# HAI — Model 31A00-2 Indoor/Outdoor Temperature and Humidity Sensor

## DESCRIPTION

When connected to an HAI controller, the Model 31A00-2 Indoor/Outdoor Temperature and Humidity Sensor is used for sensing the outdoor temperature and/or reporting the outdoor relative humidity or for sensing indoors temperature and/or reporting the relative humidity from 0 to 100 percent. The Model 31A00-2 features a new, high accuracy temperature sensor that doesn't need calibration.

The temperature can be used to activate programs for controlling temperatures indoors and in attics, garages, greenhouses, basements, wine cellars, and coolers. The temperature can be displayed on the console or spoken over the telephone. It can also report, log, alert, or generate an alarm if the temperature reaches freeze conditions or if the temperature goes above the high setpoint or drops below the low setpoint programmed in the system.

High and low humidity limits can be set for taking action (i.e. turning on the bathroom vent fan, running a/c in de-humidification mode, turning on humidifier in heating mode, etc.) or reporting high or low humidity conditions in homes, greenhouses, wine cellars, coolers, humidors, etc. Controlling humidity is particularly helpful in combating the growth of mold in vulnerable areas of the home, such as bathrooms, basements, attics, etc.

When used outdoors, the Model 31A00-2 should be mounted under an overhang or to the underside of an eave, otherwise known as the soffet, to protect it from direct sunlight and rain. It is coated with a sealant to withstand outdoor moisture. The outdoor temperature and/or humidity can be displayed on the console or spoken over the telephone. Furthermore, the outdoor temperature can be displayed on an HAI communicating thermostat. Automation programs, macros, and indoor appliances can be controlled based on the outdoor temperature and/or humidity.

## INSTALLATION

1. Each Model 31A00-2 requires one zone input for temperature and one zone input for humidity. Run a 4-conductor wire from the controller location to each Model 31A00-2. The humidity sensor can be used without using the temperature sensor.

2. Mount the Model 31A00-2 using the supplied wall anchors and screws. Orient the Model 31A00-2 as shown in FIGURE 1 for the optimal temperature reading. Connect as shown in FIGURE 1.

3. Program the zone type for the temperature output as an Outdoor Temperature (Type 81), Temperature (Type 82), or Temperature Alarm (Type 83) based on the application.

4. Program the zone type for the humidity output as Temperature (Type 82) or Temperature Alarm (Type 83) per application.

**NOTE:** If the controller firmware is Version 2.3 or earlier, the zone used for humidity must be configured as a temperature zone. When viewing the humidity, it will appear as a temperature. Be assured that you are viewing the relative humidity from 0 to 100 percent. For clarity, include the word "Humidity" or an abbreviation thereof in the zone name for each humidity zone.

## SPECIFICATIONS

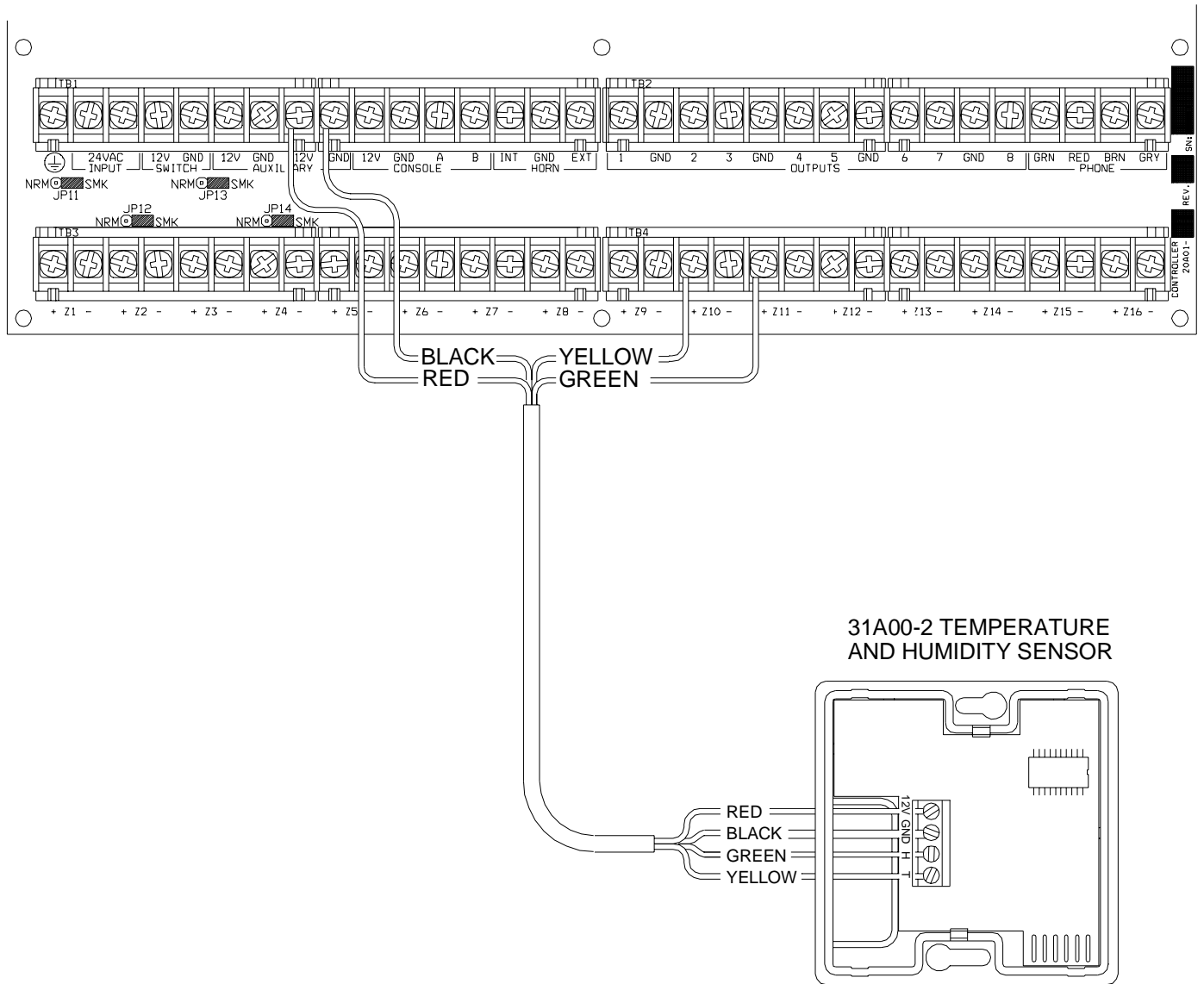| | |
|---|---|
| Dimensions: | 2.75W x 2.75H x 1D |
| Temperature Range: | $0^{o}$ F - $120^{o}$ F |
| Humidity Range: | 0% - 100% relative humidity |
| Current Consumption: | 15mA maximum |

**(Connections Diagram on Next Page)**

# FIGURE 1 – MODEL 31A00-2 CONNECTIONS