

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

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.



2-channel input loop-powered 2-way isolator with increased cut-off voltage and plug-in connection technology for the electrical isolation of analog signals. Input signal = output signal: 0(4) mA ... 20 mA. Screw connection technology

## Product description

Two-channel input-loop-powered 2-way isolator with increased cut-off voltage and plug-in connection technology for the electrical isolation and filtering of analog signals. The input-loop-powered isolator allows operation with active sensor technology with a supply voltage of 6 V DC to 30 V DC. The device is powered via the current loop of the sensor. Input signal = output signal: 0(4) mA to 20 mA. With screw connection.

## Commercial data

Item number	2907706
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C402
Product key	CK1113
Catalog page	Page 125 (C-5-2019)
GTIN	4055626219264
Weight per piece (including packing)	155.1 g
Weight per piece (excluding packing)	128.4 g
Customs tariff number	85437090
Country of origin	DE

## Technical data

### Product properties

Product type	Signal conditioner
Product family	MACX Analog
No. of channels	2
Type	Signal conditioners with SIL functional safety

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

No. of channels	2
Electrical isolation	2-way isolation
Signal transmission behavior	In = Out
Maximum temperature coefficient	≤ 0.002 %/K (of measured value / 100 Ω load)
Transmission error, typical	0.08 % (of final value)

### Electrical isolation Input/output/power supply

Rated insulation voltage	600 V <sub>rms</sub>
Test voltage	5 kV AC (50 Hz, 60 s)
Insulation	Safe isolation in accordance with IEC/EN 61010-1

### Supply

Supply voltage range	loop-powered, no external supply necessary
----------------------	--

### Input data

#### Signal: Current

Number of inputs	2
Configurable/programmable	no
Max. voltage input signal	< 30.5 V
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA
Input voltage limitation	30.5 V
Voltage dissipation	2.9 V (I = 20 mA)
Step response (10-90%)	5 ms (500 Ω load)
Additional error, load-dependent	0.022 % (of measured value / 100 Ω load)
Response current	approx. 50 µA

### Output data

#### Signal: Current

Number of outputs	2
Configurable/programmable	no

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

Max. voltage output signal	27.5 V
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
Load/output load current output	$\leq 1375 \Omega$ (I = 20 mA)
Residual ripple	< 10 mV <sub>rms</sub> (500 $\Omega$ load)

## Connection data

Connection method	Screw connection
Stripping length	7 mm
Screw thread	M3
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 AWG	24 ... 14
Tightening torque	0.5 Nm ... 0.6 Nm

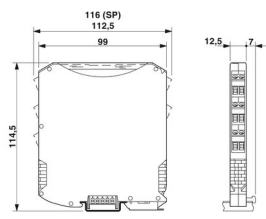
## Test socket

Max. diameter	2.3 mm
---------------	--------

## Ex data

Ex installation (EPL)	Gc
	Div. 2

## Dimensions

Dimensional drawing	
Width	12.5 mm
Height	112.5 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

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 ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

Altitude	< 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

## Approvals

### CE

Certificate	CE-compliant
Note	and EN 61326-1

### ATEX

Identification	II 3 G Ex nA IIC T4 Gc X
----------------	--------------------------

### UKCA Ex (UKEX)

Identification	II 3 G Ex nA IIC T4 Gc X
Certificate	PxCIF21UKEX2905278X

### UL, USA/Canada

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

### Safety Integrity Level (SIL, IEC 61508)

Identification	3
Certificate	968/FSP 1200.01/21

## EMC data

Noise immunity	EN 61326-1
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4

## Standards and regulations

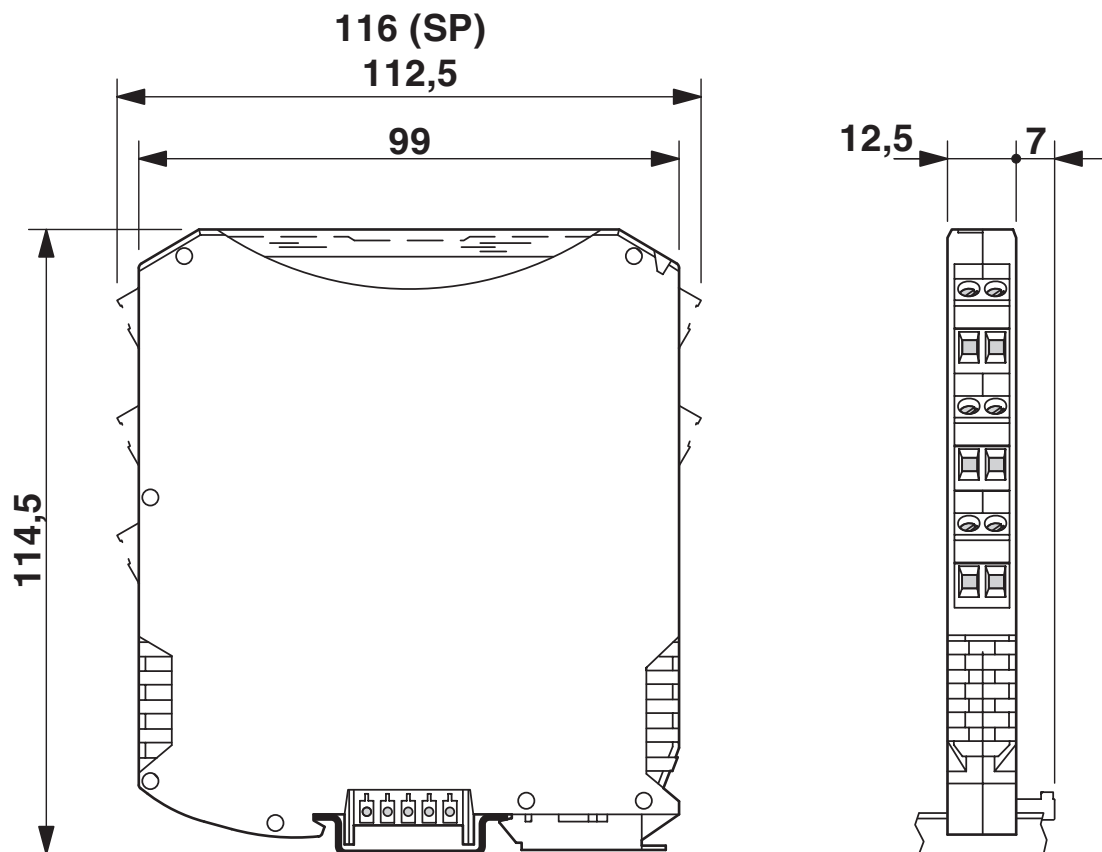
Electrical isolation	2-way isolation
----------------------	-----------------

## Mounting

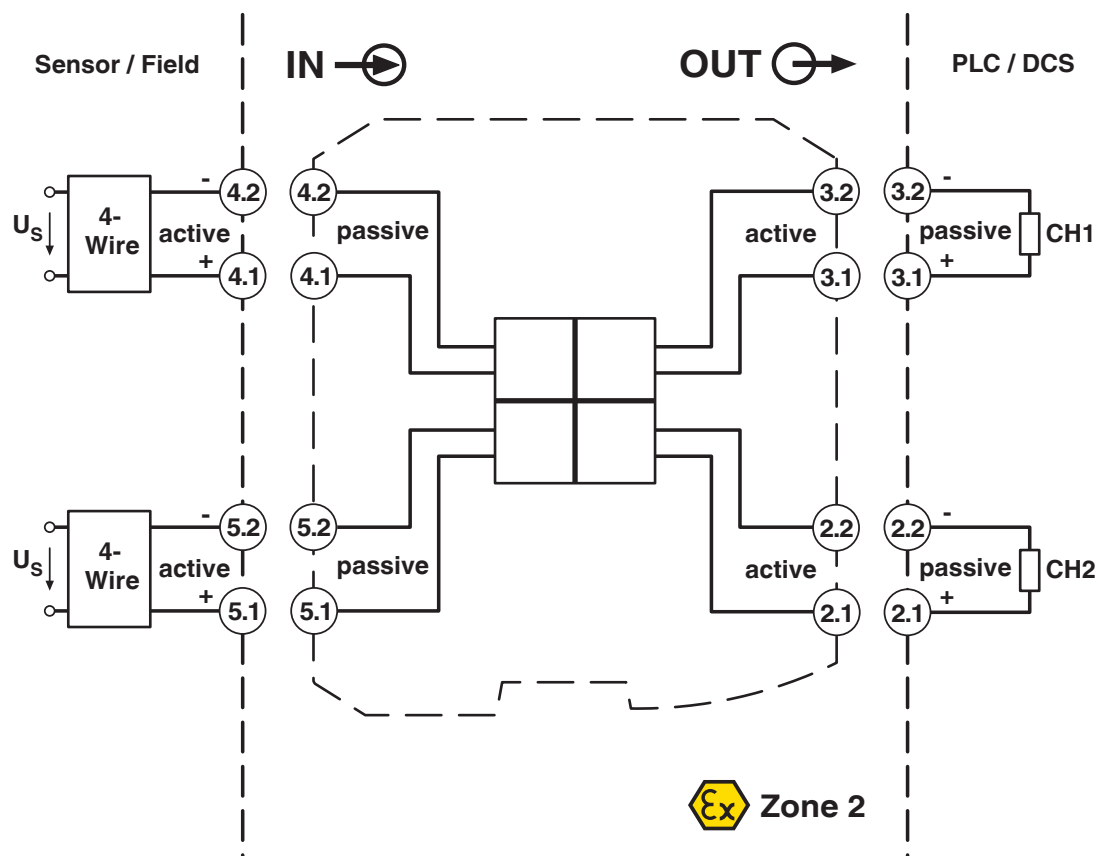
Mounting type	DIN rail mounting
---------------	-------------------

## Drawings

Dimensional drawing



Block diagram



# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2907706>



**EAC**

Approval ID: RU\*DE.\*08.B.01608/19



**UL Listed**

Approval ID: FILE E 330267



**cUL Listed**

Approval ID: FILE E 330267



**cUL Recognized**

Approval ID: FILE E 199827



**UL Recognized**

Approval ID: FILE E 199827

**cULus Listed**

**cULus Recognized**

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC002653
----------	----------

### UNSPSC

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



# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## Environmental product compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## Accessories

### EA-MSTB 2,5/ 5 - Accessories

1831016

<https://www.phoenixcontact.com/us/products/1831016>

Cover for screw shafts of the MSTB connector ranges with a pitch of 5.0 mm and 5.08 mm. These can be aligned and shortened for use with different numbers of positions.



---

### 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



# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



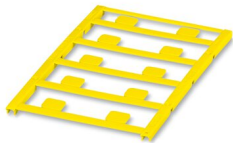
2907706

<https://www.phoenixcontact.com/us/products/2907706>

## 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

---

## 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

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

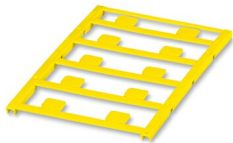
<https://www.phoenixcontact.com/us/products/2907706>

## 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



---

## 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



# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## 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

---

## 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

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## 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

---

## 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

# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

<https://www.phoenixcontact.com/us/products/2907706>

## 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



---

## 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



# MACX MCR-SL-2I-2I-HV-ILP - Loop-powered isolators



2907706

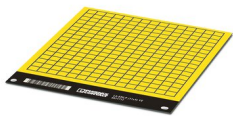
<https://www.phoenixcontact.com/us/products/2907706>

## 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



---

## 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



---

Phoenix Contact 2023 © - 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)