PRODUCT SPEC SHEET RST Range

RST Range
TEMPERATURE SENSORS

BLANK VERSION   LED VERSION   DISPLAY SCREEN
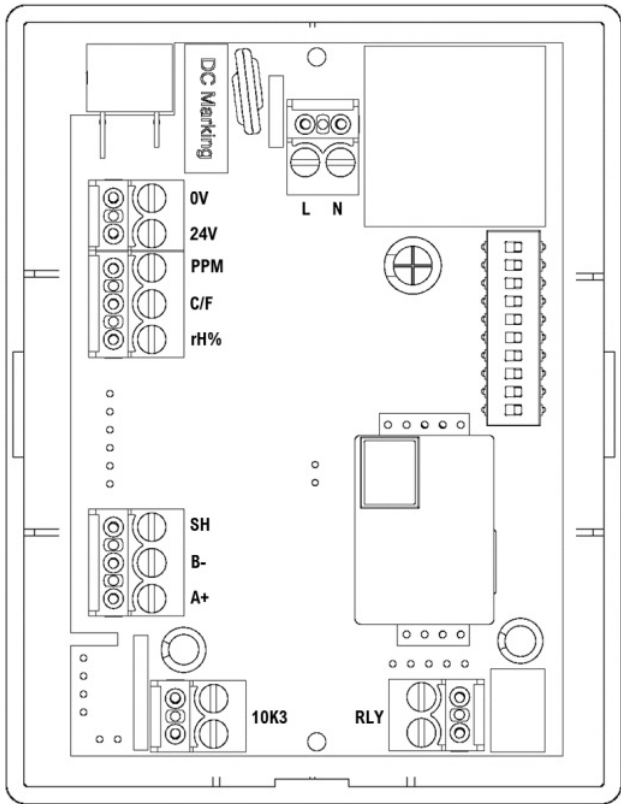
Product Overview:

The RST Temperature Room Sensors, designed to be used across residential, public, commercial, and light industrial settings. These sensors offer digital & analog outputs and exceptional performance features.

Key Features:

- Versatile Outputs: Delivering 1x 0-10V analog signal for Temperature (ºC or ºF), alongside digital RS-485 communication supporting Modbus RTU or BACnet MS/TP protocols.
- Robust Construction: Designed for straightforward wall mounting with a 1/2" DIA rear entry and snap-offs for side trunking, encased in a durable ABS UL Flame retardant housing, assuring longevity and safety in diverse environments.
- Flexible Power Options: Compatible with 12-24V AC/DC or 230VAC electrical systems.
- Optimal Performance: Exhibiting rapid response times, quick warm-up periods, and excellent long-term stability, with minimal interference, guaranteeing accurate readings and consistent operation over time.

Circuit Board Diagram:

CONNECTION	LABEL	TERMINATION
230V 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)
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	0.16kg
Enclosure	ABS UL Flame retardant - IP40

Electrical	
24V AC/DC Power Rating	12-24VDC (11-32 VDC) / 24VAC, (20-27 VAC) 50-60Hz
230VAC Power Rating	Nominal 230VAC, (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 (230V Voltage)	II (Class 2) Pollution Degree 2
Installation Cat (24V Voltage)	III (Class 3) Pollution Degree 2

Inputs / Outputs	
Analog Outputs	1x Linear 0-10V/2-10V Temperature. Thermistor (10K3).
Digital Networks	BACnet MS/TP or MODBUS RTU (Parity: None Data bit: 8bit Stop bit: 1)
Relay Outputs	1 x SPST 70mA

Cable Spec	
Power	22 - 24 AWG
Analog Output	22 - 24 AWG
Relay	22 - 24 AWG
Digital Output	22 - 24 AWG twisted pair + ground, shielded cable with 120 Ω characteristic impedance.

User Interface	
Lanuage	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