

Head-mounted transducer - FA MCR-EX-HT-1TS-I-OLP



1145217

<https://www.phoenixcontact.com/pc/products/1145217>

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Ex i, Output loop-powered head transmitter for transmitting RTD and TC sensor signals, as well as from resistance and voltage sensors via 4 mA ... 20 mA. HART, Standard configuration, Screw connection

Commercial Data

Item number	1145217
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	CK3322
GTIN	4063151134983
Weight per Piece (including packing)	186 g
Weight per Piece (excluding packing)	70 g
Customs tariff number	85437090
Country of origin	DE

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Technical Data

Product properties

Product type	Temperature transmitter
No. of channels	1

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

No. of channels	1
Step response (0–99%)	1 s (TC)
	1 s (RTD)

Electrical isolation Input/output

Test voltage	2 kV AC (50 Hz, 60 s)
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Supply

Supply voltage range	10 V DC ... 30 V DC (Ex)
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Input data

Measurement

Number of inputs	1
Input voltage range	-20 mV ... 100 mV (Minimum measuring span: 5 mV)
Sensor types (RTD) that can be used	Pt, Ni, Cu sensors: 2, 3, 4-wire
Sensor types that can be used (TC)	A, B, C, D, E, J, K, L, N, R, S, T, U
Temperature measuring range	-250 °C ... 2500 °C (Range depending on the sensor type)
Temperature measuring range	≥ 10 K (RTD)
	≥ 50 K (TC)
Linear resistance measuring range	10 Ω ... 2000 Ω (Minimum measuring span: 10 Ω)

Output data

Signal: Current

Output name	Current output
Current output signal	4 mA ... 20 mA (HART)
	20 mA ... 4 mA (HART)
Max. current output signal	23 mA
Load	$(U_L - 10 \text{ V}) / 0.023 \text{ A}$
HART coding	FSK ± 0.5 mA
HART version	7
Transmission speed	1200 Baud
Mains frequency filter	50/60 Hz
Communication resistance	≥ 250 Ω

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Switch-on delay	<input type="checkbox"/> 7 s (HART)
	<input type="checkbox"/> 7 s (Measured value)

Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14
Torque	0.5 Nm

Interfaces

Data communication (bypass)

Protocols supported	HART
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP00 (upon installation in field housing IP66/67, NEMA 4X)
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-50 °C ... 100 °C
Altitude	≤ 4000 m (Above sea level)
Climatic class	C1
Permissible humidity (operation)	5 % ... 95 % (condensation permitted)

Approval data

CE

Designation	CE
Certificate	CE-compliant

CE

Designation	ATEX
Identification	<input type="checkbox"/> II 1G Ex ia IIC T6...T4 Ga
Certificate	EPS 20 ATEX 1 166 X

CE

Designation	IECEX
Identification	II 1G Ex ia IIC T6...T4 Ga
Certificate	IECEX EPS 20.0060X

CE

Designation	CSA
Identification	IS for Class I, Div. 1, Groups A, B, C, D; T6...T4 Ex ia IIC T6...T4 Ga

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Mounting

Assembly instructions

Installation in connection head according to DIN 43729 form B

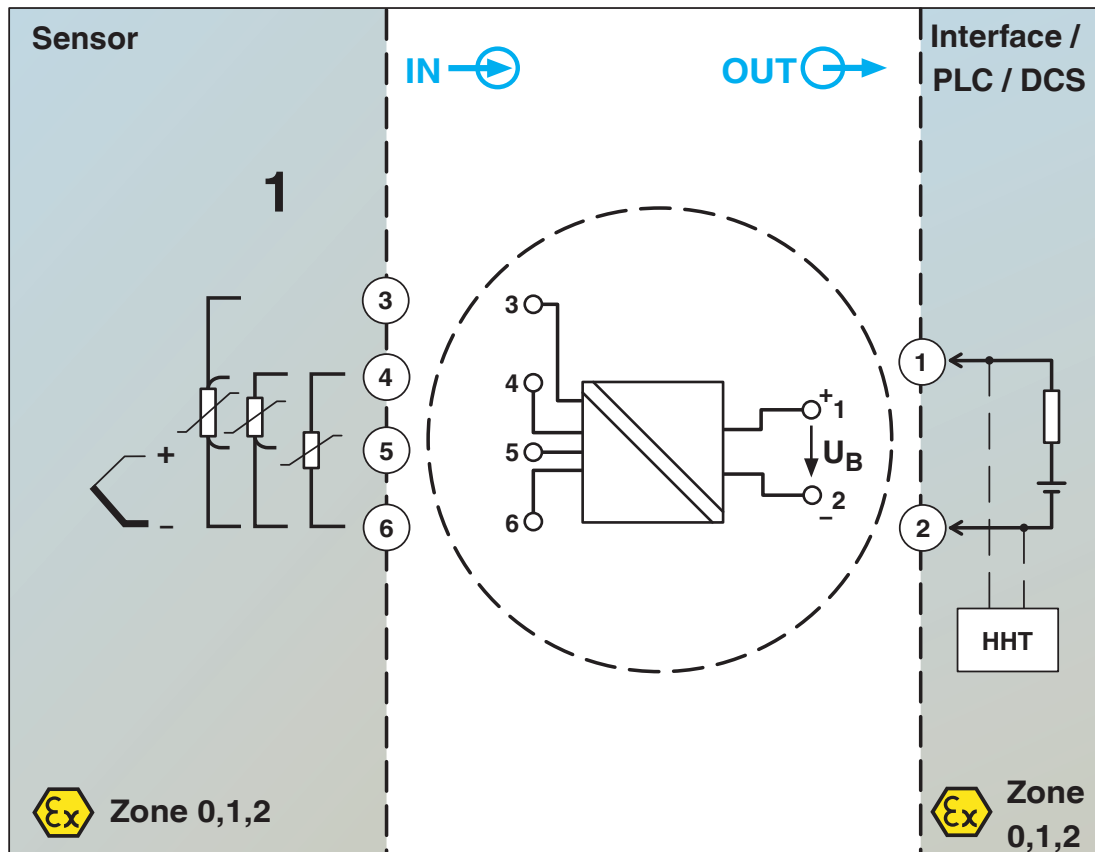
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Drawings

Block diagram



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Approvals



IECEX

Approval ID: IECEX_EPS_20.0060X



CSA

Approval ID: 80070110



ATEX

Approval ID: EPS 17 ATEX 1 130 X



CSAus

Approval ID: 80070110

cCSAus

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Classifications

ECLASS

ECLASS-9.0	27210129
ECLASS-10.0.1	27210129
ECLASS-11.0	27210129

ETIM

ETIM 8.0	EC002919
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UNSPSC

UNSPSC 21.0	41112100
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Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"
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Accessories

Programming adapter

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

<https://www.phoenixcontact.com/pc/products/2309000>

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



Cable adapter

Cable adapter - GW HART USB MODEM - 1003824

<https://www.phoenixcontact.com/pc/products/1003824>

USB HART modem cable for communication between a PC and HART devices, cable length: 1m.



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Adapter

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

<https://www.phoenixcontact.com/pc/products/2864671>

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



Display

Display - FA MCR-HT-D - 2908735

<https://www.phoenixcontact.com/pc/products/2908735>

Display unit for plugging directly into the FA MCR-... head transmitter



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Electronic housing

Electronic housing - FA MCR-HT-FH - 2908736

<https://www.phoenixcontact.com/pc/products/2908736>



Field housing for the installation of head transmitters with or without display unit.
For direct connection to the process.

Mounting kit

Mounting kit - FA MCR-HT-FH-WM - 2908737

<https://www.phoenixcontact.com/pc/products/2908737>



Wall fastening for FA MCR-HT-FH field housing

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Mounting kit

Mounting kit - FA MCR-HT-FH-PM - 2908738

<https://www.phoenixcontact.com/pc/products/2908738>

Pipe fastening for FA MCR-HT-FH field housing



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