

MACX PL-EX-RPSS-2I-2I - Repeater power supply



2904963

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Ex i measuring transducer repeater power supply, 2-channel, HART-transparent. Supplies Ex i 2-conductor measuring transducers and transmits the 4 ... 20 mA signal from the Ex area to the safe area. PLd, screw connection. Replacement part: 2865382 MACX MCR-EX-SL-RPSS-2I-2I.

Commercial data

Item number	2904963
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C430
Product key	DK1211
GTIN	4046356904551
Weight per piece (including packing)	199.7 g
Weight per piece (excluding packing)	199 g
Customs tariff number	85437090
Country of origin	DE

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Technical data

Product properties

Product type	Repeater power supply
Application	Analog IN
No. of channels	2

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Electrical isolation between input and output	yes
Signal transmission behavior	In = Out
Step response (10-90%)	< 1.3 ms (for 4 mA ... 20 mA step)
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)
Insulation	Safe isolation in accordance with IEC/EN 61010-1

Electrical isolation Input/output

Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)
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Electrical isolation Input/power supply

Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)
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Electrical isolation Output 1/output 2/ power supply

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

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (24 V DC, -20 % ... +25 %)
Max. current consumption	< 100 mA (24 V / 20 mA)
Power dissipation	< 1.4 W (at 24 V DC / 20 mA)

Input data

Signal

Description of the input	intrinsically safe
Number of inputs	2
Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (at 20 mA)
Underload/overload signal range	0 mA ... 24 mA

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Output data

Signal: Current

Output description	Current output
Number of outputs	2
Current output signal	4 mA ... 20 mA (active)
Load/output load current output	$\leq 450 \Omega$ (20 mA) $\leq 375 \Omega$ (24 mA)
Output behavior in the event of an error	< 3.6 mA (In the event of cable break at the input (as per NE 43)) > 22.5 mA (In the event of cable short circuit at the input (as per NE 43))
Underload/overload signal range	0 mA ... 24 mA

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

Test socket

Max. diameter	2.3 mm
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Ex data

Safety data

Max. output voltage U_o	25.2 V
Max. output current I_o	93 mA
Max. output power P_o	587 mW
Safety-related maximum voltage U_m	253 V AC (125 V DC)
IIC: Max. external inductivity L_o / Max. external capacitance C_o	2 mH / 107 nF
IIB: Max. external inductivity L_o / Max. external capacitance C_o	4 mH / 820 nF

Interfaces

Data communication (bypass)

HART function	Yes
Protocols supported	HART-transparent

Signaling

Status display	Green LED (supply voltage)
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Dimensions

Width	12.5 mm
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Height	99 mm
Depth	114.5 mm

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 (1) G [Ex ia Ga] IIC/IIB
	⊕ II (1) D [Ex ia Da] IIIC
	⊕ II 3(1) G Ex nA [ia Ga] IIC T4 Gc
Certificate	BVS 13 ATEX E 001 X

IECEX

Identification	[Ex ia Ga] IIC/IIB
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC T4 Gc
Certificate	IECEX BVS 13.0007X

UL, USA/Canada

Identification	UL 61010 Listed
Certificate	Ⓢ C.D.-No 83104549

Shipbuilding approval

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

Safety Integrity Level (SIL, IEC 61508)

Identification	3
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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.

Noise emission

Standards/regulations	EN 61000-6-4
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Mounting

Mounting type	DIN rail mounting
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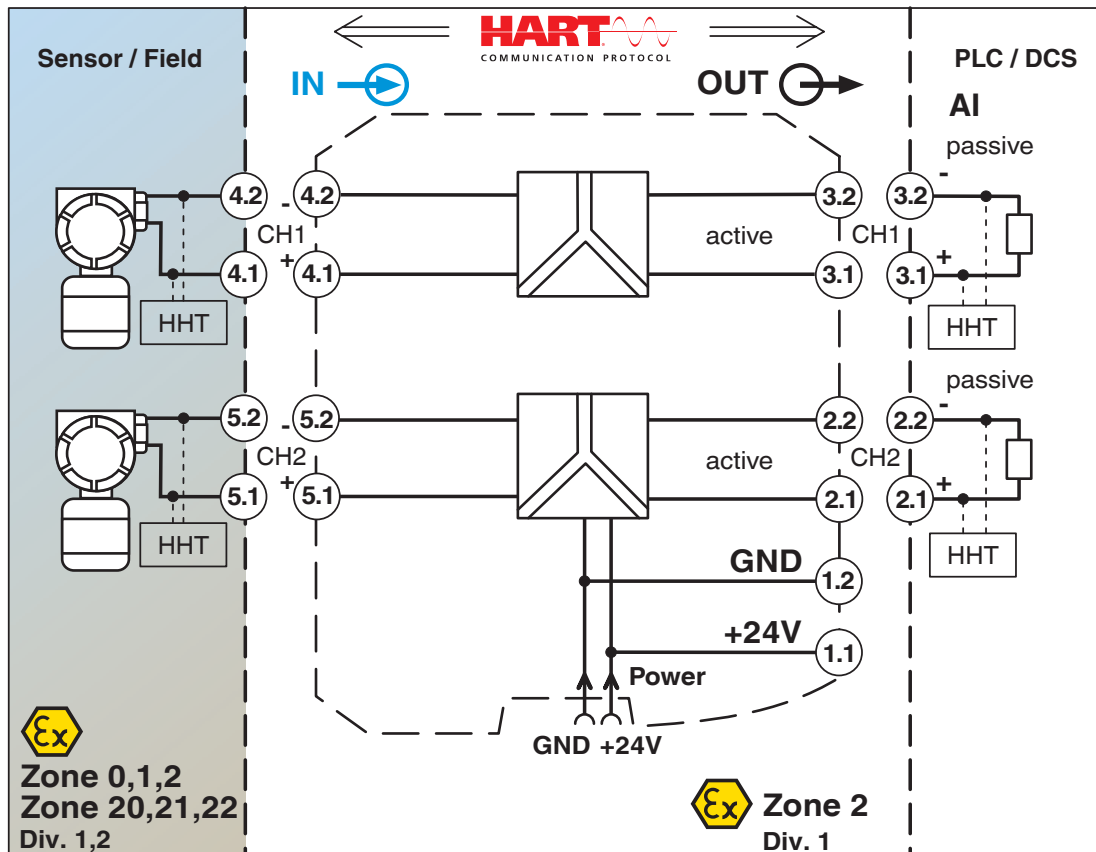
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Drawings

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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com