

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.

Product Features

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



Key commercial data

package_quantity	1
GTIN	4046356046565

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

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Technical data

Ambient conditions

Degree of protection	IP20
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Input data

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

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
Current output signal	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 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 (at 24 V DC incl. load)
Power consumption	< 450 mW

Connection data

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

General

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Technical data

General

No. of channels	1
Maximum transmission error	< 0.1 % (of final value)
Maximum transmission error	< 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
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T5
GL	GL EMC 2 D

EMC data

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

classifications

eCI@ss

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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

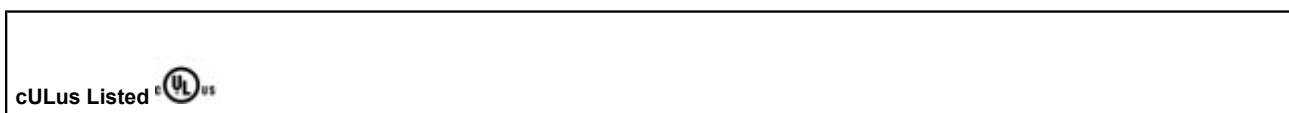
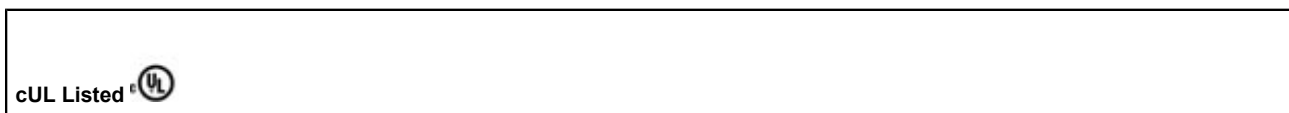
UNSPSC

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

approvals

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

Approval details



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approvals

Nominal voltage UN	
Nominal current IN	
mm ² /AWG/kcmil	

cUL Recognized	
Nominal voltage UN	
Nominal current IN	
mm ² /AWG/kcmil	

GL

cULus Recognized	
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accessories

DIN rail connector

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



Power module

MINI MCR-SL-PTB - 2864134



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accessories

MINI MCR-SL-PTB-SP - 2864147



System adapter

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



Power supply

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



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



Marking material

MINI MCR-DKL-LABEL - 2810272



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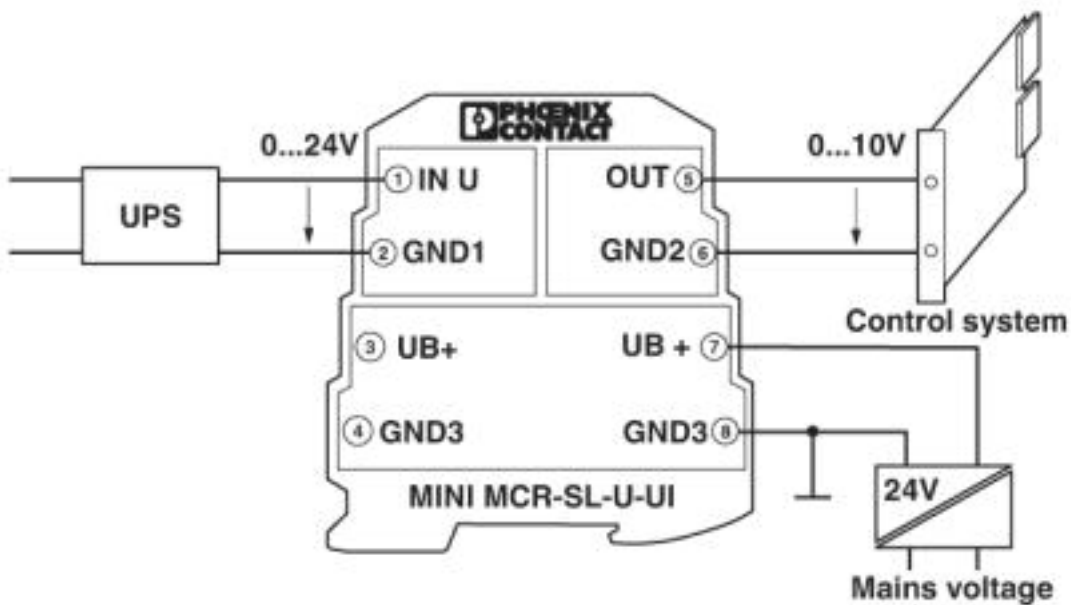
accessories

MINI MCR DKL - 2308111



Drawings

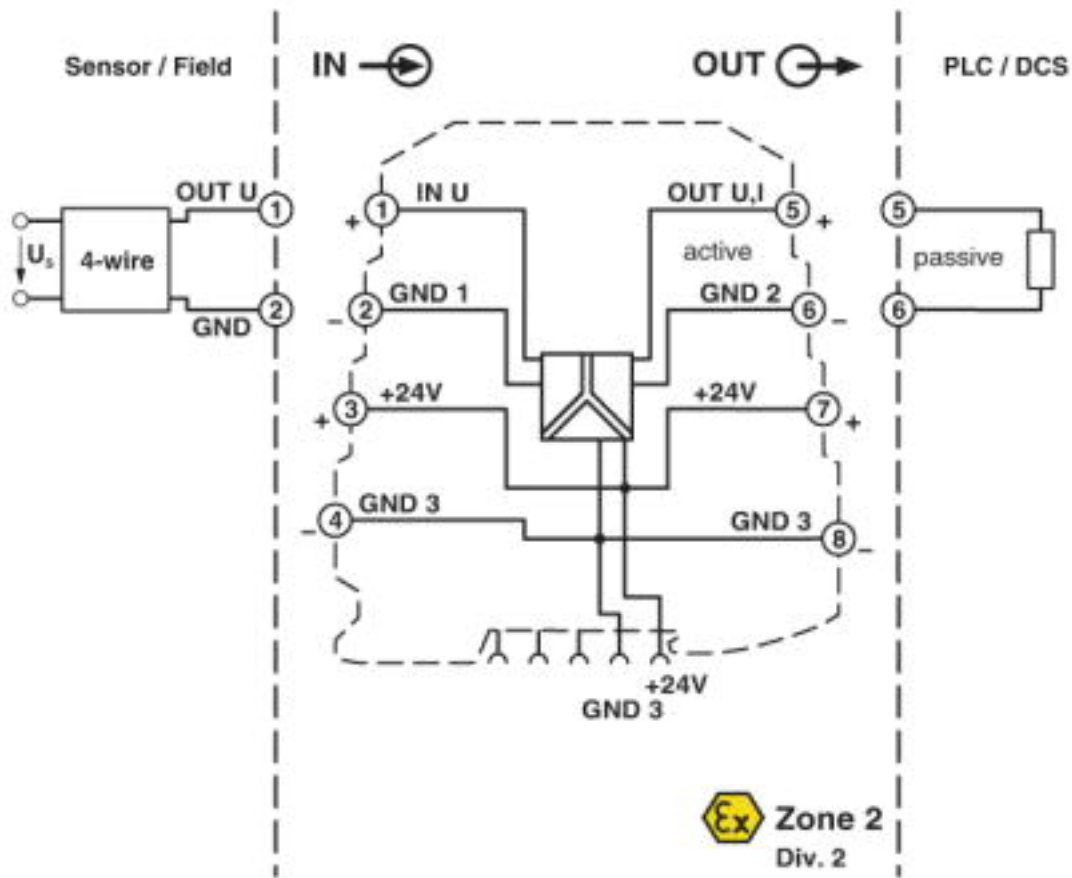
Application drawing



Signal conversion to uninterruptible power supply (UPS)

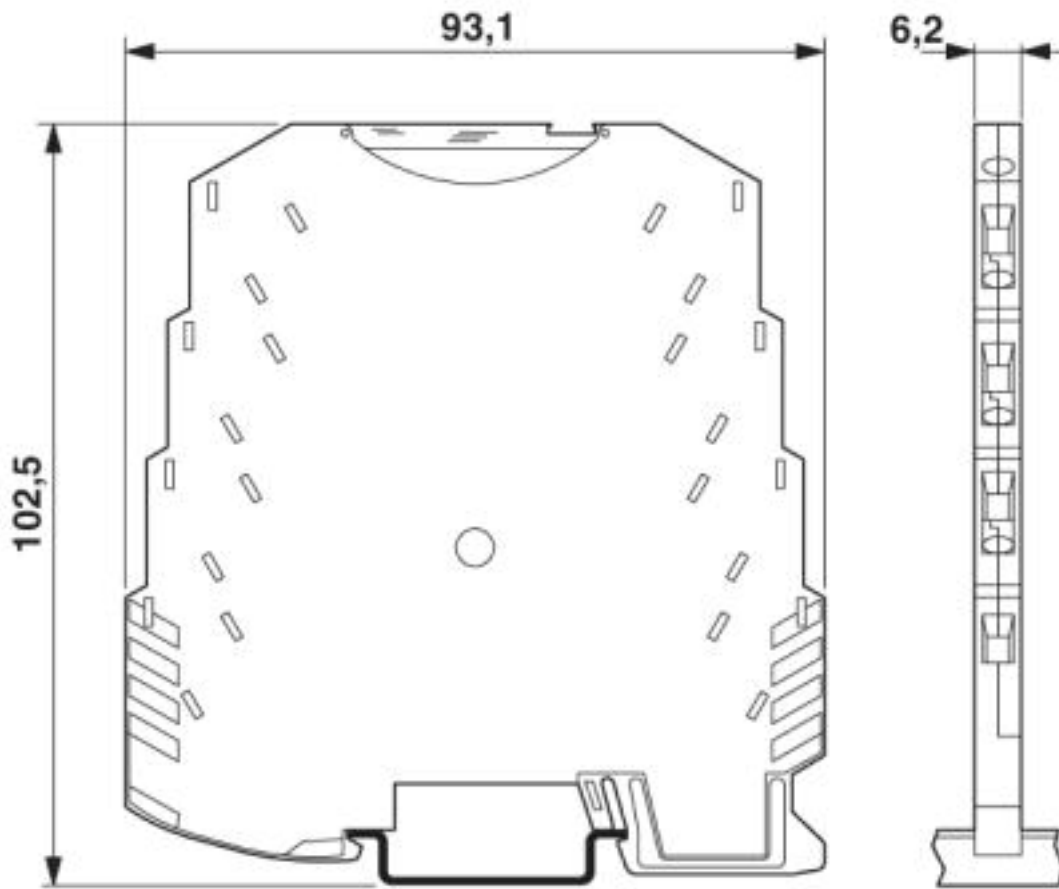
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Block diagram



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Dimensioned drawing



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