

Electronic Temperature Switch



- Measuring/switching range: -50 to +125 °C
- Pressure: max. 80 bar
- Accuracy: ± 0.5 °C (for -10 to +85 °C)
- Housing material: St. Steel
- Connection: G 1/2, G 3/4, 1/2 NPT, 3/4 NPT or M25x1.5



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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. Switch point 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: St. Steel 1.4305
 Housing: St. Steel 1.4404(compact version)
 St. Steel 1.4305(separate version)

Connection compact version:
 G 1/2 or G 3/4 male thread
 St. Steel 1.4404
 Option: 1/2 NPT or 3/4 NPT

Connection separate version:
 Sensor: 100 mm, 6 mm
 Cable: 2.5 m PTFE with M12x1 plug
 Housing: M25x1 with counter nut
 Principle of measurement: Semiconductor
 Display: 3-digit LED, digit-height: 7 mm
 Resolution: 0.5°C up to 99.9°C
 1°C (100°C onwards)

Max. temperature of measured medium: -20...+120°C (compact version)
 -50...+125°C (separate version)

Max. ambient temperature: -20...+50°C

Max. Pressure: 80 bar

Power Supply: 24 V_{DC} ± 20%

Current intake: approx 40 mA
 (without switching output)

Electrical Connection: Plug M12x1 or
 PVC cable (cable t_{max}: 90°C)

Switching Output: Semiconductor; PNP or NPN
 (factory set),
 max. 300 mA, short-circuit proof

Contact function: N/O / N/C, window, adjustable

Switch. point Adjustment: via 2 keys adjustable

Switching state Display: 1 LED

Hysteresis: via 2 keys adjustable

Meas. cycle: 0.5 sec.

Accuracy (sensor): ±0.5°C (between -10...+85°C)
 ±2°C (between -50...-10°C)
 ±2°C (between +85...125°C)

Protection Cat: IP 65

Order Codes (Example: TDD-153 R4H2 00) Please specify cable length with order!

Electrical Connection	Model		Version	Sensor length*
	Switching output PNP	Switching output NPN		
Plug M12x1	TDD-153	TDD-353	R4H2 = G 1/2; -20...+120°C R5H2 = G 3/4; -20...+120°C N4H2 = 1/2 NPT; -20...+120°C N5H2 = 3/4 NPT; -20...+120°C D6H3 = separate version; smooth sensor; -50...+125°C	00=short
1 m PVC-cable	TDD-150	TDD-350		10=100 mm
Special cable length	TDD-159	TDD-359		20=200 mm

*Separate version only with 100 mm sensor; maximum length at NPT-threads is 184 mm instead 200 mm



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. Switch point and hysteresis are adjustable within the measuring range.

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- Plant engineering
- Pumps

Accessories: Electrical connection

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M12x1 box with Quickon-plug	ZUB-KAB-12Q000

Technical Details

Housing cover: St. Steel 1.4305
 Housing: St. Steel 1.4404
 St. Steel 1.4305 (separate version)
 Connection compact version:
 G 1/2 or G 3/4 male thread
 St. Steel 1.4404
 Option: 1/2 NPT or 3/4 NPT
 Connection separate version:
 Sensor: 100 mm, 6 mm, St. Steel 1.4404
 Cable: 2.5 m PTFE with M12x1 plug
 Housing: M25x1 with counter nut
 Principle of measurement: Semiconductor
 Display: 8-digit LED-chain
 Resolution: 5°C
 Max. temperature of measured medium: -20...+120°C (compact version)
 -50...+125°C (separate version)
 Max. ambient temperature: -20...+50°C
 Max. Pressure: 80 bar
 Power Supply: 24 V_{DC} ± 20%
 Current intake: approx 40 mA (without switching output)
 Electrical Connection: Plug M12x1 or PVC cable (cable t_{max}: 90°C)
 Switching Output: Semiconductor; PNP or NPN (factory set), max. 300 mA, short-circuit proof
 Contact function: N/O / N/C, window, adjustable
 Switch. point Adjustment: via 2 keys adjustable
 Switching display: adjustable
 Switching state Display: blinkende LED of LED-chain
 Hysteresis: via 2 keys adjustable
 Meas. cycle: 0.5 sec.
 Accuracy (sensor): ± 0.5°C (between -10...+85°C)
 ± 2°C (between -50...-10°C)
 ± 2°C (between +85...125°C)
 Protection Cat: IP 65

Order Codes (Example: TDD-253 R4 00 00) Please specify cable length with order!

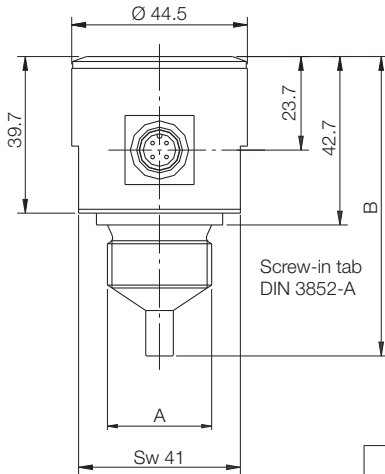
Electrical Connection	Model		Version	Measuring range*	Sensor length**
	Switching output PNP	Switching output NPN			
M12x1 plug	TDD-253	TDD-453	R4 = G 1/2 R5 = G 3/4 N4 = 1/2 NPT N5 = 3/4 NPT D6 = separate version; M25x1; 5 smooth sensor	00 = -35...0°C 20 = -15...+20°C 40 = 5...40°C 60 = 25...60°C 80 = 45...80°C 1H = 65...100°C H2 = 85...120°C	00 = short 10 = 100 mm 20 = 200 mm
1 m PVC-cable	TDD-250	TDD-450			
Special cable length	TDD-259	TDD-459			

* Measuring range -35...0°C only for separate version

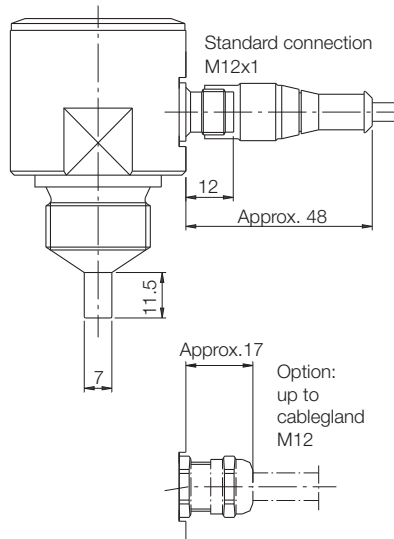
**Separate version only with 100 mm sensor; maximum length at NPT-threads is 184 mm instead 200 mm

Dimensions

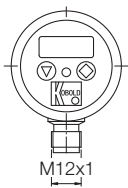
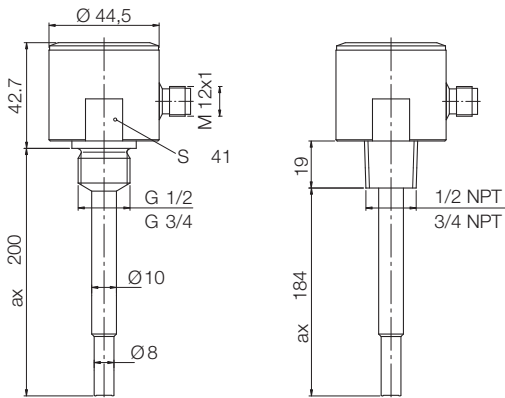
Separate version short



A	B
G 1/2	72,3
G 3/4	75,9
1/2-14 NPT	70,2
3/4-14 NPT	70,5



Compact version long



Separate version

