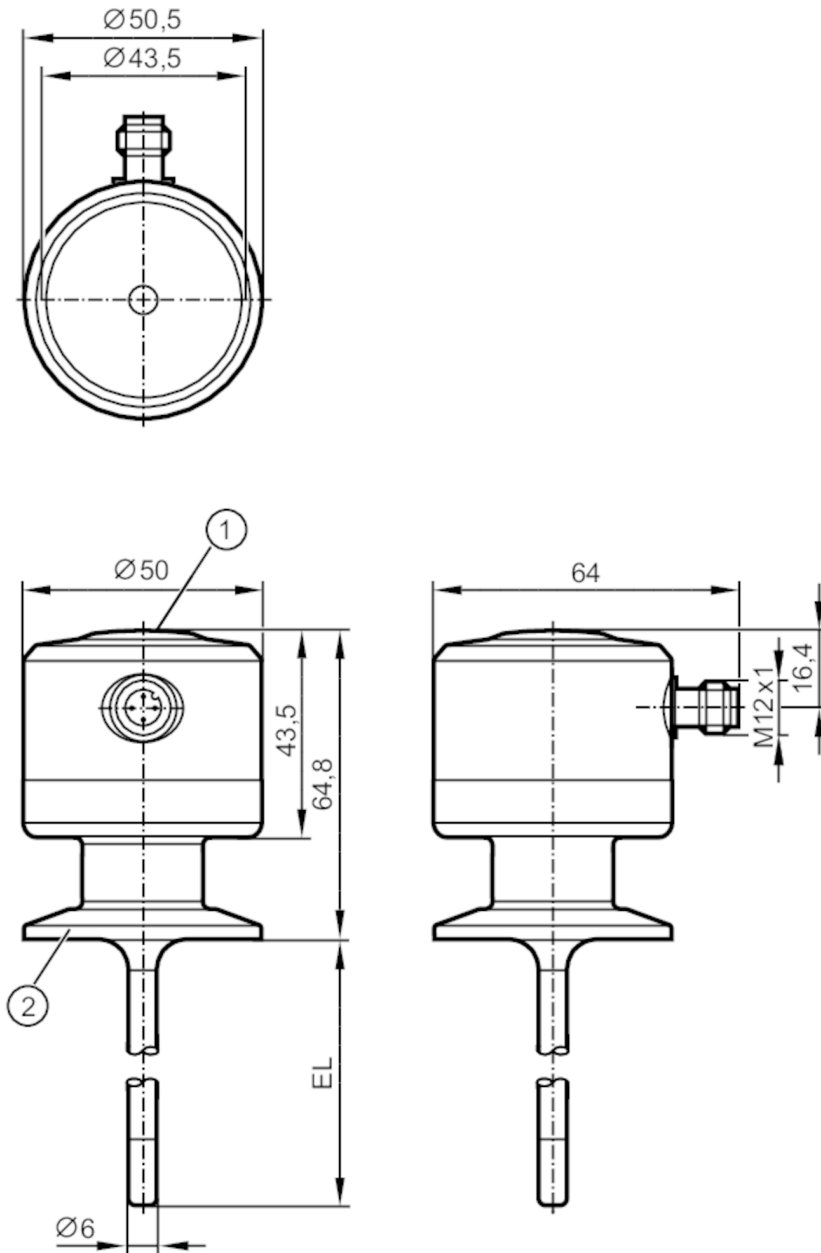


TCC811



Temperature transmitter

TCC050K1EC01-A-DKG/US



- 1 LED
- 2 Process connection



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1	
Measuring range	-25...160 °C	-13...320 °F
Communication interface	IO-Link	
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)	
Installation length EL [mm]	50	

Application

System	gold-plated contacts
Measuring element	1 x Pt 1000

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Temperature transmitter

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Reference element		1 x NTC
Media		liquids and gases
Pressure rating	[bar]	160
Electrical data		
Operating voltage	[V]	18...32 DC; (cULus - Class 2 source required)
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 analog outputs: 1
Outputs		
Total number of outputs		2
Output signal		analog 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 analog outputs		1
Analog current output	[mA]	4...20
Max. load	[Ω]	(U _b - 15 V) x 50
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
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 analog output	[K]	0.05
Accuracy / deviations		
Precision analog output	[K]	± 0,2
Precision IO-Link	[K]	± 0,2
Temperature coefficient analog output		< ± 0,02; (In case of deviation from the reference condition 25 ± 5 °C)
	[% of the span / 10 K]	

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

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

Parameter setting options	Display unit; scaling of the analog 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	Digital Measuring Sensor, Common Profile, Blob Transfer				
SIO mode	yes				
Required master port class	A				
Process data analog	1				
Process data binary	1				
Min. process cycle time [ms]	4.4				
IO-Link resolution temperature [K]	0.01				
Supported DeviceIDs	<table><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>1129</td></tr></tbody></table>	Type of operation	DeviceID	default	1129
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 number	K021
	File number UL	E217884

Mechanical data

Weight [g]	352.3
Dimensions [mm]	Ø 50 / L = 114.8
Material	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

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Installation length EL [mm] 50

Remarks

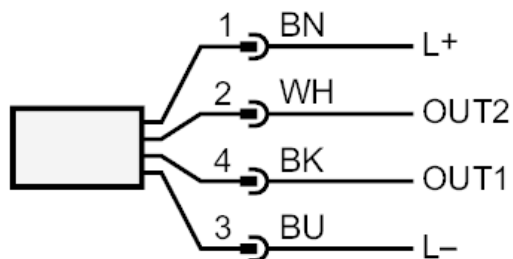
Remarks	MS = set measuring span cULus - Class 2 source required
Pack quantity	1 pcs.

Electrical connection

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



Connection



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