RSTH Range

TEMPERATURE & HUMIDITY SENSORS

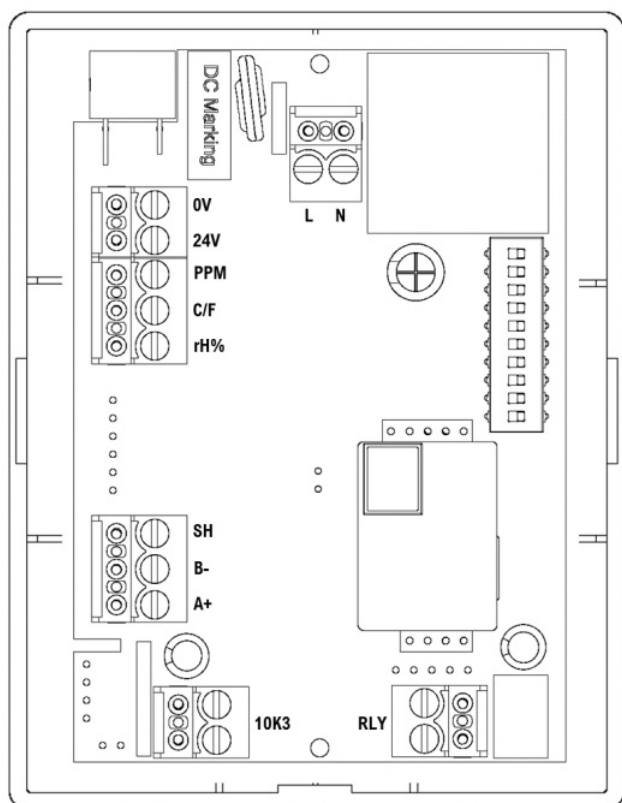BLANK VERSION   LED VERSION   DISPLAY SCREEN

Product Overview:

The RSTH Range: Featuring Temperature Sensors & Humidity Sensors, designed to monitor and measure vital indoor air quality environmental parameters with precision and reliability. Engineered to be used across residential, public, commercial, and light industrial settings, these sensors offer digital & analog outputs and exceptional performance features.

Key Features:

- Digital RS-485: Modbus RTU or BACnet MS/TP communication protocols
- Analog: 2x Linear 0-10V/2-10V CO_2, Temperature & Humidity.
- 10k3 Thermistor

Circuit Board Diagram:

CONNECTION	LABEL	TERMINATION
120V AC IN	POWER LIVE IN	L (Line) N (Neutral)
24V AC/DC INPUT	24V IN	+24V 0V (Common GND)
ANALOG OUT/P	+10V OUT	ºC/F (Temperature O/P) %RH (Humidity O/P)
DIGITAL OUT/P	RS-485	A+ B- SH (Shield)
THERMISTOR	10K3	(No Polarity)
CO2 VFC RELAY	RLY 70mA	Disabled On This Model

Technical Specifications

Mechanical

Mounting	Wall Mounted
Entry	1/2" DIA Rear Entry
Size (W x H x D)	Display Screen - 3.38" x 4.48" x 1.3" / Blank & LED - 3.38" x 4.48" x 0.98"
Weight	0.35lb
Enclosure	ABS UL Flame retardant - IP40

Electrical

24V AC/DC Power Rating	12-24VDC (11-32 VDC) / 24VAC, (20-27 VAC) 50-60Hz
110VAC Power Rating	Nominal 110VAC, (90-250V AC), 50-60H
Internal Fuse	Resettable PPTC 110VAC, 400mA
Communication	127 Units Max
Power Consumption	5W Max

Environmental

Operating Temperature	14ºF to 122ºF / -10ºC to 50ºC
Storage	32-86ºF / 0ºC to 30ºC
Room Humidity	0 to 95% RH (continuous) Non-Condensing
Atmospheric Pressure	80 to 110Pa
Altitude	<6562ft
Installation Cat (110V Voltage)	II (Class 2) Pollution Degree 2
Installation Cat (24V Voltage)	III (Class 3) Pollution Degree 2

Inputs / Outputs

Analog Outputs	2 x Linear 0-10V/2-10V Temperature & Humidity. Thermistor (10K3).
Digital Networks	BACnet MS/TP or MODBUS RTU (Parity: None Data bit: 8bit Stop bit: 1)
Relay Outputs	Disbled On This Model

Cable Spec

Power	22 - 24 AWG
Analog Output	22 - 24 AWG
Relay	Disabled On This Model
Digital Output	22 - 24 AWG twisted pair + ground, shielded cable with 120 Ω characteristic impedance.

User Interface

Lanugage	English
Optional Display	2.8" TFT
Indication	Green: Power (OK) / Yellow: Warning (Pre-Alarm) / Red: Danger (Alarm)

Safety & EMC

Safety	IEC 61010-1
Electromagnetic Compatibility	FCC
Compliance	CE, EMC, RoHS, REACH and WEEE Compliant

Temperature (ºF or ºC)

Fully Calibrated
Normal Indication Range: 32-122ºF
Response: t63% @ 77ºF ~20s
Typical Excellent long term stability
Strong anti-interference
Warm Up Time: 1 minute
Accuracy: ±0.5º @ 50-113ºF
Resolution: 0.1º

Humidity (%RH)

Fully Calibrated
Indication Range: 0-100% RH
Quick Response: t63% @ 77ºF ~8s
Excellent long term stability
Strong anti-interference
Warm Up Time: 1 minute
Accuracy: ±2% @ 59-86ºF (20-90%RH)
Resolution: 0.1%