GREYSTONE
ENERGY SYSTEMS INC

ROOM HUMIDITY/ TEMPERATURE TRANSMITTER
HTRC Series

Precision humidity/temperature control/sensing

FEATURES:

- Highly stable RH sensor element
- Humidity range: 0-100%
- Accuracy available 2%, 3%, & 5%
- Choice of precision temperature sensors
- LCD display available
- Optional override, setpoint & fan speed control
- Field selectable outputs
- Custom logo available

Peace of mind through reliable humidity/temperature monitoring

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

DESCRIPTION:

The HTRC Humidity/Temperature 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 and provides two analog outputs of either 4-20 mA, 0-5Vdc or 0-10 Vdc .

Additional options include an occupancy override button, a communication jack, a fan speed switch or a LCD display.

SPECIFICATIONS:

RH Sensor..... Thermoset polymer based capactive
Accuracy..... ±2, 3 or 5% RH from 5 to 95% RH
Range..... 0 to 100% RH non-condensing
Temperature Compensation ..... 0˚ to 50˚C (32˚-122˚F)
Hysteresis ..... ± 3% RH
Response Time..... 15 seconds typical
Stability ..... ±1.2% RH typical @ 50% RH in 5 years
Offset ..... ±20% RH, programmable
Temperature Sensor..... Curve-matched thermistor
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
Power Supply ..... 24 Vac/dc ±10% (non-isolated half-wave rectified)
Consumption ..... 60 mA max @ 24 Vdc
Input Voltage Effect ..... Negligible over specified operating range
Output Signal..... 4-20 mA active (sourcing), 0-5 Vdc or 0-10 Vdc
Output Drive @24 Vdc ..... 550 ohm max. for current, 10K ohms min. for voltage
Output Resolution ..... 10 bit PWM
Protection Circuitry..... Reverse voltage protected and output limited
Operating Conditions ..... 0˚ to 50˚C (32˚-122˚F), 0-95% RH non-condensing
Programming/Selection ..... Via intenal push buttons and on-screen menu
Wiring Connections..... Screw terminal block (14 to 22 AWG)
Enclosure Size..... 84mmW x 119mmH x 29mmD (3.3" x 4.7" x 1.15")

OPTIONS:

LCD DISPLAY

Range..... 00.0 to 99.9, 3 digit
Symbols ..... ˚C, ˚F, %RH
Display Size..... 38.1 x 16.5 mm (1.5" x 0.65")
Digit Height..... 11.43 mm (0.45")
Backlight..... Enable/disable via menu

OVERRIDE

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

FAN SPEED SWITCH

Type..... Side panel mount, 5 postion switch
Range..... Off, Auto, Low, Medium, High
Signal ..... Resistance: 0, 2, 4, 6, 8 KΩ (Custom ranges available)

NETWORK COMMUNICATIONS

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

PRODUCT ORDERING INFORMATION:

MODEL	Product Description
HTRC	Room Humidity/Temperature Transmitter

CODE	RH Accuracy
2	2 %
3	3 %
5	5 %

CODE	LCD Display
N	Concealed
L	Viewable

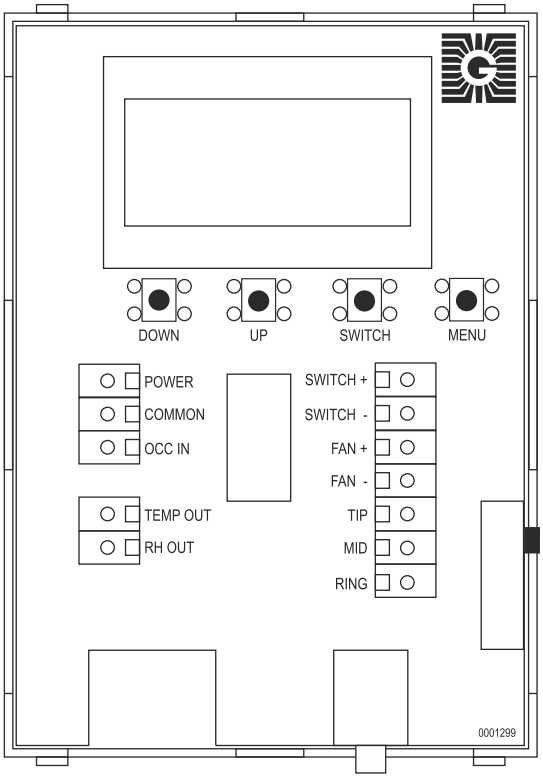
CODE	Output
I	4-20 mA
V	0-5 Vdc or 0-10 Vdc (Jumper selectable)

CODE	Options (Multiple selections may be made)
S	Override switch (Includes occupied input)
J	Communication jack (3.5 mm phono)
F	Fan speed switch

HTRC	3	N	I	-	-	← Typical Model Number

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

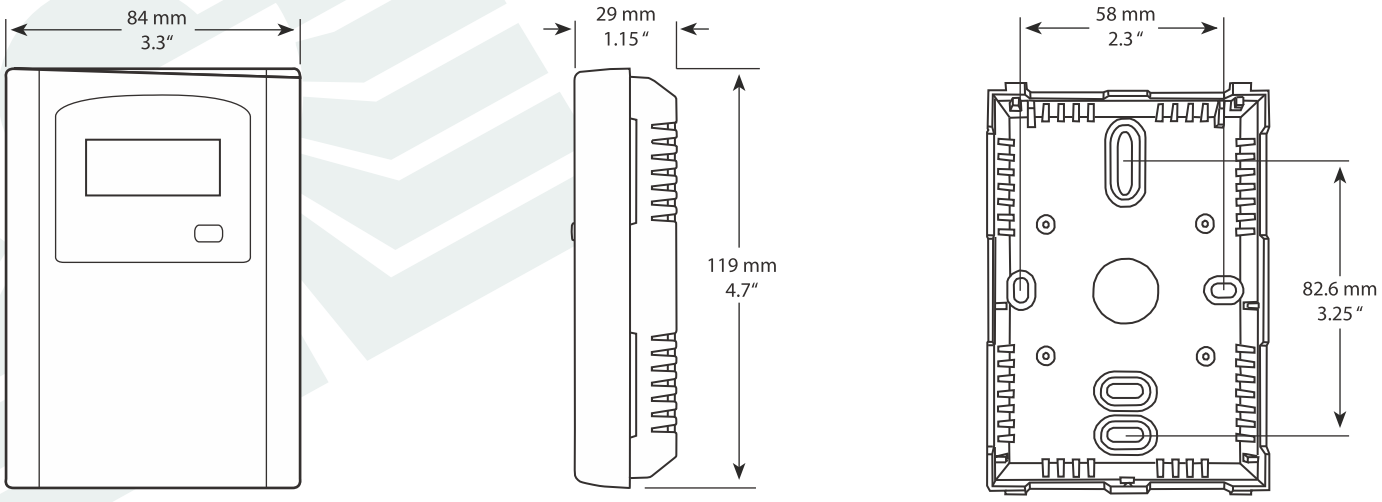
PCB/WIRING INFORMATION

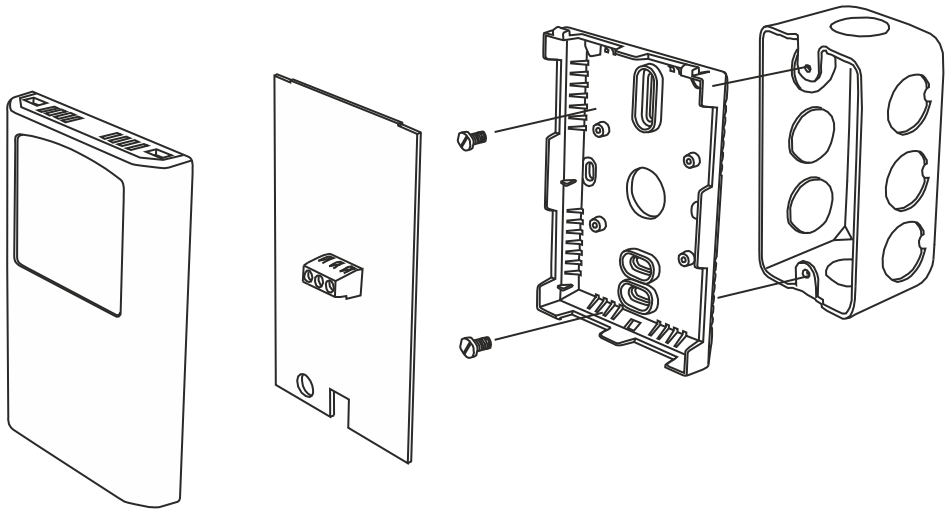


Terminal	Function
POWER	From +24 Vac/dc of controller or power supply
COMMON	To GND or COMMON of controller
OCC IN	To digital output of controller
TEMP Output	To analog input of controller 4-20 mA or 0-5 Vdc or 0-10 Vdc
RH Output	To analog input of controller 4-20 mA or 0-5 Vdc or 0-10 Vdc
SWITCH +	To 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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