

Head-mounted transducer - MCR-FL-HT-T-I - 2864529

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

Your advantages

- ✓ Freely programmable via MCR/PI-CONF-WIN
- ✓ For installation in connecting head, form B
- ✓ Two-wire transmitter for resistance thermometers, thermocouples, resistance-type sensors, and voltage sensors

RoHS

Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 893224
GTIN	4017918893224
Weight per Piece (excluding packing)	80.000 g
Custom tariff number	85437090
Country of origin	Germany

Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Degree of protection	IP00
	IP66 (Installed in the connection head)
Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21

Input data

Configurable/programmable	Yes, programmable
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Technical data

Input data

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
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
Connection technology	2, 3, 4-wire

Output data

Output name	Current output
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)
Load/output load current output	max (V _{supply} - 8 V) / 0.025 A (current output)

Power supply

Designation	Loop-powered
Supply voltage range	8 V DC ... 35 V DC
Max. current consumption	< 3.5 mA

Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 1.75 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.75 mm ²
Conductor cross section AWG	24 ... 15

General

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)
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 voltage sensor	± 20 μV (-10...100 mV)
Step response (10-90%)	< 2 s
Switch-on delay	6 s
Test voltage input/output	2 kV (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61326-1 (IEC 61326) and NAMUR NE 21

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Technical data

General

Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21
Color	green
Housing material	Polycarbonate, PC
Mounting position	any
Assembly instructions	Connection head according to DIN 43729 form B
Configuration	Using MCR-PI-CONF-WIN configuration software package

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61326-1 (IEC 61326) and NAMUR NE 21
Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21
Connection in acc. with standard	CUL
Conformance	CE-compliant
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D

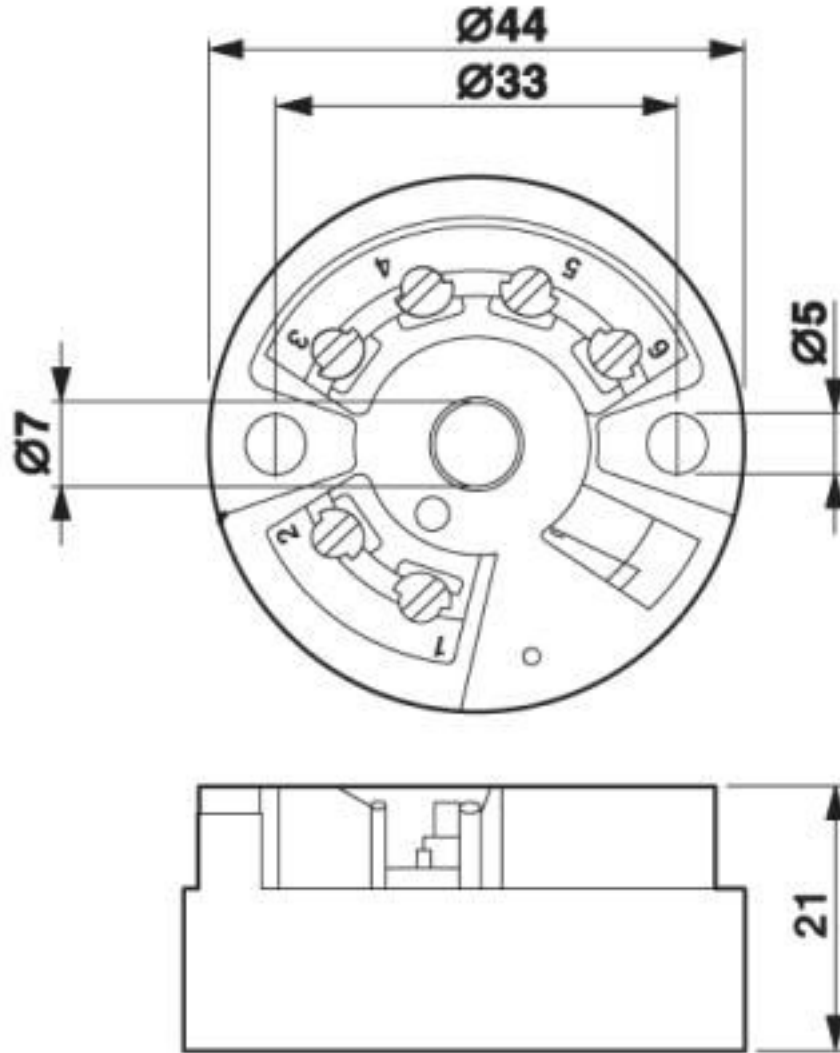
Environmental Product Compliance

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

Drawings

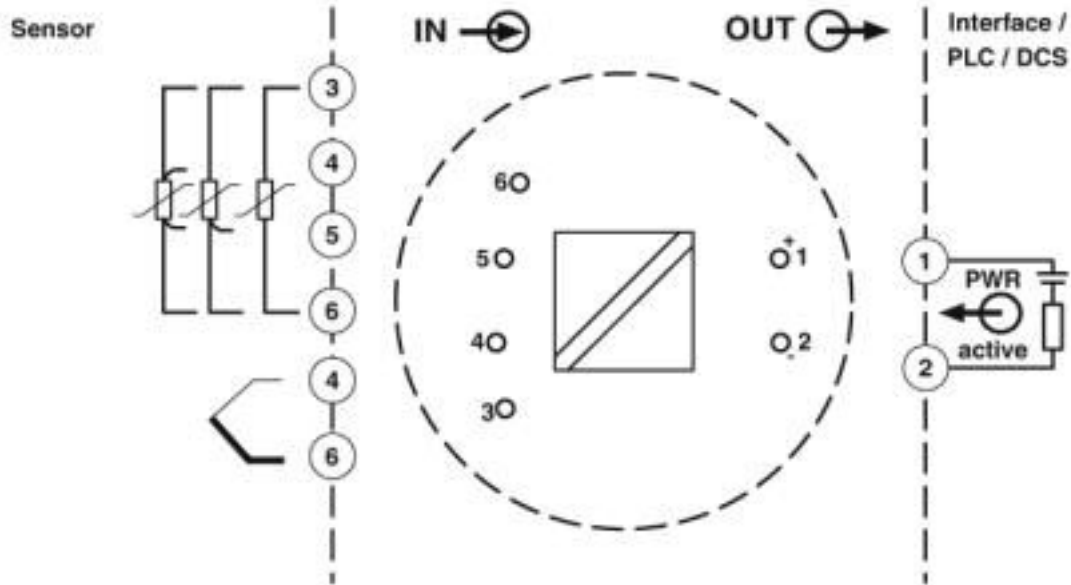
Head-mounted transducer - MCR-FL-HT-T-I - 2864529

Dimensional drawing



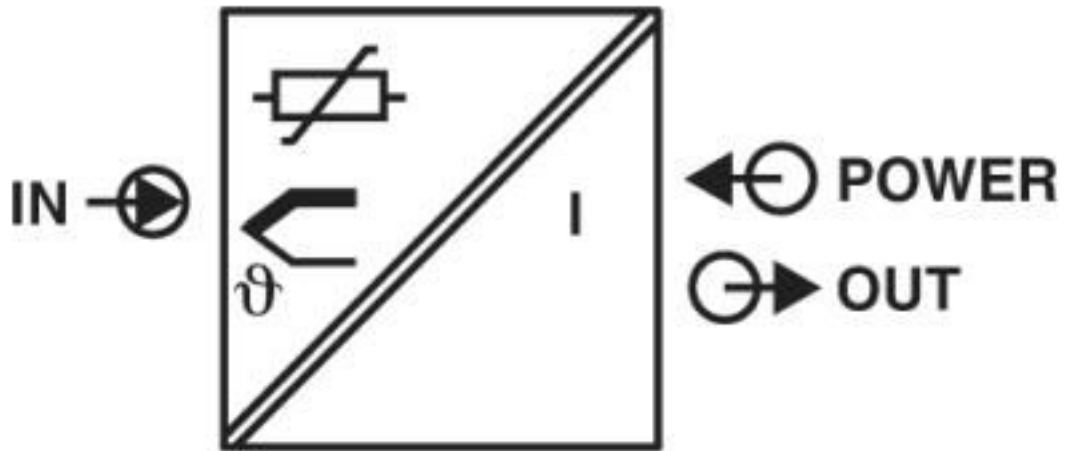
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Block diagram



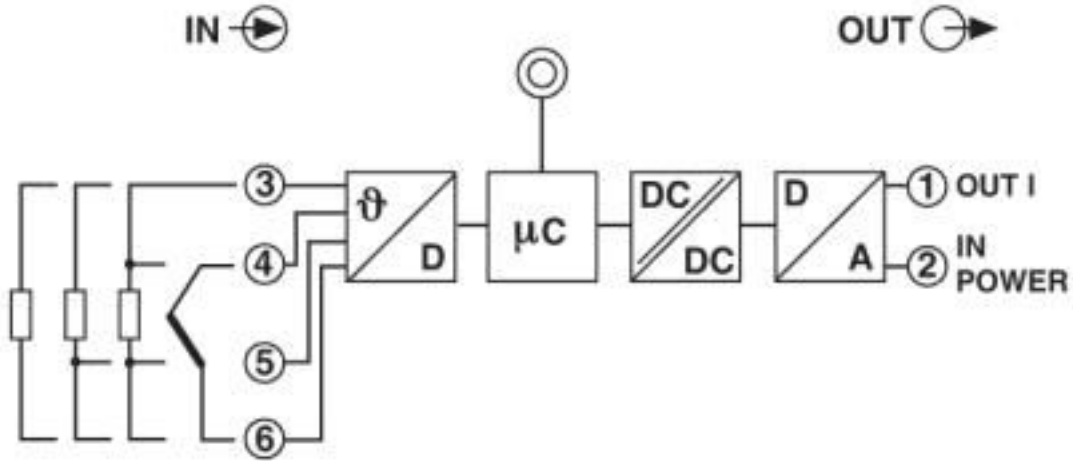
Block diagram MCR-FL-HT-T-I

Pictogram



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Circuit diagram



Classifications

eCl@ss

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 8.0	27200206
eCl@ss 9.0	27210129

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	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

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Classifications

UNSPSC

UNSPSC 18.0	41112105
UNSPSC 19.0	41112105
UNSPSC 20.0	41112105
UNSPSC 21.0	41112105

Accessories

Accessories

Mounting rail adapter

Adapter - MCR-DIN-RAIL-ADAPTER HT - 2864671



DIN rail adapter for head-mounted transducers. Suitable for 35 mm DIN rails in accordance with EN 60715.

Programming adapter

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



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