

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



2901994

<https://www.phoenixcontact.com/us/products/2901994>

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1-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

Single-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 ... 20 mA. The measuring transducer supports NFC communication.

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2901994 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C404 |
| Product key | DK1121 |
| GTIN | 4046356648653 |
| Weight per piece (including packing) | 115.3 g |
| Weight per piece (excluding packing) | 106 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 |
|----------|---|

Product properties

| | |
|-----------------|--------------------|
| Product type | Signal conditioner |
| Product family | MINI Analog Pro |
| No. of channels | 1 |

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 _{rms} |
| 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 | 1 |
| 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) |
|---------------------|-------------------|

Output data

Signal: Current

| | |
|---------------------------------|--------------------------------------|
| Number of outputs | 1 |
| 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 ² ... 1.5 mm ² (with ferrule) 0.14 mm ² ... 2.5 mm ² (without ferrule) |
| Conductor cross-section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 12 (flexible) |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Ex data

| | |
|-----------------------|--------------|
| Ex installation (EPL) | Gc Div. 2 |
|-----------------------|--------------|

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 |
|-------------|--------------|

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 |
|----------------|-----------------|

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 00079 |

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 |
|-----------------------|--------------|

Standards and regulations

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

GB Standard

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

Mounting

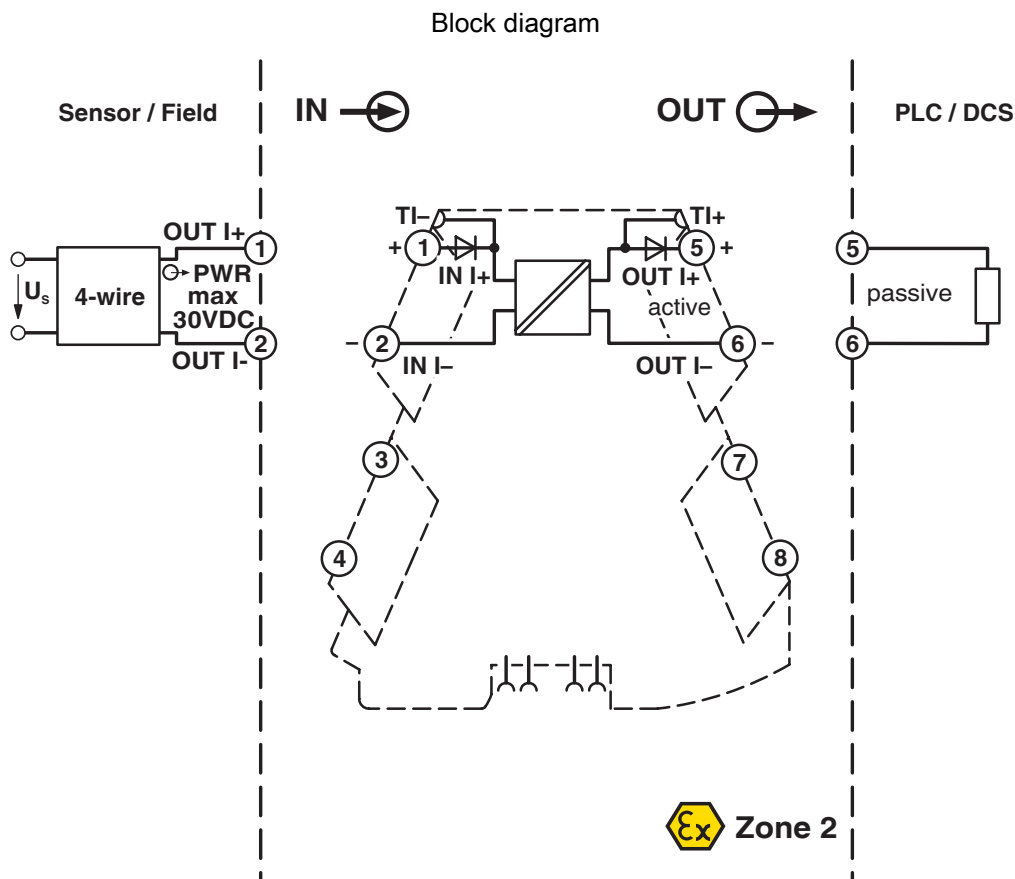
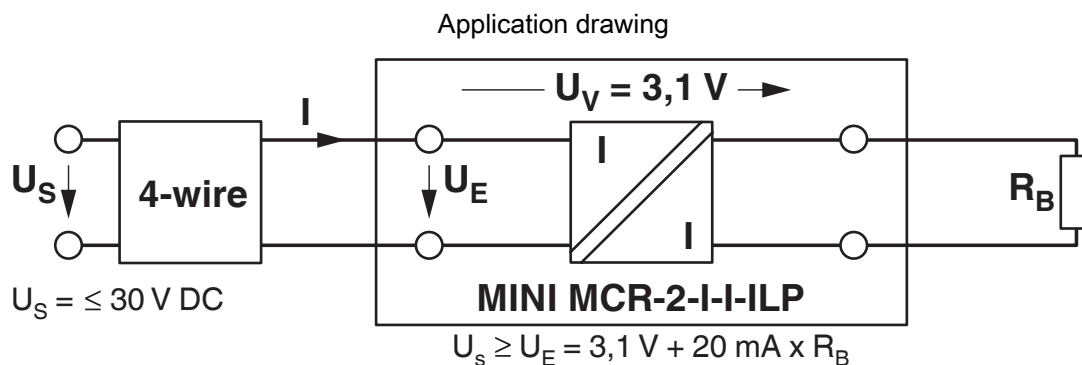
| | |
|-------------------|-------------------|
| Mounting type | DIN rail mounting |
| Mounting position | any |

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Drawings



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2901994>



EAC

Approval ID: RU C-DE.A*30.B.01082



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: TP012 103.01 00079



CCC

Approval ID: 2021122310114155

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27210120 |
| ECLASS-15.0 | 27210120 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002653 |
|-----------|----------|

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 | a7fb1e42-0ff9-4ffe-8a95-48b83a5aa925 |

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