

Scotsman CM³ Photo Eye and Blue Controller Test

Pre-Test: If the unit failure mode is False Bin Full, a Closed bin thermostat will cause the Bin Full light to be ON. Some units had bin thermostats; they were wired to Connection 7. To test: Unplug Connection 7, if the bin full light goes out, replace the bin thermostat.

The Test Requires:

- Quality DC voltmeter / multimeter
- Power connected to unit
- Photo eyes in place
- Eye lenses clear of scale
- Bin door closed
- Top panel on
- Bin NOT full of ice
- Unit switched OFF

Notes:

- The controller has numbers molded into its case. Those are the Connection locations.
- Test with black / negative probe to the lower pin on Connections 3 and 4.
- Insert probes into the wire side of the connector.

Test Procedure:

1. Measure voltage from transformer (Connection 8, top left of controller. Wires orange/violet).
 - A. It should be about 24-30 VAC.
 - B. If not, check line voltage and/or replace transformer.
2. Disconnect wires (to eyes) from Connections 3 and 4. Measure voltage, black probe on bottom pin for each.
 - A. Both should be about 4.9 to 5.1 VDC, confirming good voltage from controller.
 - B. If not, replace controller.
3. Measure frequency output from 3 with a good multimeter.
 - A. It should be about 166-162 HZ, confirming proper operation of the controller.
 - B. If not, replace controller.
4. Reconnect photo eyes to Connections 3 and 4. Measure voltage, black probe on bottom pin for each.
 - A. Both should be about 2.2 – 2.5 VDC, confirming a good signal thru to the detector.
 - B. If lower or higher, replace eyes.
5. Remove emitter photo eye (has red and black wires) from cabinet. Measure voltage again at Connection 3, black probe on bottom pin of each.
 - A. Connection 3 should be about 4.9 to 5.1 VDC, confirming that the voltage changed when no light is detected.
 - B. If not, replace eyes.

If the parts pass the entire test, there is nothing wrong with either the controller or eyes.

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