

Head-mounted transducer - MCR-FL-HT-T-I-EX - 2864532

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MCR head-mounted temperature transducers, programmable, intrinsically safe, for resistance thermometers, thermocouples, resistance-type sensors and voltage sensors. For Pt 100 resistance thermometers

Product Features

- Input for resistance thermometers, thermocouples, and linear mV signals, Ex ia IIC
- Configuration via software
- Can be installed in zone 0
- 2-way electrical isolation
- Loop-powered
- Single-channel
- 4
20 mA/20
4 mA output



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	82.3 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Ambient conditions

Degree of protection	IP00, IP66 (integrated in the connecting head)
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Input data

Configurable/programmable	Yes, programmable
Sensor types (RTD) that can be used	Pt, Ni (100, 500, 1000); min. measurement range 10 K

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Technical data

Input data

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

Configurable/programmable	Yes, programmable
Current output signal	4 mA ... 20 mA
	20 mA ... 4 mA
Max. current output signal	≤ 25 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 (linear increase/decrease)
Load/output load current output	≤ 720 Ω (For $U_V = 24$ V; $U_{supply} = 8$ V / 0.025 A)

Power supply

Designation	Loop-powered
Supply voltage range	8 V DC ... 30 V DC
Max. current consumption	< 3.5 mA

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.75 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	1.75 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	15
Stripping length	8 mm
Screw thread	M3
Connection method	Screw connection
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

General

Step response (10-90%)	< 2 s
Switch-on delay	6 s
Configuration	Using MCR-PI-CONF-WIN configuration software package
Flammability rating according to UL 94	V0

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Technical data

General

Standards/regulations	NAMUR recommendation NE 21
Housing material	Polycarbonate, PC
Color	green
Line monitoring	NE 43
Conformance	CE-compliant
ATEX	# II 1 G Ex ia IIC T6/T5/T4
UL, USA / Canada	cULus

Safety data

Max. output voltage U_o	8.2 V DC
Max. output current I_o	4.6 mA
Max. output power P_o	9.35 mW
Max. ambient temperature	Category 1: T4 = 60°C, T5 = 50°C, T6 = 40°C
Group	IIB
Max. external inductivity L_o	8.5 mH
Max. external capacity C_o	1.9 μ F
Group	IIC
Max. external inductivity L_o	4.5 mH
Max. external capacity C_o	974 nF
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 1 G Ex ia IIC T6/T5/T4
UL, USA / Canada	cULus
Group	IIB
	IIC

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

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Classifications

eCl@ss

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

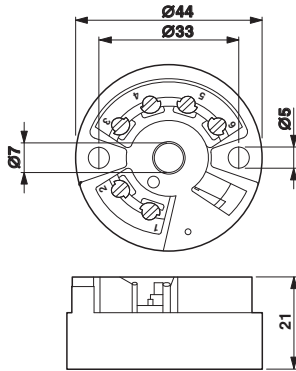
EAC

EAC

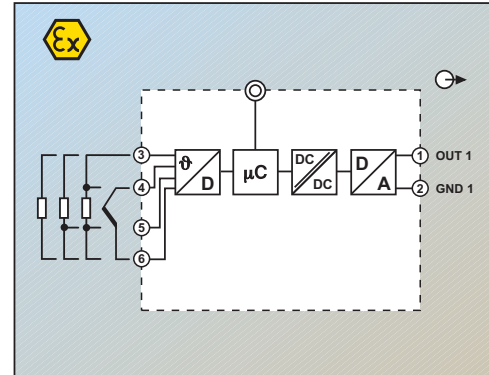
Drawings

Head-mounted transducer - MCR-FL-HT-T-I-EX - 2864532

Dimensional drawing



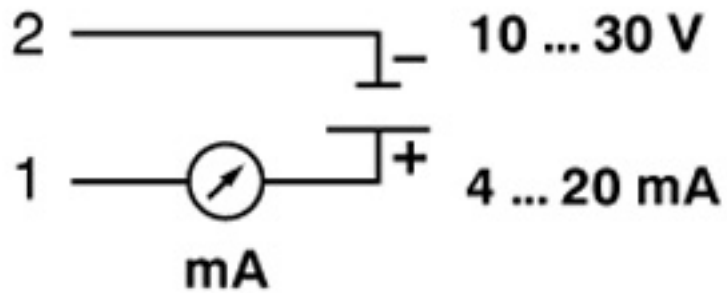
Block diagram



Dimensional drawing

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

Connection diagram



Connection diagram

