

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



2924016

<https://www.phoenixcontact.com/us/products/2924016>

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Ex i repeater power supply and input signal conditioner, HART-transparent. Transmits supplied or active 0/4 ... 20 mA signals from the Ex area to a load (active or passive) in the safe area. 3-way electrical isolation, SIL 2 in accordance with IEC 61508, with Push-in connection

## Your advantages

- 0/4 mA ... 20 mA input, intrinsically safe, [Ex ia], powered and not powered
- Measuring transducer supply voltage > 16 V
- 0/4 mA ... 20 mA output, active up to 1000  $\Omega$  load or passive
- Bidirectional HART signal transmission
- Error indication according to NAMUR NE 43
- SIL 2 according to IEC/EN 61508
- Installation in Ex zone 2 permitted
- 3-way electrical isolation
- Power supply possible via DIN rail connector
- Plug-in connection terminals, push-in connection technology
- Housing width: 12.5 mm
- Minimal power dissipation
- High transmission accuracy

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2924016             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | C430                |
| Product key                          | CK3111              |
| Catalog page                         | Page 142 (C-5-2019) |
| GTIN                                 | 4046356338066       |
| Weight per piece (including packing) | 174.5 g             |
| Weight per piece (excluding packing) | 160 g               |
| Customs tariff number                | 85437090            |
| Country of origin                    | DE                  |

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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## Technical data

### Product properties

|                 |                                                     |
|-----------------|-----------------------------------------------------|
| Product type    | Repeater power supplies                             |
| Product family  | MACX Analog                                         |
| Application     | Analog IN                                           |
| No. of channels | 1                                                   |
| Type            | Ex i signal conditioners with SIL functional safety |

### Electrical properties

|                                               |                                                             |
|-----------------------------------------------|-------------------------------------------------------------|
| Electrical isolation                          | 3-way isolation                                             |
| Electrical isolation between input and output | yes                                                         |
| Signal transmission behavior                  | In = Out                                                    |
| Step response (10-90%)                        | < 200 $\mu$ s (for jump 4 mA ... 20 mA, load 600 $\Omega$ ) |
|                                               | < 600 $\mu$ s (for jump 0 mA ... 20 mA, load 600 $\Omega$ ) |
| Maximum temperature coefficient               | < 0.01 %/K                                                  |
| Temperature coefficient, typical              | < 0.004 %/K                                                 |
| Maximum transmission error                    | < 0.1 % (of final value)                                    |
| Transmission error, typical                   | < 0.05 % (of final value)                                   |
| Reverse polarity protection                   | yes                                                         |

#### Electrical isolation

|                      |                         |
|----------------------|-------------------------|
| Test voltage         | 2.5 kV AC (50 Hz, 60 s) |
| Overvoltage category | II                      |
| Pollution degree     | 2                       |

#### Electrical isolation Input/output/power supply IEC/EN 61010-1

|                          |                      |
|--------------------------|----------------------|
| Standards/regulations    | IEC/EN 61010-1       |
| Rated insulation voltage | 300 V <sub>rms</sub> |
| Insulation               | Safe isolation       |

#### Electrical isolation Input/output IEC/EN 60079-11

|                          |                      |
|--------------------------|----------------------|
| Standards/regulations    | IEC/EN 60079-11      |
| Rated insulation voltage | 265 V <sub>rms</sub> |

#### Electrical isolation Input/power supply IEC/EN 60079-11

|                          |                      |
|--------------------------|----------------------|
| Standards/regulations    | IEC/EN 60079-11      |
| Rated insulation voltage | 265 V <sub>rms</sub> |

#### Electrical isolation Output/supply IEC/EN 60079-7

|                          |                      |
|--------------------------|----------------------|
| Standards/regulations    | IEC/EN 60079-7       |
| Rated insulation voltage | 265 V <sub>rms</sub> |

#### Supply

|             |                                 |
|-------------|---------------------------------|
| Designation | Repeater power supply operation |
|-------------|---------------------------------|

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|                          |                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------|
| Nominal supply voltage   | 24 V DC -20 % ... +25 %                                                                                     |
| Supply voltage range     | 19.2 V DC ... 30 V DC                                                                                       |
| Max. current consumption | < 76 mA (24 V DC / 20 mA / 1000 Ω)<br>< 55 mA (24 V DC / 20 mA / 250 Ω)                                     |
| Power dissipation        | < 1.1 W (24 V DC / 20 mA / 1000 Ω)<br>< 0.95 W (24 V DC / 20 mA / 250 Ω)<br>< 1.2 W (24 V DC / 20 mA / 0 Ω) |
| Power consumption        | < 1.8 W (20 mA / 1000 Ω)<br>< 1.3 W (20 mA / 250 Ω)                                                         |

## Supply

|                          |                                                                                                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------|
| Designation              | Signal conditioner operation                                                                                  |
| Nominal supply voltage   | 24 V DC -20 % ... +25 %                                                                                       |
| Supply voltage range     | 19.2 V DC ... 30 V DC                                                                                         |
| Max. current consumption | < 44 mA (24 V DC / 20 mA / 1000 Ω)<br>< 27 mA (24 V DC / 20 mA / 250 Ω)                                       |
| Power dissipation        | < 0.75 W (24 V DC / 20 mA / 1000 Ω)<br>< 0.65 W (24 V DC / 20 mA / 250 Ω)<br>< 0.95 W (24 V DC / 20 mA / 0 Ω) |

## Input data

### Signal: Repeater power supply operation

|                                   |                                                              |
|-----------------------------------|--------------------------------------------------------------|
| Description of the input          | Active current input, intrinsically safe                     |
| Number of inputs                  | 1                                                            |
| Input signal                      | Current                                                      |
| Current input signal              | 4 mA ... 20 mA                                               |
| Current limitation                | 25 mA                                                        |
| Transmitter supply voltage        | > 16 V (20 mA)<br>> 15.3 V (22.5 mA)                         |
| Polarization and surge protection | Yes                                                          |
| Underload/overload signal range   | 0 mA ... 24 mA (Extended transmission range for diagnostics) |

### Signal: Signal conditioner operation

|                                 |                                                              |
|---------------------------------|--------------------------------------------------------------|
| Description of the input        | Passive current input, intrinsically safe                    |
| Current input signal            | 0 mA ... 20 mA<br>4 mA ... 20 mA                             |
| Voltage drop                    | < 3.5 V (in input isolating amplifier operation)             |
| Underload/overload signal range | 0 mA ... 24 mA (Extended transmission range for diagnostics) |

## Output data

### Signal: Repeater power supply operation

|                    |                                     |
|--------------------|-------------------------------------|
| Output description | Current output (active and passive) |
| Number of outputs  | 1                                   |

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|                                          |                                                              |
|------------------------------------------|--------------------------------------------------------------|
| Current output signal                    | 4 mA ... 20 mA (active)                                      |
|                                          | 4 mA ... 20 mA (14 ... 26 V ext. source voltage)             |
| Load/output load current output          | < 1000 $\Omega$ (20 mA)                                      |
|                                          | < 825 $\Omega$ (24 mA)                                       |
| Output ripple                            | < 20 mV <sub>rms</sub>                                       |
| Output behavior in the event of an error | 0 mA (Cable break in the input)                              |
|                                          | $\geq$ 22.5 mA (Cable short-circuit in the input)            |
| Underload/overload signal range          | 0 mA ... 24 mA (Extended transmission range for diagnostics) |

## Signal: Signal conditioner operation

|                                          |                                                              |
|------------------------------------------|--------------------------------------------------------------|
| Output description                       | Current output (active and passive)                          |
| Current output signal                    | 0 mA ... 20 mA (active)                                      |
|                                          | 4 mA ... 20 mA (active)                                      |
|                                          | 0 mA ... 20 mA (14 ... 26 V ext. source voltage)             |
|                                          | 4 mA ... 20 mA (14 ... 26 V ext. source voltage)             |
| Load/output load current output          | < 1000 $\Omega$ (20 mA)                                      |
|                                          | < 825 $\Omega$ (24 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)                      |
| Underload/overload signal range          | 0 mA ... 24 mA (Extended transmission range for diagnostics) |

## Connection data

|                                                                         |                                                                                     |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Connection method                                                       | Push-in connection                                                                  |
| Stripping length                                                        | 10 mm                                                                               |
| Conductor cross section rigid                                           | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                         |
| Conductor cross section flexible                                        | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                                         |
| Conductor cross section flexible (2 conductors with same cross section) | 0.25 mm <sup>2</sup> ... 0.34 mm <sup>2</sup> (TWIN ferrule without plastic sleeve) |
|                                                                         | 0.5 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (TWIN ferrule with plastic sleeve)      |
| Conductor cross section AWG                                             | 24 ... 14                                                                           |
|                                                                         | 24 ... 22 (TWIN ferrule without plastic sleeve)                                     |
|                                                                         | 20 ... 16 (TWIN ferrule with plastic sleeve)                                        |

## Ex data

|                       |        |
|-----------------------|--------|
| Ex installation (EPL) | Gc     |
|                       | Div. 2 |
| Ex i circuits (EPL)   | Ga     |
|                       | Da     |
|                       | Ma     |
|                       | Div. 1 |

## Safety data: Repeater power supply operation

|                                    |        |
|------------------------------------|--------|
| Max. output voltage U <sub>o</sub> | 25.2 V |
| Max. output current I <sub>o</sub> | 93 mA  |

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|                                                                                            |                                                                                                              |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Max. output power $P_o$                                                                    | 587 mW                                                                                                       |
| Safety-related maximum voltage $U_m$                                                       | 253 V AC                                                                                                     |
|                                                                                            | 125 V DC                                                                                                     |
| I (simple circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$      | 40 mH / 4.8 $\mu$ F                                                                                          |
| IIA (simple circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$    | 26 mH / 2.9 $\mu$ F                                                                                          |
| IIB (simple circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$    | 14 mH / 820 nF                                                                                               |
| IIC (simple circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$    | 3 mH / 107 nF                                                                                                |
| IIA (mixed circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$     | 26 mH / 470 nF, 20 mH / 570 nF, 1 mH / 630 nF, 0.5 mH / 720 nF, 0.1 mH / 1.1 $\mu$ F, 0.005 mH / 2.9 $\mu$ F |
| IIB/III (mixed circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 16 mH / 370 nF, 500 $\mu$ H / 510 nF, 200 $\mu$ H / 660 nF, 100 $\mu$ H / 820 nF                             |
| IIC (mixed circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$     | 2.2 mH / 47 nF, 2 mH / 49 nF, 1 mH / 63 nF, 500 $\mu$ H / 80 nF, 200 $\mu$ H / 107 nF                        |
| I (mixed circuit): Max. external inductivity $L_o$ / Max. external capacitance $C_o$       | 37 mH / 0.54 $\mu$ F, 0.35 mH / 1 $\mu$ F, 0.009 mH / 2.9 $\mu$ F, 0.001 mH / 4.15 $\mu$ F                   |

Safety data: 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    |
| Safety-related maximum voltage $U_m$ | 253 V AC      |
|                                      | 125 V DC      |

## Interfaces

Data communication (bypass)

|                     |                  |
|---------------------|------------------|
| HART function       | Yes              |
| Protocols supported | HART-transparent |

## Signaling

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

## Dimensions

|                     |         |
|---------------------|---------|
| Dimensional drawing |         |
| Width               | 12.5 mm |

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|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| Height          | 107.9 mm                                                               |
| Depth           | 113.7 mm                                                               |
| Depth NS 35/7,5 | 114.5 mm (Snapped onto DIN rail NS 35/7,5 in accordance with EN 60715) |

## Material specifications

|                                        |                 |
|----------------------------------------|-----------------|
| Color                                  | gray (RAL 7042) |
| Flammability rating according to UL 94 | 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)         | -40 °C ... 60 °C (Any mounting position)<br>-40 °C ... 70 °C (Derating) |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C                                                        |
| Permissible humidity (operation)        | 10 % ... 95 % (non-condensing)                                          |

### Altitude range ( $\leq 2000$ m)

|                                 |                                                                                                                                                                    |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Altitude                        | $\leq 2000$ m (The technical data refers to altitudes $\leq 2000$ m above mean sea level. For altitudes $> 2000$ m above mean sea level, refer to the data sheet.) |
| Ambient temperature (operation) | -40 °C ... 60 °C<br>-40 °C ... 70 °C (Derating)                                                                                                                    |
| Rated insulation voltage        | 375 V <sub>PP</sub> (Power supply, input / output)                                                                                                                 |

### Altitude range ( $\leq 3000$ m)

|                                 |                                                                                    |
|---------------------------------|------------------------------------------------------------------------------------|
| Height range                    | $> 2000$ m ... 3000 m                                                              |
| Ambient temperature (operation) | -40 °C ... 54 °C<br>-40 °C ... 63 °C (Derating)                                    |
| Rated insulation voltage        | 190 V AC (Power supply, input / output)<br>110 V DC (Power supply, input / output) |

### Altitude range ( $\leq 4000$ m)

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Height range                    | $> 3000$ m ... 4000 m                           |
| Ambient temperature (operation) | -40 °C ... 48 °C<br>-40 °C ... 56 °C (Derating) |
| Rated insulation voltage        | 60 V AC/DC (Power supply, input / output)       |

### Altitude range ( $\leq 5000$ m)

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| Height range                    | $> 4000$ m ... 5000 m                           |
| Ambient temperature (operation) | -40 °C ... 42 °C<br>-40 °C ... 49 °C (Derating) |
| Rated insulation voltage        | 60 V AC/DC (Power supply, input / output)       |

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## Approvals

### CE

|             |              |
|-------------|--------------|
| Certificate | CE-compliant |
| Note        | and EN 61326 |

### ATEX

|                |                                     |
|----------------|-------------------------------------|
| Identification | ⊕ II (1) G [Ex ia Ga] IIC           |
|                | ⊕ II (1) D [Ex ia Da] IIIC          |
|                | ⊕ II 3(1) G Ex ec [ia Ga] IIC T4 Gc |
|                | ⊕ I (M1) [Ex ia Ma] I               |
| Certificate    | BVS 08 ATEX E 054X                  |

### IECEX

|                |                         |
|----------------|-------------------------|
| Identification | [Ex ia Ga] IIC          |
|                | [Ex ia Da] IIIC         |
|                | Ex ec [ia Ga] IIC T4 Gc |
|                | [Ex ia Ma] I            |
| Certificate    | IECEX BVS 08.0016X      |

### CCC / China-Ex

|                |                         |
|----------------|-------------------------|
| Identification | [Ex ia Ga] IIC          |
|                | [Ex ia Da] IIIC         |
|                | Ex ec [ia Ga] IIC T4 Gc |
| Certificate    | 2022122316115973        |

### UL, USA/Canada

|                |                                                                         |
|----------------|-------------------------------------------------------------------------|
| Identification | UL 61010 Listed                                                         |
|                | Class I, Div. 2, Groups A, B, C, D T4                                   |
|                | Class I, Div. 2, Groups IIC, IIB, IIA T4                                |
|                | Associated apparatus for use in Class I, Division 1, Groups A,B,C,D     |
|                | Associated apparatus for use in Class II, Div.1 Groups E,F,G            |
|                | Associated apparatus for use in Class III, Division 1                   |
|                | Associated apparatus for use in Class I, Zone 0,1,2, Groups IIC,IIB,IIA |
| Certificate    | Ⓢ C.D.-No 83104549                                                      |

### UL, USA/Canada

|                |                                              |
|----------------|----------------------------------------------|
| Identification | UL 61010 Listed                              |
|                | Class I Div 2; IS for Class I, II, III Div 1 |
| Certificate    | Ⓢ C.D.-No 83104549                           |

### Shipbuilding approval

|             |                   |
|-------------|-------------------|
| Certificate | DNV GL TAA000020C |
|-------------|-------------------|

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## Safety Integrity Level (SIL, IEC 61508)

|                |                      |
|----------------|----------------------|
| Identification | 2                    |
| Certificate    | IN-AT-AS-MRL-2300149 |

## Systematic Capability

|                |   |
|----------------|---|
| Identification | 3 |
|----------------|---|

## KC-s

|                |                 |
|----------------|-----------------|
| Identification | [Ex ia] IIC/IIB |
| Certificate    | 17-KA4BO-0400X  |

## INMETRO

|                |                         |
|----------------|-------------------------|
| Identification | [Ex ia Ga] IIC          |
|                | [Ex ia Da] IIIC         |
|                | Ex ec [ia Ga] IIC T4 Gc |
|                | [Ex ia Ma] I            |
| Certificate    | DNV 18.0136 X           |

## DNV GL data

|             |                                                                                         |
|-------------|-----------------------------------------------------------------------------------------|
| Temperature | B                                                                                       |
| Humidity    | B                                                                                       |
| Vibration   | A                                                                                       |
| EMC         | A                                                                                       |
| Enclosure   | Required protection according to the Rules shall be provided upon installation on board |

## EMC data

|                               |                                                                      |
|-------------------------------|----------------------------------------------------------------------|
| Noise immunity                | EN 61000-6-2                                                         |
| Note                          | When being exposed to interference, there may be minimal deviations. |
| Electromagnetic compatibility | Conformance with EMC directive                                       |
| Noise emission                | EN 61000-6-4                                                         |

## Electromagnetic HF field

|                                                        |                          |
|--------------------------------------------------------|--------------------------|
| Designation                                            | Electromagnetic RF field |
| Standards/regulations                                  | EN 61000-4-3             |
| Typical deviation from the measuring range final value | 1 %                      |

## Fast transients (burst)

|                                                        |                         |
|--------------------------------------------------------|-------------------------|
| Designation                                            | Fast transients (burst) |
| Standards/regulations                                  | EN 61000-4-4            |
| Typical deviation from the measuring range final value | 1 %                     |

## Conducted interference

|                       |                         |
|-----------------------|-------------------------|
| Designation           | Conducted interferences |
| Standards/regulations | EN 61000-4-6            |

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|                                                        |     |
|--------------------------------------------------------|-----|
| Typical deviation from the measuring range final value | 1 % |
|--------------------------------------------------------|-----|

## Standards and regulations

|                      |                 |
|----------------------|-----------------|
| Electrical isolation | 3-way isolation |
|----------------------|-----------------|

### GB Standard

|                       |             |
|-----------------------|-------------|
| Standards/regulations | GB/T 3836.1 |
|                       | GB/T 3836.3 |
|                       | GB/T 3836.4 |

## Mounting

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

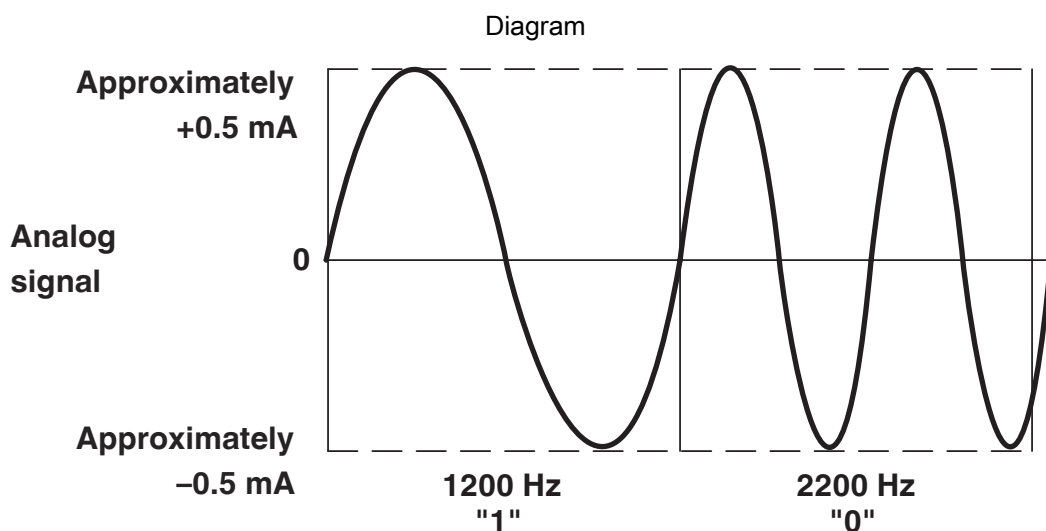
# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



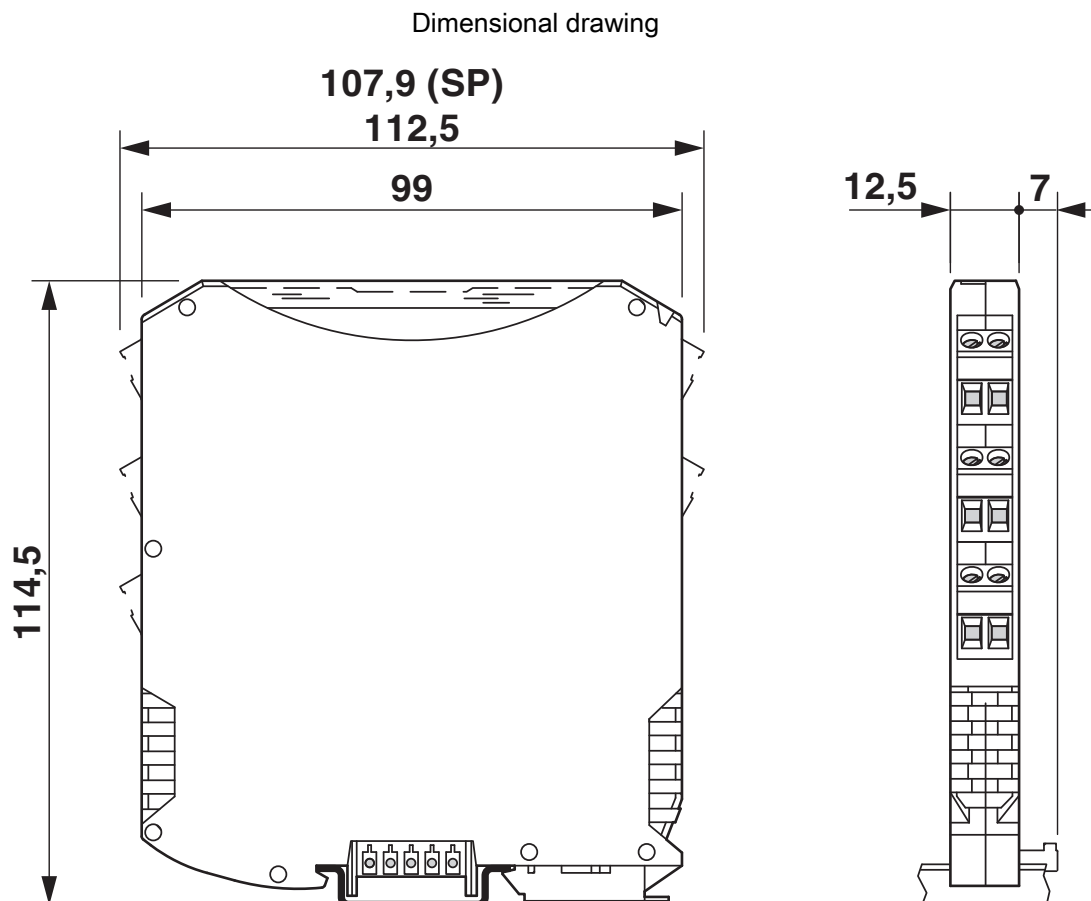
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## Drawings



Signal transmission analog and digital at the same time



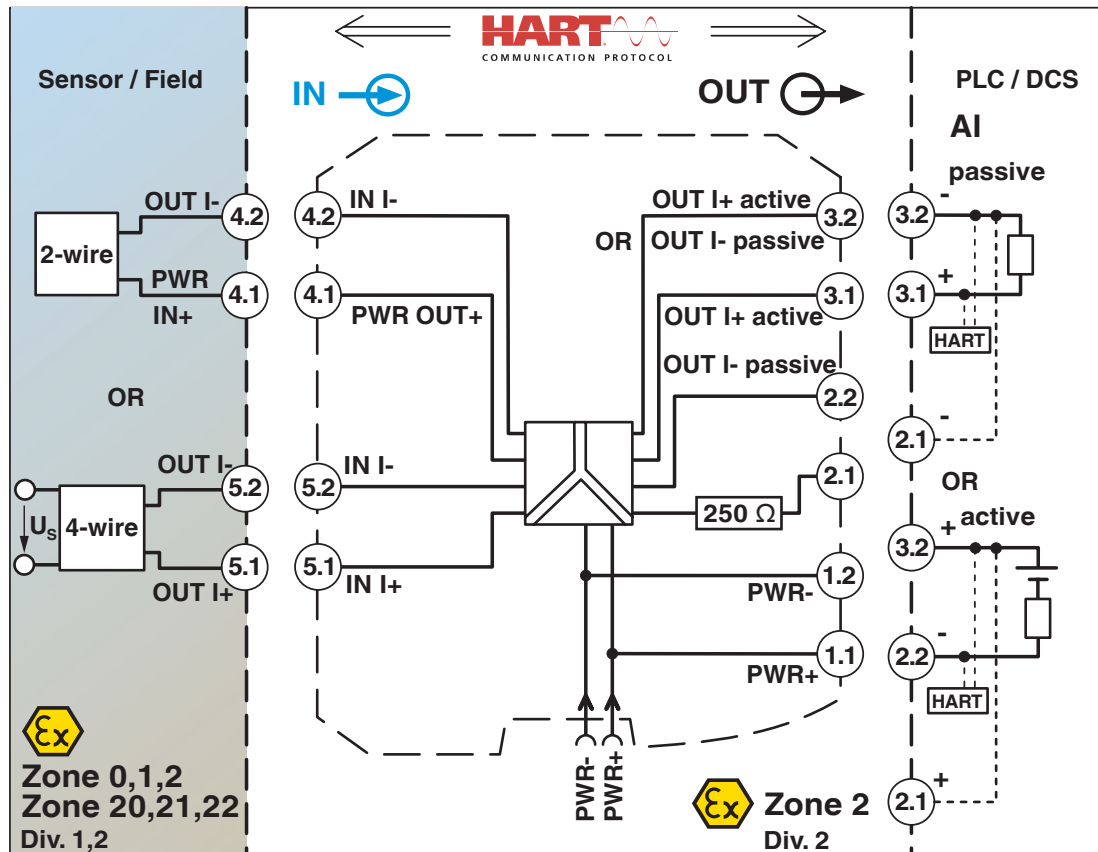
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Block diagram



# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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## Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2924016>



**DNV GL**

Approval ID: TAA000020C



**BV**

Approval ID: 39933/B0\_BV



**UL Listed**

Approval ID: FILE E 330267



**cUL Listed**

Approval ID: FILE E 330267

**Functional Safety**

Approval ID: BVS Pb 03/08



**EAC Ex**

Approval ID: RU C-DE.AB72.B.00093



**IECEx**

Approval ID: IECEx BVS 08.0016X



**cUL Listed**

Approval ID: FILE E 199827



**UL Listed**

Approval ID: FILE E 199827



**ATEX**

Approval ID: BVS 08 ATEX E 054X



**KC-s**

Approval ID: 17-KA4BO-0400X

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INMETRO

Approval ID: DNV 18.0136 X

 CCC

Approval ID: 2022122316115973

cULus Listed

cULus Listed

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27210120 |
| ECLASS-12.0 | 27210120 |
| ECLASS-13.0 | 27210120 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC002653 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121000 |
|-------------|----------|

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## Environmental product compliance

|                                         |                    |
|-----------------------------------------|--------------------|
| EU RoHS                                 |                    |
| Fulfills EU RoHS substance requirements | Yes                |
| Exemption                               | 6(c), 7(a), 7(c)-I |

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.) | Lead(CAS: 7439-92-1)                 |
| SCIP                                | 8681b086-bdb1-4186-9b6d-692b6a09dbe2 |

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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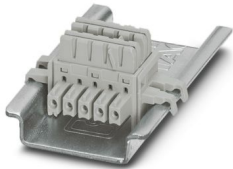
<https://www.phoenixcontact.com/us/products/2924016>

## Accessories

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

2695439

<https://www.phoenixcontact.com/us/products/2695439>



DIN rail connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rail in accordance with EN 60715

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### ME 6,2 TBUS-PR-ADAPTER - DIN rail bus connectors

1136500

<https://www.phoenixcontact.com/us/products/1136500>



Power rail adapter (ME 6,2 TBUS-PR-ADAPTER), 2-pos., enables MINI and MACX Analog modules to be adapted for supply via universal power rail UPR-03 and UPR-05.

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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<https://www.phoenixcontact.com/us/products/2924016>

## MCR-DP - Separating plate

1430594

<https://www.phoenixcontact.com/us/products/1430594>



The partition plate is used to maintain Ex i isolating distances when Ex i and non-Ex i devices are mounted side by side on a DIN rail.

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## GW HART USB MODEM - Cable adapter

1003824

<https://www.phoenixcontact.com/us/products/1003824>



USB HART modem cable for communication between a PC and HART devices, cable length: 1 m.

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## TC-D37SUB-ADIO16-EX-P-UNI - Module carrier

2924854

<https://www.phoenixcontact.com/us/products/2924854>



Universal termination carrier for connecting 16 MACX Analog Ex i signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection)

## TC-D37SUB-AIO16-EX-PS-UNI - Module carrier

2902932

<https://www.phoenixcontact.com/us/products/2902932>



Universal termination carrier for connecting 16 MACX Analog Ex i signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection), with HART multiplexer connection

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## MPS-IH WH - Insulating sleeve

0201663

<https://www.phoenixcontact.com/us/products/0201663>

Insulating sleeve, color: white



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## MPS-IH RD - Insulating sleeve

0201676

<https://www.phoenixcontact.com/us/products/0201676>

Insulating sleeve, color: red



# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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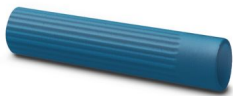
<https://www.phoenixcontact.com/us/products/2924016>

## MPS-IH BU - Insulating sleeve

0201689

<https://www.phoenixcontact.com/us/products/0201689>

Insulating sleeve, color: blue



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## MPS-IH YE - Insulating sleeve

0201692

<https://www.phoenixcontact.com/us/products/0201692>

Insulating sleeve, color: yellow



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## MPS-IH GN - Insulating sleeve

0201702

<https://www.phoenixcontact.com/us/products/0201702>

Insulating sleeve, color: green



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## MPS-IH GY - Insulating sleeve

0201728

<https://www.phoenixcontact.com/us/products/0201728>

Insulating sleeve, color: gray



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## MPS-IH BK - Insulating sleeve

0201731

<https://www.phoenixcontact.com/us/products/0201731>

Insulating sleeve, color: black



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## MPS-MT - Test plug

0201744

<https://www.phoenixcontact.com/us/products/0201744>

Test plug, with solder connection up to 1 mm<sup>2</sup> conductor cross section, number of positions: 1, color: gray



# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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## UC-EMLP (11X9) - Plastic label

0819291

<https://www.phoenixcontact.com/us/products/0819291>



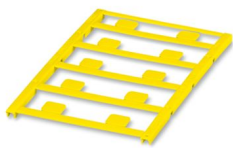
Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 10

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## UC-EMLP (11X9) YE - Plastic label

0822602

<https://www.phoenixcontact.com/us/products/0822602>



Plastic label, Sheet, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 10

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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<https://www.phoenixcontact.com/us/products/2924016>

## UC-EMLP (11X9) CUS - Plastic label

0824547

<https://www.phoenixcontact.com/us/products/0824547>

Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 11 x 9 mm



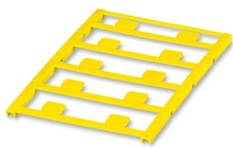
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## UC-EMLP (11X9) YE CUS - Plastic label

0824548

<https://www.phoenixcontact.com/us/products/0824548>

Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 11 x 9 mm



# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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<https://www.phoenixcontact.com/us/products/2924016>

## UC-EMLP (11X9) SR - Plastic label

0828094

<https://www.phoenixcontact.com/us/products/0828094>



Plastic label, Sheet, silver, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 10

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## UC-EMLP (11X9) SR CUS - Plastic label

0828098

<https://www.phoenixcontact.com/us/products/0828098>



Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 10

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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<https://www.phoenixcontact.com/us/products/2924016>

## US-EMLP (11X9) - Plastic label

0828789

<https://www.phoenixcontact.com/us/products/0828789>



Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 135

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## US-EMLP (11X9) YE - Plastic label

0828871

<https://www.phoenixcontact.com/us/products/0828871>



Plastic label, Card, yellow, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 135

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## US-EMLP (11X9) SR - Plastic label

0828872

<https://www.phoenixcontact.com/us/products/0828872>



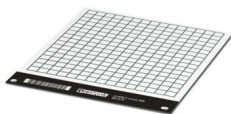
Plastic label, Card, silver, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 135

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## LS-EMLP (11X9) WH - Device marker

0831678

<https://www.phoenixcontact.com/us/products/0831678>



Device marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 255

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## LS-EMLP (11X9) SR - Device marker

0831705

<https://www.phoenixcontact.com/us/products/0831705>

Device marker, Sheet, silver, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 255



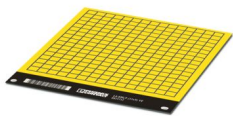
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## LS-EMLP (11X9) YE - Device marker

0831732

<https://www.phoenixcontact.com/us/products/0831732>

Device marker, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 255



# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



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<https://www.phoenixcontact.com/us/products/2924016>

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

2865625

<https://www.phoenixcontact.com/us/products/2865625>



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

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

2924184

<https://www.phoenixcontact.com/us/products/2924184>



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

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



2924016

<https://www.phoenixcontact.com/us/products/2924016>

## QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply unit

2904614

<https://www.phoenixcontact.com/us/products/2904614>



Primary-switched power supply, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A

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## SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/us/products/1205053>



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

# MACX MCR-EX-SL-RPSSI-I-SP - Power/input isolating amplifier



2924016

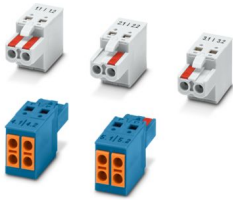
<https://www.phoenixcontact.com/us/products/2924016>

## MACX EX-SET-TVFKC 2-POLE - Connector set

1584378

<https://www.phoenixcontact.com/us/products/1584378>

TVFKC plug set for MACX Ex i devices with 2-pos. plugs



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