Deluxe Wall Humidity Sensors

1% & 2% NIST, or Standard 2%, 3%, or 5%

HWL

DESCRIPTION

HW Deluxe humidity transmitters provide an ideal solution for measuring relative humidity in all conditions. All devices are equipped with a thin-film capacitive sensor that is easily replaceable in the field. These sensors are calibrated to NIST standards, with certificates available (see Ordering Information; choose "N" in NIST block). Temperature sensing options are also available.

The wall-mounted HW model features a low-profile housing with an optional LCD display for easy visibility. All Deluxe models come with a standard five-year warranty.

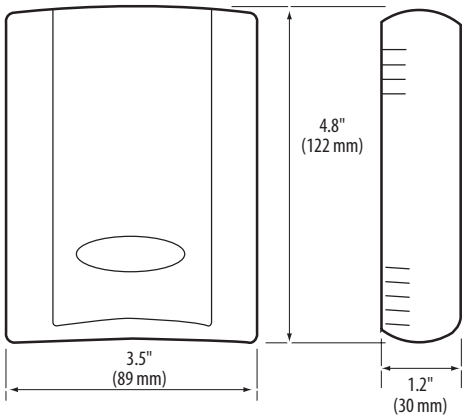
APPLICATIONS

- Controlling HVAC systems 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

FEATURES

- Thin-film capacitive sensor element recovers from 100% saturation
- Fully interchangeable element to 1%, 2%, 3%, or 5% accuracy...no calibration
- Replace element in the field...maintain accuracy and minimize downtime
- Polarity insensitive, two-wire 4-20 mA or 3-wire 0-5/0-10 VDC versions... flexible systems compatibity...save time in the field and stock fewer devices
- Calibration-free interchangeable NIST traceable HS element
- HS element is microprocessor profiled with on-board nonvolatile memory
- Multi-point digital calibration to NIST standards
- NIST certification available
- Minimizes field calibration downtime

DIMENSIONAL DRAWING



SPECIFICATIONS

5 Year Warranty

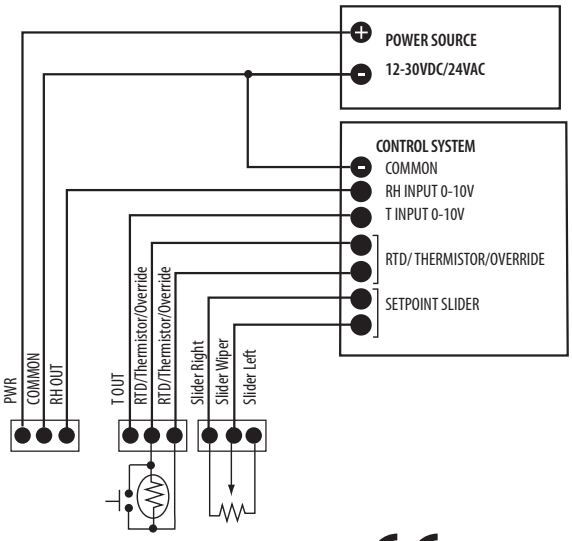
HS Element	Digitally profiled thin-film capacitive (32 bit mathematics) U.S. Patent 5,844,138†
Accuracy at 25°C from 10-80% RH*	±2%, 3%, or 5% models; ±1% at 12-60% RH in voltage output mode; ±1% at 12-60% RH in mA output mode with temp transmitter; ±1% at 20-40% RH in mA output mode; (multi-point calibration, NIST traceable)
Reset Rate**	24 hours
Stability	±1%@20°C (68°F) annually, for two years
Operating Humidity Range	0 to 100% RH noncondensing
Hysteresis	1.5% typical
Linearity	Included in accuracy spec.
Temperature Coefficient	±0.1% RH/°C above or below 25°C (typical)
Analog Output	4-20mA mode: 2-wire, not polarity sensitive (clipped and capped); 0-5V/0-10V mode: 3-wire, observe polarity
Scaling	0-100% RH
Operating Temperature Range	10° to 35°C (50° to 95°F)
Input Power***	4-20 mA mode: loop powered 12-30VDC only, 30mA max.; 0-5V/0-10V mode: 12-30VDC/24VAC, 15mA max.
Optional Temperature Transmitter Output	Digital, 4-20mA (clipped and capped) or 0-5V/0-10V output; accuracy ±0.5°C (±1°F) typical 10° to 35°C (50° to 95°F and 0° to 50°C (32° to 122°F) (switchable)

† The HS sensing element has a 1-year warranty. The element is not a part of the 5-year product warranty.
** Specified accuracy with 24VDC 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.*
**** One side of transformer secondary is connected to signal common, so an Isolation transformer or dedicated power supply may be required.*
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.
EMC Conformance - CE Option: Low Voltage Directive 2006/95/EC and EMC Directive 2004/108/EC.
EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper SURGE PROTECTION (EN 61000-6-1:2007 specification requirements).

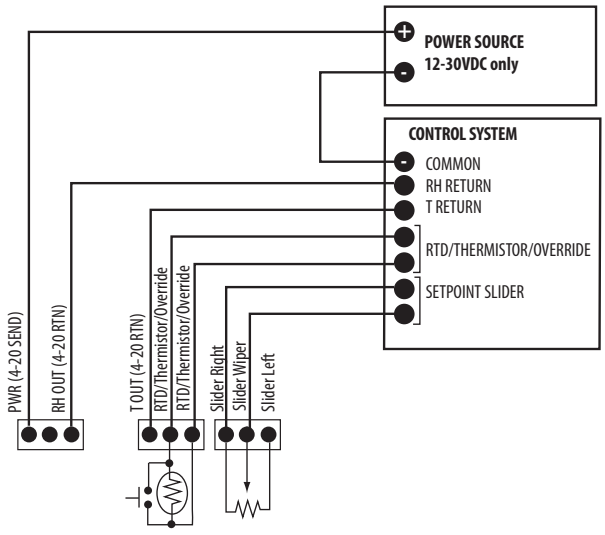
VERIS INDUSTRIES

APPLICATION/WIRING DIAGRAMS

HW Voltage Output (3-Wire, 0-5V/0-10V)



HW Current Output (2-Wire, 4-20mA)



ORDERING INFORMATION

CE *Available*

Options Available

	Display	Accuracy	NIST	US or EU	Temp.	Sensor Type	Temp Cal Cert	Option	Value	Housing
HW	X									
	= No	**1** = 1% **2** = 2% **3** = 3% **5** = 5%	**N** = NIST (1% and 2% only) **X** = No (2%, 3%, and 5% only)	**S** = Standard **C** = CE	**T** = Temp* **X** = No Temp (Stop here)	**A** = Transmitter: 10° - 35°C (50° - 95°F and 0° - 50°C (32° - 122°F) *(switchable)* **B** = 100R Platinum, RTD **C** = 1k Platinum, RTD **D** = 10k T2, Thermistor **E** = 2.2k, Thermistor **F** = 3k, Thermistor **G** = 10k CPC, Thermistor **H** = 10k T3, Thermistor **J** = 10k Dale, Thermistor **K** = 10k with 11k shunt, Thermistor **M** = 20k NTC, Thermistor **N** = 1800 ohm TAC, Thermistor **Q** = 1uA/C, Linitemp **R** = 10k US, Thermistor **S** = 10k 3A 221 **T** = 100k, Thermistor **U** = 20k "D", Thermistor **W** = 10k T2 high accuracy, Thermistor **Y** = 10k T3 high accuracy, Thermistor **Z** = 10k E1, Thermistor	**X** = No Cert **1** = 1pt Cal **2** = 2pt Cal	**1** = Push Button Override **2** = Set Point Slider **3** = Push Button Override and Set Point Slider	**A** = 1k **F** = 10k **G** = 20k **K** = 50k **M** =100k	**Blank** = Cloud white **B** = Black

Options Available

	Display	Accuracy	NIST	US or EU	Temp.	Sensor Type	Temp Cal Cert	Option	Value	Housing
HW	L									
	= LCD	**1** = 1% **2** = 2% **3** = 3% **5** = 5%	**N** = NIST (1% and 2% only) **X** = No (2%, 3%, and 5% only)	**S** = Standard **C** = CE	**T** = Temp* **TA** = Transmitter only **D** = Transmitter and resistive element **X** = No Temp (Stop here)	**None** = Select for TA temp option only **B** = 100R Platinum, RTD **C** = 1k Platinum, RTD **D** = 10k T2, Thermistor **E** = 2.2k, Thermistor **F** = 3k, Thermistor **G** = 10k CPC, Thermistor **H** = 10k T3, Thermistor **J** = 10k Dale, Thermistor **K** = 10k with 11k shunt, Thermistor **M** = 20k NTC, Thermistor **N** = 1800 ohm TAC, Thermistor **Q** = 1uA/C, Linitemp **R** = 10k US, Thermistor **S** = 10k 3A 221 **T** = 100k, Thermistor **U** = 20k "D", Thermistor **W** = 10k T2 high accuracy, Thermistor **Y** = 10k T3 high accuracy, Thermistor **Z** = 10k E1, Thermistor	**X** = No Cert **1** = 1pt Cal **2** = 2pt Cal	**1** = Push Button Override **2** = Set Point Slider **3** = Push Button Override and Set Point Slider	**A** = 1k **F** = 10k **G** = 20k **K** = 50k **M** =100k	**Blank** = Cloud white **B** = Black

Examples:

HW	L	2	N	C	T	A			*Stop Here*
HW	L	2	N	C	T	C	2	2	F
HW	X	5	X	S	X				*Stop Here*

** In order for unit to display both temp and RH, use the TA or D temp selection.*
Temp displayed on LCD is read from temperature transmitter, not resistive element. If only the resistive output is selected for temp. output, LCD will not display temp.

ACCESSORIES


HS

Replacement humidity element (HS)
Replacement covers for wall units (AA51, AA51B, AA52, AA52B)
Replacement cloud white wall housing (AA55)

HUMIDITY