

MACX PL-RPSSI-2I - Repeater power supply



2904961

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Measuring transducer repeater power supply and input signal conditioner, HART-transparent. Transmits supplied or active 4...20 mA electrically isolated signals from the field to two loads. 4-way electrical isolation, PLd. Replacement part: 2924825 MACX MCR-SL-RPSSI-2I.

Commercial data

Item number	2904961
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C401
Product key	DK1111
GTIN	4046356904537
Weight per piece (including packing)	198.4 g
Weight per piece (excluding packing)	198.4 g
Customs tariff number	85437090
Country of origin	DE

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Technical data

Product properties

Product type	Repeater power supply
No. of channels	1

Electrical properties

Electrical isolation between input and output	yes
Step response (10-90%)	1.3 ms (for jump 4 mA ... 20 mA, typical)
Maximum temperature coefficient	< 0.01 %/K
Maximum transmission error	< 0.1 % (of final value)
Transmission error, typical	< 0.05 % (of final value)

Electrical isolation Input/output/power supply

Rated insulation voltage	300 V _{rms}
Test voltage	2.5 kV AC (50 Hz, 60 s)
Overvoltage category	II
Degree of pollution	2
Insulation	Safe isolation in accordance with IEC/EN 61010-1

Electrical isolation Output 1/output 2

Test voltage	1.5 kV AC (50 Hz, 60 s)
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Supply

Designation	Repeater power supply operation
Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC, -20 % ... +25 %)
Max. current consumption	< 75 mA (24 V DC / 20 mA)
Power dissipation	< 1.45 W (24 V DC/20 mA)

Supply

Designation	Signal conditioner operation
Nominal supply voltage range	19.2 V DC ... 30 V DC (24 V DC, -20 % ... +25 %)
Max. current consumption	< 46 mA (24 V DC / 20 mA)
Power dissipation	< 1.2 W (24 V DC/20 mA)

Input data

Signal: Repeater power supply operation

Description of the input	Repeater power supply operation
Number of inputs	1
Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 21.5 V (20 mA) > 21 V (23 mA)

Signal: Signal conditioner operation

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Description of the input	Signal conditioner operation
Current input signal	4 mA ... 20 mA
Voltage drop	< 3.9 V (in input isolating amplifier operation)

Output data

Signal: Repeater power supply operation

Output description	Repeater power supply operation
Number of outputs	2
Current output signal	4 mA ... 20 mA (active)
Load/output load current output	< 450 Ω (20 mA) < 380 Ω (23 mA)
Output ripple	< 20 mV _{rms}
Output behavior in the event of an error	0 mA (Cable break in the input) 0 mA (Cable short-circuit in the input)

Signal: Signal conditioner operation

Output description	Signal conditioner operation
Current output signal	4 mA ... 20 mA (active)
Load/output load current output	< 450 Ω (20 mA) < 380 Ω (23 mA)
Output ripple	< 20 mV _{rms}
Output behavior in the event of an error	0 mA (Cable break in the input) ≥ 23 mA (Cable short-circuit in the input)

Connection data

Connection method	Screw connection
Stripping length	7 mm
Screw thread	M3
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 ... 14
Tightening torque	0.5 Nm ... 0.6 Nm

Interfaces

Data communication (bypass)

HART function	Yes
Protocols supported	HART-transparent

Signaling

Status display	Green LED (PWR supply voltage)
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Dimensions

Width	12.5 mm
Height	99 mm

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Depth	114.5 mm
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Material specifications

Color	yellow (RAL 1018)
Flammability rating according to UL 94 (Housing)	V0 (Housing)
Housing material	PA 6.6-FR

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (not assessed by UL)
Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
Note	and EN 61326

ATEX

Identification	Ⓔ II 3 G Ex nA IIC T4 Gc X
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UL, USA/Canada

Identification	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4

Shipbuilding approval

Identification	C, EMC2
Certificate	DNV GL 11 564-14HH

Safety Integrity Level (SIL, IEC 61508)

Identification	2
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Performance Level (ISO 13849)

Identification	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.

Electromagnetic HF field

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

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Typical deviation from the measuring range final value	3 %
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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	3 %

Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	3 %

Mounting

Mounting type	DIN rail mounting
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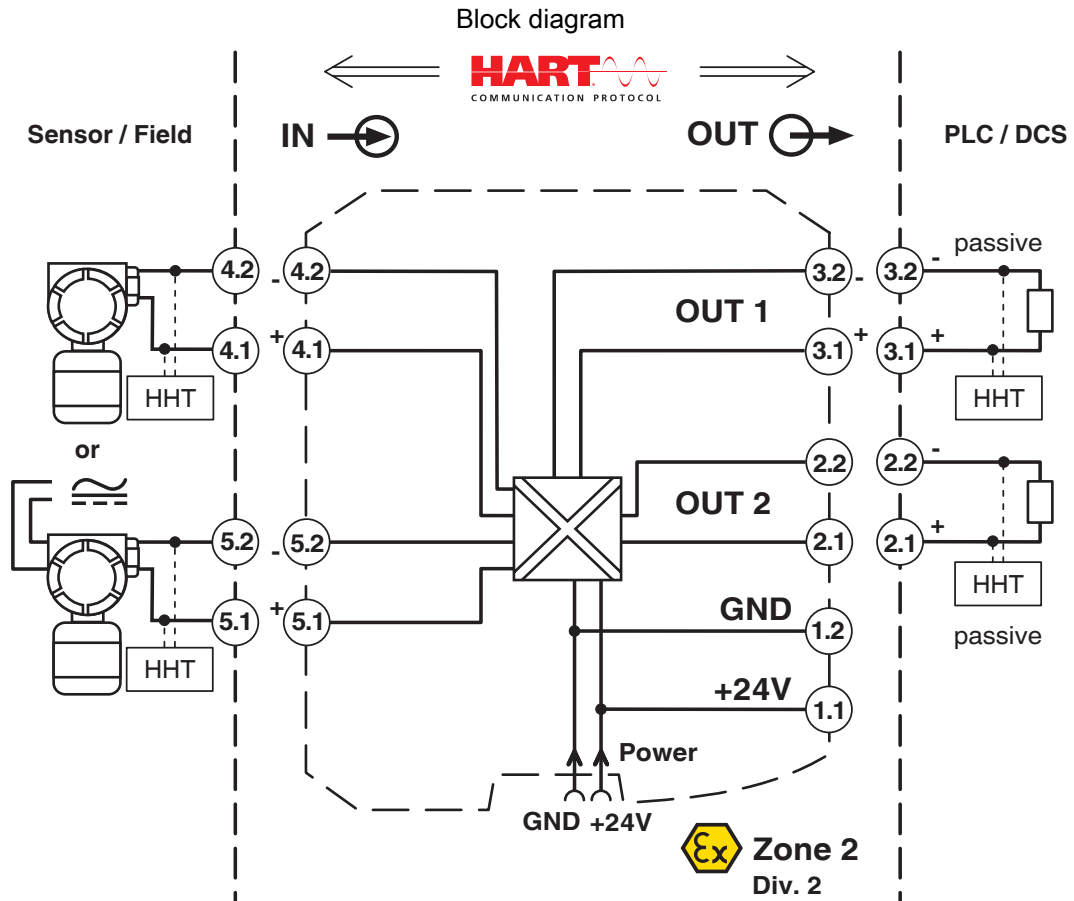
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Drawings



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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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