

# MINI MCR-2-2I-2I-ILP - Passive separator



2901996

<https://www.phoenixcontact.com/us/products/2901996>

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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. Screw 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 9.6 V DC ... 30 V DC. The device is powered via the current loop of the sensor. Input signal = output signal: 0(4) mA to 20 mA. The measuring transducer supports NFC communication.

## Commercial data

Item number	2901996
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C404
Product key	DK1121
GTIN	4046356649476
Weight per piece (including packing)	123 g
Weight per piece (excluding packing)	61 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Signal conditioner
Product family	MINI Analog Pro
No. of channels	2

### Electrical properties

Electrical isolation	2-way isolation
Electrical isolation between input and output	yes
Limit frequency (3 dB)	100 Hz
Signal transmission behavior	In = Out
Maximum temperature coefficient	≤ 0.002 %/K (of measured value / 100 Ω load)
Maximum transmission error	≤ 0.1 % (of final value)
Additional error, load-dependent	< 0.075 % (of measured value / 100 Ω load)

#### Electrical isolation

Overvoltage category	II
Pollution degree	2

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

Standards/regulations	IEC/EN 61010-1
Rated insulation voltage	300 V <sub>rms</sub>
Test voltage	3 kV AC (50 Hz, 60 s)
Insulation	Reinforced insulation

#### Supply

Supply voltage range	9.6 V DC ... 30 V DC (loop-powered, no external supply necessary)
Power consumption	600 mW

### Input data

#### Signal: Current

Number of inputs	2
Configurable/programmable	no
Current input signal	0 mA ... 20 mA 4 mA ... 20 mA
Response current	approx. 200 µA
Input voltage limitation	30 V

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Voltage dissipation	3.1 V (I = 20 mA)
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## Output data

Signal: Current

Number of outputs	2
Configurable/programmable	no
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA
Load/output load current output	< 600 Ω (at I = 20 mA output signal)

## Connection data

Connection method	Screw connection
Stripping length	10 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (with ferrule) 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (without ferrule)
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 12 (flexible)
Tightening torque	0.5 Nm ... 0.6 Nm

## Ex data

Ex installation (EPL)	Gc Div. 2
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## Dimensions

Width	6.2 mm
Height	109.81 mm
Depth	119.2 mm

## Material specifications

Color	gray (RAL 7042)
Housing material	PBT
Fire protection for rail vehicles (DIN EN 45545-2) R22	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R23	HL 1 - HL 2
Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

## Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (not assessed by UL)
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

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## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	⊕ II 3 G Ex ec IIC T4 Gc
Certificate	BVS 19 ATEX E 079 X

### IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX BVS 19.0068X

### CCC / China-Ex

Identification	Ex ec IIC T4 Gc
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### UL, USA/Canada

Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T6
	Class I, Zone 2, Group IIC T6

### EAC Ex

Identification	Ⓜ Ex ec IIC T4 Gc
Certificate	BY/112 02.01 TP012 103.01 00081

## EMC data

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

### Noise emission

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

Electrical isolation	2-way isolation
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### GB Standard

Standards/regulations	GB/T 3836.1
	GB/T 3836.3

## Mounting

Mounting type	DIN rail mounting
Mounting position	any

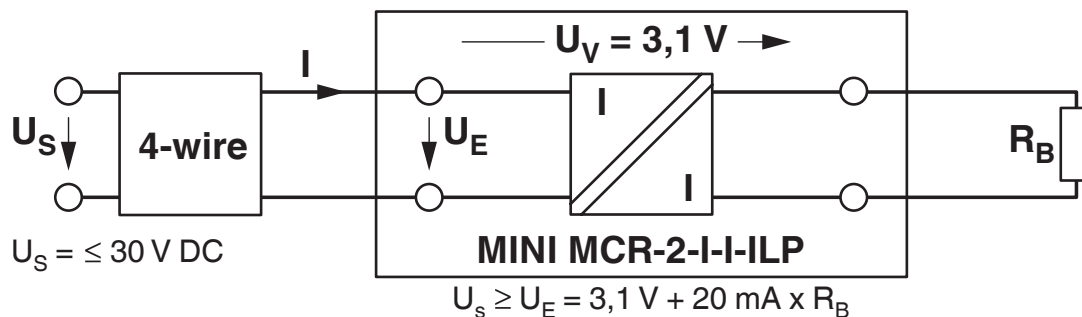
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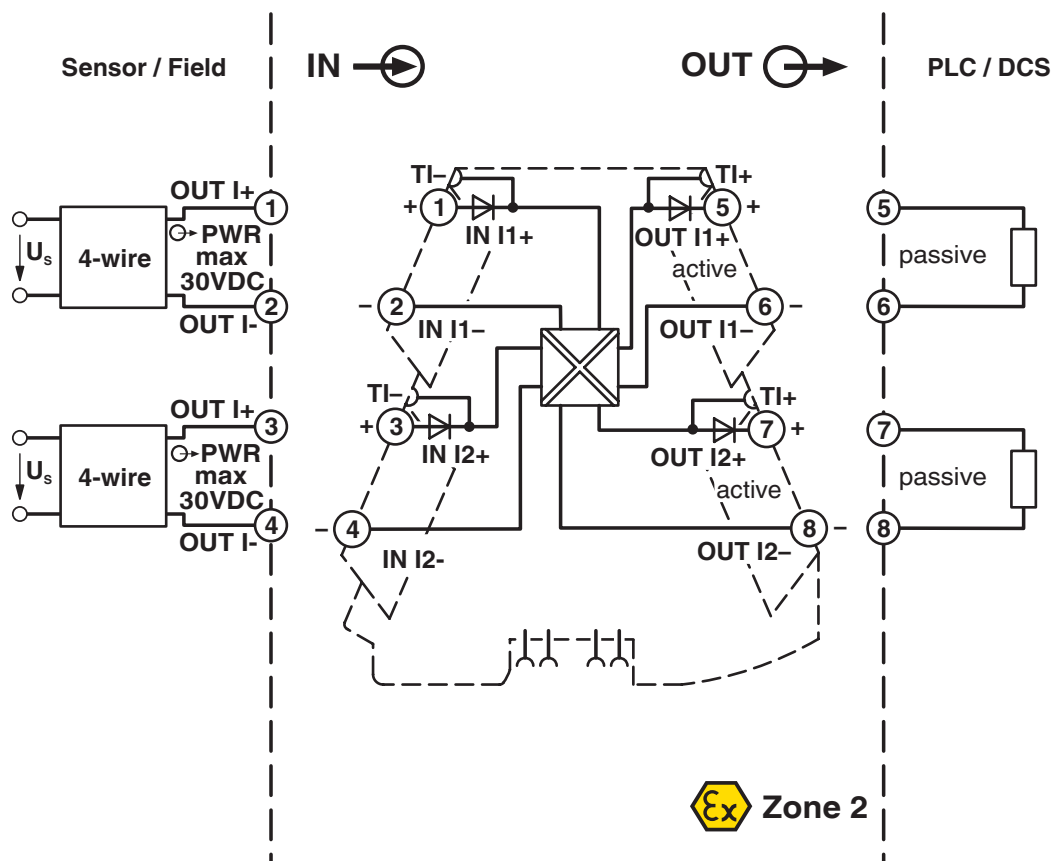
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## Drawings

Application drawing



Block diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2901996>



**EAC**

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



**UL Listed**

Approval ID: E238705



**cUL Listed**

Approval ID: E238705



**IECEx**

Approval ID: IECEx BVS 19.0068X



**cUL Listed**

Approval ID: FILE E 196811



**UL Listed**

Approval ID: E196811



**ATEX**

Approval ID: BVS 19 ATEX E 079 X



**EAC Ex**

Approval ID: TR TS\_S\_103.01.00081



**CCC**

Approval ID: 2021122310114155

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## Classifications

### ECLASS

ECLASS-13.0	27210120
ECLASS-15.0	27210120

### ETIM

ETIM 10.0	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	1d9d63eb-c86e-4bf8-a307-e03d6677f5af

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