

# CPS6000 Power System

- Models: 19" Shelf, Dual Front AC, 3 Slot CC109159488**  
**19" Shelf, Dual Front AC, 3 Slot, LVBD CC109160173**  
**23" Shelf, Dual Front AC, 4 Slot CC109159463**  
**23" Shelf, Dual Front AC, 4 Slot, LVBD CC109160181**  
**23" Shelf, Dual Front AC W/20P plugs, 4 Slot, LVBD CC109169900**  
**23" Shelf, Dual Front AC W/30P plugs, 4 Slot, LVBD CC109169917**



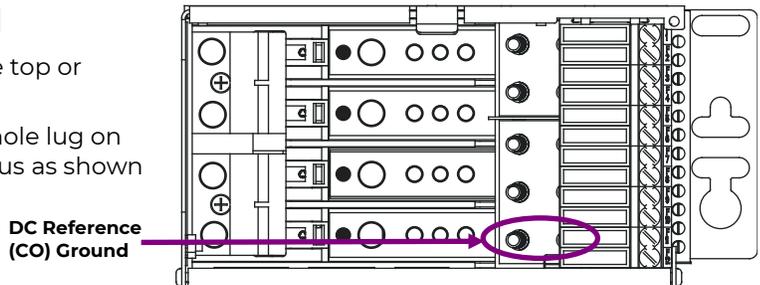
The CPS6000 comes in a 19" or 23" shelf configuration. Install the shelf with a minimum gap of 3/4 inch above and below to allow proper airflow. Attach the CPS shelf to the frame using a minimum of four (two on each side) of the 12-24 screws included with the shelf.

## Tools required:

- |                                     |   |  |
|-------------------------------------|---|--|
| Wire cutters and strippers          | Digital meter, +/- 0.02%                | 5/16" and 3/8" nut drivers and sockets |
| Heat shrink gun                     | Screw Drivers (Philips #1 and #2, flat) |  |
| Torque wrench (0-240 in-lb / 28 Nm) | Cable crimpers                          |  |

## Step 1 - Connect DC Reference (CO) Ground

- The reference ground wire can be connected to the top or bottom landing and routed up or down.
- Connect minimum 8 gage wire with a #10 double-hole lug on 5/8-inch center (not provided) to the Load Return bus as shown below.
- Torque connections to 37 in-lbs. Connection is #10-32 studs on 5/8" centers.



## Step # 2 - Connect AC Inputs

This shelf comes equipped with two AC input cords. Cords have blunt cut ends, 20P or 30P type plugs. The AC feeds may be 110VAC or 208/220VAC depending on the rectifier used. One cord powers rectifiers 1 & 3, the other powers rectifiers 3 & 4 (4 rectifiers are only available on the 23" shelves). Connect the cord to the AC Service Panel or the appropriate mating connector.

**Caution:** Ensure ac power is OFF and use appropriate lock-out tag-out procedures before continuing with ac connections.

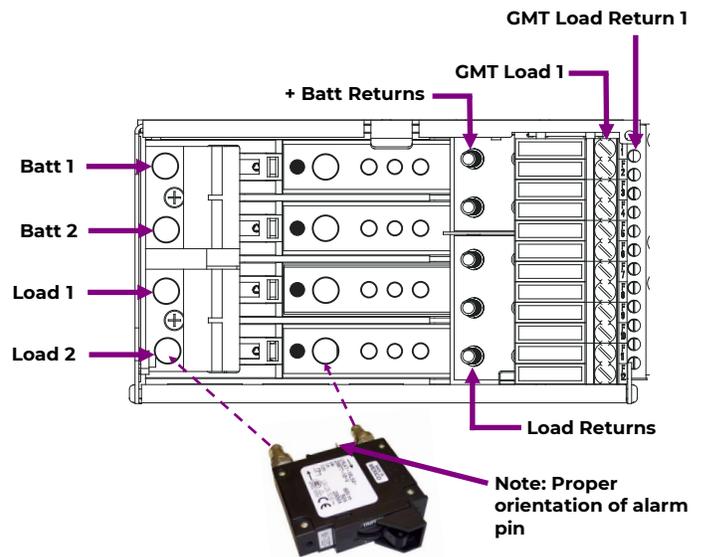
**Caution:** When connecting to utility source, ensure all local and national wiring rules are being complied with.

**Caution:** When routing AC cables ensure cable does not come in contact with sharp or rough surfaces that may damage insulation and cause a short circuit. Make sure cable does not come in contact with any pinch points such as doors.



### Step 3 - Connect Loads and Batteries

- Load protectors: twelve GMT fuses and two circuit breakers.
- Battery protectors: two circuit breakers.
- GMT fuse connections: lug-less terminal blocks. The maximum wire size for fuse connections is 10 AWG.
- Circuit Breaker Battery and Load Connections: double hole lugs on #10-32 studs on 5/8" centers. Maximum tongue width 0.68". An extra return connection is available for the DC reference ground shown previously.
- Identify all circuit breaker and fuse loads on the label located on the inside of the distribution front door.
- Install fuses and circuit breakers.



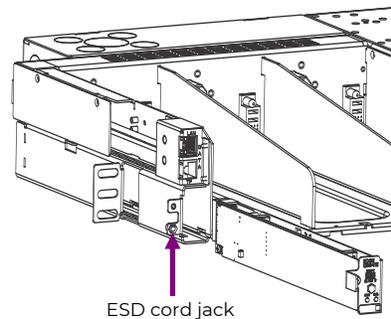
### Step 4 - Install Controller

- Install the controller in the controller slot on the left side of the system as shown.

System controllers are sold separately.

It is good practice to properly protect the controller against ESD discharge.

Note: There is an ESD cord jack on the left side of the shelf.

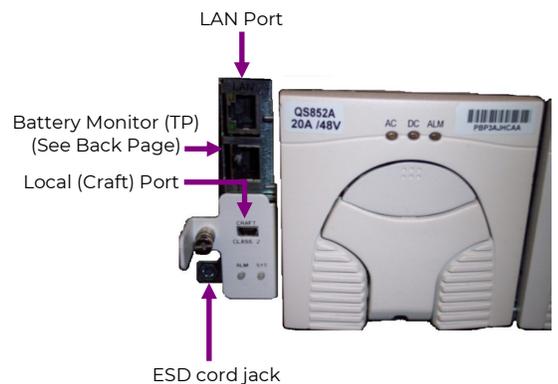


### Step 5 - Connect Office Cables

- Connect Office Alarms cable to connector on rear
- Connect LAN and Battery Monitoring (TP) cables on front as shown. Office Alarms, LAN and Battery Temp Monitoring (TP) cable interfaces are fixed to the shelf, allowing the controller board to be removed from the shelf without disconnecting cables.

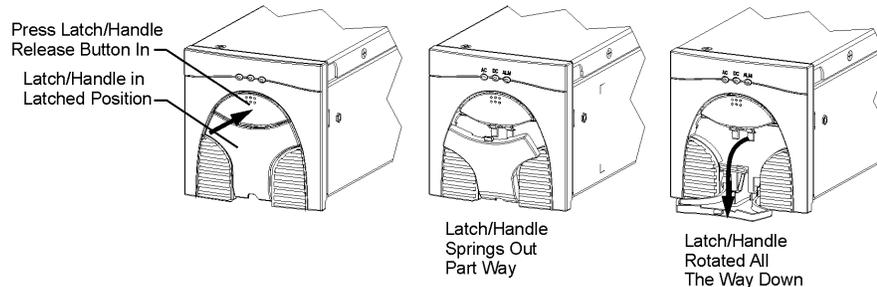
The Local (Craft) Port (RS232 or USB) is the only cable that connects directly to the controller.

For details of Battery monitoring installation consult the detailed Product Manual.



## Step 6 - Install Rectifiers

1. Unlatch the handle as shown.
2. Firmly push the rectifier into the rectifier slot until the connector on the rear of the rectifier engages with the connector at the back of the rectifier slot on the CPS shelf. The latch will pop most of the way up when the rectifier is properly seated.
3. Push the latch up into the latched position to complete engagement.



## Step 7 - Initial Start Up

- Verify that all AC, DC and Alarm connections are complete and secure.
- If rectifiers have not yet been installed, install rectifiers now as described previously.
- Once this is complete, the AC input breakers may be turned on. As each rectifier is installed, the controller automatically identifies the new rectifier and begins communication.
- If there are no alarms, make required adjustments to the default settings on the controller for this installation. Refer to the controller sections in CPS6000 Manual (CC848879015) for more information on web pages, craft port and configuration changes. Most functions in software are intuitive by referring to the menu map listed in the detailed Product Manual.

## Information: Controller Basic Operation

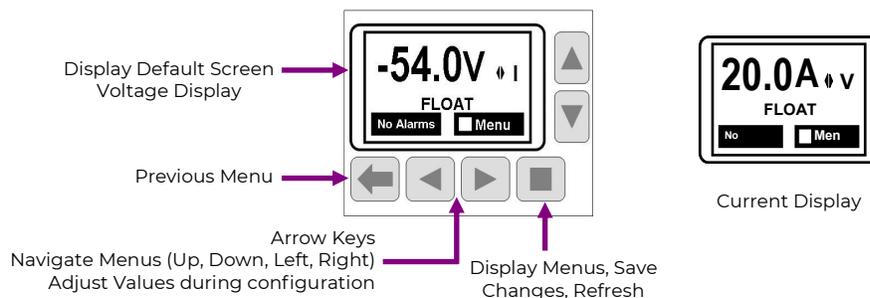
The backlight of the four-line LCD display changes color to reflect the system alarm status as follows:

Green Normal

Amber Minor Alarms Present

Red Major Alarms Active

The up and down arrow keys can be used to adjust screen contrast when the controller is displaying the default screen. At the default menu, the left and right arrows are also used to toggle the display from displaying the system voltage or the system load current. The left and right arrow keys are also used to navigate the menus and the up and down arrow keys are used to change values when configuring the system. A black box highlighting a menu item indicates that the item has sub-menus. Full configuration details and Menu structure are available in the Product Manual.

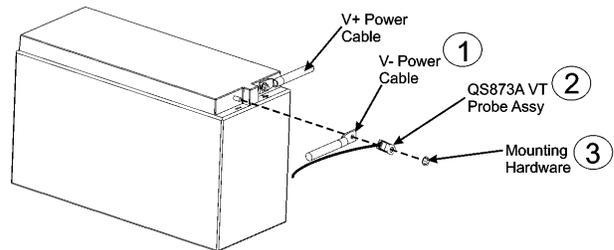
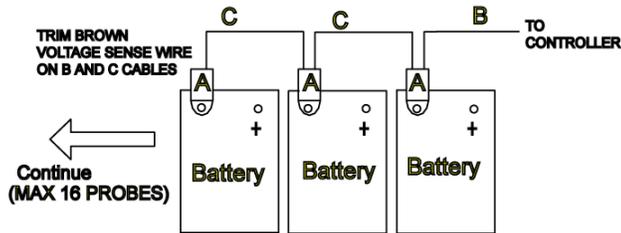


## Information: Battery Monitoring Connections

VT Probes mounted to one of the battery terminals monitor battery temperature and voltage.

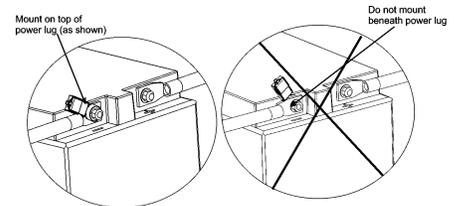
VT Probes connect to the controller's Battery Monitoring Port (TP) in a series "daisy chain".

Monitoring Temperature Only: Trim Brown voltage sense wires on B and C cables.



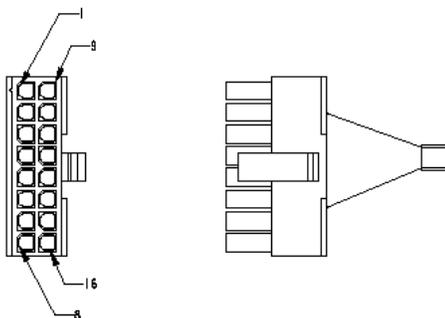
## Cable Part Numbers

CC109142980	QS873A VT Probe (A)
CC848817024	10 ft wire set (B: thermal probe to controller)
CC848822560	1 ft wire set (C: thermal probe to thermal probe)
848719803	5 ft wire set (C: thermal probe to thermal probe)
CC848822321	10 ft wire set (C: thermal probe to thermal probe)



## Information: Office Alarm Connections

Office alarm connector (J1) provides access to the alarm relay inputs and outputs. Discrete wire cable assembly is included. Note the wire color and alarm descriptions in the attached table.



Pos	Color	Signal	Factory Default	Software Default
1	BLK	Input Alarm 5 (Closure to pin 3)		
2	W	Input Alarm 3 (Closure to pin 3)		
3	R/BLK	System -48V for Input Alarms ABS		
4	OR	Alarm Relay 5 Return		PMJ Return
5	OR/BLK	Alarm Relay 6 Return		PMN Return
6	R/WHT	Alarm Relay 1 Return		
7	WHT/BLK	Alarm Relay 2 Return		
8	BL/R	Alarm Relay 3 & 4 Return		
9	R	Input Alarm 8 (Closure to pin 3)		
10	GR	Input Alarm 4 (Closure to pin 3)		
11	BL	Alarm Relay 4	Open	
12	GR/BK	Alarm Relay 5	Open	PMJ
13	BL/BK	Alarm Relay 6	Open	PMN
14	GR/WHT	Alarm Relay 1	Open	
15	WHT/R	Alarm Relay 2	Open	
16	OR/R	Alarm Relay 3	Open	

Open = Open to Common when Alarm condition exists

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