

MINI MCR-2-IDS-I-I - Output signal conditioner



2905623

<https://www.phoenixcontact.com/nl/products/2905623>

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Output signal conditioner for isolating and transmitting 0 mA / 4 mA ... 20 mA signals from the controller to an intrinsically safe load in the Ex area. HART transparency, open-circuit voltage: 27 V DC, Standard configuration, 3-way isolation, Screw connection

Commercial data

Item number	2905623
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DK1122
Product key	DK1122
GTIN	4046356995504
Weight per piece (including packing)	130,2 g
Weight per piece (excluding packing)	99,99 g
Customs tariff number	85437090
Country of origin	DE

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Technical data

Product properties

Product family	MINI Analog Pro
Configuration	DIP switches

System properties

Functionality

Configuration	DIP switches
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Electrical properties

Electrical isolation	3-way isolation
Electrical isolation between input and output	yes
Signal transmission behavior	In = Out
Maximum temperature coefficient	$\leq 0.01\text{ \%/K}$
Maximum transmission error	0.1 %

Electrical isolation

Overvoltage category	II ($\leq 5000\text{ m}$)
Pollution degree	2 ($\leq 5000\text{ m}$)

Electrical isolation Input/output/power supply IEC/EN 61010-1

Standards/regulations	IEC/EN 61010-1
Rated insulation voltage	300 V _{rms}
Test voltage	2.5 kV AC (50 Hz, 60 s)
Insulation	Double/reinforced insulation

Electrical isolation Input/output/power supply IEC/EN 60079-7

Standards/regulations	IEC/EN 60079-7
Rated insulation voltage	251 V _{rms}

Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC
Power consumption	$\leq 1.2\text{ W}$

Input data

Signal: Current

Number of inputs	1
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
Input current	$\leq 30\text{ mA}$
Voltage drop	$< 3.5\text{ V DC (20 mA)}$

Output data

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Signal: Current

Number of outputs	1
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA
Load/output load current output	$\leq 700 \Omega$ (20 mA) $\leq 630 \Omega$ (21 mA)
Output ripple	20 mV (rms)
Open-circuit voltage	$\leq 27 \text{ V DC}$
Short-circuit-proof	yes
Line fault detection	$> 10 \text{ k}\Omega$ (Line break) $< 50 \Omega$ (Short circuit)

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
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Interfaces

Data communication (bypass)

HART function	HART transparency
Protocols supported	HART

Signaling

Status display	Green LED (supply voltage)
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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

Environmental and real-life conditions

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Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C (Any mounting position)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (at 25 °C, non-condensing)
Shock (operation)	15g (DIN EN 60068-2-27)
Vibration (operation)	5g (DIN EN 60068-2-6)

Altitude range (IEC/EN 61010-1)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Rated insulation voltage	300 V _{rms} (Input/output/power supply)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 61010-1)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Rated insulation voltage	300 V _{rms} (Input/output/power supply)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 61010-1)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Rated insulation voltage	150 V _{rms} (Input/output/power supply)
Insulation	Double/reinforced insulation

Altitude range (IEC/EN 60079-7)

Height range	> 2000 m ... 3000 m
Ambient temperature (operation)	-40 °C ... 63 °C
Rated insulation voltage	162 V _{rms} (Input/output/power supply)

Altitude range (IEC/EN 60079-7)

Height range	> 3000 m ... 4000 m
Ambient temperature (operation)	-40 °C ... 56 °C
Rated insulation voltage	60 V _{rms} (Input/output/power supply)

Altitude range (IEC/EN 60079-7)

Height range	> 4000 m ... 5000 m
Ambient temperature (operation)	-40 °C ... 49 °C
Rated insulation voltage	60 V _{rms} (Input/output/power supply)

Approvals

CE

Certificate	CE-compliant
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ATEX

Identification	Ⓔ II 3 G Ex ec IIC T4 Gc
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IECEX

Identification	Ex ec IIC T4 Gc
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CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	2023122310117250

UL, USA/Canada

Identification	UL 61010-2-201 Listed
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Shipbuilding approval

Certificate	DNV TAA00003FZ
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INMETRO

Identification	Ex ec IIC T4 Gc
Certificate	DNV 23.0186 X

Shipbuilding 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

Electromagnetic compatibility	Tested in accordance with the following standards and regulations: EN 61326-1 For industrial use, NAMUR NE 21
Low Voltage Directive	Conformance with Low Voltage Directive
Noise immunity	EN 61000-6-2

Noise emission

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

Electrical isolation	3-way isolation
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Mounting

Mounting type	DIN rail mounting
Mounting position	any

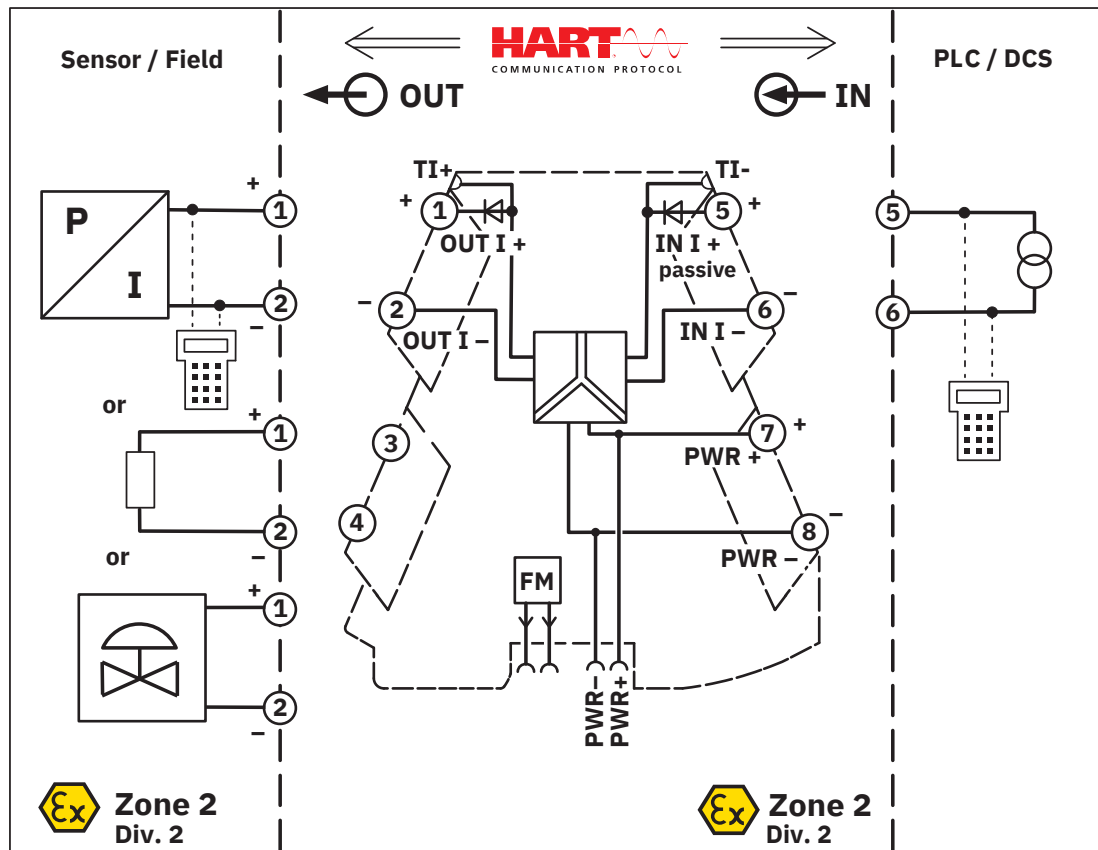
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Drawings

Block diagram



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Approvals

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cULus Listed

Approval ID: E238705

DNV

Approval ID: TAA00003FZ



ATEX

Approval ID: BVS 23 ATEX E 007 X



IECEx

Approval ID: IECEx BVS 23.0003X



CCC

Approval ID: 2023122310117250

INMETRO

Approval ID: DNV 23.0186 X

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Classifications

ECLASS

ECLASS-13.0	27210120
ECLASS-15.0	27210120

ETIM

ETIM 9.0	EC002653
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UNSPSC

UNSPSC 21.0	39121008
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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)
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol(CAS: 79-94-7)
SCIP	867bf8da-b84e-4e1f-9f2d-1e285655d58a

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PHOENIX CONTACT B.V.
Hengelder 56 6902 PA Zevenaar
Postbus 246 6900 AE Zevenaar
(0316) 59 17 20
sales@phoenixcontact.nl