Model 31A00-8 Extended Range Temperature and Humidity Sensor

DESCRIPTION

The Model 31A00-8 Extended Range Temperature and Humidity Sensor is used for sensing temperatures from -40° F - 120° F when connected to an HAI OmniLT, Omni II, or OmniPro II controller with Firmware Version 2.8 or higher. It can also be used for reporting the relative humidity from 0 to 100 percent. The Model 31A00-8 features a new, high accuracy temperature sensor that doesn't need calibration.

The temperature can be used to activate programs for controlling temperatures in attics, garages, greenhouses, basements, wine cellars, coolers, and freezers. 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 31A00-8 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 31A00-8 requires one zone input on the HAI controller or Expander Module for temperature. The Model 31A00-8 **can not** be connected to a zone on an Expansion Enclosure (i.e. Model 17A00) for temperature. It also requires one zone input for humidity. Run a 4-conductor wire from the controller location to each Model 31A00-8. The humidity sensor can be used without using the temperature sensor.

2. Mount the Model 31A00-8 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 (T) as an "Extended Range" device: ER Outdoor Temperature (Type 85), ER Temperature (Type 86), or Temperature Alarm (Type 87) based on the application.

4. Program the zone type for the humidity output (H) as Humidity (Type 84).

(Connections Diagram on Next Page)

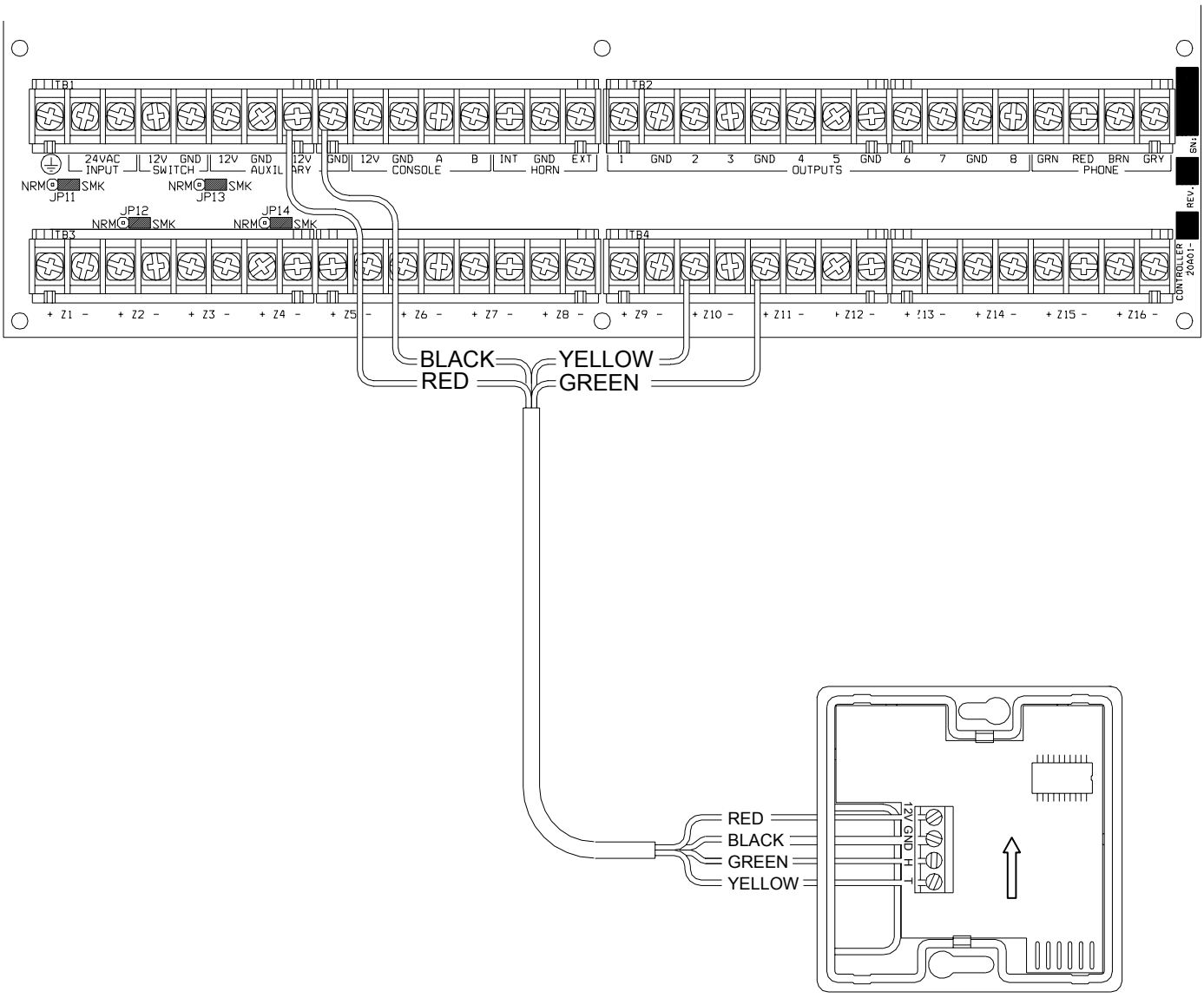

FIGURE 1 – MODEL 31A00-8 CONNECTIONS

SPECIFICATIONS

Dimensions: 2.75W x 2.75H x 1D

Temperature Range: -40^{o} F - 120^{o} F

Humidity Range: 0% - 100% relative humidity

Current Consumption: 15mA maximum