

# 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

## Your advantages

- ✓ 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
- ✓ 1-channel
- ✓



## Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4017918893231

## Technical data

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 55 °C
Degree of protection	IP00
	IP66 (Installed in the connection head)

### 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 technology	2, 3, 4-wire
Input signal range	10 Ω ... 400 Ω (min. measurement range 10 Ω)

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## Technical data

### Input data

	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 $U_V = 24\text{ V}$ ; $U_{\text{supply}} = 8\text{ V} / 0.025\text{ A}$ )
Configurable/programmable	no

### Power supply

Designation	Loop-powered
Supply voltage range	8 V DC ... 30 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 <sup>2</sup> ... 1.75 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.75 mm <sup>2</sup>
Conductor cross section AWG	24 ... 15
Torque	0.5 Nm ... 0.6 Nm
pluggable	no

### General

Step response (10-90%)	< 2 s
Switch-on delay	6 s
Configuration	Using MCR-PI-CONF-WIN configuration software package
Standards/regulations	NAMUR recommendation NE 21
Housing material	Polycarbonate, PC
Color	green
Line monitoring	NE 43

### 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

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## Technical data

### Safety data

Group	IIB
Max. external inductivity $L_o$	8.5 mH
Max. external capacitance $C_o$	1.9 $\mu$ F
Group	IIC
Max. external inductivity $L_o$	4.5 mH
Max. external capacitance $C_o$	974 nF
Safety-related maximum voltage $U_m$	250 V

### Standards and Regulations

Standards/regulations	NAMUR recommendation NE 21
Conformance	CE-compliant
ATEX	# II 1 G Ex ia IIC T6/T5/T4
UL, USA/Canada	cULus
Group	IIB
	IIC

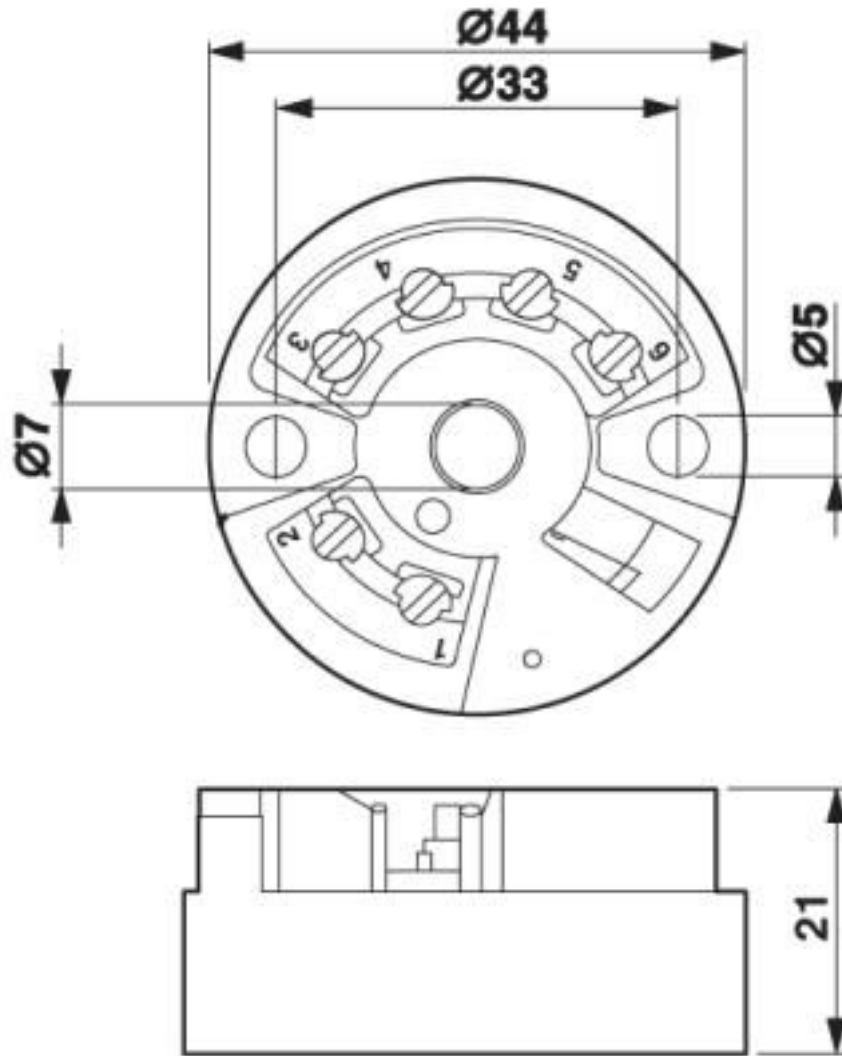
### Environmental Product Compliance

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

## Drawings

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

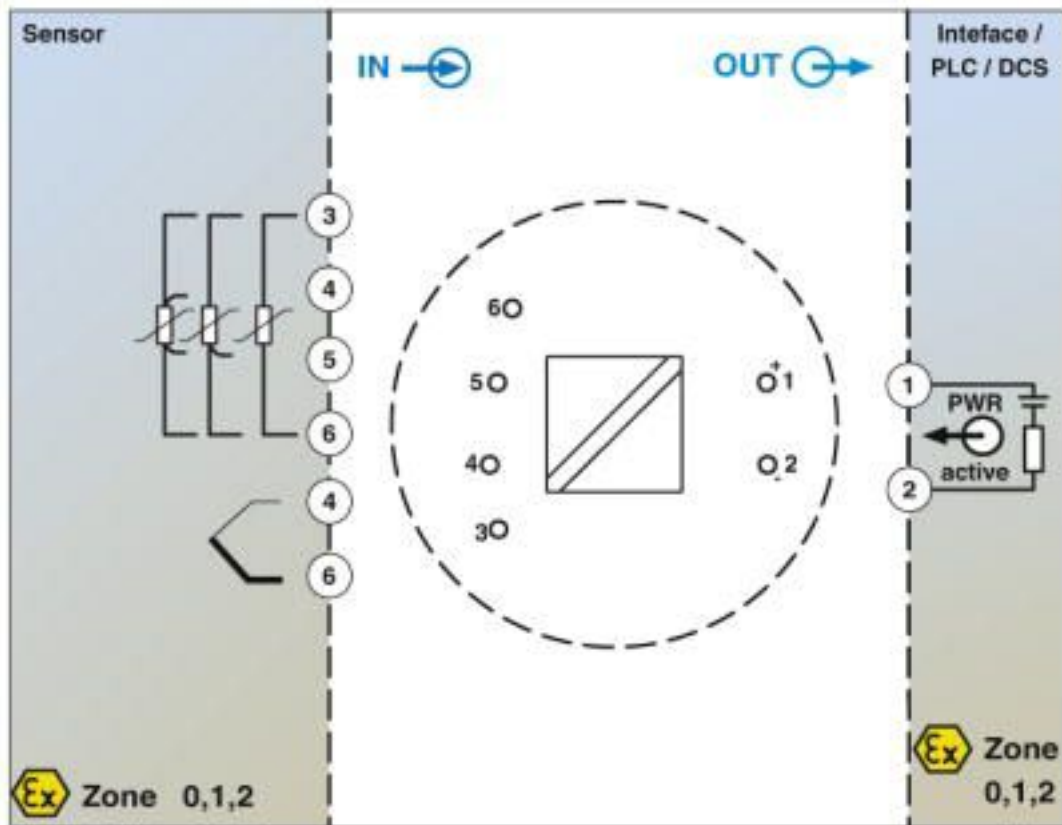
Dimensional drawing



Dimensional drawing

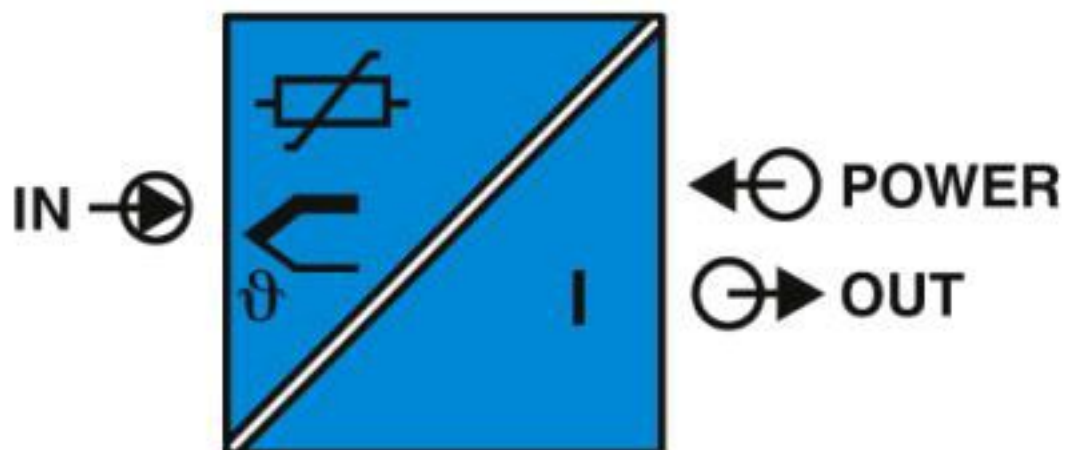
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Block diagram



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

Pictogram



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

## Classifications

### eCl@ss

eCl@ss 10.0.1	27210129
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
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

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

### Accessories

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



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