

2902830

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Output-side-powered 2-way loop-powered signal conditioner, can be configured via DIP switches, with spring-cage connection technology, standard configuration. Replacement part: 2902063 MINI MCR-2-UI-I-OLP-PT.

Product description

The 6.2 mm wide MINI MCR-SL-UI-I-LP... configurable 2-way isolating amplifier is used to electrically isolate, condition, and filter analog signals. The output loops that supply the loop-powered isolating amplifier enable the isolating amplifier to operate on an active analog input module. The modules are supplied via the current loop of the controller.

On the input side, standard analog signals and non-standard analog signals can be connected, starting from 2 mA or 50 mV up to 40 mA or 30 V. These are converted to a 4...20 mA signal.

The DIP switches accessible on the housing side enable the configuration of input signal ranges.

Commercial data

Item number	2902830
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CK1213
Catalog page	Page 102 (C-7-2015)
GTIN	4046356681865
Weight per piece (including packing)	81.6 g
Weight per piece (excluding packing)	74.4 g
Customs tariff number	85437090
Country of origin	DE

MINI MCR-SL-UI-I-LP-SP-NC - Signal conditioner



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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

Alignment span	$\pm 2 \%$
Alignment zero	$\pm 2 \%$
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. 30 Hz
Test voltage input/output	1.5 kV AC (50 Hz, 60 s)
Step response (10-90%)	approx. 16 ms
Maximum temperature coefficient	0.01 %/K
Temperature coefficient, typical	0.005 %/K
Maximum transmission error	< 0.1 % (of final value)
	< 0.2 % (Without adjustment)

Supply

Supply voltage range	loop-powered, no external supply necessary
Power consumption	28 mW (without signal)

Input data

Signal

Number of inputs	1
Voltage input signal	0 mV ... 1000 mV
	0 mV ... 750 mV
	0 mV ... 500 mV
	0 mV ... 300 mV
	0 mV ... 250 mV
	0 mV ... 200 mV
	0 mV ... 150 mV
	0 mV ... 125 mV
	0 mV ... 120 mV
	0 mV ... 100 mV
	0 mV ... 75 mV
	0 mV ... 60 mV

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0 mV ... 50 mV
0 V ... 10 V
0 V ... 7.5 V
0 V ... 5 V
0 V ... 3 V
0 V ... 2.5 V
0 V ... 2 V
0 V ... 1.5 V
0 V ... 1.25 V
0 V ... 1.2 V
0 V ... 30 V
0 V ... 25 V
0 V ... 20 V
0 V ... 12.5 V
0 V ... 12 V
0 V ... 15 V
-1000 mV ... 1000 mV
-750 mV ... 750 mV
-500 mV ... 500 mV
-300 mV ... 300 mV
-250 mV ... 250 mV
-200 mV ... 200 mV
-125 mV ... 125 mV
-120 mV ... 120 mV
-150 mV ... 150 mV
-100 mV ... 100 mV
-75 mV ... 75 mV
-60 mV ... 60 mV
-50 mV ... 50 mV
-10 V ... 10 V
-7.5 V ... 7.5 V
-5 V ... 5 V
-3 V ... 3 V
-2.5 V ... 2.5 V
-2 V ... 2 V
-1.25 V ... 1.25 V
-1.2 V ... 1.2 V
-1.5 V ... 1.5 V
-30 V ... 30 V
-25 V ... 25 V
-20 V ... 20 V
-12.5 V ... 12.5 V
-12 V ... 12 V
-15 V ... 15 V

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	200 mV ... 1000 mV
	150 mV ... 750 mV
	100 mV ... 500 mV
	60 mV ... 300 mV
	50 mV ... 250 mV
	40 mV ... 200 mV
	25 mV ... 125 mV
	24 mV ... 120 mV
	30 mV ... 150 mV
	20 mV ... 100 mV
	15 mV ... 75 mV
	12 mV ... 60 mV
	10 mV ... 50 mV
	2 V ... 10 V
	1.5 V ... 7.5 V
	1 V ... 5 V
	0.6 V ... 3 V
	0.5 V ... 2.5 V
	0.4 V ... 2 V
	0.25 V ... 1.25 V
	0.24 V ... 1.2 V
	0.3 V ... 1.5 V
	6 V ... 30 V
	5 V ... 25 V
	4 V ... 20 V
	2.5 V ... 12.5 V
	2.4 V ... 12 V
	3 V ... 15 V
Max. voltage input signal	< 40 V
Current input signal	0 mA ... 40 mA
	0 mA ... 30 mA
	0 mA ... 20 mA
	0 mA ... 12 mA
	0 mA ... 10 mA
	0 mA ... 8 mA
	0 mA ... 7.5 mA
	0 mA ... 5 mA
	0 mA ... 6 mA
	0 mA ... 4 mA
	0 mA ... 3 mA
	0 mA ... 2.5 mA
	0 mA ... 2 mA
	-40 mA ... 40 mA
	-30 mA ... 30 mA

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	-20 mA ... 20 mA
	-12 mA ... 12 mA
	-10 mA ... 10 mA
	-8 mA ... 8 mA
	-7.5 mA ... 7.5 mA
	-5 mA ... 5 mA
	-6 mA ... 6 mA
	-4 mA ... 4 mA
	-3 mA ... 3 mA
	-2.5 mA ... 2.5 mA
	-2 mA ... 2 mA
	8 mA ... 40 mA
	6 mA ... 30 mA
	4 mA ... 20 mA
	2.4 mA ... 12 mA
	2 mA ... 10 mA
	1.6 mA ... 8 mA
	1.5 mA ... 7.5 mA
	1 mA ... 5 mA
	1.2 mA ... 6 mA
	0.8 mA ... 4 mA
	0.6 mA ... 3 mA
	0.5 mA ... 2.5 mA
	0.4 mA ... 2 mA
Max. current input signal	< 50 mA (Dielectric strength up to 30 V)
Input resistance of voltage input	approx. 100 k Ω (At ≤ 1 V, otherwise approximately 1 M Ω)
Input resistance current input	$\leq 50 \Omega$

Output data

Signal

Number of outputs	1
Configurable/programmable	Yes, preconfigured
Current output signal	4 mA ... 20 mA
Max. current output signal	35 mA (output limit)
Load/output load current output	< 1000 Ω (($U_B - 8$ V) / 22 mA)
Ripple	< 20 mV _{PP} (at 500 Ω)

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 12

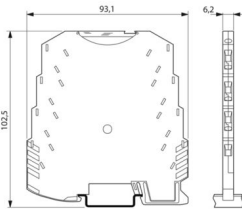
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Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

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)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Approvals

CE	
Certificate	CE-compliant

ATEX	
Identification	Ex II 3 G Ex nA IIC T4 Gc X

UL, USA/Canada	
Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T5
	Class I, Zone 2, Group IIC

Shipbuilding approval	
Identification	D, EMC1
Certificate	DNV GL 14085-15HH

EMC data

Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

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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	0.5 %

Electromagnetic HF field

Comments	Criterion A
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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	2 %

Fast transients (burst)

Comments	Criterion B
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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	0.5 %

Conducted interference

Comments	Criterion A
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Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010
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Mounting

Mounting type	DIN rail mounting
Mounting position	any

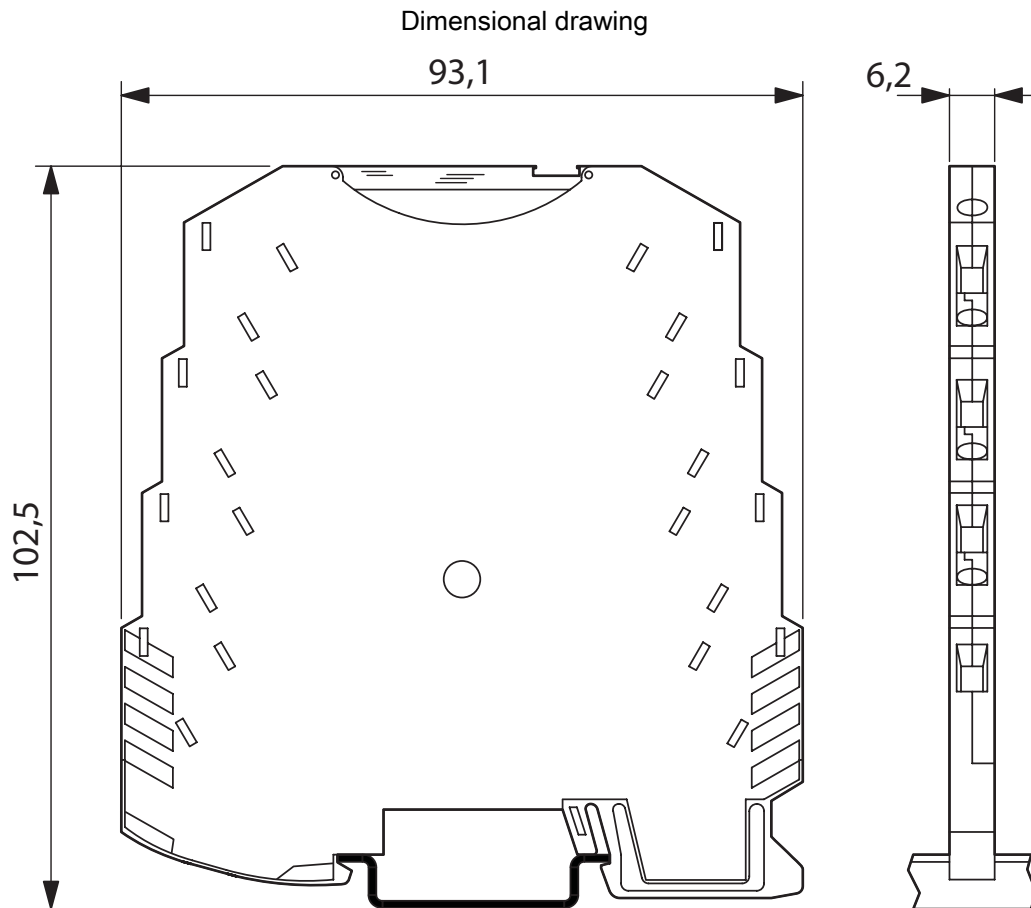
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Drawings



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Classifications

ECLASS

ECLASS-11.0	27210120
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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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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com