

# Temperature measuring transducer - MINI MCR-SL-PT100-LP-NC - 2810308

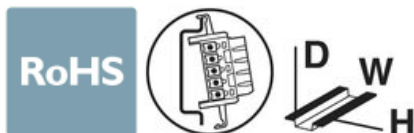
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Configurable loop-powered temperature transducer for Pt 100 temperature sensors, configured via DIP switches, with screw connection, not pre-configured

## Your advantages

- ✓ 2-, 3-, 4-conductor Pt 100 sensors
- ✓ Highly-compact loop-powered temperature transducer for electrical isolation, conversion, amplification, and filtering of Pt 100 signals to create standard signals
- ✓ Does not require additional auxiliary voltage
- ✓ Error indication via diagnostic LED and analog signal
- ✓ 2-way isolation
- ✓ Input signals can be configured via DIP switches
- ✓ Supplied by an output loop
- ✓ Temperature measuring range of -150°C to +300°C



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 134668
GTIN	4046356134668

## 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	101.2 mm

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## Technical data

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

### Input data

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

### Output data

Output name	Current output
Number of outputs	1
Configurable/programmable	Yes, unconfigured
Current output signal	4 mA ... 20 mA 20 mA ... 4 mA
Max. output current	23 mA (output limit)
Load/output load current output	$(U_{\text{supply}} - 12 \text{ V}) / 22 \text{ mA}$
Ripple	< 20 mV <sub>PP</sub> (at 500 Ω)

### Power supply

Designation	Loop-powered
Supply voltage range	12 V DC ... 30 V DC
Max. current consumption	< 4.5 mA (without signal current)
Power consumption	< 150 mW (without signal current)

### Connection data

Connection method	Screw connection
Stripping length	12 mm
Screw thread	M3
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	26 ... 12

### General

Transmission error in the set measuring range	$((90 \text{ K} / \text{set measuring range [K]}) + 0.05)\%$
Transmission error in the full measuring range	≤ 0,25 %
Maximum temperature coefficient	< 0.02 %/K

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## Technical data

### General

Linearity error	< 0.05 % (for full measuring range)
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	2
Rated insulation voltage	30 V AC
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
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

### EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	5 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	5 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	5 %

### 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

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## Technical data

### Conformance/approvals

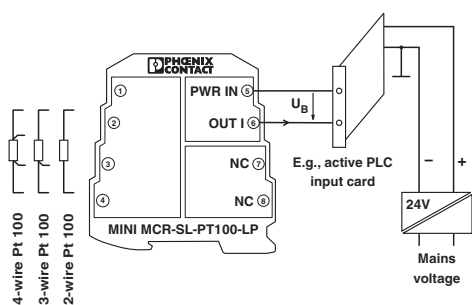
Designation	CE
Certificate	CE-compliant
Designation	UKCA
Designation	UL, USA / Canada
Identification	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T4

### Environmental Product Compliance

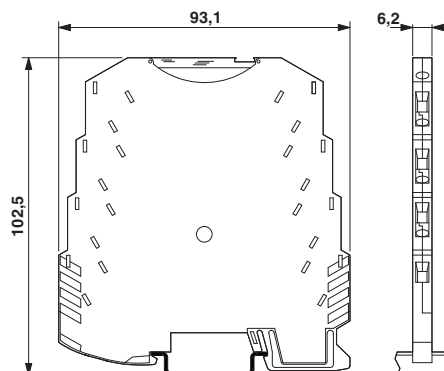
REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

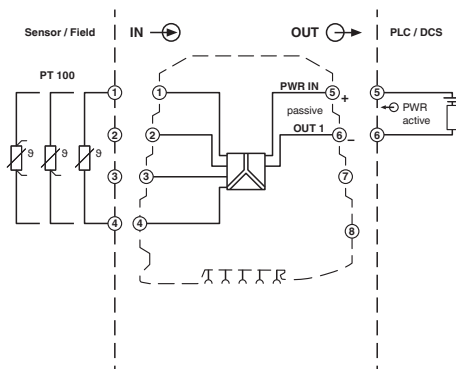
Application drawing



Dimensional drawing



Block diagram



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## Classifications

### eCl@ss

eCl@ss 10.0.1	27210129
eCl@ss 11.0	27210129
eCl@ss 4.0	27200200
eCl@ss 4.1	27200200
eCl@ss 5.0	27200200
eCl@ss 5.1	27200200
eCl@ss 6.0	27200200
eCl@ss 7.0	27200206
eCl@ss 9.0	27210129

### ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 6.0	EC002919
ETIM 7.0	EC002919

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	41112105
UNSPSC 18.0	41112105
UNSPSC 19.0	41112105
UNSPSC 20.0	41112105
UNSPSC 21.0	41112105

## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / cULus Recognized

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#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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### Approval details

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## Approvals

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cULus Recognized			
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## Accessories

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#### 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