

MINI MCR-2-I-I-ILP-PT - Loop-powered isolators



2901995

<https://www.phoenixcontact.com/in/products/2901995>

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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. Push-in 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 | 2901995 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | CK1 |
| Product Key | CK1413 |
| Catalog Page | Page 80 (C-5-2019) |
| GTIN | 4046356649261 |
| Weight per Piece (including packing) | 109 g |
| Weight per Piece (excluding packing) | 52.2 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 |
| Type | Signal conditioner |

Insulation characteristics: GB Standard

| | |
|----------------------|----|
| Overvoltage category | II |
| Pollution degree | 2 |

Electrical properties

| | |
|---|--|
| No. of channels | 1 |
| 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 Input/output

| | |
|--------------------------|---|
| Rated insulation voltage | 300 V _{rms} |
| Test voltage | 3 kV AC (50 Hz, 60 s) |
| Insulation | Reinforced insulation according to IEC/EN 61010-1 |

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 |

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| | |
|--------------------------|-------------------|
| Input voltage limitation | 30 V |
| 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 | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross section rigid | 0.2 mm ² ... 2.5 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) |

Ex data

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

Dimensions

| | |
|--------|-----------|
| Width | 6.2 mm |
| Height | 109.81 mm |
| Depth | 119.2 mm |

Material specifications

| | |
|--|-------------|
| 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 |
| Housing material | PBT |

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) |

Approvals

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CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

ATEX

| | |
|----------------|---|
| Identification | <input type="checkbox"/> II 3 G Ex ec IIC T4 Gc |
| Certificate | BVS 19 ATEX E 079 X |

UKCA Ex (UKEX)

| | |
|----------------|---|
| Identification | <input type="checkbox"/> II 3 G Ex ec IIC T4 Gc |
| Certificate | PxCIF21UKEX2901994X |

IECEX

| | |
|----------------|--------------------|
| Identification | Ex ec IIC T4 Gc |
| Certificate | IECEX BVS 19.0068X |

CCC / China-Ex

| | |
|----------------|-----------------|
| Identification | Ex nA 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 | <input type="checkbox"/> 2Ex ec IIC T4 Gc |
| Certificate | BY/112 02.01 TP012 103.01 00079 |

EMC data

| | |
|-------------------------------|--|
| Noise immunity | EN 61000-6-2 |
| Note | When being exposed to interference, there may be minimal deviations. |
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise emission | EN 61000-6-4 |

Standards and regulations

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

GB Standard

| | |
|-----------------------|-----------|
| Standards/regulations | GB 3836.1 |
| | GB 3836.8 |

Mounting

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

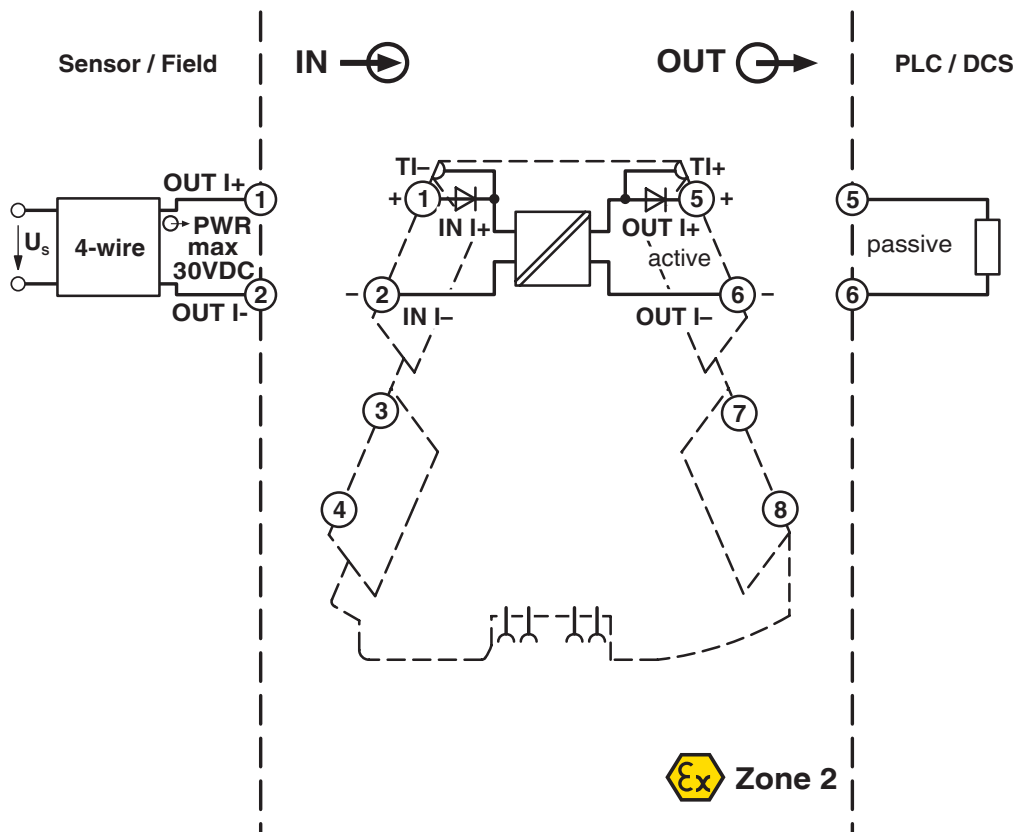
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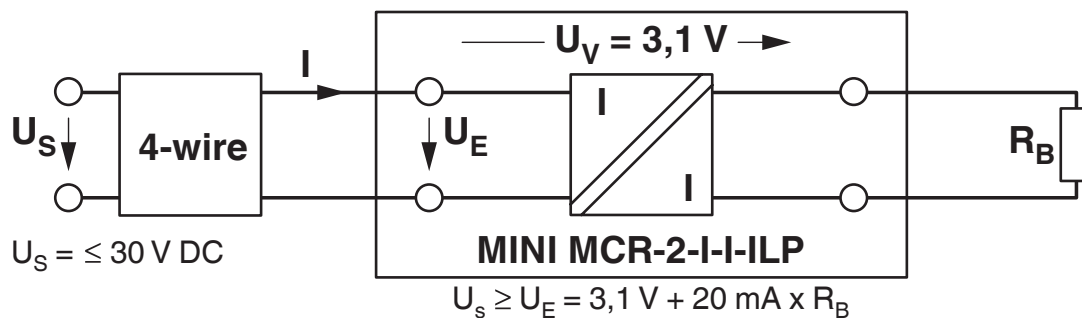
<https://www.phoenixcontact.com/in/products/2901995>

Drawings

Block diagram



Application drawing



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<https://www.phoenixcontact.com/in/products/2901995>

Approvals



EAC

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



UL Listed

Approval ID: FILE E 238705



CCC

Approval ID: 2021122310114155



cUL Listed

Approval ID: FILE E 238705



IECEx

Approval ID: IECEx BVS 19.0068X



cUL Listed

Approval ID: FILE E 196811



UL Listed

Approval ID: FILE E 196811



ATEX

Approval ID: BVS 19 ATEX E 079 X

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Classifications

ECLASS

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

ETIM

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

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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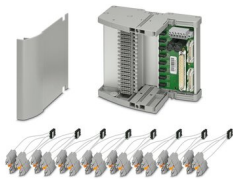
<https://www.phoenixcontact.com/in/products/2901995>

Accessories

TC-D37SUB-AIO16-MP-PS-UNI - Module carrier

2906640

<https://www.phoenixcontact.com/in/products/2906640>



Universal Termination Carrier for connecting 16 MINI Analog Pro signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection), with HART multiplexer connection

TC-D37SUB-ADIO16-MP-P-UNI - Module carrier

2906639

<https://www.phoenixcontact.com/in/products/2906639>



Universal Termination Carrier for connecting 16 MINI Analog Pro signal conditioners to digital or analog I/O cards, via D-SUB connector, 37-pos. (1:1 connection)

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MINI MCR-2-V8-FLK 16 - System adapter

2901993

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Eight MINI Analog Pro signal conditioners and measuring transducers can be connected to a controller with minimal cabling effort and without any errors using system adapters and system cabling.

MINI MCR-2-V8-MOD-RTU - Communication module

2905634

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Eight MINI Analog Pro signal conditioners and measuring transducers are quickly and easily integrated into a Modbus/RTU network via a communication adapter.

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MINI MCR-2-V8-MOD-TCP - Communication module

2905635

<https://www.phoenixcontact.com/in/products/2905635>



Eight MINI Analog Pro signal conditioners and measuring transducers are quickly and easily integrated into a Modbus/TCP network via a communication adapter.

MINI MCR-2-V8-PB-DP - Communication module

2905636

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Eight MINI Analog Pro signal conditioners and measuring transducers are quickly and easily integrated into a PROFIBUS DP network via a communication adapter.

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MINI MCR-2-V8-PN - Communication module

2905637

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Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a PROFINET network via a communication adapter.

FASTCON PRO-SET - Connector set

2906227

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FASTCON Pro plug set consisting of four plugs with screw connection, one for each position on the module. Suitable for all MINI Analog Pro modules.

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FASTCON PRO-SET-PT - Connector set

2906228

<https://www.phoenixcontact.com/in/products/2906228>



FASTCON Pro plug set consisting of four plugs with push-in connection, one for each position on the module. Suitable for all MINI Analog Pro modules.

UCT-EM (30X5) - Marker for end clamp

0801505

<https://www.phoenixcontact.com/in/products/0801505>



Marker for end clamp, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 30 x 5 mm, Number of individual labels: 24

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UCT-EM (30X5) CUS - Marker for end clamp

0801589

<https://www.phoenixcontact.com/in/products/0801589>



Marker for end clamp, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

SK 5,0 WH:REEL - Marker strip

0805221

<https://www.phoenixcontact.com/in/products/0805221>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm, Number of individual labels: 90000

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UC-EMLP (15X5) - Plastic label

0819301

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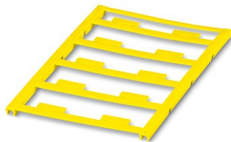


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UC-EMLP (15X5) YE - Plastic label

0822615

<https://www.phoenixcontact.com/in/products/0822615>



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: 15 x 5 mm, Number of individual labels: 10

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UC-EMLP (15X5) CUS - Plastic label

0824550

<https://www.phoenixcontact.com/in/products/0824550>

Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

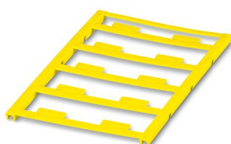


UC-EMLP (15X5) YE CUS - Plastic label

0824551

<https://www.phoenixcontact.com/in/products/0824551>

Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm



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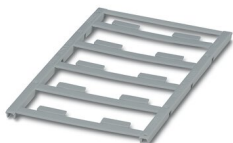
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UC-EMLP (15X5) SR - Plastic label

0828095

<https://www.phoenixcontact.com/in/products/0828095>

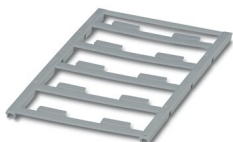


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UC-EMLP (15X5) SR CUS - Plastic label

0828099

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Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

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US-EMLP (15X5) - Plastic label

0828790

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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: 15 x 5 mm, Number of individual labels: 189

US-EMLP (15X5) YE - Plastic label

0828873

<https://www.phoenixcontact.com/in/products/0828873>



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: 15 x 5 mm, Number of individual labels: 189

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US-EMLP (15X5) SR - Plastic label

0828874

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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: 15 x 5 mm, Number of individual labels: 189

US-EMLP (15X5) CUS - Plastic label

0830076

<https://www.phoenixcontact.com/in/products/0830076>



Plastic label, can be ordered: by card, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

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US-EMLP (15X5) YE CUS - Plastic label

0830077

<https://www.phoenixcontact.com/in/products/0830077>

Plastic label, can be ordered: by card, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189



US-EMLP (15X5) SR CUS - Plastic label

0830078

<https://www.phoenixcontact.com/in/products/0830078>

Plastic label, can be ordered: by card, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189



MINI MCR-2-I-I-ILP-PT - Loop-powered isolators



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UCT-EM (30X5) YE - Marker for end clamp

0830340

<https://www.phoenixcontact.com/in/products/0830340>



Marker for end clamp, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, lettering field size: 30 x 5 mm, Number of individual labels: 24

UCT-EM (30X5) YE CUS - Marker for end clamp

0830348

<https://www.phoenixcontact.com/in/products/0830348>



Marker for end clamp, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

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