

## TF115-NEMA 4X Raintight Thermostat

### Installation & Operation Instructions



**WARNING.** To prevent overheating or fire, use this control as an operating or regulating thermostat. ALWAYS USE A BACKUP CONTROL OR ALARM if a control failure could cause the controlled appliance to overheat or could cause a fire.

Where thermostat is capable of cycling directly between heating and cooling loads, failure to provide a load transfer switch will result in thermostat failure.

Do not install, use or operate if product appears damaged, the enclosure is cracked or broken or if the sensor has been bent, crimped or is dirty.

#### Appropriate Application

This thermostat has been tested by CSA and Underwriters Laboratories Inc. (UL), meets the requirements for NEMA 4X equipment and is suitable for use under the National Electrical Code (NEC), Article 547-4, when used with appropriate watertight connectors (not included).

#### Installation



**WARNING.** To avoid electrical shock or damage to equipment, disconnect all power before installing or servicing.

To avoid potential fire and/or explosion, do not use in potentially flammable or explosive atmospheres.

Installation must be made by a trained, qualified service person in accordance with the National Electrical Code (NEC) and all applicable local codes and ordinances. Installation should meet all applicable national, state and local codes. Refer to the appropriate wiring diagram included. Locate the thermostat (Local sensing models) or sensing bulb (remote sensing models) for optimum temperature sensing of the controlled space. Thermostat operation will be affected by unusual heat or cold, such as direct sunlight, near windows or doors or on outside walls.

All fittings and materials used for the installation should be approved, suitable and installed properly for the intended application. For water tightness, the cord seal or conduit hub should be UL listed and be marked 4X. The conduit hub is to be tightened onto the conduit before installing in the enclosure.

Where applicable, remove knockout(s) by impacting near the inside edge of the knockout to be removed. **IMPORTANT: Do not impact, dent or use the sensor for support. This will cause calibration and/or thermostat failure.**



**WARNING.** READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS THERMOSTAT. Failure to observe safety information and comply with instructions could result in PERSONAL INJURY, DEATH AND/OR PROPERTY DAMAGE.

Retain these instructions for future reference. This product, when installed, will be part of an engineered system whose specifications and performance characteristics are not designed or controlled by Sunne Controls. You must review your application and national and local codes to assure that your installation will be functional and safe.

Even though this thermostat is sealed, water or dust could enter through improperly sealed wiring. A drip loop should be provided to prevent water or other liquids from entering the thermostat housing. The cord or conduit connections to the enclosure must be water and dust tight. The cover must be tightened securely to compress the gasket and provide a watertight seal. Use only screws provided. Do not overtighten.

Maximum sensing element withstand temperature is 35°F (20°C) above the highest temperature setting. Maximum temperature for the plastic enclosure is 140°F (60°C).



**CAUTION.** For use in wet or humid environments or where water tightness is required, failure to use suitable watertight connections and suitable drip loop could allow water to enter the enclosure resulting in thermostat failure.

Use copper wire only. Insulate or wire-nut all unused leads.

Use the grounding provisions provided for connection to the line ground and equipment ground wire.

#### Operation & Check-out

Allow one hour or necessary amount of time for the thermostat and system to stabilize for normal operation. This thermostat is factory calibrated and requires no correction on site.

- Disconnect power.
- Place the heat/cool selector switch, if applicable, in the heat position.
- Adjust the thermostat set point to at least 10°F (5°C) below the temperature of the controlled space.
- Restore power.
- Slowly adjust the thermostat knob to raise the set point. When the set point reaches the approximate temperature of the controlled space, the heating equipment should start.

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## To Check Operation of Cooling Systems

- Disconnect power.
- Place the heat/cool selector switch, if applicable, in the cool position.
- Adjust the thermostat set point to at least 10°F (5°C) above the temperature of the controlled space.
- Restore power.
- Slowly adjust the thermostat knob to lower the set point. When the set point reaches the approximate temperature of the controlled space, the cooling equipment should start.

