

WAGO® Inline Connector to Powerpoles Adapter Project
Connector Workshop – 9/14/2025

The project as described below is built with 12-gauge solid copper wire and 30 Amp PowerPole contacts. I recommend keeping the total amperage when in use to a maximum of 30 Amps.

Please contact me with any questions regarding the project. I can also arrange for you to borrow any needed tools to complete your kit and/or build additional kits.

Any construction comments are welcome for consideration for a future update to the documentation.

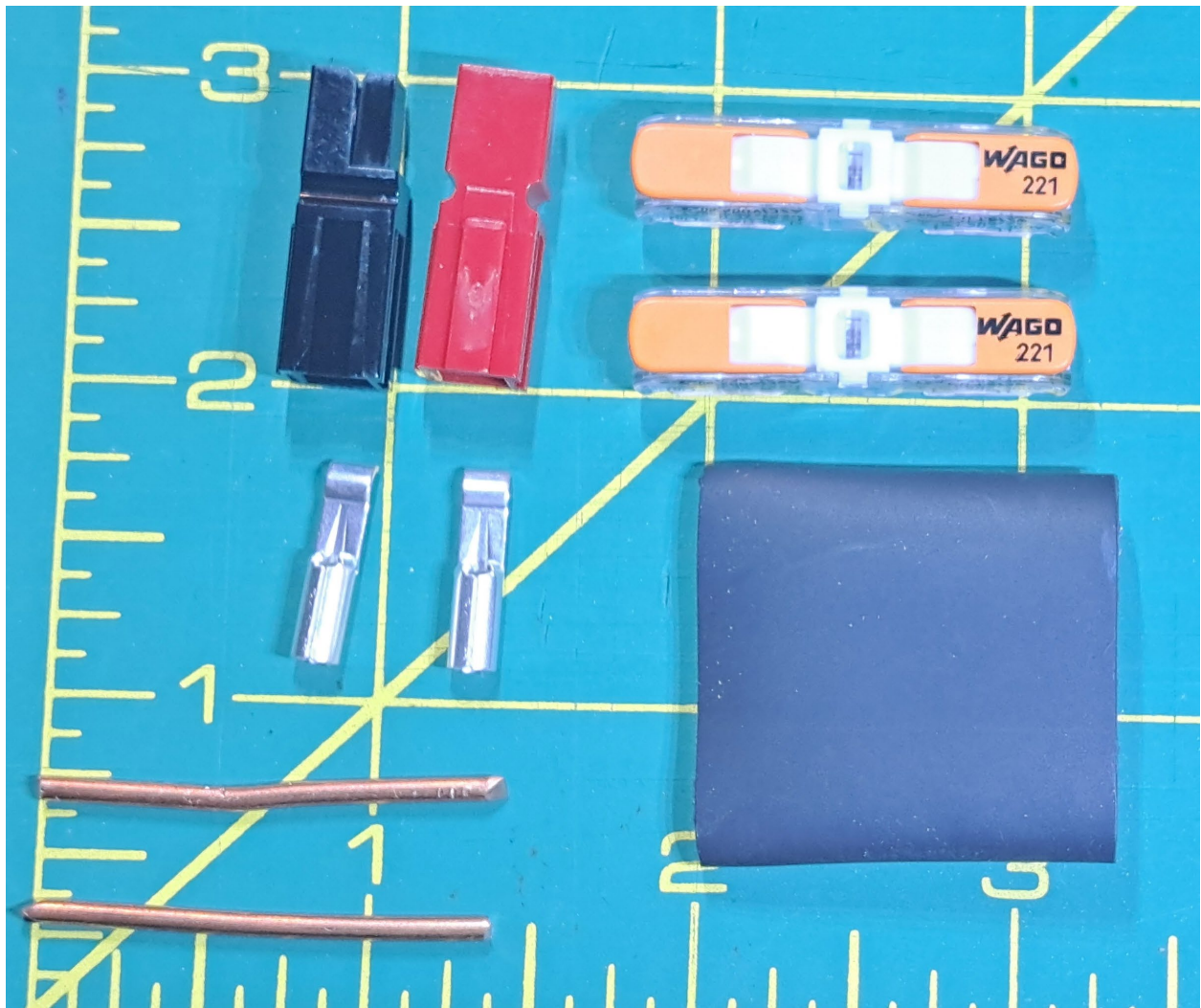
This document is also available online for reference/download at:
<https://thewebniche.net/>

73

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Provided Kit Parts:

- (1) Black 15-30-45A PowerPole Housing
- (1) Red 15-30-45A PowerPole Housing
- (2) 1 3/8" 12 AWG wire pieces (AWG = American Wire Gauge)
- (2) 30A PowerPole contacts
- (2) WAGO® 221 Inline Connectors
- (1) 3/4" diameter, 1 1/4" long, 2:1 Heat Shrink Tubing



Recommended tools:

PowerPole Crimper

Heat Gun

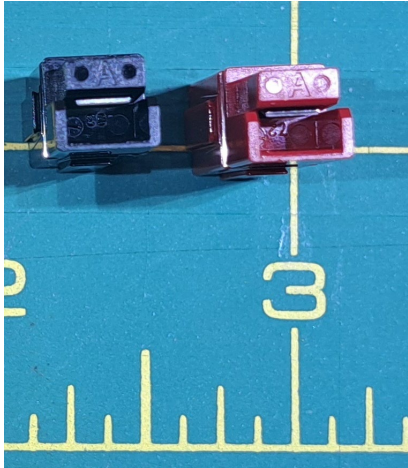
Wire Cutters

Pliers

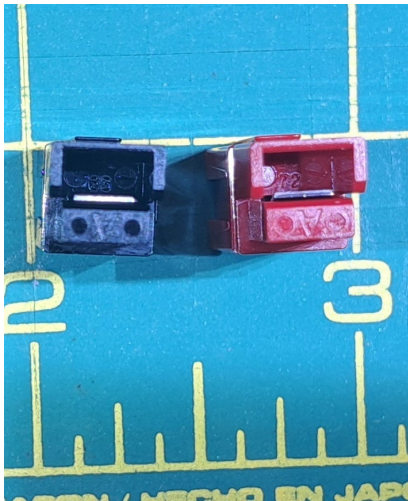
Proper PowerPole Orientation is critical to the success of this project.

Red Right Tongue Up

This is the correct orientation. Always ensure that this orientation is maintained.

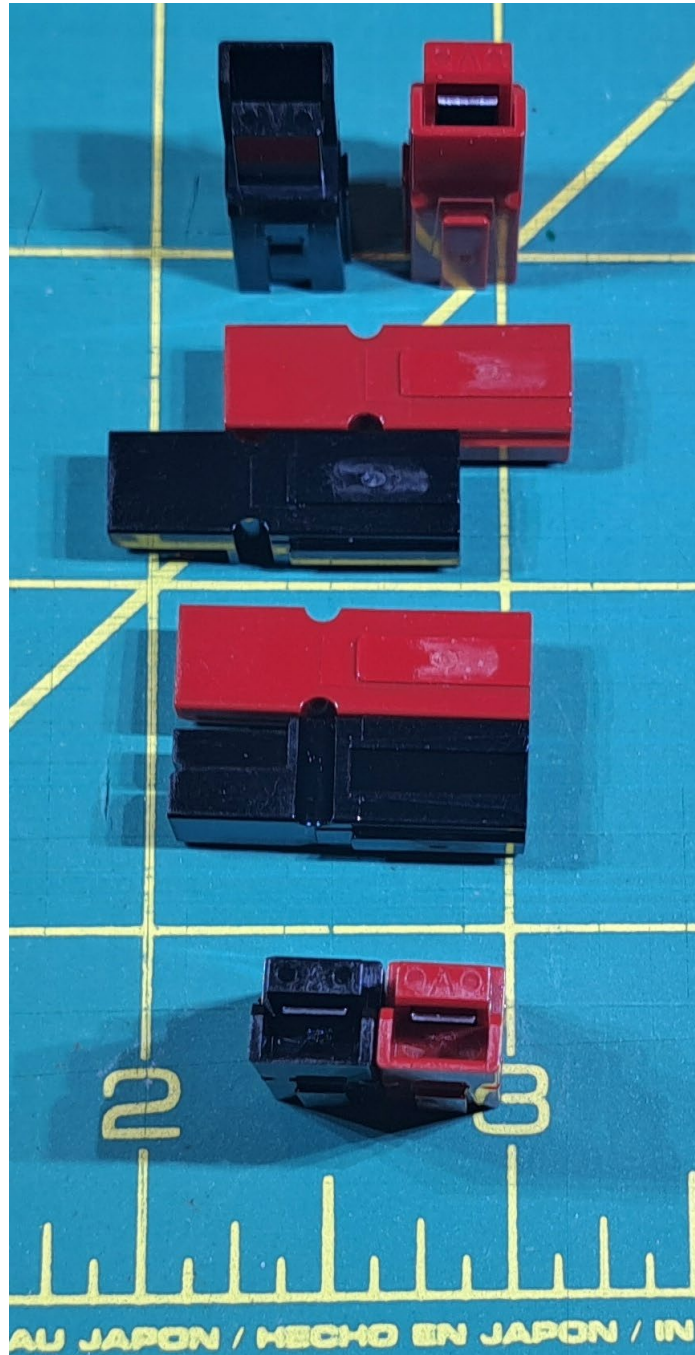


This is the incorrect orientation. This is Red Right Tongue Down. **DO NOT USE THIS ORIENTATION!**



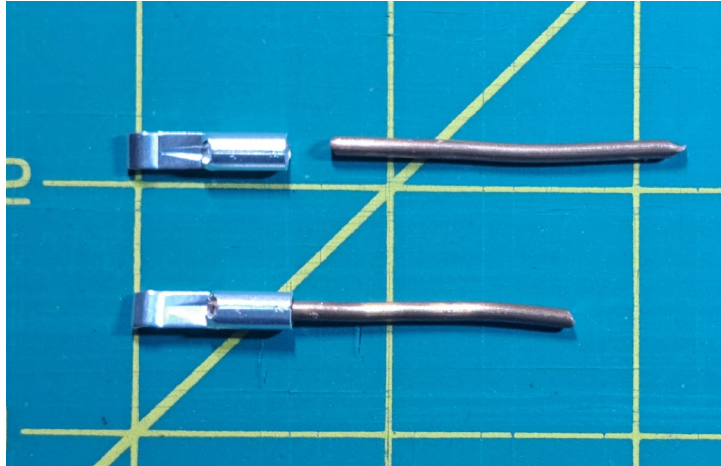
Slide the one black and one red housing together in the correct orientation.

Check the assembled pair and ensure Red Right Tongue Up has been obeyed.



Use pliers to straighten the 12 AWG wire pieces, if necessary.

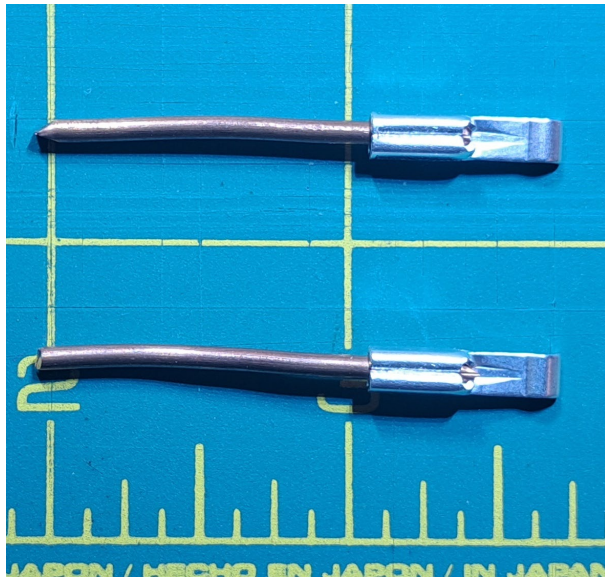
Dry fit a 30 Amp PowerPole contact onto each wire. Ensure that you can fully insert the wire into the contact housing.



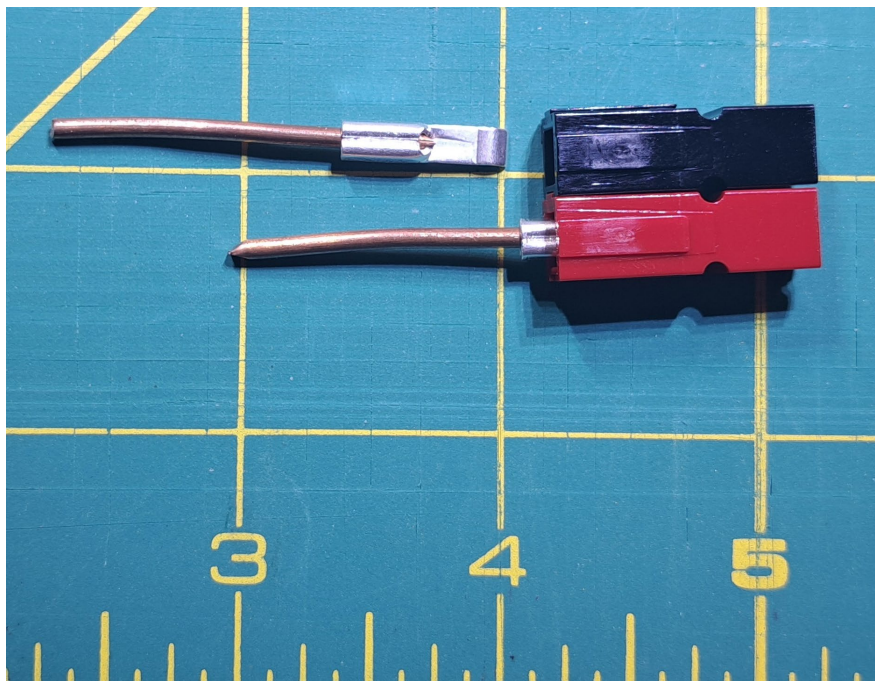
Insert the 30 Amp PowerPole contact into the 30 Amp position in the die set in a pair of PowerPole crimpers. Ensure the wire is fully inserted into the contact barrel and crimp. Repeat for the other piece of wire and contact.



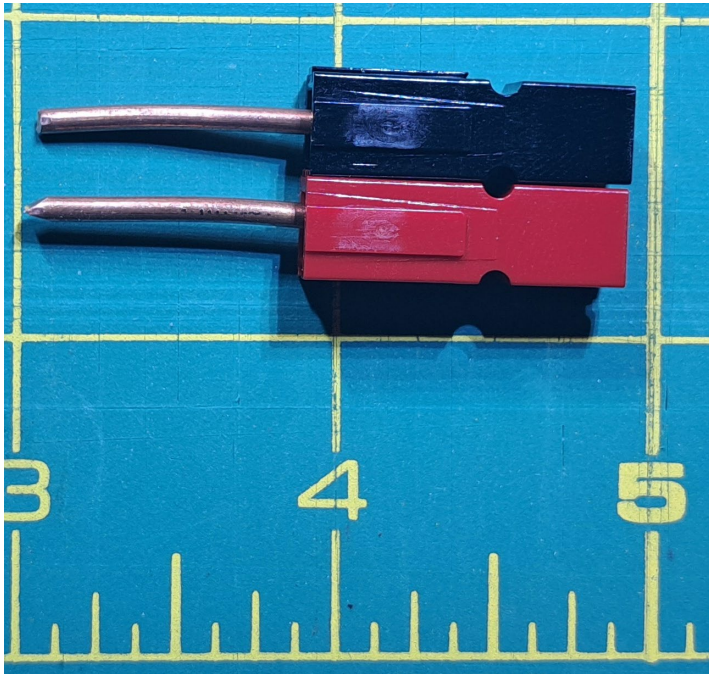
Contacts crimped onto wire pieces



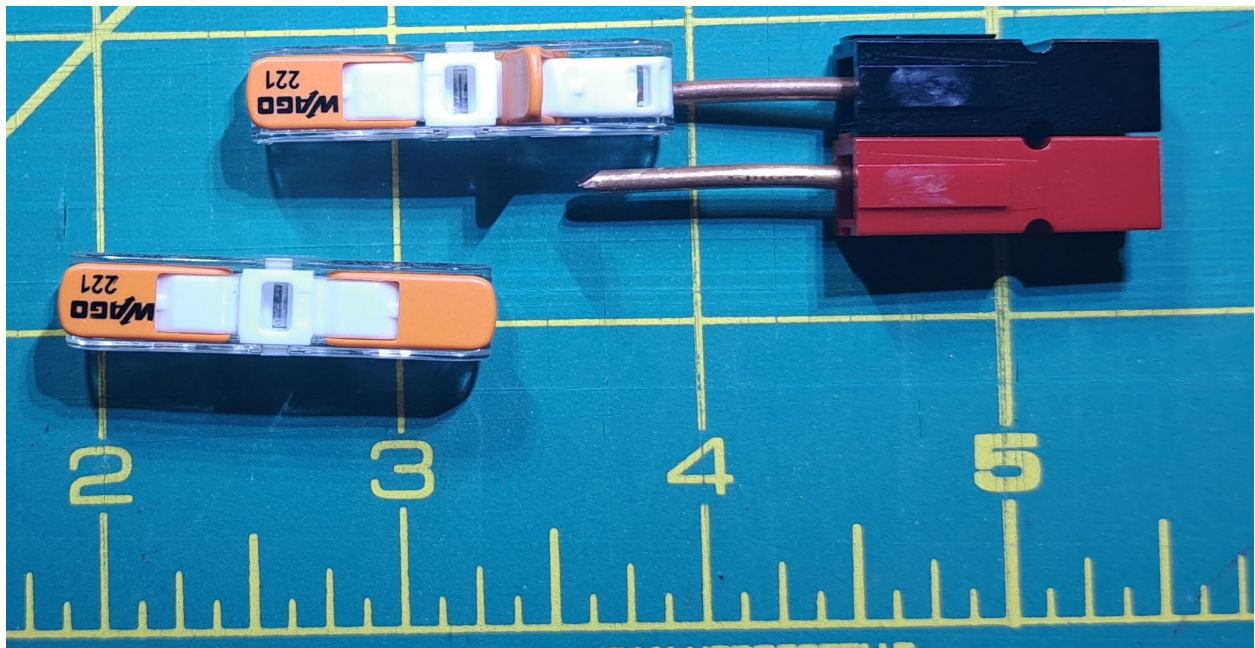
Insert Wires and Contacts into the pair of PowerPole housings



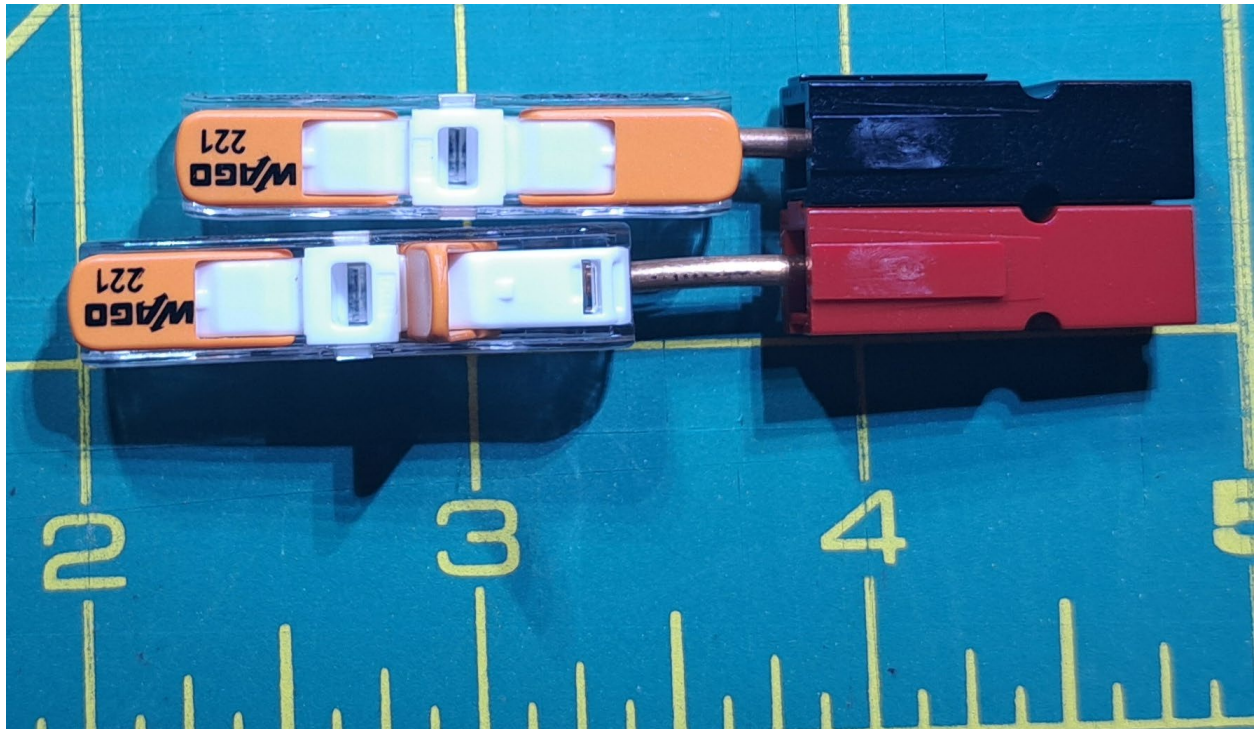
Insertion completed



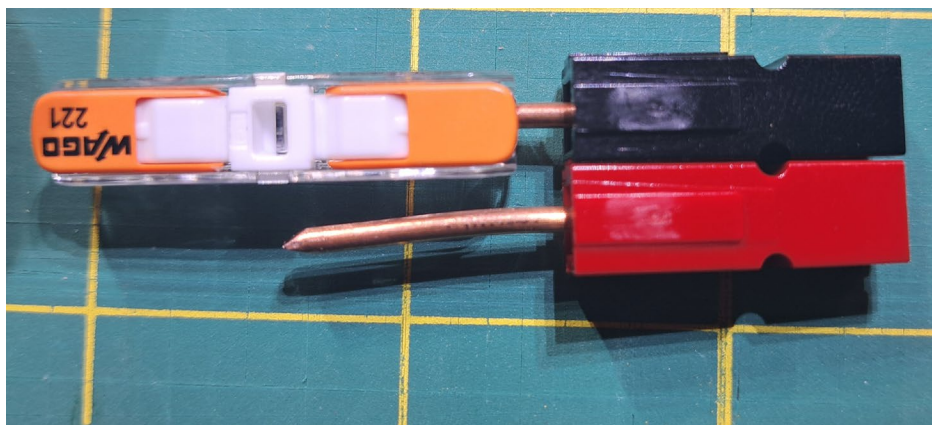
Open the lever on one end of a WAGO® Inline Connector and slide it onto the wire extending from a housing.



Snap the lever closed and ensure that the inline connector is securely locked onto the wire. Slide on the second inline connector.



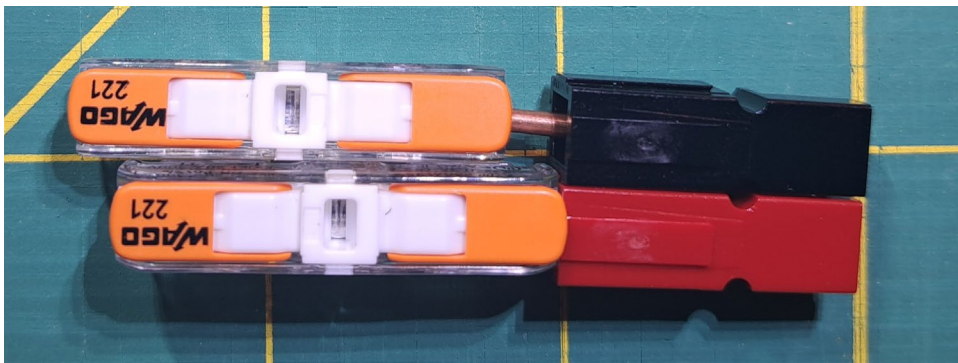
The wires in the kit are purposely cut long to allow variations in construction. The goal is to trim the wire so that there is no gap between the installed inline connector and the PowerPole housing. This will enable the strongest connection within the completed adapter. Notice the width of the gap and prepare to trim that amount of wire off of the end of each wire.



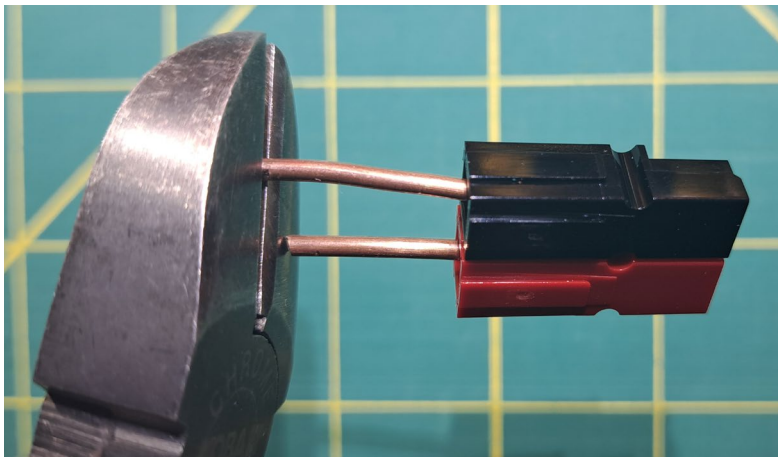
Wire from Red Housing has been trimmed.



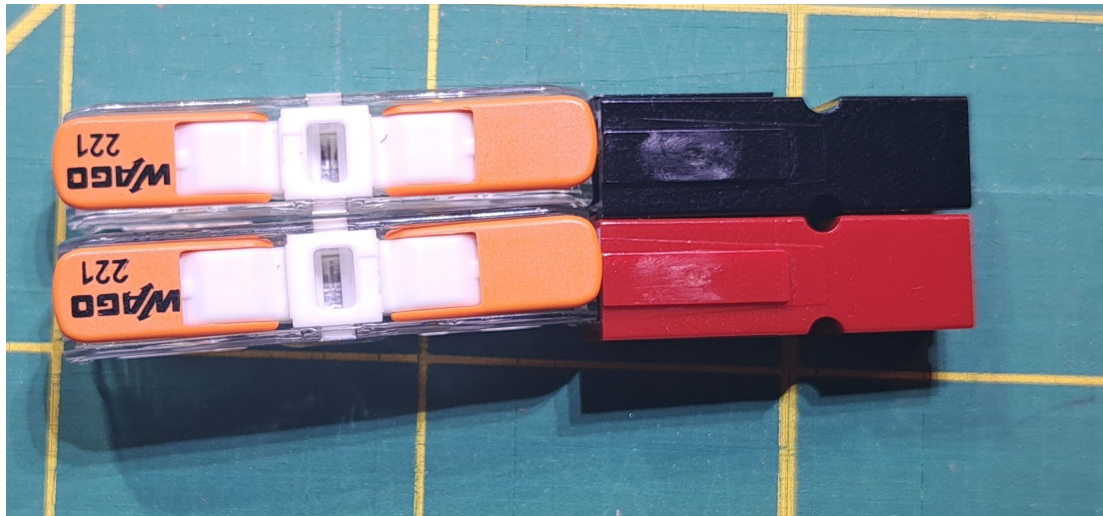
Inline connector fits flush to Red Housing.



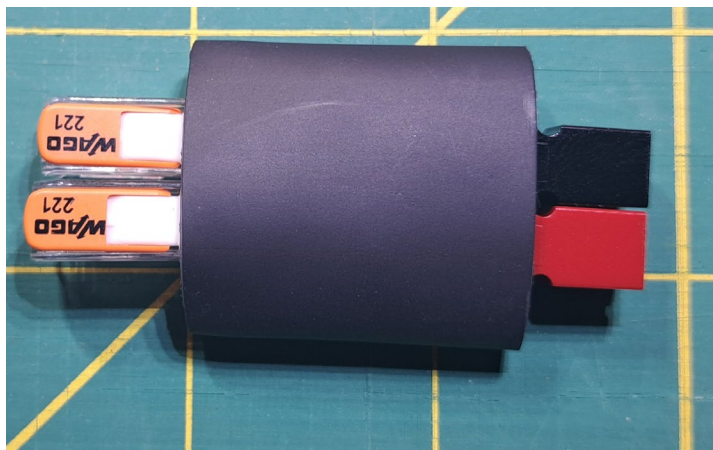
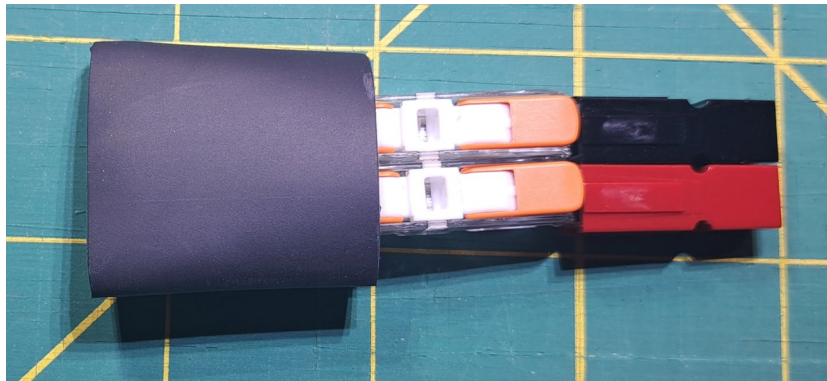
Preparing to trim second wire to proper length.



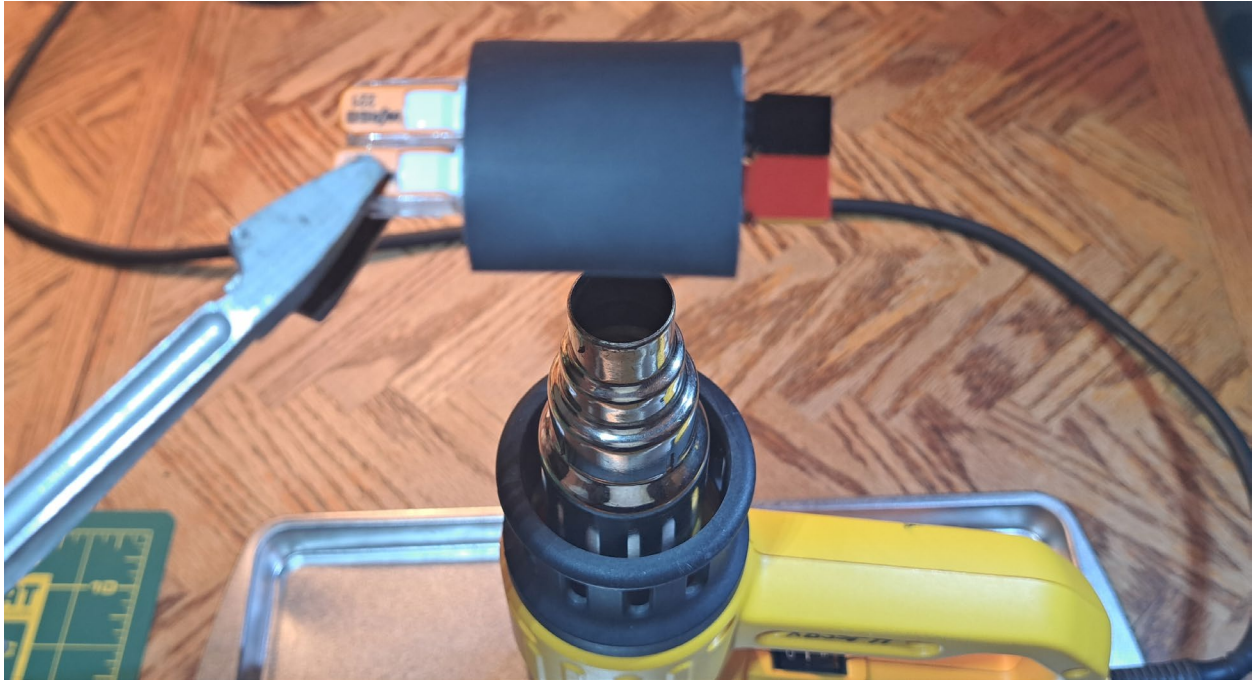
Clip both Inline Connectors onto the wires from the housings and ensure both fit flush.



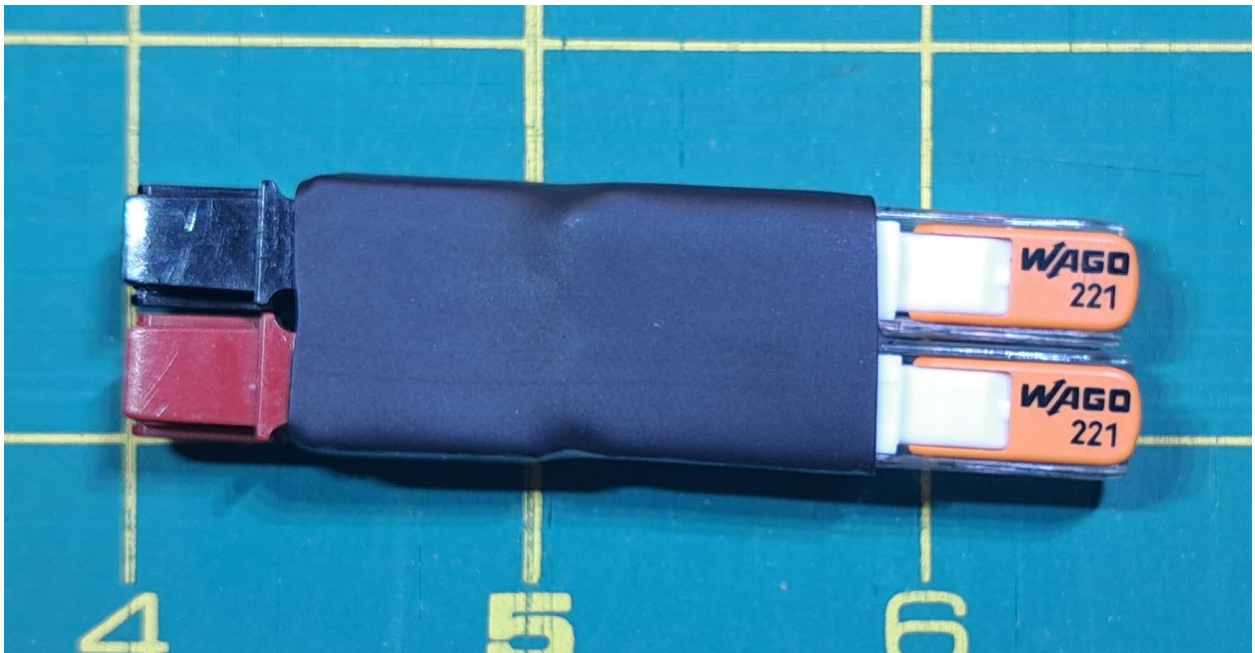
Position the Heat Shrink Tubing.



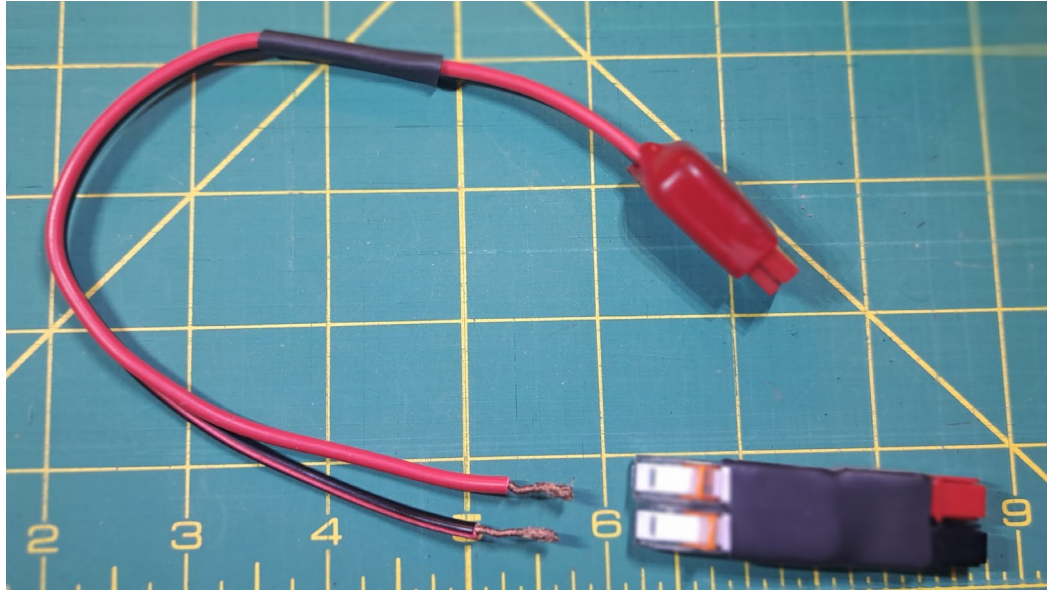
Carefully shrink the Heat Shrink Tubing to complete the Adapter.



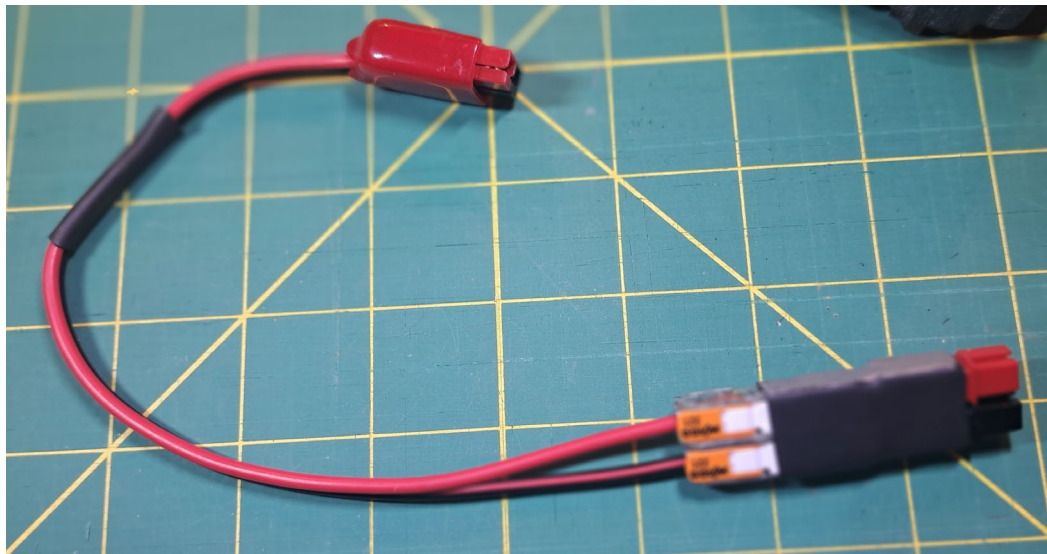
Completed Adapter.



Preparing to test the Adapter by clipping it onto bare wires leading to a pair of PowerPoles.



Clipped on.



Adapter in use. 12V Source > WAGO®/PowerPoles Adapter > Red 12V LED Trailer Marker light.

