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

1105515

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Output loop-powered head transmitter for transmitting up to 2 sensor signals from RTD and TC sensors as well as from resistance and voltage sensors via 4 mA ... 20 mA. HART, Standard configuration, Safety Integrity Level (SIL, IEC 61508): 2, Systematic Capability: 3, Screw connection

Commercial data

Item number	1105515
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DK1142
Product key	DK1142
GTIN	4055626988306
Weight per piece (including packing)	190 g
Weight per piece (excluding packing)	188,7 g
Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product family	Field Analog
No. of channels	2
Configuration	Software
	HART

Insulation characteristics

Overvoltage category	II
Pollution degree	2

System properties

Functionality

Configuration	Software
	HART

Electrical properties

Electrical isolation between input and output	yes
Step response (0–99%)	0.8 s (TC)

Electrical isolation Input/output

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

Supply

Supply voltage range	loop-powered, no external supply necessary
	11 V DC ... 42 V DC (Standard)
	11 V DC ... 32 V DC (SIL active)

Input data

Measurement

Number of inputs	2
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)
	-200 °C ... 850 °C (Pt 100)
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

Current output signal	4 mA ... 20 mA (HART)

	20 mA ... 4 mA (HART)
Max. current output signal	23 mA
Load	(U_B – 11 V) / 0.023 A
HART coding	FSK ± 0.5 mA
HART version	7
Transmission speed	1200 Baud
Mains frequency filter	50/60 Hz
Communication resistance	≥ 250 Ω
Switch-on delay	≈ s (HART)
	≈ s (Measured value)

Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm² ... 2.5 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	24 ... 14
Tightening torque	0.35 Nm

Ex data

Ex installation (EPL)	Gc
	Div. 2

Interfaces

Data communication (bypass)

Protocols supported	HART

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
	-40 °C ... 70 °C (SIL active)
Ambient temperature (storage/transport)	-50 °C ... 100 °C
Altitude	≤ 4000 m (Above sea level)
Climatic class	C1
Permissible humidity (operation)	5 % ... 95 % (condensation permitted)

Approvals

CE

Certificate	CE-compliant

ATEX

Identification	Ex II 3G Ex nA IIC T6...T4 Gc

UL, USA/Canada

Identification	UL 61010 Recognized

FM

Identification	NI / Class I / Div. 1, 2 / Group ABCD T6/T5/T4

CSA

Identification	NI, Class I, Div. 2, Groups A, B, C, D

Shipbuilding approval

Certificate	DNV GL TAA00002GX

Safety Integrity Level (SIL, IEC 61508)

Identification	2

Systematic Capability

Identification	3

Shipbuilding data

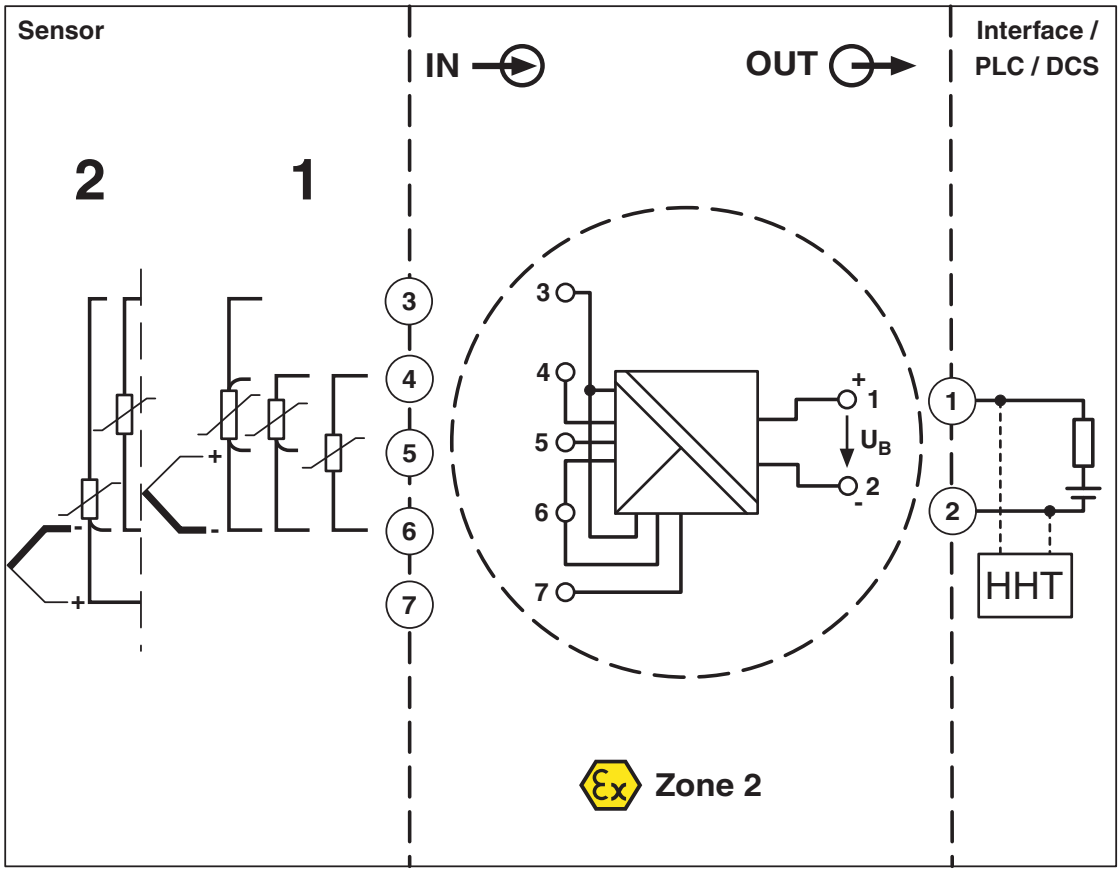
Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	C

Mounting

Mounting type	Installation DIN rail mounting
Assembly note	Installation in connecting head B in accordance with DIN EN 50446

Drawings

Block diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/nl/products/1105515

cUL Recognized
Approval ID: FILE E 198586

UL Recognized
Approval ID: FILE E 198586

EAC
Approval ID: RU*DE.*08.B.01522/19

DNV GL
Approval ID: TAA00002GX

Functional Safety
Approval ID: Z10 029429 0021

DNV
Approval ID: TAA00002GX

FM approved
Approval ID: FM17US0110X

Classifications

ECLASS

ECLASS-13.0	27210129
ECLASS-15.0	27210129

ETIM

ETIM 9.0	EC002919

UNSPSC

UNSPSC 21.0	41112100

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)

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