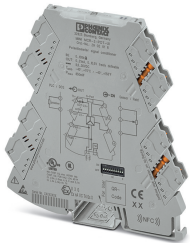


Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

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Configurable potiposition transducer with plug-in connection technology for connecting potentiometers from 0 Ω ... 100 Ω to 0 kΩ ... 100 kΩ. Configurable via DIP switch or software. Screw connection technology, standard configuration

Product Description

Configurable, 3-way isolated potentiometer measuring transducer with plug-in connection technology. The measured values are converted into a linear and freely adjustable current or voltage signal. You can configure the device using one of the free software solutions. Default settings can also be made directly on the device by simply using the DIP switches (see configuration table). If it is not possible to fully utilize the potentiometer range, you can specify the upper and lower potentiometer values in the software. The measuring transducer supports fault monitoring and NFC communication.



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 649551
GTIN	4046356649551

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	6.2 mm
Height	109.81 mm
Depth	119.2 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Degree of protection	IP20 (not assessed by UL)

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Technical data

Ambient conditions

Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
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Input data

Potentiometer	100 Ω ... 100 kΩ
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Output data

Voltage output signal	1 V ... 5 V (via DIP switch)
	10 V ... 0 V (via DIP switch)
	0 V ... 5 V (via DIP switch)
	0 V ... 10 V (via DIP switch)
	0 V ... 10.5 V (can be set via software)
Current output signal	0 mA ... 20 mA (via DIP switch)
	4 mA ... 20 mA (via DIP switch)
	20 mA ... 0 mA (via DIP switch)
	20 mA ... 4 mA (via DIP switch)
	0 mA ... 21 mA (can be set via software)
Max. voltage output signal	approx. 12.3 V
Max. current output signal	24.6 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	≤ 600 Ω (at 20 mA)

Power supply

Supply voltage	24 V DC
	9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715))
Current consumption	33 mA (24 V DC)
	68 mA (12 V DC)

Connection data

Connection method	Screw connection
Stripping length	10 mm
Screw thread	M3
Conductor cross section solid	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)
Torque	0.5 Nm ... 0.6 Nm

General

Maximum transmission error	< 0.1 % (R < 240 Ω = < 0,2 %)
Maximum temperature coefficient	0.01 %/K
Temperature coefficient, typical	0.01 %/K

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Technical data

General

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Housing material	PBT

EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	0.2 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	0.4 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	0.2 %

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Standards/regulations	EN 61000-4-2
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1

Conformance/approvals

Designation	CE
Certificate	CE-compliant
Designation	ATEX
Identification	# II 3 G Ex ec IIC T4 Gc
Certificate	BVS 20 ATEX E 024 X
Designation	IECEX
Identification	Ex ec IIC T4 Gc
Certificate	IECEX BVS 20.0017X
Designation	UL, USA / Canada
Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T5
	Class I, Zone 2, Group IIC T5
Designation	Shipbuilding approval
Certificate	DNV GL TAA00002UA

Resistance/potipotition transducer - MINI MCR-2-POT-UI - 2902016

Technical data

Conformance/approvals

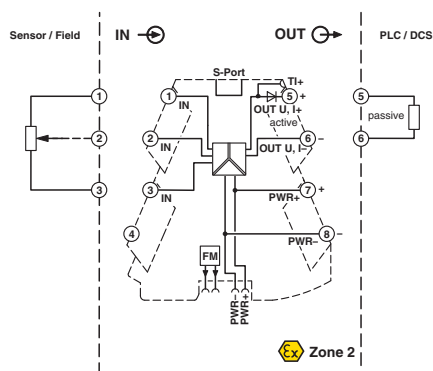
Temperature	B
Humidity	B
Vibration	A
EMC	A
Enclosure	Required protection according to the Rules shall be provided upon installation on board

Environmental Product Compliance

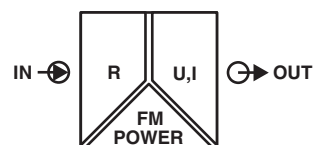
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Block diagram



Pictogram



Classifications

eCl@ss

eCl@ss 10.0.1	27210120
eCl@ss 11.0	27210120
eCl@ss 4.0	27210100
eCl@ss 4.1	27210100
eCl@ss 5.0	27210100
eCl@ss 5.1	27210100
eCl@ss 6.0	27210100
eCl@ss 7.0	27210120
eCl@ss 9.0	27210120

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Classifications

ETIM

ETIM 4.0	EC002653
ETIM 6.0	EC002653
ETIM 7.0	EC002653

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008
UNSPSC 18.0	39121008
UNSPSC 19.0	39121008
UNSPSC 20.0	39121008
UNSPSC 21.0	39121008

Approvals

Approvals

Approvals

UL Listed / cUL Listed / DNV GL / cULus Listed

Ex Approvals

UL Listed / cUL Listed / EAC Ex / ATEX / ATEX / IECEx / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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DNV GL		https://approvalfinder.dnvgl.com/	TAA00002UA
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Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Approvals

cULus Listed



Accessories

Accessories

Communication module

Communication module - MINI MCR-2-V8-MOD-RTU - 2905634



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

Communication module - MINI MCR-2-V8-MOD-TCP - 2905635



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

Communication module - MINI MCR-2-V8-PB-DP - 2905636



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

Device marking

Marker for end clamp - UCT-EM (30X5) - 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 into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Accessories

Plastic label - UC-EMLP (15X5) - 0819301



Plastic label, Sheet, white, 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

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

Plastic label - UC-EMLP (15X5) SR - 0828095



Plastic label, Sheet, silver, 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

Plastic label - US-EMLP (15X5) - 0828790



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

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

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Accessories

Plastic label - US-EMLP (15X5) SR - 0828874



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

Marker for end clamp - UCT-EM (30X5) YE - 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 into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

DIN rail connector

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - 2695439



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

DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



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

Evaluation unit

Monitoring module - MINI MCR-2-FM-RC - 2904504



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Screw connection technology, standard configuration

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Accessories

Monitoring module - MINI MCR-2-FM-RC-PT - 2904508



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Push-in connection technology, standard configuration

Labeled device marker

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

Plastic label - UC-EMLP (15X5) CUS - 0824550



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

Plastic label - UC-EMLP (15X5) YE CUS - 0824551



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

Plastic label - UC-EMLP (15X5) SR CUS - 0828099



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

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Accessories

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

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

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

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

Power module

Power terminal block - MINI MCR-2-PTB - 2902066



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Screw connection technology

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Accessories

Power terminal block - MINI MCR-2-PTB-PT - 2902067



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Push-in connection technology

Power supply

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



Please use the following item in new systems: 2904614
Primary-switched MINI POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

Programming adapter

Programming adapter - IFS-USB-PROG-ADAPTER - 2811271



Programming adapter with USB interface, for programming with software. The USB driver is included in the software solutions for the products to be programmed, such as measuring transducers or motor managers.

Adapter - IFS-BT-PROG-ADAPTER - 2905872



Bluetooth adapter with micro USB and S-PORT interface for wireless communication with the MINI Analog, MINI Analog Pro, MACX Analog, INTERFACE system gateways, and PLC logic device series.

Programming adapter - TWN4 MIFARE NFC USB ADAPTER - 2909681



Near Field Communication (NFC) programming adapter with USB interface for the wireless configuration of NFC-capable products from PHOENIX CONTACT with software. No separate USB driver is required.

System adapter

Resistance/potiposition transducer - MINI MCR-2-POT-UI - 2902016

Accessories

System adapter - MINI MCR-2-V8-FLK 16 - 2901993



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.

Terminal marking

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: 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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