

Thermocouple measuring transducer - MINI MCR-SL-TC-UI-NC - 2864299

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MCR temperature transducer for thermocouples, can be configured via DIP switches, with screw connection, standard configuration

Product Description

The configurable temperature transducer with 3-way isolation is suitable for the connection of thermocouples.

The measured values are converted into a linear current or voltage signal.

The device can either be configured via DIP switches or, with extended functionality, via the S-PORT using the software (FDT/DTM). The measuring transducer supports fault monitoring.

Your advantages

- ✓ Power supply possible via the foot element (TBUS)
- ✓ For J and K thermocouples according to IEC 60584
- ✓ Error indication via diagnostic LED and analog signal
- ✓ Temperature measuring range of -150°C to +1350°C
- ✓ Highly-compact temperature transducer for electrical isolation, conversion, amplification, and filtering of thermocouple signals to create standard signals
- ✓ Internal cold junction compensation
- ✓ Input and output signals can be configured via DIP switches
- ✓ 3-way isolation



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Note

Thermocouple measuring transducer - MINI MCR-SL-TC-UI-NC - 2864299

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

Input data

Sensor types that can be used (TC)	Thermocouples type J, K (IEC 584-1)
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Output data

Number of outputs	1
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	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 500 Ω)
	< 20 mV _{PP} (at 10 kΩ)

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

General

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Technical data

General

No. of channels	1
Transmission error in the set measuring range	$((150 \text{ K} / \text{set measurement range [K]}) + 0.1)\%$
Transmission error in the full measuring range	$\leq 0,2 \%$
Maximum temperature coefficient	$< 0.02 \%/K$
Cold point error, max.	$< 3 \text{ K}$
Typical cold point errors	$< 2 \text{ K}$
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.
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	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

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Technical data

Standards and Regulations

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

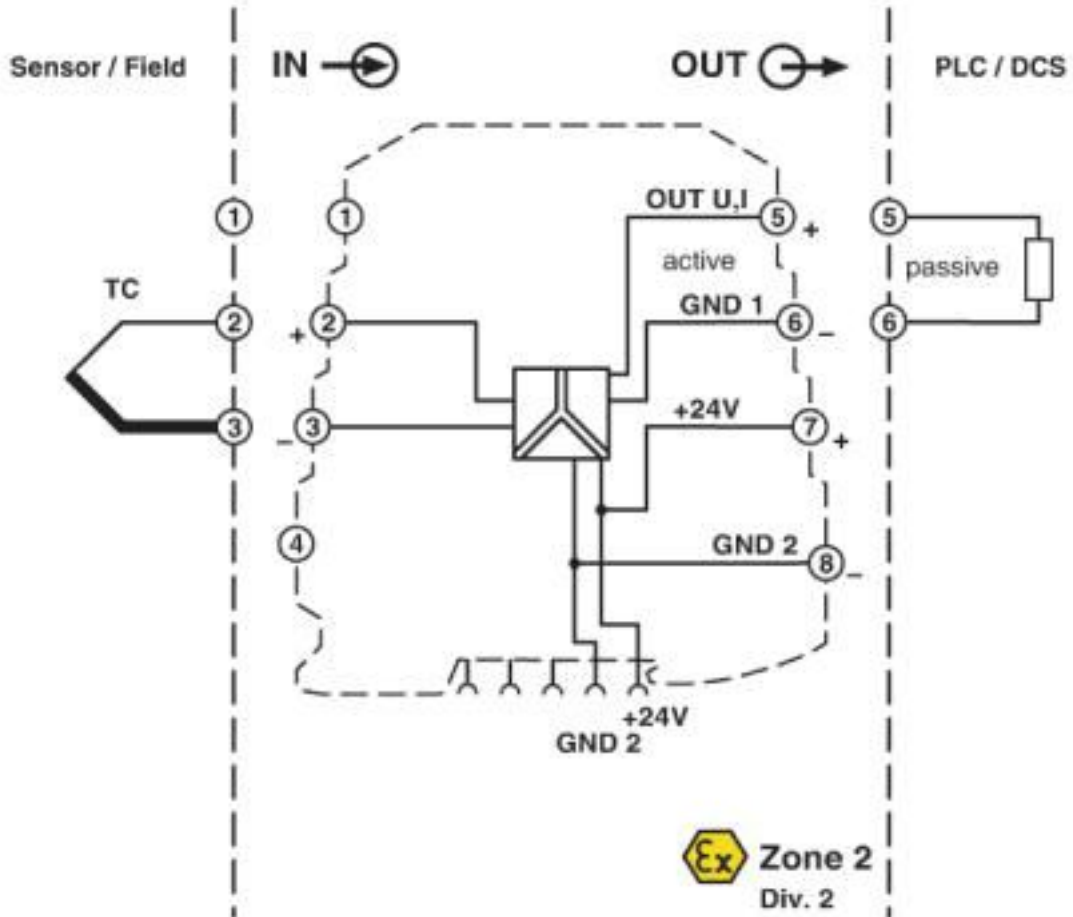
Environmental Product Compliance

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

Drawings

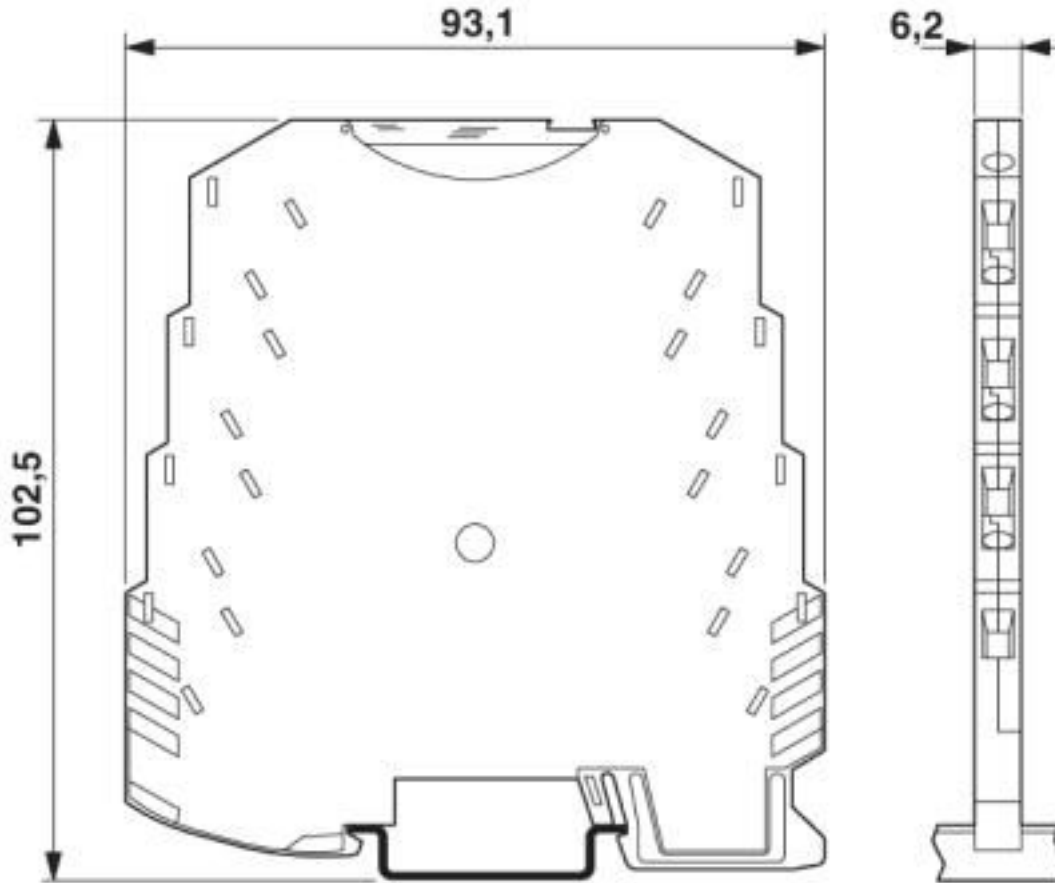
Thermocouple measuring transducer - MINI MCR-SL-TC-UI-NC - 2864299

Block diagram



Thermocouple measuring transducer - MINI MCR-SL-TC-UI-NC - 2864299

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	27371503
eCl@ss 9.0	27371503

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446

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Classifications

ETIM

ETIM 4.0	EC001446
ETIM 5.0	EC002568

UNSPSC

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

Accessories

Accessories

DIN rail connector

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.

Evaluation unit

Monitoring module - MINI MCR-SL-FM-RC-NC - 2902961



The fault monitoring module is used to evaluate and report group errors from the fault monitoring system and to monitor the supply voltages. The error is reported via an N/O contact. Screw connection, standard configuration.

Monitoring module - MINI MCR-SL-FM-RC-SP-NC - 2902962



The fault monitoring module is used to evaluate and report group errors from the fault monitoring system and monitor supply voltages. Spring-cage connection, standard configuration. Replacement part: 2904508 MINI MCR-2-FM-RC-PT.

Marking material

Thermocouple measuring transducer - MINI MCR-SL-TC-UI-NC - 2864299

Accessories

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

Multiplexer

Multiplexer - MINI MCR-SL-MUX-V8-FLK 16 - 2811815



MINI analog multiplexer, generates one analog output from 8 analog input signals, for MINI analog module with screw connection.

Power module

Power terminal block - MINI MCR-SL-PTB-FM - 2902958



The MINI MCR-SL-PTB-FM(-SP) power terminal block is used to supply the supply voltage to the DIN rail connector. The FM power terminal block offers the additional function of monitoring in combination with the fault monitoring module. Screw connection.

Power terminal block - MINI MCR-SL-PTB-FM-SP - 2902959



The MINI MCR-SL-PTB-FM(-SP) feed-in terminal is used to feed in the supply voltage to the DIN rail connector. The FM feed-in terminal offers an additional function: monitoring. Spring-cage connection. Replacement part: 2902067 MINI MCR-2-PTB-PT.

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Accessories

Power supply

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

Programming adapter

Programming adapter - IFS-USB-PROG-ADAPTER - 2811271



Programming adapter with USB interface, for programming with software. The USB driver is included in the software solutions for the products to be programmed, such as measuring transducers or motor managers.

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.

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[2907808](#) [TB ML 3P ST D5.08](#) [5604442](#) [XW2B-40G5-T](#) [5606629](#) [XW2B-20G5-D](#) [2903870](#) [5541988](#) [5541962](#) [1776613-1](#) [XW2B-34G4](#)
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