

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Output loop-powered 2-way isolator with plug-in connection technology for the electrical isolation of unipolar and bipolar analog signals. Input configurable via DIP switch. Push-in connection technology, standard configuration.

## Product description

Output loop-powered 2-way isolator with plug-in connection technology for the electrical isolation, conversion, and filtering of analog signals. The output loop-powered isolator allows operation at an active analog input module. The device is supplied via the current loop of the controller. On the input side, standard analog signals and non-standard analog signals can be connected, ranging from 2 mA or 50 mV up to 40 mA or 30 V. These are converted to 4 mA ... 20 mA signals. You can configure the input signals via DIP switches. The measuring transducer supports NFC communication.

## Commercial data

Item number	2902063
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C404
Product key	CK1413
Catalog page	Page 81 (C-5-2019)
GTIN	4046356652117
Weight per piece (including packing)	118.1 g
Weight per piece (excluding packing)	109.3 g
Customs tariff number	85437090
Country of origin	DE

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

## 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
Configuration	DIP switches

#### Data management status

Article revision	04
------------------	----

#### Insulation characteristics: GB Standard

Overvoltage category	II
Pollution degree	2

### Electrical properties

Electrical isolation	2-way isolation
Electrical isolation between input and output	yes
Limit frequency (3 dB)	approx. 30 Hz
Step response (10-90%)	20 ms
Maximum temperature coefficient	0.01 %/K
Temperature coefficient, typical	0.005 %/K
Maximum transmission error	≤ 0.1 % (of final value)

#### Electrical isolation Input/output/power supply

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

#### Supply

Supply voltage range	8 V DC ... 30 V DC (loop-powered, no external supply necessary)
Typical current consumption	≤ 20 mA
Power consumption	≤ 600 mW

### Input data

#### Signal: Voltage/current

Number of inputs	1
Configurable/programmable	Yes
	0 mV ... 1000 mV

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>



Voltage input signal	0 mV ... 750 mV
	0 mV ... 500 mV
	0 mV ... 300 mV
	0 mV ... 250 mV
	0 mV ... 200 mV
	0 mV ... 125 mV
	0 mV ... 120 mV
	0 mV ... 150 mV
	0 mV ... 100 mV
	0 mV ... 75 mV
	0 mV ... 60 mV
	0 mV ... 50 mV
	0 V ... 10 V
	0 V ... 7.5 V
	0 V ... 5 V
	0 V ... 3 V
	0 V ... 2.5 V
	0 V ... 2 V
	0 V ... 1.5 V
	0 V ... 1.25 V
	0 V ... 1.2 V
	0 V ... 30 V
	0 V ... 25 V
	0 V ... 20 V
	0 V ... 12.5 V
	0 V ... 12 V
	0 V ... 15 V
	-1000 mV ... 1000 mV
	-750 mV ... 750 mV
	-500 mV ... 500 mV
	-300 mV ... 300 mV
	-250 mV ... 250 mV
	-200 mV ... 200 mV
	-125 mV ... 125 mV
	-120 mV ... 120 mV
	-150 mV ... 150 mV
	-100 mV ... 100 mV
	-75 mV ... 75 mV
	-60 mV ... 60 mV
	-50 mV ... 50 mV
	-10 V ... 10 V
	-7.5 V ... 7.5 V
-5 V ... 5 V	
-3 V ... 3 V	

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

	-2.5 V ... 2.5 V
	-2 V ... 2 V
	-1.25 V ... 1.25 V
	-1.2 V ... 1.2 V
	-1.5 V ... 1.5 V
	-30 V ... 30 V
	-25 V ... 25 V
	-20 V ... 20 V
	-12.5 V ... 12.5 V
	-12 V ... 12 V
	-15 V ... 15 V
	2 V ... 10 V (additional areas can be configured, see table)
	1 V ... 5 V (additional areas can be configured, see table)
Max. voltage input signal	< 30 V
Current input signal	0 mA ... 40 mA
	0 mA ... 30 mA
	0 mA ... 20 mA
	0 mA ... 12 mA
	0 mA ... 10 mA
	0 mA ... 8 mA
	0 mA ... 7.5 mA
	0 mA ... 6 mA
	0 mA ... 5 mA
	0 mA ... 4 mA
	0 mA ... 3 mA
	0 mA ... 2.5 mA
	0 mA ... 2 mA
	4 mA ... 20 mA
	2 mA ... 10 mA
	1 mA ... 5 mA
Max. current input signal	50 mA (Dielectric strength up to 30 V)
Input resistance of voltage input	≈  kΩ (≤ 1 V)
	≈  MΩ (≥ 1 V)
Input resistance current input	25 Ω (+0.7 V for test diode)

## Output data

Signal: Current

Number of outputs	1
Current output signal	4 mA ... 20 mA
Max. current output signal	32 mA
Load/output load current output	< 1000 Ω ((U <sub>B</sub> - 8 V) / 22 mA)
Ripple	< 10 mV <sub>rms</sub> (at 600 Ω)

## Connection data

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 2.5 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)

## Ex data

Ex installation (EPL)	Gc
	Div. 2

## Signaling

Status display	Green LED (supply voltage)
----------------	----------------------------

## 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)

## Approvals

### CE

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

### ATEX

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

### UKCA Ex (UKEX)

Identification	Ⓜ II 3 G Ex ec IIC T4 Gc
Certificate	PxCIF21UKEX2901994X

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

## IECEEx

Identification	Ex ec IIC T4 Gc
Certificate	IECEEx 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 T5
	Class I, Zone 2, Group IIC T5

## Shipbuilding approval

Certificate	DNV GL TAA000021E Rev. 1
-------------	--------------------------

## EAC Ex

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

## DNV GL data

Temperature	B
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to the Rules shall be provided upon installation on board

## 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

# MINI MCR-2-UI-I-OLP-PT - Passive separator

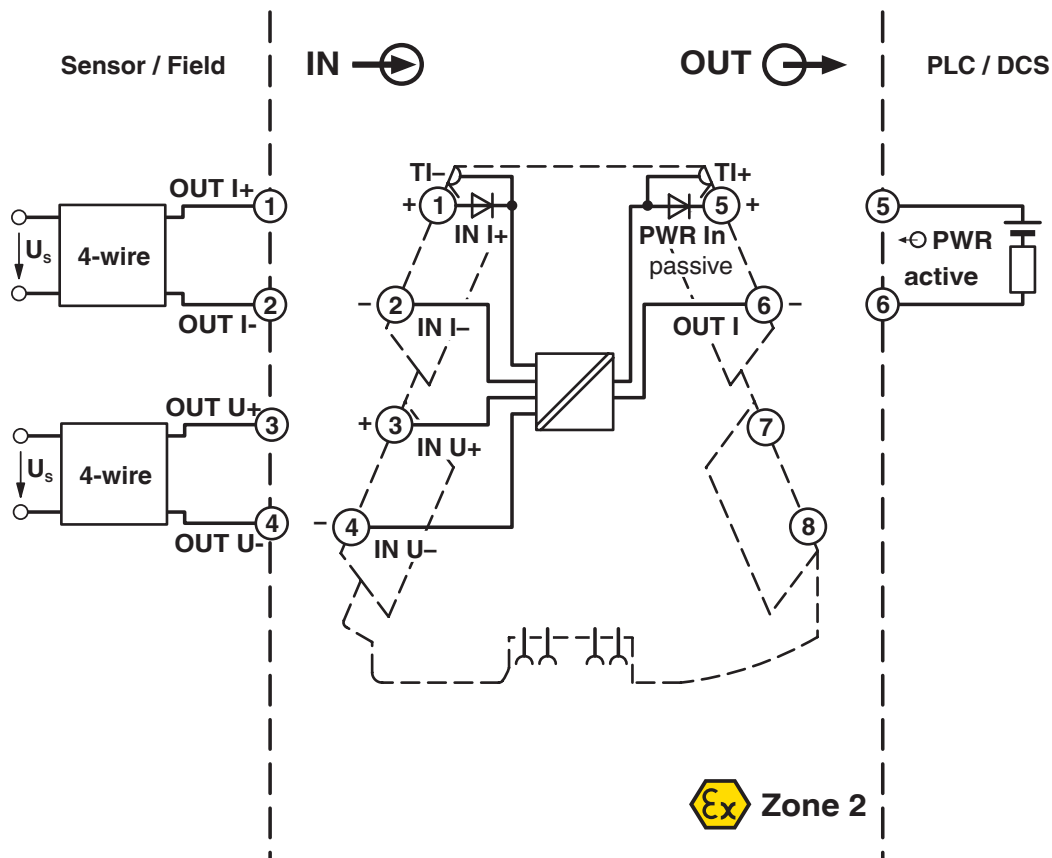


2902063

<https://www.phoenixcontact.com/us/products/2902063>

## Drawings

Block diagram



# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2902063>



**EAC**

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



**UL Listed**

Approval ID: E238705



**CCC**

Approval ID: 2021122310114155



**cUL Listed**

Approval ID: E238705

**DNV**

Approval ID: TAA000021E



**IECEX**

Approval ID: IECEX BVS 19.0068X



**cUL Listed**

Approval ID: E196811



**UL Listed**

Approval ID: E196811



**ATEX**

Approval ID: BVS 19 ATEX E 079 X

**cULus Listed**

**cULus Listed**



# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

## Classifications

### ECLASS

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

### ETIM

ETIM 9.0	EC002653
----------	----------

### UNSPSC

UNSPSC 21.0	39121000
-------------	----------

# MINI MCR-2-UI-I-OLP-PT - Passive separator



2902063

<https://www.phoenixcontact.com/us/products/2902063>

## 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	9dc7d9e0-a060-4095-9249-0b504daddc2b

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)