

# MACX PL-EX-RPSSI-2I-SP - Repeater power supply



2904960

<https://www.phoenixcontact.com/us/products/2904960>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Ex-i measuring transducer repeater power supply and input signal conditioner, HART. Transfers supplied or active 4...20 mA electrically isolated signals from the Ex area to two loads in the safe area. 4-way electrical isolation, PLd, Push-in Technology. Replacement part: 2924236-MACX MCR-EX-SL-RPSSI-2I-SP

## Commercial data

Item number	2904960
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C430
Product key	DK1211
GTIN	4046356904520
Weight per piece (including packing)	197 g
Weight per piece (excluding packing)	197 g
Customs tariff number	85437090
Country of origin	DE

# MACX PL-EX-RPSSI-2I-SP - Repeater power supply



2904960

<https://www.phoenixcontact.com/us/products/2904960>

## 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 <sub>rms</sub>
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 Input/output

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

### Electrical isolation Input/power supply

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

### Electrical isolation Output 1/output 2

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

### 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

# MACX PL-EX-RPSSI-2I-SP - Repeater power supply



2904960

<https://www.phoenixcontact.com/us/products/2904960>

Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (20 mA)
	> 15.1 V (23 mA)

Signal: Signal conditioner operation

Description of the input	Signal conditioner operation
Current input signal	4 mA ... 20 mA
Voltage drop	approx. 3.9 V

## 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 $\Omega$ (20 mA)
	< 380 $\Omega$ (23 mA)
Output ripple	< 20 mV <sub>rms</sub>
Output behavior in the event of an error	0 mA (Cable break in the input)
	$\geq$ 23 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 $\Omega$ (20 mA)
	< 380 $\Omega$ (23 mA)
Output ripple	< 20 mV <sub>rms</sub>
Output behavior in the event of an error	0 mA (Cable break in the input)
	0 mA (Cable short-circuit in the input)

## Connection data

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16

## Ex data

Safety data

Note	Repeater power supply operation
Max. output voltage U <sub>o</sub>	25.2 V
Max. output current I <sub>o</sub>	93 mA
Max. output power P <sub>o</sub>	587 mW
Safety-related maximum voltage U <sub>m</sub>	253 V AC (125 V DC)
IIC: Max. external inductivity L <sub>o</sub> / Max. external capacitance C <sub>o</sub>	2 mH / 107 nF

# MACX PL-EX-RPSSI-2I-SP - Repeater power supply



2904960

<https://www.phoenixcontact.com/us/products/2904960>

IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	4 mH / 820 nF
--	---------------

## Safety data

Note	Signal conditioner operation
Input voltage $U_i$	$\leq 30$ V
Input current $I_i$	$\leq 150$ mA
Max. internal inductance $L_i$	negligible
Max. internal capacitance $C_i$	negligible

## Interfaces

### Data communication (bypass)

HART function	Yes
Protocols supported	HART

## Signaling

Status display	Green LED (PWR supply voltage)
----------------	--------------------------------

## Dimensions

Width	12.5 mm
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	$\leq 2000$ 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/IIB T4 Gc

# MACX PL-EX-RPSSI-2I-SP - Repeater power supply



2904960

<https://www.phoenixcontact.com/us/products/2904960>

Certificate	BVS 10 ATEX E 143 X
-------------	---------------------

## IECEX

Identification	[Ex ia Ga] IIC/IIB
	[Ex ia Da] IIIC
	Ex nA [ia Ga] IIC/IIB T4 Gc
Certificate	IECEX BVS 10.0097X

## UL, USA/Canada

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

## Shipbuilding approval

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

## Safety Integrity Level (SIL, IEC 61508)

Identification	2
----------------	---

## Performance Level (ISO 13849)

Identification	d
----------------	---

## 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.

## Mounting

Mounting type	DIN rail mounting
---------------	-------------------

# MACX PL-EX-RPSSI-2I-SP - Repeater power supply

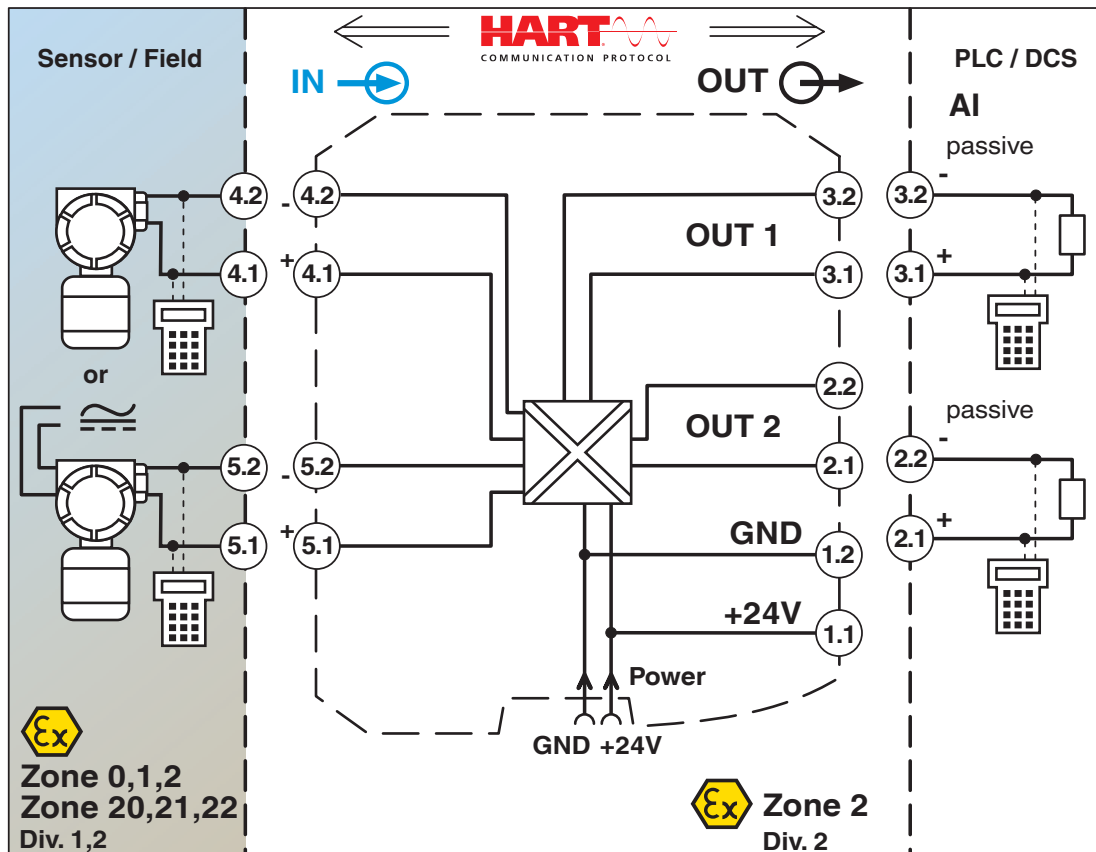


2904960

<https://www.phoenixcontact.com/us/products/2904960>

## Drawings

Block diagram



# MACX PL-EX-RPSSI-2I-SP - Repeater power supply



2904960

<https://www.phoenixcontact.com/us/products/2904960>

## 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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

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