



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 indoor temperature and/or reporting the relative humidity from 0 to 100 percent or for sensing the outdoor temperature and/or reporting the outdoor relative humidity. 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 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. For optimal temperature and humidity readings, mount it vertically so that the white arrow (silk-screened onto the board) points upward as shown in FIGURE 1. The plastic enclosure must be mounted so that the airflow slots are at the top and bottom. Connect to controller 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 Humidity (Type 84).

NOTE: If the controller firmware is Version 2.3 or earlier, the zone used for humidity must be configured as a temperature zone type. 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.

When a humidity zone is defined as "Temperature" (Type 82), the "Freeze Alarm" feature must be disabled for the controller. If the "Freeze Alarm" feature is desired, use one of the following alternatives:

- a) Define the humidity zone as "Temperature Alarm" (Type 83) instead. In the case, make sure to set the "High" and "Low" limits to "0" (unless it is being used for alarm purposes). Temperature Alarm zones are not subject to a "Freeze Alarm".
- b) Connect the humidity sensor to a zone that is after the current "Outdoor Temperature" zone (if one is in use). Define the zone as "Outdoor Temperature" (Type 81). The controller uses the data from the first zone defined as and "Outdoor Temperature" when displaying the outdoor temperature on the thermostat and saying it over the telephone. All other zones configures as "Outdoor Temperature" as simply treated as a "Temperature Zone" but are not subject to a "Freeze Alarm".

(Connections Diagram on Next Page)

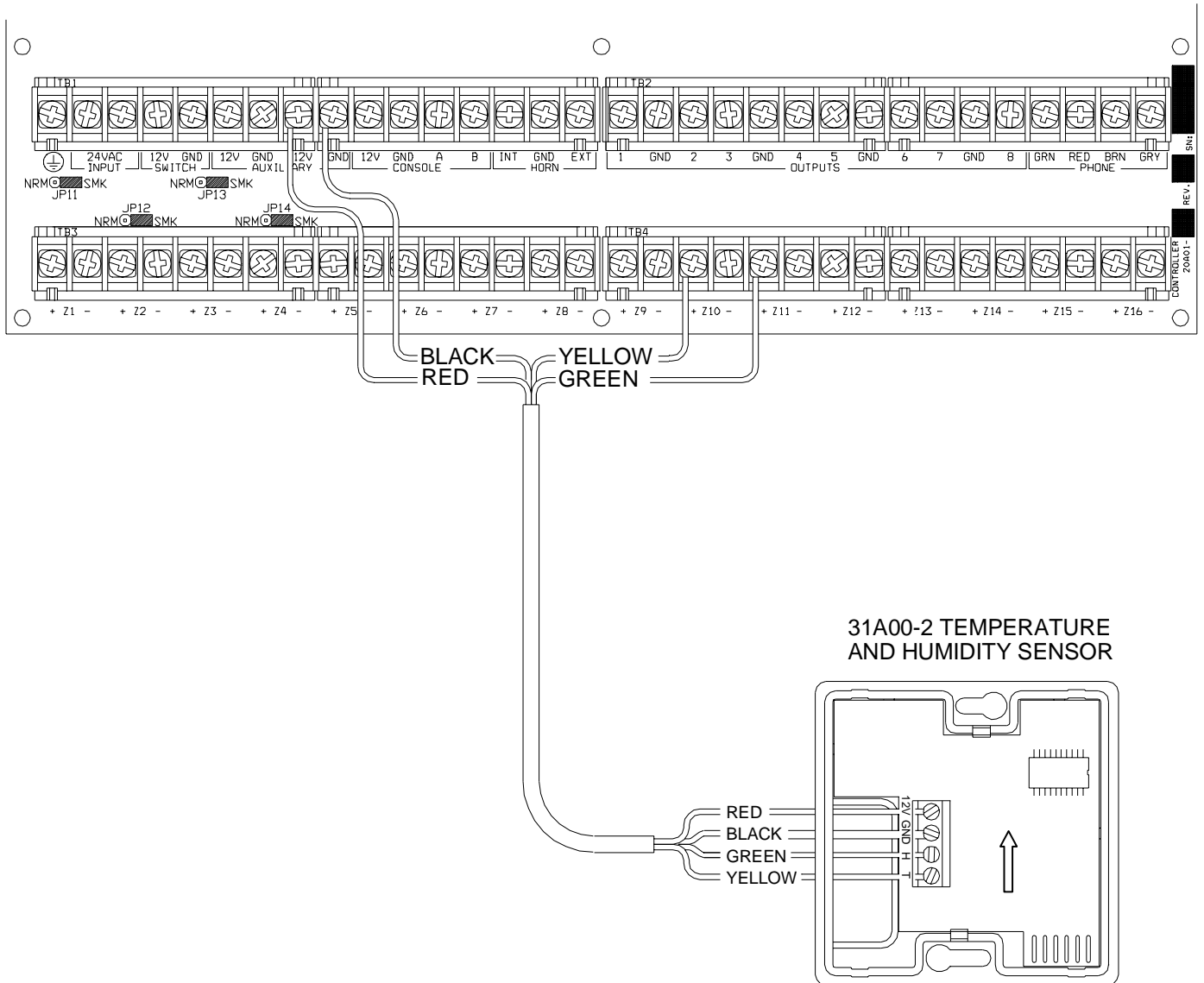


FIGURE 1 – MODEL 31A00-2 CONNECTIONS

SPECIFICATIONS

- Dimensions: 2.75W x 2.75H x 1D
- Temperature Range: 0° F - 120° F
- Humidity Range: 0% - 100% relative humidity
- Current Consumption: 15mA maximum