

# MINI MCR-SL-UI-UI-SP-NC - Signal conditioner



2864163

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MCR 3-way signal conditioner, input/output can be configured via DIP switches, for the electrical isolation of analog signals, with spring-cage connection, standard configuration. Replacement part: 2902040 MINI MCR-2-UI-UI-PT.

## Your advantages

- Power supply possible via the foot element (TBUS)
- 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

## Commercial data

Item number	2864163
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	CK1211
Catalog page	Page 92 (C-7-2015)
GTIN	4017918974794
Weight per piece (including packing)	79.6 g
Weight per piece (excluding packing)	65 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data


### Product properties

Product type	Signal conditioner
Product family	MINI Analog
No. of channels	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

No. of channels	1
Rated insulation voltage	50 V AC/DC
Electrical isolation	Basic insulation in accordance with EN 61010
Electrical isolation between input and output	yes
Limit frequency (3 dB)	approx. 100 Hz
Maximum power dissipation for nominal condition	58 mW 184 mW
Test voltage, input/output/supply	1.5 kV AC (50 Hz, 60 s)
Protective circuit	Transient protection
Step response (10-90%)	≈  ms
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Maximum transmission error	≤ 0.1 % (of final value) < 0.4 % (Without adjustment)

### Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (The DIN rail 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 in accordance with 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)

### Input data

#### Signal

Number of inputs	1
Configurable/programmable	Yes, unconfigured
Voltage input signal	0 V ... 10 V 0 V ... 5 V 1 V ... 5 V

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	2 V ... 10 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 k $\Omega$
Input resistance current input	approx. 50 $\Omega$

## Output data

### Signal

Number of outputs	1
Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 10 V
	0 V ... 5 V
	1 V ... 5 V
	2 V ... 10 V
Max. voltage output signal	approx. 12.5 V
Non-load voltage	approx. 12.5 V
Current output signal	0 mA ... 20 mA (please indicate if different setting when ordering)
	4 mA ... 20 mA
Max. current output signal	28 mA
Short-circuit current	approx. 22 mA
Load/output load voltage output	$\geq 10$ k $\Omega$
Load/output load current output	$< 500$ $\Omega$ (at 20 mA)
Ripple	$< 20$ mV <sub>PP</sub> (at 500 $\Omega$ )
	$< 20$ mV <sub>PP</sub> (at 10 k $\Omega$ )

## Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section rigid	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	24 ... 12

## Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm

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Depth	102.5 mm
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## Material specifications

Color	green (RAL 6021)
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 ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	⊕ 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

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

### 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 %

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## 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
Typical deviation from the measuring range final value	5 %

## Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010
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## Mounting

Mounting type	DIN rail mounting
Assembly instructions	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

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