Hero™ 16 Amp Tap Commander Installation Guide

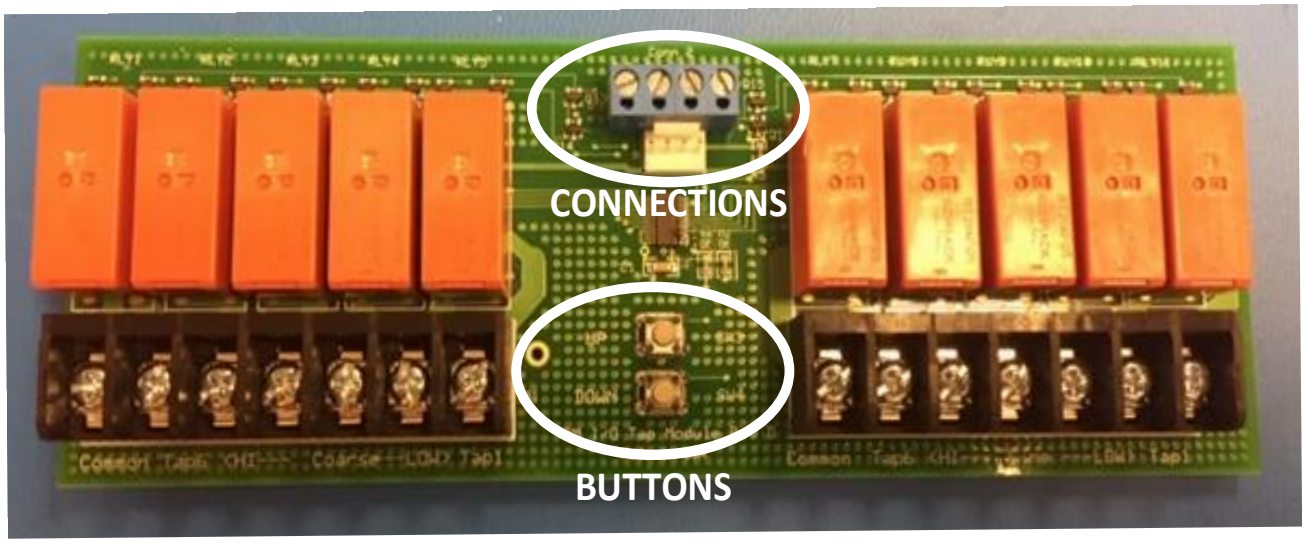
The 16 Amp Tap Commander ™ connects to the Rectifier and Hero 1 or Hero 2 Rectifier Monitor and allows the user to adjust the output voltage of the rectifier either locally, remotely via OmniView or automatically to keep the rectifier output current relatively constant.

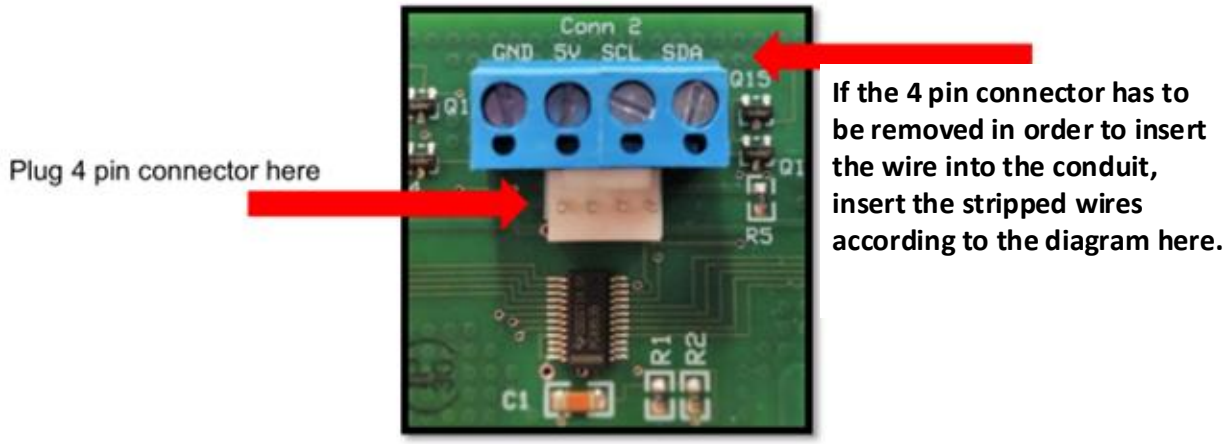
NOTE: If a Solid State Relay (SSR w/Bypass) is in use, it must interrupt on the DC side of the rectifier

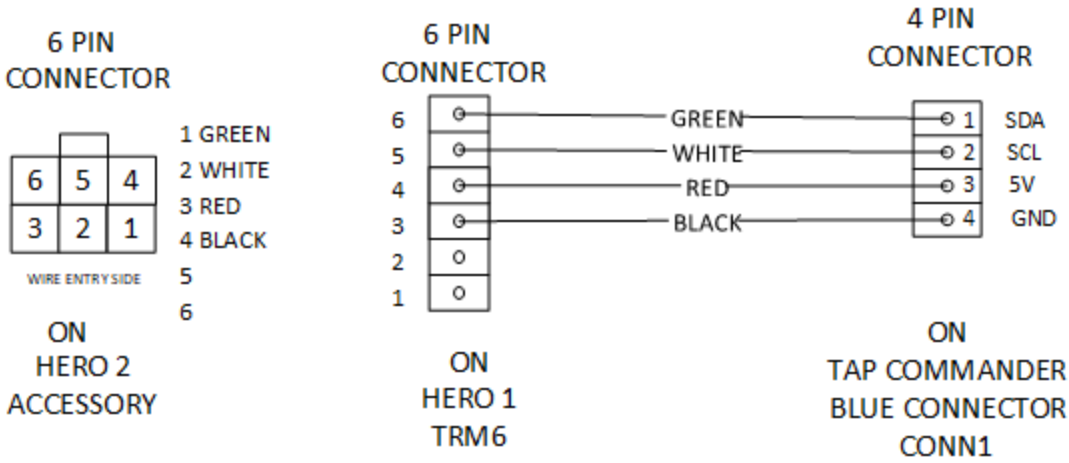
1. Verify the following components are included in the package and are free from damage:
   - Tap Commander Module
   - Tap Commander Interface Cable (6') (Located with the Hero wiring)
   - 14 Yellow Tap Wires
   - Snap-Track (for mounting the Tap Commander)
   - Installation Instructions
2. Before installing the Tap Commander:
   - Note the Tap Numbers of the shorting bars on the rectifier
   - Using a multimeter, measure and record the Shunt Voltage
   - Using a multimeter, measure and record the Output Voltage
   - Install the Hero RMU (see installation guide included with the Hero)
   - **During the installation of the Hero, route the Tap Commander Accessory cable through the conduit. See the note on the next page if you must cut the 4 pin connector off of the Accessory cable.**
   - Make sure the current protection wires are firmly screwed down on the external Interrupter Relay connections.
   - Turn on the AC power to the rectifier and confirm the **Blue** Heartbeat LED on the Hero board is blinking once per second (this can take up to ten minutes)
   - **The external Interrupter Relay must be wired correctly and operational before installation of the Tap Commander.**
     - **Hero 1** – Test the Interrupter Relay by issuing a Rectifier Off command from Omniview. Confirm the relay is open by using a multimeter to measure mV across the shunt, the mV reading should be zero. After confirmation, issue a Rectifier On command from Omniview.
     - **Hero 2** - Test the relay by pressing and holding the red "Interrupter Relay" button for three seconds, on the Hero 2 Interface Board. The Red LED should illuminate below the red "Interrupter Relay" button signifying the relay is open. Confirm the relay is open by using a multimeter to measure mV across the shunt, the mV reading should be zero. After confirmation, press and hold the red "Interrupter Relay" button until the Red LED goes out on the Interface Board. **NOTE: The button on the Interface Board are only active when the blue Heartbeat light is flashing.**
   - The external Interrupter Relay is an integral part of the Tap Commander design. If the external Interrupter Relay is not working correctly, **do not** proceed with installation of the Tap Commander until that problem is resolved

3. Installation:
   - Power down the AC to the Rectifier
   - Remove the shorting bars from the rectifier
   - Route the Interface cable through the conduit from the Hero to the rectifier. If the 4-pin connector must be removed on the Interface cable to route through the conduit, insert stripped wires according to the diagram below, otherwise plug in the 4-pin connector on the Interface cable as shown.
   - Connect the Data wires to the Tap Commander before mounting the Tap Commander inside the Rectifier (the unit comes with magnetic feet that can be attached to the side or back of the rectifier or the unit can rest on the screen at the bottom)

16 Amp Tap Commander Circuit Board







- Plug the 6 pin connector into the designated connector on the Hero:
  - Hero 1 - TRM6 on the main board.
  - Hero 2 - ACCESSORY on the Communication Module
- Route the yellow Tap Wires **except for the Common wires** to the appropriate taps on the rectifier. Each Tap Wire is labelled on both ends as follows:
  C(OARSE COMMON), C1, C2, … C6 (Coarse 1, Coarse 2…Coarse 6)
  F(INE COMMON), F1, F2… F6 (Fine 1, Fine 2…Fine 6)
- Connect the Ring Terminals to the Rectifier Taps as labelled. If the Rectifier has less taps than 6 coarse/fine, combine the higher wire numbers (e.g. 5/6) on the last coarse (or fine) tap

4. Call in to OmniMetrix Tech Support, 770-209-0012 ext. 2 for initialization of the Tap Commander
5. Have the Tap Numbers, noted during Step 2, ready for the OmniMetrix Tech Support representative. He will guide you through the rest of initialization process.
6. Once the OmniMetrix tech representative has completed the initialization process, measure the shunt mV with a multimeter and confirm that it corresponds with the data from Step 2

7. Installation is now complete

- The Tap Commander has Up/Down buttons for operating the taps on site

- It is possible to adjust the Taps, by pressing and holding the “Up” or “Down” button, until the desired Output Voltage and Current is reached. After the button is released, you must wait for the Hero to go into normal communication mode (the Blue Heartbeat LED will blink once per second) before further adjustments to the Tap settings can be made