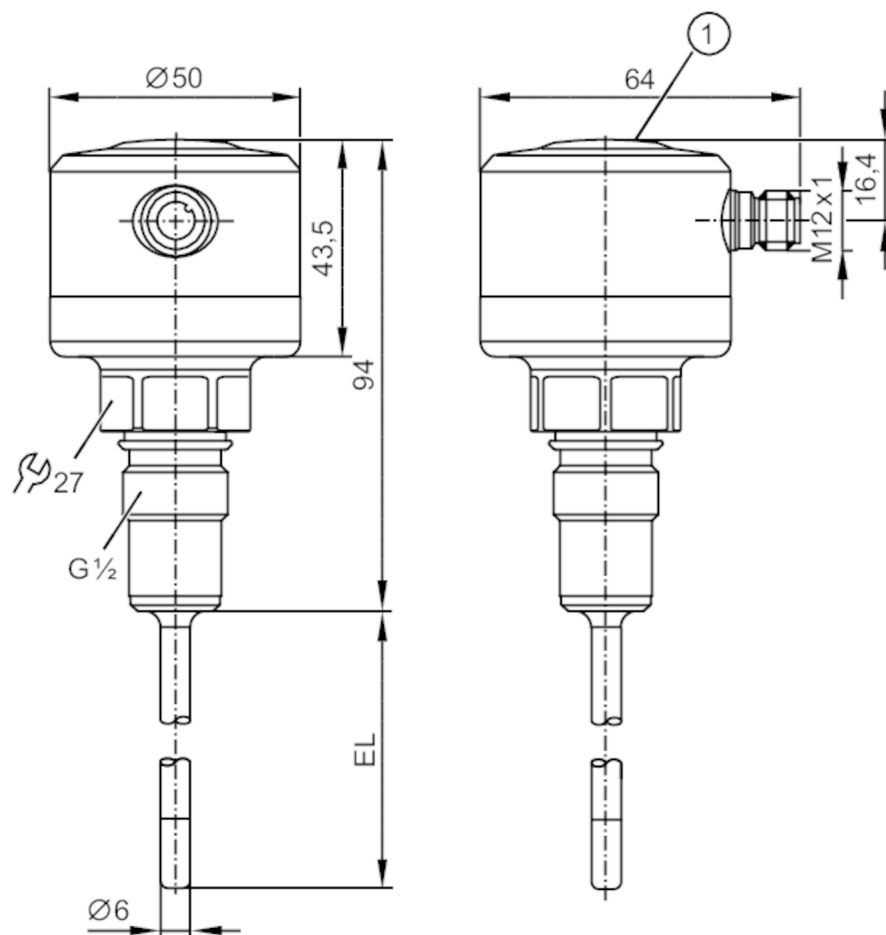


TCC551



Temperature transmitter

TCC999K1ER12-A-DKG/US



- 1 LED
- 2 Gasket FKM (for sealing on the back - not pressure resistant) / removable
- 3 pre-mounted PEEK sealing ring (removable) / metallic sealing area



EC 1935/2004 EHEDG Certified



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	threaded connection G 1/2 sealing cone	
Installation length EL [mm]	1000	

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	



Temperature transmitter

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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
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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 V) x 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 [% of the span / 10 K]	< ± 0,02; (in case of deviation from the reference condition 25 ± 5 °C)
Temperature coefficient IO-Link [% of the span / 10 K]	< ± 0,01; (in case of deviation from the reference condition 25 ± 5 °C)

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		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		<table><tr><th>Type of operation</th><th>DeviceID</th></tr><tr><td>default</td><td>1129</td></tr></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		<table><tr><td>DIN EN 61000-6-2</td><td></td></tr><tr><td>DIN EN 61000-6-3</td><td></td></tr></table>	DIN EN 61000-6-2		DIN EN 61000-6-3	
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				
UL approval		<table><tr><td>UL Approval no.</td><td>K021</td></tr></table>	UL Approval no.	K021		
UL Approval no.	K021					
Mechanical data						
Weight	[g]	820				
Dimensions	[mm]	Ø 50 / L = 1094				
Materials		stainless steel (316L/1.4404); PEI; FKM; PFA				
Materials (wetted parts)		stainless steel (316L/1.4404); PEEK				
Tightening torque	[Nm]	30...50				
Process connection		threaded connection G 1/2 sealing cone				
Surface characteristics Ra/Rz of the wetted parts		Ra: < 0.8				
Probe diameter	[mm]	6				
Installation length EL	[mm]	1000				
Remarks						
Remarks		<table><tr><td>MS = set measuring span</td></tr><tr><td>operating voltage "supply class 2" according to cULus</td></tr></table>	MS = set measuring span	operating voltage "supply class 2" according to cULus		
MS = set measuring span						
operating voltage "supply class 2" according to cULus						
Pack quantity		1 pcs.				

TCC551



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Electrical connection

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



Connection



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