Temperature measuring transducer - MCR-FL-T-LP-I

2864561

https://www.phoenixcontact.com/us/products/2864561

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 measuring transducer: programmable, loop-powered, for resistance thermometers, thermocouples, resistance-type sensors and voltage sensors.

Your advantages

- Freely programmable via MCR/PI-CONF-WIN
- Two-wire transmitter for resistance thermometers, thermocouples, resistance-type sensors, and voltage sensors

Commercial Data

Item number	2864561
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C01
Product Key	CK1322
Catalog Page	Page 196 (C-5-2017)
GTIN	4017918899820
Weight per Piece (including packing)	103.6 g
Weight per Piece (excluding packing)	103.6 g
Customs tariff number	85437090
Country of origin	DE

Technical Data

Product properties

Product type	Temperature transmitter
Configuration	Using MCR-PI-CONF-WIN configuration software package

Electrical properties

Switch-on delay	4 s
Maximum power dissipation for nominal condition	122.5 mW
Test voltage input/output	2 kV AC (50 Hz, 60 s)
Step response (10-90%)	< 2 s
Transmission error voltage sensor	± 20 µV (-10...100 mV)
Transmission error thermocouples	typ. 0.5 K (K, J, T, E, L, U), 1.0 K (N, C, D), 2.0 K (S, B, R)
Transmission error resistance-type sensor	± 0.1 Ω (10...400 Ω), ± 1.5 Ω (10...2000 Ω)
Transmission error resistance thermometer	0.2 K (Pt 100, Ni 100), 0.5 K (Pt 500, Ni 500), 0.3 K (Pt 1000, Ni 1000)

Supply

Designation	Loop-powered
Supply voltage range	12 V DC ... 35 V DC
Max. current consumption	< 3.5 mA

Input data

Signal:

Number of inputs	1
Input signal	Temperature

Measurement

Configurable/programmable	Yes, programmable
Sensor types (RTD) that can be used	Pt, Ni (100, 500, 1000); minimum measurement range 10 K
Sensor types that can be used (TC)	B, C, D, E, J, K, L, N, R, S, T, U; minimum measurement range 50 K/500 K
Sensor type:	-200 °C ... 850 °C (freely adjustable)
	-200 °C ... 250 °C (freely adjustable)
	-200 °C ... 250 °C (freely adjustable)
	-60 °C ... 250 °C (freely adjustable)
	-60 °C ... 150 °C (freely adjustable)
	-60 °C ... 150 °C (freely adjustable)
	0 °C ... 1820 °C (freely adjustable)
	0 °C ... 2320 °C (freely adjustable)
	0 °C ... 2495 °C (freely adjustable)
	-270 °C ... 1000 °C (freely adjustable)
	-210 °C ... 1200 °C (freely adjustable)
	-270 °C ... 1372 °C (freely adjustable)

	-200 °C ... 900 °C (freely adjustable)
	-270 °C ... 1300 °C (freely adjustable)
	-50 °C ... 1760 °C (freely adjustable)
	-50 °C ... 1760 °C (freely adjustable)
	-270 °C ... 400 °C (freely adjustable)
	-200 °C ... 600 °C (freely adjustable)
Linear resistance measuring range	Resistance-type sensor from 10 Ω to 400 Ω and from 10 Ω to 2000 Ω; minimum measurement range 10 Ω/100 Ω
Linear mV signal range	-10 mV ... 100 mV (min. measurement range 5 mV)
Connection technology	2-, 3-, 4-conductor

Output data

Frequency:

Configurable/programmable	no

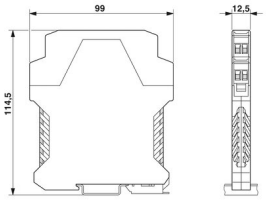
Signal:

Number of outputs	1
Configurable/programmable	Yes
Current output signal	4 mA ... 20 mA
	20 mA ... 4 mA
Output current with wire break	≤ 3.6 mA or ≥ 21 mA (adjustable)
Output current with short-circuit	≤ 3.6 mA or ≥ 21 mA (adjustable, not for thermocouples)
Output current range with overrange/underrange	≤ 20.5 mA / ≥ 3.8 mA (linear increase/decrease)
Output current limit	≤ 23 mA
Load/output load current output	max (V_{supply} -12 V) / 0.023 A (current output)

Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm² ... 2.5 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 14

Dimensions

Dimensional drawing	
Width	12.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Housing material	Polyamide PA non-reinforced

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C

Approval data

CE

Certificate	CE-compliant

UL, USA / Canada

Identification	Class I, Div. 2, Groups A, B, C, D

EMC data

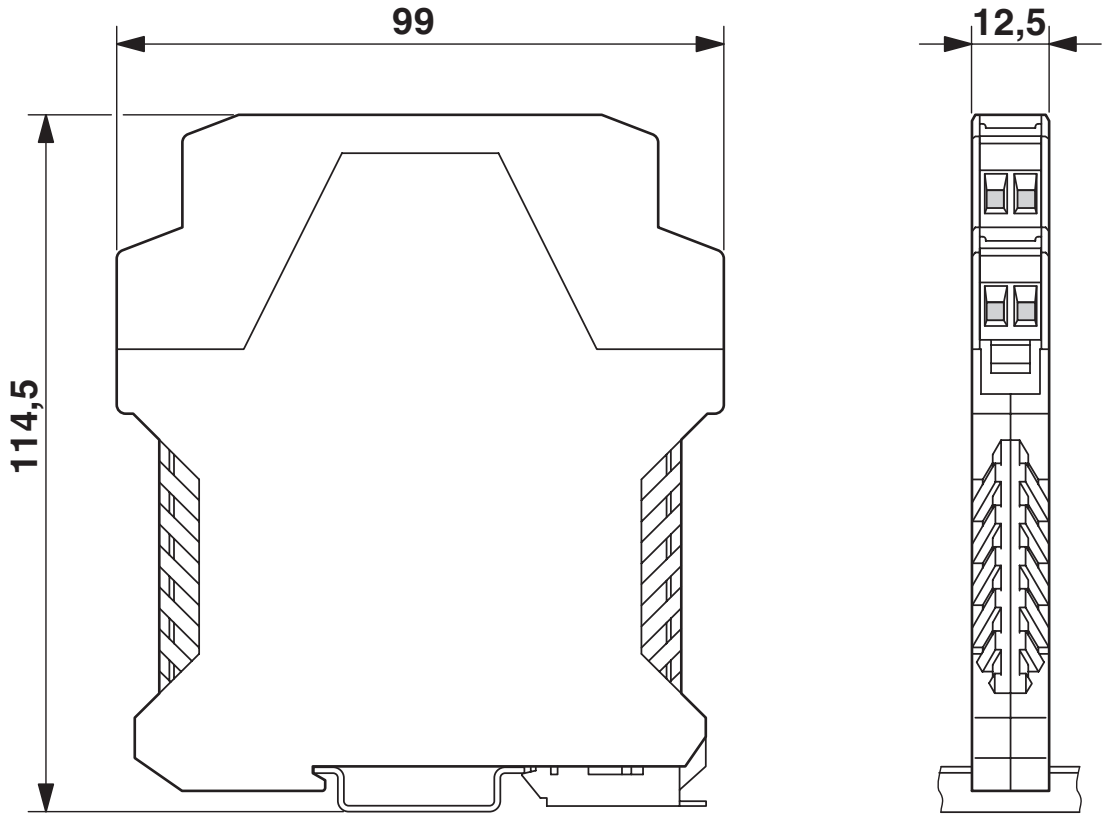
Noise emission	EN 61326-1 (IEC 61326) and NAMUR NE 21
Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21

Mounting

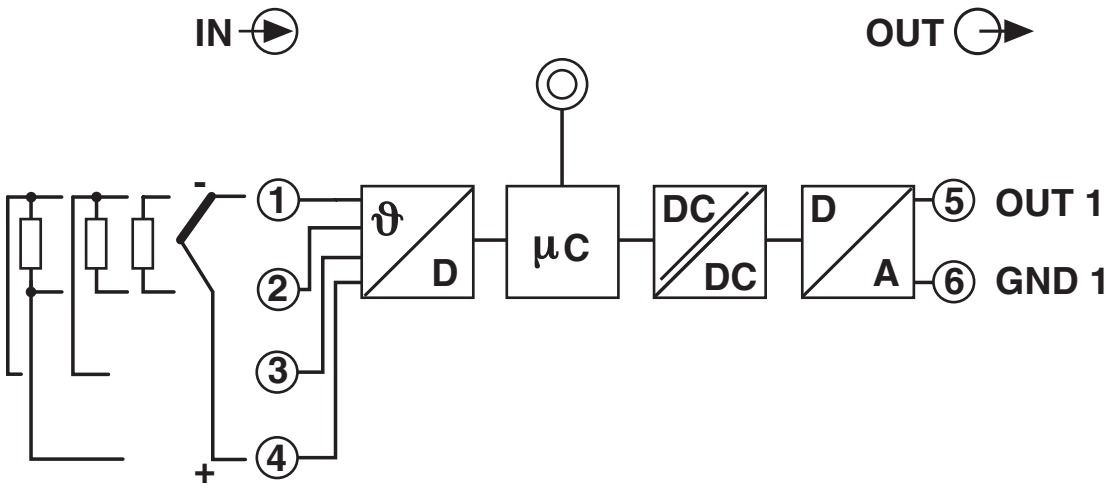
Mounting type	DIN rail mounting
Mounting position	any

Drawings

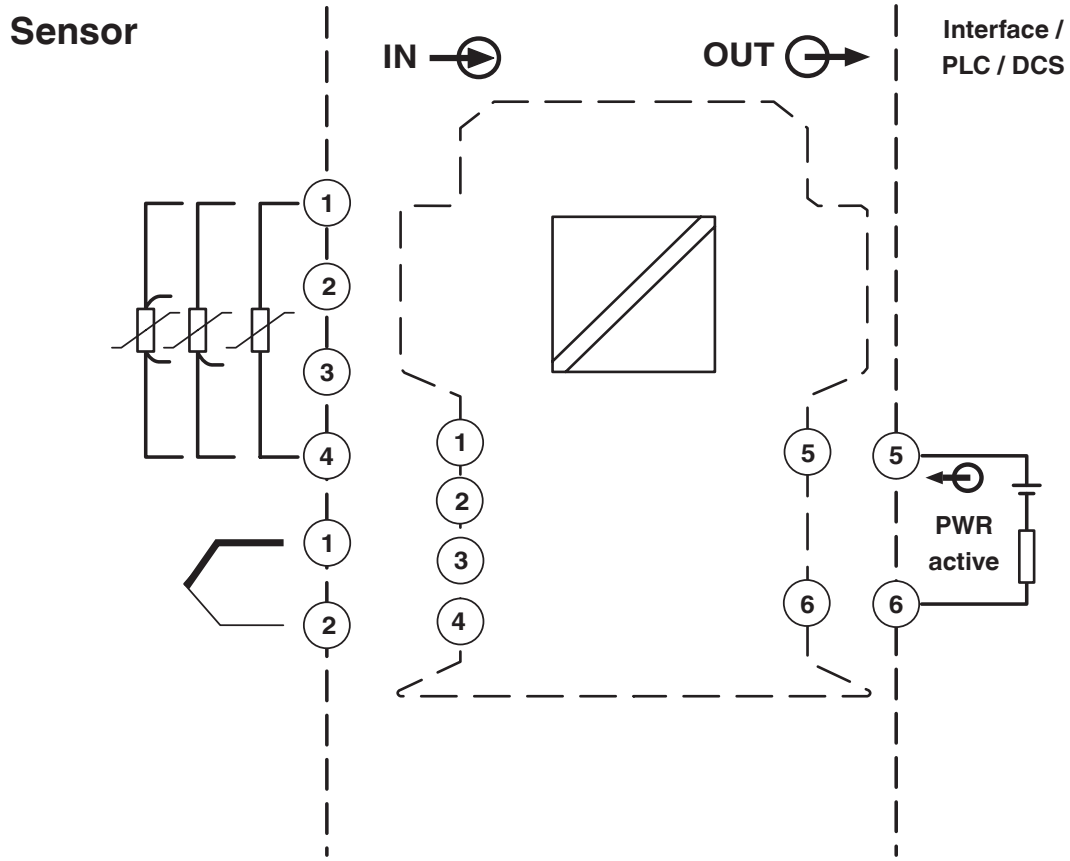
Dimensional drawing



Circuit diagram



Block diagram



Block diagram MCR-FL-T-LP-I

Approvals

cUL Recognized
Approval ID: FILE E 198586

UL Recognized
Approval ID: FILE E 198586

EAC
Approval ID: RU C-DE.A*30.B.01082

cUL Listed
Approval ID: FILE E 199827

UL Listed
Approval ID: FILE E 199827

cULus Recognized

cULus Listed

Classifications

ECLASS

ECLASS-9.0	27210129
ECLASS-10.0.1	27210129
ECLASS-11.0	27210129

ETIM

ETIM 7.0	EC002919

UNSPSC

UNSPSC 21.0	41112105

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Accessories

Programming adapter

Programming adapter - MCR-PAC-T-USB - 2309000

https://www.phoenixcontact.com/us/products/2309000

Programming adapter with USB and T port interface, 2.4 m for programming FA MCR-..., MCR-...-LP-..., and MCR-...-HT-... modules



Phoenix Contact 2022 © - all rights reserved
https://www.phoenixcontact.com

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com