efector600

TN2530

TN-013KBBD10-MFP

Temperature sensors

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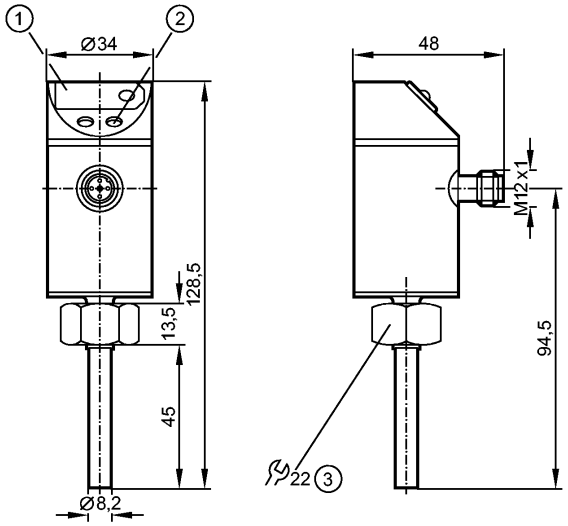
replaced by: TN2531



1: 7-segment LED display
2: Programming button
3: internal thread M18 x 1.5

Product characteristics		
Electronic temperature sensor		
Compact type for adapter		
Quick disconnect		
Process connection: internal thread M18 x 1.5 for adapter		
gold-plated contacts		
Switching output, analog output 4...20 mA or 0...10 V		
7-segment LED display		
Measuring range: -40...125 °C / -40...257 °F		
Measuring element: 1 x Pt 1000, to DIN EN 60751, class B		
Application		
Application		liquids and gases
Pressure rating	[bar]	300
Minimum installation depth	[mm]	15
Electrical data		
Electrical design		DC PNP
Operating voltage	[V]	20...30 DC
Current consumption	[mA]	< 66
Insulation resistance	[MΩ]	> 100 (500 V DC)
Protection class		III
Reverse polarity protection		yes
Outputs		
Output		Switching output, analog output 4...20 mA or 0...10 V
Output function		1 x normally open / closed programmable + 1 x analog (4...20 mA / 0...10 V, scalable)
Current rating	[mA]	250

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Voltage drop	[V]	< 2	
Short-circuit protection		yes (non-latching)	
Overload protection		yes	
Analog output		4...20 mA (Rmax: 500 Ω) / 0...10 V (Rmin: 2000 Ω)	
Measuring / setting range			
Measuring range		-40...125 °C	-40...257 °F
Analog start point, ASP	°C / °F	-40...115 / -40...239	
Analog end point, AEP	°C / °F	-30...125 / -22...257	
Setting range			
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			
Switching output	[K]	0.5	
Analog output	[K]	0.125	
Display	[K]	0.5	
Accuracy / deviations			
Switch point accuracy	[K]	± (Pt 1000 + 0.2 K)	
Analog output	[K]	± (Pt 1000 + 0.2 K + 0.4%)	
Display	[K]	± (Pt 1000 + 0.2 K + 1/2 Digit)	
Temperature drift (/ 10 K)	[K]	0.1	
Reaction times			
Power-on delay time	[s]	1.5	
Dynamic response	T05 / T09 [s]	1 / 3 *)	
Measuring / display cycle	[ms]	200	
Integrated watchdog		yes	
Software / programming			
Adjustment of the switch point		Programming button	
Programming options		hysteresis / window; normally closed/open; min./max. memory reset; °C/°F selectable; adjustment up to 10 K; analog output selectable and scaleable	
Environment			
Ambient temperature	[°C]	-25...70	
Storage temperature	[°C]	-40...100	
Protection		IP 67	
Tests / approvals			
EMC		EN 61000-4-2 ESD: EN 61000-4-3 HF radiated: EN 61000-4-4 Burst: EN 61000-4-6 HF conducted:	4 kV CD / 8 kV AD 10 V/m 2 kV 10 V
Shock resistance		DIN IEC 68-2-27:	50 g (11 ms)
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)
Mechanical data			
Process connection		internal thread M18 x 1.5 for adapter	
Materials (wetted parts)		stainless steel 316L / 1.4404	
Probe length L	[mm]	45	

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Housing materials		stainless steel (304S15); PBT (Pocan); PC (Makrolon); EPDM/X (Santoprene); FPM (Viton)
Weight	[kg]	0.244

Displays / operating elements

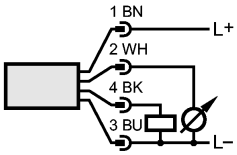
Display	Switching status LED red Function display 7-segment LED display Measured values 7-segment LED display

Electrical connection

Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function:
Hno = hysteresis / N.O.
Hnc = hysteresis / N.C.
Fno = window function / N.O.
Fnc = window function / N.C.



Remarks

Remarks	*) according to DIN EN 60751 The values for accuracy apply to flowing water.
Pack quantity [piece]	1

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