SMP10C24X220 Series

Power Supply/Charger

Models Include:

SMP10C24X220

SMP10PMC24X220

- Single Output.

SMP10PM24P4220

- Four (4) Fuse Protected Outputs.

SMP10PM24P8220

- Eight (8) Fuse Protected Outputs.

SMP10PM24P16220

- Sixteen (16) Fuse Protected Outputs.

SMP10PM24P4CB220

- Four (4) PTC Protected Outputs.

SMP10PM24P8CB220

- Eight (8) PTC Protected Outputs.

SMP10PM24P16CB220

- Sixteen (16) PTC Protected Outputs.

Installation Guide

Altronix®

More than just power.™

Rev. 012610

Installing Company: _____ Service Rep. Name: _____

Address: _____ Phone #: _____

Overview:

Altronix SMP10C24X220 Series power supply/chargers convert a 220VAC (working range 198VAC - 256VAC), 50/60Hz input into a regulated 24VDC output with up to 10A of continuous load current *(see specifications)*.

SMP10C24X220 Series Configuration Reference Chart:

Altronix Model Number	Accessory Power Distribution Module(s)	Number of Outputs	Fused Outputs	PTC Outputs (auto-resettable)	Individual Output Rating (A)	Supervised	220VAC 50/60Hz Input Current (A)	24VDC Total Output Current (A)
SMP10C24X220	–	1	–	–	10A	–	1.8A	10A
SMP10PMC24X220			–	–		✓		
SMP10PM24P4220	PD4	4	✓	–	2.5A			
SMP10PM24P4CB220	PD4CB		–	✓	2.0A			
SMP10PM24P8220	PD8	8	✓	–	2.5A			
SMP10PM24P8CB220	PD8CB		–	✓	2.0A			
SMP10PM24P16220	PD16W	16	✓	–	2.5A			
SMP10PM24P16CB220	PD16WCB		–	✓	2.0A			

Specifications:

Input:
- Input 220VAC, 50/60Hz, 1.8A.

Output:
- 24VDC output.
- 10A supply current.
- Filtered and electronically regulated outputs.
- Short circuit and thermal overload protection.

Battery Backup:
- Built-in charger for sealed lead acid or gel type batteries.
- Maximum charge current 0.7A.
- Zero voltage drop when switching over to battery backup.

Features:
- Power ON/OFF switch.

Supervision (select models)**:**
- AC fail supervision (form "C" contacts).
- Battery presence and low battery supervision (form "C" contacts).

Visual Indicators:
- AC input and DC output LED indicators.

Electrical:
- Operating temperature: 0ºC to 49ºC ambient.
- BTU/Hr. (approx.): 122 BTU/Hr.
- System AC input VA requirement: 310.5VA.

Mechanical:
- Enclosure Dimensions (H x W x D approx.): 13" x 12.5" x 3.25" (330.2mm x 317.5mm x 82.6mm)
  - Accommodates up to two (2)12VDC/7AH batteries.

Installation Instructions:

Wiring methods shall be in accordance with the National Electrical Code/NFPA 70/NFPA 72/ANSI, and with all local codes and authorities having jurisdiction. Product is intended for indoor use only.

1. Mount unit in the desired location. Mark and predrill holes in the wall to line up with the top two keyholes in the enclosure. Install two upper fasteners and screws in the wall with the screw heads protruding. Place the enclosure's upper keyholes over the two upper screws; level and secure. Mark the position of the lower two holes. Remove the enclosure. Drill the lower holes and install the three fasteners. Place the enclosure's upper keyholes over the two upper screws. Install the two lower screws and make sure to tighten all screws *(Enclosure Dimensions, pg. 8)*. Secure enclosure to earth ground.
2. Slide [Power ON/OFF] switch to OFF position *(Fig. 1a, pg. 4, Fig. 2a, pg. 5)*.
3. Connect AC circuit (220VAC, 50/60Hz) as follows: Green branch wire connects to earth (safety) ground ⏚. Line and Neutral to the connector on power supply board marked [L, N] respectively *(Fig. 1, pg. 4, Fig. 2, pg. 5)*.
   Use 18 AWG or larger for all power connections (Battery, DC output).
   Use 22 AWG to 18 AWG for power-limited circuits (AC Fail/Low Battery reporting).
4. Slide [Power ON/OFF] switch to ON position.
5. Measure output voltage before connecting devices. This helps avoiding potential damage.

Keep power-limited wiring separate from non power-limited wiring (220VAC, 50/60Hz Input, Battery Wires). Minimum 0.25" spacing must be provided.
CAUTION: Do not touch exposed metal parts.
Shut branch circuit power before installing or servicing equipment.
There are no user serviceable parts inside. Refer installation and servicing to qualified service personnel.

6. Slide [Power ON/OFF] switch to OFF position.
7. Connect devices to be powered:
   a. For Power Supply Board connect to the terminals marked [– DC +].
   b. For Power Distribution Module(s) connect devices to be powered to the terminal pairs 1 to 4 marked [1P & 1N] through [4P & 4N] *(Fig. 3, pg. 6),* 1 to 8 marked [1P & 1N] through [8P & 8N] *(Fig. 4, pg. 6),* or 1 to 16 marked [1P & 1N] through [16P & 16N] *(Fig. 5, pg. 6)*, carefully observing correct polarity.

   Note: Power switch is used to disconnect the L (HOT) terminal from the rest of the board *(Fig. 1a, pg. 4, Fig. 2a, pg. 5).* When servicing the unit, AC mains should be removed.
8. When using stand-by batteries, they must be lead acid or gel type.
   Connect battery to the terminals marked [– BAT +] (battery leads included).
   Note: When batteries are not used, a loss of AC will result in the loss of output voltage.

For supervised models only:

9. Connect appropriate signaling notification devices to AC Fail and Low Bat supervisory relay outputs marked [NC, C, NO] *(Fig. 1b, pg. 4 or Fig. 2b, pg. 5).*
10. Slide [Power ON/OFF] switch to ON position.

LED Diagnostics:

Power Supply Board

Red (DC)	Green (AC)	Power Supply Status
ON	ON	Normal operating condition.
ON	OFF	Loss of AC. Stand-by battery is supplying power.
OFF	ON	No DC output.
OFF	OFF	Loss of AC. Discharged or no stand-by battery. No DC output.

Power Distribution Module

Green	Power Distribution Module Status
ON	Normal operating condition.
OFF	No Power Output.

Terminal Identification:

Power Supply Board:

Terminal Legend	Function/Description
L, G, N	Connect 220VAC to these terminals: L to Hot, N to Neutral.
– DC +	24VDC @ 10A continuous output.
*AC FAIL NC, C, NO	Used to notify loss of AC power, e.g. connect to audible device or alarm panel. Relay normally energized when AC power is present. Contact rating 1A @ 120VAC / 28VDC.
*Low Battery NC, C, NO	Used to indicate low battery condition, e.g. connect to alarm panel. Relay normally energized when DC power is present. Contact rating 1A @ 120VAC / 28VDC. Low battery threshold: 24VDC output threshold set @ approximately 21VDC.
– BAT +	Stand-by battery connections. Maximum charge rate 0.7A.

***Note:** Supervised models only

PD4/PD4CB/PD8/PD8CB/PD16W/PD16WCB - Power Distribution Module:

Terminal Legend			Function/Description
PD4/PD4CB	PD8/PD8CB	PD16W/PD16WCB	
1P to 4P	1P to 8P	1P to16P	Positive DC power outputs.
1N to 4N	1N to 8N	1N to 16N	Negative DC power outputs.

Caution: Equipment to be installed / serviced by authorized / trained personnel only. Shut branch circuit power before installing / servicing equipment.

WARNING: To reduce the risk of fire or electric shock, do not expose the unit to rain or moisture. This installation should be made by qualified service personnel and should conform to the National Electrical Code and all local codes.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of an insulated DANGEROUS VOLTAGE within the product's enclosure that may be of sufficient magnitude to constitute an electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: To reduce the risk of electric shock do not open enclosure. There are no user serviceable parts inside. Refer servicing to qualified service personnel.

Fig. 1

Fig. 1a
Switch disables power mains line voltage input.
If stand-by battery (batteries) are connected, the DC output remains on

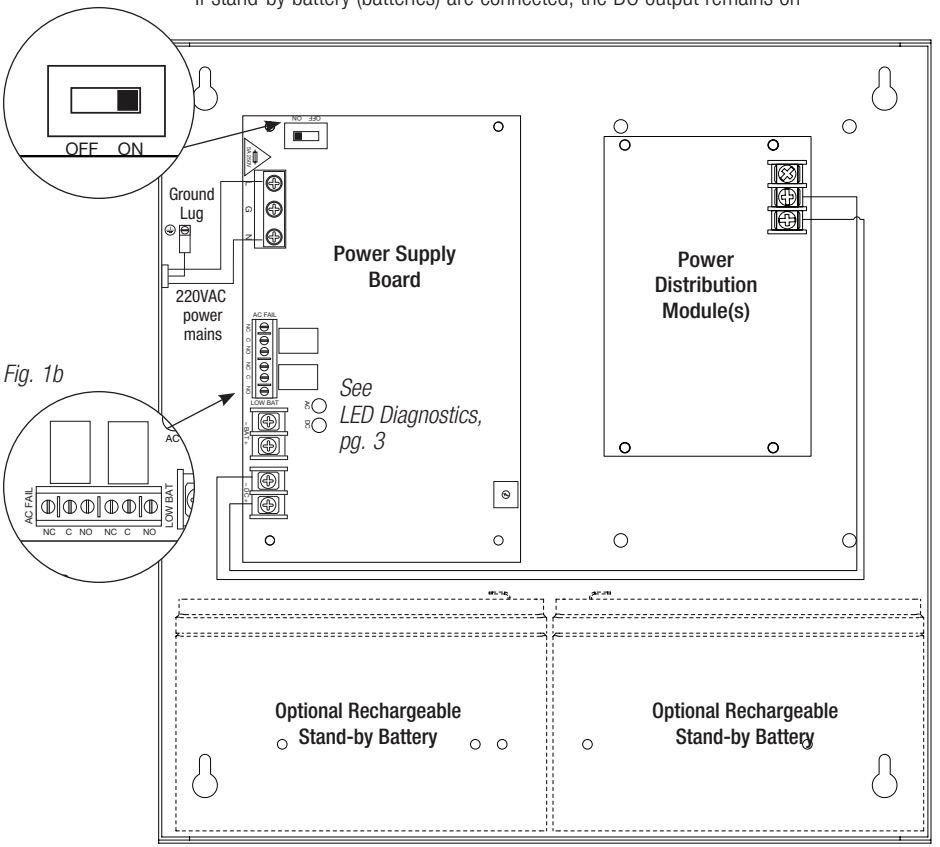


Fig. 1b

Fig. 2

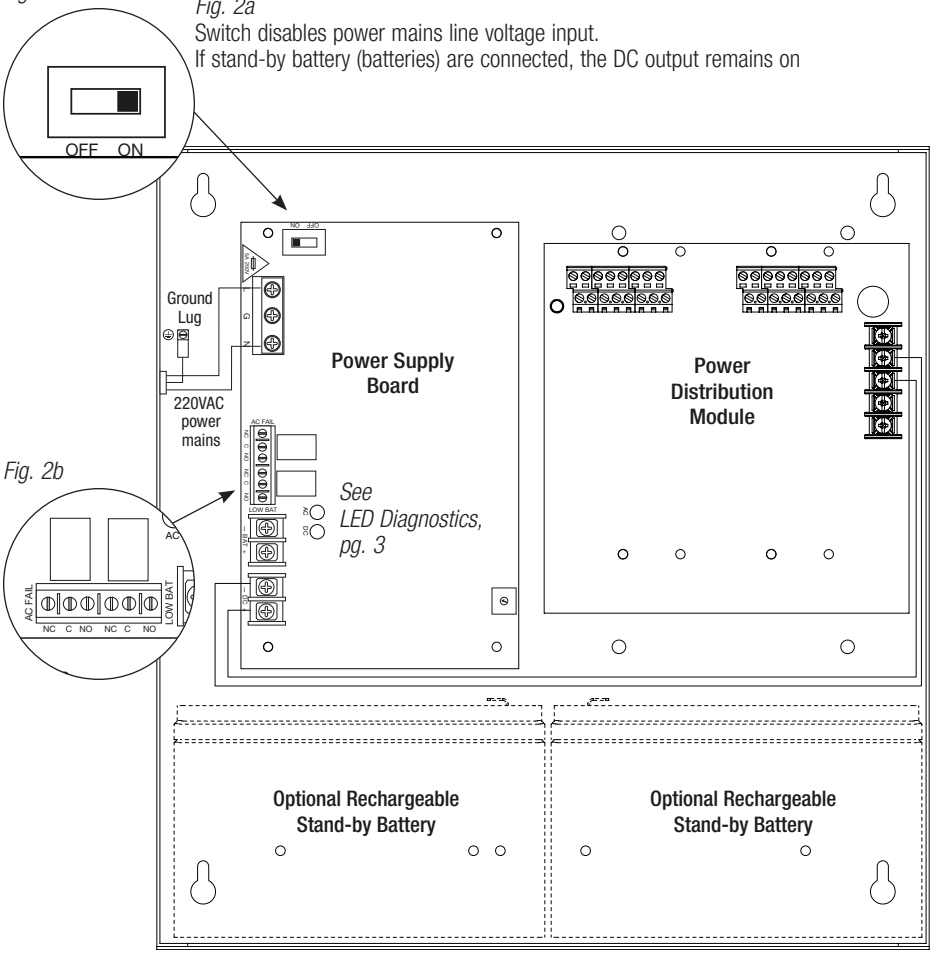


Fig. 2a
Switch disables power mains line voltage input.
If stand-by battery (batteries) are connected, the DC output remains on

Fig. 2b

Power Distribution Module(s):

Fig. 3 - **PD4/PD4CB**

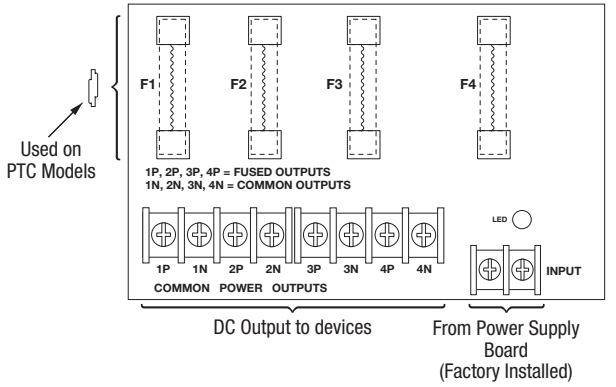


Fig. 4 - **PD8/PD8CB**

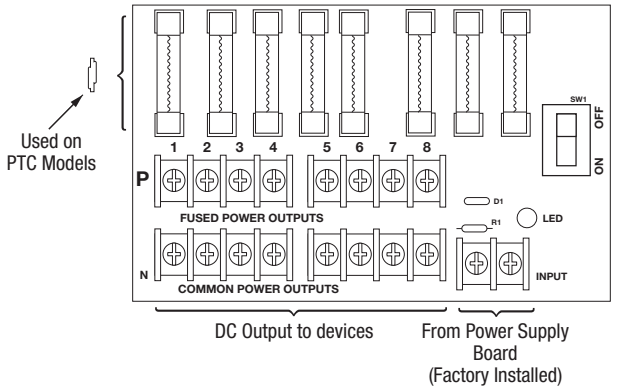
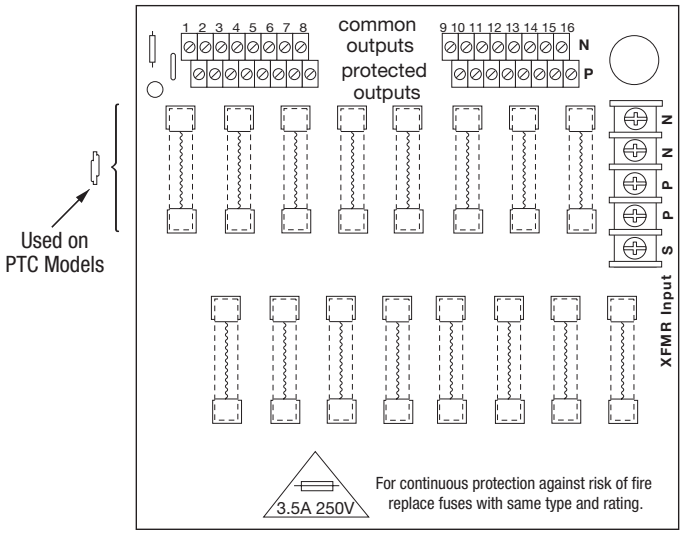


Fig. 5 - **PD16W/PD16WCB**



Notes:

Enclosure Dimensions (BC300)**:**

13” x 12.5” x 3.25” (330.2mm x 317.5mm x 82.6mm)
Enclosure accommodates up to two (2) 12VDC/7AH batteries.

Also available to accommodate up to two (2) 12VDC/12AH batteries (please contact Altronix).

