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3-way output signal conditioner for transmitting 0/4 ... 20 mA signals from the controller to a load located in the field with simultaneous 3-way electrical isolation between the input, output, and supply, with screw connection

Product description

The 6.2 mm wide MINI MCR-SL-IDS-I-I... output signal conditioner transmits 0/4 - 20 mA signals from the controller to a load located in the field (I/P converters, control valves, indicators) with simultaneous 3-way electrical isolation between the input, output, and supply. HART data protocols can be transmitted bidirectionally. Electrically isolated 0 ... 20 mA or 4 ... 20 mA standard analog signals are available on the input and output side. Power (19.2 V DC ... 30 V DC) can either be supplied via the connection terminal blocks of the modules or in conjunction with the DIN rail connector.

Commercial data

Item number	2905577
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C403
Product key	CK1212
Catalog page	Page 100 (C-7-2015)
GTIN	4046356966290
Weight per piece (including packing)	87.7 g
Weight per piece (excluding packing)	87.7 g
Customs tariff number	85437090
Country of origin	DE

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



2905577

<https://www.phoenixcontact.com/us/products/2905577>

Technical data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Product properties

Product type	Repeater power supplies
Product family	MINI Analog
No. of channels	1

Data management status

Article revision	06
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Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Electrical isolation	3-way isolation
Limit frequency (3 dB)	> 175 Hz
Protective circuit	Transient protection
Signal transmission behavior	In = Out
Step response (10-90%)	< 2 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	50 V AC/DC
Test voltage	1.5 kV AC (50 Hz, 60 s)
Insulation	Basic insulation in accordance with IEC/EN 61010

Supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 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)
Power consumption	< 600 mW (at 24 V DC)

Input data

Signal

Number of inputs	1
Current input signal	0 mA ... 20 mA

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	4 mA ... 20 mA
Max. current input signal	20 mA
Input voltage limitation	< 2 V (20 mA)

Output data

Signal: Current

Number of outputs	1
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA
Load/output load current output	$\leq 800 \Omega$ (at 20 mA)
Ripple	< 20 mV _{rms}

Connection data

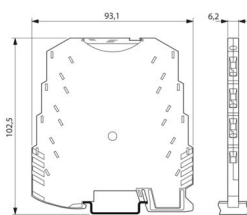
Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	26 ... 12

Interfaces

Data communication (bypass)

HART function	Yes
Limit frequency (3 dB)	2.5 Hz

Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	101.2 mm

Material specifications

Color	green (RAL 6021)
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

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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
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UKCA

Certificate	UKCA-compliant
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UL, USA/Canada

Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T4
	Class I, Zone 2, Group IIC

Shipbuilding approval

Certificate	DNV GL TAA000020N
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DNV GL data

Temperature	B
Humidity	B
Vibration	B
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

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Comments	Safety measures must be taken to prevent electrostatic discharge.
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Electromagnetic HF field

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Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	3 %

Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	3 %

Surge current load (surge)

Standards/regulations	EN 61000-4-5
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Surge current load (surge)

Comments	Criterion B
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Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	3 %

Standards and regulations

Electrical isolation	3-way isolation
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Mounting

Mounting type	DIN rail mounting
Assembly note	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.
Mounting position	any

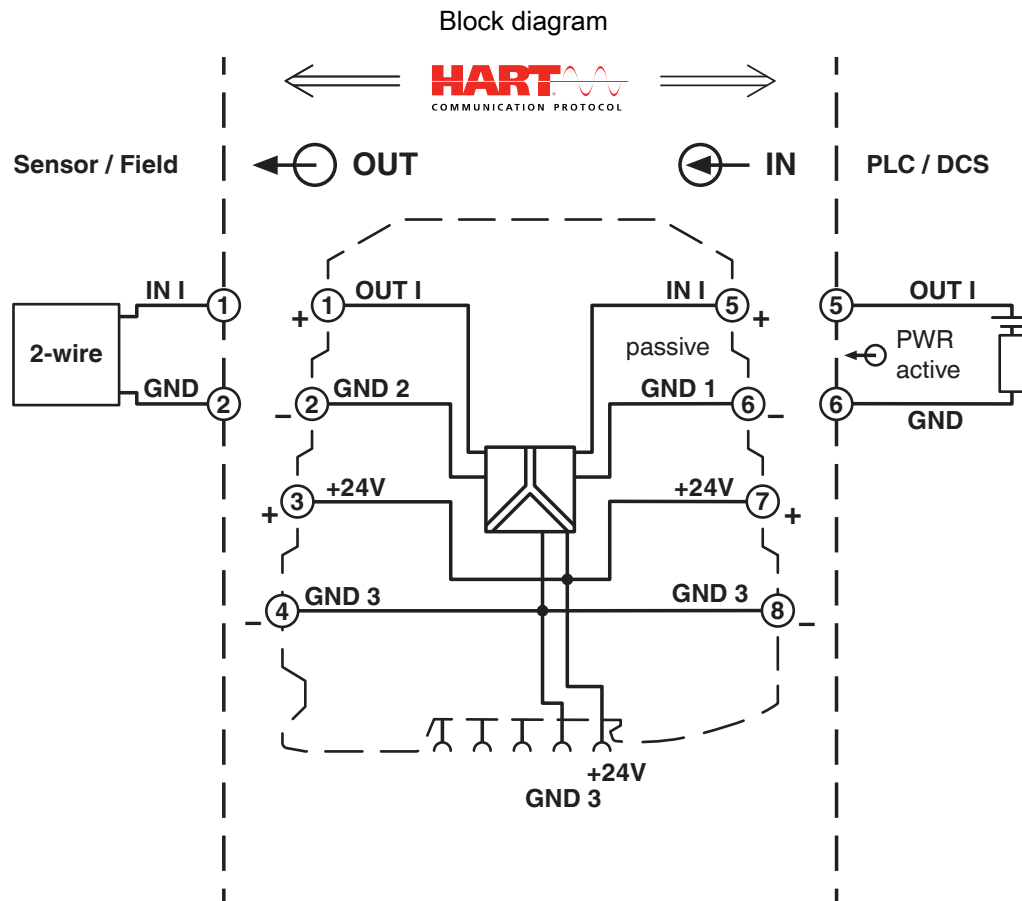
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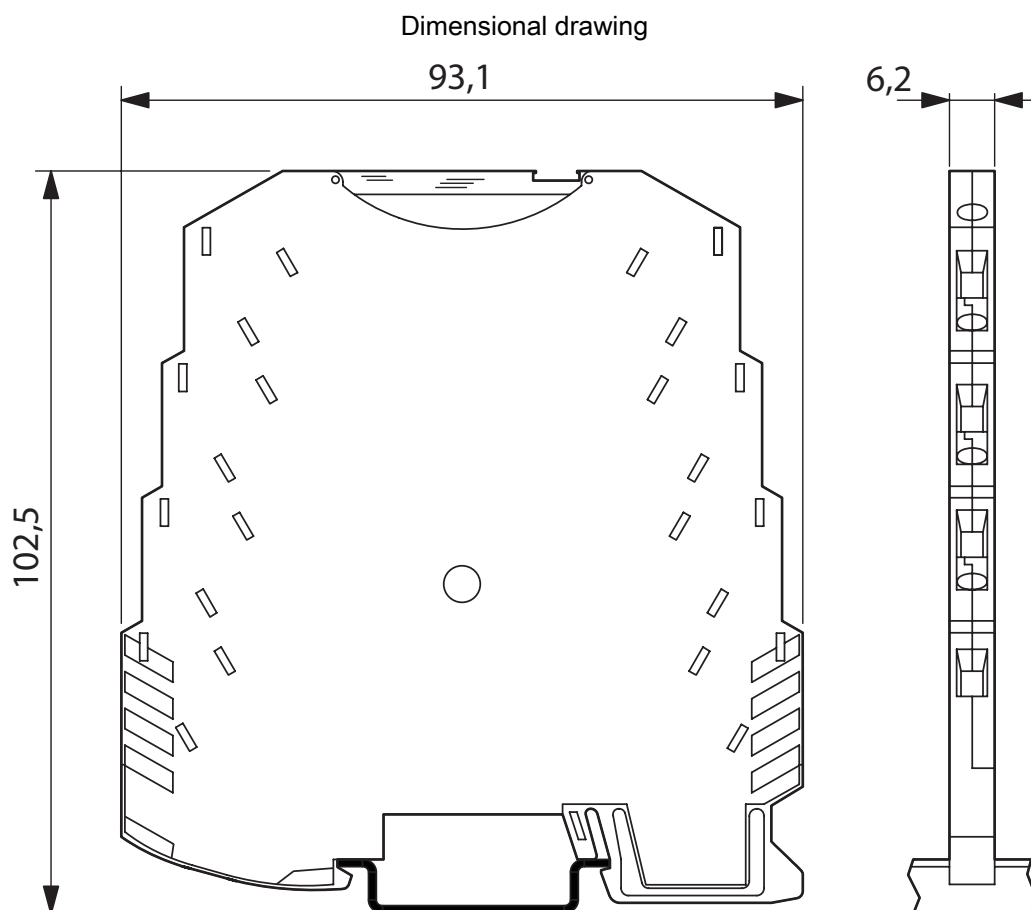
Drawings



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2905577>



UL Listed
Approval ID: E238705



cUL Listed
Approval ID: E238705

DNV
Approval ID: TAA000020N



cUL Recognized
Approval ID: E199827



UL Recognized
Approval ID: E199827

cULus Listed

cULus Recognized

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Classifications

ECLASS

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

ETIM

ETIM 9.0	EC002653
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UNSPSC

UNSPSC 21.0	39121000
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 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	635dca74-920d-42ee-a421-9ee4157137aa

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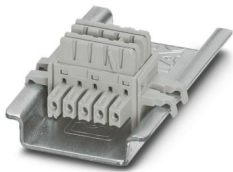
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Accessories

ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - DIN rail bus connectors

2695439

<https://www.phoenixcontact.com/us/products/2695439>

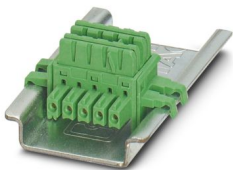


DIN rail connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rail in accordance with EN 60715

ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - DIN rail bus connectors

2869728

<https://www.phoenixcontact.com/us/products/2869728>



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

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

2902934

<https://www.phoenixcontact.com/us/products/2902934>



Universal termination carrier for connecting 16 MINI Analog 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-M-P-UNI - Module carrier

2902933

<https://www.phoenixcontact.com/us/products/2902933>



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

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GW HART USB MODEM - Cable adapter

1003824

<https://www.phoenixcontact.com/us/products/1003824>



USB HART modem cable for communication between a PC and HART devices, cable length: 1 m.

MINI MCR DKL - Transparent cover

2308111

<https://www.phoenixcontact.com/us/products/2308111>



Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm

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MINI MCR-DKL-LABEL - Marking label

2810272

<https://www.phoenixcontact.com/us/products/2810272>

Label for extended marking of MINI MCR modules in connection with the MINI MCR-DKL



MINI MCR-SL-PTB - Power terminal block

2864134

<https://www.phoenixcontact.com/us/products/2864134>

MCR power terminal block for supplying several MINI Analog modules via the DIN rail connector, with screw connection, maximum current consumption of up to 2 A



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

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QUINT4-SYS-PS/1AC/24DC/2.5/SC - Power supply unit

2904614

<https://www.phoenixcontact.com/us/products/2904614>



Primary-switched power supply, QUINT POWER, screw connection, DIN rail mounting, supply of devices possible via the TBUS DIN rail connector, protective coating, input: single-phase, output: 24 V DC/2.5 A

SZS 0,6X3,5 - Screwdriver

1205053

<https://www.phoenixcontact.com/us/products/1205053>



Actuation tool, for ST terminal blocks, insulated, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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