

Direct Mount Temperature Switch – Model TSB



Features

- Limit Switch for Critical Temperature
- Activates Indicator Lights, Alarms or Shutdown Equipment
- SPDT Snap-Acting Switch
- Fits Most Engine Applications
- Time-Proven SWICHGAGE® Construction
- Easy Wiring Terminal Block
- Steel Housing Specially Coated to Resist Corrosion
- Trip Point is Factory Preset to Your Specifications

* Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

Description

The TSB switch is a direct mount switch for temperature sensing. It has one limit contact that can be used to activate an alarm, actuate indicator lights or shut down equipment.

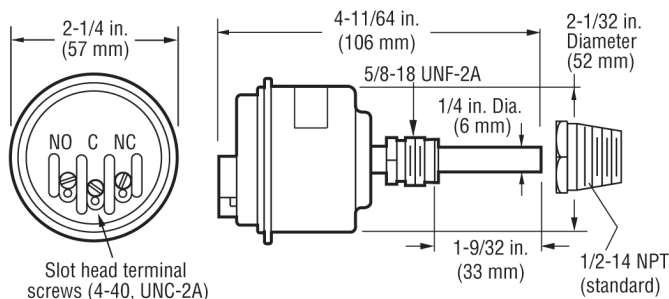
The construction of this instrument is the same as our time-proven SWICHGAGE®. A precision machined brass mounting plate and port captures a high quality stamped beryllium copper diaphragm. The single-pole, double-throw (SPDT) snap switch is operated directly from the diaphragm, for quick acting and positive switching. Trip point is factory preset according to your specifications.

Housing is weather sealed to prevent entry of moisture, dust, etc. A glass-filled nylon terminal block with quick-screw terminal connections gives the TSB switch a real advantage in industrial engine applications. The TSB is ideal when reading is not desired, but temperature is critical to operational efficiency. Intended for use in general purpose nonclassified areas.

Applications

- Engine Coolant
- Irrigation Systems
- Compressors
- Oil Field Systems
- Engine Lubrication
- Construction equipment
- Mobile Equipment
- Marine Engines
- Generators
- Electric Motors

Dimensions



Specifications

Housing: Plated steel.
Connections: Popular NPT and metric (specify).
Diaphragm: Formed beryllium copper (heat treated).
Sensing Bulb: Copper.
Terminal Block: Three # 4-40 screws.

Accuracy	Switch Trip Point Range 150–295°F (66–146°C)
Trip Point	±3°F (1.7°C)
Switch Reset Differential	± 15°F (9°C)
Repeatability	±3°F (1.7°C)

Contact Rating: SPDT 3 A @ 30 VDC inductive.

Maximum Temperature: 325°F (163°C).

Factory Trip Point Setting: 210°F (99°C) Rising. Other trip point setting must be specified at time of order (see How to Order on reverse side).

Contact: Operates on rising or falling temperature (specify).

Shipping Weight: 10 oz (0.31 kg).

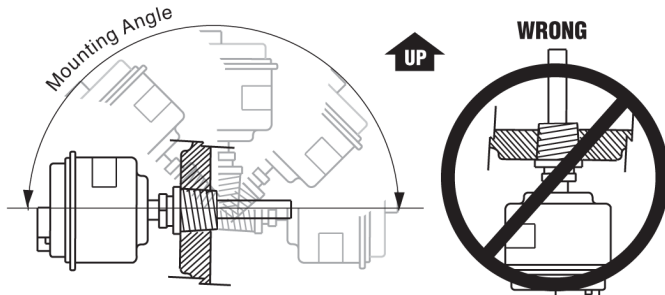
Shipping Dimensions: 4-3/4 x 4-3/4 x 2-5/8 in. (121 x 121 x 67 mm).

■ NOTE: No customer replacement parts.

Installation Instructions

Mounting

1. The TSB can be mounted in horizontal or vertical angles (do not mount the switch facing down).



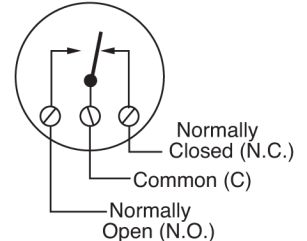
2. Install the TSB switch in the engine water jacket location recommended by the engine manufacturer.
3. Install the appropriate adapter nut into the engine water jacket. Use thread sealant such as Teflon® tape as necessary.
4. Insert the sensing bulb through the adapter nut. The sensing bulb must be fully immersed in coolant/liquid flow so liquid flows across the sensing bulb.
5. Tighten the 5/8-18 UNF-2A compression nut to complete a liquid tight seal.

Wiring



CAUTION: DISCONNECT Electrical Power before wiring.

1. See wiring schematic on right. Switch contacts are shown with no temperature applied to the TSB switch.
 2. A spade (forked) terminal is recommended for all TSB switch connections.
 3. Complete the wiring operation making sure the voltage and current requirements are within the TSB switch electrical rating.
- Teflon is a trademark of Dupont.



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