

## Termination

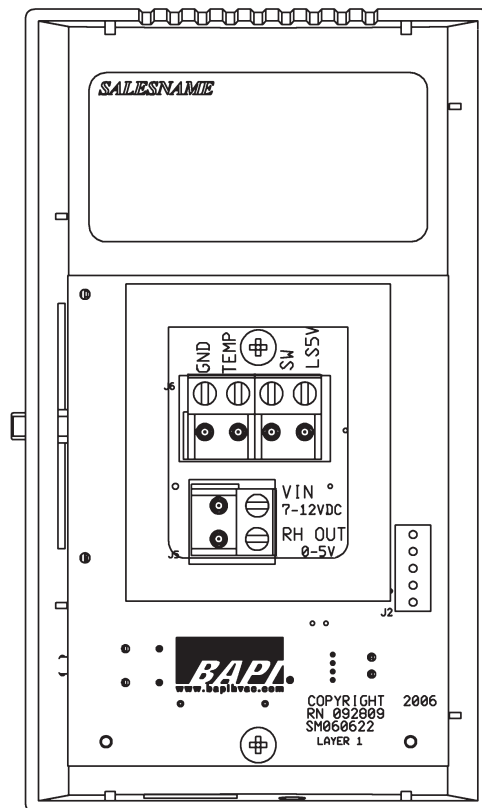
LSBASE2H Terminal Connections			
Terminal	Alt. Name	Lead Color	Function
GND	GND	Black	Ground (sensor, RH)
TEMP	Tx	Green	Room Temperature (sensor)
SW	Rx	Yellow	Not Used
LS5V	PWR	Red	Not Used
RH OUT			Relative Humidity (0 to 5 VDC - 0 to 100% RH)
VIN			7 to 12 VDC for Humidity

LSPLUS2H Terminal Connections			
Terminal	Alt. Name	Lead Color	Function
GND	GND	Black	Ground (sensor, setpoint, TLO, LED, RH)
TEMP	Tx	Green	Room Temperature (sensor)
SW	Rx	Yellow	Setpoint Adjust and TLO
LS5V	PWR	Red	LED
RH OUT			Relative Humidity (0 to 5 VDC - 0 to 100% RH)
VIN			7 to 12VDC for Humidity

The relative humidity signal (“RH OUT” terminal) should be taken to an unused analog input on the controller.

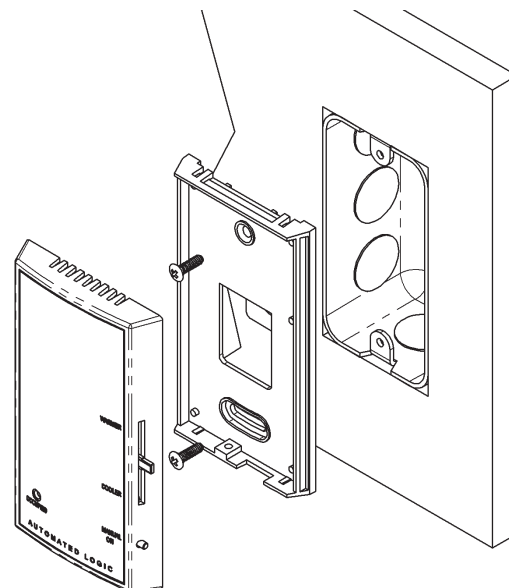
When used with an ALC module equipped with RNet, the RNet 12 VDC supply may be used to power the unit. If there is not a convenient source of 7 to 12 VDC power, an ALC/VC350A or ALC/VC350A-EZ may be used.

*Note: The connectors use a rising block screw terminal to hold the wires. If the block is in a partially up position, the wire may be inserted under the block and the wire will not be held when the screw is tightened. To avoid improper wiring, turn the male connector screws counterclockwise until the block is below the wire opening before inserting the wire. Lightly tug on each wire after tightening to verify proper termination.*



## Mounting

1. Secure the base to the junction box using the #6-32 x 1/2” mounting screws provided.
2. For drywall installation, pre-drill two 3/16” holes 3.275” apart on center. Insert the drywall anchors and secure the base using the #6 x 1” sheet metal screws provided.
3. Terminate the unit as shown in the Terminations section.
4. Attach the cover by latching it to the top of the base.
5. Rotate the cover down.



### Diagnostics

If the unit does not respond properly, please go through the following steps:

1. Set a meter to the “Ohms” setting
2. Disconnect the TEMP, SW and RH OUT terminals from the system

#### Temperature Sensor

3. Measure the resistance from terminal GND to TEMP
4. Compare the resistance reading to the resistance listed in the output table.
5. If the sensor reads significantly lower or 0 Ohms, then the sensor is shorted
6. If the sensor reads significantly higher or OL (overload) then the sensor is open.
7. If the sensor reads properly, verify that the controller is operating correctly.

#### Setpoint and Override

8. Measure the resistance from terminal GND to SW.
9. The resistance should range from 4.75 kΩ to 24.75 kΩ (±10%) as the slide pot is moved from left to right.
10. Pushing the override switch should cause the resistance reading to go to approximately 0Ω.

#### Relative Humidity Diagnostics

11. Measure the voltage from terminal GND to RH OUT.
12. The relative humidity is found by solving the following equation:  

$$\%RH = RH\ OUT * 20$$

Deg F	Deg C	10K-2 Ω
50°F	10.0°C	19,903
55°F	12.8°C	17,439
60°F	15.6°C	15,313
62°F	16.7°C	14,546
64°F	17.8°C	13,822
66°F	18.9°C	13,139
68°F	20.0°C	12,493
70°F	21.1°C	11,884
72°F	22.2°C	11,307
74°F	23.3°C	10,762
76°F	24.4°C	10,247
77°F	25.0°C	10,000
78°F	25.6°C	9,760
80°F	26.7°C	9,298
82°F	27.8°C	8,862
84°F	28.9°C	8,448
86°F	30.0°C	8,056
88°F	31.1°C	7,685
90°F	32.2°C	7,333
95°F	35.0°C	6,530
100°F	37.8°C	5,826

Note: The temperature table shown above is a portion of the entire operating range of the sensor.

Relative Humidity	Output Voltage	Relative Humidity	Output Voltage
0%	0	55%	2.750 VDC
5%	0.250 VDC	60%	3.000 VDC
10%	0.500 VDC	65%	3.250 VDC
15%	0.750 VDC	70%	3.500 VDC
20%	1.000 VDC	75%	3.750 VDC
25%	1.250 VDC	80%	4.000 VDC
30%	1.500 VDC	85%	4.250 VDC
35%	1.750 VDC	90%	4.500 VDC
40%	2.000 VDC	95%	4.750 VDC
45%	2.250 VDC	100%	5.000 VDC
50%	2.500 VDC		