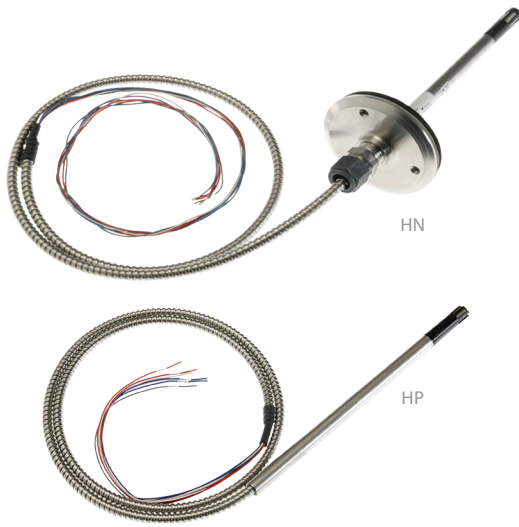


# HN & HP SERIES

Pendant and Insertion



HN and HP Series probe type humidity transmitters are easy to install and exceptionally accurate. Their long-term stability and trouble-free serviceability make them among the best in the industry. The electronics are embedded inside the probe, protecting them from condensation-related failures. The thin-film capacitive HS sensor elements are factory calibrated using NIST traceable calibration equipment, eliminating the need for field calibration. Field replacement of the sensor element is a snap with the patented removable sensor, lowering costs and reducing downtime.

## Specifications

INPUT POWER	
Voltage Model	Class 2; 12 to 30 Vdc/24 Vac, 15 mA max.
mA Model	Class 2; Loop powered 12 to 30 Vdc only, 30 mA max.
OUTPUT	
Voltage Model	3-wire, observe polarity
mA Model	2-wire, not polarity sensitive (clipped & capped)
HUMIDITY	
HS Element†	Digitally profiled thin-film capacitive (32-bit mathematics) U.S. Patent 5,844,138
Accuracy @ 25°C**	±1%, 2%, 3%, or 5% (specify)@10 to 80% RH; Multi-point calibration, NIST traceable
Reset Rate***	24 hours
Stability	±1%@20 °C (68 °F) annually, for two years
Hysteresis	1.5% typical
Linearity	Included in accuracy spec.
Temperature Coefficient	±0.1% RH/°C above or below 25 °C (typical)
Scaling	0 to 100% RH
TEMPERATURE OPTION	
Optional Temperature Transmitter Output	Digital, 4 to 20 mA (clipped & capped) or 0-5/ 0-10 V output; accuracy ±0.5 °C (±1 °F) typical

## Sensor element

Thin-film capacitive sensor element recovers from 100% saturation

## Corrosion resistant

Electronics are encapsulated in stainless steel probe to resist corrosion

## Interchangeable

Fully interchangeable element to 1%, 2%, 3%, or 5% accuracy...no calibration

## Flexible

Pendant and insertion versions for application flexibility

## Compatibility

Polarity insensitive two-wire 4 to 20 mA or 3-wire 0-5/0-10 Vdc versions...flexible systems compatibility

## Calibration free

Calibration-free interchangeable NIST traceable HS element

## APPLICATIONS

- HVAC control for improved comfort and energy savings
- Museums, schools, printing shops, and other locations requiring humidity control
- Facilitating compliance with ASHRAE standards for environmental control and indoor air quality

## OPERATING ENVIRONMENT

Operating Humidity Range	0 to 100% RH non-condensing
Operating Temp Range	-40 to 50 °C (-40 to 122 °F)

## WARRANTY

Limited Warranty	5 years †
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## AGENCY APPROVALS



† The HS sensing element has a 1-year warranty. The element is not a part of the 5-year product warranty.

†† The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

\* One side of transformer secondary is connected to signal common, so an Isolation transformer or dedicated power supply may be required.

\*\* Specified accuracy with 24 Vdc supplied power with rising humidity. RTD/Thermistors are not compensated for internal heating of product.

\*\*\* Reset Rate is the time required to recover to 50% RH after exposure to 90% RH for 24 hours.

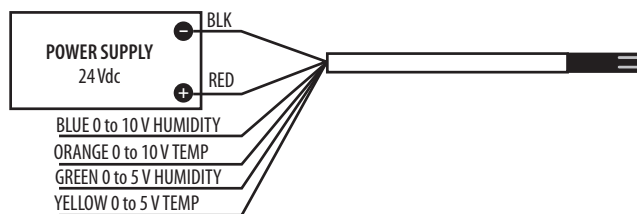
Shielded cabling is required for conformance to EMC standards. Technical information is available from factory upon request or is available on our website: [www.veris.com](http://www.veris.com). EMC Conformance - CE Option: Low Voltage Directive 2014/35/EU and EMC Directive 2014/30/EU.

EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).



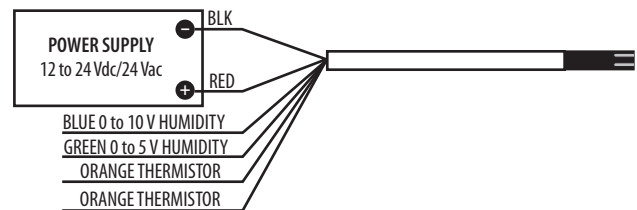
### HN/HP (0-5V/0-10V VERSIONS)

Wiring Diagram



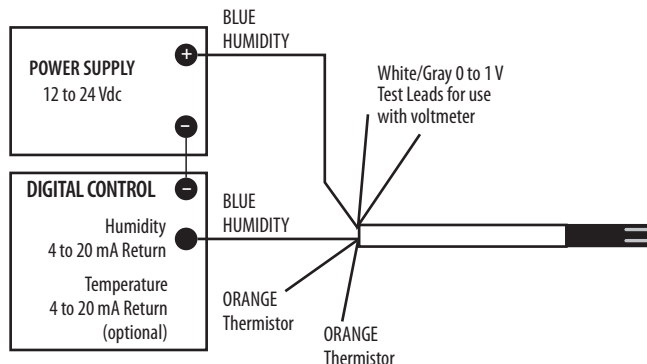
### HN/HP WITH RTD/THERMISTOR (0-5V/0-10V VERSIONS)

Wiring Diagram



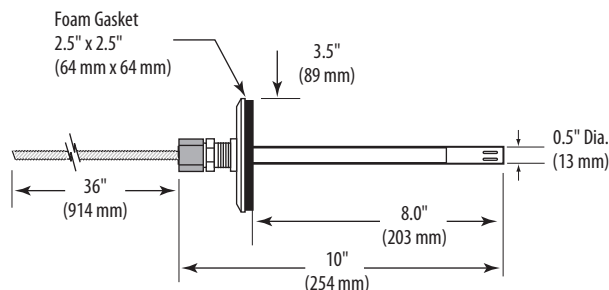
### HN/HP WITH RTD/THERMISTOR (4-20 mA VERSIONS)

Wiring Diagram



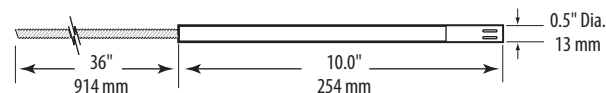
### HN SERIES

Dimensional Drawing



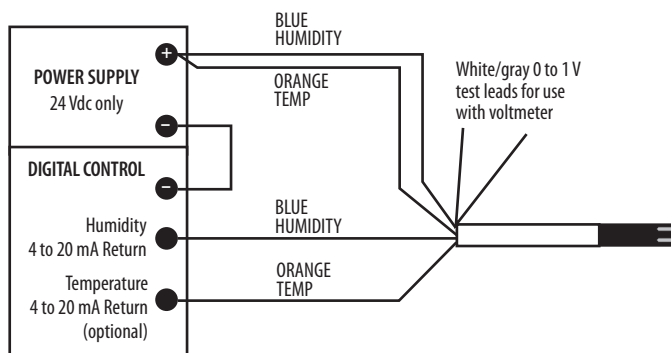
### HP SERIES

Dimensional Drawing



### HN/HP (4-20 mA VERSIONS)

Dimensional Drawing



## ORDERING INFORMATION

<p>Enclosure</p> <p>H <input type="checkbox"/></p> <p>N = RH Insertion P = RH Pendant</p>	<p>Accuracy</p> <p><input type="checkbox"/></p> <p>1 = 1% 2 = 2% 3 = 3% 5 = 5%</p>	<p>NIST</p> <p><input type="checkbox"/></p> <p>N = NIST 1%, &amp; 2% only X = None 2%, 3%, 5% only</p>	<p>Output</p> <p><input type="checkbox"/></p> <p>M = 4 to 20 mA V = 0-5V/0-10 Vdc</p>	<p>US or EU</p> <p><input type="checkbox"/></p> <p>S = Standard C = CE</p>	<p>Temp.</p> <p><input type="checkbox"/></p> <p>T = Temp X = No Temp (Stop here)</p>	<p>Humidity Transmitter Combination</p> <p>Sensor Type: <input type="checkbox"/> A = Transmitter</p> <p>Range: <input type="checkbox"/> 1 = -40 to 122 °F (-40 to 50 °C) <input type="checkbox"/> 2 = 32 to 122 °F (0 to 50 °C)</p> <p>OPTION Temp Cert: <input type="checkbox"/> Blank = None <input type="checkbox"/> 1 = 1pt Cal <input type="checkbox"/> 2 = 2pt Cal</p>	<p>Humidity RTD/Thermistor Combination</p> <p>Sensor Type: <input type="checkbox"/></p> <p>OPTION Temp Cert: <input type="checkbox"/> Blank = None <input type="checkbox"/> 1 = 1pt cal* <input type="checkbox"/> 2 = 2pt cal*</p>
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Example: (No Temp)

H  P  2  X  V  S  X Stop Here

Example: (With Temp)

H  N  2  X  V  S  T  C  2

\* Not available with W and Y high-accuracy thermistors.

