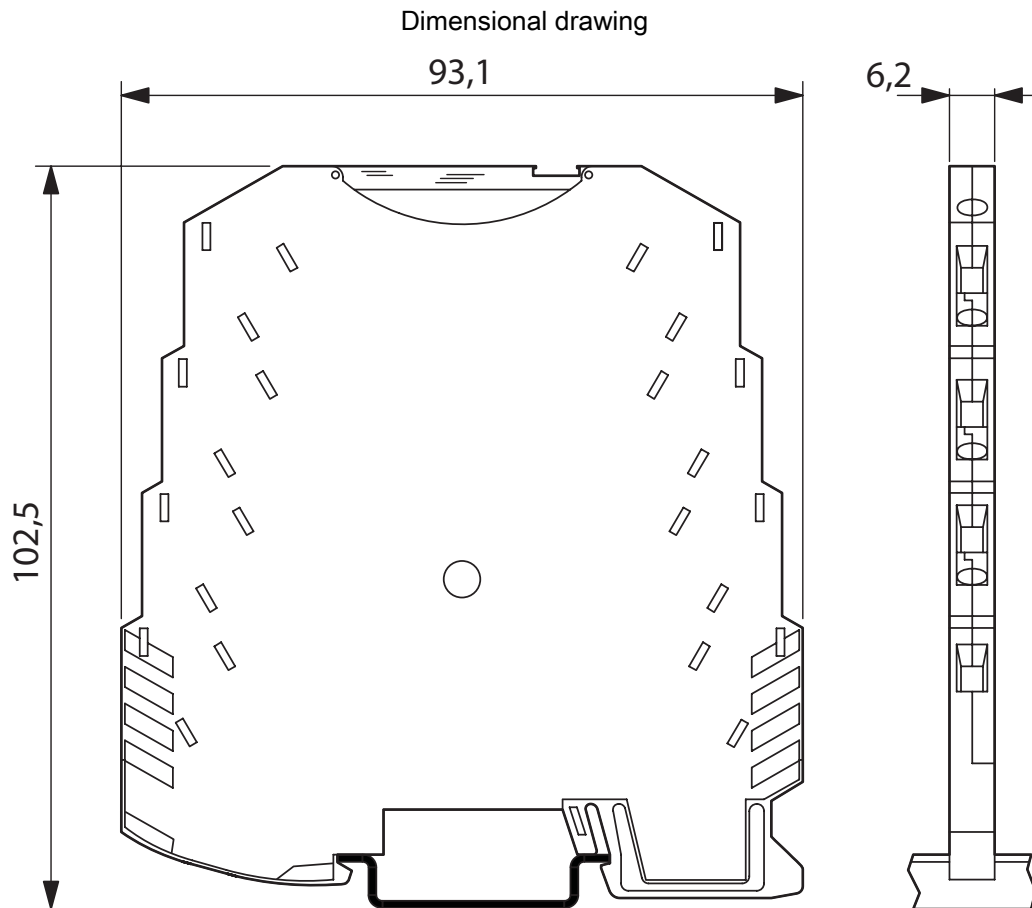
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Drawings

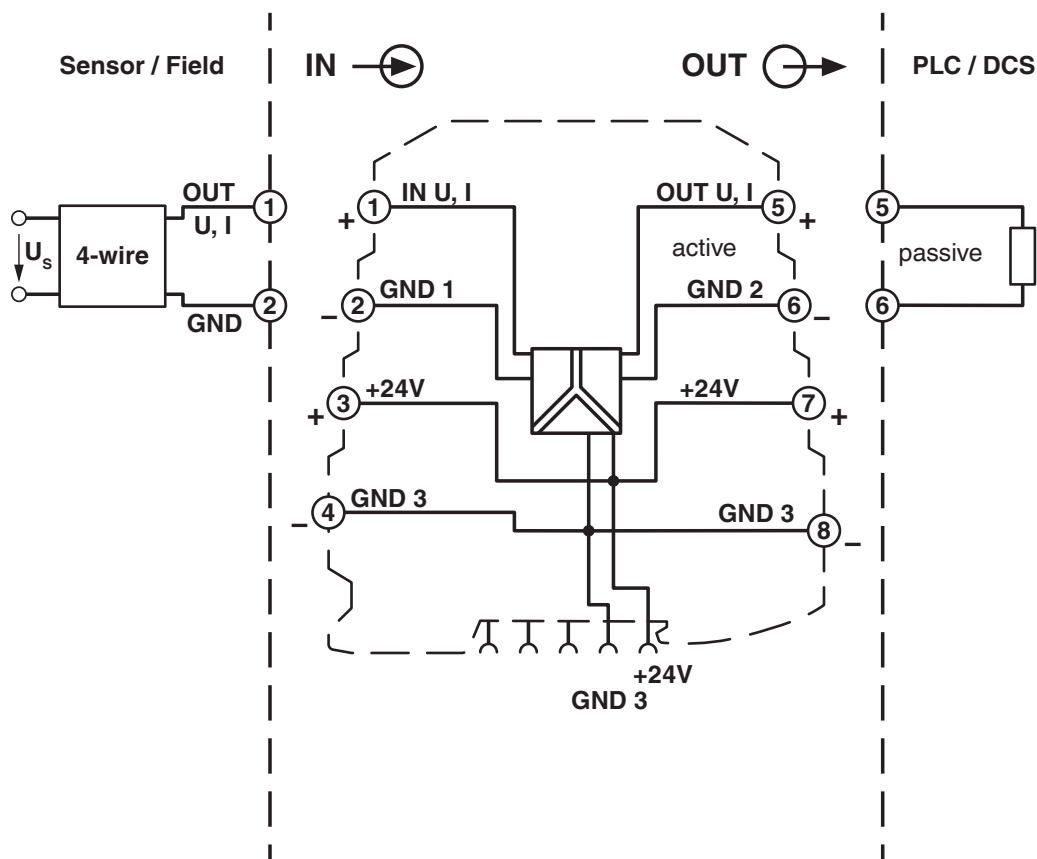


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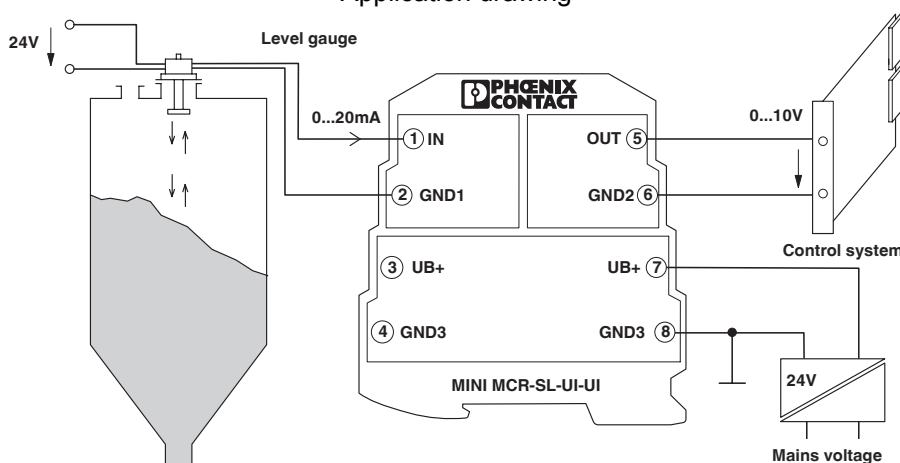
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Block diagram



Application drawing



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Classifications

ECLASS

ECLASS-9.0	27210120
ECLASS-10.0.1	27210120
ECLASS-11.0	27210120

ETIM

ETIM 7.0	EC002653
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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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