

Stainless Steel Thermistor Probe TSSP-1TM

Soil, Surface, Liquid Temperature

DATA SHEET

FEATURE SUMMARY

- Long-term stability
- IP68 waterproof rating
- Swaged stainless steel
- Soil, liquid, or surface temperature
- 10k ohm @ 25°C
- Designed for freeze-thaw thermal cycles
- Curve-matched for +/- 0.1°C interchangeability
- Made in USA.

DESCRIPTION

Stainless Steel Thermistor Probe TSSP-1TM is a precision NTC thermistor housed in a durable package.

The thermistor element is double encased. It is doublepotted and tightly swaged (formed) within a stainless steel probe. The swaging forms a liquid-tight seal around the cable, ensuring both integrity in harsh freeze-thaw environments as well as excellent strain relief.

TSSP-1 is suitable for a wide range of temperature measurement applications, including:

- Soil
- Liquid submersion
- Gasses
- HVAC
- Refrigeration

In addition, when used with Dyacon Control Modules, the temperature value is included in weather reports and can be used to trigger text message alarms.



KEY FEATURES

Construction: **TSSP-1** is double potted with thermally conductive epoxy and swaged in a stainless steel probe. The swaged enclosure increases the cable strain relief and sensor sealing. The sensor is designed to neither crack nor come loose from the stainless steel tip, even in high temperature cycling environments.

Interchangeability: An interchangeability value of 0.1°C ensures that **TSSP-1** thermistors are field replaceable without further calibration.

Installation: Once **TSSP-1** is installed in a Dyacon Control Module, the user can simply enable the thermistor configuration through the menu, and probe measurements will be included in the condition reports.

THERMISTOR SPECIFICATIONS

| | |
|------------------------------|---|
| Resistance | 10k ohms @ 25°C |
| Interchangeability Tolerance | +/- 0.1°C (within 0°C to 70°C / 32°F to 158°F) |
| Measurement Range | -40°C to 105°C (-40°F to 220°F) |
| Storage Temperature | -40°C to 105°C (-40°F to 220°F) |
| Dissipation Constant | 2 mW/°C |
| Time Constant | 8 s, still air |

MECHANICAL FEATURES

| | |
|--------------------------------|--|
| Sealed | IP68 |
| Cable to Thermistor Connection | Thermistor leads welded to cable |
| Submersion Depth | >2 m (>6 ft) |
| Cable Length | 6.1 m (20 ft) |
| Wire | 22 AWG, 7 x 30, tin plated, PVC |
| Cable Jacket | PVC, gray |
| Cable Diameter | 3.8 mm (0.15") |
| Probe Dimensions | 4.8 mm x 38.1 mm (0.188" x 1.5") |
| Weight | 100 g (4 oz) |
| Probe Materials | Double potted with thermally conductive epoxy Swaged in 305 stainless steel probe |



Image 1: Approximately full scale.