

MINI MCR-SL-RPS-I-I-SP - Repeater power supply



2864752

<https://www.phoenixcontact.com/us/products/2864752>

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MCR repeater power supply, with spring-cage connection, input signal: (0)4...20 mA, output signal: (0)4...20 mA. Replacement part: 2902015 MINI MCR-2-RPSS-I-I-PT.

Your advantages

- Power supply possible via the foot element (TBUS)
- Can be used as an isolator with passive input
- 3-way isolation
- Supply of 2-conductor and passive 3-conductor sensors
- Highly-compact repeater power supplies for electrical isolation, amplification, and filtering of standard analog signals

Commercial data

Item number	2864752
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	DK1131
GTIN	4017918974954
Weight per piece (including packing)	82.18 g
Weight per piece (excluding packing)	79.4 g
Customs tariff number	85437090
Country of origin	DE

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Technical data

Product properties

Product type	Repeater power supply
Product family	MINI Analog
No. of channels	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

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	508 mW (24 V DC) 208 mW (24 V DC)
Test voltage, input/output/supply	1.5 kV AC (50 Hz, 60 s)
Protective circuit	Transient protection
Signal transmission behavior	In = Out
Step response (10-90%)	approx. 3.5 ms
Maximum temperature coefficient	< 0.01 %/K
Temperature coefficient, typical	< 0.002 %/K
Maximum transmission error	≤ 0.2 % (of final value)
Transmission error, typical	≤ 0.1 % (of final value)

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)
Power consumption	< 900 mW (at 24 V DC and in repeater power supply operation) < 600 mW (at 24 V DC and in isolator operation)

Input data

Signal

Description of the input	Current input (sensor circuit)
Number of inputs	1
Current input signal	4 mA ... 20 mA (repeater power supply and isolator operation) 0 mA ... 20 mA (isolator operation)
Max. current input signal	28 mA
Input resistance current input	approx. 50 Ω
Transmitter supply voltage	U _B - max. 4.5 V for load 0 mA ... 20 mA

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Transmitter supply voltage range	14.7 V DC ... 25.5 V DC
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Output data

Signal: Current

Number of outputs	1
Open-circuit voltage	approx. 12.5 V
Current output signal	0 mA ... 20 mA (isolator operation) 4 mA ... 20 mA (repeater power supply and isolator operation)
Max. current output signal	28 mA
Load/output load current output	$\leq 500 \Omega$ ($I = 20 \text{ mA}$)
Ripple	$< 20 \text{ mV}_{\text{rms}}$ (at 500Ω)

Connection data

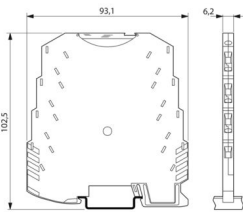
Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 12

Interfaces

Data communication (bypass)

HART function	no
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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)
Housing material	PBT
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

Environmental and real-life conditions

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Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °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

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

Noise emission

Standards/regulations	EN 50081-2
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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	10 %

Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	10 %

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	10 %

Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010
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Mounting

Mounting type	DIN rail mounting
Assembly note	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.
Mounting position	any

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Drawings



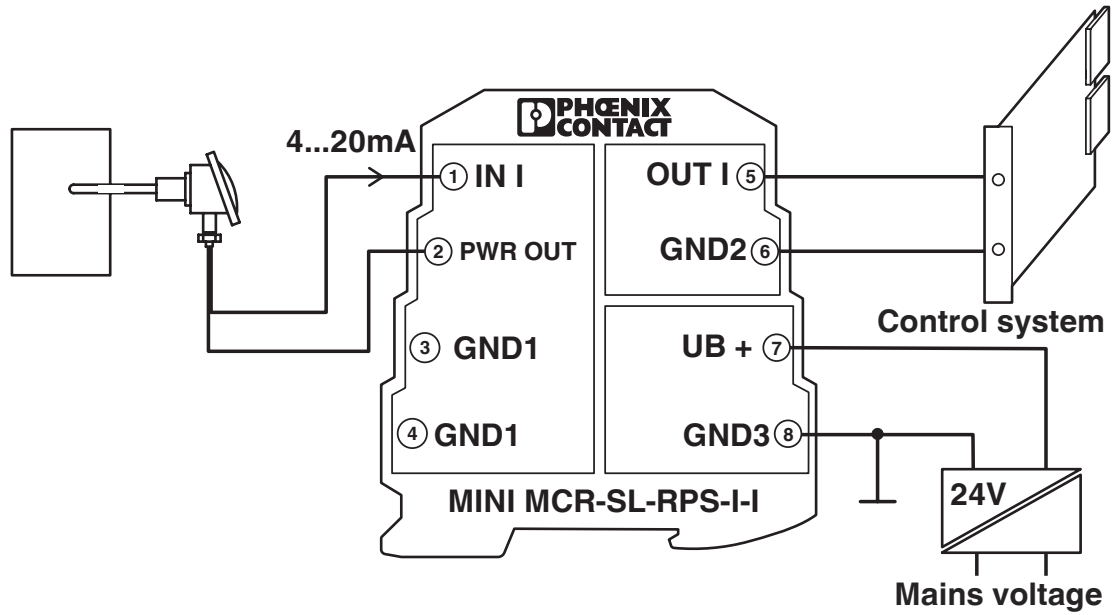
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Application drawing



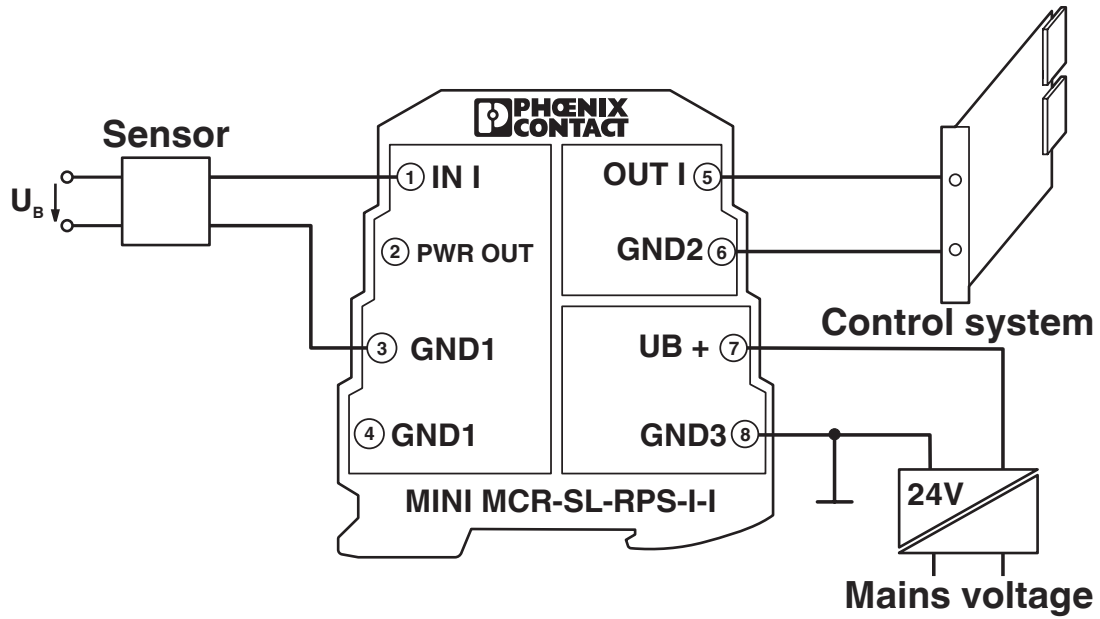
Repeater power supply operation with a passive sensor

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Application drawing



Isolator operation with an active sensor

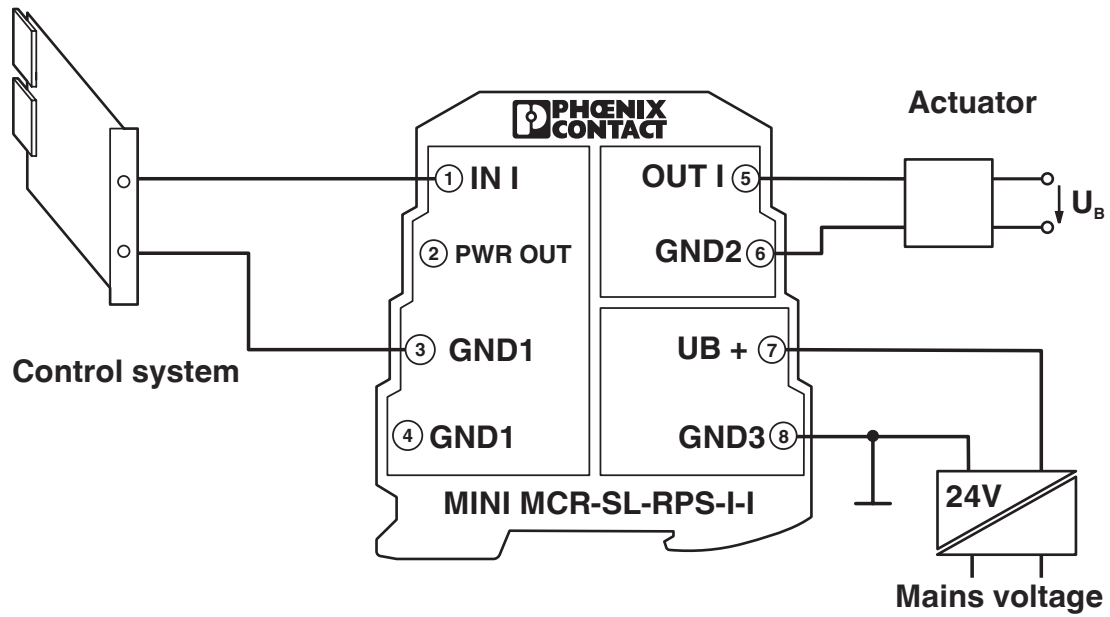
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Application drawing



Isolator operation at the analog output module

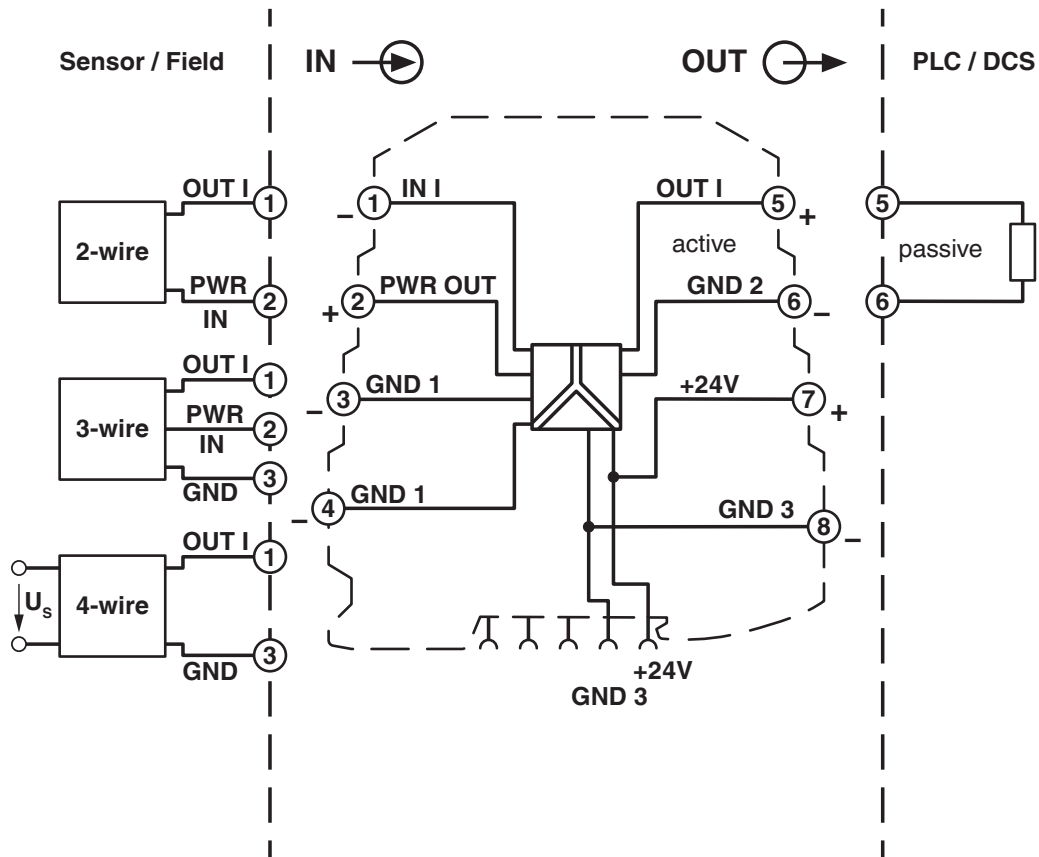
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Block diagram



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Environmental product compliance

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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