

MACX MCR-SL-2I-2I-ILP-SP - Passive separator



2905281

<https://www.phoenixcontact.com/gb/products/2905281>

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

Product description

Two-channel input-loop-powered 2-way isolator with 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 push-in connection.

Commercial data

Item number	2905281
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DK1113
Product key	DK1113
Catalog page	Page 124 (C-5-2019)
GTIN	4046356944380
Weight per piece (including packing)	162 g
Weight per piece (excluding packing)	150 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

Electrical properties

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

Test voltage	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	600 V _{rms}
Insulation	Safe isolation

Supply

Supply voltage range	loop-powered, no external supply necessary
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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	~ 50 µA

Output data

Signal: Current

Number of outputs	2
Configurable/programmable	no

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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 _{rms} (500 Ω load)

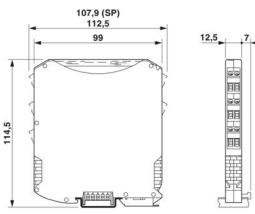
Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible (2 conductors with same cross section)	0.25 mm ² ... 0.34 mm ² (TWIN ferrule without plastic sleeve)
	0.5 mm ² ... 1.5 mm ² (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

Dimensions

Dimensional drawing	
Width	12.5 mm
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 ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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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
Certificate	PxCIF15ATEX2905278X

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

Electromagnetic compatibility	Conformance with EMC directive
Noise immunity	EN 61326-1

Noise emission

Standards/regulations	EN 61000-6-4
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Standards and regulations

Electrical isolation	2-way isolation
Standards/regulations	EN/IEC 60079-0
	EN/IEC 60079-7

Mounting

Mounting type	DIN rail mounting
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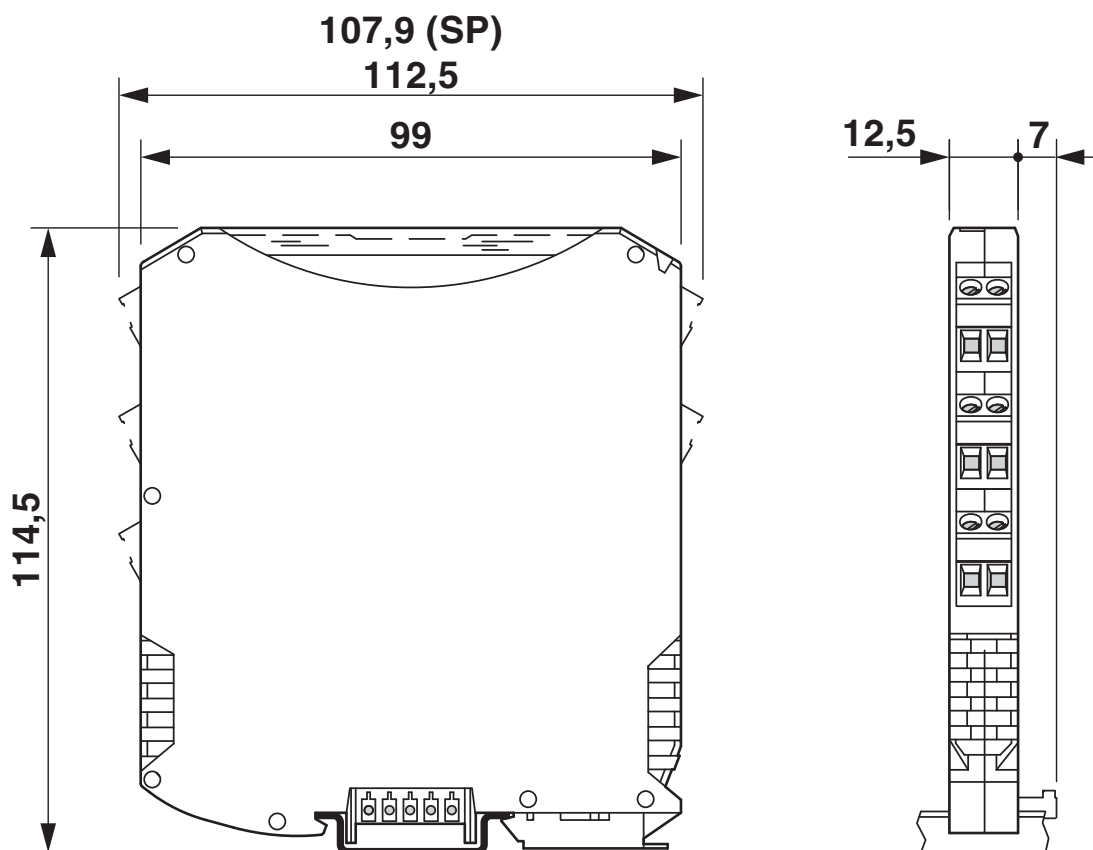
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Drawings

Dimensional drawing

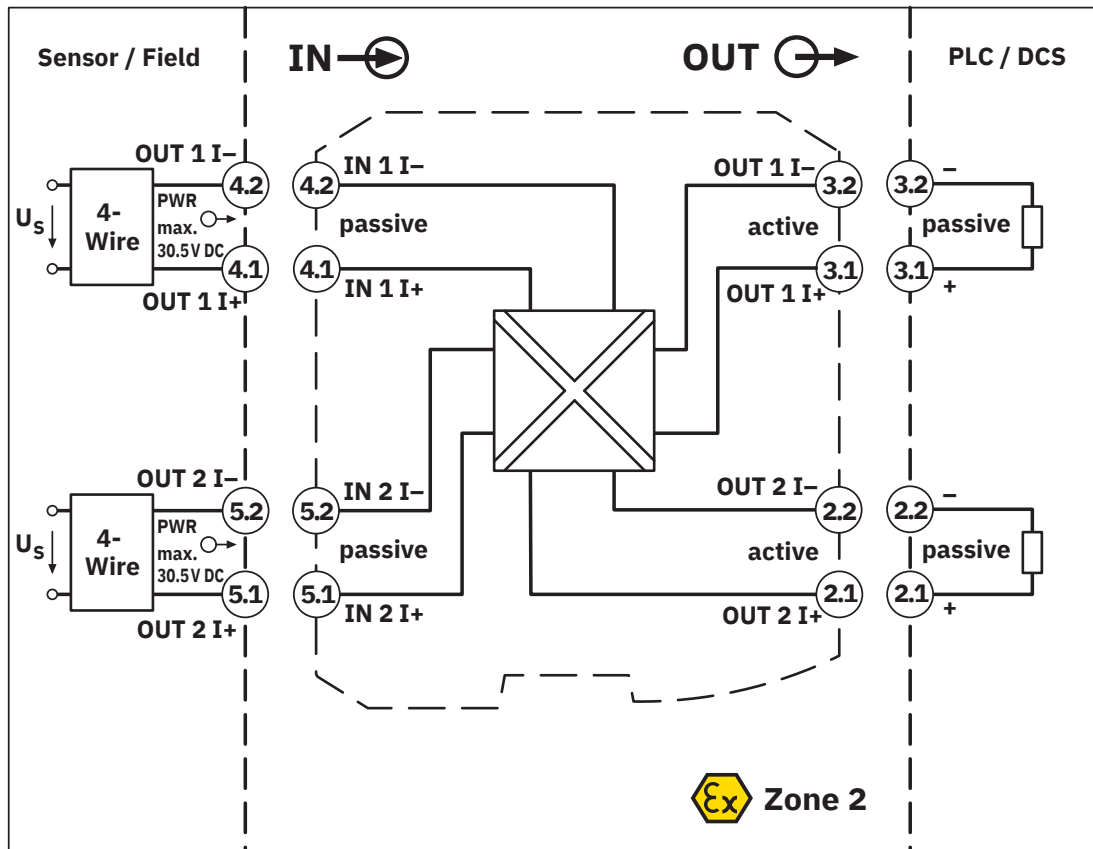


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Block diagram



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Approvals

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UL Listed

Approval ID: E330267



cUL Listed

Approval ID: E330267



cUL Recognized

Approval ID: FILE E 199827



UL Recognized

Approval ID: FILE E 199827

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Classifications

ECLASS

ECLASS-13.0	27210120
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ETIM

ETIM 9.0	EC002653
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UNSPSC

UNSPSC 21.0	39121000
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	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	1d7f887d-cb1d-4e75-8e2b-a3c81ceb026d