



# GREYSTONE

## ENERGY SYSTEMS INC

# ROOM HUMIDITY/ TEMPERATURE TRANSMITTER SPC Series

The SPC series uses a highly accurate and reliable thermoset polymer based capacitance humidity sensor and curve matched thermistor together with state-of-the-art digital linearization and temperature compensated circuitry in an attractive, low profile enclosure to monitor room humidity & temperature levels. Dual setpoint adjustment features for both RH and temperature are also available. Additional options include manual override, communication jack & fan speed switch.

## SPECIFICATIONS:

Power Supply .....	24Vac/dc $\pm 10\%$ (non-isolated half-wave rectified)
Consumption .....	20 mA + (20mA x number of outputs) max @ 24 Vdc
Input Voltage Effect .....	Negligible over specified operating range
Protection Circuitry.....	Reverse voltage and MOV protected and output limited
Output Signals.....	4-20 mA active (sourcing) or 0-5 Vdc or 0-10 Vdc (specify when ordering)
Output Resolution .....	10 bit for all signals
Output Drive Capability.....	550 ohm max for current 10Kohm min for voltage
Programming and Selection.....	Via push buttons and on-screen menu
Operating Conditions .....	0°-50°C (32°-122°F) 0-95%RH non-condensing
Wiring Connections.....	Screw terminal block (14 to 22 AWG)
Enclosure Size .....	84mmW x 117mmH x 29mmD (3.3" x 4.6" x 1.15")

### LCD DISPLAY

Display Size.....	38.1 x 16.5 mm (1.5" x 0.65")
Digit Height.....	11.43 mm (0.45")
Symbols .....	°C, °F, %RH, OCC
Backlight.....	Enable or disable via menu

### TEMPERATURE

Accuracy.....	$\pm 0.2^{\circ}\text{C}$ ( $\pm 0.4^{\circ}\text{F}$ )
Range.....	0° to 35°C (32° to 95°F) or 0° to 50°C (32° to 122°F) programmable
Offset .....	$\pm 9^{\circ}\text{F}$ programmable
Display Units .....	°C or °F programmable
Display Resolution .....	0.5° <100°, 1° >100°

### TEMPERATURE SETPOINT

Midpoint.....	18° to 27°C or 65° to 80°F programmable
Range.....	$\pm 2$ to $\pm 10^{\circ}\text{C}$ or $\pm 5$ to $\pm 20^{\circ}\text{F}$ of the midpoint, programmable
Resolution .....	0.5 or 1.0°C and 1.0 or 2°F programmable

### RH

Sensor.....	Thermoset polymer based capacitive
Accuracy.....	$\pm 2, 3$ , or 5% RH
Range.....	0-100% RH
Temperature Compensation .....	0° to 50°C (32° to 122°F)
Hysteresis .....	$\pm 3\%$ RH
Response Time .....	15 seconds typical
Stability .....	$\pm 1.2\%$ RH typical @ 50% RH in 5 years
Offset .....	$\pm 20\%$ RH programmable

### RH SETPOINT

Midpoint.....	20 to 70% RH programmable
Range.....	$\pm 5, \pm 10$ or $\pm 20\%$ RH of the midpoint, programmable
Resolution .....	1% RH

### OVERRIDE

Front panel, momentary push-button, 2 wire dry contact	
Switch ratings.....	N.O., SPST, 50 mA @12 Vdc



## PART NUMBER SELECTED

## PRODUCT SELECTION INFORMATION:

MODEL	Product Description
SPC	Room Humidity/Temperature Transmitter

CODE	Product Parameters
01	Humidity transmitter c/w setpoint control
02	Temperature transmitter c/w setpoint control
04	Humidity and temperature transmitter c/w temperature setpoint control
05	Humidity and temperature transmitter c/w humidity setpoint control
06	Humidity and temperature transmitter c/w humidity and temperature setpoint control

CODE	Output
I	4-20 mA output
V	0-5 Vdc or 0-10 Vdc output - Jumper selectable

CODE	Accuracy (N/A for "02", leave blank)
02	2%
03	3%
05	5%

CODE	Options
S	Override switch (Includes OCC input)
J	Comm. Jack (3.5 mm phono)
F	Fan speed switch

Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

### OCCUPIED INPUT

Signal Type.....	Digital input, 0/5 Vdc or dry contact to common
Logic.....	Active low or active high, programmable
Action .....	Causes "OCC" segment to light on LCD

### FAN SPEED SWITCH

Range.....	Off, Auto, Low, Medium, High
Signal .....	Resistance: 0, 2, 4, 6, 8 K $\Omega$ (Custom ranges available)

### NETWORK COMMUNICATIONS

3.5mm phono jack .....	Ring/Mid/Tip connections to a 3-pin terminal block
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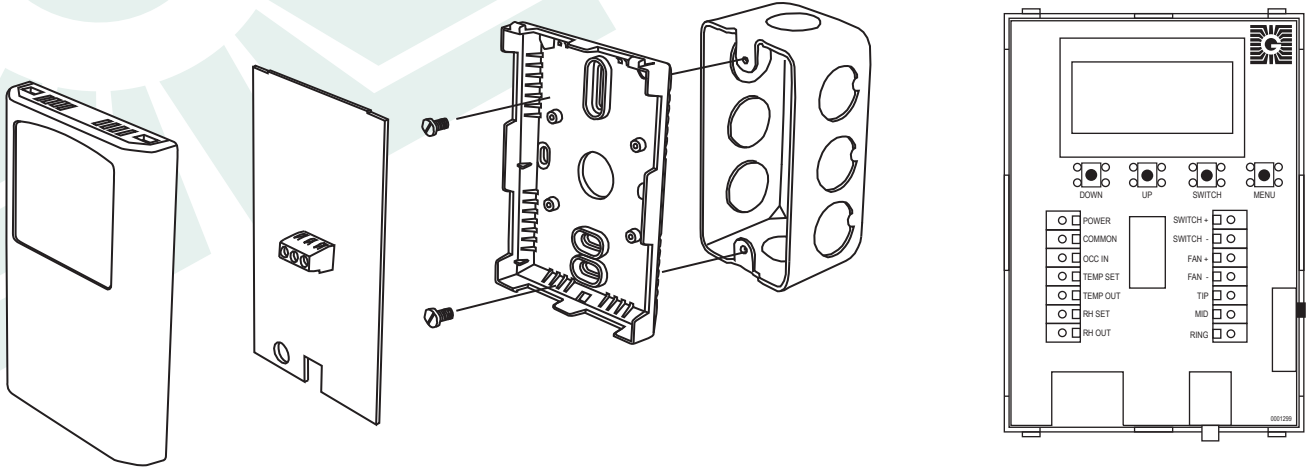


## TYPICAL INSTALLATION:

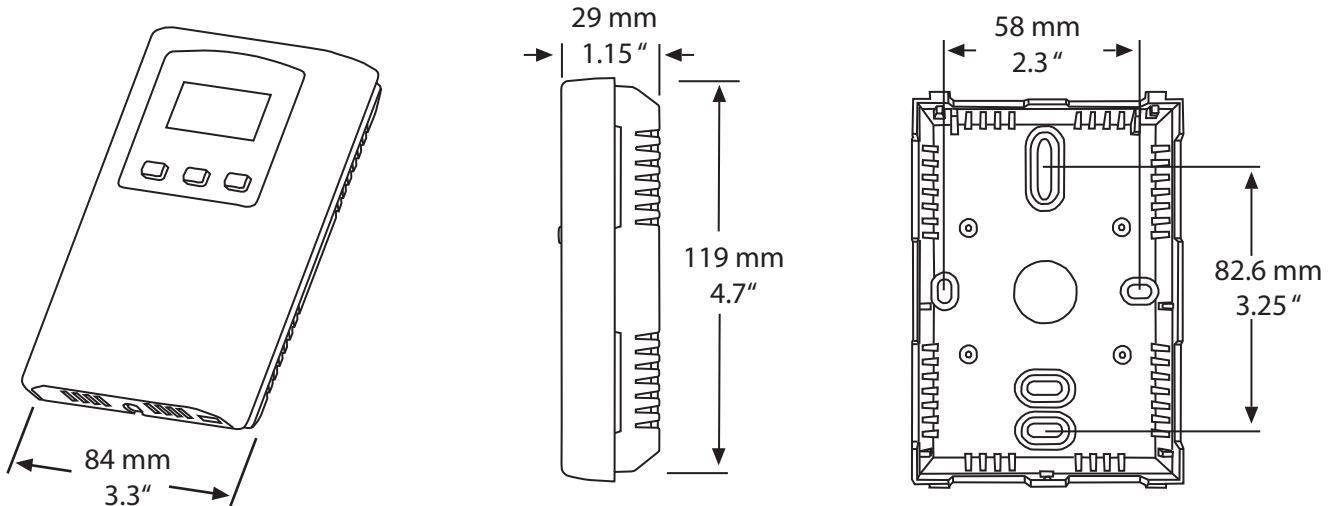
For complete installation and wiring details, please refer to the product installation instructions.

The SPC series can be mounted directly to a single gang electrical box or directly to a wall. Insulating foam is adhered to the back of the enclosure to provide a thermal barrier from wall temperatures.

A terminal block connection is provided for connection to the Building Automation System.



## DIMENSIONS



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*Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC sensors and transmitters for Building Automation Management Systems.*

*We have conscientiously established a worldwide reputation as an industry leader by maintaining leading-edge design technology, prompt technical support, and a commitment to on-time deliveries. We take pride in our Quality Management System which is ISO 9001 certified, assuring our customers of consistent product reliability.*

GREYSTONE HAS AN **ISO 9001** REGISTERED QUALITY SYSTEM