

## TDD - Digital Temperature Sensor



### Benefits and Features

- Measuring Range -58 to 250°F
- Scalable Output Transmitter
- Large Easy-to-Read LED Display
- All Stainless Steel Construction
- Rugged and Reliable
- Remote Sensor Available

### General Description

The TDD series digital temperature switch integrates the latest solid state sensing technology into a very versatile, simple to operate package. Programming features include setpoint, reset point, window mode, dampening, switch logic and user selectable lockout code. The digital semiconductor sensing system and solid state transistor switch ensure an exceptionally long cycle life with virtually no calibration drift. These features along with the compact, robust stainless steel package make the TDD an ideal choice for OEM or industrial applications.

The TDD is available with the controller mounted directly onto the sensing probe or separated for mounting the probe remotely from the controller. Various probe lengths are available. The remote probe version has a smooth shank (no fitting) allowing the user to adjust the probe insertion depth by installing with a compression fitting sold as an accessory item.

### Specifications

**Switching Range:** Per-ordering Code

**Display Type:** 3-digit LED

**Display**

**Resolution:**  $\pm 0.5^\circ$  between  $-10^\circ\text{F}$  and  $+100^\circ\text{F}$ ,  $\pm 1^\circ\text{F}$  above  $100^\circ\text{F}$

**Switch Status**

**Indicator:** Single red LED, on when temperature is above setpoint

**Accuracy:**

14°F to 185°F:  $\pm 1^\circ\text{F}$

185 to 250°F:  $\pm 3.6^\circ\text{F}$

-58°F to 14°F:  $\pm 3.6^\circ\text{F}$

**Max. Pressure:** 1150 PSIG

**Ambient Temp.**

**Range:**  $-4^\circ\text{F}$  to  $120^\circ\text{F}$

**Sensor Element:** Semi-conductor

**Housing and Probe**

**Material:** 316L Stainless Steel

**Electrical Data**

**Power:** 24 VDC  $\pm 20\%$

**Switch Type:** Transistor NPN or PNP based on model number

**Switch Rating:** 300 mA Max. short circuit protected

**Switch Logic:** User programmable N/O or N/C

**Sample Rate:** 0.5 Sec./sample

**Dampening:** Programmable averaging over 2, 4, 8, 16, 32, or 64 samples

**Electrical Connection:** 4-Pin Micro-DC male plug or PVC jacketed cable

**Electrical Protection:** NEMA 4/IP 65

**Cable for Remote Probe:** Teflon 8ft. std.

**Programmable Functions**

- Lockout Code
- Setpoint
- Switching Hysteresis
- Window Switching
- Switch Logic
- Dampening

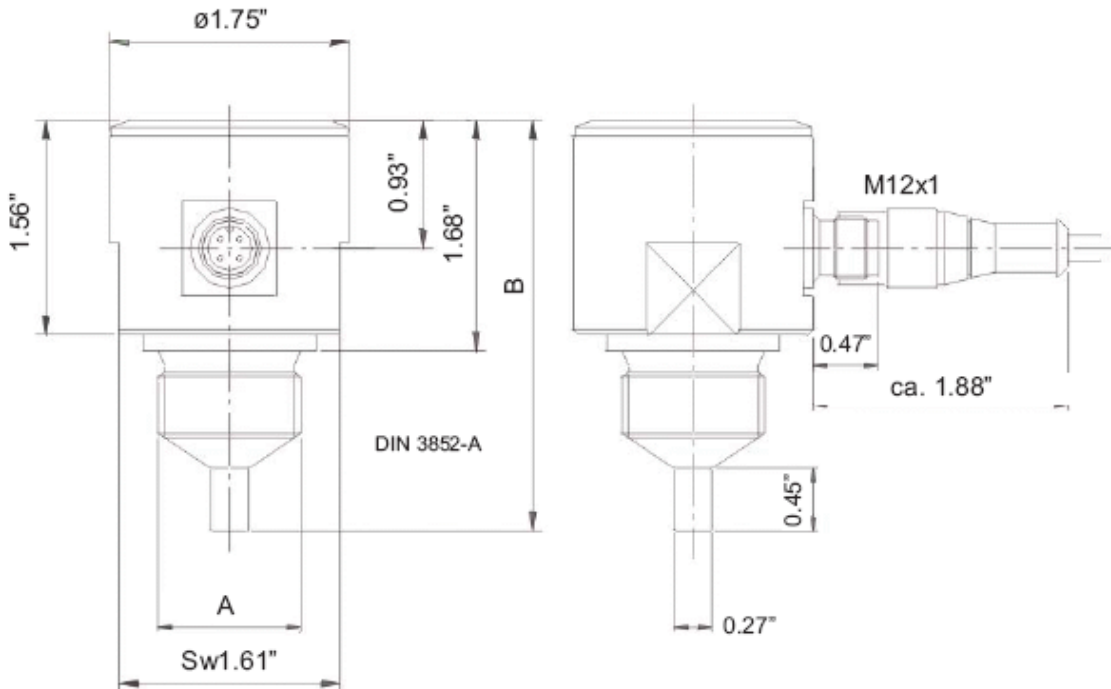
# TDD - Digital Temperature Sensor

## Ordering Information

TDD Series Ordering codes	
<b>TDD</b>	= Electronic Temperature Switch
<b>153</b>	= PNP Transistor Switch <b>Output Type</b>
<b>353</b>	= NPN Transistor Switch
<b>N4</b>	= 1/2" NPT <b>Process Connection</b>
<b>N5</b>	= 3/4" NPT
<b>D6</b>	= Remote Probe Smooth Shank 8ft. Cable w/ Micro-DC Plug
<b>F2</b>	= 0 to 250°F <b>Range</b>
<b>F3</b>	= -58 to 250°F (Available Only with Fitting D6)
<b>H2</b>	= -20 to 120°C
<b>H3</b>	= -50 to 125°C (Available Only with Fitting D6)
<b>0</b>	= 12 mm (1/2") (Not Available with Fitting D6) <b>Probe Length</b>
<b>1</b>	= 100 mm (4")
<b>2</b>	= 185 mm (7.25") (Not Available with Fitting D6)
<b>L3M</b>	= Micro-DC plug, 4-Pin male <b>Electrical Connection</b>
<b>L3P</b>	= 3 Ft. PVC cable
<b>L3S</b>	= Custom length PVC cable
<b>EC</b>	= Extended Cable Length on Process Connection D6 <b>Options</b>
(*Specify desired Cable Length When Ordering)	
TDD - 153 - N4 - F2 - 0 - L3M - EC Example TDD ordering code	
Accessories	
Part# 807.037 - Mating 4-Pin Micro-DC plug with 6 ft. cable.	
Part# TD-FTFHG1/4SS - 6 mm 316 SS Bore Through Compression Fitting x 1/4" NPT for Remote Probe Installation.	
Part# TSR-FTFHG1/2SS - 6 mm 316 SS Bore Through Compression Fitting x 1/2" NPT for Remote Probe Installation.	

## Dimensions

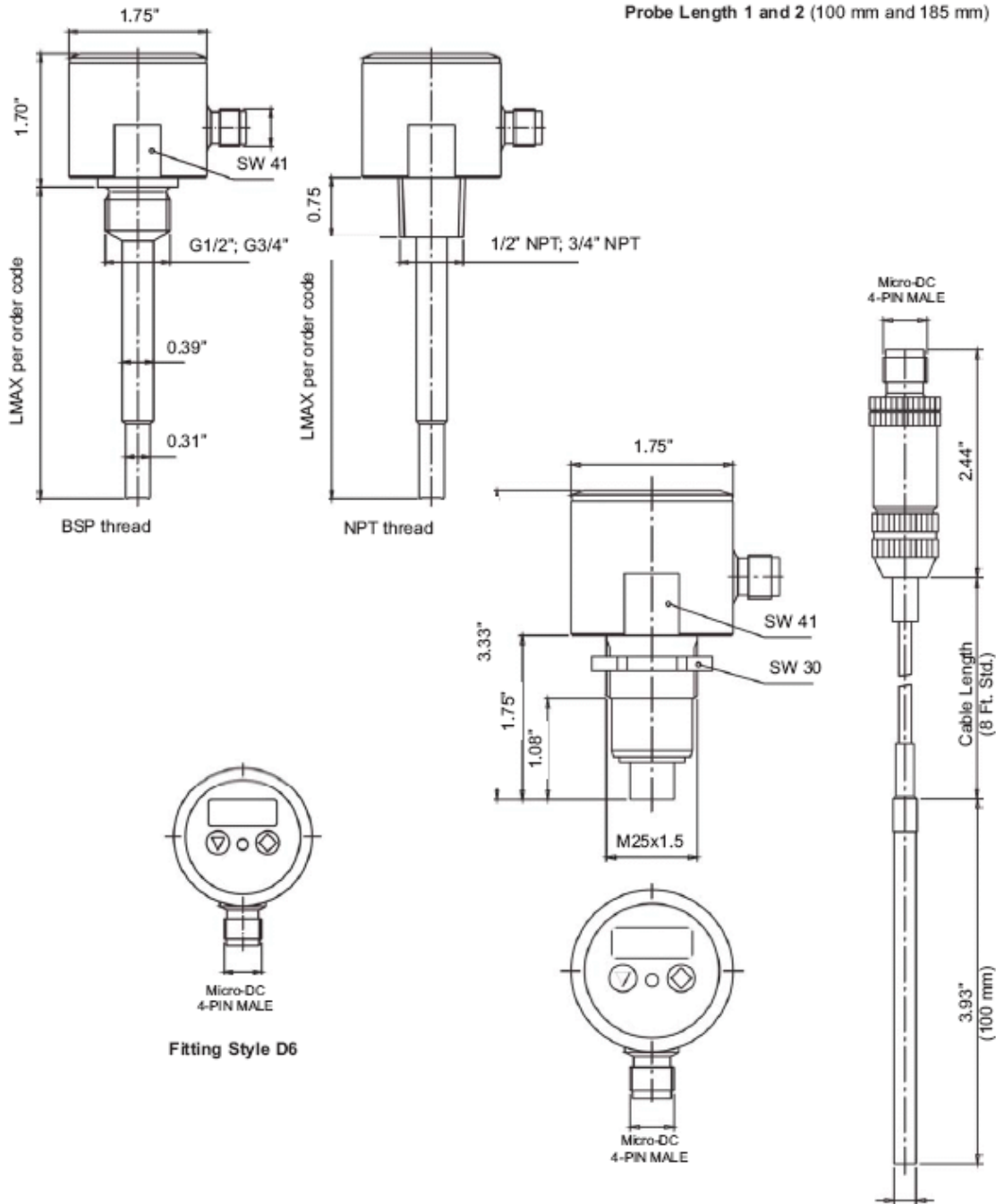
Probe Length 0 (12mm)



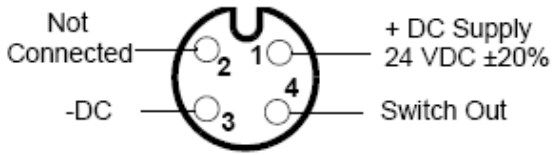
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## ← Dimensions

Probe Length 1 and 2 (100 mm and 185 mm)



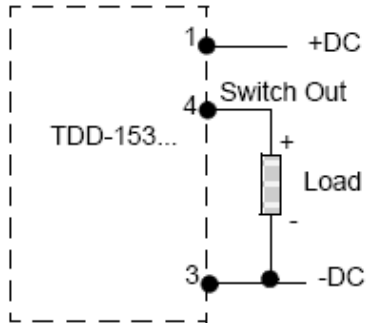
# Electrical Connection



### Optional Mating Connector

- Brown = 1 = +DC
- White = 2 = Not Connected
- Blue = 3 = -DC
- Black = 4 = Switch Out

### PNP Switch Version



### NPN Switch Version

