

Resistance thermometer measuring transducer - MINI MCR-SL-PT100-UI-NC - 2864273

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MCR temperature transducer for Pt 100 temperature sensors, configured via DIP switch, with screw connection, not pre-configured

Product Description

The 6.2 mm wide MINI MCR-SL-PT100-UI... is a configurable 3-way isolated temperature measuring transducer. It is suitable for the connection of Pt 100 resistance thermometers according to IEC 60751 in 2, 3 and 4-wire connection methods.

On the output side, the analog standard signals 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 are available, electrically isolated.

The DIP switches are accessible on the side of the housing and allow the following parameters to be configured:

- Connection method
- Temperature range to be measured
- Output signal as well
- Fault evaluation type


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

Why buy this product

- ✓ Power supply possible via the foot element (TBUS)
- ✓ For 2, 3 or 4-wire Pt 100 sensors according to 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
- ✓ 3-way isolation
- ✓ Pt 100 signals to create standard signals
- ✓ Temperature measuring range of -150°C to +850°C



Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 956561
GTIN	4017918956561
Weight per Piece (excluding packing)	99.200 g
Custom tariff number	85437090

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Country of origin	Germany
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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	93.1 mm
Depth	102.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20

Input data

Configurable/programmable	Yes
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Sensor input current	1 mA (constant)
Connection method	2, 3, 4-wire

Output data

Number of outputs	1
Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 10 V
	10 V ... 0 V
	0 V ... 5 V
	1 V ... 5 V
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	20 mA ... 0 mA
	20 mA ... 4 mA
Max. output voltage	approx. 12.5 V
Max. output current	23 mA
Short-circuit current	approx. 10 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	< 500 Ω (at 20 mA)
Ripple	< 20 mV _{PP} (at 10 kΩ)
	< 20 mV _{PP} (at 500 Ω)

Power supply

Nominal supply voltage	24 V DC
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Power supply

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

Connection data

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

General

No. of channels	1
Transmission error in the set measuring range	((100 K / set measurement range [K]) + 0.1)%
Transmission error in the full measuring range	≤ 0,2 %
Maximum temperature coefficient	< 0.02 %/K
Protective circuit	Transient protection
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	50 V AC/DC
Test voltage, input/output/supply	1.5 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.
Color	green
Housing material	PBT
Mounting position	any
Assembly instructions	The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715.
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5

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Technical data

General

GL	GL EMC 2 D
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EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	10 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	10 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	10 %

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Connection in acc. with standard	CUL
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	Basic insulation according to EN 61010
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5
GL	GL EMC 2 D

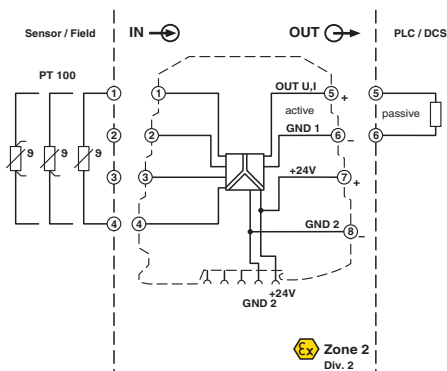
Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

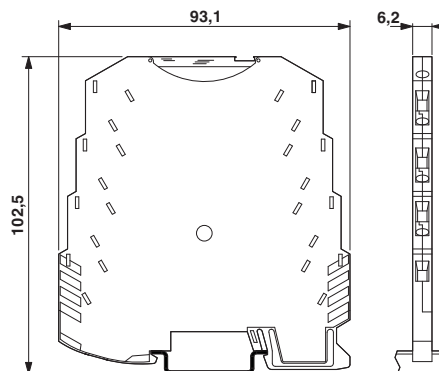
Drawings

Resistance thermometer measuring transducer - MINI MCR-SL-PT100-UI-NC - 2864273

Block diagram



Dimensional drawing



Classifications

eCl@ss

eCl@ss 4.0	27200206
eCl@ss 4.1	27200206
eCl@ss 5.0	27200206
eCl@ss 5.1	27200206
eCl@ss 6.0	27200206
eCl@ss 7.0	27200206
eCl@ss 8.0	27200206
eCl@ss 9.0	27210129

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	EC001446
ETIM 6.0	EC001446

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	41112105

Approvals

Approvals

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Approvals

Approvals

UL Recognized / cUL Recognized / GL / EAC / ATEX / cULus Recognized

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
GL		http://www.gl-group.com/newbuilding/approvals/index.html	24917-05 HH
EAC			EAC-Zulassung
ATEX			PxCIF05ATEX2864435X
cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	

Accessories

Accessories

DIN rail connector

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Accessories

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.

Marking material

Transparent cover - MINI MCR DKL - 2308111



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

Marking label - MINI MCR-DKL-LABEL - 2810272



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

Power module

Power terminal block - MINI MCR-SL-PTB - 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 terminal block - MINI MCR-SL-PTB-SP - 2864147



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

Power supply

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Accessories

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



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653



Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

System adapter

System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.
