

Head-mounted transducer - MCR-FL-HT-TS-I-EX - 2864545

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MCR head-mounted temperature transducers 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 1
- Single-channel
- Loop-powered
- 4
20 mA/20
4 mA output
- HART-compatible (MCR-FL-TS-LP-I-EX)
- 2-way electrical isolation



Key commercial data

package_quantity	1
GTIN	4017918893200

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
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)
Input signal range	10 Ω ... 2000 Ω (min. measurement range 100 Ω)
Input signal range	-10 mV ... 75 mV (min. measurement range 5 mV)

Output data

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Output data

Configurable/programmable	Yes, programmable
Current output signal	4 mA ... 20 mA
Current output signal	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 (linear increase/decrease)
Load/output load current output	≤ 630 Ω (At UV = 24 V; U _{supply} - 10 V / 0.023 A)

Power supply

Name	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 mm ²
Conductor cross section solid max.	1.75 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.75 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil 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
Pickup delay	6 s
Configuration	With HART protocol
Inflammability class according to UL 94	V0
Standards/regulations	NAMUR recommendation NE 21
Housing material	Polycarbonate, PC
Color	green
Line monitoring	NE 43
Conformance	CE-compliant
ATEX	# II 1 G and II 2 G Ex ia IIC T6/T5/T4
UL, USA / Canada	cULus
Functional safety (SIL)	SIL 2 according to EN 61508

Safety data

Max. output voltage U _o	5 V DC
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Safety data

Max. output current I_o	5.4 mA
Max. output power P_o	6.6 mW
Max. ambient temperature	Category 1: T4 = 60°C, T5 = 50°C, T6 = 40°C
Gas group	IIA
Max. external inductivity L_o	100 mH
Max. external capacity C_o	9.9 µF
Gas group	IIB
Max. external inductivity L_o	100 mH
Max. external capacity C_o	9.9 µF
Gas group	IIC
Max. external inductivity L_o	100 mH
Max. external capacity C_o	2 µF
Safety-related maximum voltage U_m	250 V

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	27200206

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	EC001446

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

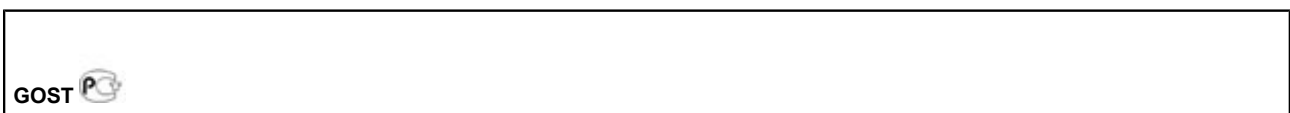
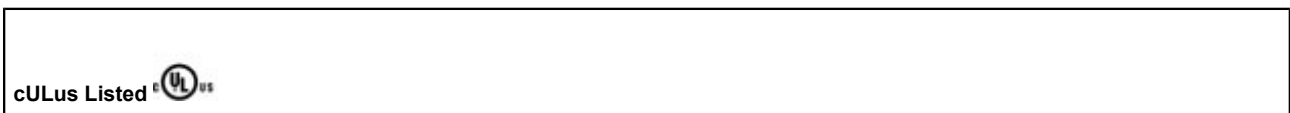
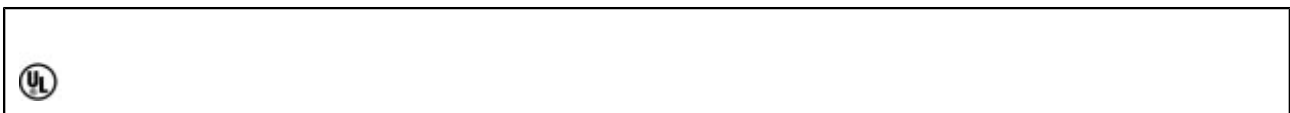
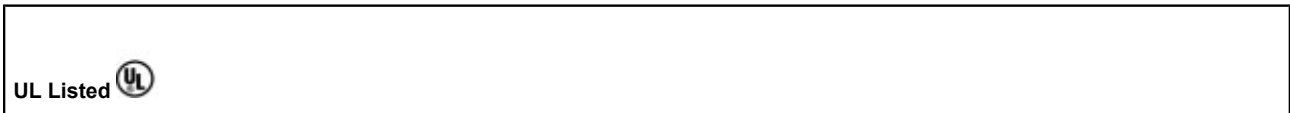
approvals

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

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approvals

Approval details



accessories

Configuration and diagnostics

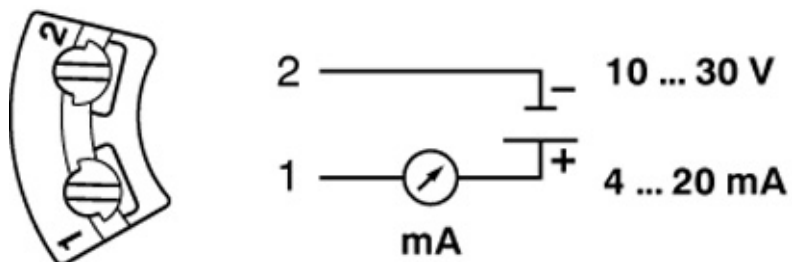
MCR/PI-CONF-WIN - 2814799



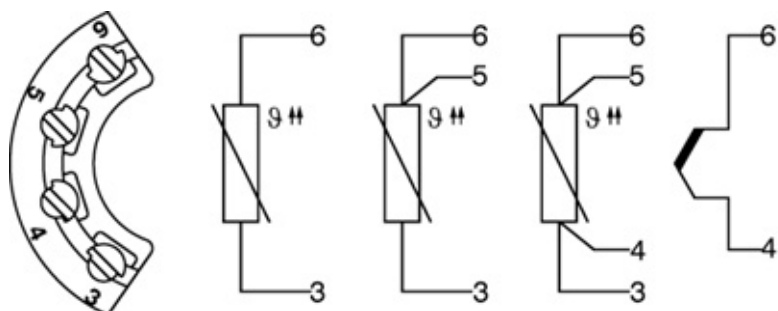
Drawings

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Connection diagram

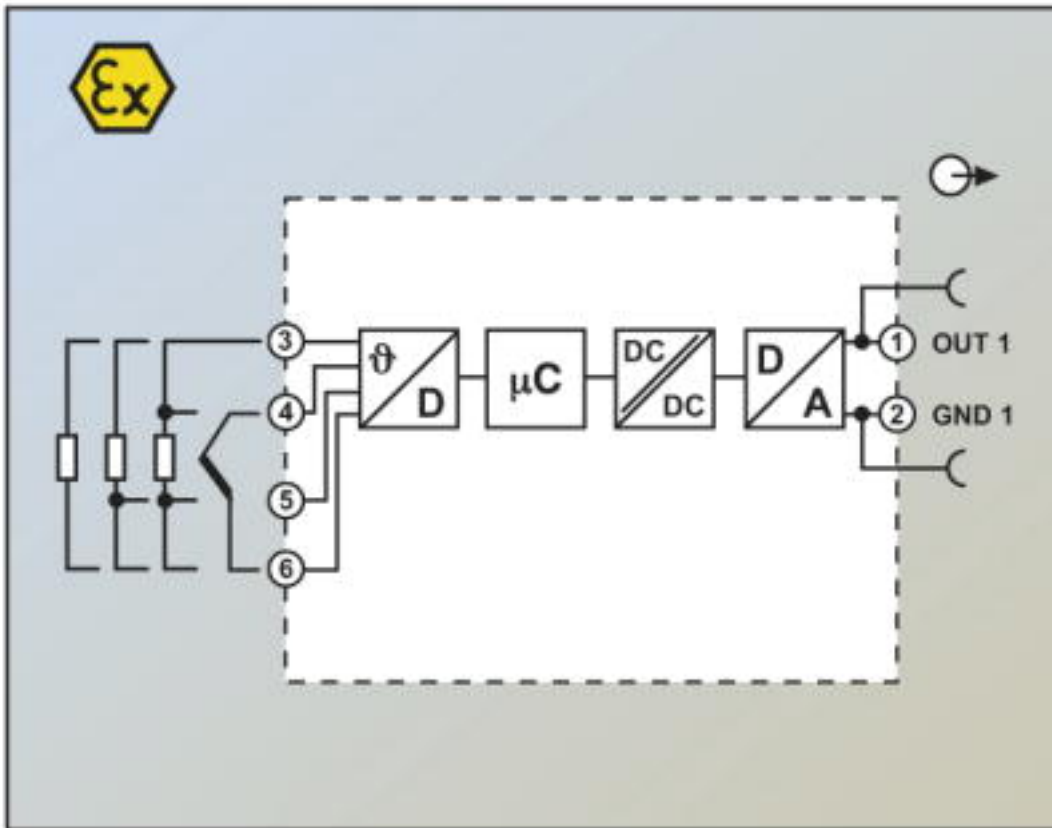


Connection diagram



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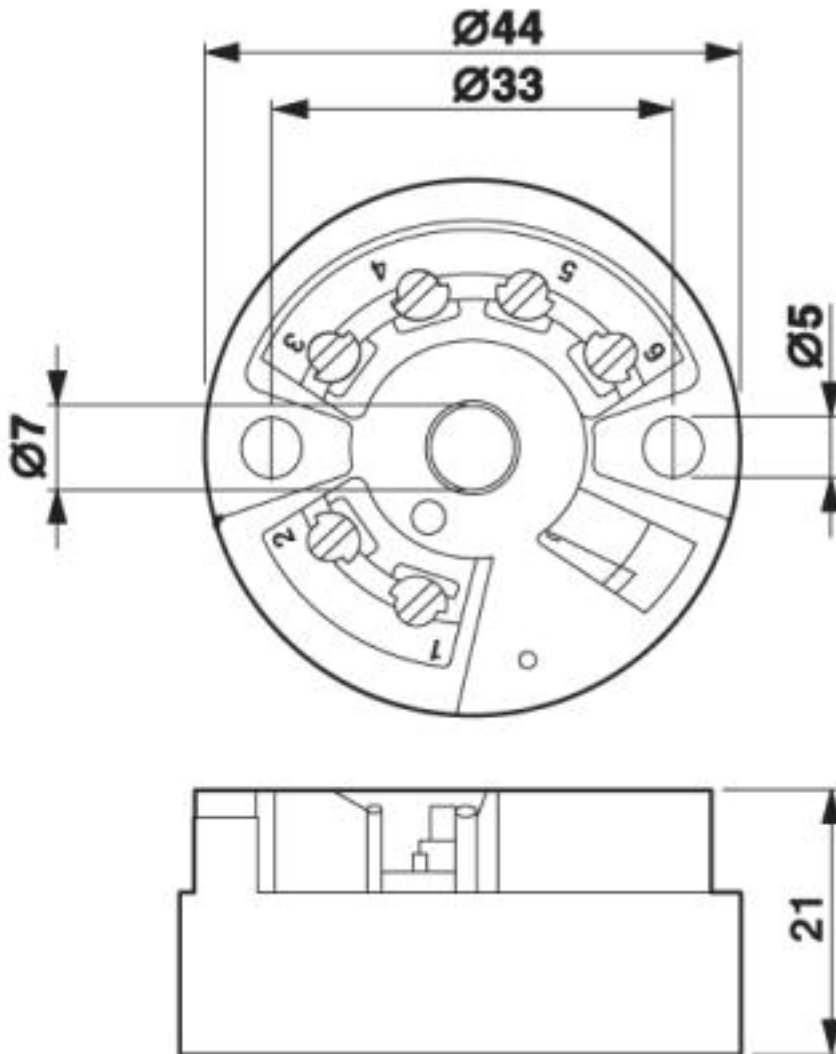
Block diagram



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

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Dimensioned drawing



Dimensional drawing

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