

Installing the Power Distribution Unit for Laser Projectors

The power distribution unit contains rectifiers and breakers to provide DC power to the laser modules. Connect the AC power and ground wires to the correct locations on the power distribution unit.

Laser rack power requirements

A certified electrician must complete these and any other electrical installations. The electrical installation is subject to the approval of all local authorities having jurisdiction.

- One single phase (100 - 240) VAC, 15 A, (50 - 60) Hz branch circuit for the rack Ethernet switch.
- Two to four single phase for the LM Rack (Full) or one to three single phase for the LM Rack (Half) (200 - 240) VAC, 30 A, (50 - 60) Hz circuits for the power distribution unit, as specified in the following table.
- To protect from over-currents, short circuits, and earth faults, a 30 A circuit breaker for each circuit must be part of the building installation.
- The disconnect device must be readily accessible in the same room as the laser rack.
 - Use wires suitable for at least 90 degrees Celsius for AC supply connections.
 - Use appropriately rated IEC 60309 plugs and receptacles as part of the AC power cord connections.
 - Ensure that all AC power connections comply with local and national electrical codes.

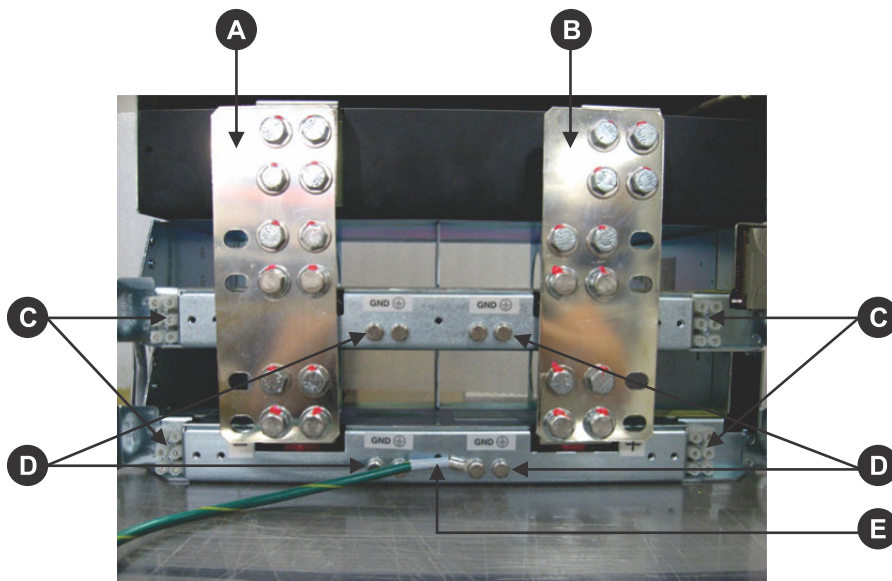
Number of laser modules	2000 W Rectifiers Required for N + 1 Redundancy	Number of (200 - 240) VAC, 30 A Circuits Required
2	3	2
3	3	2
4	4	2
5	4	2
6	5	3
7	5	3

Number of laser modules	2000 W Rectifiers Required for N + 1 Redundancy	Number of (200 - 240) VAC, 30 A Circuits Required
8	6	3
9	6	3
10	7	4
11	7	4
12	8	4

Four circuits is the preferred configuration. If you install fewer circuits, remove the rectifiers that are not connected to the AC power. Rectifiers not connected to AC power emit an audible signal.

Installing the rectifiers and breakers

A qualified electrician is required to install the single phase (200 - 240) VAC, 30 A, (50 - 60) Hz power lines to the power distribution unit and the wall outlet for the rack Ethernet switch.

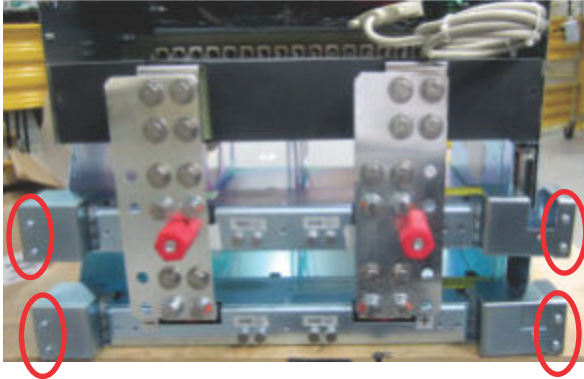


A	-VE bus bar
B	+VE bus bar
C	AC feed terminal blocks (four locations)
D	AC feed ground wire connection (four locations)
E	Factory installed safety ground wire

1. At the wall circuit breaker, turn off the power to the laser rack.
2. Insert the rectifiers in the lower section of power distribution unit at the bottom of the laser rack.
3. Turn the breakers to the off position and insert them in the upper section of the power distribution unit.

Each laser module has one breaker.

4. To remove the cover from the back of the power distribution unit, remove the Phillips screw from each of the four corners.
5. From each of the AC terminal blocks, remove the two screws holding the cover.



6. On the back of the power distribution unit connect each AC feed to the appropriate AC terminals (C).
Each AC feed supplies power to two rectifiers. The third (bottom) terminal of each AC terminal block is not used.
7. Connect the safety ground wire from each AC feed to the appropriate GND bolt (D).
Only connect one ground wire to each GND bolt. Ensure the lugs or wires do not touch the +VE bus bar.
Always keep the factory installed safety ground wire (E) connected to the laser rack. Do not disconnect the ground wire or use it for any other connection.
8. Using a multimeter, verify the ground wire is connected correctly.
9. Reinstall the covers on the AC terminal blocks.
10. Replace the cover onto the back of the power distribution unit.
11. Turn on the power to power distribution unit at the wall breaker.
Do not turn on the breakers in the power distribution unit until all the laser modules have been installed.
12. Verify the rectifier and power distribution unit status lights are on.
 - For each rectifier, the top two status lights are on.
 - The power distribution unit displays a green LED.
 - The power distribution unit is silent.If a rectifier is not installed properly, or there is an empty rectifier bay, there is an audible signal.
13. Verify that the power distribution unit is outputting the correct voltage (48 VDC) before the laser modules are connected.

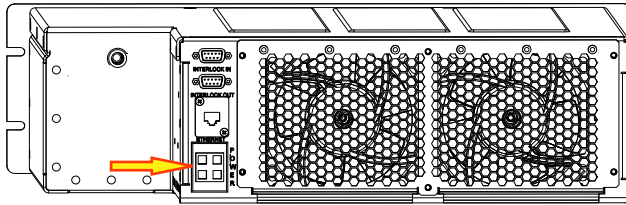
Connecting the power cables

Supply power to the laser modules in the rack.



Caution! Failure to comply with the following could result in minor or moderate injury.

- **SHOCK HAZARD!** Turn off the breakers in the power distribution unit when setting up the laser rack.
1. Turn off the breakers in the power distribution unit at the bottom of the laser rack.
 2. Attach a power cable from the power distribution unit to each laser module in the laser rack, starting at the bottom.



3. Attach a power cable from the wall socket to the rack Ethernet switch.

Technical support

- North and South America: +1-800-221-8025 or tech-support@christiedigital.com
- Europe, Middle East, and Africa: +44 (0) 1189 778111 or techsupport-emea@christiedigital.com
- Asia Pacific: tech-asia@christiedigital.com
- Christie Managed Services: +1-800-550-3061 or NOC@christiedigital.com