

WeatherBoss

Installation Manual

***BARTLETT* Instrument Co.**

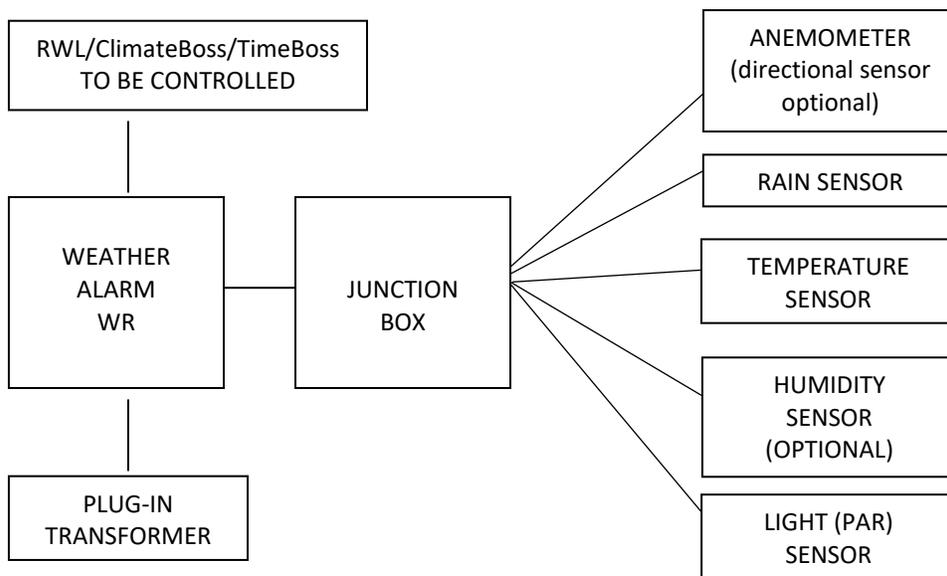
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Installation Overview

Thank you for choosing Bartlett Instrument's WeatherBoss; the weather station that helps protect your greenhouse and improve growing efficiency. The WeatherBoss includes wind, rain, temperature, humidity and light readings. The WeatherBoss is both a wind and rain alarm and can act as a remote sensor module. As a wind and rain alarm, it will activate an output when the wind speed exceeds a programmed wind speed set point or the rain sensor detects a programmed level of moisture on the sensor surface. As a remote sensor module, it can share alarms and readings with other controllers as well as our Headgrower cloud platform.

This manual will guide you through placement and use of the sensors. The Operation manual will guide you through settings and options and explain the function of the WeatherBoss.



A typical installation consists of the WeatherBoss, plug-in transformer, sensor junction box, anemometer (directional sensor optional), rain sensor, and temperature sensor (monitor only). Optional humidity sensor and Light (PAR) sensors can also be connected to the WeatherBoss.

BE SURE ALL POWER IS OFF BEFORE INSTALLATION!



INSTALLATION SHOULD BE DONE BY A LICENSED ELECTRICIAN.

BE SURE ALL WIRING AND EQUIPMENT IS INSTALLED ACCORDING TO LOCAL ELECTRICAL CODES.

THE WEATHERBOSS IS A LOW VOLTAGE DEVICE. LIMITED TO 24V AC CONTROL VOLTAGES.

CAUTION: The WeatherBoss is designed to be reliable but as with all equipment, failures do occur. Therefore, in situations where loss could result from the failure of the WeatherBoss, separate backup thermostat or alarm systems should be provided.

The reliability and performance of the WeatherBoss can be compromised by locating the controller in direct sunlight or in direct water spray. We also recommend when installing the WeatherBoss to wire according to the diagram on page 11 to protect from lightning strikes and power surges.

Junction Box Green ground wire needs to be wired to Earth Ground on its own circuit. Do not wire with other Ground wires from Electrical Circuits.

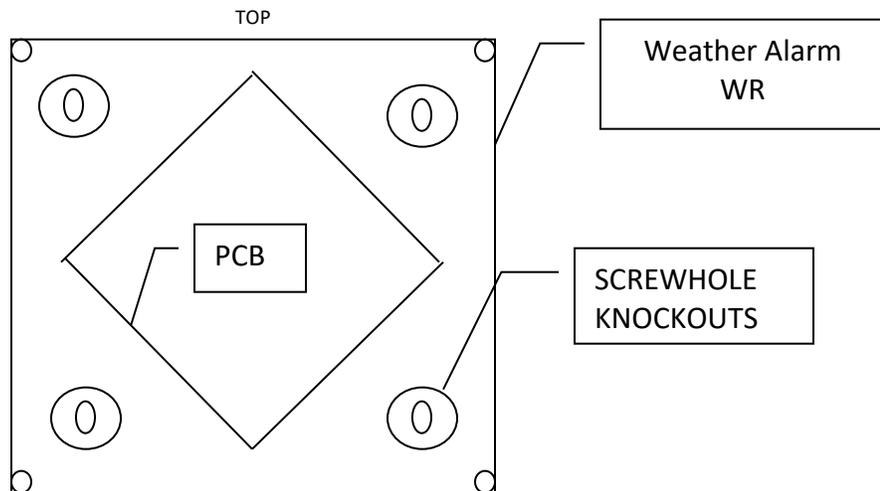
Placement and Mounting

Mount the WeatherBoss in an easily accessible location. Protect the WeatherBoss from direct sunlight for better reliability and readability. Moisture can cause corrosion and premature failure, so avoid direct water and have all wires enter and leave through liquid-tight connectors, waterproof conduit, or seal the wires with silicone sealant. (Do not mount within 2-3 feet of any other Bartlett Controllers)

WARNING: Some sealants release acetic acid while curing. Be sure sealant is completely cured (up to 3 days) before closing control box to avoid corrosion damage.

To mount the WeatherBoss, remove the front cover and unplug ribbon cable from the relay board. Insert the 4 self-drilling screws provided with the WeatherBoss through the 4 screw-hole knockouts and fasten the box to the wall. Cover the screw heads with plastic cups provided. After all wiring is complete and any sealant cured, reattach the ribbon cable and screw on the front cover.

Alternately, the WeatherBoss may be mounted with drywall screws placed through the corner holes of the box.



Rain Sensor

The rain sensor detects moisture on the surface of the sensor. It does not measure the amount of moisture that has fallen. The WeatherBoss junction box has one rain sensor input labeled RS. To ensure proper readings, the rain sensor should be mounted in a location that will not be sheltered from rain from any direction. The sensor should be mounted in an easily accessible location in order to clean any debris from the sensor surface.

The rain sensor comes with 10' leads to connect the rain sensor to the four terminals of the junction box. The white/black twisted pair connect to rain sensor. The red/green twisted pair connect to the rain sensor power.

Anemometer

For anemometer mounting instructions please refer to WS-201-01B manual.

Temperature Sensor

The thermistor is the temperature sensor. The WeatherBoss junction box has one thermistor input labeled TH. To ensure proper readings, the thermistor should not be in direct sunlight or where it will be sprayed with water. The thermistors come with 24' leads and can be connected directly to the two terminals labeled TH. There is no special orientation to the thermistor leads. This is an informational only sensor and cannot be used to control greenhouse equipment.

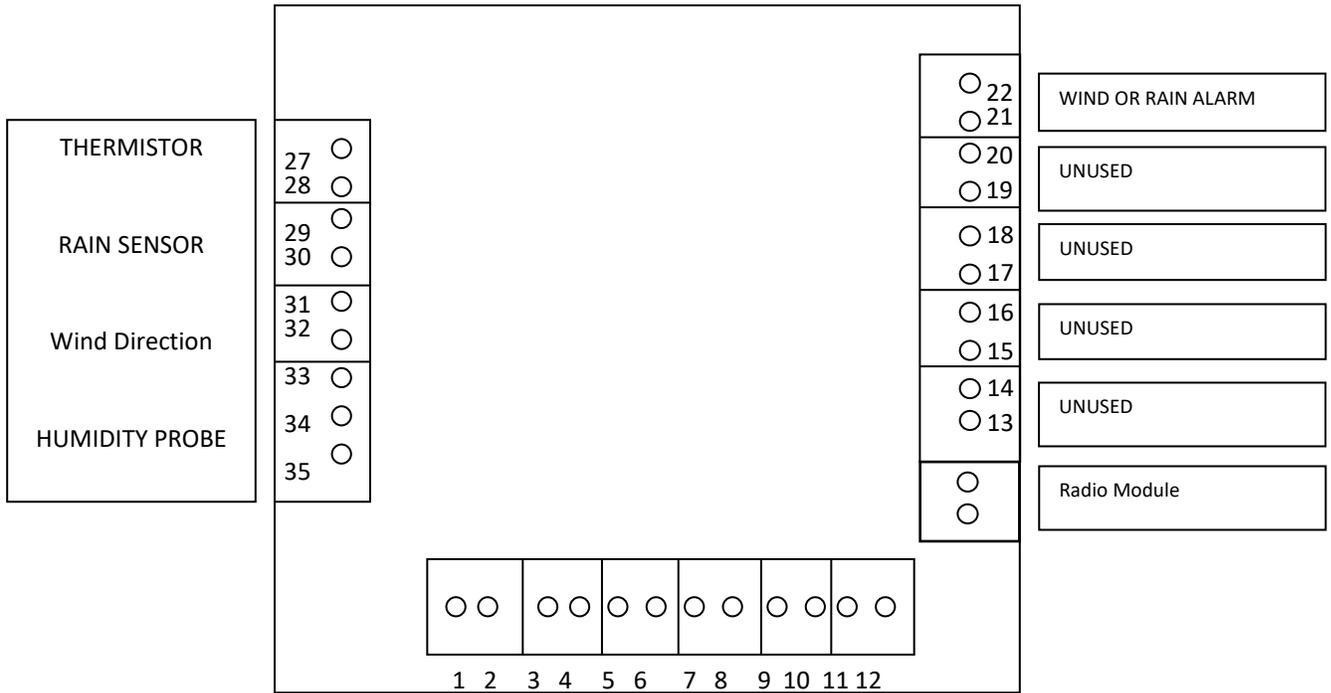
Humidity Sensor

The optional humidity sensor should be mounted in any location that it is necessary to measure humidity levels. The Weather Alarm WR junction box has terminals marked Hum In, Hum Power and Hum GND. To ensure proper readings, the humidity sensor should not be in direct sunlight or where it will be sprayed with water. This is an informational only sensor and cannot be used to control greenhouse equipment.

WeatherBoss Outputs

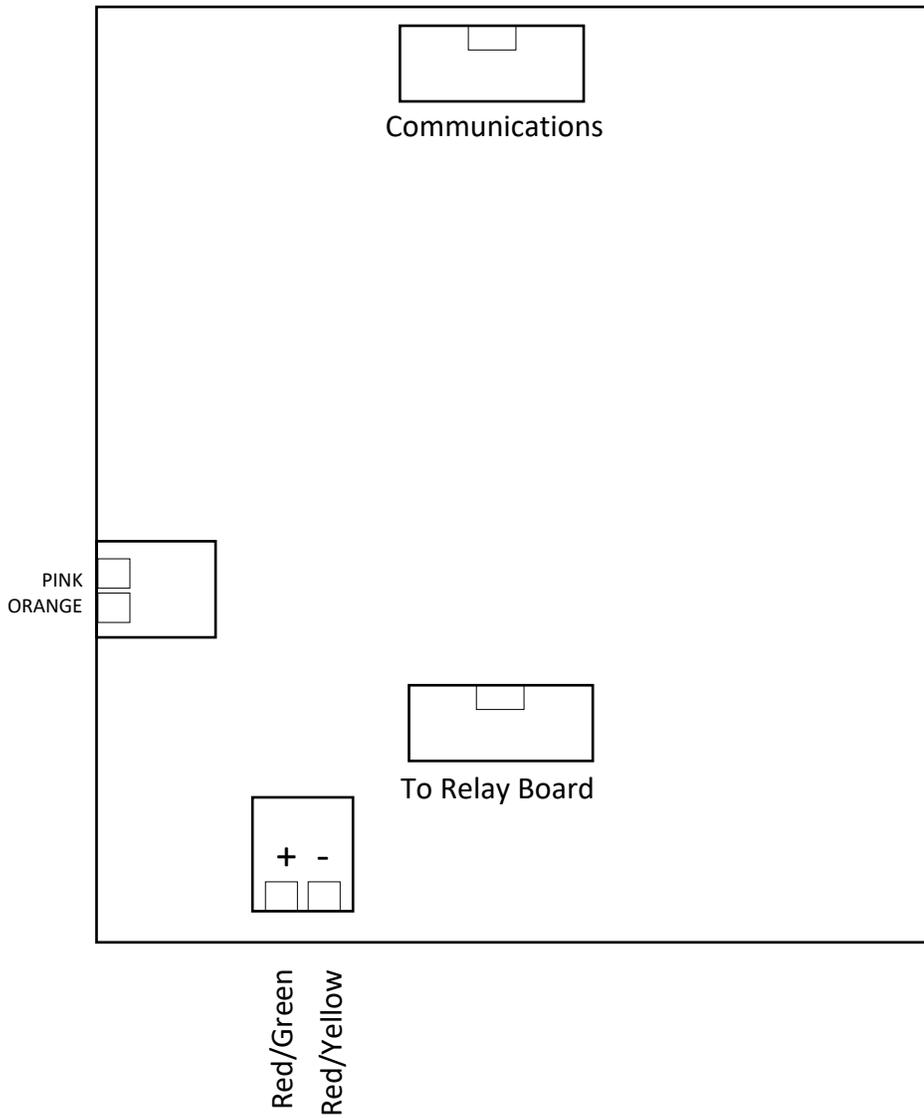
The WeatherBoss has three alarm outputs – wind alarm, rain alarm, and wind or rain alarm. The wind and rain outputs activate separately based on individual sensors. The “wind or rain” output activates when either sensor exceeds its set point.

Connection Locations



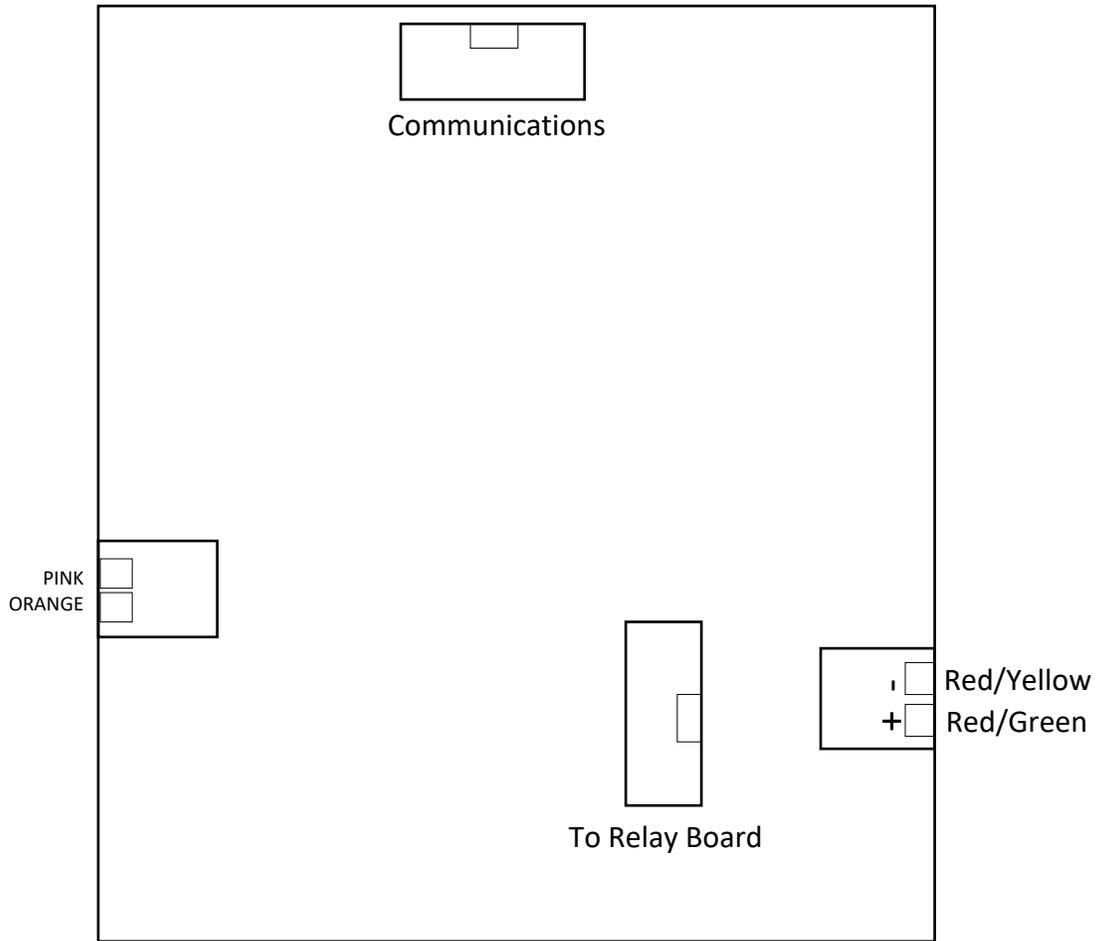
2	2	W	U	U	U	U
4	4	I	N	N	N	N
		N	U	U	U	U
		D	S	S	S	S
		A	E	E	E	E
		L	D	D	D	D
		A				
		R				
		A				
		L				
		A				
		R				
		M				

TERMINAL	DESCRIPTION	TERMINAL	DESCRIPTION	TERMINAL	DESCRIPTION
1	24VAC Power (For Controller and Rain Sensor)	13		25	
2	24VAC COM (For Controller and Rain Sensor)	14		26	
3	WIND ALARM	15		27	THERMISTOR
4	WIND ALARM	16		28	THERMISTOR
5		17		29	RAIN SENSOR
6		18		30	RAIN SENSOR
7		19	RAIN ALARM	31	Wind Direction
8		20		32	Wind Direction
9		21	WIND OR RAIN ALARM	33	HUM. IN
10		22	WIND OR RAIN ALARM	34	HUM. POWER
11		23		35	HUM. GROUND
12		24			



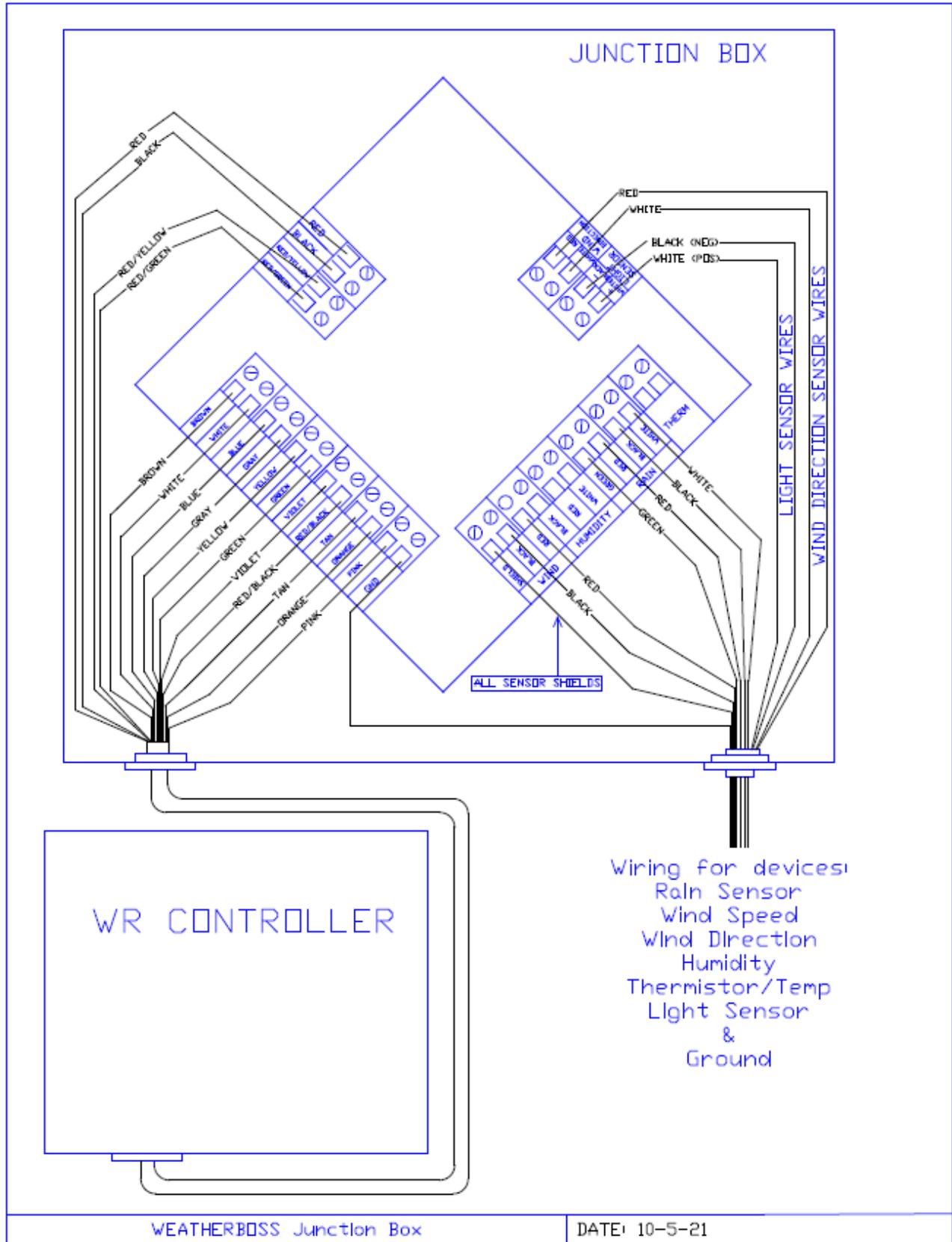
TERMINAL	DESCRIPTION
Pink	Wind Speed Connection
Orange	Wind Speed Connection
Red/Green	Light (PAR) Sensor Connection
Red/Yellow	Light (PAR) Sensor Connection

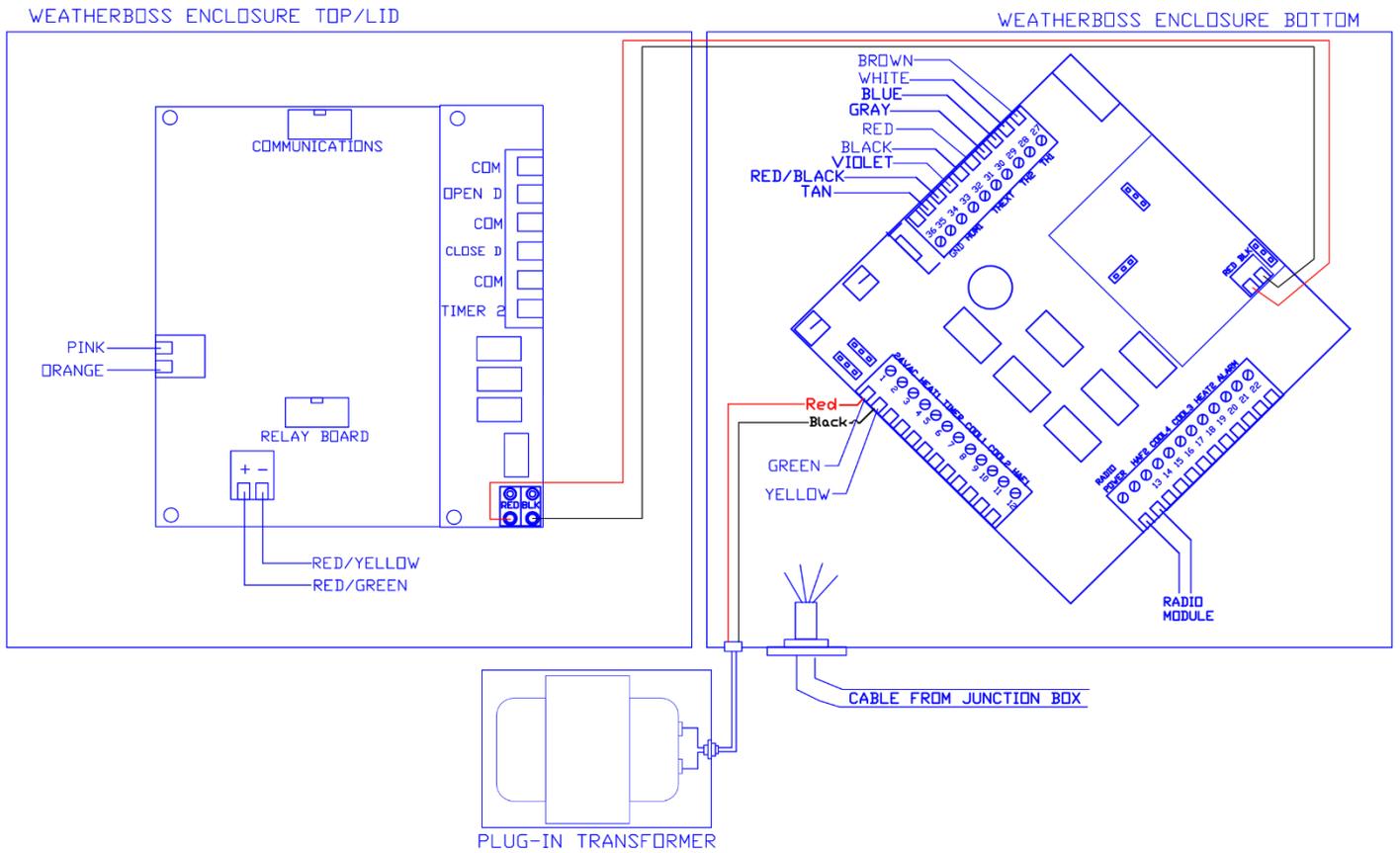
Above diagram is of an older WeatherBoss Controller. (Units manufactured before March 2021)



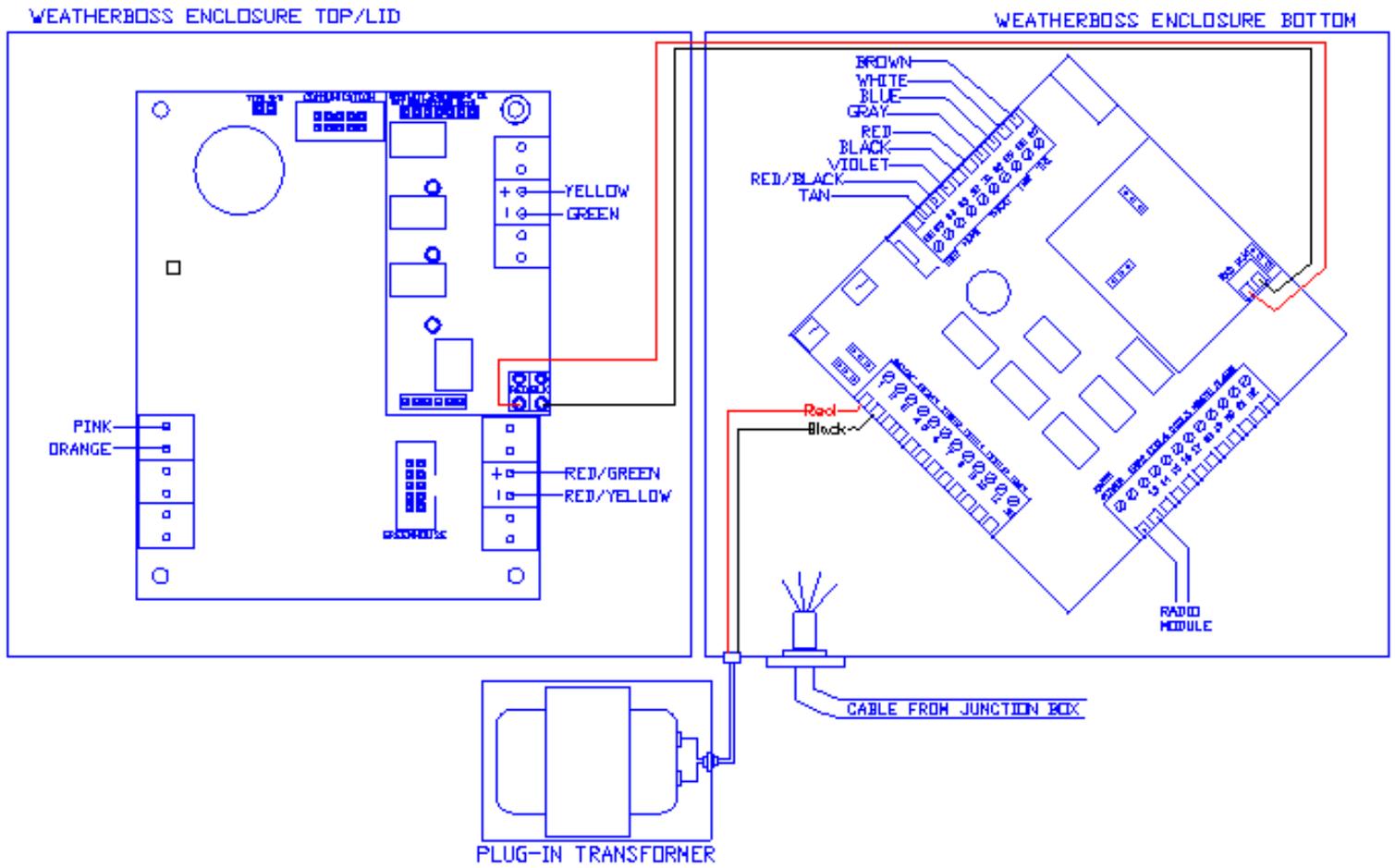
TERMINAL	DESCRIPTION
Pink	Wind Speed Connection
Orange	Wind Speed Connection
Red/Green	Light (PAR) Sensor Connection
Red/Yellow	Light (PAR) Sensor Connection

Above Diagram is of WeatherBoss Controllers manufactured after March 2021.





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