

## Signal conditioner - MINI MCR-SL-UI-UI-NC - 2864150

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3-way isolating amplifier for the electrical isolation of analog signals, I/O can be configured via DIP switches, with screw connection, standard configuration

### Your advantages

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



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 956615
GTIN	4017918956615
Weight per Piece (excluding packing)	85.000 g
Custom tariff number	85437090
Country of origin	Germany

### Technical data

#### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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#### Dimensions

Width	6.2 mm
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### Technical data

#### Dimensions

Height	93.1 mm
Depth	101.2 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

#### Input data

Number of inputs	1
Configurable/programmable	Yes, unconfigured
Voltage input signal	0 V ... 10 V
	0 V ... 5 V
	1 V ... 5 V
	2 V ... 10 V
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
max. input voltage	30 V
Max. input current	50 mA
Input resistance of voltage input	approx. 100 k $\Omega$
Input resistance current input	approx. 50 $\Omega$

#### Output data

Number of outputs	1
Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 10 V
	0 V ... 5 V
	1 V ... 5 V
	2 V ... 10 V
Current output signal	0 mA ... 20 mA (please indicate if different setting when ordering)
	4 mA ... 20 mA
Max. output voltage	approx. 12.5 V
Max. output current	28 mA
Short-circuit current	approx. 22 mA
Load/output load voltage output	$\geq$ 10 k $\Omega$
Load/output load current output	< 500 $\Omega$ (at 20 mA)
Ripple	< 20 mV <sub>PP</sub> (at 500 $\Omega$ )

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### Technical data

#### Output data

	< 20 mV <sub>PP</sub> (at 10 kΩ)
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#### Power 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, Order 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)

#### Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 12

#### General

No. of channels	1
Maximum transmission error	≤ 0.1 % (of final value)
	< 0.4 % (Without adjustment)
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Limit frequency (3 dB)	approx. 100 Hz
Step response (10-90%)	approx. 3.2 ms
Protective circuit	Transient protection
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/supply	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

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### Technical data

#### General

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 IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5
GL	GL EMC 2 D
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

#### EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	5 %

#### 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
	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Electrical isolation	Basic insulation according to EN 61010
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
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## Signal conditioner - MINI MCR-SL-UI-UI-NC - 2864150

### Technical data

#### Standards and Regulations

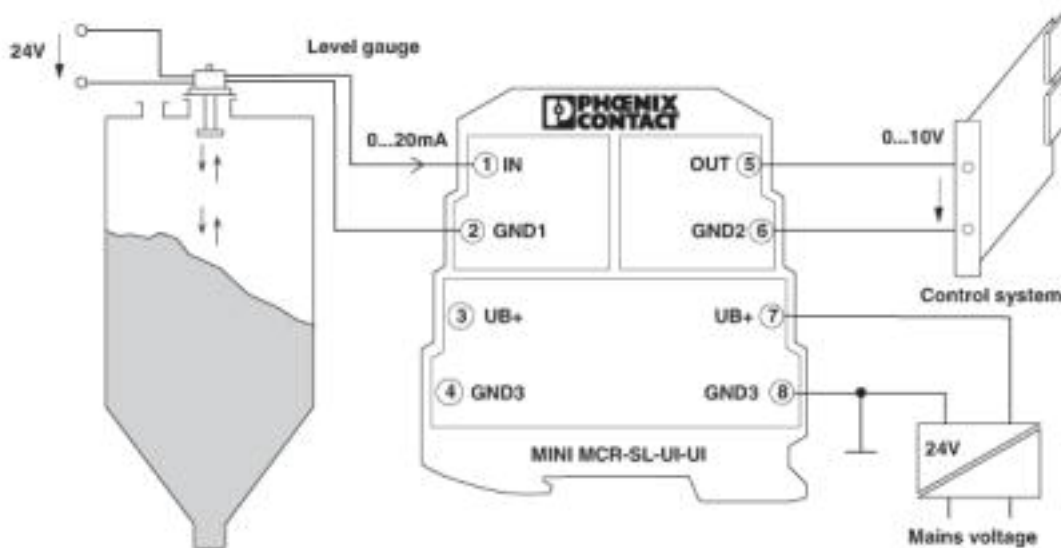
GL	GL EMC 2 D
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

#### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

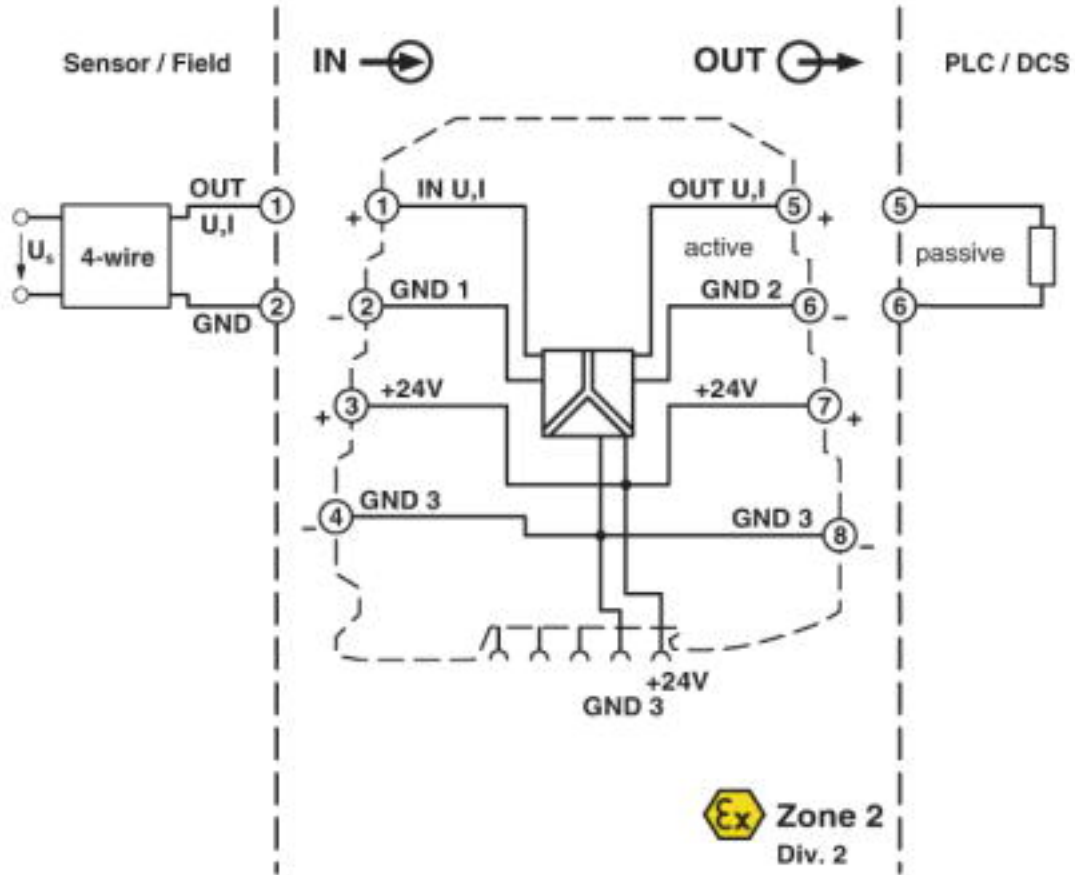
### Drawings

Application drawing



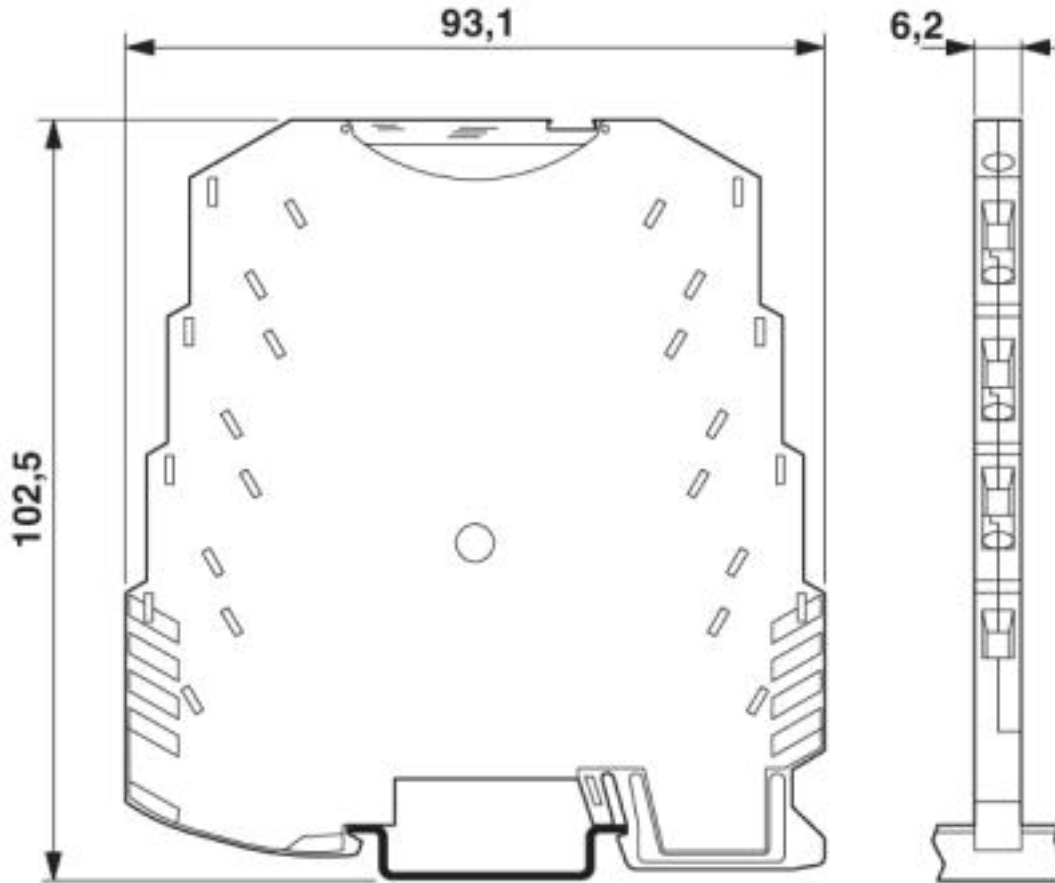
# Signal conditioner - MINI MCR-SL-UI-UI-NC - 2864150

Block diagram



# Signal conditioner - MINI MCR-SL-UI-UI-NC - 2864150

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 4.0	27210100
eCl@ss 4.1	27210100
eCl@ss 5.0	27210100
eCl@ss 5.1	27210100
eCl@ss 6.0	27210100
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

### ETIM

ETIM 4.0	EC002653
ETIM 5.0	EC002653

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### Classifications

#### ETIM

ETIM 6.0	EC002653
ETIM 7.0	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 / DNV GL / cULus Recognized

##### Ex Approvals

ATEX / UL Listed / cUL Listed / EAC Ex / cULus Listed

#### Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA000020N
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cULus Recognized			
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<https://www.phoenixcontact.com/us/products/2864150>



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