

FERDALE RENEWABLE ENERGY EVALUATION (F.R.E.E.) WIND TEST CENTER TECHNICAL BULLETIN 005

LAKOTA Controller Diode/Breaker Retrofit

This modification adds both an integrated DC circuit breaker and a blocking diode to the standard LAKOTA controller to protect both the turbine and LDR when used with solar.

Before mounting the LDR into the controller, simply cut a slot into the side of the controller as shown and mount the 30A or 60A OBDC circuit breaker on which ever side of the box your battery cables are connected. This works fine for 24 and 48v systems but we have not found a suitable 100A breaker for the 12v series that will fit in the same space.

On a separate piece of aluminum angle (for heat sink) mount the 70HFR40 power diode and mount the angled assembly on a non-conductive non-flammable surface. The positive leg power is then connected from the Rectifier to the LDR (BATT+), then to the CB, to the Diode back side and from the diode to the Battery + Terminal.

Make sure the diode symbol ►| is pointing toward the batteries. The blue connectors are crimp style connectors for #6 AWG wire but other terminals can be used if they fit and are appropriate for the wire size.

Contact your Dealer/Installer or TRUE-NORTH Power Systems service support at david@truenorthpower.com (519) 793-3290 for assistance.

