

ASPIRO - 2RU 3200 W Power Supply System

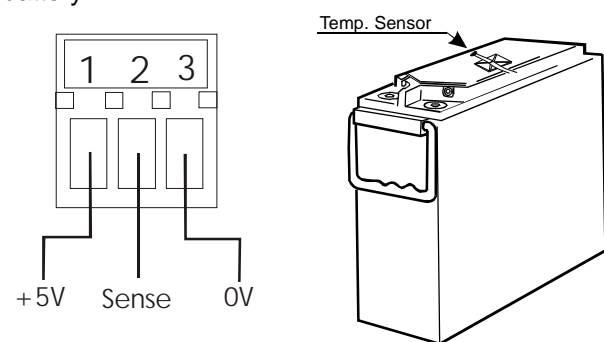
Quick Install Guide



11 Temperature Sensor

Temperature Sensor Connection for supervising battery temperature is usually delivered pre-installed when used. If it is added later, use a three-pin plug and connect.

The sensor itself should be fastened to the battery after battery installation: Unwind the the cable, remove the paper covering the adhesive for the sensor and fasten the sensor to the battery.



12 Commissioning Procedure

1. Remove the covers and check that all connections are made according to the installation drawing. Verify that all connections are properly tightened with sufficient torque.
2. Ensure load and battery MCB breakers are set to OFF position - ensuring the load and battery strings are connected.
3. Ensure all rectifier modules are removed, starting from the rightmost position.
4. Check the battery polarity with the Multimeter (3" Digit, 0.1% dc). Place the positive lead of the meter to the positive busbar, and the negative lead to the battery breaker. The meter must now show a positive voltage. If the voltage is negative, change over the connection of the blue and black battery cables to the batteries.
5. Turn on the AC mains voltage.
6. Measure the AC voltage on the AC terminal block, between phases and neutral. The correct value is approximately 230V. If the value is different, check the AC connection.
7. Plug in all rectifier modules, starting from the leftmost position. Make sure to fasten the rectifiers again. The rectifiers will turn on automatically.
8. Set load breakers into "1" (ON) position.
9. Verify right polarity on battery connection by measuring the voltage drop across battery breaker(s) (Normally not more than 5V DC.)
10. Green LED on controller should blink for approx. 20 sec.
11. Output voltage will increase slowly to U1.
12. Turn battery breaker to "1" ("on") position.
13. If any alarms are present, they should be reset in accordance with "Show alarms" in product description controller.
14. The system should now be without alarms.
15. Attach all the system covers in their correct places.
16. Check that all changes to drawings, if any have been completed.
17. Clean the site.

13 PowCom Login

If you don't have PowCom software you can download it from the Power-One web page:

http://power_solutions.power-one.com/telecom-power/software_download.html

Please follow the instructions and use the following login and password to access the software for download.

Login: P1powcom

Password: 83w1ldcats

Once you have downloaded the file, you will need a license number to activate the software.

License number: 1391-0AF6-368A-2935-1B45

License level: 30

User no.: 447

Type of license: Company license

To activate your PowCom software with your license, please follow the instructions below.

1. Start PowCom and go to Communication/Properties in the menu.

2. Click on the license tab in the Properties window. Copy and paste your license number and click on the Activate License button.

Please exit the program and restart it again in order to fully activate the license.

If any problem occurs do not hesitate to contact our technical support.

Technical support

For technical support please visit
<http://www.power-one.com/contact>

Contact Telephone numbers are:

Asia/Pacific: + 65 6896 3363
Europe, Middle East and Africa: + 800 7693 7663
The Americas and Carribean: + 1 805 987 8742

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START HERE

This guide includes the basic steps for installation of 2RU ASPIRO Power Supply System. For more detailed information please contact Power-One for extended Instruction Manual.

Disclaimer

Power-One is not responsible for system problems that are the result of incorrect installation or modification of the instructions provided in this guide.

WARNING!

There are potential hazards related to the installation of this system. It is recommended to carefully read and understand the contents of the System Safety Chapter before performing this installation.

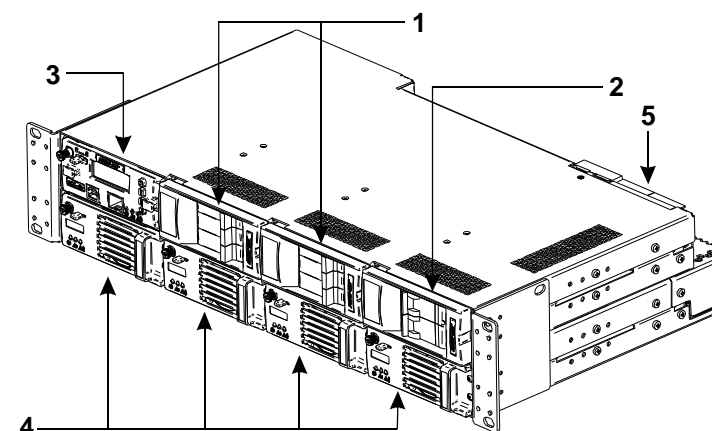
WARNING!

It is strongly recommended to turn off the Power System before performing this installation.

1 Aspiro 4-Rectifier System

Rectifier system has 3 drawer positions available for the breakers. One drawer position is designated for battery breakers.

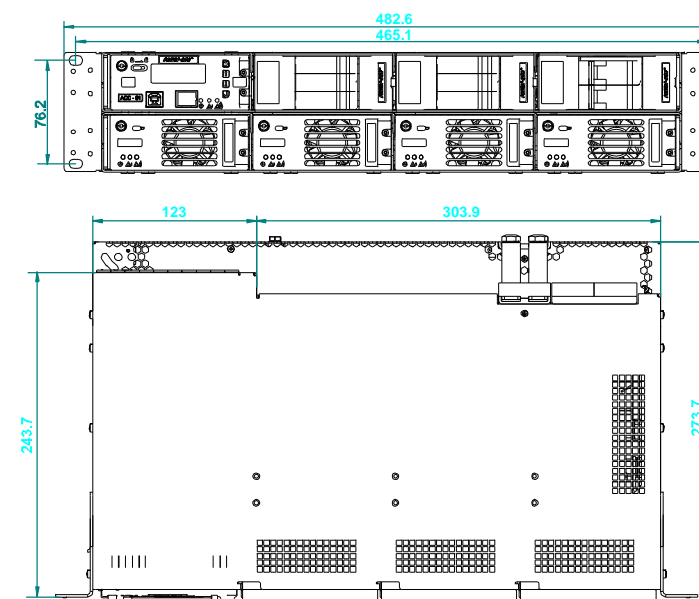
4 Rectifier System



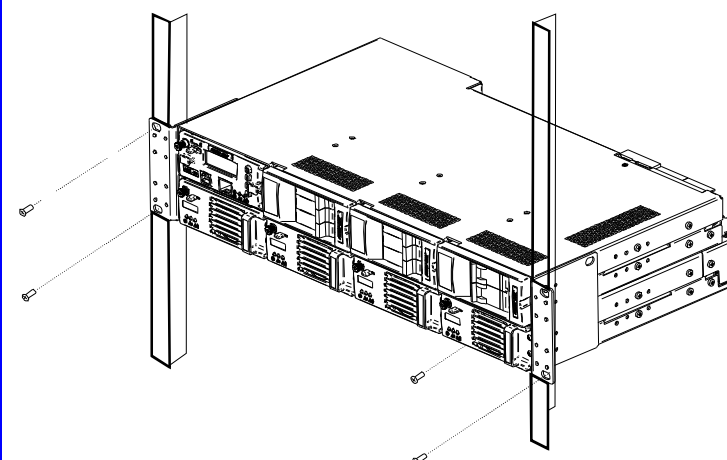
- 1 Load Breaker Drawers
- 2 Battery Breaker Drawer (incl. LVD)
- 3 System Controller (PCC)
- 4 XR08.48 Rectifiers (max.4)
- 5 Rear Connections

2 Rack Mounting

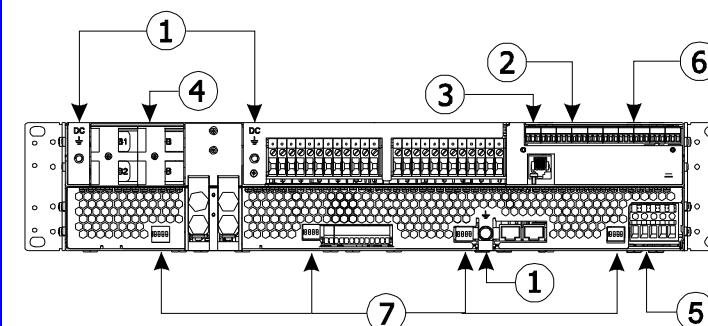
The 2RU power system is designed for rack mounting, and the default bracket is for 19 inch rack width. This bracket can easily be turned around for ETSI mounting. There needs to be sufficient clearance at the front for rectifier installation, and at the rear for connections and airflow.



NOTE It is recommended to remove the rectifiers before installing the shelf to the cabinet or rack.



3 Connection



- 1. Earth Connection
- 2. Configuration-specific Alarms Connection
- 3. Temperature Sensor Connection
- 4. Battery Connectors
- 5. Mains Connections (single-phase)
- 6. Multi Purposes (Symmetry and Analog Inputs)
- 7. Rectifier Addressing (4R System)

All cable connections for the Aspiro system are available at the rear of the system. Load and battery connections are performed at the rear of the breaker drawer.

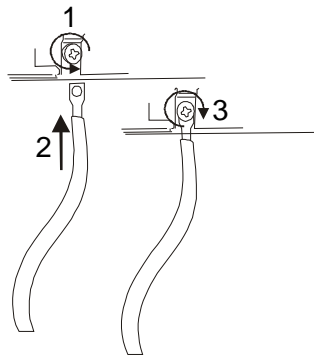
NOTE Recommended wire sizes are not given as exact conversions, but as recommended sizes in standard values for each system. Wires should be rated for 90°C and minimum 300 V rating.

4 DC Earth Connection

The power system needs to be properly grounded to the rack or cabinet frame to ensure its safe and efficient operation.
2 RU systems are interconnected between the grounding points of the two shelves, so connecting one only to the central office ground is sufficient.

To connect:

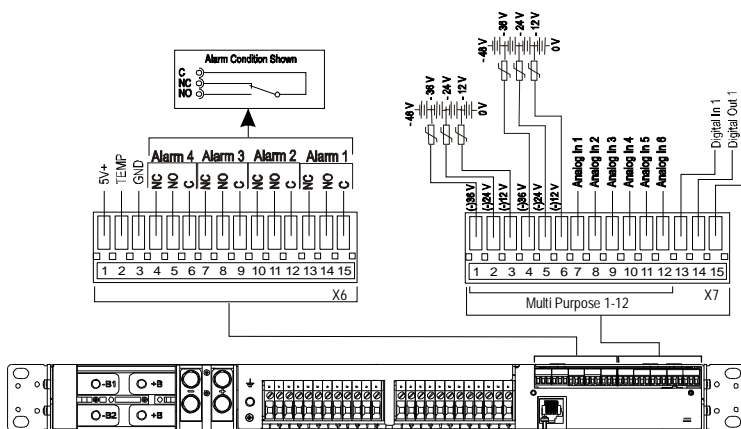
1. Loosen the screw (M5).
 2. Attach suitably sized cable lug.
 3. Tighten the screw with torque 3 Nm.
- Recommended cable size is 6.0 mm².



5 Alarm and Symmetry Connection

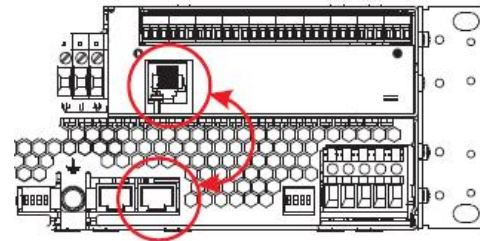
Alarm and Symmetry Connections are situated at the rear of the system. There are connections for the 4 alarm contacts and 2x3 connections for the symmetry. Multi Purposes 7-12 can be reconfigured as external analog inputs.

NOTE The configuration of alarms and symmetry connections may vary depending on the controller

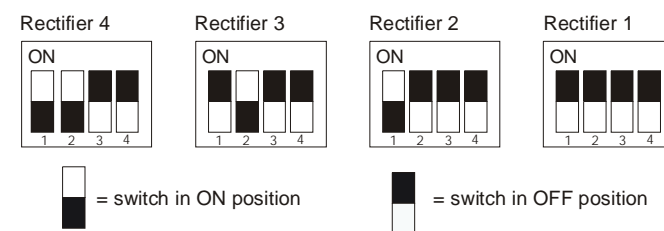


NOTE Multi Purposes 7-12 (Pin X16) and Digital In/Outs (Pin X17) are enabled only with ACC controller. Connectors X9 and X15 are not normally required.

NOTE Communication cable connecting the system controller with the power shelf is pre-installed. However, it is recommended to verify that the cable is properly fastened on both shelves to ensure proper communication.



The 4R Power Shelf also features rectifier address switches for each rectifier position to properly communicate with the system controller. The dip-switches are set at the factory, but the addressing should be verified by the installer before starting up the power system. Correct addressing is shown below (rear view-left to right).



6 Mains Connection

Mains connection is pre-installed as a single-phase connection.

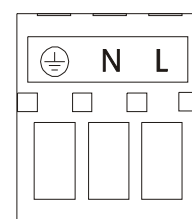
During the installation, follow the appropriate installation instructions below.
It is recommended that a UL listed Mains Protection Circuit Breaker is used, voltage rating 240 V.

To connect:

1. Remove sufficient insulation from the cables and insert the stripped cables in the appropriate terminal.
2. Then tighten the corresponding screw on the terminal with a flat screwdriver,

Maximum cable size for connection is 4 mm². Torque according to Torque table.

Single-phase (Top fastening)



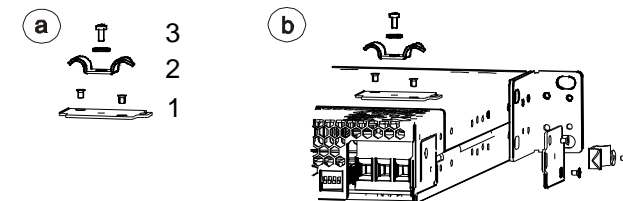
Legend:
⊕ Earth
N Neutral
L Phase

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Recommended Mains Circuit Protection:
I_{max} = 38 A at 100 VAC
Recommended Mains CB for XR08.48 is C50 A

7 Cable Relief Kit

The Aspiro power system is delivered with a kit for mounting a mains cable relief near the mains connector. The kit may be mounted according to the customer needs as shown in the picture.



The Cable Relief Kit consists of the mounting plate with two screws for fastening to the shelf (1), the cable relief (2) and a screw and washer (3) to fasten the cable relief and cable to the mounting plate.
With rear-mounted mains connector the options for mounting the relief kit is either on the top or on the side.

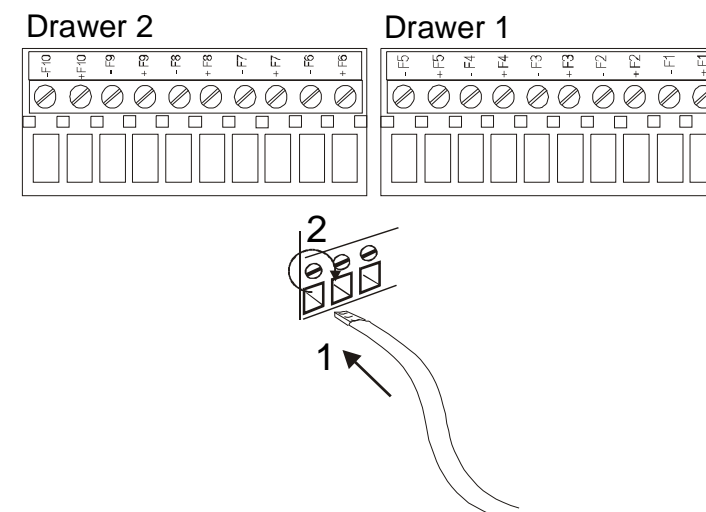
8 Load Connection

Breaker drawers mounted into Aspiro shelves are front access distribution modules that allow in-service replacement of battery and load breakers.

D22	Breaker size	16 A
	Wire size [mm ²]	2.5

B33	Breaker size	40 A
	Wire size [mm ²]	8.0

For Load connection there is one connector corresponding to each breaker drawer in the shelf, with the rear connectors labelled according to the breaker labelling. Max. cross-section for the connector is 6 mm², but the cable needs to be carefully selected according to the breaker size.

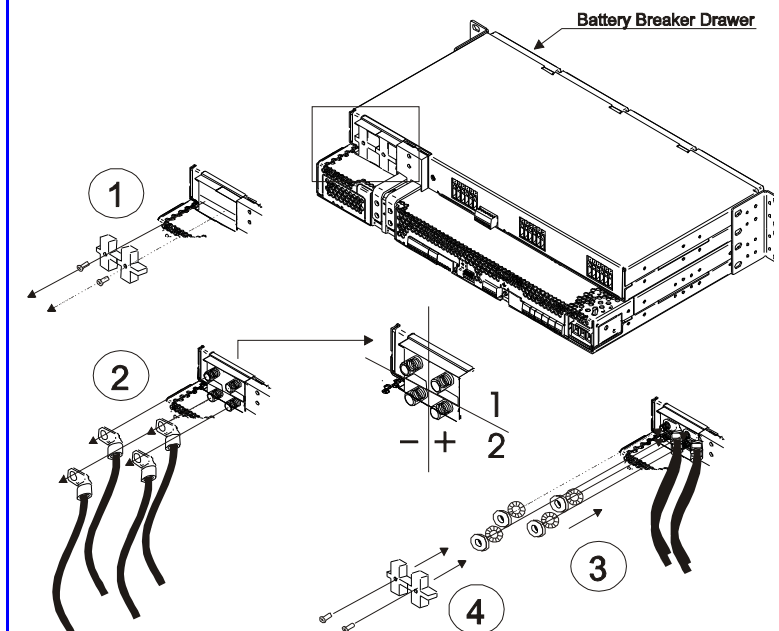


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9 Battery Connections

WARNING Improper handling with batteries can be dangerous. Please read and understand the information in the Safety chapter before connecting batteries.

Battery connections are available to the left, marked with -B1 (top left), +B1 (top right), -B2 (bottom left), +B2 (bottom right) for the maximum two battery breakers in the battery breaker drawer.
Remove the two cover plates by loosening the screw on each cover.
After fastening the battery cables (recommended torque: 8 Nm), guide the cables out to the right and reattach the cover plates.



10 Symmetry Connection

1. Attach the interblock connections plates between the batteries.
2. Insert the suitably sized cable lug into one pole of the interblock connection plate. Fasten the lugs and plates to individual battery poles.
3. For 4-block measurement fix 3 wires of symmetry cable to individual cable lugs (B).

