

# 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

## Product Features

- Power supply possible via the foot element (T-connector)
- 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

<b>package_quantity</b>	1
<b>GTIN</b>	4017918956615

## Technical data

### Note

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

<b>Width</b>	6.2 mm
<b>Height</b>	93.1 mm
<b>Depth</b>	102.5 mm

### Ambient conditions

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

### Input data

<b>Configurable/programmable</b>	Yes, unconfigured
<b>Voltage input signal</b>	0 V ... 10 V
<b>Voltage input signal</b>	0 V ... 5 V
<b>Voltage input signal</b>	1 V ... 5 V

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## Technical data

### Input data

Voltage input signal	2 V ... 10 V
Current input signal	0 mA ... 20 mA
Current input signal	4 mA ... 20 mA
Max. input voltage	30 V
Max. input current	50 mA
Input resistance of voltage input	approx. 100 kΩ
Input resistance current input	approx. 50 Ω

### Output data

Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 10 V
Voltage output signal	0 V ... 5 V
Voltage output signal	1 V ... 5 V
Voltage output signal	2 V ... 10 V
Current output signal	0 mA ... 20 mA (please indicate if different setting when ordering)
Current output signal	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	≥ 10 kΩ
Load/output load current output	< 500 Ω (at 20 mA)

### Power supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (The T 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)
Max. current consumption	< 9 mA (Voltage output, at 24 V DC incl. load)
Power consumption	< 450 mW (Current output)
Power consumption	< 200 mW (Voltage output)

### Connection data

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

### General

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## Technical data

### General

<b>No. of channels</b>	1
<b>Maximum transmission error</b>	≤ 0.1 % (of final value)
<b>Maximum transmission error</b>	< 0.4 % (Without adjustment)
<b>Maximum temperature coefficient</b>	< 0.01 %/K
<b>Temperature coefficient, typical</b>	< 0.002 %/K
<b>Limit frequency (3 dB)</b>	approx. 100 Hz
<b>Step response (10-90%)</b>	approx. 3.2 ms
<b>Protective circuit</b>	Transient protection
<b>Electrical isolation</b>	Basic insulation according to EN 61010
<b>Surge voltage category</b>	II
<b>Pollution degree</b>	2
<b>Rated insulation voltage</b>	50 V AC/DC
<b>Test voltage, input/output/supply</b>	1.5 kV (50 Hz, 1 min.)
<b>Electromagnetic compatibility</b>	Conformance with EMC Directive 2004/108/EC
<b>Noise emission</b>	EN 61000-6-4
<b>Noise immunity</b>	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
<b>Color</b>	green
<b>Housing material</b>	PBT
<b>Mounting position</b>	any
<b>Assembly instructions</b>	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.
<b>Conformance</b>	CE-compliant
<b>ATEX</b>	# II 3 G Ex nA IIC T4 Gc X
<b>UL, USA / Canada</b>	UL 508 Recognized
<b>UL, USA / Canada</b>	Class I, Div. 2, Groups A, B, C, D T5
<b>GL</b>	GL EMC 2 D

### EMC data

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

### classifications

eCl@ss

<b>eCl@ss 4.0</b>	27210120
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## classifications

### eCl@ss

eCl@ss 4.1	27210120
eCl@ss 5.0	27210120
eCl@ss 5.1	27210120
eCl@ss 6.0	27210120
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120

### ETIM

ETIM 2.0	EC001485
ETIM 3.0	EC001485
ETIM 4.0	EC001485
ETIM 5.0	EC001485


### UNSPSC


UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

## approvals

UL Listed / cUL Listed / ATEX / cULus Listed / UL Recognized / cUL Recognized / GL / cULus Recognized /

### Approval details

<b>UL Listed</b> 	
Nominal voltage UN	
Nominal current IN	
mm <sup>2</sup> /AWG/kcmil	

<b>cUL Listed</b> 	
Nominal voltage UN	
Nominal current IN	
mm <sup>2</sup> /AWG/kcmil	

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approvals

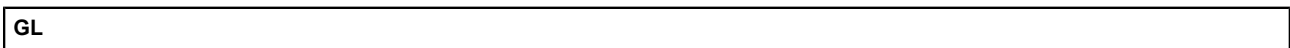


**UL Recognized**

Nominal voltage UN	
Nominal current IN	
mm <sup>2</sup> /AWG/kcmil	

**cUL Recognized**

Nominal voltage UN	
Nominal current IN	
mm <sup>2</sup> /AWG/kcmil	



accessories

**DIN rail connector**

ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



**Power module**

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### accessories

MINI MCR-SL-PTB - 2864134



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MINI MCR-SL-PTB-SP - 2864147



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### Power supply

MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



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MINI-PS-100-240AC/24DC/1.5/EX - 2866653



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### System adapter

MINI MCR-SL-V8-FLK 16-A - 2811268



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### Marking material

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accessories

MINI MCR DKL - 2308111

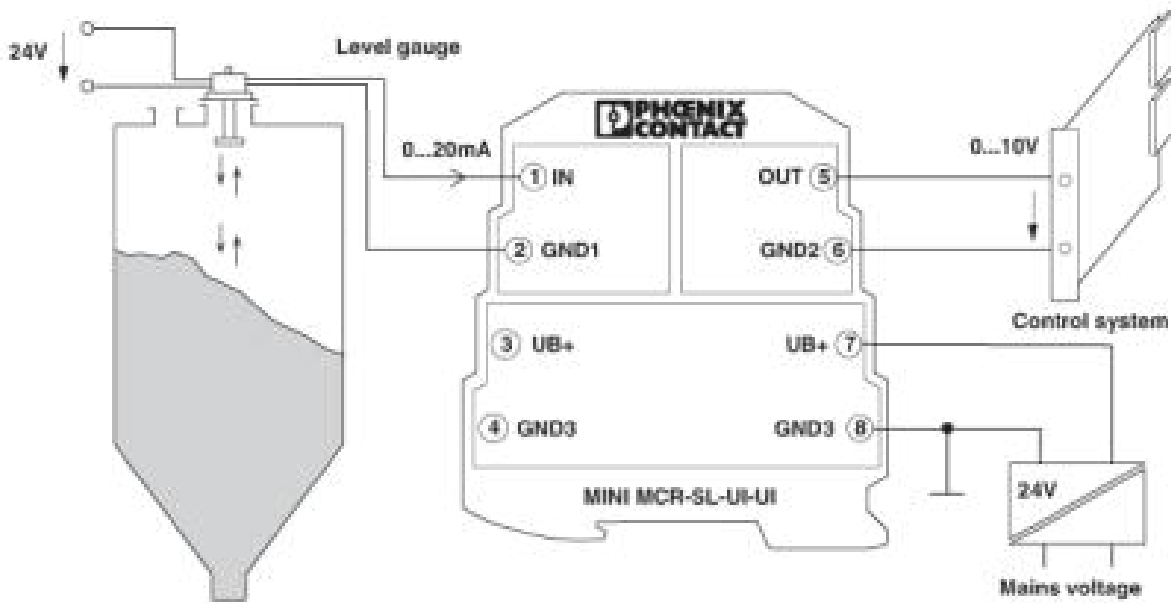


MINI MCR-DKL-LABEL - 2810272



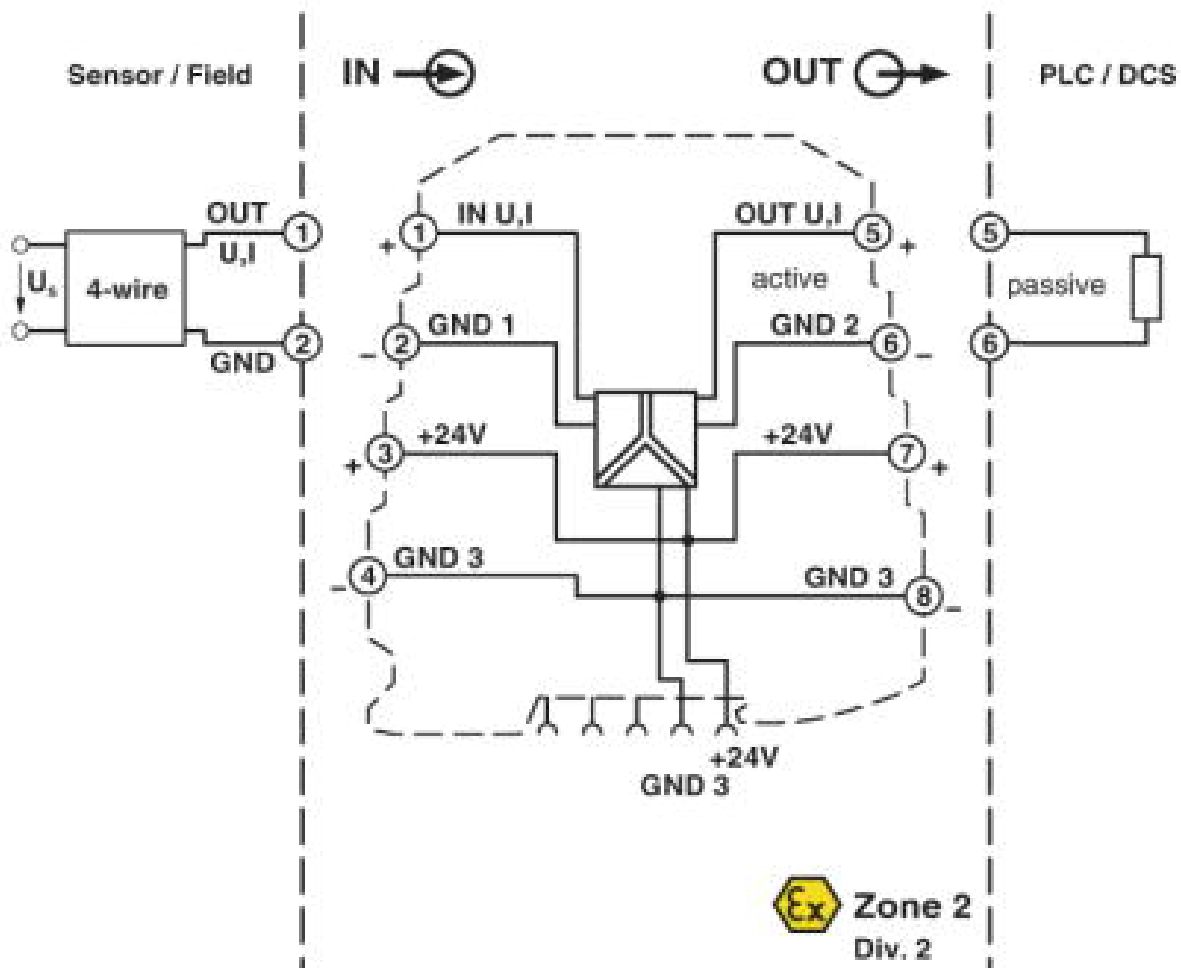
## Drawings

Application drawing



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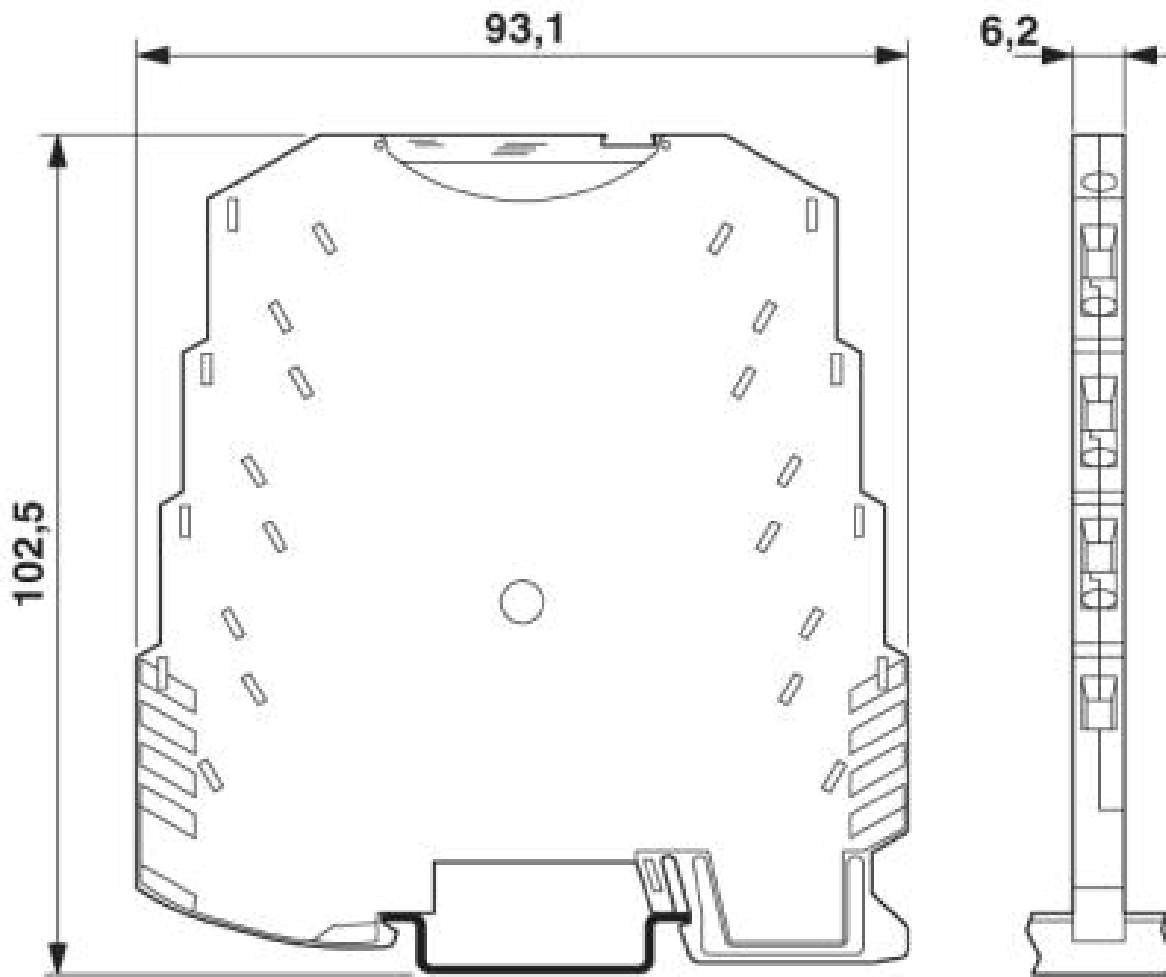
Block diagram





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Dimensioned drawing



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