Repeater power supply - MINI MCR-2-RPSS-I-I - 2902014

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The figure shows a version with push-in connection

3-way repeater power supply with plug-in connection technology. HART-transparent, input signal 0(4)...20 mA, output signal 0(4)...20 mA. The device can be used in both isolator and repeater power supply operation. Screw connection technology

Product description

The repeater power supply with plug-in connection technology supplies the transmitter in the field and electrically isolates the input signal from the output signal. HART data protocols can be transmitted bidirectionally. The device can be used in both isolator and repeater power supply operation. Electrically isolated 0...20 mA or 4...20 mA standard analog signals are available on the input and output sides with a maximum output load of 600 W. The measuring transducer supports fault monitoring and NFC communication.

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	80.0 GRM
Custom tariff number	85437090
Country of origin	Germany

Technical data

Note

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

Dimensions

Width	6.2 mm
Height	110.5 mm
Depth	120.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C

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Technical data

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

Input data

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)
Input resistance current input	approx. 68 Ω
Transmitter supply voltage	> 19.5 V

Output data

Output name	Current output
Number of inputs	1
Current output signal	4 mA ... 20 mA (repeater power supply and isolator operation)
	0 mA ... 20 mA (isolator operation)
Max. output current	24 mA
Load/output load current output	≤ 600 Ω (at 20 mA)
Transmission Behavior	1:1 to input signal

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	9.6 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))
Typical current consumption	25 mA (at 24 V DC and in isolator operation)
	50 mA (at 24 V DC and in repeater power supply operation)
	55 mA (at 12 V DC and in isolator operation)
	110 mA (at 12 V DC and in repeater power supply operation)
Power consumption	≤ 1400 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)

Connection data

Connection method	Screw connection
Single conductor/terminal point, solid, with ferrule, min.	0.2 mm²
Single conductor/terminal point, solid, with ferrule, max.	1.5 mm²
Single conductor/terminal point, solid, without ferrule, min.	0.2 mm²
Single conductor/terminal point, solid, without ferrule, max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	1.5 mm²
Min. AWG conductor cross section, stranded	24

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Connection data

Max. AWG conductor cross section, stranded	12
Stripping length	10 mm
Screw thread	M3

General

Maximum transmission error	0.1 % (of final value)
Maximum temperature coefficient	0.01 %/K
Limit frequency (3 dB)	> 1.75 kHz (typ.)
Step response (10-90%)	< 200 µs (typ.)
Protective circuit	Transient protection
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Surge voltage category	II
Pollution degree	2
Rated insulation voltage	300 V
Test voltage, input/output/supply	3 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	gray
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 Listed
	Class I, Div. 2, Groups A, B, C, D T5
	Class I, Zone 2, Group IIC T5
GL	GL applied for

Data communication (bypass)

Limit frequency (3 dB)	approx. 1.75 kHz

EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Designation	Conducted interferences

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Technical data

EMC data

Standards/regulations	EN 61000-4-6

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	EC002653

UNSPSC

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

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

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Approvals

Approvals submitted

Approval details

UL Listed

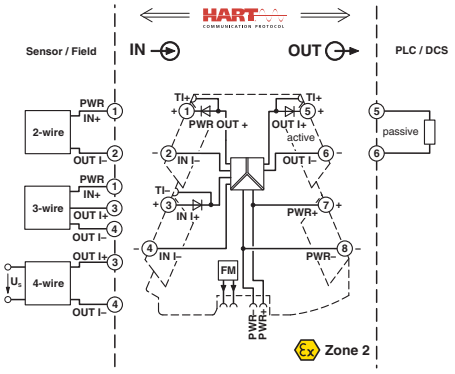
cUL Listed

cULus Listed

Drawings

Pictogram

Block diagram



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Pictogram