

Signal conditioner - MINI MCR-SL-UI-UI - 2864383

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

Product description

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

The standard signals 0...20 mA, 4...20 mA, 0...10 V, 2...10 V, 0...5 V or 1...5V are available electrically isolated on the input and 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 (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

Packing unit	1 pc
Weight per Piece (excluding packing)	67.9 g
Weight per piece (including packing)	88.3 g
Custom tariff number	85437090
Country of origin	Germany
Sales Key	J1 - MSR Technology

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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Signal conditioner - MINI MCR-SL-UI-UI - 2864383

Technical data

Dimensions

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

Configurable/programmable	Yes, preconfigured
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 kΩ
Input resistance current input	approx. 50 Ω

Output data

Configurable/programmable	Yes, preconfigured
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	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)
	< 9 mA (Voltage output, at 24 V DC incl. load)
Power consumption	< 450 mW (Current output)
	< 200 mW (Voltage output)

Signal conditioner - MINI MCR-SL-UI-UI - 2864383

Technical data

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 AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	12
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
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. 3.2 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	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

EMC data

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

Signal conditioner - MINI MCR-SL-UI-UI - 2864383

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 / cULus Recognized

Ex Approvals


UL Listed / cUL Listed / ATEX / cULus Listed


Signal conditioner - MINI MCR-SL-UI-UI - 2864383

Approvals


Approvals submitted

Approval details

UL Recognized 

cUL Recognized 

GL

cULus Recognized 

Accessories

Accessories

DIN rail connector

Electronic housing - 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

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

Signal conditioner - MINI MCR-SL-UI-UI - 2864383

Accessories

Marking label - MINI MCR-DKL-LABEL - 2810272



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

Power module

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



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

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



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

Power supply

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



DIN rail power supply unit, primary-switched mode, slim design, output: 24 V DC / 1.5 A

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



DIN rail power supply unit, primary-switched mode, slim design, output: 24 V DC / 1.5 A, ATEX approval

System adapter

Signal conditioner - MINI MCR-SL-UI-UI - 2864383

Accessories

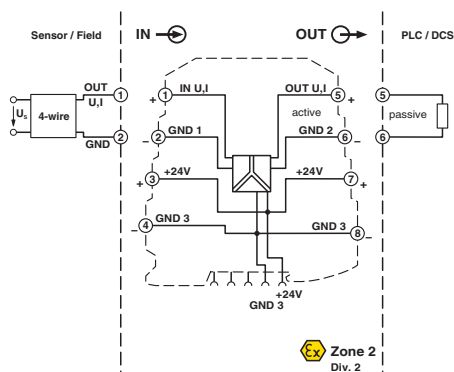
System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



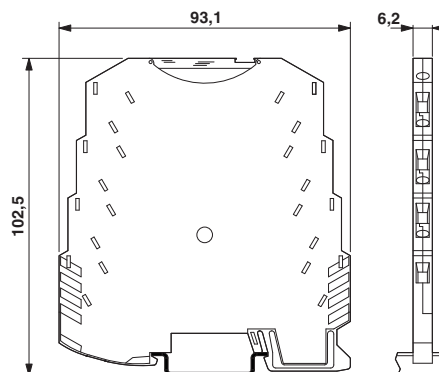
Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.

Drawings

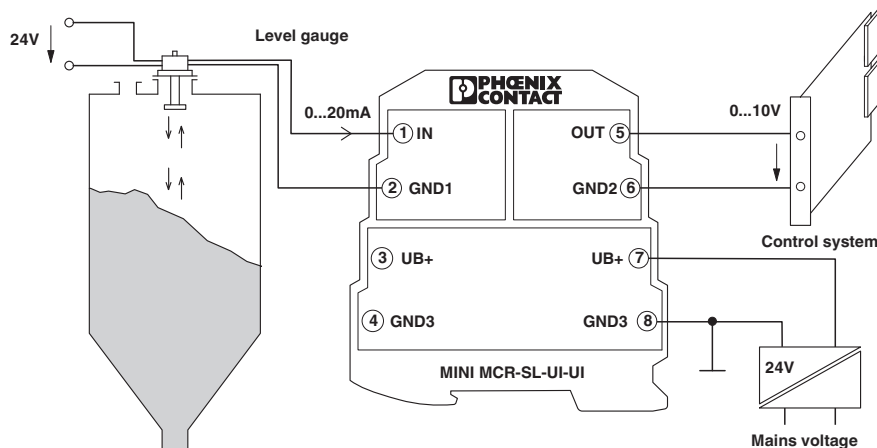
Block diagram



Dimensioned drawing



Application drawing



Level measurement