AutoHot Gen3 Controller Low-Voltage Harness Functions & Troubleshooting Guide

Overview

The AutoHot Gen3 controller uses four low-voltage harnesses for signal and device control connections. Each harness is color-coded and designed for specific functions related to sensors, switches, and indicator devices.

Harness Functions

Harness Color	Function	Description
Black/Black	Temperature Sensor.	The temperature sensor reads the return-line temperature to determine when to start or stop the pump.
Green/White	LED Power Output.	Provides low-voltage power for LED indicators (5 VDC).
Black/Green	Motion Sensor Power.	Constant 5 VDC output for wired motion sensors.
Black/Red	Activation Signal Output.	Momentary switch or motion sensor signal to activate the pump.

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Typical Wiring Configurations

- Basic two-wire momentary switch connection.
- Four-wire LED switch connection (uses Green/White for LED power).
- Wired motion sensor connection (uses Black/Green for power, Black/Red for signal).

Common Installation Mistake

- **Symptom**: Controller turns on and off continuously (24/7).
- **Cause**: Black and Red wires are shorted or permanently connected, simulating a constant 'ON' signal.
- **Result:** Controller behaves as if in 'temperature mode,' activating the pump whenever temperature drops.
- **Fix:** Separate the Black and Red wires or remove any jumper connection.

Step-by-Step Troubleshooting

- Disconnect power to the controller.
- Inspect the Black/Red harness for a jumper or crossed wires.
- If found, remove the jumper or correct the wiring.
- Power the controller back on and observe pump behavior.
- Reconnect switches or sensors one at a time, testing after each connection.

Quick Reference

Symptom	Likely Cause	Fix
Pump Runs Constantly	Black/Red harness shorted.	Remove jumper / correct wiring.
LED Not Lighting	LED not connected to Green/White.	Connect LED to Green/White harness.
Motion Sensor Not Triggering	Power or signal wires swapped.	Power = Black/Green, Signal = Black/Red.

Note

- All harnesses operate at low voltage (5 VDC). Verify correct wiring before powering on the controller to prevent false triggers or continuous cycling.