



Room Relative Humidity and Relative Humidity/ Temperature Sensors



Description

Staefa TALON™ Room Relative-Humidity (RH) and Relative-Humidity-and-Temperature (RH/T) Sensors offer a wide range of features and functions to deliver exceptional occupant comfort – even in demanding environments. Their attractive, compact design results in an attractive, inconspicuous installation. A styled ventilation ring allows substantial airflow through the cover for fast measurement response and superior control.

The range of models includes **humidity sensing-only**, **humidity and temperature sensing-only**, and **full-featured humidity and temperature sensing**. Full-featured models include display, setpoint adjustment, and occupant override capability.

All units are calibrated using a National Institute of Standards and Technology (NIST) standard and incorporate a humidity-sensing element made of a bulk-resistive polymer. The combination temperature/humidity units use a transmitter to send a 0-10 volt signal for both temperature and humidity. These sensors are available in 5% or 2% RH accuracy variations.

All sensors have a RJ-11 port located at the bottom of the sensor for connection to the *EasyCal Plus™* Humidity Calibrator. This calibrator can be connected to verify humidity sensor operation and perform a one-point offset adjustment if necessary.

Features

Full-Featured RH/T Combination Model

The full-featured RH/T model offers a broad range of functions specifically designed for use with the Raptor controller, including:

- **Digital Temperature Display:** Provides an easy-to-read, two-line, alphanumeric LCD that simultaneously displays room temperature in degrees Fahrenheit or Celsius and relative humidity in percent RH.

- **Digital temperature setpoint adjustment:** The sensor keypad allows digital temperature setpoint adjustments in one-degree increments.
- **Bypass button:** The flush mounted bypass button allows an occupant to override an unoccupied mode by temporarily extending the occupied control mode for a predetermined time period as pre-programmed by the system operator.
- **Operating mode display:** Easy-to-read graphic symbols in the LCD indicate the controller's operating mode. A 'sun' icon indicates an occupied mode of system control while a 'moon' icon indicates an unoccupied mode.

Sensing-Only Models

Sensing-only models offer accurate measurement of humidity-only or humidity and temperature. They connect either to a Raptor or Predator Controller and provide excellent monitoring when room occupancy or mode override is not required.

Specifications – Humidity Element

Operating range	0 to 100% RH
Accuracy at 77°F (25°C) (element only)	±5% or ±2% RH over 20-95% RH including hysteresis, linearity, and repeatability
Operating temperature	32 to 122°F (0 to 50°C)
Temperature effect	Less than 0.06% per degree Farenheig (0.11% per degree Celsius)
Output signal-RH only units	4-20 mA DC, 0-100% linear, proportional
Output signal-RH/T units	0-10 V DC, 0-100% linear, proportional
Calibration requirements	Annually (field calibration using the EasyCal Plus)
Polarity Protection	Yes

Specifications – Temperature Element

(Combination humidity and temperature versions)

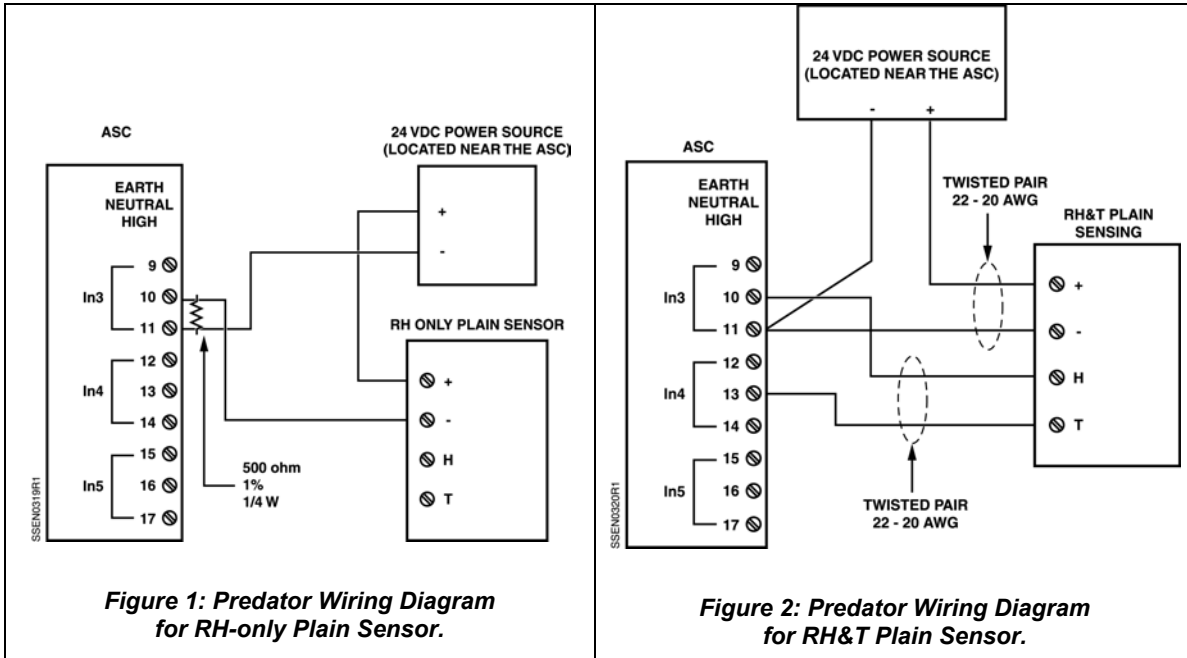
Operating range	32 to 122°F (0 to 50°C)
RTD Calibration Point	32 °F (0 °C)
Sensing Elements	1K Platinum RTD (temperature element only, bulk-polymer humidity element)
Output Signal	0-10 V DC, 32 to 122°F (0 to 50°C) linear, proportional
Setpoint adjustment range	73°F ± 10°F (23°C ± 10°C)
Calibration requirements	None required

Specifications

Installation	750 feet (229 m) max. cable length using 18 to 22 AWG twisted pair shielded cable (overall shielded cable for Full-Featured Units), NEC Class 2
Connections	Screw terminals
Cover dimensions	3-11/32" H × 2-1/2" W × 1-1/2" D (85 mm × 63 mm × 38 mm)
Color	White
Voltage requirement	18 to 35 Vdc

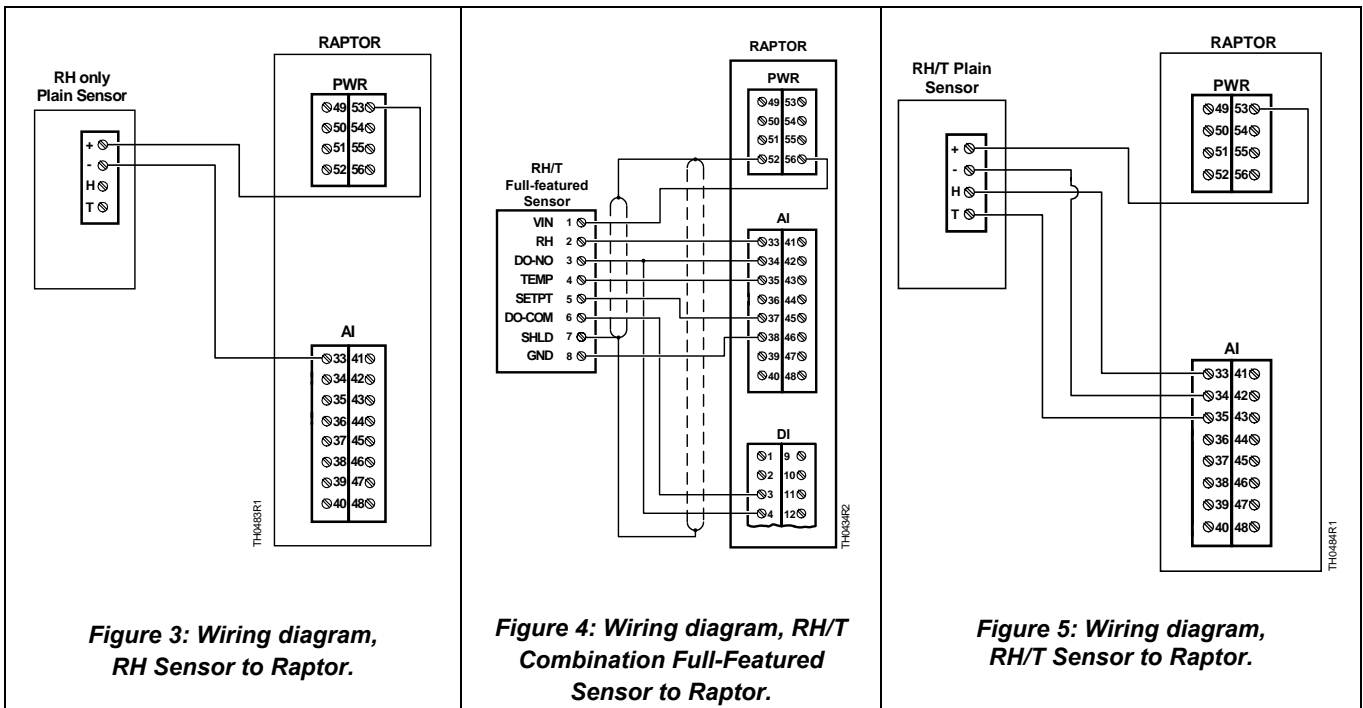
Wiring Diagrams

TALON RH and RH/T Plain Sensors – Wiring to Predator Controller



NOTE: The Predator does not support the RH/T combination full-featured sensor.

TALON RH, RH/T, and RH/T Full-Featured Sensors – Wiring to Raptor Controller



Ordering Information

Room Sensors

Description	Accuracy %	Features	Product Number
RH @ 5%	5	5% RH Sensing (blank cover)	587-190
RH @ 2%	2	2% RH Sensing (blank cover)	587-191
RH/T @ 5%	5	5% RH with Temperature Sensing (blank cover)	587-192
RH/T @ 2%	2	2% RH with Temperature Sensing (blank cover)	587-193
RH/T @ 2%	5	Full-Featured 5% RH Combination Sensor with display, setpoint adjust, and override capability	587-194 ¹
RH/T @ 2%	2	Full-Featured 2% Combination Sensor with display, setpoint adjust, and override capability	587-195 ¹

1. Sensor will display Fahrenheit or Celsius temperature. Full-featured models are for use with Raptor Controllers only.

Accessories

Description	Product Number
EasyCal Plus Humidity Calibrator	538-897
Sensor Backplate	544-781B
Double Adapter Base Kit	544-783B
Extender Ring Kit	544-785B
Non-Conduit Rough-In Kit	544-784

Notice: Information in this document is based on specifications believed correct at the time of publication. The right is reserved to make changes as design improvements are introduced.

Credits: *Staefa Control System, Raptor, Predator, and TALON* are trademarks of Siemens Building Technologies, Inc. Other products and company names herein may be the trademarks of their respective owners.



Siemens Building Technologies, Inc.
 HVAC Products
 1000 Deerfield Parkway
 Buffalo Grove, Illinois 60089
 Phone: 847-215-1000
www.staefa.com

Copyright 2001 by Siemens Building Technologies, Inc.

