

Signal conditioner - MINI MCR-SL-U-UI-SP-NC - 2810078

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MCR 3-way isolation amplifier, with configurable input/output, for electrical isolation and conversion of analog signals up to 30 V, with spring-cage connection, standard configuration

Why buy this product

- ✓ Power supply possible via the foot element (TBUS)
- ✓ Low power consumption
- ✓ Up to 12 signal combinations can be configured using DIP switches
- ✓ 3-way isolation
- ✓ Highly-compact isolating amplifier for electrical isolation, conversion, amplification, and filtering of 24 V or 30 V DC signals to create standard analog signals



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 043588
GTIN	4046356043588

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
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

Signal conditioner - MINI MCR-SL-U-UI-SP-NC - 2810078

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Input data

Number of inputs	1
Configurable/programmable	Yes, unconfigured
Voltage input signal	0 V ... 24 V
	0 V ... 30 V
max. input voltage	50 V DC
Input resistance of voltage input	approx. 125 k Ω (0 ... 24 V)
	approx. 155 k Ω (0 ... 30 V)

Output data

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
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
Max. output voltage	\leq 12.5 V
Max. output current	28 mA
Short-circuit current	\leq 22 mA
Load/output load voltage output	$>$ 10 k Ω
Load/output load current output	$<$ 500 Ω (at 20 mA)
Ripple	$<$ 20 mV _{PP} (at 500 Ω)
	$<$ 20 mV _{PP} (at 10 k Ω)

Power 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, 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 (at 24 V DC incl. load)
Power consumption	$<$ 450 mW

Connection data

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

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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. 3.5 ms
Protective circuit	Transient protection
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	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
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	To bridge the supply voltage, the DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used. It can be snapped onto a 35 mm DIN rail according to EN 60715.
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

EMC data

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

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2

Signal conditioner - MINI MCR-SL-U-UI-SP-NC - 2810078

Technical data

Standards and Regulations

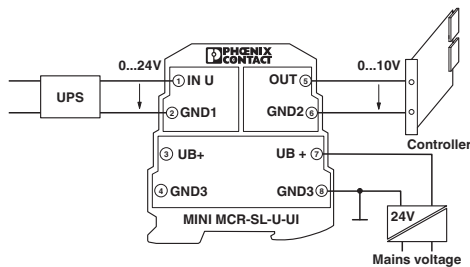
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Electrical isolation	Basic insulation according to EN 61010
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R26	HL 1 - HL 2 HL 1 - HL 2 HL 1 - HL 2

Environmental Product Compliance

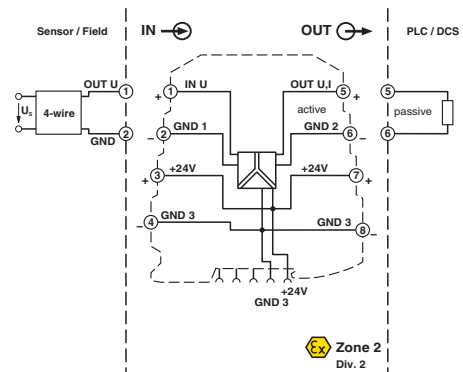
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Application drawing



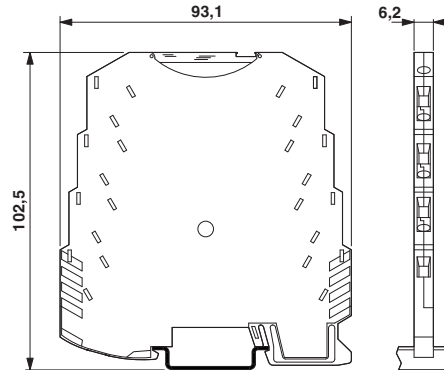
Block diagram



Signal conversion to uninterruptible power supply (UPS)

Signal conditioner - MINI MCR-SL-U-UI-SP-NC - 2810078

Dimensional drawing



Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / GL / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / ATEX / cULus Listed

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
GL		http://exchange.dnv.com/tari/	24916-05 HH
cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	

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