

**Figure 1. ALC Branch Hub**

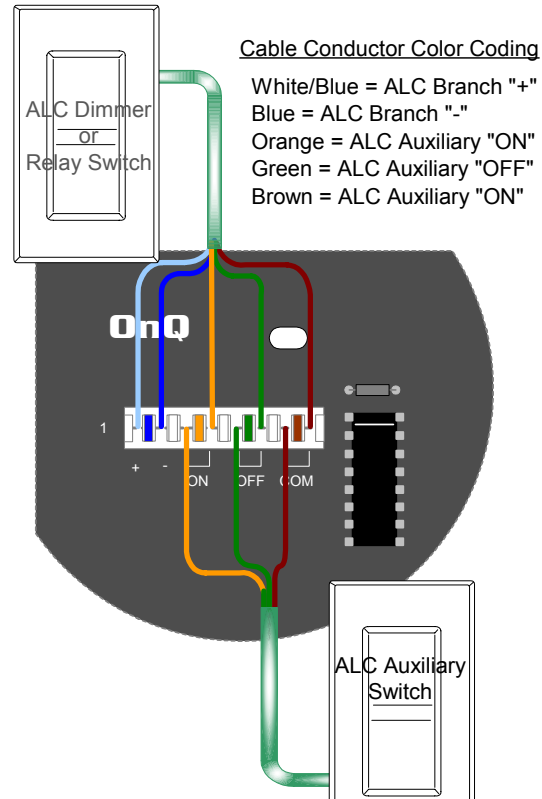
**INTRODUCTION**

The part no. 364677-01 ALC Branch Hub extends the wiring distances of ALC branches up to 1000 additional feet from a lighting controller. The Hub incorporates active electronics that selectively recondition weakened communication signals on an ALC two-wire communications branch. The Hub supports direct wiring of ALC switches to a centralized connection location providing a structured ALC lighting system installation. A direct wiring methodology is conducive to testing and efficient isolation of faults when they occur. The Hub acts as a conduit to pass ALC communications between all connected switches and a lighting controller. A single category cable may provide ALC communications and 12 VDC, 100mA power to each Hub.

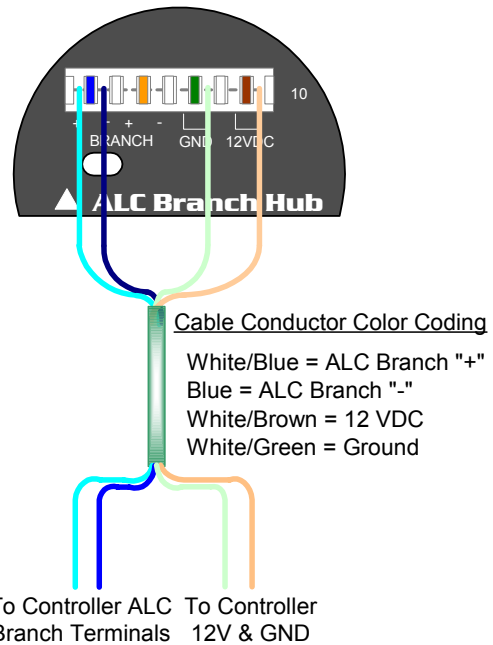
**WIRING**

The ALC Branch Hub provides connection points for up to 9 ALC Dimmers, Relay Switches, Scene Switches, Program Switches or I/O Modules. Refer to figure 1. All connection points consist of 110 style IDC connectors for connection of category 3, 5 or 5E cable. Connection Points 1 thru 7 provide connections for ALC Auxiliary Switches to support 3-way dimming and switching applications. Connection Point 8 is provided for connection of an ALC Scene Switch, Program Switch or an ALC Dimmer or Relay Switch where multi-way local control is not required. Connection Point 9 provides connections for up to 3 ALC Auxiliary switches for 3, 4 or 5-way dimming or switching applications.

The total cumulative length of all cables connecting ALC Dimmers, Relay Switches, Scene Switches, Program Switches and I/O Modules to the ALC Branch Hub should not exceed 500 feet. Connection Point 10 provides connections for a single category 3, 5 or 5E cable that is homerun directly to the lighting controller. Connection Point 10 provides additional connections for cascading additional Hubs. The maximum cable distance between the ALC Branch Hub and the lighting controller should not exceed 1000 ft. Up to four (4) Hubs may be connected to each controller ALC branch. The wiring distance of each Hub from the controller should not exceed 1000 ft. If ALC switches are connected directly in parallel with the Hub to the controller, the total cumulative branch wiring length should not exceed 500 ft. Refer to Figure 6.



**Figure 2. Communications and 3-Way Switching Connections**

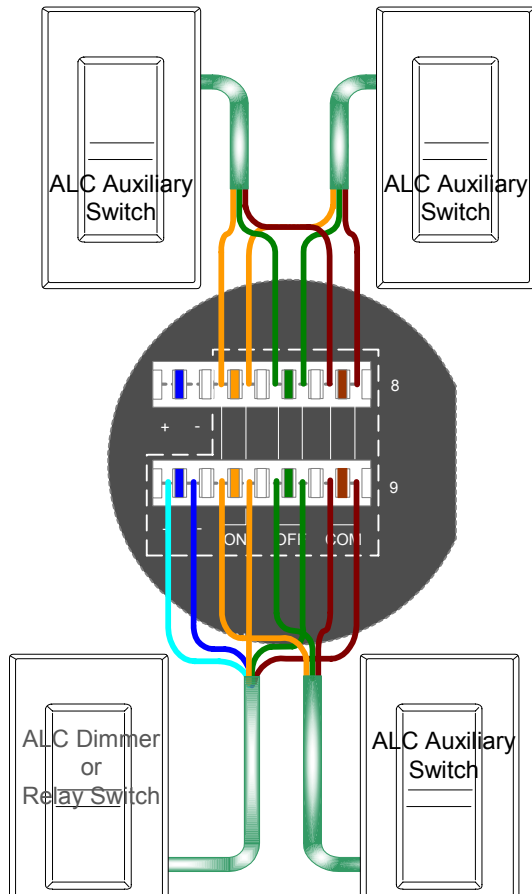


**Figure 3. Connections to Lighting Controller**

**INSTALLATION**

The ALC Branch Hub mounts directly to any two-gang electrical box or old-work construction ring. Subsequent to termination of all cables, the ALC Branch Hub can be mounted and covered with a blank two-gang cover plate. Upon powering up the ALC Branch Hub, the integral green Power LED will illuminate.

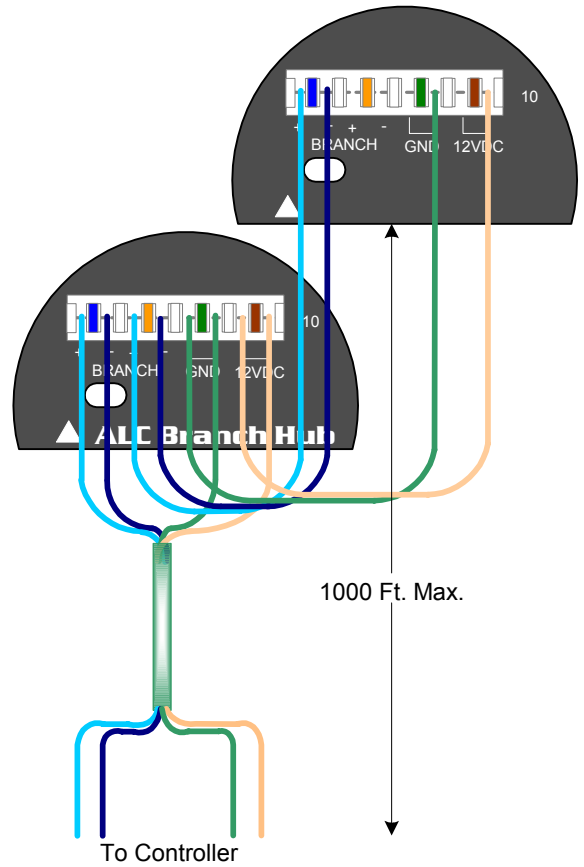
**Notice:** If the green Power LED does not illuminate check the 12 VDC and Ground (GND) power connections. Ensure that correct voltage polarity is maintained when connecting 12 VDC power to the ALC Branch Hub. Failure to maintain correct polarity may result in damage to the ALC Branch Hub.



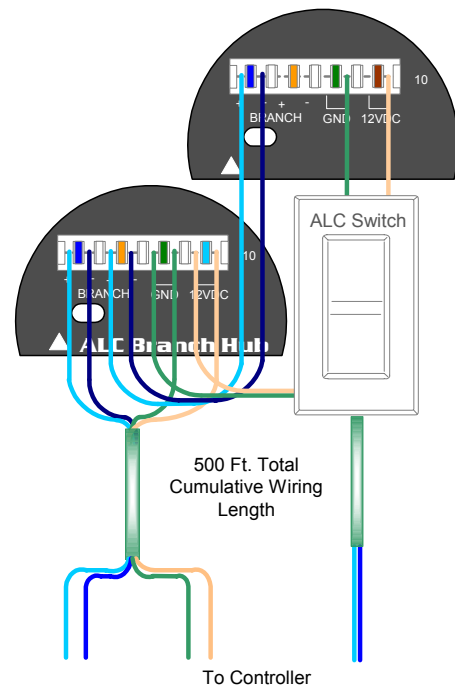
**Figure 4. Communications and 5-Way Switching Connections**

**WARRANTY**

OnQ warrants to the end-user, each new ALC product to be free of defects in materials or workmanship for a period of one year from the date of original purchase from OnQ or its authorized reseller or installer. Each product is deemed warrantable under conditions of normal use and when installed and operated within OnQ specifications and in accordance with the applicable National Electrical Code and Safety Standards of Underwriters Laboratories. When determined to be warrantable, OnQ shall at its option and expense, replace any defective product with a new or reconditioned product. OnQ will continue to warrant any replaced product for a period of ninety (90) days from shipment, or through the end of the original warranty period, which ever is longer.



**Figure 5. Wiring Cascaded Hubs**



**Figure 6. Parallel Switch Wiring Limitation**