

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



MCR temperature transducer for Pt 100 temperature sensors, configured via DIP switches, with spring-cage connection, preconfigured. Replacement part: 2902051 MINI MCR-2-RTD-UI-PT-C.

Product description

The narrow, 6.2 mm wide MINI MCR-SL-PT100-UI... is a configurable, 3-way isolated temperature transducer. It is suitable for connecting Pt 100 resistance thermometers in accordance with IEC 60751 in 2-, 3-, and 4-conductor connection technology.

Electrically isolated 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 0 ... 5 V, 1 ... 5 V, 10 ... 0 V, 20 ... 0 mA, or 20 ... 4 mA standard analog signals are available on the output side.

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

- Connection technology
- Temperature range to be measured
- Output signal
- 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)
- For 2-, 3-, 4-conductor Pt 100 sensors in accordance with IEC 60751
- Error indication via diagnostic LED and analog signal
- Input and output signals can be configured via DIP switches
- Highly-compact temperature transducer for electrical isolation, conversion, amplification, and filtering of
- Temperature measuring range of -150°C to +850°C
- 3-way isolation
- Pt 100 signals to create standard signals

Commercial data

Item number	2864736
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	CK1221
Catalog page	Page 105 (C-7-2015)
GTIN	4017918974930
Weight per piece (including packing)	98.7 g

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Weight per piece (excluding packing)	58.7 g
Customs tariff number	85437090
Country of origin	DE

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Technical data

Product properties

Product type	Temperature transmitter
Product family	MINI Analog
No. of channels	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

No. of channels	1
Rated insulation voltage	50 V AC/DC
Electrical isolation	Basic insulation in accordance with EN 61010
Maximum power dissipation for nominal condition	235.5 mW
Test voltage, input/output/supply	1.5 kV AC (50 Hz, 60 s)
Protective circuit	Transient protection
Step response (0–99%)	< 160 ms
Maximum temperature coefficient	< 0.02 %/K
Transmission error in the set measuring range	$((100 \text{ K} / \text{set measurement range [K]} + 0.1)\%$
Transmission error in the full measuring range	$\leq 0,2 \%$

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)
Max. current consumption	< 21 mA (at 24 V DC)
Power consumption	< 500 mW

Input data

Signal

Number of inputs	1
Input signal	Temperature

Measurement

Configurable/programmable	Yes
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Temperature measuring range	min. 50 K
Sensor type:	-150 °C ... 850 °C (configurable)
Sensor input current	1 mA (constant)
Max. permissible overall conductor resistance	10 Ω (Per cable)

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Connection technology	2-, 3-, 4-conductor
-----------------------	---------------------

Output data

Signal

Number of outputs	1
Configurable/programmable	Yes, preconfigured
Voltage output signal	0 V ... 10 V
	10 V ... 0 V
	0 V ... 5 V
	1 V ... 5 V
Max. voltage output signal	approx. 12.5 V
Non-load voltage	approx. 12.5 V
Current output signal	4 mA ... 20 mA
	20 mA ... 0 mA
	20 mA ... 4 mA
	0 mA ... 20 mA (please indicate if different setting when ordering)
Max. current output signal	23 mA
Short-circuit current	approx. 10 mA
Load/output load voltage output	$\geq 10 \text{ k}\Omega$
Load/output load current output	$< 500 \Omega$ (at 20 mA)
Ripple	$< 20 \text{ mV}_{PP}$ (at 10 k Ω)
	$< 20 \text{ mV}_{PP}$ (at 500 Ω)

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
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	24 ... 12

Dimensions

Dimensional drawing	
Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

Material specifications

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

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

Approvals

CE

Certificate	CE-compliant
-------------	--------------

ATEX

Identification	⊕ II 3 G Ex nA IIC T4 Gc X
----------------	----------------------------

UL, USA/Canada

Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5

GL

Identification	GL EMC 2 D
----------------	------------

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
-----------------------	--------------

Electrostatic discharge

Comments	Safety measures must be taken to prevent electrostatic discharge.
----------	---

Electromagnetic HF field

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	10 %

Fast transients (burst)

Designation	Fast transients (burst)
-------------	-------------------------

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	10 %

Surge current load (surge)

Standards/regulations	EN 61000-4-5
-----------------------	--------------

Surge current load (surge)

Comments	Criterion B
----------	-------------

Conducted interference

Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	10 %

Standards and regulations

Electrical isolation	Basic insulation in accordance with EN 61010
----------------------	--

Mounting

Mounting type	DIN rail mounting
Assembly instructions	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer

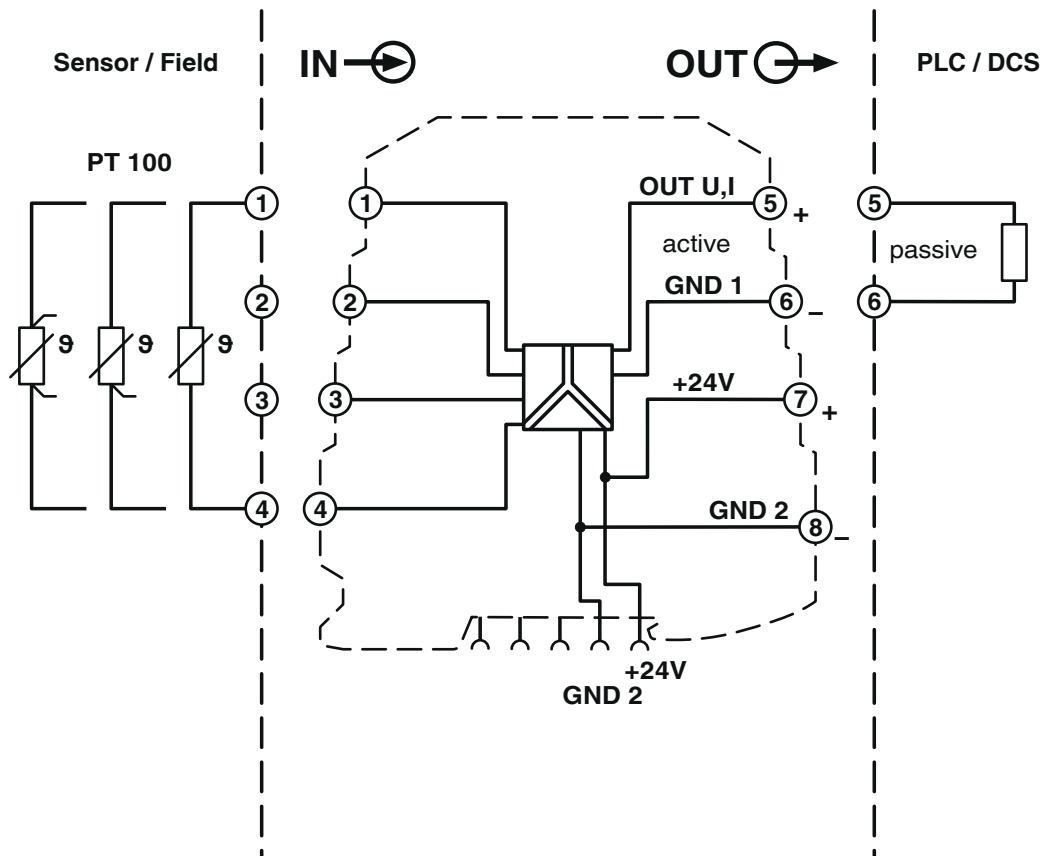


2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Drawings

Block diagram

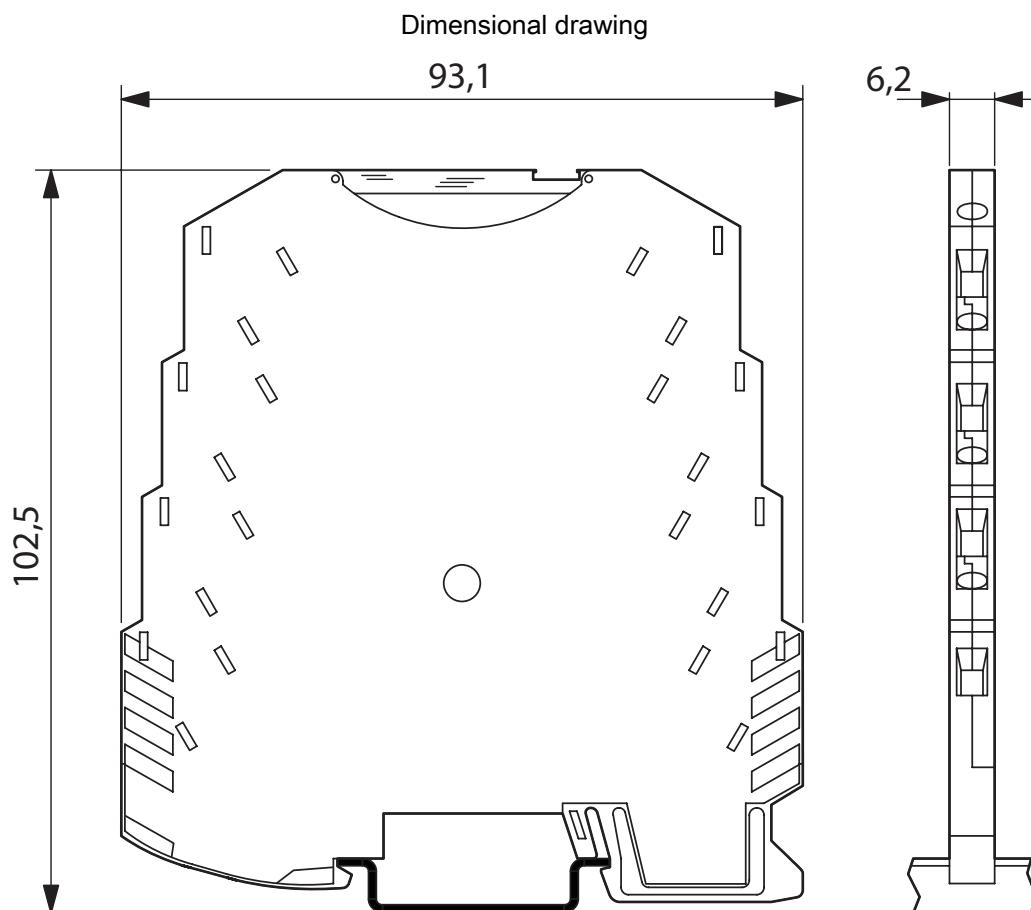


MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>



MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Classifications

ECLASS

ECLASS-11.0	27210129
-------------	----------

ETIM

ETIM 7.0	EC002919
----------	----------

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

Environmental product compliance

China RoHS

Environmentally Friendly Use Period = 50 years

For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer

2864736

<https://www.phoenixcontact.com/pc/products/2864736>

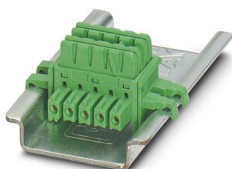
Accessories

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

2869728

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

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



MINI MCR-SL-PTB - Power terminal block

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



MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

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

2866983

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

MINI MCR DKL - Transparent cover

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

MINI MCR-SL-PT100-UI-SP - Resistance thermometer measuring transducer



2864736

<https://www.phoenixcontact.com/pc/products/2864736>

MINI MCR-DKL-LABEL - Marking label

2810272

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

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



SZS 0,6X3,5 - Screwdriver

1205053

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



Phoenix Contact 2023 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

info@phoenixcontact.com