Signal conditioner - MINI MCR-SL-SHUNT-UI-NC - 2810780

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MCR 3-way isolating amplifier, with configurable input/output, for electrical isolation and conversion of analog signals in the mV range, single-pos. as well as 2-pos. with screw connection, pre-configured

Product Features

- Power supply possible via the foot element (T-connector)
- Ideal for converting signals for shunt measurements
- Low power consumption
- Highly-compact isolating amplifier for electrical isolation, conversion, amplification, and filtering of mV signals to create standard analog signals
- Up to 280 signal combinations can be configured using DIP switches
- 3-way isolation

Key commercial data

package_quantity	1
GTIN	4046356305341

Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

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
Degree of protection	IP20

Input data

Configurable/programmable	Yes, unconfigured
Voltage input signal	-50 mV ... 50 mV

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Input data

Voltage input signal	-60 mV ... 60 mV
Voltage input signal	-75 mV ... 75 mV
Voltage input signal	-80 mV ... 80 mV
Voltage input signal	-100 mV ... 100 mV
Voltage input signal	-120 mV ... 120 mV
Voltage input signal	-150 mV ... 150 mV
Voltage input signal	-200 mV ... 200 mV
Voltage input signal	-240 mV ... 240 mV
Voltage input signal	-300 mV ... 300 mV
Voltage input signal	-500 mV ... 500 mV
Voltage input signal	-600 mV ... 600 mV
Voltage input signal	-750 mV ... 750 mV
Voltage input signal	-800 mV ... 800 mV
Voltage input signal	-1 V ... 1 V
Voltage input signal	-1.2 V ... 1.2 V
Voltage input signal	-1.5 V ... 1.5 V
Voltage input signal	-2 V ... 2 V
Voltage input signal	-2.4 V ... 2.4 V
Voltage input signal	-3 V ... 3 V
Voltage input signal	0 mV ... 50 mV
Voltage input signal	0 mV ... 60 mV
Voltage input signal	0 mV ... 75 mV
Voltage input signal	0 mV ... 80 mV
Voltage input signal	0 mV ... 100 mV
Voltage input signal	0 mV ... 120 mV
Voltage input signal	0 mV ... 150 mV
Voltage input signal	0 mV ... 200 mV
Voltage input signal	0 mV ... 240 mV
Voltage input signal	0 mV ... 300 mV
Voltage input signal	0 mV ... 500 mV
Voltage input signal	0 mV ... 600 mV
Voltage input signal	0 mV ... 750 mV
Voltage input signal	0 mV ... 800 mV
Voltage input signal	0 V ... 1 V
Voltage input signal	0 V ... 1.2 V
Voltage input signal	0 V ... 1.5 V
Voltage input signal	0 V ... 2 V
Voltage input signal	0 V ... 2.4 V
Voltage input signal	0 V ... 3 V
Max. input voltage	approx. 30 V DC
Input resistance of voltage input	approx. 10 kΩ

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Output data

Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 10 V
Voltage output signal	2 V ... 10 V
Voltage output signal	0 V ... 5 V
Voltage output signal	1 V ... 5 V
Voltage output signal	-10 V ... 10 V (The bi-polar output can be used only for bi-polar input signals.)
Voltage output signal	-5 V ... 5 V (The bi-polar output can be used only for bi-polar input signals.)
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
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
Power consumption	< 450 mW (Current output)

Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	12
Stripping length	12 mm
Screw thread	M3
Connection method	2-wire

General

Maximum transmission error	≤ 0.2 %
Maximum transmission error	< 0.4 % (Without adjustment)
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Limit frequency (3 dB)	(100 Hz / 30 Hz switchable)
Step response (10-90%)	3.5 ms (At 100 Hz)
Electrical isolation	Basic insulation according to EN 61010
Surge voltage category	II
Pollution degree	2
Rated insulation voltage	50 V AC/DC

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General

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
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D T5 applied for
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	6 %
Name	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	6 %
Name	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	6 %

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

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classifications

UNSPSC

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

approvals

ATEX / UL Recognized / cUL Recognized / GL / cULus Recognized /

Approval details

ATEX

UL Recognized

cUL Recognized

GL

cULus Recognized

Drawings

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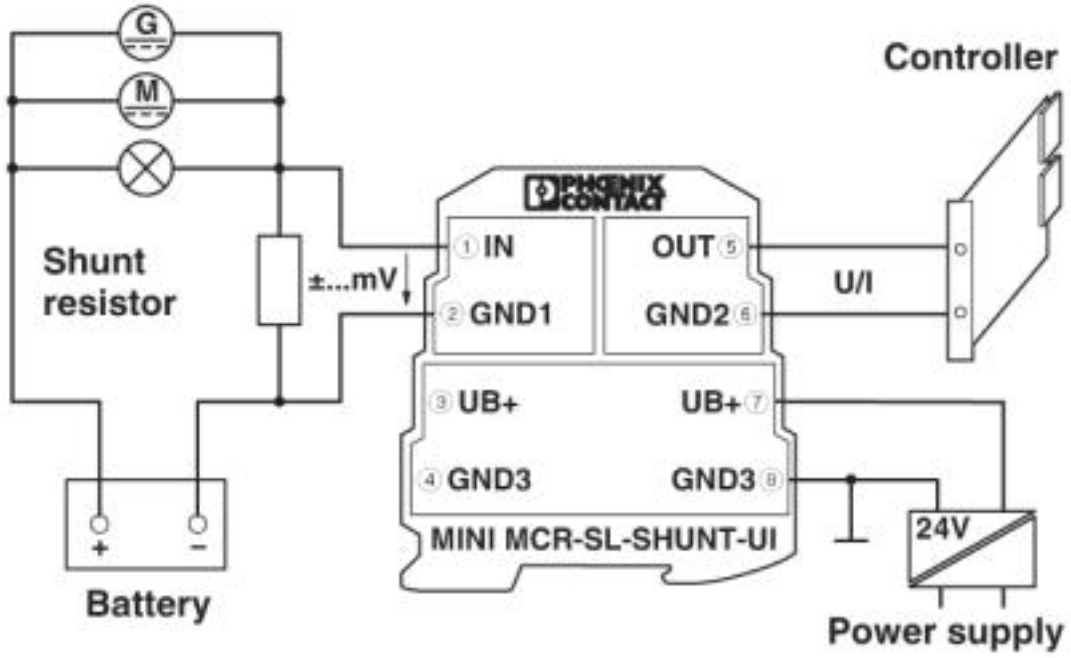
Application drawing



Monitoring of loading and unloading currents

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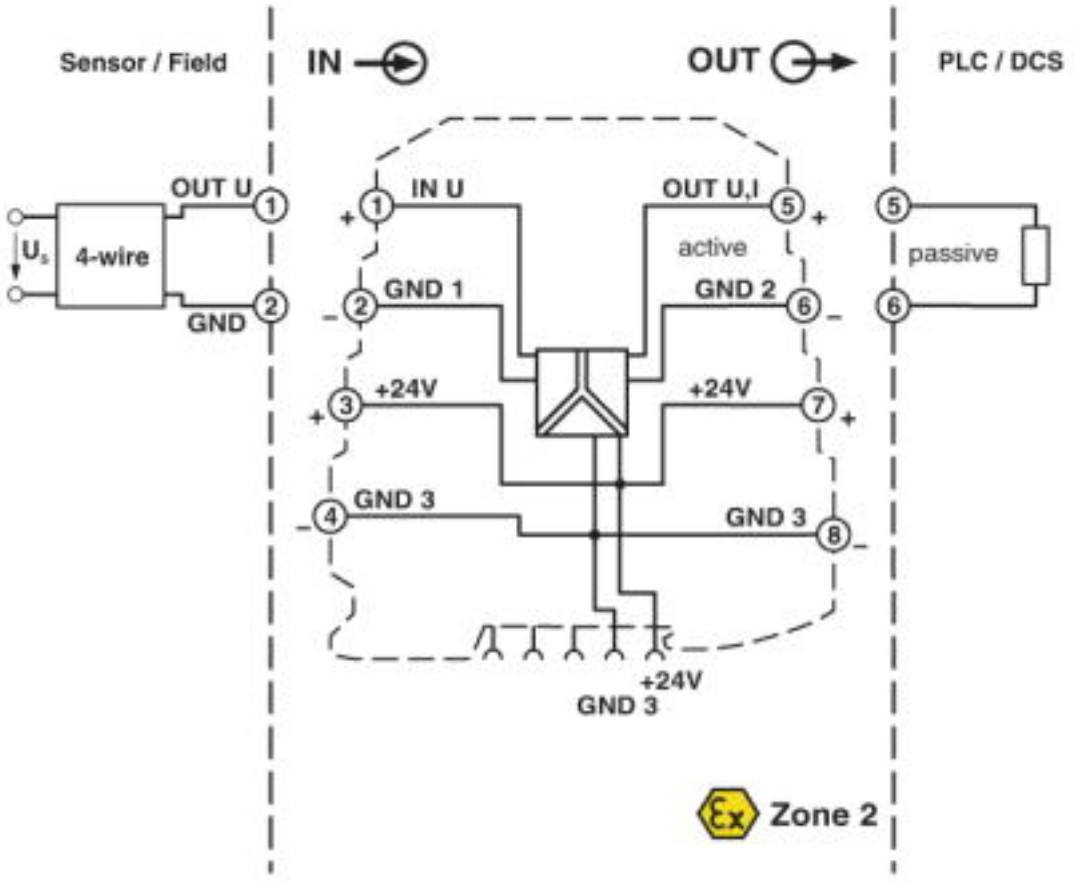
Block diagram



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Dimensioned drawing