Chart 36

Wiring PDU113

TOOLS REQUIRED

Screwdrivers: Phillips and straight tip

Procedure

1. **DANGER: Possibility of personal injury. Rack or frame must be suitably grounded in accordance with Article 250 of the National Electrical Code (NEC) to ensure UL and CSA compliance. If outside the United States, ground per local electrical codes and practices.**

2. **DANGER: Possibility of personal injury. Personal injury can be caused by -48 Vdc. Ensure battery power cables are not connected to office battery power or turn off all power to rack before starting this procedure.**

3. **DANGER: Possibility of personal injury. Short circuiting, low-voltage, low-impedance, dc circuits can cause severe arcing that may result in burns or eye damage. Remove rings, watches, and other metal jewelry while working with primary power circuits. Exercise caution to avoid shorting power input terminals.**

4. Determine the necessary power/ground cable run lengths by measuring the distance from the power source to the location in the frame where the Power Distribtion Unit (PDU) will be installed.

5. Run the appropriate power and ground wires (up to 6 AWG stranded) from the power source to the PDU using the path measured in Step 4. Maximum PDU current draw is 80 amps duplex or 40 amps for each of two simplex legs.

6. Using job drawings, locate the -48 Vdc power source and disable the distribution by removing the fuse or placing a circuit breaker in the OFF position.

7. Secure the cable to the frame per operating company standards.

Connection Battery Return

1. ***WARNING: Possibility of equipment damage. Ensure the fuses have been removed from any equipment in the frame. Do not reinstall the fuses until instructed to do so.***

2. Locate the BAT RTN terminals on the rear of the PDU113 (Figure 1).

Figure 1. Location of Battery Return Terminals

1. Before proceeding, obtain terminal lugs for 1/4-20 studs (to be connected on PDU end of cables from office battery power source). Table A lists the U.L. listed terminal lug part numbers for various application wire sizes.

Table A. 2-HOLE TERMINAL LUG PART NUMBERS

WIRE SIZE (AWG)	BURNDY PART NUMBER
8	YA8C-2TC14
6	YA6C-2TC14
4	YA4C-2TC14
10-12	YAV10-2TC14

1. **DANGER: Possiblity of personal injury. A listed pressure cable and/or terminal connectors are to be used for connection of field wiring conductors. Only conductors specificed for use with the connector can be used.**

2. Do you want to use simplex or duplex power battery return configuration?

   If simplex, go to step 16.
   If duplex, go to step 13.

3. Connect the office A-battery return cable to the A-side BAT RTN terminal.

4. Connect the office B-battery return cable to the B-side BAT RTN terminal, as shown in Figure 2.

Figure 2. Duplex Power Battery Return Connections

1. Go to step 17.

2. Connect the office A-battery return cable to the A-side BAT RTN terminal (Figure 3).

Figure 3. Simplex Power Battery Return Connection

Simplex/Duplex Power Strapping

1. Remove the A-side and B-side battery input terminal plastic covers (Figure 4). These must be removed before proceeding.

NOTE: *Save these covers for later since they are a voltage protection safeguard.*

Figure 4. Location of A/B Battery Input Terminals

NOTE: *Figure 5 shows the plastic cover. It can be removed by squeezing the top and bottom surfaces slightly and removing either the bottom or top tabs first.*

Figure 5. Battery Input Protective Covers

1. With the covers removed, examine the A-side battery input terminals. If the installation requires simplex power configuration, move the A/B power strap to the simplex position (Figure 6). Otherwise, leave it as shipped in the the duplex position.

Figure 6. Simplex/Duplex Power Strap Positions

-48 Vdc Connections

1. Do you want to use simplex or duplex power connections?

   If simplex, go to step 23.
   If duplex, go to step 20.

2. Connect the -48 Vdc office battery feeder A-side cable to the A-side battery input terminal (-A BAT) on the rear of the PDU113 (Figure 7).

Figure 7. Duplex Battery Connections on the PDU113

1. Connect the -48 Vdc office battery feeder B-side cable to the B-side battery input terminal (-B BAT) on the rear of the PDU113, as shown in Figure 7.

2. Go to step 24.

3. Connect the -48 Vdc office battery feeder A-side cable to the A-side battery input terminal (-A BAT) on the rear of the PDU113 (Figure 8).

Figure 8. Simplex Battery Connection on the PDU113

1. ***WARNING: Do not attempt to power another PDU or another Fuse Alarm Panel by running jumper connections from these terminals to another unit.***

2. Update office records.

3. STOP. This procedure is complete.