Temperature measuring transducer - MCR-FL-T-LP-I-EX - 2864574

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MCR head-mounted temperature transducers: Programmable loop-powered temperature transducers. Resistance thermometers, thermocouples, resistance-type sensors and voltage sensors.

Product Features

- Input for resistance thermometers, thermocouples, and linear mV signals, Ex ia IIC
- Configuration via software
- Can be installed in zone 1
- 2-way electrical isolation
- Single-channel
- Loop-powered
- HART-compatible (MCR-FL-TS-LP-I-EX)
- 4
  20 mA/20
  4 mA output



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	106.6 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

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Technical data

Ambient conditions

Degree of protection	IP20

Input data

Configurable/programmable	Yes, programmable
Sensor types (RTD) that can be used	Pt, Ni (100, 500, 1000); min. measurement range 10 K
Sensor types that can be used (TC)	B, C, D, E, J, K, L, N, R, S, T, U; min. measurement range 50 K/500 K
Connection method	2, 3, 4-wire
Input signal range	10 Ω ... 400 Ω (min. measurement range 10 Ω)
	10 Ω ... 2000 Ω (min. measurement range 100 Ω)
	-10 mV ... 100 mV (min. measurement range 5 mV)

Output data

Signal output	Current output
Current output signal	4 mA ... 20 mA
	20 mA ... 4 mA
Max. current output signal	≤ 23 mA
Output current with short-circuit	≤ 3.6 mA or ≥ 21 mA (adjustable, not for thermocouples)
Output current with wire break	≤ 3.6 mA or ≥ 21 mA (adjustable)
Output current range with overrange/underrange	3.8 mA ... 20.5 mA
Load/output load current output	≤ 520 Ω (At U_V = 24 V; U_{supply} - 12 V / 0.023 A)

Power supply

Designation	Loop-powered
Supply voltage range	12 V DC ... 30 V DC
Max. current consumption	< 3.5 mA

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	8 mm
Screw thread	M3
Connection method	Screw connection
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

General

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Technical data

General

Step response (10-90%)	< 2 s
Switch-on delay	4 s
Configuration	Using MCR-PI-CONF-WIN configuration software package
Flammability rating according to UL 94	V0
Standards/regulations	NAMUR recommendation NE 21
Housing material	Polyamide PA non-reinforced
Color	green
Line monitoring	NE 43
Conformance	CE-compliant
ATEX	# II 2(1) G Ex ia IIC T4...T6
UL, USA / Canada	cULus

Safety data

Max. output voltage U_o	4.4 V DC
Max. output current I_o	9.6 mA
Max. output power P_o	10.6 mW
Max. ambient temperature	T4 = 85 °C, T5 = 65 °C, T6 = 50 °C
Group	IIA
Max. external inductivity L_o	100 mH
Max. external capacity C_o	12 µF
Group	IIB
Max. external inductivity L_o	100 mH
Max. external capacity C_o	12 µF
Group	IIC
Max. external inductivity L_o	100 mH
Max. external capacity C_o	2.4 µF
Safety-related maximum voltage U_m	250 V

Standards and Regulations

Standards/regulations	NAMUR recommendation NE 21
Flammability rating according to UL 94	V0
Conformance	CE-compliant
ATEX	# II 2(1) G Ex ia IIC T4...T6
UL, USA / Canada	cULus
Group	IIA
	IIB
	IIC

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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

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
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

Approvals

Approvals

Approvals

EAC / EAC

Ex Approvals

ATEX / UL Listed / UL Listed / cUL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

EAC

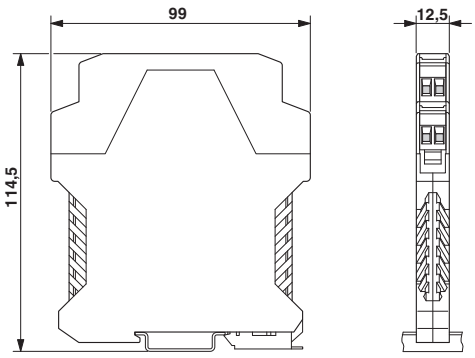
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Approvals

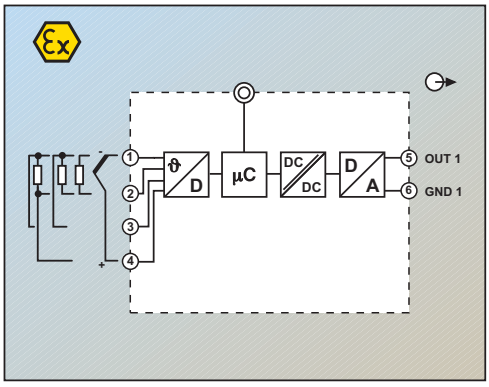
EAC

Drawings

Dimensional drawing



Block diagram



Block diagram MCR-FL-T-LP-I-EX

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