

# Electric Vehicle 7WDC-DC Installation and Wiring Guide

Belktronix

Initial Release 042007

Revised 090809

Rev 1.2

# Document Revision History

- 1.0 Initial release
- 1.1 Added Link 10 E-Meter details including shunt and HV Adapter
- 1.2 Corrected wire size, also show DC-DC input to load side of the shunt, adapter labels.

# Special Thanks from Belktronix!

- Thank you for your purchase of this 7W DC-DC converter. It is designed for years of trouble-free use and ease of installation.
- Please read through the manual to familiarize yourself with the installation instructions herein.
- Please contact Belktronix if there are questions or problems with the installation or documentation.

# System Wiring

**DANGER: Working with HIGH VOLTAGE Systems can be FATAL.**

**Follow Guidelines. Maximize Caution. Avoid Distractions.**

- Each wiring task is illustrated to make it easy to follow, point to point.
- Route low signal wiring away from high current wires.
- A 3 Traction Battery string is illustrated in the diagrams, your system will have more. Limit series connected 12V batteries to 25.
- Crimp tool, 0.250" Fast-On's and hookup wire is needed to install DC-DC converter

# Mechanical Installation

**DANGER – USE CAUTION WORKING WITH HIGH VOLTAGE AND CURRENT!**

- Locate a flat, smooth area in engine compartment which is away from direct exposure to outside elements (i.e. front grill area) where DC-DC converter is to be mounted.
- If outside temperature is less than 70°F, warm area with hot water.
- Clean area on vehicle chassis with alcohol or other suitable film-free cleaner.
- Remove other side of wax paper and stick DC-DC to vehicle and press firmly for 1 minute. Velcro will allow removal of the DC-DC and provide some shock absorbing effect.
- DC-DC converter should now be securely mounted to vehicle

# Electrical Installation

Note: Red wire is the positive terminal(s) to DC-DC converter.

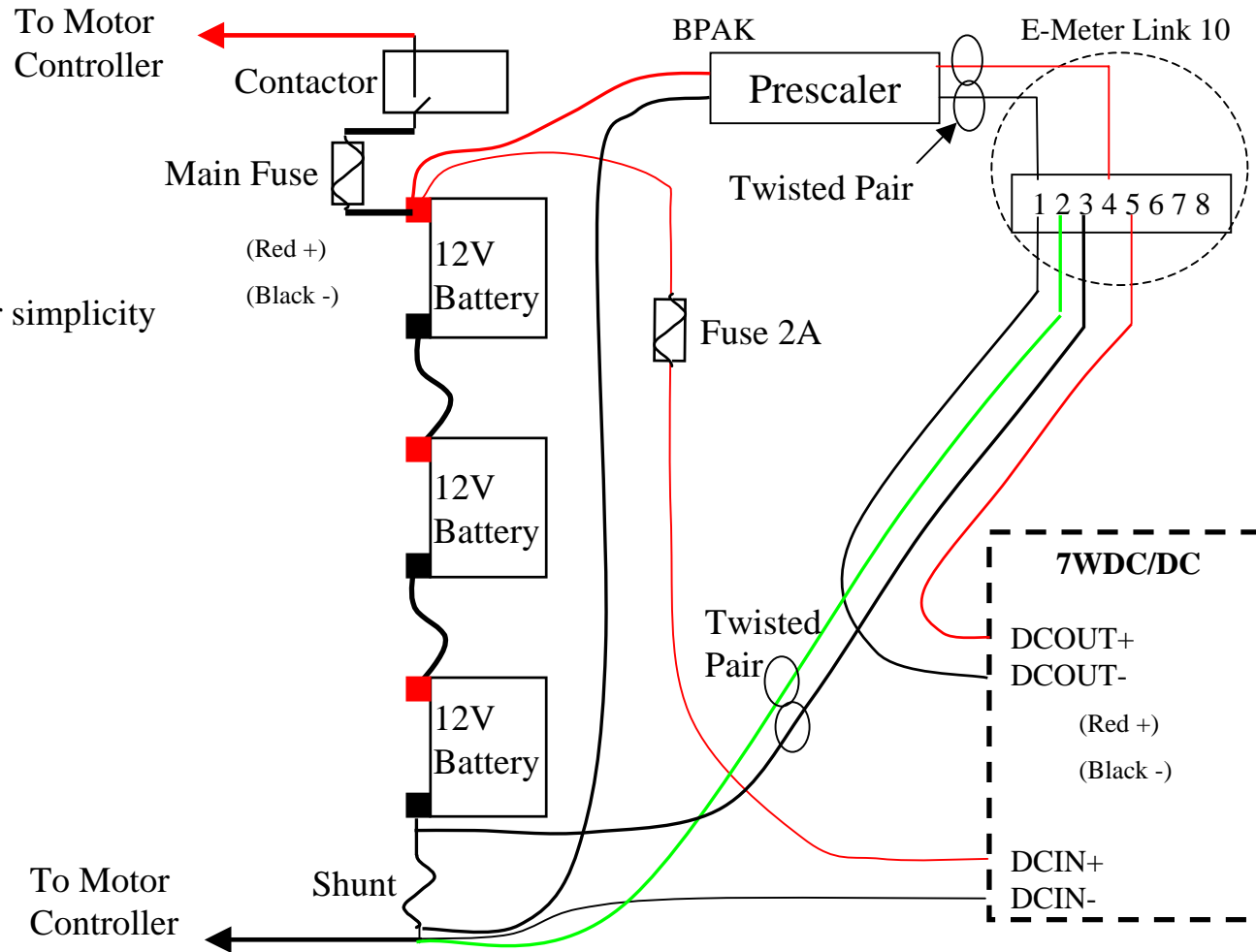
Black wire is the negative terminal(s) for DC-DC converter

See block diagram on following slide for wiring view.

- Wire up DCOUT Fast-On terminals to E-Meter first.
- Wire up shunt side minus (load side) to DCIN black Fast-On terminal of DC-DC converter
- Open the fuseholder and wire up DCIN red wire to long side of fuseholder.
- Prepare battery positive terminal to short side of fuseholder connection. Be Careful!
- Insert fuse in long side and close fuseholder. There may be a slight spark. Verify E-Meter is powered.
- If DC-DC fails to start, remove fuse and wait 1 minute. Re-insert fuse and recheck E-Meter display

Note: If your meter has stored battery data and you don't want to lose the data log, contact Belktronix for more info about preserving battery history during hookup.

# DC-DC Power Wiring to Link 10



Link 10 PreScaler wiring shown

Direct Battery Connection

Traction Pack, 3 Batteries shown for simplicity

DC Input wire size 18 AWG

DC Output wire size 22 AWG

RED wire is Positive (+) terminals

Black wire is Negative (-) terminals

ZOOM IN for clearer image details