



Electronic Temperature Sensor for Liquids



measuring
•
monitoring
•
analysing

TDD



- Measuring range: -50...+125 °C
- Pressure: max. 80 bar
- Accuracy: ± 0.5 °C (for -10...+85 °C)
- Housing material: stainless steel
- Connection:
G 1/2, G 3/4, 1/2" NPT, 3/4" NPT or M25 x 1.5



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KOBOLD Messring GmbH
Nordring 22-24
D-65719 Hofheim/Ts.
Head Office:
+49(0)6192 299-0
+49(0)6192 23398
info.de@kobold.com
www.kobold.com



Electronic Temperature Sensor for Liquids Model TDD



Description

KOBOLD temperature switches of model TDD are used for economical measurement and monitoring of temperature. They are suited for applications where temperature must be monitored with a high degree of switching accuracy. A semiconductor, which outputs a digital signal to the evaluating electronics in 0.5 °C steps, serves as sensor element.

The current measured value is displayed on a 3-digit LED display. Two switch points, on-/off-switching delay and hysteresis are adjustable within the measuring range.

Applications

- Compressors
- Mechanical engineering
- Plant engineering
- Pumps

Accessories: Electrical connection

Description	Model
M12x1 box with terminal	ZUB-KAB-12D500
M12x1 box with 2 m cable	ZUB-KAB-12K002
M12x1 box with Quickon plug	ZUB-KAB-12Q000

Technical Details

Housing cover:	stainless steel 1.4305
Housing:	stainless steel 1.4404
Sensor :	stainless steel 1.4401 / 1.4404
Connection compact version:	G ½ or G ¾ male thread option: ½" NPT or ¾" NPT
Connection separately mounted version:	Sensor: 100 mm, 6 mm Cable: 2.5 m PTFE with M12x1 plug Housing: M25x1.5 with counter nut
Principle of measurement:	semiconductor
Display:	3-digit LED, digit-height: 7 mm
Resolution:	0.5 (up to 99.9 °C) 1 °C (from 100 °C)
Max. temperature of measured medium:	-20 ... +120 °C (compact version) -50 ... +125 °C (separate version)
Max. ambient temp.:	-20 ... +50 °C
Max. pressure:	80 bar
Power supply:	24 V _{DC} ±20 %
Power consumption:	40 mA (TDA-...L3M); approx. 70 mA (TDA-...P3M, TDA-...N3M) (without switching current output)
Electrical connection:	plug M12x1
Switching output:	semiconductor; PNP or NPN (factory set), max. 300 mA, short-circuit proof
Contact function:	N/O / N/C, window, adjustable
Switching point adjustment:	adjustable via 2 keys
Switching display:	adjustable
Switch. state display:	1 (2) LED
Hysteresis:	adjustable via 2 keys
ON/OFF-switching delay:	0.5 ... 99.5 s (separately adjustable)
Measuring cycle:	0.5 s
Response time:	t _{50/90} : approx. 13/30 s
Accuracy (sensor):	±0.5 °C (between -10 ... +85 °C) ±2 °C (between +85 ... 125 °C and -50 ... -10 °C)
Protection:	IP 65

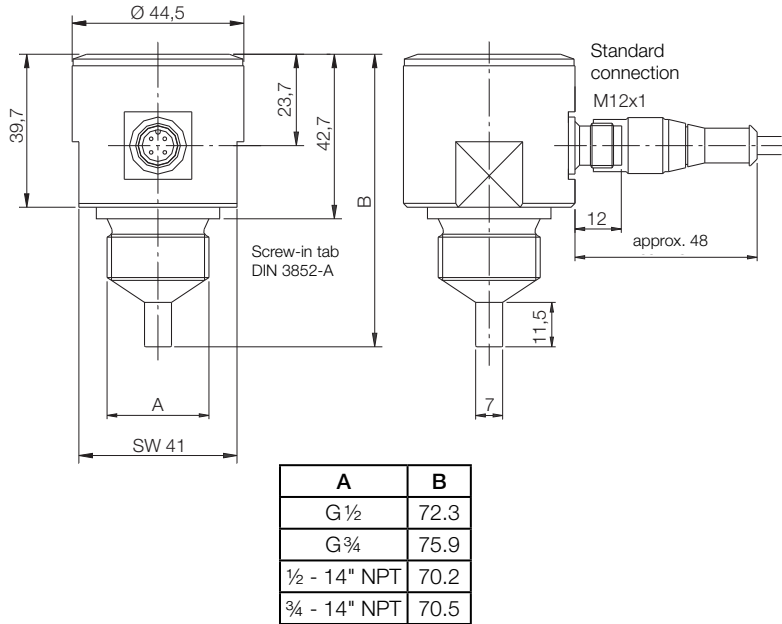
Order Details (Example: TDD-153 R4H2 00)

Model				Version	Sensor length*
Switching output 1x PNP	Switching output 1x NPN	Switching output 2x PNP	Switching output 2x NPN		
TDD-153	TDD-353	TDD-553	TDD-753	R4H2 = G ½; -20 ... +120 °C R5H2 = G ¾; -20 ... +120 °C N4H2 = ½" NPT; -20 ... +120 °C N5H2 = ¾" NPT; -20 ... +120 °C D6H3 = separate version; smooth sensor; -50 ... +125 °C	00 = short 10 = 100 mm 20 = 200 mm

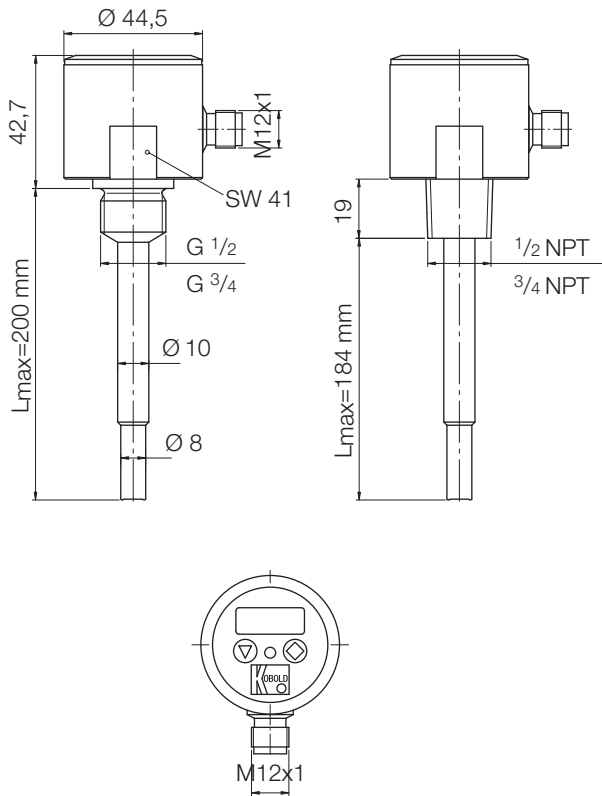
* Maximum length for NPT screw thread is 184 mm instead of 200 m.

Dimensions:

Compact version, short



Compact version, long



Separately mounted version

