

MINI MCR-SL-U-I-4 - Input signal conditioner



2813525

<https://www.phoenixcontact.com/us/products/2813525>

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3-way signal conditioner, for electrical isolation of analog signals, with screw connection, input signal: 0 V ... 10 V, output signal: 4 mA ... 20 mA

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
- Fixed signal combinations
- 3-way isolation

Commercial data

Item number	2813525
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C403
Product key	DK1131
GTIN	4046356100618
Weight per piece (including packing)	88 g
Weight per piece (excluding packing)	71.1 g
Customs tariff number	85437090
Country of origin	DE

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Technical data

Notes


Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Product properties

Product type	Input signal conditioner
Product family	MINI Analog
No. of channels	1

Electrical properties

Electrical isolation	3-way isolation
Electrical isolation between input and output	yes
Limit frequency (3 dB)	approx. 100 Hz
Maximum power dissipation for nominal condition	88 mW
Step response (10-90%)	≈  ms
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Maximum transmission error	≤ 0.1 % (of final value)

Electrical isolation

Overvoltage category	II
Pollution degree	2

Electrical isolation Input/output/power supply IEC/EN 61010

Standards/regulations	IEC/EN 61010
Rated insulation voltage	30 V AC
	50 V DC
Test voltage	1.5 kV AC (50 Hz, 60 s)
Insulation	Basic insulation

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	< 20 mA
Power consumption	< 450 mW

Input data

Signal: Voltage

Number of inputs	1
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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

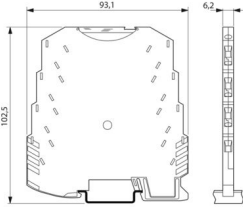
Signal: Current

Number of outputs	1
Configurable/programmable	no
Open-circuit voltage	approx. 12.5 V
Current output signal	4 mA ... 20 mA
Max. current output signal	28 mA
Load/output load current output	$\leq 500 \Omega$
Ripple	$< 20 \text{ mV}_{\text{PP}}$ (at 500 Ω)

Connection data

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

Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	101.2 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

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<https://www.phoenixcontact.com/us/products/2813525>

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
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UL, USA/Canada

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

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

Noise emission

Standards/regulations	EN 61000-6-4
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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 %

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

Standards and regulations

Electrical isolation	3-way isolation
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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

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Drawings



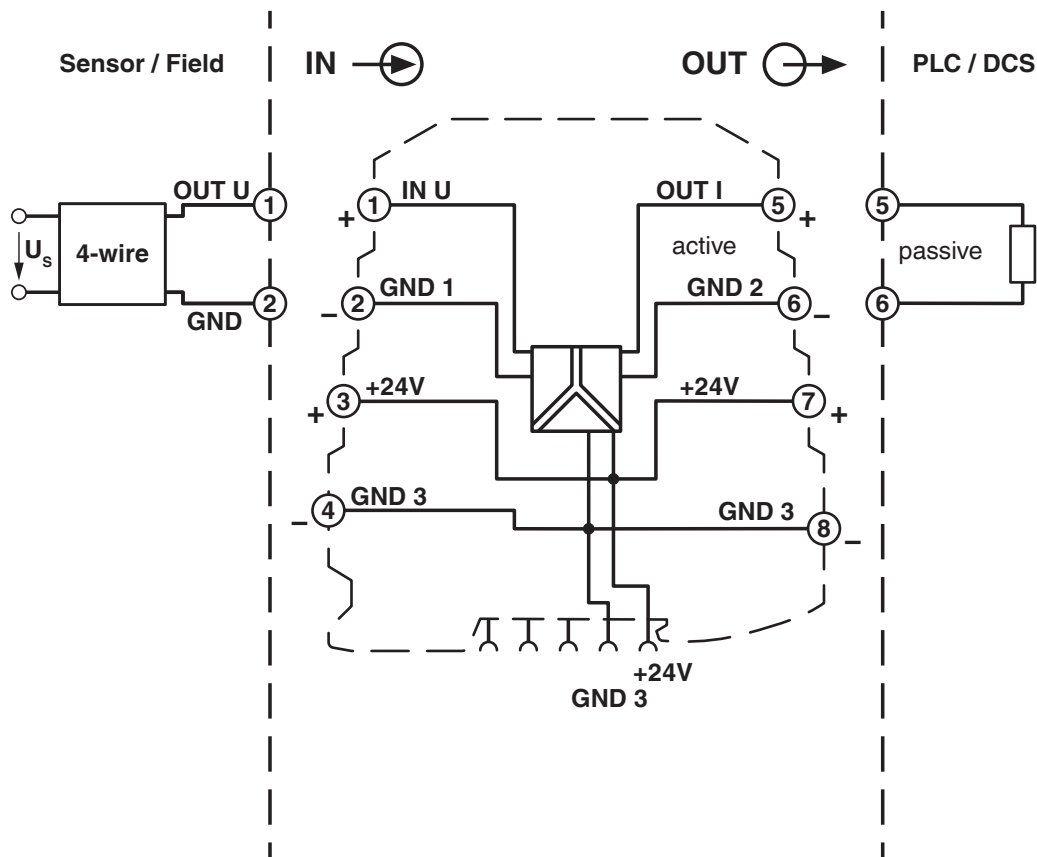
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Block diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2813525>



cUL Recognized

Approval ID: E238705



UL Recognized

Approval ID: E238705

DNV

Approval ID: TAA000020N



cUL Listed

Approval ID: E199827



UL Listed

Approval ID: E199827

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2813525

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Classifications

ECLASS

ECLASS-13.0	27210120
ECLASS-15.0	27210120

ETIM

ETIM 10.0	EC002653
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UNSPSC

UNSPSC 21.0	39121000
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

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.)	Lead(CAS: 7439-92-1)
SCIP	839007c8-d78e-49d6-8f32-ec02754c8d3f

EF3.1 Climate Change

CO2e kg	2.015 kg CO2e
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