Introduction

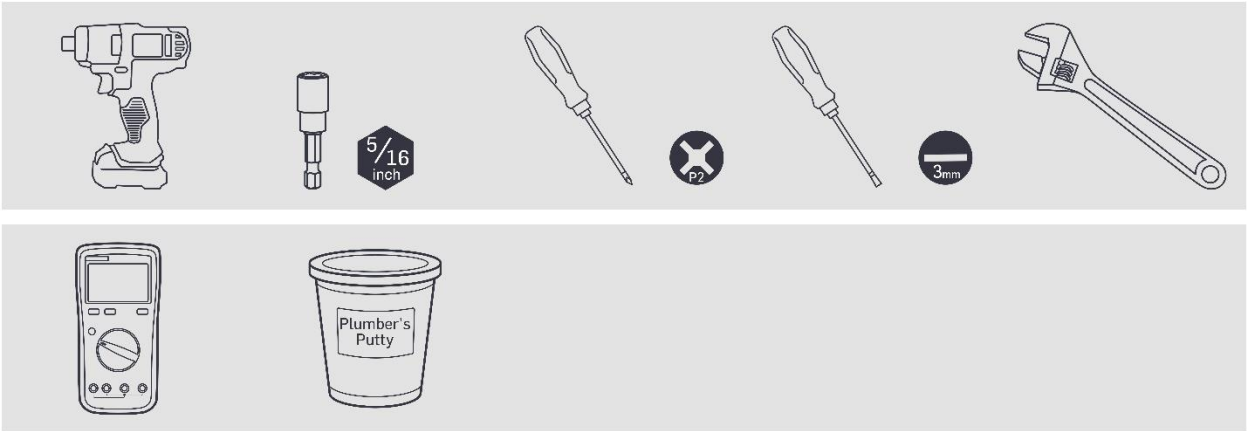
These instructions explain how to install and configure LOGR-S UPS Shelter Boxes #16927 & #18365. These Shelter Boxes are identical aside from the location of the 12V battery.

Parts/BOM

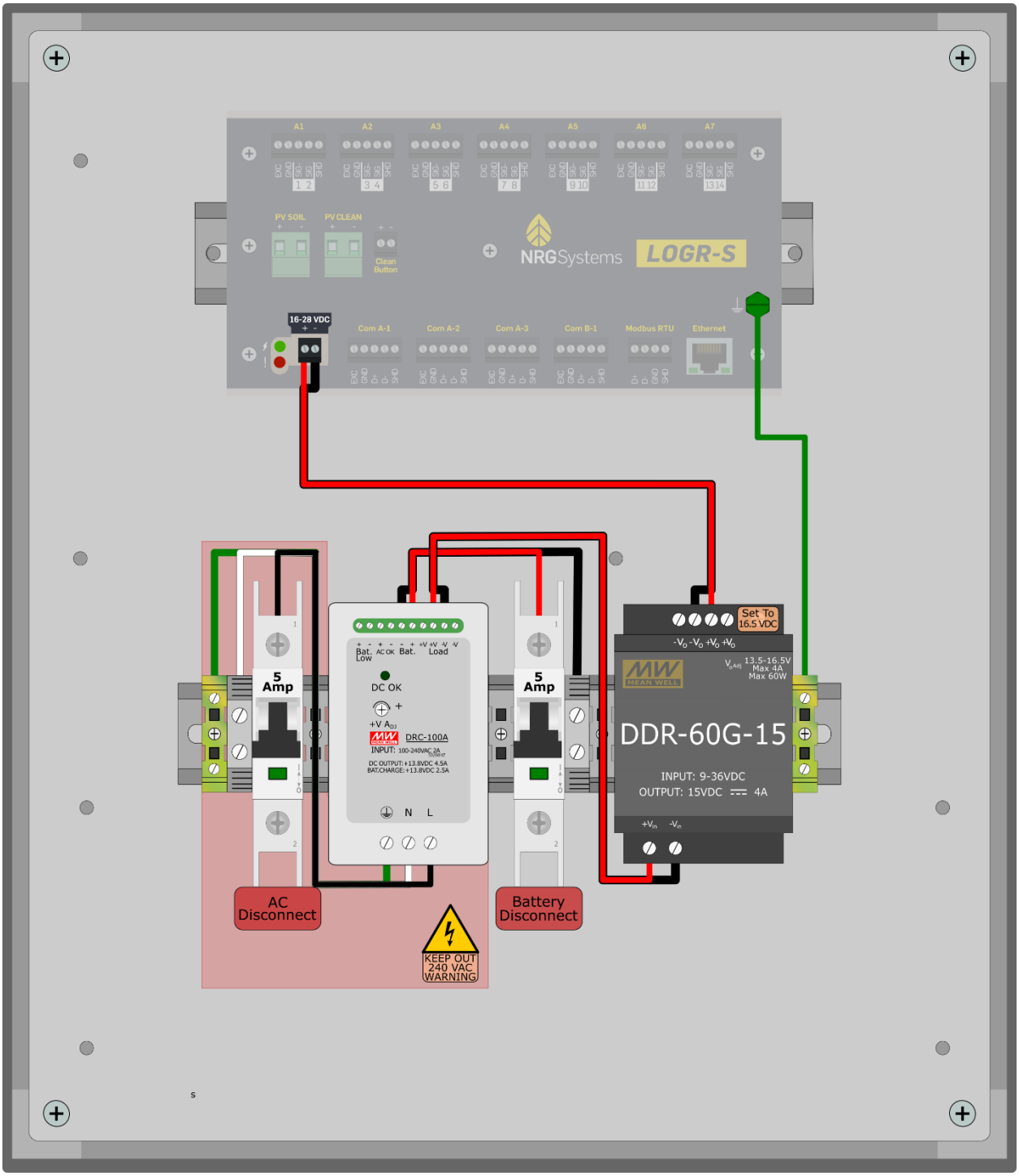
NRG PN	Part Description	Part Specification	Quantity
16927 **or** **18365**	LOGR-S UPS Shelter Box, 12V External Battery LOGR-S UPS Shelter Box, 12V Internal Battery	Assembled & Pre-wired	1
Multiple	Auxiliary Battery Kit	14482: 1x 108 Ah Gel battery 14483: 2x 108 Ah Gel batteries 14484: 3x 108 Ah Gel batteries	1

Tools

LOGR-S UPS Shelter Box Wiring



#16927 LOGR-S UPS, 12V, External Battery Shelter Box



NRG Part: 16927 - SRM UPS LOGR-S

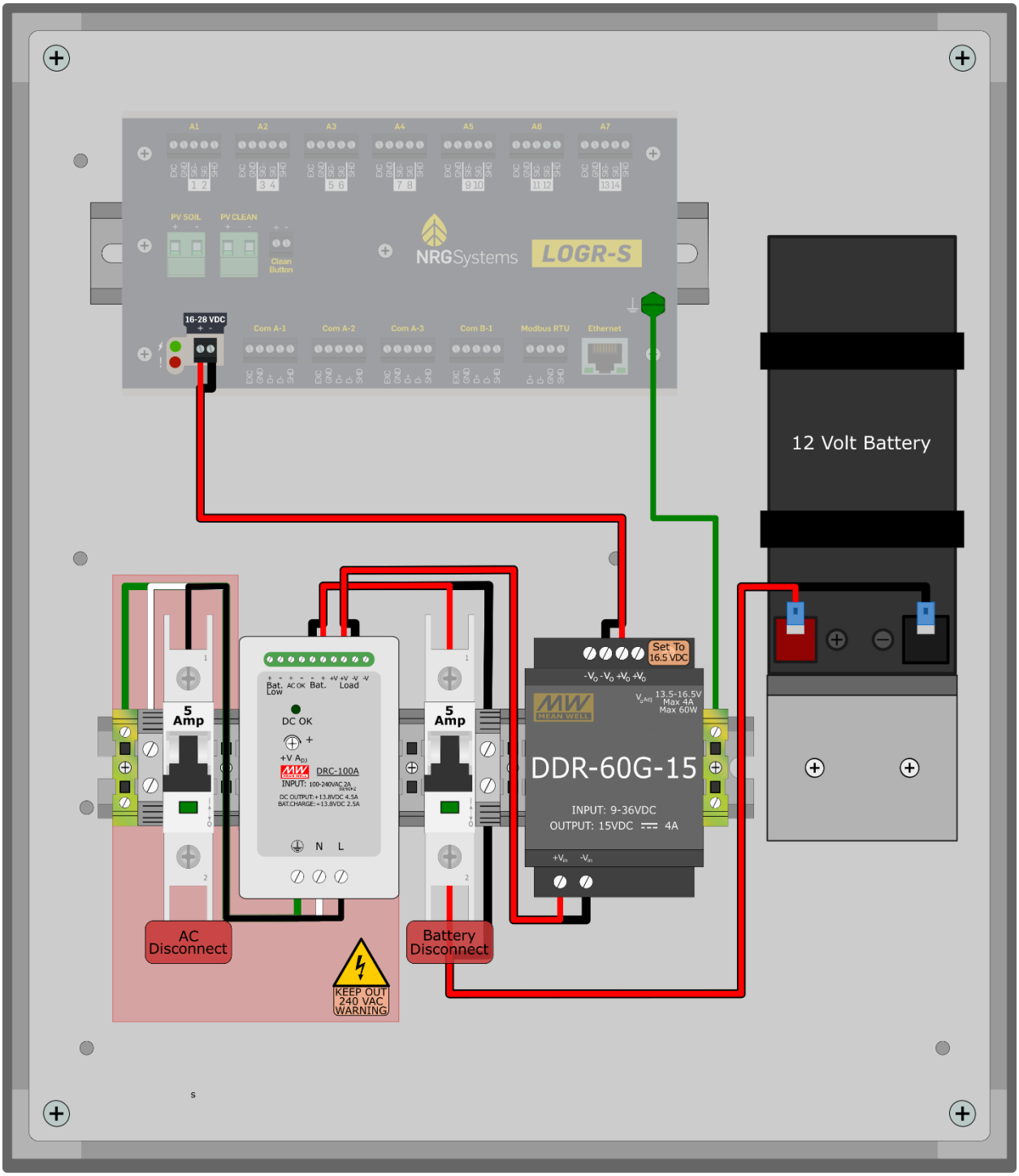
Wiring Diagram: 17393

Rev: B

Notes:

- Wires Modeled To Show Termination Points, Do Not Reference For Wire Lengths
- Shown Electronic Components May Be Substituted With Alternatives Of Appropriate Specifications
- 15 Volt DC-DC Converter Tuned At 16.5 Volts To Power LOGR-S

#18365 LOGR-S UPS, 12V, Internal Battery Shelter Box



NRG Part: 18365 - SRM UPS LOGR-S Internal Batt

Wiring Diagram: 18411

Rev: A

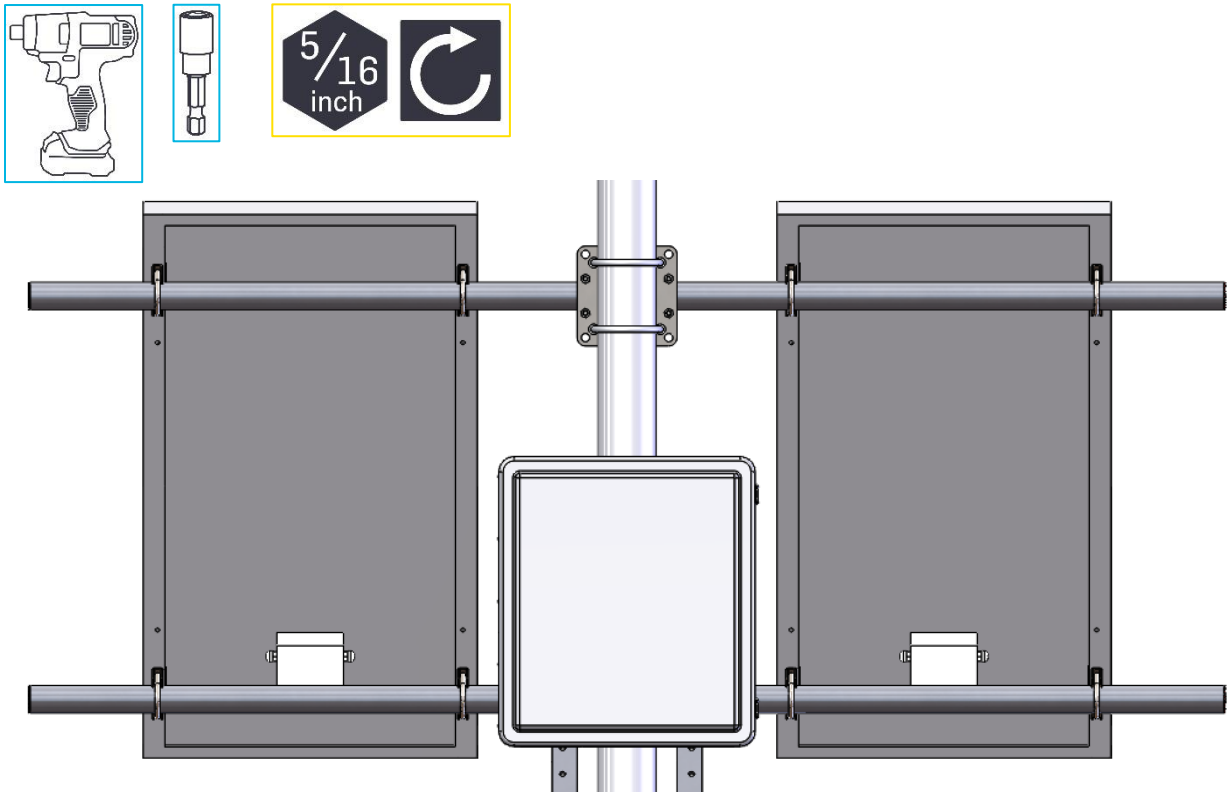
Notes:

- Wires Modeled To Show Termination Points, Do Not Reference For Wire Lengths
- Shown Electronic Components May Be Substituted With Alternatives Of Appropriate Specifications
- 15 Volt DC-DC Converter Tuned At 16.5 Volts To Power LOGR-S
- 18365 Uses An External Battery, Instead Of Internally Mounted One

Procedures

Mounting the UPS Shelter Box

Attach the LOGR-S UPS shelter box to the tower using hose clamps.



Auxiliary Battery Kit – For #16927 Only

The #16927 is designed for use with external batteries. For use with internal batteries, refer to the Internal Battery diagram on page 3. To provide the system with backup power, 1-3 sealed gel (BCI Group 27) batteries are used. Each battery has a C100 rating of 108 Ah.

These batteries contain a significant amount of energy. Use caution when handling and wiring the batteries or serious injury may occur.

Batteries Should be stored in a manner that protects them from the environment and disturbance by wildlife. The battery boxes supplied with the kit may not provide sufficient protection on their own in every case.

The installer must use their best judgement when considering how to protect these batteries for the life of the system.

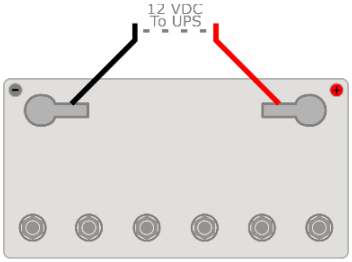
1 Place each battery inside of a supplied black plastic battery box. Set the top of each box aside until wiring is complete.

2 **When installing multiple batteries:**

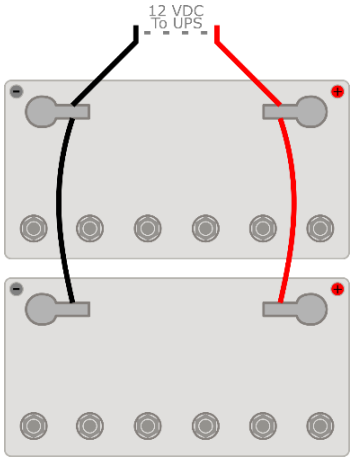
Use the supplied 4 AWG battery cables to chain the batteries in **parallel** (shown below).

3 Cover the bare ends of the 2C 10 AWG cable with electrical tape. They will be connected to terminals inside the shelter box in the next section.

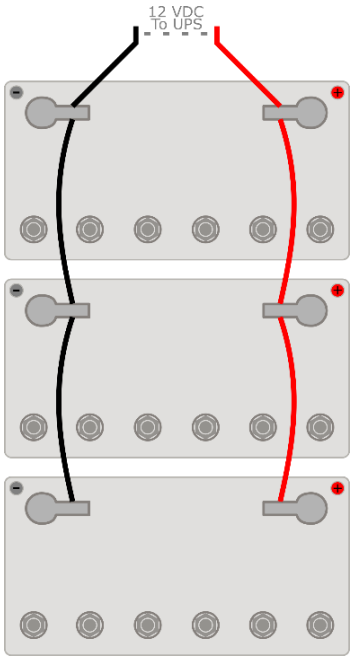
Connect the other ends of the wires to the battery bank at the terminals of one battery, matching wire colors to the battery cables.



Auxiliary RPS, Batt Kit, 108 A
NRG Kit:14482



Auxiliary RPS, Batt Kit, 216 A
NRG Kit:14483



Auxiliary RPS, Batt Kit, 324 A
NRG Kit:14484

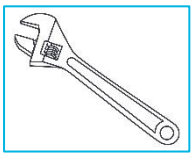
Wiring Procedure

The following steps require working with AC & DC electricity and should only be done by properly qualified individuals.

1 LOGR-S UPS Shelter Boxes #16927 & 18365 include 6 cord grips to seal the holes in the bottom of the shelter box. See specs in the table below.

Install these cord grips in the shelter box.

Note that the position & wire compatibility of cord grips may vary at each installation. Different cord grips may be required.



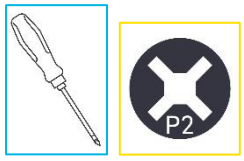
NRG Part Number	Holes	For Wire Diameter	Quantity
1638	1	0.19-0.35”	3
12028	1	0.39-0.55”	1
12870	2	0.18-0.22”	2

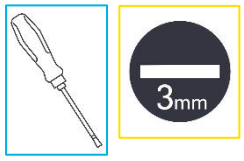
2 Feed the cables into the Control Box through the appropriate cord grips. Leave plastic covers loosely threaded to allow for cables to move.

3 Prior to wiring, make sure all breakers are turned to the OFF position (switch down).

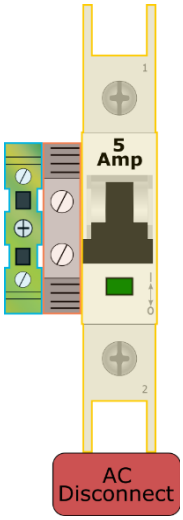
4 Wire the AC power cable into the EATON breaker & terminal blocks labeled for 120 – 240 VAC.

Ensure the AC power wire is de-energized by completing necessary LOTO procedures and using a digital voltmeter to verify that there is no AC voltage present.



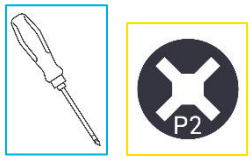


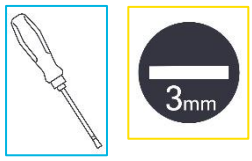
AC Power Wire	Control Box #16210 Wiring
AC Line (black)	AC Disconnect breaker IN
AC Neutral (white)	AC Disconnect grey terminal (left)
AC Ground (green)	AC Disconnect green terminal (right)



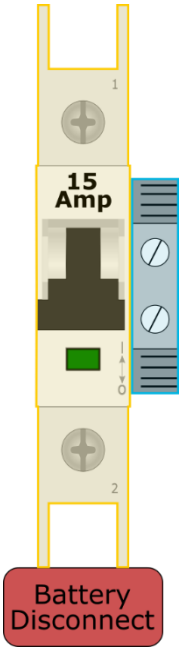
Note that AC wire colors vary around the world and the wire colors shown here (and used in North America) may not pertain to the region that the control box is installed in. If needed, swap out the wires between the terminals/breaker and the AC/DC converter to match local regulations.

5 Connect the 2C 10 AWG battery bank wires to the breaker & terminal block labeled for battery.





Battery Bank Wire	Control Box Wiring
Battery + (red)	Battery Disconnect breaker IN
Battery – (black)	Battery Disconnect terminal (right)

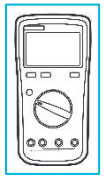


6 Turn on the circuit breakers & check wiring in the following order:

1. **110-240 VAC Breaker:**
   The MeanWell DCR-100 AC/DC converter will light up indicating it is active.

2. **Battery Breaker:**
   Flip the battery breaker on to connect the batteries to the charge regulator.

3. **Verify**: check voltage outputs from the following sources to confirm they're working:



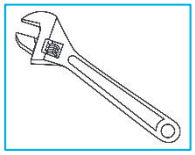
- **MeanWell DCR-100**
  Measure the **-V** and **+V** terminals.
  OUTPUT: ~13.8 VDC

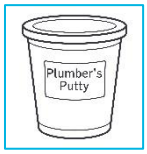
- **Battery Input**
  Measure from the breaker screw and ground terminal screw.
  OUTPUT: >12.5 VDC

- **12 VDC Power Supply**
  Probe one set of 12 VDC Power terminals.
  (bottom row = -12 VDC / top row = +12 VDC)
  OUTPUT: >12 VDC

Turn the breakers off before connecting sensor wires.

7 Seal up the UPS shelter box by tightening the cord grip gasket covers enough to seal around the cables running through them (if used) or by using plumber's putty around the wire grommets.





Place the covers on the black battery boxes and ensure that the batteries are in a suitable location.

8 Turn on all breakers in the Shelter Box. Verify that the (configured) logger is receiving data from the sensors.