

Resistance/potiposition transducer - MINI MCR-SL-R-UI



2864095

<https://www.phoenixcontact.com/pc/products/2864095>

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MCR potiposition transducer for conversion of potentiometer positions into a standard analog signal, 0 Ω input... 100 Ω to 0 k Ω ... 100 k Ω

Product Description

The narrow 6.2 mm MINI MCR-SL-R-UI... potiposition transducer converts potentiometer positions into a standard analog signal on a percentage basis. If the potentiometer range cannot be utilized to the full, an externally accessible slide switch is used to set the upper and lower potentiometer final values. The output signal between 0% and 100% is based on this set final value.

The DIP switches, which can be accessed on the side of the housing, are used to configure the following parameters:

- Output signal
- Automatic potentiometer detection
- Wire-break detection slider
- Type of error evaluation

Power (19.2 V DC to 30 V DC) can either be supplied via the connection terminal blocks of the modules or in conjunction with the DIN rail connector.

Your advantages

- Power supply possible via the foot element (TBUS)
- Automatic potentiometer detection without manual adjustment
- Error indication via diagnostic LED and analog signal
- For 100 Ω to 100 k Ω potentiometers
- potentiometer signals to create standard signals
- Configurable measuring range and output signals
- Highly-compact potentiometer transducer for electrical isolation, conversion, amplification, and filtering of
- Input and output signals can be configured via DIP switches
- 3-way isolation
- A potentiometer sub-range can be linearized via the "teach-in" switch on the device

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Commercial Data

Item number	2864095
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Product Key	CK1232
Catalog Page	Page 111 (C-7-2015)
GTIN	4046356046442
Weight per Piece (including packing)	98.2 g
Weight per Piece (excluding packing)	73.17 g
Customs tariff number	85437090
Country of origin	DE

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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	Potipotension transducer
No. of channels	1
Configuration	DIP switches

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

No. of channels	1
Maximum power dissipation for nominal condition	235.5 mW
Step response (0–99%)	< 30 ms
Maximum temperature coefficient	< 0.02 %/K
Temperature coefficient, typical	< 0.02 %/K
Maximum transmission error	< 0.2 %

Electrical isolation Input/output/power supply

Rated insulation voltage	30 V AC
	50 V 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 bus 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 according to EN 60715))
Typical current consumption	< 25 mA (at 24 V DC)
Power consumption	< 500 mW

Input data

Signal: Potentiometer

Number of inputs	1
Resistance range	100 Ω ... 100 kΩ
Reference voltage source	< 3.6 V

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Output data

Signal: Voltage/current

Output name	Voltage output / current output
Number of outputs	1
Voltage output signal	0 V ... 5 V
	1 V ... 5 V
	0 V ... 10 V
	10 V ... 0 V
Max. voltage output signal	12.5 V
Non-load voltage	<input type="checkbox"/> 12.5 V
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	20 mA ... 0 mA
	20 mA ... 4 mA
Max. current output signal	23 mA
Short-circuit current	<input type="checkbox"/> 10 mA
Load/output load voltage output	> 10 k Ω
Load/output load current output	< 500 Ω (20 mA)
Ripple	< 20 mV _{PP} (500 Ω)
	< 20 mV _{PP} (10 k Ω)
Behavior in the event of a sensor error	0 % ... 105 % (configurable)

Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section solid	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

Software

Functionality

Configuration	DIP switches
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Dimensions

Dimensional drawing	
Width	6.2 mm

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Height	93.1 mm
Depth	101.2 mm

Material specifications

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
Housing material	PBT

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

Approval data

CE

Certificate	CE-compliant
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CE

Certificate	UKCA-compliant
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CE

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T4

CE

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

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

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Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %

Fast transients (burst)

Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %

Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	5 %

Mounting

Mounting type	DIN rail mounting
Mounting position	any

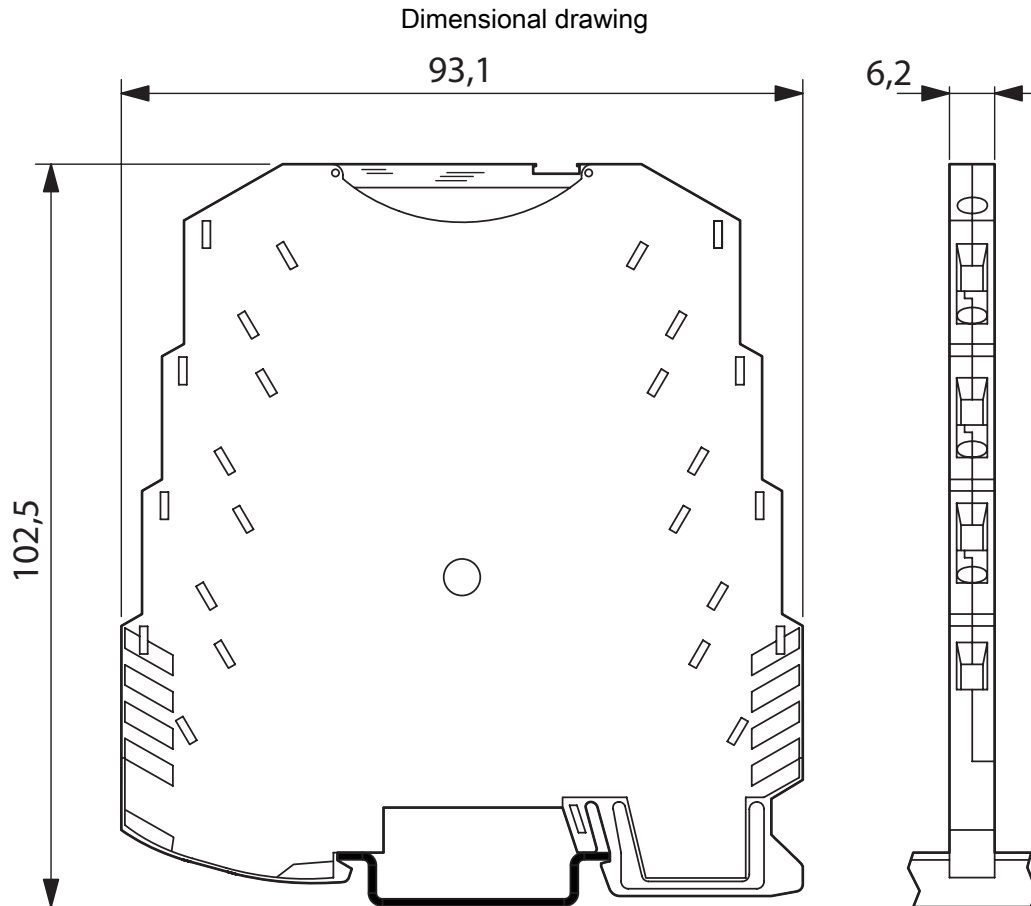
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Drawings



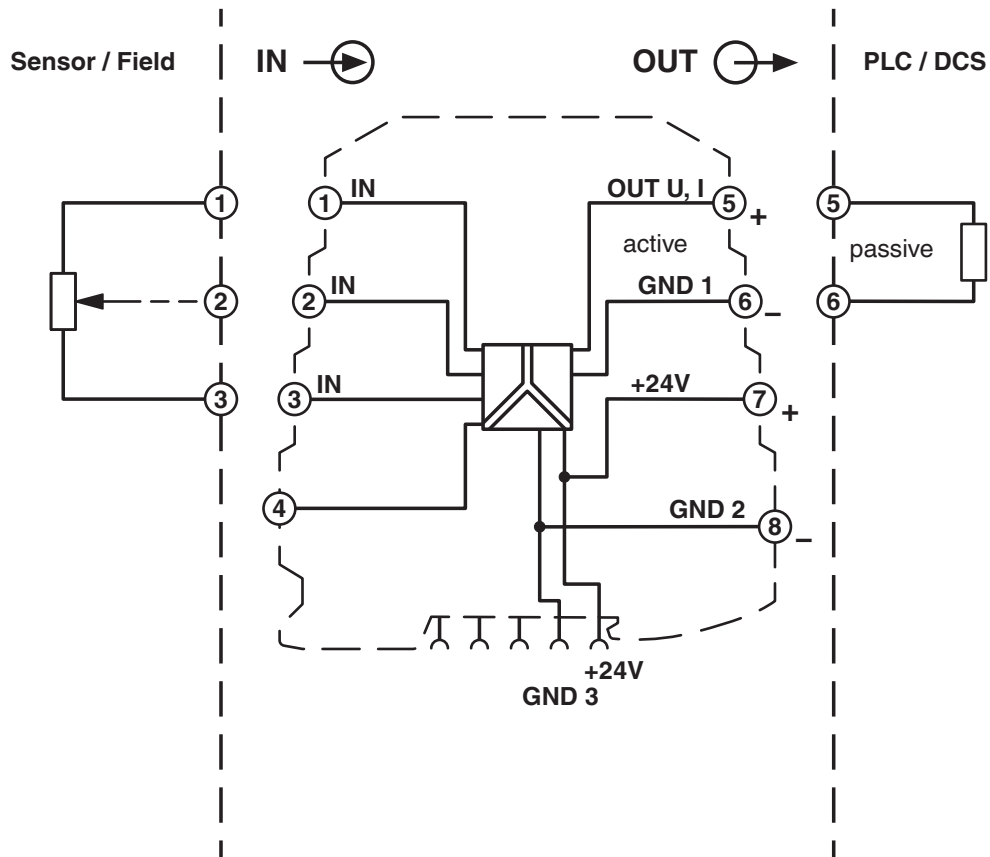
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Block diagram

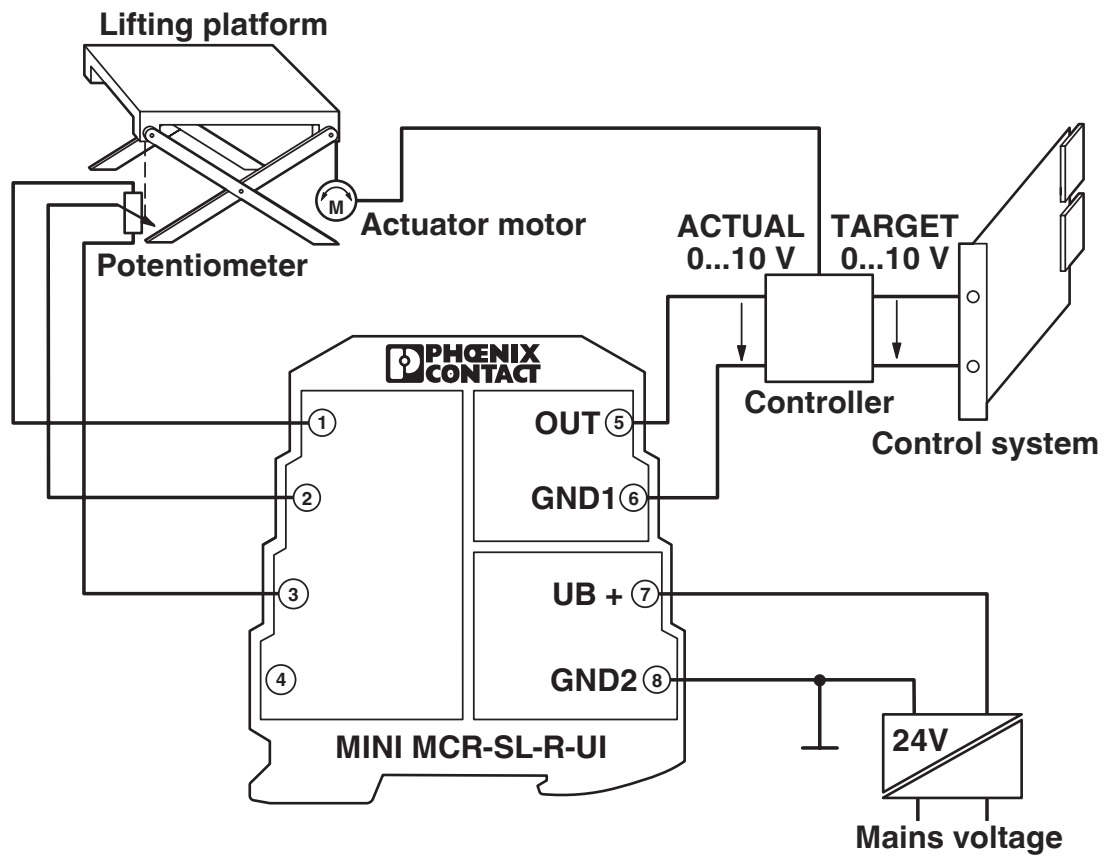


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Application drawing



Height adjustment of a lifting platform with setpoint and actual value control

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Approvals



cUL Recognized
Approval ID: FILE E 238705



UL Recognized
Approval ID: FILE E 238705



DNV GL
Approval ID: TAA00000N1



cUL Listed
Approval ID: FILE E 199827



UL Listed
Approval ID: FILE E 199827

cULus Recognized

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	27210120
ECLASS-10.0.1	27210120
ECLASS-11.0	27210120

ETIM

ETIM 8.0	EC002653
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UNSPSC

UNSPSC 21.0	39121000
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Power terminal block

Power terminal block - MINI MCR-SL-PTB - 2864134

<https://www.phoenixcontact.com/pc/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

Power supply unit

Power supply unit - QUINT4-SYS-PS/1AC/24DC/2.5/SC - 2904614

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



Primary-switched power supply unit, QUINT POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 2.5 A

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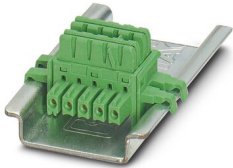
<https://www.phoenixcontact.com/pc/products/2864095>

DIN rail bus connectors

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

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

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



Transparent cover

Transparent cover - MINI MCR DKL - 2308111

<https://www.phoenixcontact.com/pc/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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Marking label

Marking label - MINI MCR-DKL-LABEL - 2810272

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

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



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