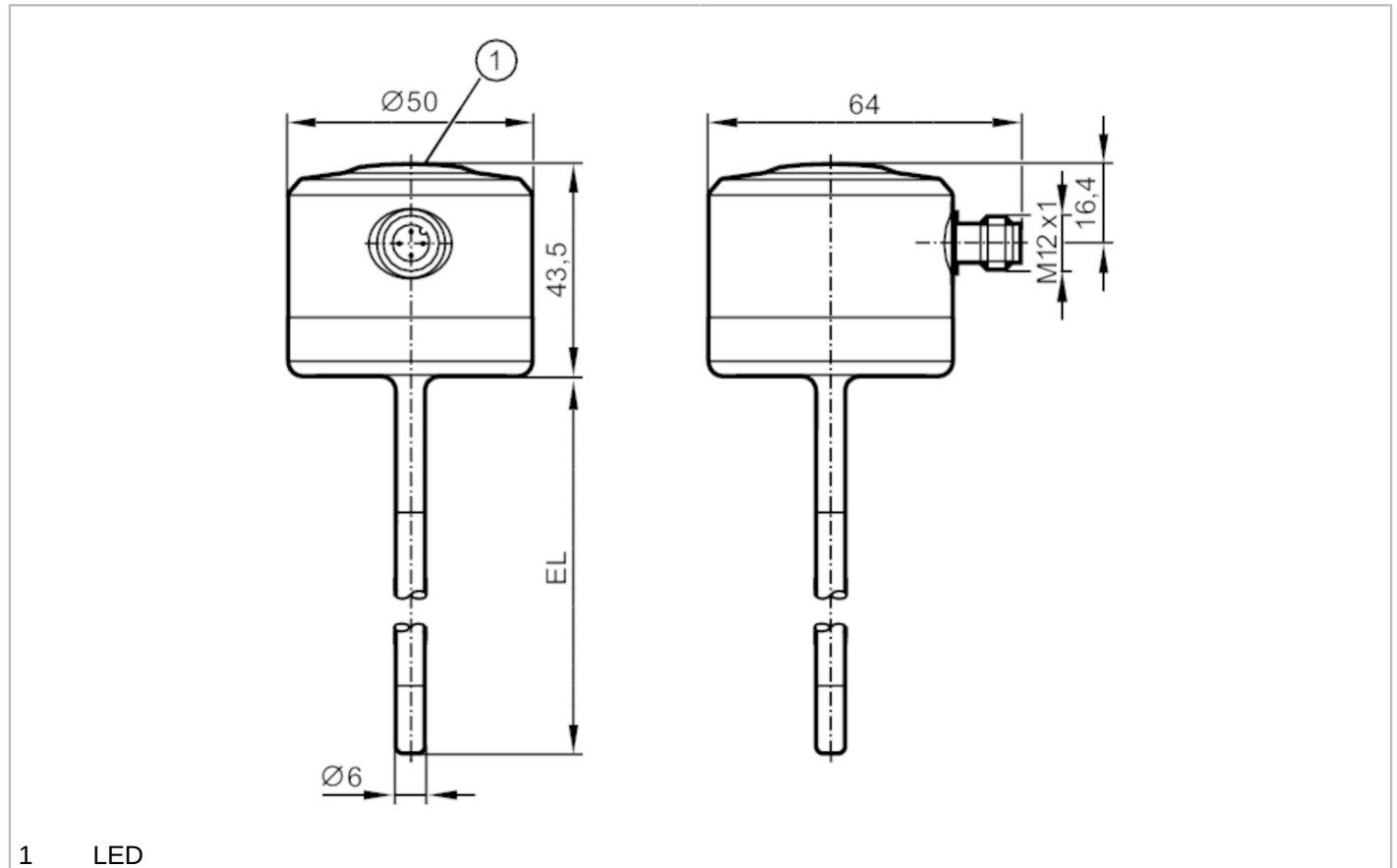


# TCC231



## Temperature transmitter

TCC100K1ED06-A-DKG/US



1 LED



### 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
Process connection	Diameter Ø 6 mm	
Installation length EL [mm]	100	

### Application

System	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; (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
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## Temperature transmitter

TCC100K1ED06-A-DKG/US

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 <sub>b</sub> - 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]	
Temperature coefficient IO-Link		< ± 0,01; (In case of deviation from the reference condition 25 ± 5 °C)
	[% of the span / 10 K]	
Reaction times		
Dynamic response T05 / T09	[s]	1,5 / 4
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	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 <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>	
UL approval	UL approval number	K021
	File number UL	E217884
Mechanical data		
Weight [g]	275.6	
Dimensions [mm]	Ø 50 / L = 143.5	
Material	stainless steel (1.4404 / 316L); PEI; FKM; PFA	
Materials (wetted parts)	stainless steel (1.4404 / 316L); PEEK	
Process connection	Diameter Ø 6 mm	
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	
	cULus - Class 2 source required	
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; coding: A; Contacts: gold-plated		

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### Connection



OUT2: analog output

OUT1: Diagnostic output / IO-Link