

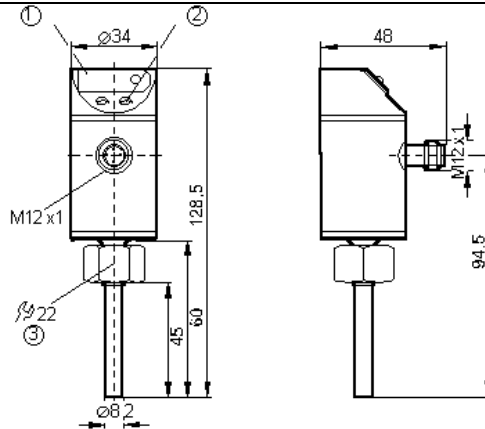
Temperature sensors with integrated control monitor

**TN2530**

Electronic temperature sensor  
TN  
Compact type for adapter  
Plug and socket

gold-plated contacts

Switching output, analogue  
output 4...20 mA or 0...10V  
7-segment LED display  
Measuring range  
-40...+125°C / -40...+257°F



1: 7-segment LED display, 2: Programming button, 3: internal thread M18x1.5

<b>Application</b>	liquids and gases
<b>Electrical design</b>	DC PNP
<b>Output</b>	normally open / closed programmable; 4...20 mA or 0...10 V
Operating voltage [V]	20...30 DC
Current rating [mA]	250
Short-circuit protection	•
Reverse polarity protection / Overload protection	•
Integrated Watchdog	•
Voltage drop [V]	< 2
Current consumption [mA]	< 66
Analogue output	4...20mA (max. 500 Ω) / 0...10V (min. 2000 Ω)
Permissible overl. pressure [bar]	300
<b>Setting range</b>	
Switch-on point, SP [°C/°F]	-39,5...+125 / -39...+257
Switch-off point, rP [°C/°F]	-40...+124,5 / -40...+256
in steps of [°C/°F]	0,5 / 1
Programming options	hysteresis / window; normally closed/open; min./max. memory reset; °C/°F selectable; adjustment up to 10K; analogue output selectable and scaleable
Adjustment of the switch point	Programming button
<b>Accuracy</b>	
Switching output [°C/°F]	± (PT 1000 + 0,2 K)
Analogue output [°C/°F]	± (PT 1000 + 0,2 K + 0,4%)
Displayed value [°C/°F]	± (PT 1000 + 0,2 K + 1/2 Digit)
<b>Resolution</b>	
Switching output [°C/°F]	0,5 / 1
Analogue output [°C/°F]	0,125 / 0,23
Displayed value [°C/°F]	0,5 / 0,5
Temperature drift ( / 10 K)	0,1
Power-on delay time [s]	1,5
Measuring / display cycle [ms]	200
Measuring element	1 x PT 1000 to DIN EN 60751, class B
Dynamic response T05 / T09 [s]	2 / 5 *)

**TN2530**

Operating temperature [°C]	-25...+70
Storage temperature [°C]	-40...+100
Protection	IP 67, III
Insulation resistance [MΩ]	> 100 / 500V DC
Shock resistance [g]	50g (DIN / IEC 68-2-27, 11ms)
Vibration resistance [g]	20g (DIN / IEC 68-2-6, 10-2000 Hz)
EMC	IEC 1000/4/2 ESD: 4kV CD / 8kV AD IEC 1000/4/3 HF radiated: 10 V/m IEC 1000/4/4 Burst: 2 KV IEC 1000/4/6 HF conducted: 10 V
Housing material	stainless steel (304S15) Pocan PC (Macrolon) EPDM/X (Santoprene) FPM (Viton)
Materials (wetted parts)	stainless steel (316S12)
Function display	red
Switching status LED	7-segment LED display
Function LED	
Connection	M12 connector, gold-plated contacts

Wiring

Programming of the output

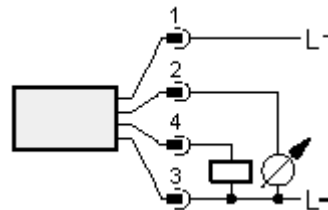
function:

Hno = hysteresis / N.O.

Hnc = hysteresis / N.C.

Fno = window function / N.O.

Fnc = window function / N.C.



Remarks

\*) according to DIN 60751  
The values for accuracy apply to flowing water.