

## Digital Temperature Sensor for Liquids



measuring  
•  
monitoring  
•  
analyzing

TDA



- Measuring Range: -58 ... 250 °F
- Pressure: Max. 1150 PSI
- Accuracy:  $\pm 1.0$  °F (for 14 ... 185 °F)
- Housing Material: Stainless Steel
- Connection:  
1/2" NPT, 3/4" NPT, G 1/2, G 3/4, or M25 x 1.5



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**Description**

The KOBOLD Model TDA temperature sensor is used for economical measuring and monitoring of temperature. It can be used for any application in which temperatures must be monitored and controlled. The sensor element is a semiconductor that outputs a digital signal to the electronics in 1.0°F steps. The measured values are shown on a 3-digit LED display. The analog output can be adjusted as required within the measuring range. Common applications include compressors, mechanical and plant engineering, and pumps.



**Technical Details**

**Housing Cover:** 303 Stainless Steel  
**Housing:** 316L Stainless Steel  
**Connection**  
**Standard Version:** 1/2" NPT or 3/4" NPT Male Thread  
 316L Stainless Steel  
 Option: G 1/2 or G 3/4  
**Remote Version**  
**Sensor:** 100 mm x 6 mm  
**Cable:** 2.5 m PTFE with M12x1 Plug  
**Housing:** M25x1.5 with Backing Nut  
**Principle of Meas.:** Semiconductor  
**Display:** 3-digit LED, Digit-height: 7 mm  
**Resolution:** 1.0°F up to 212°F  
 2.0°F (212°F Onwards)  
**Max. Media Temp:** 0... 250°F (Standard Version)  
 -58... 250°F (Remote Version)  
**Max. Ambient Temp.:** 0... 120°F  
**Max. Pressure:** 1150 PSI

**Power Supply:** 24 V<sub>DC</sub> ±20 %  
**Power Consumption:** ~40 mA (TDA-...L3M); ~70 mA (TDA-...P3M, TDA-...N3M) (not including switch current)  
**Electrical Connection:** Plug M12 x 1  
**Type of Switch Output:** PNP or NPN Transistor, Max. 300 mA, Short-circuit Proof  
**Contact Function:** N/O / N/C, Window, Adjustable  
**Switch Point Adj.:** Adjustable via 2 Keys  
**Switching State Display:** 1 (2) LED  
**Hysteresis:** Adjustable via 2 Keys  
**ON/OFF-Switch Delay:** 0.5... 99.5 (Separately Adjustable)  
**Measuring Cycle:** 0.5 s; t<sub>50/90</sub>: Approx. 13/30 s  
**Accuracy (Sensor):** ±1.0°F (between 14... 185°F)  
 ±3.6°F (between 185... 250°F and -58... -14°F)  
**Protection:** IP 65

**Order Details** (Example: **TDA-15F2N40L3M**)

Measuring Range	Model	Connection	Probe length	Output	Electrical Connection
0 ... 250 °F	<b>TDA-15F2..</b>	..N4.. = 1/2" NPT ..N5.. = 3/4" NPT	..0.. = 11.5 mm ..1.. = 100 mm	..L.. = 4 -20 mA	..3M = M12x1 Plug Connector
-20... 120 °C	<b>TDA-15H2..</b>	..R4.. = G 1/2 ..R5.. = G 3/4	..2.. = 200 mm	..P.. = 4 -20 mA, PNP-Switch Output	
-58 ... 250 °F	<b>TDA-15F3..</b>	..D6.. = Remote Mount, No Fitting	..1.. = 100 mm	..N.. = 4 -20 mA, NPN-Switch Output	
-50... 125 °C	<b>TDA-15H3..</b>				
Accessories					
Micro-DC Plug with 6 ft Cable, 4-pin for Output L					<b>807.037</b>
Micro-DC Plug with 6 ft Cable, 5-pin for Outputs P or N					<b>807.007</b>
6mm Bore Through Compression Fitting for D6 Connection - 1/4" NPT					<b>FTFHG1/4SS</b>
6mm Bore Through Compression Fitting for D6 Connection - 1/2" NPT					<b>FTFHG1/2SS</b>

