



# HS-TH Series

Greenhouse/Horticulture Sensor



## Overview

The HS-TH Series Greenhouse/Horticulture sensor is designed for a greenhouse or indoor grow facility to monitor and allow control for optimum plant growing conditions.

Available in 2 models: Temperature & Humidity or Temperature, Humidity & Carbon Dioxide. The HS-TH Series utilizes a highly accurate and reliable dual-channel, nondispersive infrared (NDIR) sensor to monitor CO<sub>2</sub>, a precision thermistor to monitor temperature and, a thermoset polymer based capacitance sensor to measure humidity levels.

## Applications

- Greenhouse environmental monitoring and control
- Optimize plant growth and yield

## Features & Benefits

- Field replaceable sensor pods
- LCD for configuration and visual Indication
- Optional relays for alarm Indication.
- Nema 4X rated enclosure

## Model Selection

	HS-	T	H	X	W	X	X	X
Temperature Reading	= T							
2% Humidity Sensor	= H							
CO <sub>2</sub> Detection	X = None C = Yes							
Mounting	W = Wall Mount							
Enclosure	T = Transparent Cover (Viewable LCD) S = Solid Cover							
Output	C = 4-20 mA V = 0-5 or 0-10 VDC							
Relay	X = None 1 = 1 Relay 2 = 2 Relay							

## Product Specifications

Power Supply	24 Vac/dc $\pm 20\%$ (non-isolated half-wave rectified)
Consumption	Current: 120 mA max @ 24 Vdc, 220 mA max @ 24 Vac Voltage: 80 mA max @ 24 Vdc, 130 mA max @ 24 Vac
Protection Circuitry	Reverse voltage protected and overvoltage protected
Operating Conditions	-10 to 50°C (14 to 122°F), 5 to 95 %RH non-condensing
Storage Conditions	-30 to 60°C (-22 to 140°F)
Enclosure	IP65 (NEMA 4X)
Enclosure Dimensions	130mm W x 130mm H x 75mm D (5.12" x 5.12" x 2.95")
Wiring Connections	Screw terminal block (14 to 22 AWG)
Country of Origin	Canada

### LCD Display

Size	35mm W x 15mm H (1.4" x 0.6") alpha-numeric 2 line x 8 characters
Backlight	Enable or disable via menu or network

### Analog Outputs

Output Signals	4-20 mA active (sourcing) or 0-5 Vdc / 0-10 Vdc
Output Drive Capability	Current - 550 $\Omega$ maximum or Voltage - 5K $\Omega$ minimum

### Temperature Sensor

Type	NTC thermistor
Accuracy	$\pm 0.2^\circ\text{C}$ ( $\pm 0.4^\circ\text{F}$ )
Range	0 to 50°C (32 to 122°F)

### Relative Humidity Sensor

Type	Thermoset polymer based capacitive
Accuracy	$\pm 2$ %RH
Range	0 to 100 %RH
Hysteresis	$\pm 1.5$ %RH
Response Time	15 seconds typical
Stability	$\pm 1$ %RH typical @ 50 %RH in 5 years

### CO<sub>2</sub> (HS-THC model)

Measurement Type	Dual-channel, non-dispersive infrared (NDIR), diffusion sampling
Measurement Range	0 to 5000 ppm
Standard Accuracy	$\pm 50$ ppm +3% of reading
Pressure Dependence	<1% of reading / kPa
Response Time	2 minutes (T90)
Sensor Life Span	>10 years

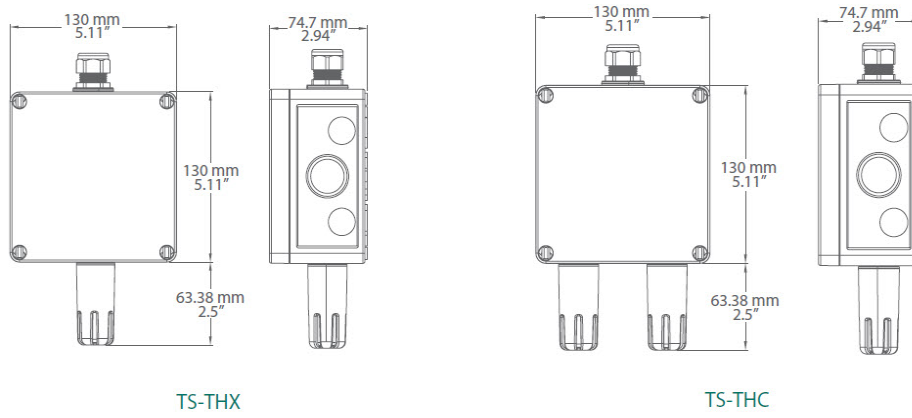
### Optional Relay Outputs

Contact Ratings	Form C (NO + NC), 2A @ 140 Vac, 2A @ 30 Vdc
Setpoints + Hysteresis	Programmable via menu or network
Time Delay	Programmable via menu or network

**RoHS**  
COMPLIANT



# Dimensions



Measurements in millimeters (mm)

Specifications subject to change without notice.  
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