

# Signal duplicator - MINI MCR-SL-UI-2I

2864794

<https://www.phoenixcontact.com/pc/products/2864794>

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MCR 4-way signal duplicator for the electrical isolation and doubling of analog signals with screw connection, order configuration. Replacement part: 2905025 MINI MCR-2-UI-2UI-C.

## Product Description

The 6.2 mm wide configurable 4-way isolating amplifier MINI MCR-SL-UI-2I-... is used for electrical isolation, conversion, amplification and filtering of standard signals.

On the input side, the analog standard signals 0...20 mA, 4...20 mA, 0...10 V or 1...5V can be selected, on the output side there are two current outputs that can be set independently of one another with a 0...20 mA-, or 4...20mA signal, electrically isolated (4-way isolation).

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.

## Your advantages

- Power supply possible via the foot element (TBUS)
- Highly-compact isolating amplifier for electrical isolation, conversion, amplification, filtering, and duplication of standard analog signals
- Duplication of a standard analog signal on two current outputs
- 4-way isolation
- Up to 8 signal combinations can be configured using DIP switches

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## Commercial Data

Item number	2864794
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CK1211
Catalog Page	Page 98 (C-7-2015)
GTIN	4017918974978
Weight per Piece (including packing)	89.7 g
Weight per Piece (excluding packing)	73.3 g
Customs tariff number	85437090
Country of origin	DE

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## Technical Data

### Product properties

Product type	Signal duplicator
No. of channels	2

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

No. of channels	2
Rated insulation voltage	50 V AC/DC
Electrical isolation	Basic insulation according to EN 61010
Electrical isolation between input and output	yes
Limit frequency (3 dB)	approx. 35 Hz
Maximum power dissipation for nominal condition	500 mW
Test voltage, input/output/supply	1.5 kV AC (50 Hz, 60 s)
Protective circuit	Transient protection
Step response (0–99%)	□ 10 ms
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.004 %/K
Maximum transmission error	≤ 0.2 % (of final value)
Transmission error, typical	< 0.1 %

### 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, Item 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	< 30 mA (at 24 V DC incl. load)
Power consumption	< 600 mW

### Input data

#### Signal

Number of inputs	1
Configurable/programmable	Yes, preconfigured
Voltage input signal	0 V ... 10 V 1 V ... 5 V
Max. voltage input signal	30 V
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA
Max. current input signal	50 mA
Input resistance of voltage input	approx. 100 kΩ

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Input resistance current input	approx. 50 $\Omega$
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## Output data

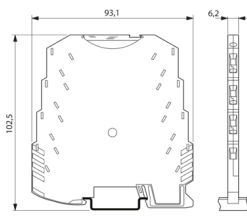
Signal:

Number of outputs	2
Configurable/programmable	Yes, preconfigured
Non-load voltage	9 V
Current output signal	2x 0 mA ... 20 mA 2x 4 mA ... 20 mA
Max. current output signal	approx. 22 mA
Load/output load current output	$\leq 250 \Omega$ (at 20 mA)
Ripple	$< 20 \text{ mV}_{PP}$ (at 250 $\Omega$ )

## Connection data

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

## Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

## Material specifications

Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2
Housing material	PBT

## Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Permissible humidity (operation)	10 % ... 95 % (non-condensing)
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## Approval data

### CE

Certificate	CE-compliant
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### ATEX

Identification	<input type="checkbox"/> II 3 G Ex nA IIC T4 Gc X
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### UL, USA / Canada

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5

### GL

Identification	GL EMC 2 D
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## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

### Electrostatic discharge

Standards/regulations	EN 61000-4-2
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### Electrostatic discharge

Comments	Safety measures must be taken to prevent electrostatic discharge.
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### Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %

### Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %

### Surge current load (surge)

Standards/regulations	EN 61000-4-5
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### Surge current load (surge)

Comments	Criterion B
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### Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6

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Typical deviation from the measuring range final value	5 %
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## Standards and regulations

Electrical isolation	Basic insulation according to EN 61010
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## Mounting

Mounting type	DIN rail mounting
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.
Mounting position	any

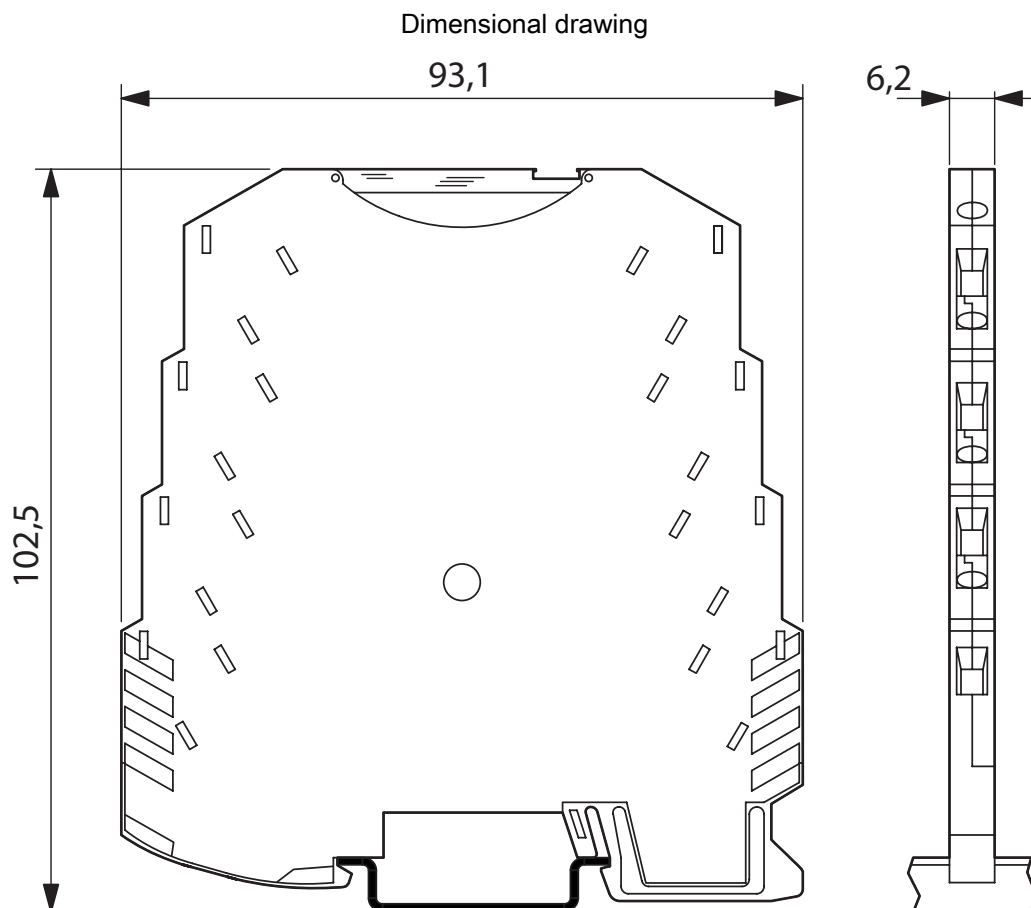
# Signal duplicator - MINI MCR-SL-UI-2I

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## Drawings

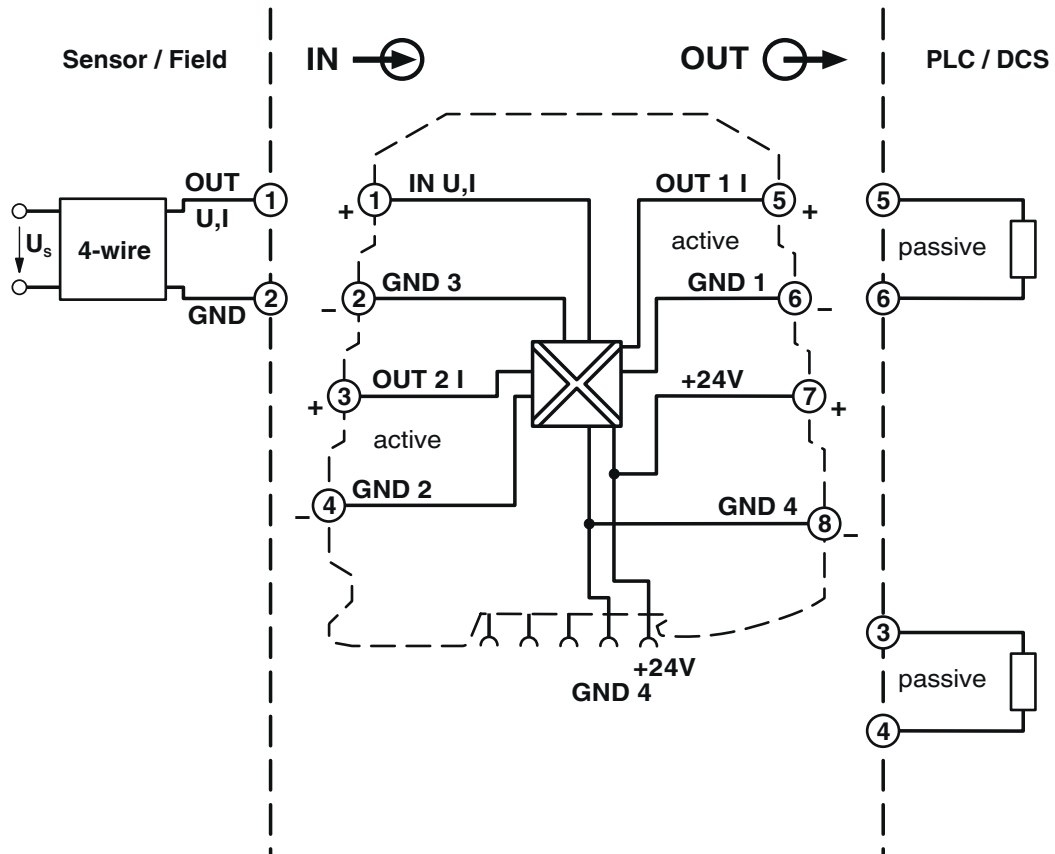


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Block diagram





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## Classifications

### ECLASS

ECLASS-9.0	27210120
ECLASS-10.0.1	27210120

### ETIM

ETIM 7.0	EC002653
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## Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"
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## Accessories

### Transparent cover

Transparent cover - MINI MCR DKL - 2308111

<https://www.phoenixcontact.com/pc/products/2308111>



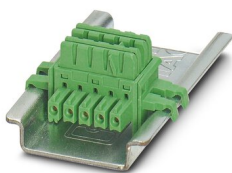
Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm

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### DIN rail bus connectors

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

<https://www.phoenixcontact.com/pc/products/2869728>



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

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## Power terminal block

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

<https://www.phoenixcontact.com/pc/products/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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## Marking label

Marking label - MINI MCR-DKL-LABEL - 2810272

<https://www.phoenixcontact.com/pc/products/2810272>



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

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## Power supply unit

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

<https://www.phoenixcontact.com/pc/products/2866983>



Please use the following item in new systems: 2904614

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

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