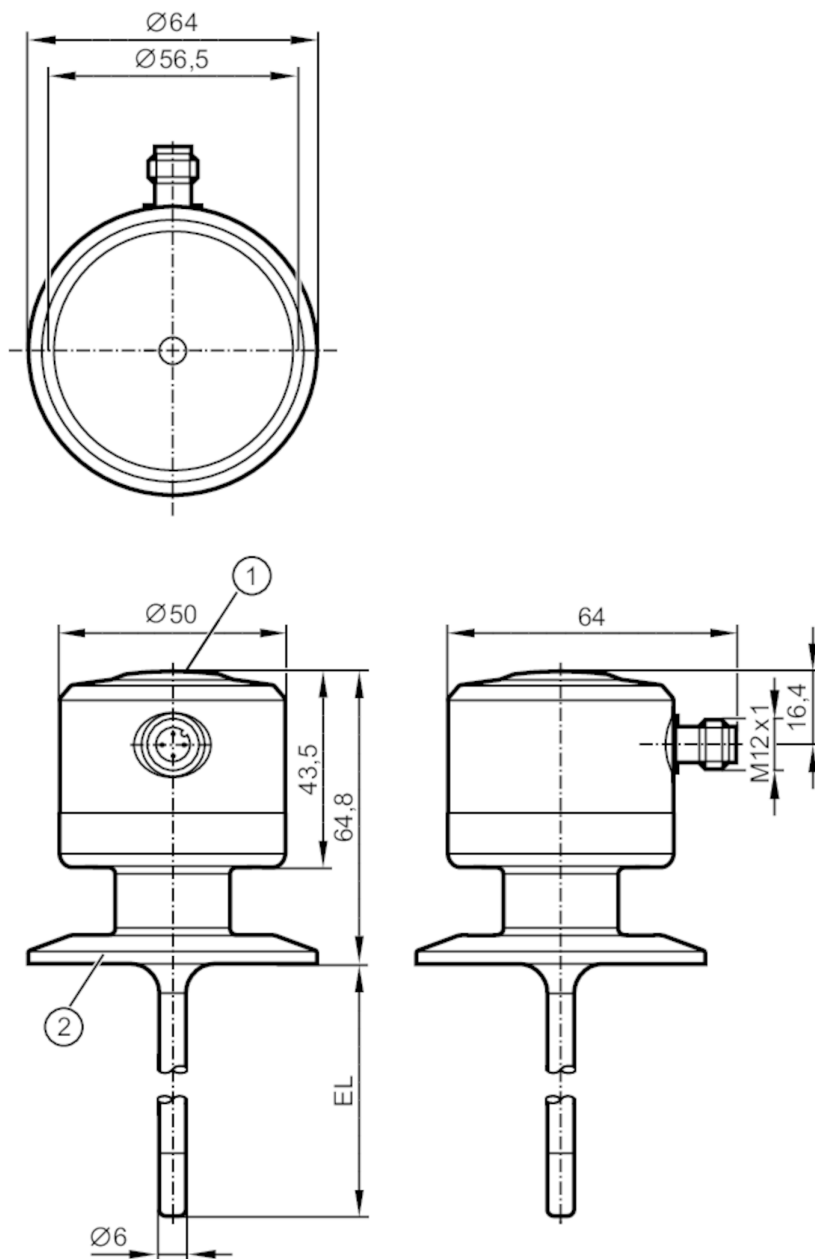


TCC931



Temperature transmitter

TCC100K1EC02-A-DKG/US



- 1 LED
- 2 Process connection



EC 1935/2004

EHEDG Certified

FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)	
Installation length EL [mm]	100	

Application

Special feature	Gold-plated contacts
Measuring element	1 x Pt 1000



Temperature transmitter

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Reference element	1 x NTC	
Media	liquids and gases	
Pressure rating	160 bar	16 MPa
Electrical data		
Operating voltage [V]	18...32 DC; ("supply class 2" to cULus)	
Current consumption [mA]	10; (24 V)	
Protection class	III	
Reverse polarity protection	yes	
Power-on delay time [s]	6	
Integrated watchdog	yes	
Inputs / outputs		
Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1	
Outputs		
Total number of outputs	2	
Output signal	analogue signal; IO-Link; (calibration check status)	
Electrical design	PNP/NPN	
Number of digital outputs	1	
Output function	normally closed; (diagnostic signal)	
Max. voltage drop switching output DC [V]	2	
Permanent current rating of switching output DC [mA]	100	
Diagnostic output	calibration check status and error diagnostics	
Number of analogue outputs	1	
Analogue current output [mA]	4...20	
Max. load [Ω]	(Ub - 15 V) x 50	
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	
Measuring/setting range		
Probe length L [mm]	100	
Measuring range	-25...160 °C	-13...320 °F
Note on measuring range	scalable	
Factory setting	-10...150 °C / 14...302 °F	
Calibration check limit [K]	0.5...3	
In steps of [K]	0.05	
Resolution		
Resolution of analogue output [K]	0.05	
Accuracy / deviations		
Precision analogue output [K]	± 0,2	
Precision IO-Link [K]	± 0,2	
Temperature coefficient analogue output	< ± 0,02; (in case of deviation from the reference condition 25 ± 5 °C)	



Temperature transmitter

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[% of the span / 10 K]	
Temperature coefficient IO-Link	< ± 0,01; (in case of deviation from the reference condition 25 ± 5 °C)
[% of the span / 10 K]	

Response times

Dynamic response T05 / T09	[s]	1,5 / 4
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Software / programming

Parameter setting options	Display unit; scaling of the analogue output; calibration check limit; switching logic diagnostic output; simulation mode
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Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	BLOB	Binary Large Object transfer
	Common - I&D	Identification and Diagnosis
	Function	Measurement data, standard resolution
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	1	
Min. process cycle time	[ms]	4.4
IO-Link resolution temperature	[K]	0.01
Supported DeviceIDs	Type of operation	DeviceID
	default	1129

Operating conditions

Ambient temperature	[°C]	-25...70
Note on ambient temperature	max. internal device temperature: 125 °C	
Storage temperature	[°C]	-40...100
Protection	IP 68; IP 69K	

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 68000-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	35 g (10...2000 Hz)
MTTF	[years]	329
Note on approval	factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval no.	K021
	File number UL	E217884

Mechanical data

Weight	[g]	416
Housing	cylindrical	
Dimensions	[mm]	Ø 50 / L = 164.8
Materials	stainless steel (316L/1.4404); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (316L/1.4404); PEEK	

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Temperature transmitter

TCC100K1EC02-A-DKG/US

Process connection	Clamp DN50 (2") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.8 µm
Probe diameter [mm]	6
Installation length EL [mm]	100

Remarks

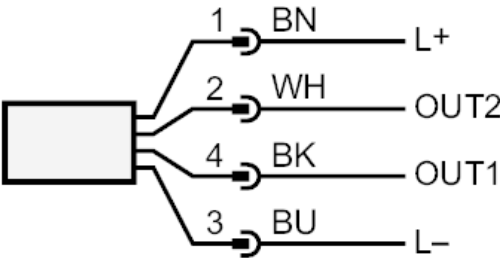
Remarks	MS = set measuring span operating voltage "supply class 2" according to cULus
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



OUT2: analogue output
OUT1: Diagnostic output / IO-Link