

## Signal conditioner - MINI MCR-SL-U-UI-NC - 2865007

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MCR 3-way isolation amplifier, with configurable input/output, for electrical isolation and conversion of analog signals up to 30 V, with screw connection, standard configuration

### Product description

The 6.2 mm wide configurable 3-way isolating amplifier MINI MCR-SL-U-UI-... is used for electrical isolation, conversion, amplification and filtering of standard signals.

The signals 0...24 V and 0...30 V can be processed on the input side.

The analog signals 0...20 mA, 4...20 mA, 0...10 V, 2...10 V, 0...5 V or 1..5 V are available electrically isolated on the output side.

The DIP switches, which can be accessed on the side of the housing, can be used to configure the input and output signal ranges.

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.

### Why buy this product

- Power supply possible via the foot element (TBUS)
- Low power consumption
- Highly-compact isolating amplifier for electrical isolation, conversion, amplification, and filtering of 24 V or
- 30 V DC signals to create standard analog signals
- Up to 12 signal combinations can be configured using DIP switches
- 3-way isolation
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### Key commercial data

Packing unit	1 pc
GTIN	
Weight per Piece (excluding packing)	65.8 g
Custom tariff number	85437090
Country of origin	Germany

### Technical data

#### Note

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## 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

### Input data

Number of inputs	1
Configurable/programmable	Yes, unconfigured
Voltage input signal	0 V ... 24 V
	0 V ... 30 V
Max. input voltage	50 V DC
Input resistance of voltage input	approx. 125 kΩ (0 ... 24 V)
	approx. 155 kΩ (0 ... 30 V)

### Output data

Number of inputs	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
	4 mA ... 20 mA
Max. output voltage	≤ 12.5 V
Max. output current	28 mA
Short-circuit current	≤ 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 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 (at 24 V DC incl. load)
Power consumption	< 450 mW

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## Technical data

### 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 min.	26
Conductor cross section AWG max.	12
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible 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)
	< 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. 3.5 ms
Protective circuit	Transient protection
Electrical isolation	Basic insulation according to EN 61010
Surge voltage category	II
Pollution degree	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 2004/108/EC
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
Mounting position	any
Assembly instructions	To bridge the supply voltage, the DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used. 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

### EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3

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## Technical data

### EMC data

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 %

## Classifications

### eCl@ss

eCl@ss 4.0	27210120
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

### Approvals

#### Approvals

UL Recognized / cUL Recognized / GL / EAC / cULus Recognized

#### Ex Approvals

UL Listed / cUL Listed / ATEX / cULus Listed

# Signal conditioner - MINI MCR-SL-U-UI-NC - 2865007


## Approvals


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Approvals submitted

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### Approval details

UL Recognized 

cUL Recognized 

GL

EAC

cULus Recognized 

## Accessories

### Accessories

#### DIN rail connector

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



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

### Marking material

Marking label - MINI MCR-DKL-LABEL - 2810272



Label for extended marking of MINI MCR modules in connection with the MINI MCR-DKL

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### Accessories

Transparent cover - MINI MCR DKL - 2308111



Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm

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### Power module

Power terminal block - MINI MCR-SL-PTB - 2864134



MCR power terminal block for supplying several MINI Analog modules via the DIN rail connector, with screw connection, maximum current consumption of up to 2 A

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Power terminal block - MINI MCR-SL-PTB-SP - 2864147



MCR power terminal block for supplying several MINI Analog modules via the DIN rail connector, with spring-cage connection, maximum current consumption of up to 2 A

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### Power supply

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



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

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



Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

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### System adapter

# Signal conditioner - MINI MCR-SL-U-UI-NC - 2865007

## Accessories

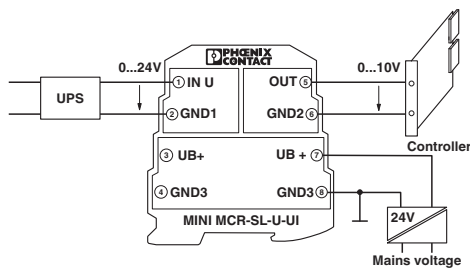
System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



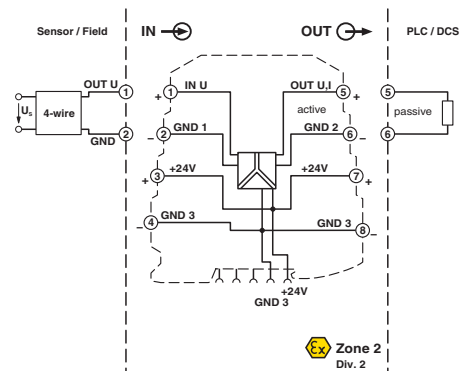
Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.

## Drawings

Application drawing



Block diagram



Signal conversion to uninterruptible power supply (UPS)

Dimensional drawing

