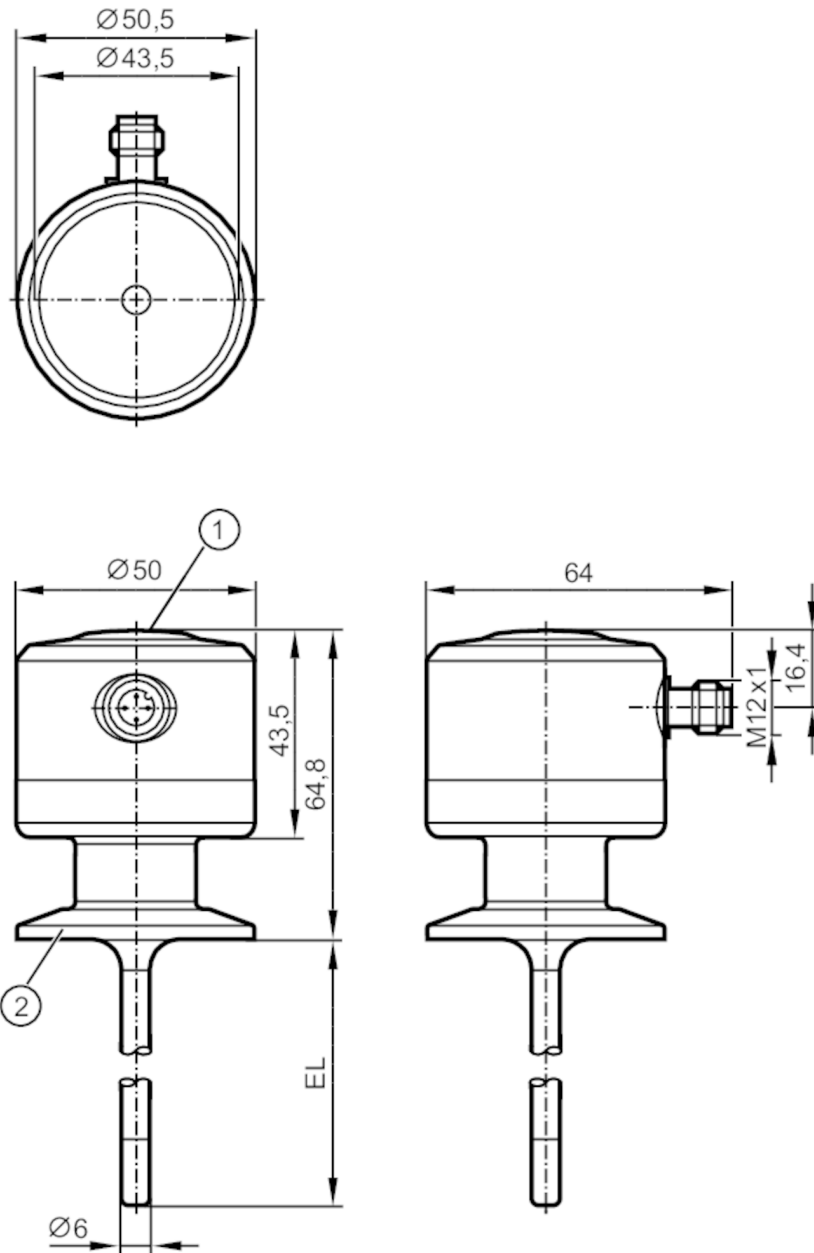


TCC831



Temperature transmitter

TCC100K1EC01-A-DKG/US



- 1 LED
- 2 Process connection



EC 1935/2004 EHEDG Certified FDA 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
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)	
Installation length EL [mm]	100	

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Application	
Special feature	Gold-plated contacts
Measuring element	1 x Pt 1000
Reference element	1 x NTC
Media	liquids and gases
Pressure rating [bar]	160
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]	$(U_b - 15 \text{ V}) \times 50$
Short-circuit protection	yes
Type of short-circuit protection	pulsed
Overload protection	yes
Measuring/setting range	
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

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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)
	[% 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
Software / programming		
Parameter setting options	Display unit; scaling of the analogue output; calibration check limit; switching logic diagnostic output; simulation mode	
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	Digital Measuring Sensor, Common Profile, Blob Transfer	
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

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Mechanical data		
Weight	[g]	358.9
Dimensions	[mm]	Ø 50 / L = 164.8
Materials		stainless steel (1.4404 / 316L); PEI; FKM; PFA
Materials (wetted parts)		stainless steel (1.4404 / 316L); PEEK
Process connection		Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts		Ra: < 0.8
Probe diameter	[mm]	6
Installation length EL	[mm]	100

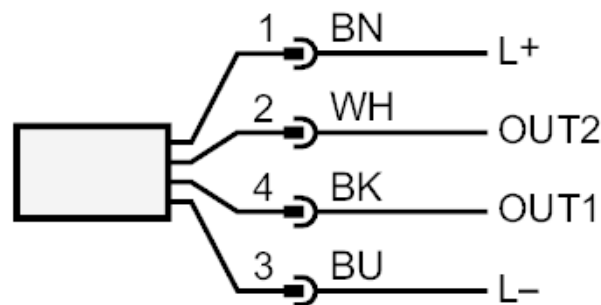
Remarks		
Remarks		MS = set measuring span operating voltage "supply class 2" according to cULus
Pack quantity		1 pcs.

Electrical connection

Connector: 1 x M12; Contacts: gold-plated



Connection



OUT2: analogue output

OUT1: Diagnostic output / IO-Link