



TTS-S

**CUL, UL and CSFM Listed, FM Approved, and NYMEA Accepted**  
2 1/2" DIA x 17 1/2"L  
(63,5mm DIA x 445mm L)

**Ordering Information**

Model Number	Stock Number
TTS-S (steel)	1010040
TTS-W (wood)	1010041

Accessories	
1" Flange	5020012
Buttress Nut	5020105
Gasket	5330035

The Model TTS is a water tank temperature supervisory switch preset to give a low temperature signal at 40°F/4,5°C and a high temperature signal at 140°F/60°C (±5°F/3°C). It is UL Listed and FM Approved. A bi-metal thermostat is used for low temperature sensing and a bi-metal thermostat for high temperature sensing. A diode is used in this unit as a testing aid. When the polarity of DC current is reversed at the feed wires to a TTS, the diode in the circuit prevents the flow of current, proving the absence of a short circuit fault in the wiring or the device itself.

**Testing**

To test for a short or open in the TTS, connect an ohmmeter across the white and black TTS leads. With the meter connected positive to white and negative to black, the meter will read continuity (about 1 meg ohm). With the meter connected reverse polarity, the meter will read open. If using the diode tester setting on the meter, the meter will read .5 observing polarity and open with reverse polarity. To test the thermostat, the device must be exposed to temperatures of 40°F and 140°F. The appropriate thermostat will open creating an open circuit regardless of polarity.

**Wiring**

The TTS is normally closed device that opens when the probe is exposed to the operating temperature of the thermostats. The device is polarity sensitive. The positive leg of the initiating device circuit must

be connected to the white wire lead. The negative leg of the initiating device circuit must be connected to the black wire lead. If the TTS is the last or only device on the initiating circuit, the EOLR must be wired in series with the TTS. It can be wired in series with either the black or white wire.

**Contacts:** .15 Amp at 115 VDC

The TTS, tank temperature switch is supplied with a one inch pipe thread for steel tanks (Model TTS-S) or with a buttress thread for wood tanks (Model TTS-W).

A buttress thread nut and gasket are available for use with the TTS-W for installations where the inside of the tank is accessible and it is not convenient to weld a flange on the tank.

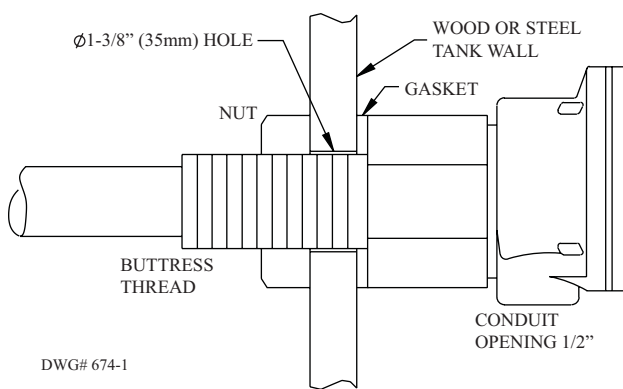
The nut and gasket can also be used on a wood tank, which is not sound enough to hold a thread (see Fig. 1). Locate the switch at a point 24" (60cm) below the required water level of the tank.

For steel tanks, weld in a No. 282-1 pipe flange or drill and tap tank to receive the one inch pipe thread of the bushing (see Fig. 2).

For wood tanks, drill a 1 3/16" (30mm) hole in the center of a stave and thread the bushing into the tank allowing the buttress bushing to cut its own thread (see Fig. 3).

**Installation**

**Fig. 1 TTS-W (Wood or Steel)**



**Fig. 2 TTS-S (Steel)**

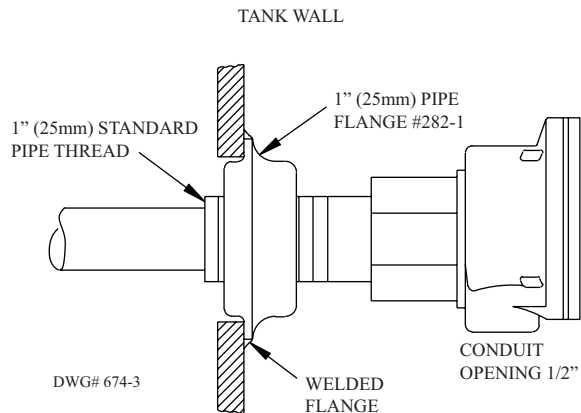


Fig. 3 TTS-W (Wood)

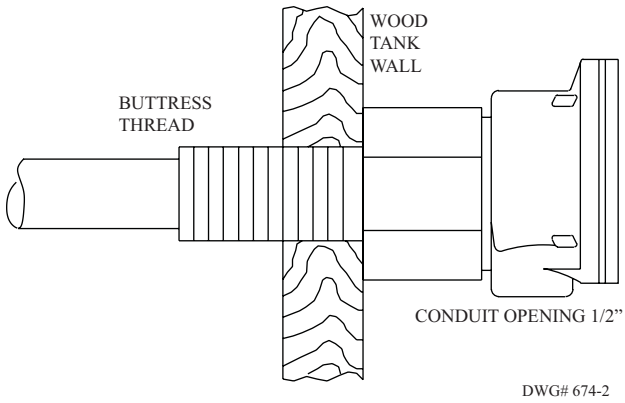
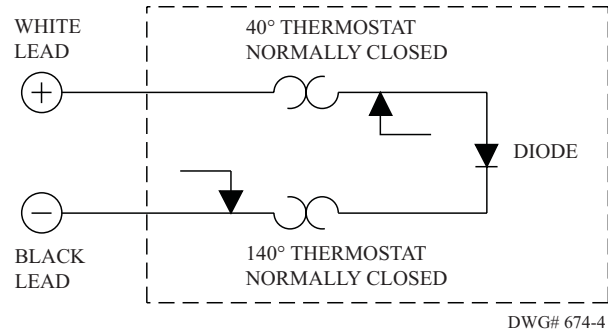
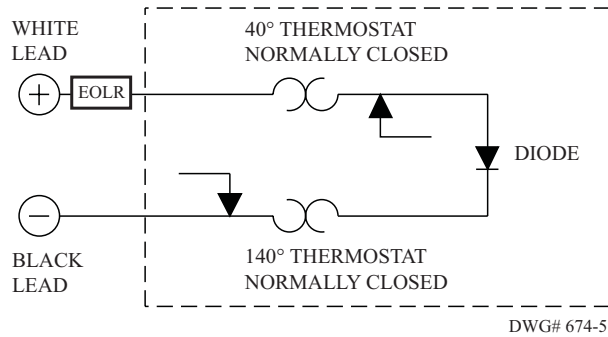


Fig. 4 TTS-S Simplified Schematic



Important: Observe lead polarity for use in normally closed circuit.



Important: Observe lead polarity for use in normally open circuit.