

HW2 PROTOCOL SERIES

Wall Mount Humidity Sensors



The HW2 Protocol Series of humidity sensors for living space is a flexible multisensor platform for use with BAS controllers designed to accept BACnet and Modbus outputs. HW2 Protocol Series sensors are available with three user interface options: touchscreen, LCD with three buttons and blank. Humidity and temperature sensors are included with all HW2 Protocol Series sensors.

SPECIFICATIONS

OPERATING ENVIRONMENT	
Input Power	Class 2; 20 to 30 Vdc, 24 Vac, 50 to 60 Hz
Protocol Output	BACnet or Modbus via RS-485, selectable
Operating Temperature Range	0 to 50 °C (32 to 122 °F)
Operating Humidity Range	0 to 95% RH non-condensing
Housing material	High-impact ABS plastic
Terminal Block Torque	0.5 to 0.6 N-m (0.37 to 0.44 in-lbf)

RH TRANSMITTER	
HS Sensor	Thin-film capacitive, replaceable
Accuracy	±2% from 10 to 80% RH @ 25°C (77 °F)
Hysteresis	1.5% typical
Stability	±1% @ 20°C (68 °F) annually for 2 years
Output Range	0 to 100% RH
Temperature Coefficient	±0.1% RH/°C above or below 25 °C (77 °F) typical

TEMPERATURE TRANSMITTER	
Sensor Type	Solid state, integrated circuit
Accuracy	±0.2 °C (±0.4 °F) typical
Resolution	0.1 °C (0.1 °F)
Range	0 to 50 °C (32 to 122 °F)

DISPLAY MODELS	
Touchscreen	61 mm (2.4 in), color, backlit, capacitive, 240x300 px Setpoint: Temperature, humidity or fan speed selectable Timeout override: Display timeout Lockout override: Touchscreen/button lockout
LCD	52mm (2.05 in), segmented with 3 buttons Setpoint: Temperature, humidity or fan speed selectable Timeout override: Display timeout Lockout override: Touchscreen/button lockout

BACnet & Modbus Field replaceable

Embedded BACnet and Modbus communication protocols...easy systems integration

Replace element in the field... maintain accuracy and minimize downtime

Sensor element

Thin-film capacitive sensor element recovers from 100% saturation

Easy to install

Large wiring terminals on baseplate and snap-on covers with security screw simplify installation and service

Interchangeable element

Fully interchangeable element to 1% or 2% accuracy with NIST calibration certificate...no calibration

Calibration free

Calibration-free interchangeable NIST traceable HS element

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

SETPOINTS	
Temperature Setpoint	Scale: 10 to 35 °C (50 to 95 °F) / 0 to 50 °C (32 to 122 °F)
Humidity Setpoint	Scale: 0 to 100% RH
Fan Speed Setpoint	Off, Low, Medium, High

OVERRIDE	
Override Button	Display models feature momentary override button

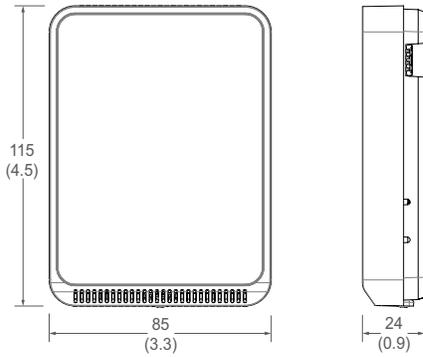
WIRING TERMINALS	
Terminal Blocks	Screw terminals, 18-24 AWG
Screw Terminal Torque	0.2 N-m (2.0 in-lbF) max.

WARRANTY	
Limited Warranty	5 years

COMPLIANCE INFORMATION	
Agency Approvals	UL 916, European conformance CE: EN61000-6-2, EN61000-6-3, EN61000 Series - industrial immunity EN 61326-1, FCC Part 15 Class B, REACH, RoHS, RCM (Australia), ICES-003 (Canada)



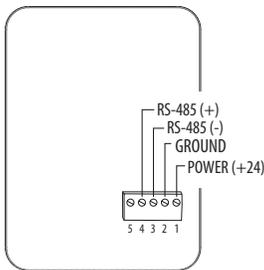
DIMENSIONAL DRAWING



USER INTERFACE TYPES



WIRING DIAGRAM



ORDERING INFORMATION

MODEL	USER INTERFACE	RH*	TEMP	SETPOINT	OVERRIDE
HW2TP2A	Touchscreen	X	X	X	X
HW2LP2A	LCD / 3 Buttons	X	X	X	X
HW2XP2A	Blank	X	X		

* Replaceable 1% with NIST certificate, 2% with NIST certificate and 2% elements available.

REPLACEABLE RH ELEMENTS

MODEL	RH ACCURACY	CALIBRATION CERTIFICATE	DESCRIPTION
HS1N	±1%	X	Replaceable RH sensor, 1% with NIST certification
HS2N	±2%	X	Replaceable RH sensor, 2% with NIST certification
HS2X	±2%		Replaceable RH sensor, 2%



Replaceable RH Element