

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



2907704

<https://www.phoenixcontact.com/za/products/2907704>

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1-channel input loop-powered 2-way isolator with increased isolating 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

Single-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.

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Commercial Data

Item number	2907704
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	CK1
Product Key	CK1113
Catalog Page	Page 125 (C-5-2019)
GTIN	4055626219240
Weight per Piece (including packing)	140,1 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
No. of channels	1
Type	Signal conditioners with SIL functional safety

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

No. of channels	1
Electrical isolation	2-way isolation
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 _{rms}
Test voltage	5 kV AC (50 Hz, 60 s)
Insulation	Safe isolation in accordance with IEC/EN 61010-1

Supply

Supply voltage range	no separate supply voltage necessary
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Input data

Signal

Number of inputs	1
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)
Response current	approx. 50 μA

Output data

Signal: Current

Number of outputs	1
Configurable/programmable	no
Max. voltage output signal	27.5 V
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA

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Transmission Behavior	1:1 to input signal
Load/output load current output	$\leq 1375 \Omega$ (I = 20 mA)
Residual ripple	$< 10 \text{ mV}_{\text{rms}}$ (500 Ω load)

Connection data

Connection method	Screw connection
Stripping length	7 mm
Conductor cross section solid	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
Torque	0.5 Nm ... 0.6 Nm
Max. diameter	2.3 mm

Dimensions

Width	12.5 mm
Height	112.5 mm
Depth	113.7 mm
	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
Altitude	$< 2000 \text{ m}$
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approval data

CE

Certificate	CE-compliant
Note	and EN 61326-1

CE

Identification	<input type="checkbox"/> II 3 G Ex nA IIC T4 Gc X
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CE

Identification	<input type="checkbox"/> II 3 G Ex nA IIC T4 Gc X
Certificate	PxCIF21UKEX2905278X

CE

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

CE

Identification	3
Certificate	968/FSP 1200.01/21

CE

Identification	3
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EMC data

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

Standards and regulations

Electrical isolation	2-way isolation
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Mounting

Mounting type	DIN rail mounting
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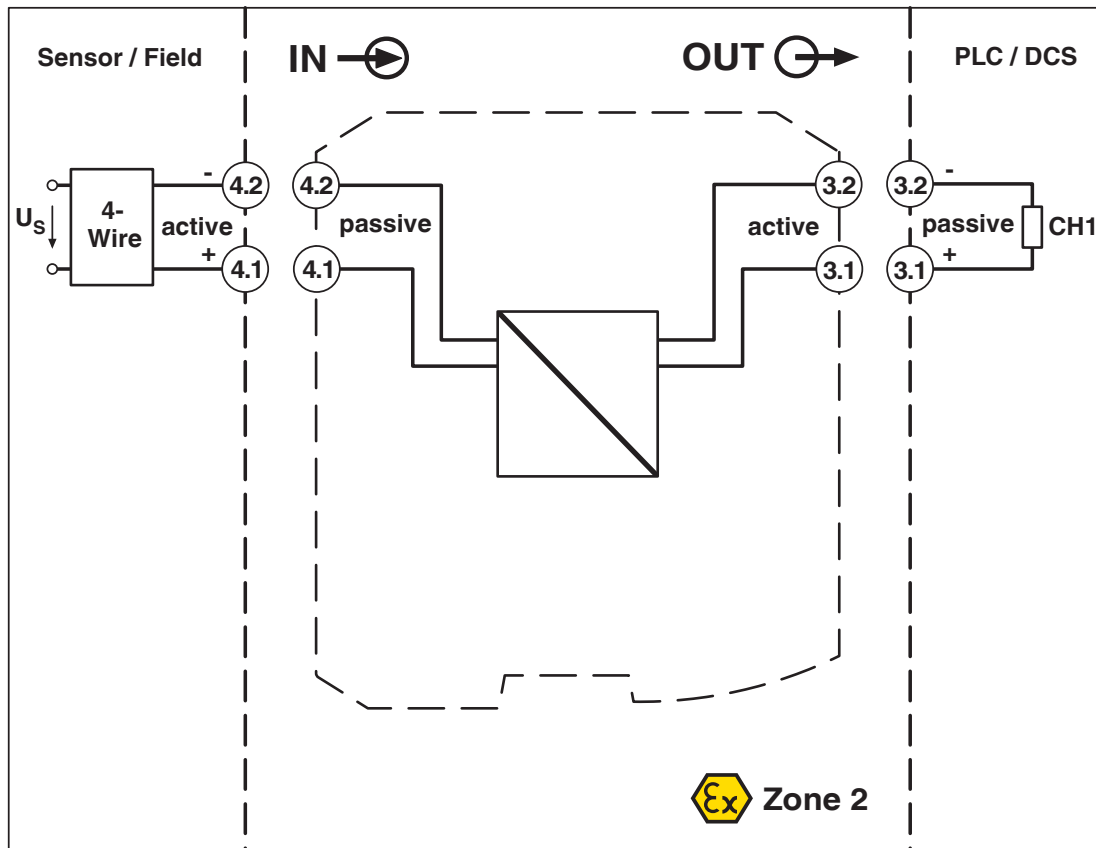


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Drawings

Block diagram



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Approvals



EAC

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



UL Listed

Approval ID: FILE E 330267



cUL Listed

Approval ID: FILE E 330267



EAC

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



cUL Listed

Approval ID: FILE E 330267



UL Listed

Approval ID: FILE E 330267



cUL Recognized

Approval ID: FILE E 199827



UL Recognized

Approval ID: FILE E 199827



ATEX

Approval ID: PxCIF15ATEX2905278X



ATEX

Approval ID: PxCIF15ATEX2905278X



cUL Recognized

Approval ID: FILE E 199827



UL Recognized

Approval ID: FILE E 199827

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cULus Listed

cULus Recognized

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Classifications

ECLASS

ECLASS-9.0	27210120
ECLASS-10.0.1	27210120
ECLASS-11.0	27210120

ETIM

ETIM 8.0	EC002653
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UNSPSC

UNSPSC 21.0	39121000
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Device marker

Device marker - LS-EMLP (11X9) WH - 0831678

<https://www.phoenixcontact.com/za/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



Device marker

Device marker - LS-EMLP (11X9) SR - 0831705

<https://www.phoenixcontact.com/za/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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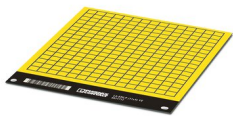
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Device marker

Device marker - LS-EMLP (11X9) YE - 0831732

<https://www.phoenixcontact.com/za/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



Plastic label

Plastic label - UC-EMLP (11X9) - 0819291

<https://www.phoenixcontact.com/za/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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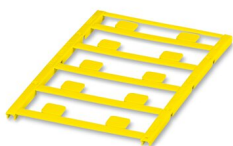
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Plastic label

Plastic label - UC-EMLP (11X9) YE - 0822602

<https://www.phoenixcontact.com/za/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

Plastic label

Plastic label - UC-EMLP (11X9) CUS - 0824547

<https://www.phoenixcontact.com/za/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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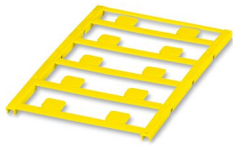
<https://www.phoenixcontact.com/za/products/2907704>

Plastic label

Plastic label - UC-EMLP (11X9) YE CUS - 0824548

<https://www.phoenixcontact.com/za/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



Plastic label

Plastic label - UC-EMLP (11X9) SR - 0828094

<https://www.phoenixcontact.com/za/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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Plastic label

Plastic label - UC-EMLP (11X9) SR CUS - 0828098

<https://www.phoenixcontact.com/za/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

Plastic label

Plastic label - US-EMLP (11X9) - 0828789

<https://www.phoenixcontact.com/za/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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Plastic label

Plastic label - US-EMLP (11X9) YE - 0828871

<https://www.phoenixcontact.com/za/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

Plastic label

Plastic label - US-EMLP (11X9) SR - 0828872

<https://www.phoenixcontact.com/za/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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