TN7430

Temperature sensor with display

TN-013KBBR12-QFPKG/US/ /V

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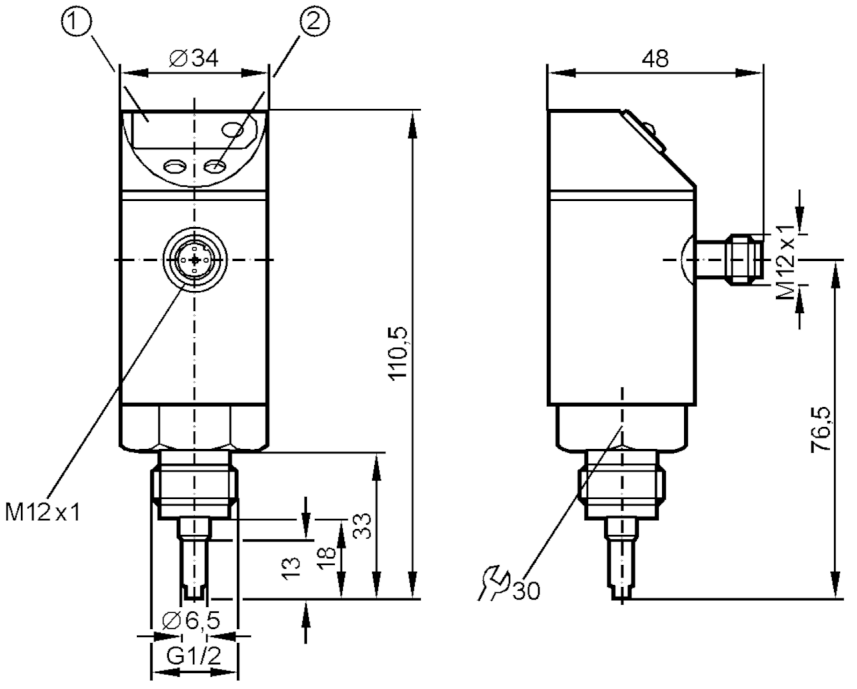
Alternative articles: TN7511 + E40096

When selecting an alternative article and accessories please note that technical data may differ!



1 7-segment LED display
2 programming button

Product characteristics			
Number of inputs and outputs		Number of digital outputs: 2	
Measuring range		-40...125 °C	-40...257 °F
Process connection		threaded connection G 1/2 external thread	
Application			
Special feature		Gold-plated contacts	
Measuring element		1 x Pt 1000; (to DIN EN 60751, class B)	
Media		Liquids	
Pressure rating	[bar]	400	
Minimum installation depth	[mm]	15	
Electrical data			
Operating voltage	[V]	18...30 DC	
Current consumption	[mA]	< 50	
Min. insulation resistance	[MΩ]	100; (500 V DC)	
Protection class		III	
Reverse polarity protection		yes	
Power-on delay time	[s]	1.5	
Integrated watchdog		yes	

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Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2	
Outputs			
Total number of outputs		2	
Output signal		switching signal	
Electrical design		PNP	
Number of digital outputs		2	
Output function		normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC	[V]	2	
Permanent current rating of switching output DC	[mA]	250	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Measuring/setting range			
Measuring range		-40...125 °C	-40...257 °F
Set point SP		-39.5...125 °C	-39...257 °F
Reset point rP		-40...124.5 °C	-40...256 °F
In steps of		0.5 °C	1 °F
Resolution			
Resolution of switching output	[K]	0.5	
Resolution of display	[K]	0.5	
Accuracy / deviations			
Switch point accuracy	[K]	± (Pt 1000 + 0,2 K)	
Display accuracy	[K]	± (Pt 1000 + 0,2 K + ½ Digit)	
Temperature drift per 10 K	[K]	0.1	
Response times			
Dynamic response T05 / T09	[s]	5 / 20; (to DIN EN 60751)	
Software / programming			
Adjustment of the switch point		programming button	
Parameter setting options		hysteresis / window; normally open / normally closed; min/ max memory reset; Display unit; zero-point calibration	
Operating conditions			
Ambient temperature	[°C]	-25...70	
Storage temperature	[°C]	-40...100	
Protection		IP 67	
Tests / approvals			
EMC		DIN EN 61000-4-2 ESD	4 kV CD / 8 kV AD
		EN 61000-4-3 HF radiated	10 V/m
		DIN EN 61000-4-4 Burst	2 kV
		EN 61000-4-6 HF conducted	10 V
Shock resistance		DIN IEC 68-2-27	50 g (11 ms)

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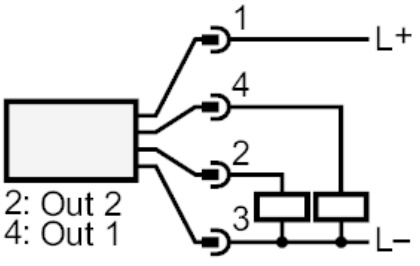
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
Mechanical data		
Materials	stainless steel (1.4301 / 304); EPDM/X; CO-PC; PBT; FKM; PA	
Materials (wetted parts)	stainless steel (1.4305 / 303)	
Process connection	threaded connection G 1/2 external thread	
Displays / operating elements		
Display	switching status	2 x LED, red
	function display	7-segment LED display
	measured values	7-segment LED display
Remarks		
Remarks	The values for accuracy apply to flowing water.	
Pack quantity	1 pcs.	

Electrical connection

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

Connection