

MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

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.



3-way signal conditioner with plug-in connection technology for the electrical isolation of unipolar and bipolar analog signals. Input signal: 0 ... 10 V/±10 V, output signal: 0 ... 10 V/±10 V, push-in connection technology.

Product description

Standard signal 3-way signal conditioner with plug-in connection technology for the electrical isolation, conversion, amplification, and filtering of standard voltage signals. The measuring transducer supports fault monitoring and NFC communication.

Commercial data

Item number	2902043
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C404
Product key	CK1411
Catalog page	Page 76 (C-5-2019)
GTIN	4046356652087
Weight per piece (including packing)	106.78 g
Weight per piece (excluding packing)	94 g
Customs tariff number	85437090
Country of origin	DE

MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

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

Data management status

Article revision	12
------------------	----

Insulation characteristics: GB Standard

Overvoltage category	II
Pollution degree	2

Electrical properties

Electrical isolation	3-way isolation
Electrical isolation between input and output	yes
Limit frequency (3 dB)	approx. 30 Hz
Protective circuit	Transient protection
Signal transmission behavior	In = Out
Step response (10-90%)	approx. 10 ms
Maximum temperature coefficient	0.01 %/K
Temperature coefficient, typical	0.01 %/K
Maximum transmission error	0.1 % (of final value)

Electrical isolation Input/output/power supply

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

Nominal supply voltage	24 V DC
Supply voltage range	9.6 V DC ... 30 V DC (The DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, item no. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail in accordance with EN 60715)
Typical current consumption	25 mA (24 V DC)
	54 mA (12 V DC)
Power consumption	≤ 200 mW (at 9.6 V DC)

MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

Input data

Signal: Voltage

Number of inputs	1
Configurable/programmable	no
Voltage input signal	0 V ... 10 V
	-10 V ... 10 V
	2 V ... 10 V
Input resistance of voltage input	approx. 1 MΩ

Output data

Signal: Voltage

Number of outputs	1
Configurable/programmable	no
Voltage output signal	0 V ... 10 V
	-10 V ... 10 V
Max. voltage output signal	11 V
Short-circuit current	< 15 mA
Load/output load voltage output	≥ 10 kΩ
Ripple	< 20 mV _{PP} (at 10 kΩ)

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross section rigid	0.2 mm² ... 2.5 mm² (with ferrule)
	0.14 mm² ... 2.5 mm² (without ferrule)
Conductor cross section flexible	0.14 mm² ... 2.5 mm²
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

MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

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
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 047 X

UKCA Ex (UKEX)

Identification	II 3 G Ex ec IIC T4 Gc
Certificate	PxCIF21UKEX2902000X

IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX BVS 19.0041X

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

Shipbuilding approval

Certificate	DNV GL TAA00002UA
-------------	-------------------

EAC Ex

Identification	Ex ec IIC T4 Gc
Certificate	BY/112 02.01 TP012 103.01 00079

DNV GL data

Temperature	B
Humidity	B
Vibration	A
EMC	A

MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

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

Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

Electrostatic discharge

Comments	Safety measures must be taken to prevent electrostatic discharge.
----------	---

Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3

Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4

Surge current load (surge)

Standards/regulations	EN 61000-4-5
-----------------------	--------------

Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6

Standards and regulations

Electrical isolation	3-way isolation
----------------------	-----------------

GB Standard

Standards/regulations	GB 3836.1
	GB 3836.8

Mounting

Mounting type	DIN rail mounting
Thread type	()
Assembly note	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

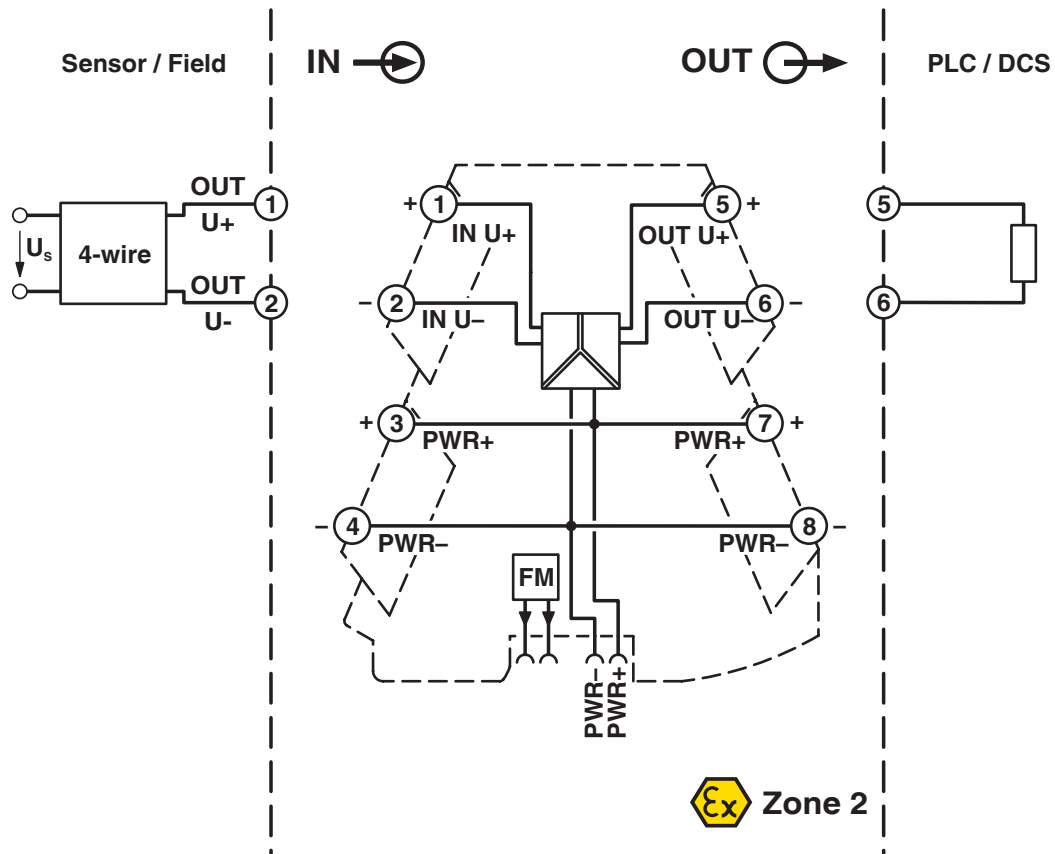
MINI MCR-2-U-U-PT - Signal conditioner

2902043

<https://www.phoenixcontact.com/us/products/2902043>

Drawings

Block diagram



MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2902043>



EAC
Approval ID: EAC-Zulassung



DNV GL
Approval ID: TAA00002UA



UL Listed
Approval ID: FILE E 238705



CCC
Approval ID: 2021322310003859



cUL Listed
Approval ID: FILE E 238705



IECEX
Approval ID: IECEX BVS 19.0041X



cUL Listed
Approval ID: E196811



UL Listed
Approval ID: E196811



ATEX
Approval ID: BVS 19 ATEX E 047 X

cULus Listed

cULus Listed

MINI MCR-2-U-U-PT - Signal conditioner



2902043

<https://www.phoenixcontact.com/us/products/2902043>

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-U-U-PT - Signal conditioner



2902043
<https://www.phoenixcontact.com/us/products/2902043>

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)
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7)
SCIP	76557b93-51af-4e12-96f6-ca3f529c36df
EF3.0 Climate Change	
CO2e kg	1.651 kg CO2e

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