

## Thermistor Temperature Sensors

Argus TN series Thermistor temperatures sensors offer high stability, accuracy, and resolution for a variety of temperature sensing applications.



### Applications



TN sensors are used alone and in Argus Temperature sensor modules and assemblies. They are suitable for use in climate control, heating systems, nutrient control, irrigation, and direct temperature sensing in a variety of media.

The numbers in the part names indicate the wire lengths in feet.

### Alternatives

**SEN-TN21/HM2:** Recommended for direct soil, liquid immersion, and other high moisture applications.

**SEN-TN21/S:** Includes a heat reflective suspended enclosure for passive air temp measurement.

**SEN-AEFT/C:** Uses TN sensors in a fan aspirated suspended enclosure for air temperature measurement.

**SEN-TNDW/C:** Includes a dry well and thermo grease fitting for pipe temperature measurement.

A wide range of other application-specific temperature sensors including thermocouples and RTDs can also be connected to the Argus system.

### Features

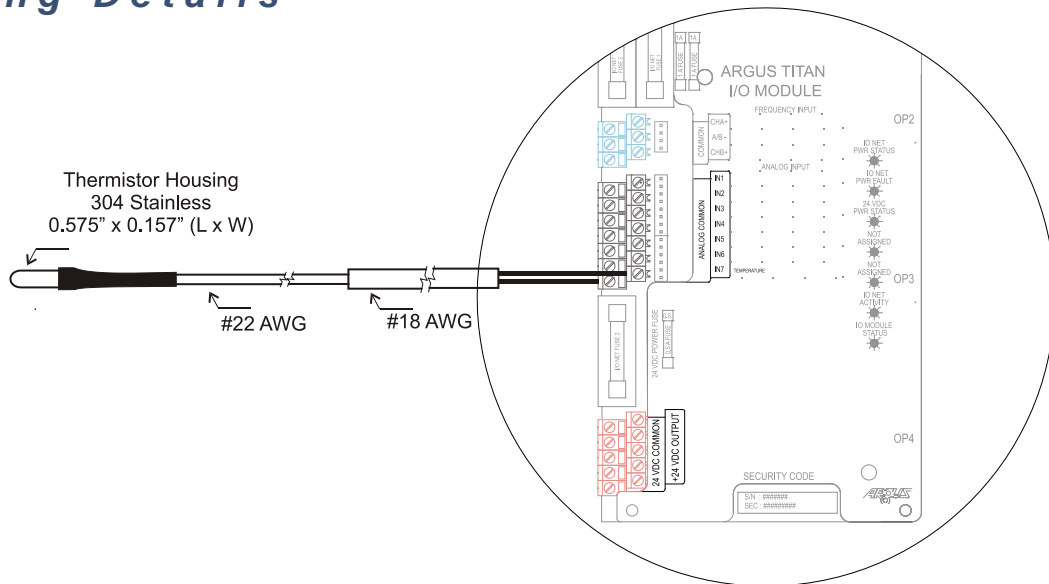
- **Accuracy** – Temperature measurement over an extensive range.
- **Interchangeability** – Thermistors are matched to a standardized resistance/temperature curve to permit interchangeability without requiring calibration.
- **Multi-Purpose** – TN Temperature sensors are used for a variety of temperature sensing applications, including pipe, soil, and air temperature.
- **Minimal Signal Degradation** – TN Sensors are minimally affected by wire resistance. Consequently, accurate measurements can be obtained from sensors located relatively long distances from the input module.

## Specifications

<b>Thermistor Type</b>	NTC (Negative Temperature Coefficient)
<b>Resistance</b>	3,000 Ohms @ 25°C Fenwal Unicurve (UUA Series)
<b>Accuracy</b>	+/-0.2°C over the range 0°C to 70°C +/-0.5°C over the range -50°C to 150°C (Accuracy degrades by 0.1°C for every 1000ft of 18 AWG field wire used)
<b>Range Supported in Software</b>	-50°C to 150°C
<b>Dissipation Constant</b>	<b>Still Air:</b> 1.0mW/°C <b>Moving Air Stream:</b> 1.7mW/°C (for example in aspirated housing) <b>Immersed in Liquid:</b> 8.0mW/°C
<b>Thermistor Housing</b>	<b>Construction:</b> 304 stainless steel <b>Dimensions:</b> 0.575" x 0.157" (length x diameter)
<b>Conductors</b>	<b>TN2:</b> 2 ft. of 22 AWG leads (heat shrink tubing included for splicing to field wiring) <b>TN21/66/100:</b> pre-spliced to 22 AWG stranded sensor wire (21', 66', 100', respectively)
<b>Recommended Field Wire</b>	2-conductor, 18 AWG UTP
<b>Sensor Compensation</b>	Type A (3K) is used for Argus, while Type G (10K) is used for Convirion.
<b>Maximum Temperature Rating</b>	+80°C

\* Dissipation constants are usually not required when connected to Titan I/O Modules due to short excitation times.

## Wiring Details



Typical wiring example. For installation, refer to the supplied wiring diagrams and instructions.

TYPICAL WIRING CONNECTION TO AN ARGUS I/O MODULE

## Additional Information

For more information, please contact Argus.

