

Generation 3 Controller

February 9, 2023

v1.0.1

Technical Brief

DS160 Alternate Wiring



Tech Brief - DS160 Alternate Wiring

Part Number(s): 28C0016(G3), 20K0027(White), 20K0005(Black)

Supported User Levels

- ☐ User
- ☒ Installer
- ☒ Developer
- ☒ Factory

Overview

Reports of damaged RS485 Adapters' motion ports has prompted this technical brief to offer an alternate wiring method to bypass a possibly damaged component, and restore full wired motion detection on previously inoperative RS485 Adapter motion ports.

Each of the 2 motion ports on the RS485 support a "primary" and "secondary" motion sense line. The "primary" line is the preferred and well know motion input signal. The "secondary" motion sense line is an alternate input, that offers the identical functionality of primary and only requires changing 1 wire.

BEFORE WE BEGIN

When the RS485 Adapter left the factory, both motion ports were fully tested for "primary" and "secondary" inputs. This means that the units were damaged by a mis-wire, short circuit, or some other calamity in the field.

**Don't repeat this mistake, as it will completely
destroy the motion port!**

Prior to moving wires around the installer MUST VERIFY:

1. The RS485 Adaptor has all 3 power supply light on and bright (24V1, 24V2 & 3.3V).
 - *If any of these LED's are dim or off; STOP. The RS485 must be factory replaced!*
2. Unplug the inoperative motion sensor from the RS485 Adaptor.
3. Double check your current wiring against the original wiring diagram.
4. Reattach the sensor to the RS485 and verify the motion sensor works using the sensors green LED.
5. Proceed with the work-around rewire.

Verify the RS485 Adaptors' Power Supplies

- Disconnect any cables wired to the RS485 Adapter's "motion" ports.
- Power up the G3 system with the RS485 Adaptor
- Verify that all 3 power supply LED's are on and bright.
- If LED's do not illuminate or appear dim, the adapter is damaged and must be factory replaced. STOP and contact the factory

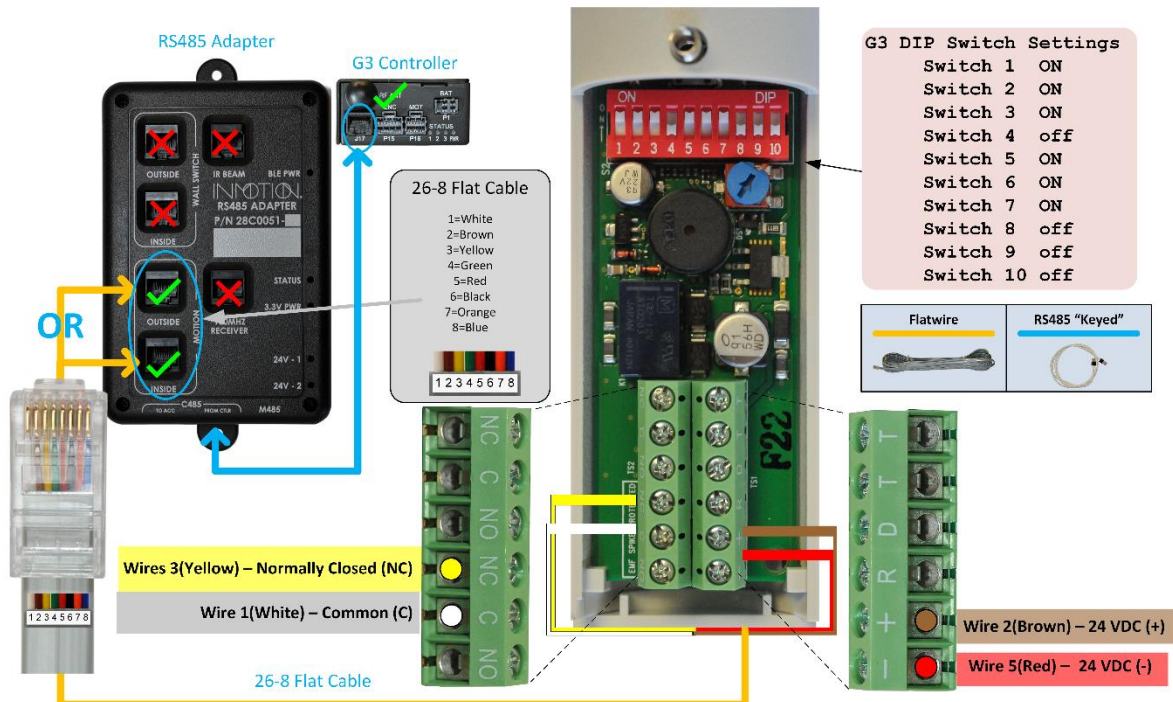


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Double Check Current Wiring

This is the original wiring documented in the G3 Automation installation guide. Right now, your wiring should match this exactly!



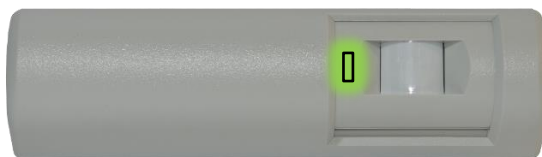
Check the RJ45 Connector Too!

With the RJ45 connectors pointed away from you, clip facing downward...

- The wire colors should match this image
 - White conductor should be on the LEFT
 - Blue conductor should be on the RIGHT

Verify the DS160 Motion Sensor Still Works

- Plug the wired RJ45 connector back into the RS485 Adaptor and power on the G3 System with the doors closed.
- Wait about a minute for the DS160 motions sensor LED to stop blinking and turn OFF.
- Present some motion to the sensor and the LED should blink indicating motion was detected.
 - If the LED does NOT blink, recheck the wiring and/or the DIP switch settings.
 - If the LED fails to detect motion; **STOP. The motion sensor maybe defective.**



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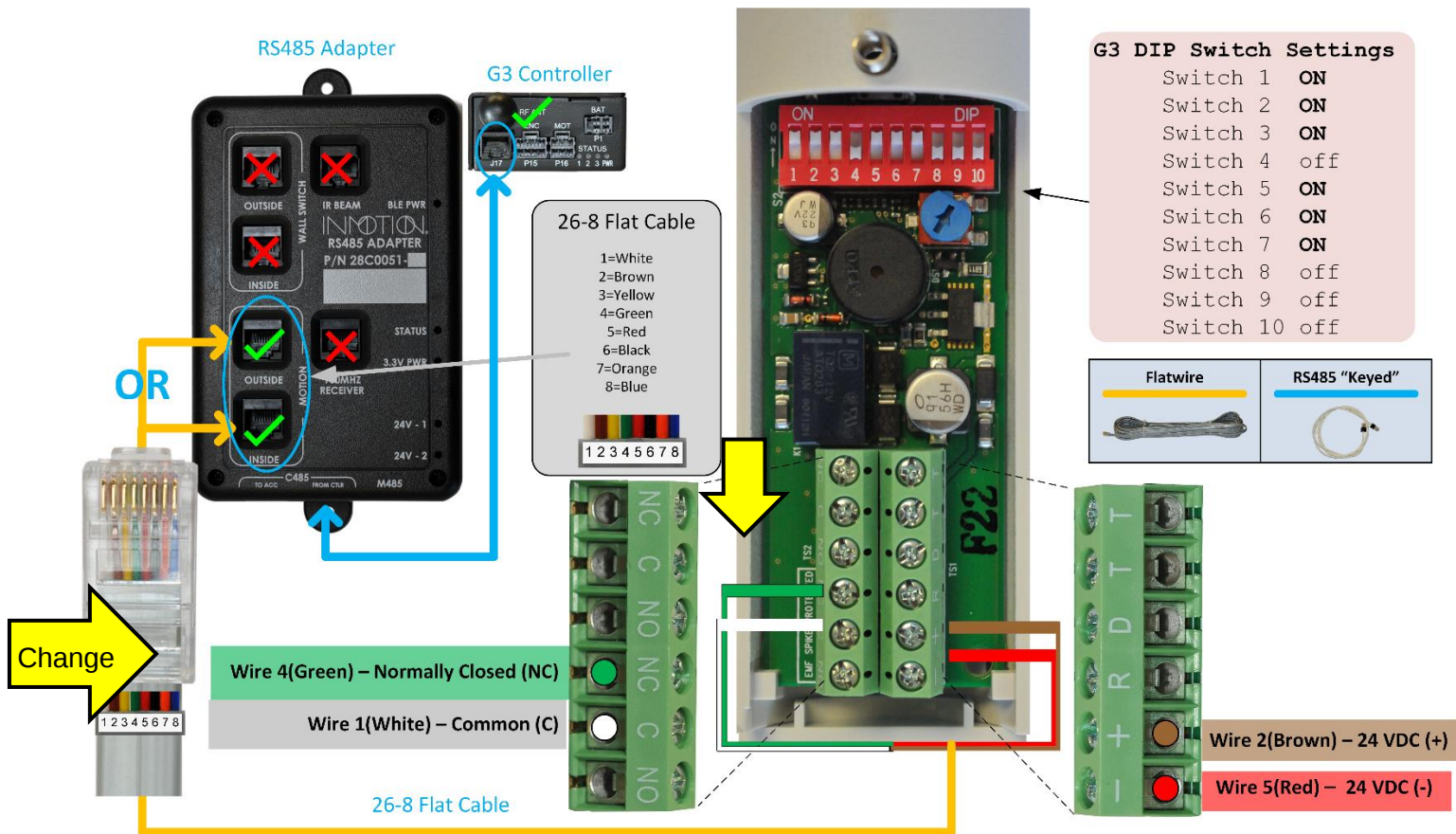
Check G3 for a Motion Signal using Original Wiring

Its possible that one or more of the steps above has corrected the no motion signal detection issue.

- Make sure the G3 controller was powered up with the doors closed.
- With the G3, RS485 Adaptor and Motion detector operational from the previous step, command the door to open. The door can also be manually opened.
- After the door reaches its open position, command the door to close.
- While the door is closing, present some motion to the motion detector.
 - The motion detectors Green led should blink on AND...
 - The G3 should immediately stop the door.
- If the door STOPPED, the motion issue has been resolved.
- If the door does NOT STOP proceed to the next step.

Secondary Motion Signal Wiring

Using the secondary motion signal is very simple. Instead of using the “Yellow” wire connected to the sensors “Normally Closed(NC)” contact, use the “Green” wire. All other wiring at the sensor’s connection points remain the same.



Repeat the Motion Test from the Previous Step

If the door stops during motion, the issue has been resolved.

- If the door does NOT stop the RS485 Adaptor and/or the DS160 Motion Detector are defective.