

AeroSun VXI FAQ

Contents

1. What connector does the VXI light have?	1
2. What is the pinout of the main VXI light?.....	1
3. What is the pinout of the trailing edge VXI light?.....	2
4. What type of wire should be used for the VXI light?.....	2
5. Can the VXI light be grounded to the airframe?.....	2
6. How do you crimp the pins onto the wires for the 194180026 mating connector?	3
7. Where can I find information on this family of connectors?.....	3
8. How many switches are required for the VXI light?	3
9. What does the wiring diagram look like?	3

1. What connector does the VXI light have?

The connector that is in the main body of the VXI light is Molex part number [194270012](#). There is one of these in each wingtip. These connectors have a maximum current rating of 18A per contact.

What is the mating connector that will be located at the end of the harness that plugs into the VXI Light's connector. There are [multiple mating connectors](#) to this part number. AeroLEDs will ship the [194180026](#) mating connector with the light. We will also be including the [crimp pins](#) that are used with that connector. If a user wants to use a different mating connector for the 14-16 AWG wire, they will need to purchase that and the appropriate pins themselves.

2. What is the pinout of the main VXI light?

- #1 Landing power (maximum 7A per wingtip)
- #2 Taxi power (maximum 3.5A per wingtip)
- #3 Wig Wag enable (not power)
- #4 Landing synchronization – connect between wingtips, for wig wag

operation.

- #5 Navigation/Position power (maximum 1.2A per wingtip)
- #6 ACS power (maximum of 5.3A per wingtip)
- #7 ACS synchronization – connect between wingtips.
- #8-#12 – Ground pins

3. What is the pinout of the trailing edge VXI light?

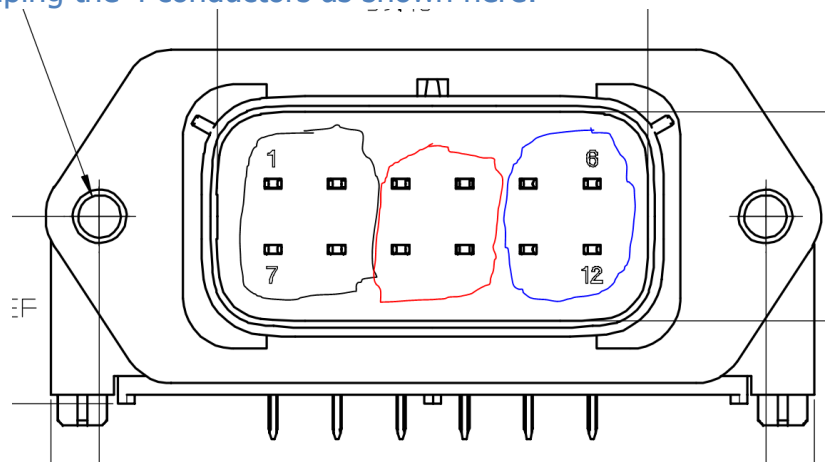
This will be a separate 6 pin connector (KIT 62)

- #1 is Ground (black) – connect to harness any of the pins #8-#12
- #2 is ACS power (yellow) – connect to harness pin #6
- #3 is Position power (Red) – connect to harness pin #5
- #4 is Convenience power (Blue) connect to harness, should be unique wire.
- #5 Green is ACS synchronization (Green) – connect to harness pin #7
- #6 is unused.

The trailing edge light will have 6 colored wires that will be 48" long to splice into the main harness that will be feeding the main VXI light.

4. What type of wire should be used for the VXI light?

Aeroleds recommends using 3 strands of 4 conductor shielded wire. Grouping the 4 conductors as shown here:



5. Can the VXI light be grounded to the airframe?

Aeroleds does not recommend grounding locally to the airframe. The reason being is that when current strobes within a wire (ACS or Wig-Wag

operation) an electric field and a magnetic field are created and collapse each time current is started and stopped. If lights are grounded to the airframe those fields are actually created in the airframe and can cause noise in other systems.

Also when lights need to communicate with each other as is the case with the ACS and Landing synchronization, the 4 lights (left wingtip, left trailing edge, right wingtip, right trailing edge) need to be at the same ground potential.

6. How do you crimp the pins onto the wires for the [194180026](#) mating connector?

Aeroleds has a [video](#) on how to crimp pins for Molex connectors. This video is for a different connector, but it is the same family of connector so all the instructions are the same.

7. Where can I find information on this family of connectors?

Click [here](#). This will tell you how to plug and unplug connectors properly.

8. How many switches are required for the VXI light?

The functionality of the light is done in such a way that if power is applied to both Landing and Taxi wires at the same time, the Landing function will have priority. Which means these two functions can share a 3 position switch (SPDT). The switch should be able to handle 14A of DC current. Such as: [switch](#)

The Navigation Light and ACS lights could also share a [switch](#). Using a DPDT power could be applied to pins 2 and 5, Navigation/Position power to pin 3 and pin 4, ACS power connected to pin 6. This would have off as the center, Navigation/Position on in on direction and both Navigation /Position and ACS on when the switch is flipped to the opposite direction. Convenience will require it's own switch. If Navigation/Position or ACS is powered the LEDs of the Convenience light that shine on the ground will be disabled.

Wig-Wag will require it's own switch. The light will Wig-Wag in either Landing or Taxi modes.

9. What does the wiring diagram look like?

