GREYSTONE ENERGY SYSTEMS INC

HUMIDITY/TEMPERATURE TRANSMITTER c/w SETPOINT ADJUSTMENTS

SPC Series

Precision humidity/temperature control/sensing

FEATURES:

- Dual humidity and temperature outputs
- Humidity and/or temperature setpoint adjustment outputs
- Current and voltage models
- LCD indication
- Highly stable RH sensor element
- Attractive, low profile enclosure
- Installer friendly wiring access

Peace of mind through reliable humidity/temperature monitoring

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

DESCRIPTION:

The SPC Temperature/humidity transmitter incorporates two sensors in one attractive wall mount enclosure for the most efficient environmental monitoring and control system. It uses a field-proven RH sensor to monitor relative humidity and a curve-matched thermistor to measure temperature.

Two setpoint controls are also available for temperature and humidity adjustment. The device may also include an occupancy override button and an external communication jack. Both measurements and setpoint signals are available on separate outputs as linear 4-20 mA, 0-5 or 0-10 Vdc signals.

Several configurations of the device are available with one to four outputs as required. An LCD is included for configuration and local indication of all parameters. Several operating parameters can be programmed using a keypad for specific applications including four temperature ranges and C/F display.

SPECIFICATIONS:

General

Power Supply	24Vac/dc ±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	White ABS - IP30 (NEMA 1) 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	± 0.2˚C (±0.4˚F)
Range	0˚ to 35˚C (32˚ to 95˚F) or 0˚ to 50˚C (32˚ to 122˚F) programmable
Offset	±9˚ 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	±2 to ±10˚C or ±5 to ±20˚F of the midpoint, programmable
Resolution	0.5 or 1.0˚C and 1.0 or 2˚F programmable

Humidity

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

Humidity Setpoint

Midpoint	20 to 70% RH programmable
Range	±5, ±10 or ± 20% RH of the midpoint, programmable
Resolution	1% RH

Manual Override

Type	Front panel, momentary pushbutton
Ratings	50 mA @12 Vdc, N.O., SPST

Occupied Input

Signal Type	Digital input, 0/5 Vdc standard, active low
Action	Causes "OCC" segment to light on LCD

Fan Speed Switch

Type	Side mounted, 5 position slide switch
Designators	Off, Auto, Low, Medium, High
Signal	2 wire, resistance output - 0, 2, 4, 6, 8 KΩ Custom ranges available, contact Greystone

Communications

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

PRODUCT ORDERING 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 setpoint control for temperature only
05	Humidity and temperature transmitter c/w setpoint control for humidity only
06	Humidity and temperature transmitter c/w setpoint control for humidity and temperature

CODE	Outputs
I	4-20mA
V	0-5Vdc or 0-10 Vdc (Jumper selectable)

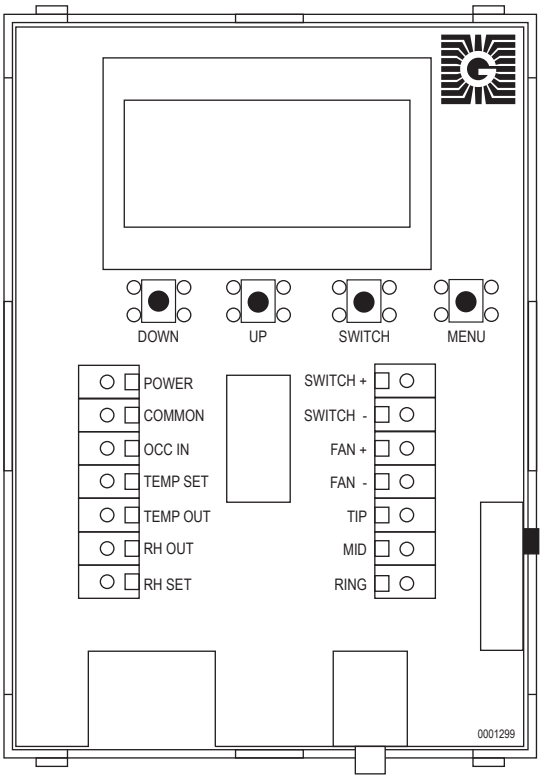
CODE	RH Accuracy (Not applicable on "02" model, leave blank)
02	2 %
03	3 %
05	5 %

CODE	Options (Multiple selections can be made)
S	Front panel push button momentary switch (NO)
J	External jack for remote system access (3.5 mm phono)
F	Fan Speed Switch, 5 position, (Off, Auto, Low, Mid, High)

SPC	06	I	03	S

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

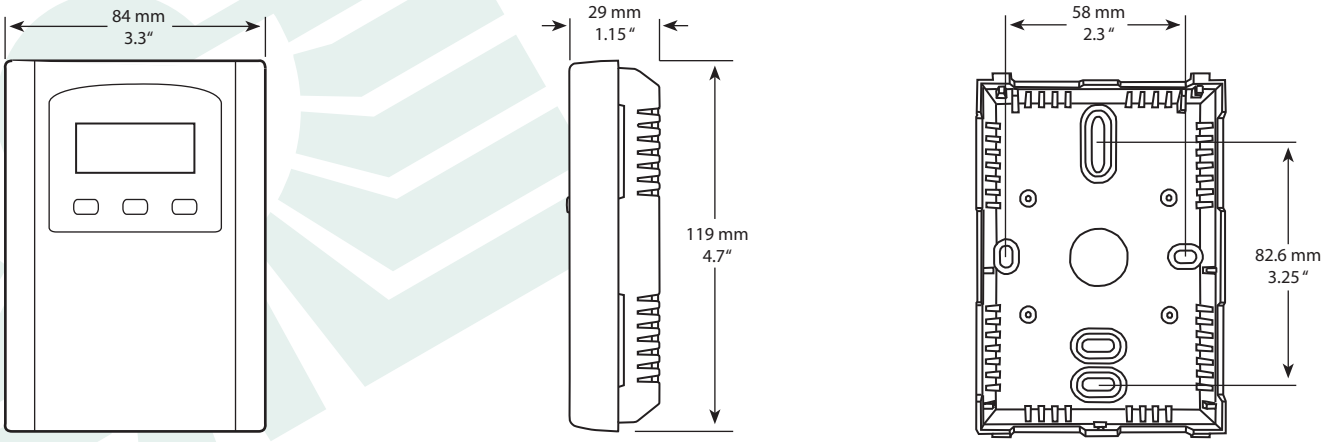
PCB/WIRING INFORMATION



Terminal	Function
POWER	From +24 Vac/dc of controller or power supply
COMMON	To GND or COMMON of controller
OCC IN	To digital output of controller
TEMP Setpoint	To analog input of controller 4-20 mA or 0-5 Vdc or 0-10 Vdc
TEMP Output	To analog input of controller 4-20 mA or 0-5 Vdc or 0-10 Vdc
RH Output	To analog input of controller 4-20 mA or 0-5 Vdc or 0-10 Vdc
RH Setpoint	To analog input of controller 4-20 mA or 0-5 Vdc or 0-10 Vdc
SWITCH +	To digital input of controller
SWITCH -	To GND or COMMON of controller
FAN +	To analog input of controller Resistance input
FAN -	To GND or COMMON of controller
TIP	External Jack TIP (tip of plug) connection
MID	External Jack MID (middle of plug) connection
RING	External Jack RING (base of plug) connection

* Some models do not have all these features
**To save on number of connection wires, all GND or COMMON may connected together.
***Illustration shows standard wiring configuration. Custom configurations are available. Please contact Greystone.

DIMENSIONS:



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RoHS COMPLIANT

Greystone Energy Systems Inc. is one of North America's largest ISO registered manufacturers of HVAC/R 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.

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