

## Signal isolator - MACX MCR-SL-RPSS-2I-2I - 2904089

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2-channel repeater power supply for operating 2-wire measuring transducers, input: 4...20 mA (powered), output: 4...20 mA (active), bidirectional transmission of digital HART communication signals, with screw connection



### Key Commercial Data

Packing unit	1 STK
Weight per Piece (excluding packing)	160.000 g
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
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#### Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

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## Technical data

### Ambient conditions

Degree of protection	IP20
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### Input data

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

### Output data

Signal output	Current output
Current output signal	4 mA ... 20 mA (active)
Transmission Behavior	1:1 to input signal
Load/output load current output	≤ 450 Ω (20 mA)
	≤ 375 Ω (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))

### Power 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 consumption	< 1.4 W (at 24 V DC / 20 mA)

### Connection data

Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm
Screw thread	M3
Connection method	Screw connection
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

### General

Maximum transmission error	< 0.1 % (of final value)
Transmission error, typical	< 0.05 % (of final value)
Maximum temperature coefficient	< 0.01 %/K
Step response (10-90%)	< 1.3 ms (for 4 mA ... 20 mA step)
Status display	Green LED (supply voltage)

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## Technical data

### General

Flammability rating according to UL 94	V0
Degree of pollution	2
Overvoltage category	II
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Interference emission	EN 61000-6-4
Housing material	PA 66-FR
Color	green
Designation	Input/output, power supply
Electrical isolation	300 V <sub>rms</sub> (Rated insulation voltage (overvoltage category II; degree of pollution 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
Designation	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Input/power supply
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Output 1/output 2/ power supply
Electrical isolation	1.5 kV (50 Hz, 1 min., test voltage)
Conformance	CE-compliant, additionally EN 61326
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 61010 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4

### Data communication (bypass)

HART function	Yes
Protocols supported	HART

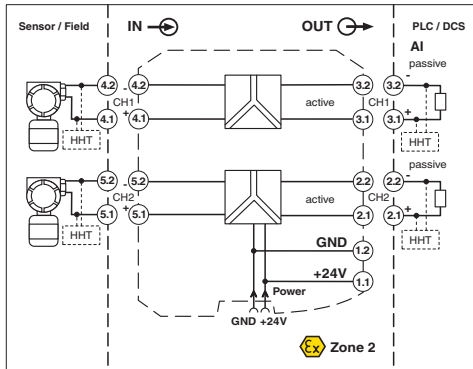
### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 61000-6-4
Flammability rating according to UL 94	V0
Conformance	CE-compliant, additionally EN 61326
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 61010 Listed
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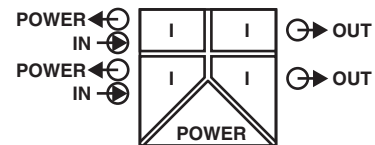
## Drawings

# Signal isolator - MACX MCR-SL-RPSS-2I-2I - 2904089

Block diagram



Pictogram



## 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
eCl@ss 9.0	27210120

ETIM

ETIM 3.0	EC001485
ETIM 4.0	EC002498
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

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## Approvals

### Approvals

UL Listed / cUL Listed / Functional Safety / cULus Listed


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### Ex Approvals

UL Listed / cUL Listed / cULus Listed


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## Approval details

UL Listed  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 330267

cUL Listed  <http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm> FILE E 330267

Functional Safety BVS Pb 04/13

cULus Listed 

## Accessories

### Accessories

#### DIN rail connector

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

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### Power module

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### Accessories

Power and error message module - MACX MCR-PTB - 2865625



Power and fault signaling module with screw connection, including corresponding ME 17,5 TBUS 1,5/ 5-ST-3,81 GN DIN rail connector

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Power and error message module - MACX MCR-PTB-SP - 2924184



Power and fault signaling module with push-in connection, including corresponding ME 17,5 TBUS 1,5/ 5-ST-3,81 GN DIN rail connector

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