

MEASUREMENT THAT WORKS



HUMISCAN[®]
Industrial Humidity Transmitters



GENERAL EASTERN

The Humidity Experts

A BOWTHORPE company

HUMISCAN®...

For Humidity / Dew Point Measurement in Industrial Applications

Features

- 1% accuracy
- Optional built-in keypad with bright, digital display
- Wall mount and duct/remote probe configurations
- Every model calculates all humidity parameters:
 - Relative Humidity – Temperature – Dew Point
 - Mixing Ratio – Absolute Humidity – Wet Bulb
- Field Select up to 3 measurement parameters
- User-selectable programming via computer or keypad/local display
- 3 simultaneous analog outputs per measurement parameter:
 - 4-20 mA – 0-5 Volt – 0-10 Volt
- Digital outputs: RS-232, RS-485/422
- 10-point factory calibration (NIST)
- Easy one-point field calibration
- Industrial NEMA 4X/IP-65 rated enclosure
- Proven, reliable sensor technology
- Temperature - compensated
- Two-year warranty
- Data Logging Option
- Pressurized Probe Option

*Industrial Humidity
Measurement
You Can Rely On*

HUMISCAN® Industrial RH Transmitters

PARAMETER

RANGE

Temp. - Wall Mount	-40°C to +80°C
Temp. - Duct/Remote	-40°C to +80°C
Relative Humidity	0 to 100% RH
Dew Point	-40°C to +80°C
Absolute Humidity	0 to 290 g/m ³
Mixing Ratio	0 to 545 g/kg d.a.
Wet Bulb Temperature	-40°C to +80°C

Ranges &
Performance for
All Models

The Flexibility and Durability to Fit Your Environment

The Humiscan® Industrial Humidity Transmitters use proven, reliable technology to measure relative humidity and temperature. The Humiscan's built-in microprocessor then calculates values for dew point temperature, absolute humidity, mixing ratio, and wet bulb temperature. The Humiscan® transmitter can be programmed easily, so that you can configure it in the field to meet your specific requirements. Connect the Humiscan transmitter to your own PC via the RS-232C interface, or use the optional, built-in keypad and local digital display. You can use either device to select a measurement, its output signal, and scale the measurement range. The Humiscan offers three simultaneous analog outputs, one digital output (RS-232C or RS-485/422), and one analog input for pressure (current or voltage). Humiscan Industrial Humidity Transmitters also offer a choice of two power input options (24 VAC/VDC or 100 to 240 VAC).

An optional data-logger provides a fast and cost-effective method to determine if your process environment requires continuous long-term measurement. The data-logging feature is also useful for applications where validation requires only a short-term measurement.

In many process control and industrial applications, humidity and temperature tend to fluctuate. For this reason, continuous temperature compensation is a standard feature on all Humiscan® transmitters. This feature automatically adjusts for changes in the environment, which insures a high degree of measurement accuracy over the entire operating range of the instrument.

Applications

- Clean rooms
- Pharmaceuticals
- Automotive
- Process Control
- HVAC
- Hospitals/Laboratories
- Environmental Chambers
- Incubators
- Many more



Performance in the Toughest Environments

The Humiscan® resists most contaminants, so monitoring process control applications does not present a problem... even in “dirty” manufacturing areas. The Humiscan’s humidity and temperature sensors are designed to tolerate exposure to harsh chemical environments. It is able to operate in condensing environments, which makes it suitable for applications where washdowns and saturation occur, such as hospitals and certain laboratories. The sensors can also withstand other harsh conditions, such as thermal shock (-40° to +80°C), high temperature combined with high humidity (95% RH), and low humidity (exposure to a desiccant).

For maximum protection in harsh or condensing environments such as automotive manufacturing, pharmaceutical processing, and other process control applications, the Humiscan’s electronics are housed in a rugged, aluminum, NEMA-4X/IP-65 rated enclosure.

The Humiscan housing features a small size (5.5”L x 5.5” W x 3” Depth), and the choice of duct/remote or wall-mounted configurations. The transmitter is also designed to resist the low amplitude vibrations that are common in manufacturing environments.



Wall-mounted Humiscan® Industrial Relative Humidity Transmitter shown with optional built-in keypad and bright, digital display. The Humiscan’s output signals, measurements, and ranges are user-scalable.

10-Point Factory Calibration

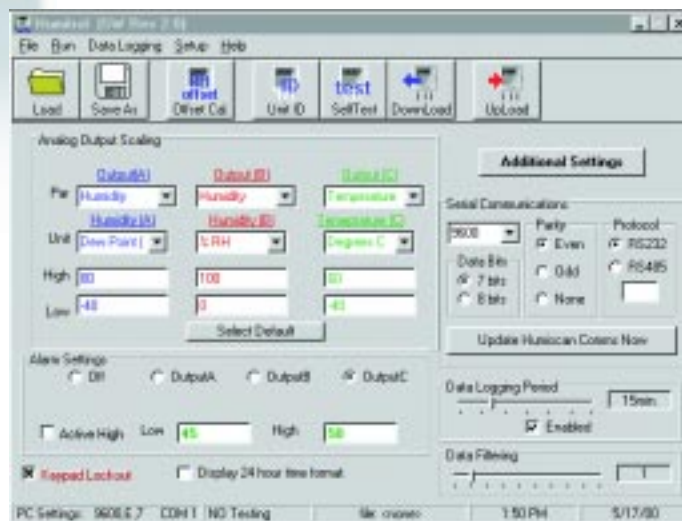
Each Humiscan is calibrated at 10 different points against a NIST-traceable standard. Compare this with competitive models that are calibrated at three points or less. This 10-point calibration ensures that you get maximum accuracy from the Humiscan.

Easy to Field-Calibrate

Using an accurate RH or temperature measurement instrument, a user can perform an on-site, one-point calibration of the Humiscan in minutes without interrupting operation.

Interchangeable Probes

This feature allows a user to replace sensor probes in the field or have a sensor probe recalibrated without removing the Humiscan.



Humitrol™ Main Screen – You get complete control over the Humiscan with Humitrol software. This Windows® ‘95 based program allows manipulation of all instrument features through your PC.

Humiscan® Industrial Humidity Transmitters Specifications*

Relative Humidity:

Sensing Element: Capacitive
 Accuracy at 77°F: ±1% at 0 to 90% RH
 ±2% at 90 to 100%RH
 Long Term Stability: Less than 0.5% drift per year typical
 Hysteresis: Less than 1% RH

Operating Range:

RH Sensor: 0% to 100% RH (non-condensing)
 -40°F to +176°F (-40°C to +80°C)
 Electronics: 0% to 95% RH (non-condensing)
 -40°F to +176°F (-40°C to +80°C)

Temperature:

Sensing Element: 1000 Ω thin-film platinum RTD
 (.00385 Alpha) Class A
 Accuracy: ±0.36°F (±0.20°C)
 Measurement Range: -40°F to +176°F (-40°C to +80°C)

Calculated Measurements:

Dew Point Temp.: -40°F to +176°F (-40°C to +80°C)
 Mixing Ratio: 0 to 545 g/kg d.a.
 Absolute Humidity: 0 to 290 g/m³
 Wet Bulb Temp.: -40°F to +176°F (-40°C to +80°C)

Outputs:

Analog: 3 Simultaneous Outputs per Measurement
 4-20mA, 0-5 Volt, 0-10 Volt
 Digital: 1 Channel, RS-232, RS-485/422 Digital
 Current Loop (Optional)
 Relay: SPDT, Form C, 250VAC/30VDC@5A
 TTL: Alarm Trigger

Power Inputs:

Standard: 24 VAC/VDC ±20%
 Optional: 100-240 VAC ±10% 50/60Hz,
 15 VA Max.

General:

Storage Temp.: -40°F to +176°F (-40°C to +80°C)
 Enclosure Material: Aluminum
 Enclosure Rating: NEMA-4X (IP-65)
 Mounting: Wall, Duct/Remote configurations (Includes Duct Mount Hardware)

Remote Cable Lengths: 3, 5, and 10 meters

Probe Material:

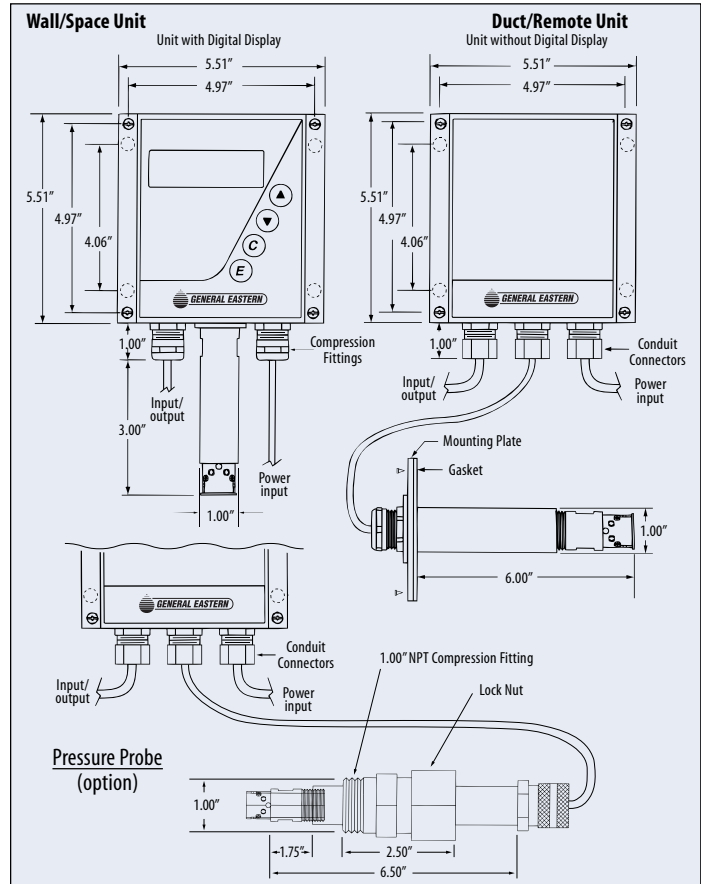
Space: Delrin®

Duct/Remote: Aluminum

Data Logging: Maximum of 700 points of humidity and temperature (selectable interval)

Pressure Probe: Up to 120 psi

*Specifications are subject to change.
 Delrin is a registered trademark of DuPont



All units have a standard 10-point factory calibration against a NIST-traceable standard.

All units are furnished with the following measurements:

- RH - Relative Humidity
- T - Temperature
- Td - Dew Point Temperature
- a - Absolute Humidity
- Tw - Wet Bulb Temperature
- x - Mixing Ratio

Model: HU	Configuration									
Display										
No Display	GND									
Display	GD									
Mounting										
Space	S									
Duct / Remote	DR	(Need to specify cable length below)								
Sensor Cable Length	Do not need to specify cable length for space mount units									
3 Meters	3									
5 Meters	5									
10 Meters	10									
Power										
24VAC/VDC	S24									
100-240 VAC - 50/60 Hz	O									
Digital Communications										
RS232	S2									
RS485/422	O4									
Data Logging										
None	SD									
Included	OD									
Fittings										
Conduit	SC									
Compression	OC									
Filter										
Plastic Open Frame	SP									
Stainless Sintered (100 µm)	SS									
PTFE Membrane	M									
Pressure Probe										
None	NP									
Applications up to 120 PSI	P									

Ordering Example:

HU	GD	S	-	O	S2	SD	OC	SS	NP
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Space Mount, Digital Display, 100-240 VAC Power, RS-232 Digital Output, Compression Fittings, Stainless Sintered Filter



The Right Solution for Your Application

General Eastern has over a quarter century of experience in the design, development, and production of global humidity sensing technologies, relative humidity sensors, transmitters, generators, and calibration equipment. The company provides standard and custom-designed humidity measurement solutions for countless applications over a wide range of industries. Whether your humidity-sensing needs entail choosing the correct sensing technology, the right sensor, or accurate advice, trust the experts.

The General Eastern Family of Humidity Measurement Products

- Sensors
- Humidity Transmitters
- Industrial Humidity Transmitters
- Pressure Transmitters
- Process Humidity Transmitters
- Humidity Transfer Standards
- Humidity Generators

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