VICONICS

μICRO-STAT®

ELECTRONIC HUMIDITY TRANSMITTER: H100

DESCRIPTION

The H100 series low voltage, microcomputer-based PI (proportional and integral) humidity transmitters are designed for accurate humidity and/or dehumidification control in non-corrosive commercial applications such as: hospitals, schools, office buildings, retail stores, museums, computer rooms, etc.

The H100 series is available with 0 to 5 Vdc or 10 Vdc output signal.

Each transmitter is computer calibrated and factory programmed with default parameters.

Features		Benefits
• Microcomputer-based design with PI algorithm	⇒	Exceptional accuracy
• Integrated and remote sensing	⇒	Larger choice of mounting options
• Ouput signal to digital indicating devices	⇒	Increases functionality of product
• CE approved	⇒	Can be sold in European markets

TABLE 1: ORDER CODE

H100 - AB - CD

AB	Output	Type
08	Analog 0 to 10 Vdc	0 to 10 Vdc
09	Analog 0 to 5 Vdc	0 to 5 Vdc

CD	Main sensor location	Sensor
01	Wall mounted transmitter	H50
02	Duct mounted transmitter	H71

Example: H100 - 08 – 02
One 0-10 VDC transmitter, duct mounted.

Fig.1 Wall mounted transmitter

CALIBRATION OF TRANSMITTER

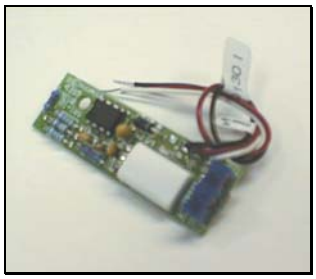
The transmitter is factory calibrated. However, it can be field recalibrated by using the (-10%, 0%, +10%) potentiometer inside the transmitter to adjust the zero (see page 2 for location). The transmitter is already factory calibrated to the center of the potentiometer. To recalibrate the transmitter to the factory preset, return the potentiometer to the 0% adjustment.

To calibrate, read the humidity with a precision hygrometer. If the reading is lower than the value you get from the sensor, remove transmitter from the base, turn the potentiometer by the amount of error in the negative scale. If the value is higher, turn the potentiometer in the positive scale. We recommend that you don't try to adjust the two potentiometers on the sensor unless you have access to two points of calibration. If you really need to recalibrate the sensor, please return the transmitter to the factory.

TABLE 2: TRANSMITTER ACCESSORIES

H50	Internal humidity sensor for H100 transmitter and for H80 remote wall sensor.
H60	Duct humidity sensor to mount directly onto the back of any H100 transmitter.
H71	Duct humidity sensor to mount directly onto the supply or return of the ventilation duct.
H80	Wall humidity sensor to mount in any remote location.
008-0089	Replacement lexan (cover sticker) for H100 transmitter
024-0048	Transmitter replacement base with connector (H50 internal humidity sensor not included).

H50 INTERNAL SENSOR



This humidity sensor can be mounted directly on 024-0048 transmitter base.

H60 DUCT SENSOR

This humidity sensor can be mounted directly onto the back of any H100 transmitter, with the supplied hardware. This transforms the transmitter into a duct-mounted transmitter.

WARNING:

Where failure or malfunction of H100 series transmitters could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of, or protect against, failure or malfunction of H100 transmitters must be incorporated into and maintained as part of the control system.

H71 REMOTE DUCT SENSOR

This humidity sensor can be mounted directly onto the supply or return of the ventilation duct. The H100 may be located on the wall with humidity sensing from the remote H71 sensor location.

H80 REMOTE WALL SENSOR

This humidity sensor can be wall mounted in any remote location. The transmitter may be located on the duct or other location, with humidity sensing from the H80 sensor location.

LOCATION OF CALIBRATION POTENTIOMETER

SPECIFICATIONS

Operating Conditions: 5 °C to 50 °C (32 °F to 122 °F)
0% to 95% R.H. non-condensing
•Sensor: 0% to 100% R.H. (see Note 1.)

Resolution: 0.5 %
Repeatability: 0.5 %

Accuracy and sensor interchangeability:
± 2 % R.H. from 0 to 100 % R.H.

Range: 0 % to 100 % R.H. for 5 to 50 °C
(41 °F to 122 °F)

Temperature effect: 0.05 % / °F

Outputs: 0 to 5 VDC into 1KΩ resistance min.
0 to 10 VDC into 2KΩ resistance min.

Power: 24 VAC -15%, +10%; 50/60 Hz; 2 VA

Base & casing: Off-white; self extinguishing
ABS plastic

Note 1. Humidity sensor: Solid state humidity sensor. Suitable for normal, clean air. Not to be used in corrosive or harmful environment.

WIRING

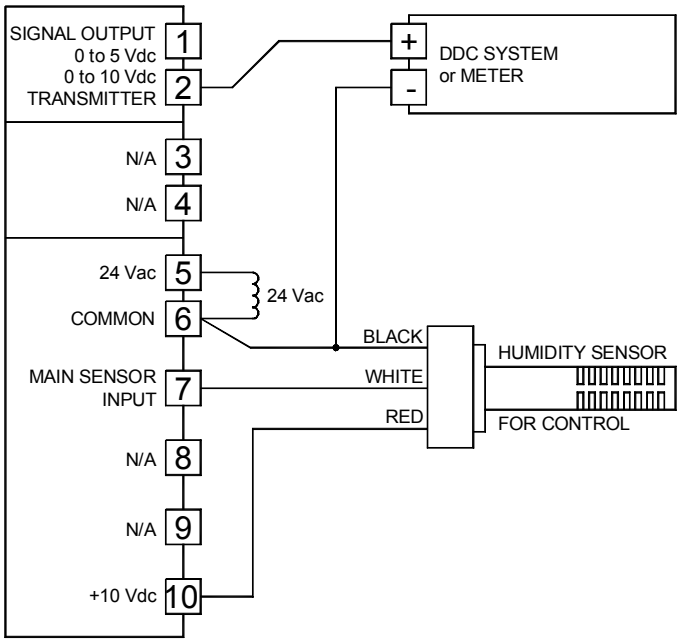


Fig.2: Wiring diagram

DIMENSIONS

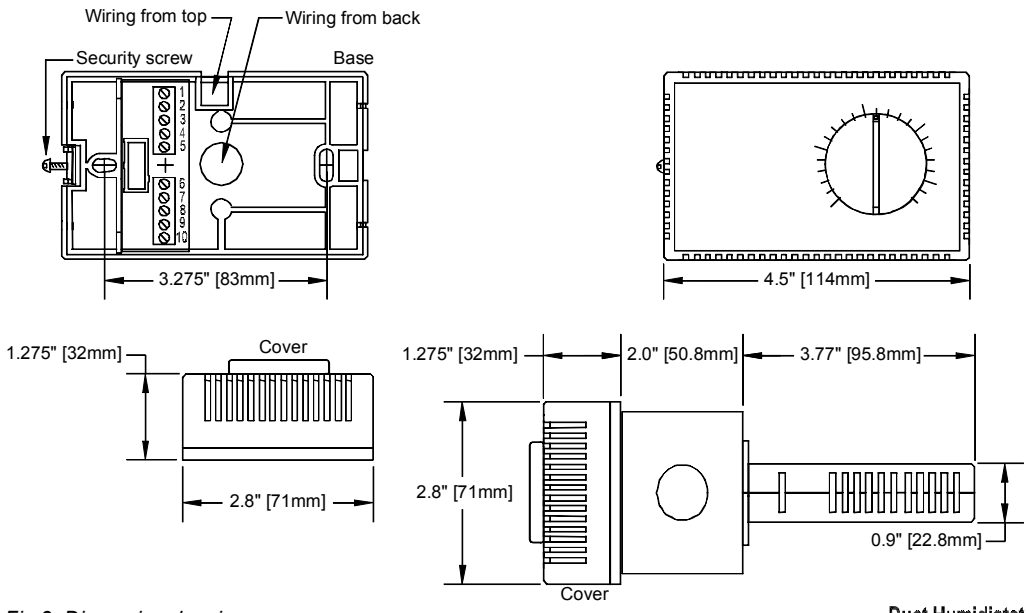


Fig.3: Dimension drawing

TABLE 3: SENSOR CHARACTERISTICS

Voltage between black and white wire, terminals #6 and #7

HUMIDITY	SENSOR OUTPUT
0 %	1.05 V
5 %	1.19 V
10 %	1.34 V
15 %	1.48 V
20 %	1.63 V
25 %	1.77 V
30 %	1.92 V
35 %	2.06 V
40 %	2.20 V
45 %	2.35 V
50 %	2.49 V
55 %	2.64 V
60 %	2.78 V
65 %	2.93 V
70 %	3.07 V
75 %	3.21 V
80 %	3.36 V
85 %	3.50 V
90 %	3.65 V
95 %	3.79 V
100 %	3.94 V

Note: Specifications and equipment are subject to change without prior notice.

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