Digital Temperature Sensor

for Liquids

measuring • monitoring • analyzing

TDA

TDA-...L3M

TDA-...P3M
TDA-...N3M

- Measuring Range: -58 ... 250 °F
- Pressure: Max. 1150 PSI
- Accuracy: ±1.0 °F (for 14 ... 185 °F)
- Housing Material: Stainless Steel
- Connection:
  ½" NPT, ¾" NPT, G ½, G ¾, 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
Sensor:	316/316L Stainless Steel
Connection	
Standard Version:	½" NPT or ¾" NPT Male Thread 316L Stainless Steel Option: G½ or G¾
Remote Version	
Sensor:	100 mm x 6 mm
Cable:	2.5 m PTFE with M12x1 Plug
Housing:	M25 x 1.5 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:	-4 ... 250 °F (Standard Version) -58 ... 250 °F (Remote Version)
Max. Ambient Temp.:	-4 ... 120 °F
Max. Pressure:	1150 PSI

Power Supply:	24 V_{DC} ±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; $t_{50/90}$: 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

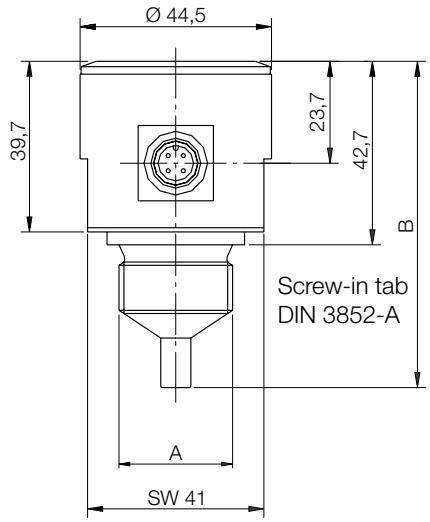
Order Details (Example: **TDA-15F2N40L3M**)

Measuring Range	Model	Connection	Probe length	Output	Electrical Connection
0 ... 250 °F	**TDA-15F2..**	**..N4..** = ½" NPT **..N5..** = ¾" NPT **..R4..** = G½ **..R5..** = G¾	**..0..** = 11.5 mm **..1..** = 100 mm **..2..** = 200 mm	**..L..** = 4 -20 mA **..P..** = 4 -20 mA, PNP-Switch Output **..N..** = 4 -20 mA, NPN-Switch Output	**..3M** = M12x1 Plug Connector
-20 ... 120 °C	**TDA-15H2..**				
-58 ... 250 °F	**TDA-15F3..**	**..D6..** = Remote Mount, No Fitting	**..1..** = 100 mm		
-50 ... 125 °C	**TDA-15H3..**				

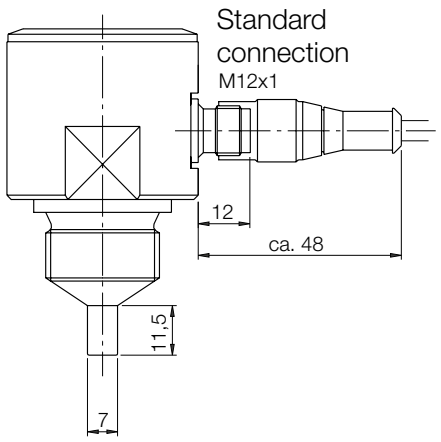
Accessories	
Micro-DC Plug with 6 ft Cable, 4-pin for Output L	**807.037**
Micro-DC Plug with 6 ft Cable, 5-pin for Outputs P or N	**807.007**
6mm Bore Through Compression Fitting for D6 Connection - 1/4" NPT	**FTFHG1/4SS**
6mm Bore Through Compression Fitting for D6 Connection - 1/2" NPT	**FTFHG1/2SS**

Dimensions (mm)

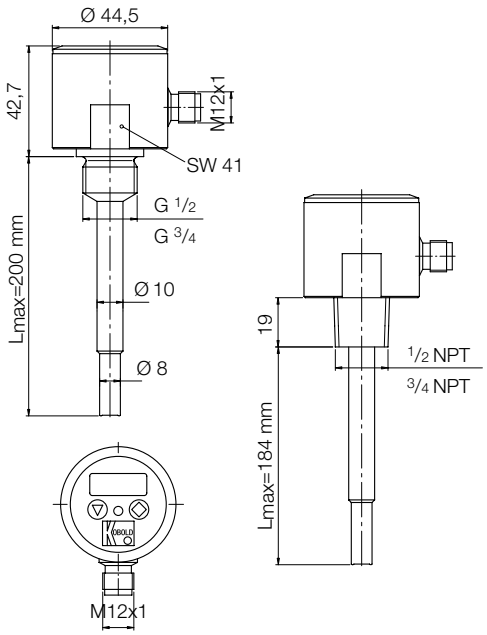
Standard Version, 12mm



A	B
½" NPT	70.2
¾" NPT	70.5
G½	72.3
G¾	75.9



Standard Version, 200mm



Remote Version