

# Signal conditioner - MINI MCR-SL-U-U - 2864684

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MCR 3-way isolating amplifier, for electrical isolation of analog signals, with screw connection, input signal: 0 ... 10 V/±10 V, output signal: 0 ... 10 V/±10 V

## Product Description

The 6.2 mm wide standard signal 3-way isolating amplifier MINI MCR-SL-U-U(-SP) is used for electrical isolation, amplification and filtering of standard signals. On the input and output side, the analog standard signals 0...10 V or ±10 V are available, electrically isolated. Power (19.2 V DC to 30 V DC) can be supplied through connection terminal blocks on the modules or in conjunction with the DIN rail connector.

## Product Features

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



## Key commercial data

package_quantity	1
GTIN	4017918956387

## 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
Height	93.1 mm
Depth	102.5 mm

### Ambient conditions

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

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## Technical data

### Input data

Configurable/programmable	no
Voltage input signal	0 V ... 10 V
Voltage input signal	-10 V ... 10 V
Max. input voltage	30 V
Input resistance of voltage input	approx. 100 kΩ

### Output data

Configurable/programmable	no
Voltage output signal	0 V ... 10 V
Voltage output signal	-10 V ... 10 V
Max. output voltage	12.5 V
Short-circuit current	approx. 2 mA
Load/output load voltage output	≥ 10 kΩ

### 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	< 20 mA
Power consumption	< 240 mW (at 24 V DC)

### 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

No. of channels	1
Maximum transmission error	≤ 0.1 % (of final value)
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
Surge voltage category	II
Pollution degree	2

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## Technical data

### General

<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>	15 %
<b>Designation</b>	Fast transients (burst)
<b>Standards/regulations</b>	EN 61000-4-4
<b>Typical deviation from the measuring range final value</b>	15 %
<b>Designation</b>	Conducted interferences
<b>Standards/regulations</b>	EN 61000-4-6
<b>Typical deviation from the measuring range final value</b>	15 %

## classifications

### eCl@ss

<b>eCl@ss 4.0</b>	27210120
<b>eCl@ss 4.1</b>	27210120
<b>eCl@ss 5.0</b>	27210120
<b>eCl@ss 5.1</b>	27210120
<b>eCl@ss 6.0</b>	27210120
<b>eCl@ss 7.0</b>	27210120
<b>eCl@ss 8.0</b>	27210120

### ETIM

<b>ETIM 2.0</b>	EC001485
<b>ETIM 3.0</b>	EC001485
<b>ETIM 4.0</b>	EC001485

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## classifications

### ETIM

<b>ETIM 5.0</b>	EC001485
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### UNSPSC

<b>UNSPSC 6.01</b>	30211506
<b>UNSPSC 7.0901</b>	39121008
<b>UNSPSC 11</b>	39121008
<b>UNSPSC 12.01</b>	39121008
<b>UNSPSC 13.2</b>	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	

<b>ATEX</b>
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<b>cULus Listed</b>
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<b>UL Recognized</b>
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# Signal conditioner - MINI MCR-SL-U-U - 2864684

## approvals

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

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

<b>GL</b>
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<b>cULus Recognized</b>	
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## accessories

### DIN rail connector

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



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## Power module

MINI MCR-SL-PTB - 2864134



## Signal conditioner - MINI MCR-SL-U-U - 2864684

### accessories

MINI MCR-SL-PTB-SP - 2864147



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### Power supply

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



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



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### Marking material

MINI MCR DKL - 2308111



MINI MCR-DKL-LABEL - 2810272

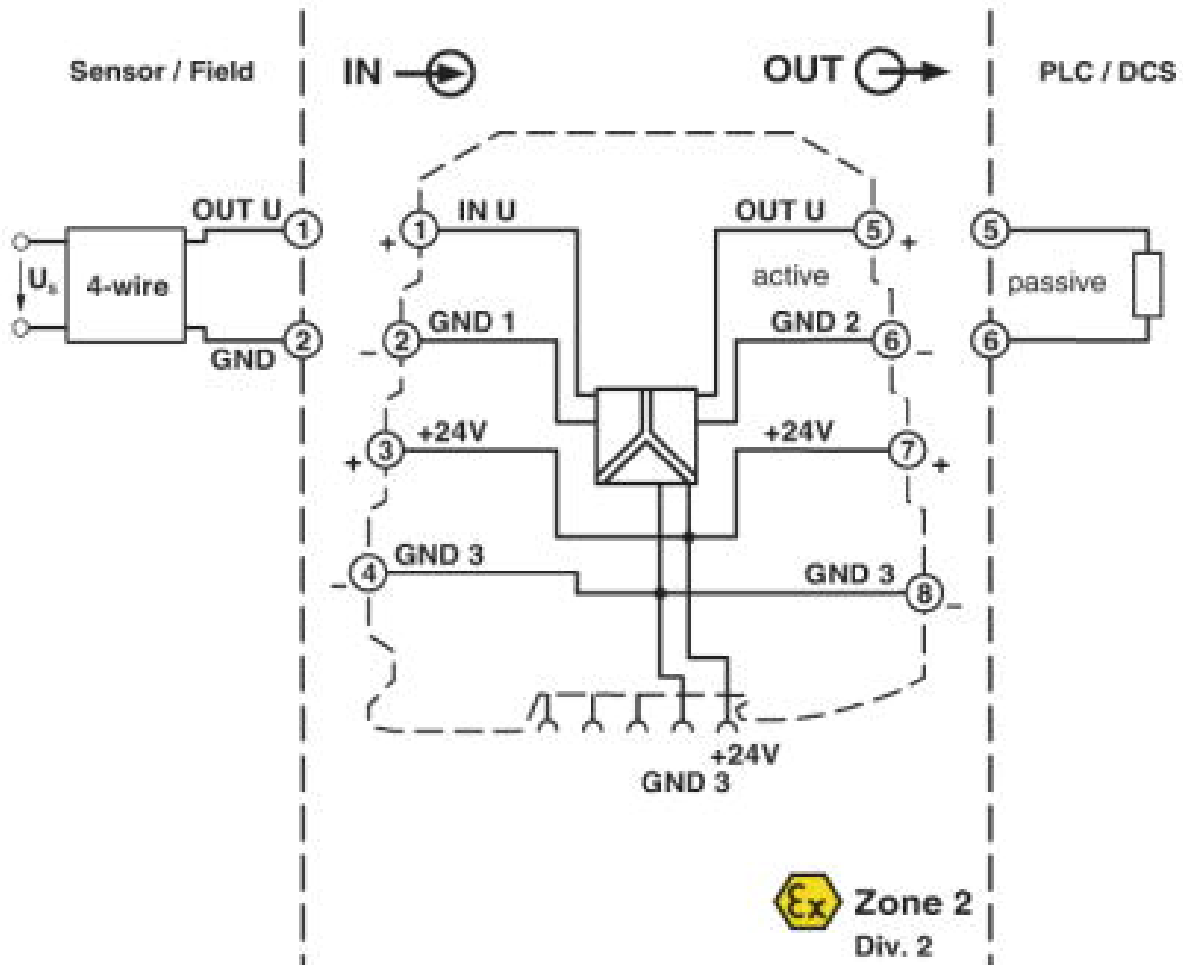


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### Drawings

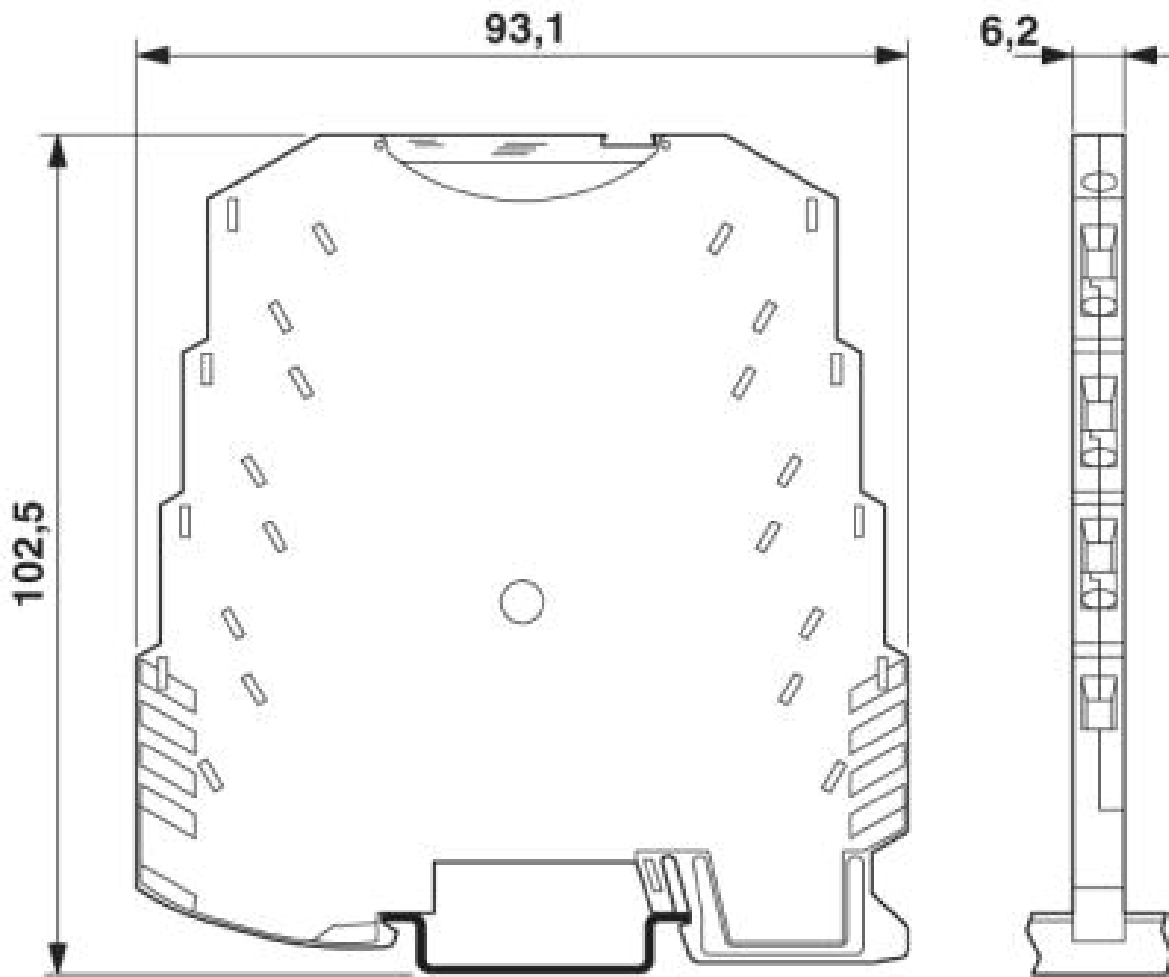
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Block diagram



# Signal conditioner - MINI MCR-SL-U-U - 2864684

Dimensioned drawing



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