MINI MCR-SL-R-UI - Potentiometer measuring transducer

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 kΩ ... 100 kΩ

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 kΩ 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

Commercial data

Item number	2864095
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C403
Product key	DK1139
GTIN	4046356046442
Weight per piece (including packing)	62.4 g
Weight per piece (excluding packing)	73.17 g

Customs tariff number	85437090
Country of origin	DE

Technical data

Notes

Utilization restriction

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

Product properties

Product type	Potiposition transducer
Product family	MINI Analog
No. of channels	1
Configuration	DIP switches

System properties

Functionality

Configuration	DIP switches

Electrical properties

Electrical isolation	3-way isolation
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

Overvoltage category	II
Pollution degree	2

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

Standards/regulations	IEC/EN 61010
Rated insulation voltage	30 V AC
	50 V DC
Test voltage	1.5 kV AC (50 Hz, 60 s)
Insulation	Basic insulation

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)
Typical current consumption	< 25 mA (at 24 V DC)
Power consumption	< 500 mW

Input data

Signal: Resistance

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

Output data

Signal: Voltage/current

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
Open-circuit voltage	≈ 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	≈ mA
Load/output load voltage output	> 10 kΩ
Load/output load current output	< 500 Ω (20 mA)
Ripple	< 20 mV_{PP} (500 Ω)
	< 20 mV_{PP} (10 kΩ)
Behavior in the event of a sensor error	0 % ... 105 % (configurable)

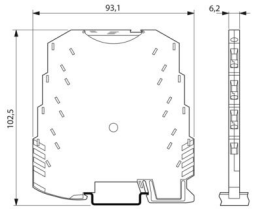
Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm² ... 2.5 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	26 ... 12

Signaling

Error indication	Red LED

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

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)

Approvals

CE

Certificate	CE-compliant

UL, USA/Canada

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

EMC data

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

Noise emission

Standards/regulations	EN 61000-6-4

Electromagnetic HF field

Designation	Electromagnetic RF field

Standards/regulations	EN 61000-4-3
Typical deviation from the upper range value	5 %

Fast transients (burst)

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

Conducted interference

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

Standards and regulations

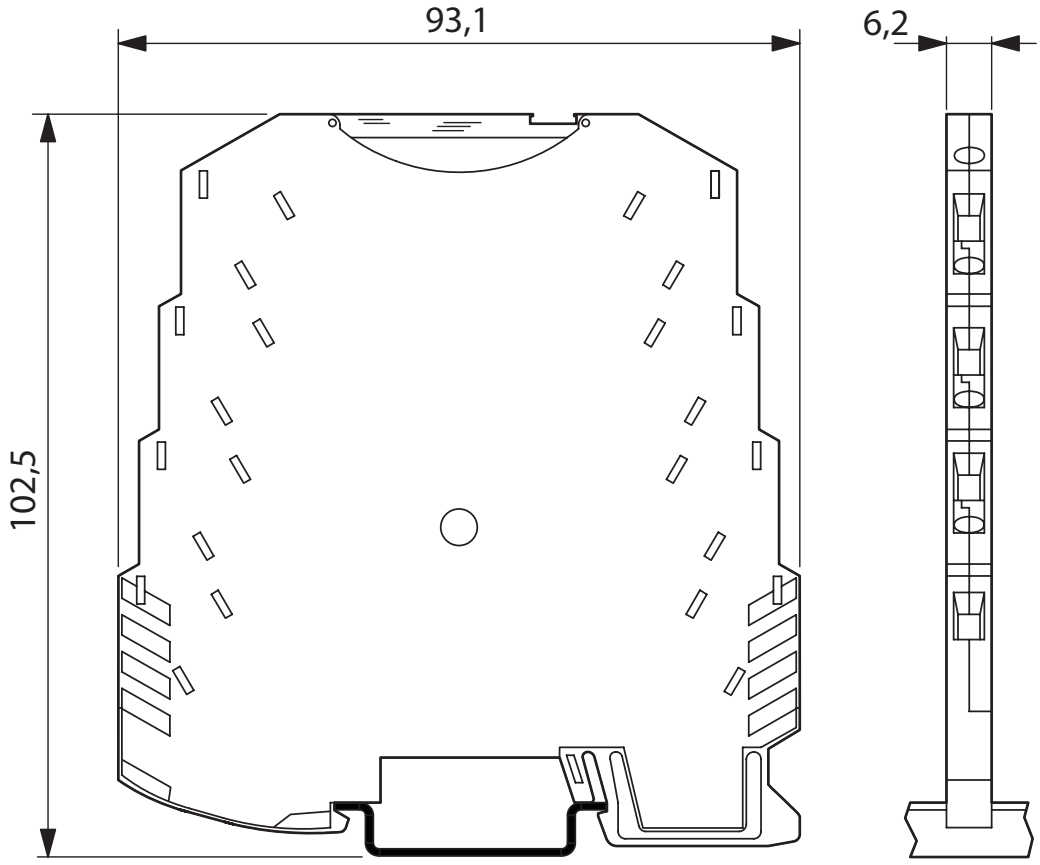
Electrical isolation	3-way isolation

Mounting

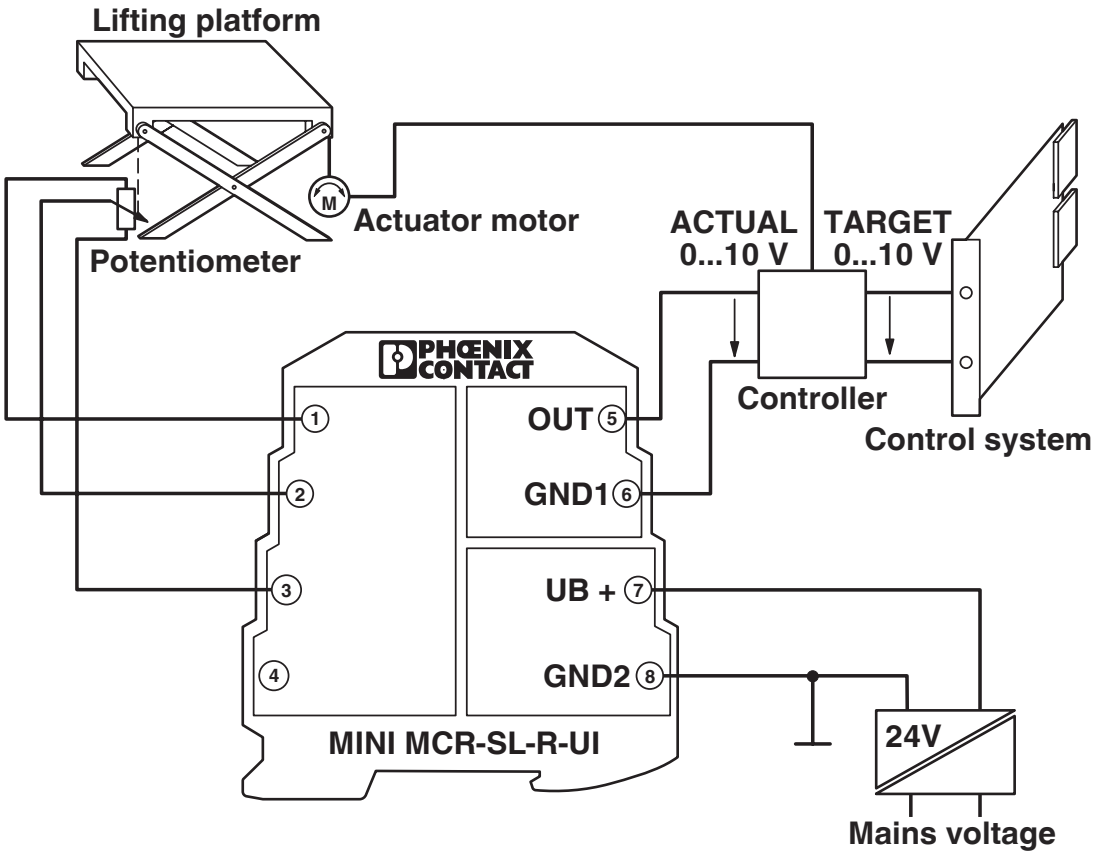
Mounting type	DIN rail mounting
Mounting position	any

Drawings

Dimensional drawing

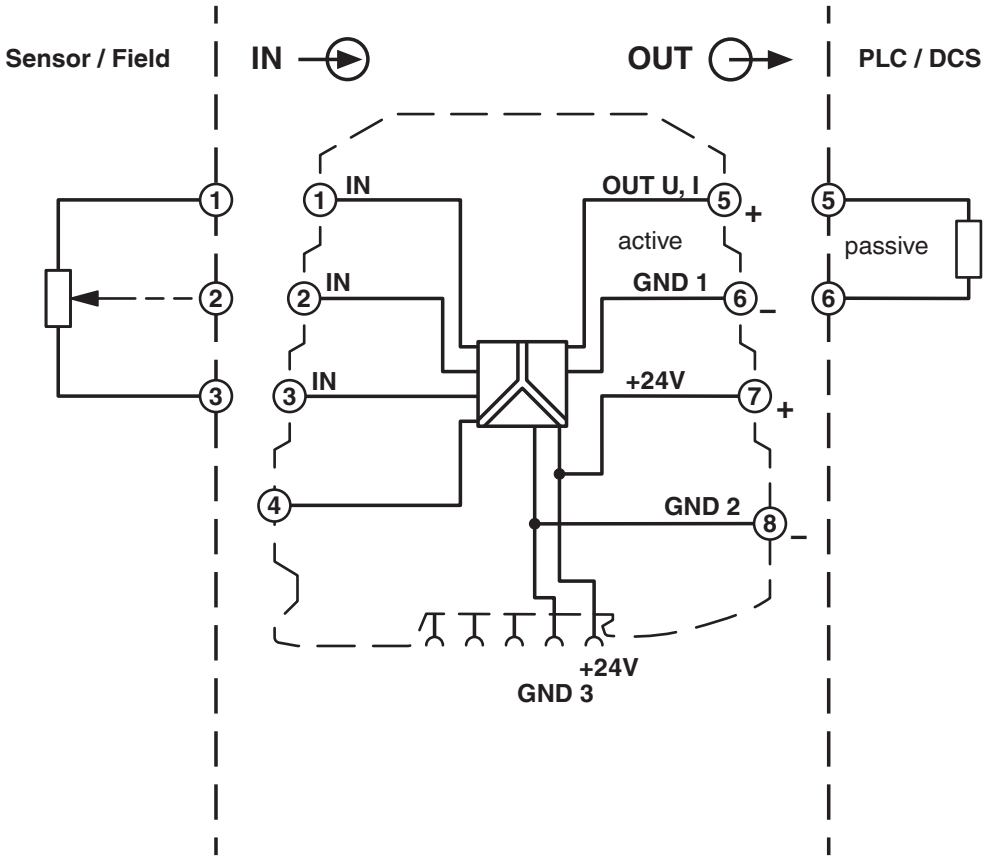


Application drawing



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

Block diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2864095

cUL Recognized
Approval ID: E238705

UL Recognized
Approval ID: E238705

cUL Listed
Approval ID: E199827

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Classifications

ECLASS

ECLASS-13.0	27210120
ECLASS-15.0	27210120

ETIM

ETIM 10.0	EC002653

UNSPSC

UNSPSC 21.0	39121000

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)
SCIP	728d3133-0d2b-401b-88b2-a6f9bc2420c9

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