

To: LFEV-Y4-2016 Team
From: Geoff Nudge
Data: 4/6/2016
Subject: ITT Cannon Connectors

Abstract

In order to prevent a pack positive pig tail from being plugged into the the same pack's negative outlet, and to facilitate attaching the accumulators to the equipment in AEC 401, a connector scheme has been developed.

Technical Findings

It should be noted that connectors of the same color and opposite gender will mate. No other connection is possible. Genders are defined as drain and source (by the manufacturer). Drains can be identified by their white spring loaded center pin (source pins are not movable with a cable installed). Sources may also be identified as by the fact that they surround a drain when connected. Further details on the differences between components and part numbers are available here:

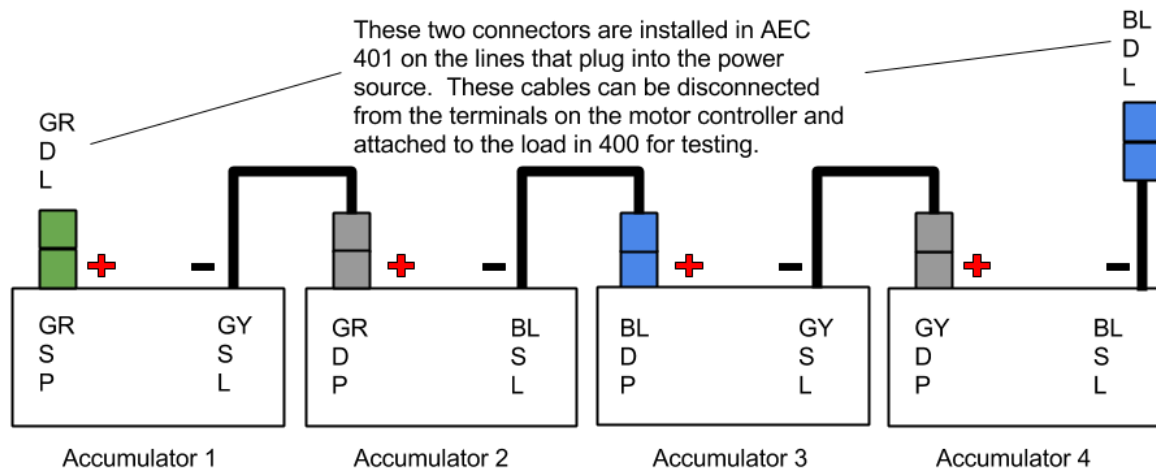
<http://www.farnell.com/datasheets/1645725.pdf>

A diagram of how the connectors are installed and interconnect is attached. Note that because Accumulator 2 and 4 use the same connectors, a 2 accumulator setup and 4 accumulator setup are both possible. Also note, that while some test connector positions are not present in the diagram, this is because the cables in AEC 401, or cables used for another pack may be used.

Recommendations and Decisions

There are spare connectors for the gray connectors only. If spares are desired (for maintainability) or if it is desired that the cables in AEC 401 remain installed and intact. A further purchase may be warranted. At the time of this memo, each connector listed below is available from Newark for between \$50 and \$75. Below is a link to a blue source line connector:

<http://www.newark.com/itt-cannon/nls-n-bl-s120-m40a/line-source-neutral-blue-400a/dp/44W4346?selectedCategoryId=&exaMfpn=true&categoryId=&searchRef=SearchLookAhead>



Connectors
for Testing



GY
D
L

GY
S
L

BL
S
L

KEY

BL - Blue

S - Source

GR - Green

D - Drain

GY - Gray

P - Panel Mount

L - Line, for connection to a cable