



LAPC PRO

Electrical Installation Instructions

Local Area Power Center

2kVA & 3kVA Models (LAPC 2.1 & LAPC 3.1)



INSTALLATION INSTRUCTIONS

Note: The LAPC should be installed by a licensed electrical contractor.

1. Determine which “critical circuit breakers” feed power to the remote receptacles and/or hard-wired loads that are required to be tied into the power isolation and battery backup of the LAPC. This will typically be the POS network receptacles and related equipment, office computer, telephone system, security system, etc.
2. Remove the panelboard covers for the “critical circuit breakers”. Use an amp probe or other current measuring device to amp out all the hot conductors connected to the “critical circuit breakers”. The total amp load for the summation of all the “critical circuit breakers” must be 12-amps or less.
3. Locate a convenient wall location as close to the electrical panels as possible where there is adequate wall space to mount the LAPC/shelf assembly and the POWERVAR Uninterruptible Power Manager (UPS). A space measuring at least 23.75” H x 10.25” W x 19.0” D is required for the entire assembly. If the shelf and the POWERVAR UPS are mounted separately from the LAPC they must be within approximately 4 feet of each other for the plug and receptacle cables to connect between these two primary product components.
4. Attach the LAPC/shelf assembly to the wall using hex head lag screws that are a minimum of 1/4 inch diameter and a minimum of 1 1/2 inches long. If the assembly cannot be attached to building framing members such as studs, it is the responsibility of the installer to use anchoring devices that are appropriate for the surface material to which the assembly is being mounted. Total assembly weight (LAPC, shelf, and UPS) is 130 pounds.
5. Select a 120V, 15- or 20-amp, single pole, circuit breaker in one of the panel boards to feed power to the LAPC. This may be one of the “critical circuit breakers” that is currently feeding one of the “critical circuits”. **DO NOT use “GROUND FAULT CIRCUIT INTERRUPT” (GFCI) TYPE BREAKERS to feed power to the LAPC. GFCI type breakers will trip when putting the LAPC into bypass mode.**
6. Using EMT conduit, flexible conduit, or 15-amp minimum MC cable, run a single circuit (Hot – Black, Neutral – White, and Safety Ground – Green) to feed power to the LAPC on terminals “L”, “N”, and “G” in the lower right-hand corner of enclosure on terminal block TB2. This circuit is considered “dirty power” since it has not been conditioned yet by the AMETEK Powervar UPS and should not be run in the same conduit as the “clean power” circuits that will feed power to all the “critical circuits”. Conductor size should be 14 AWG minimum.

7. Using EMT conduit, flexible conduit, or 15-amp minimum MC cable, run a single circuit (Hot – Black, Neutral – White, Safety Ground – Green,) for each of the output circuits from the LAPC to the panel boards. Conductor size should be 14 AWG minimum and 12 AWG for the Ground circuit.
8. Terminate each output circuit to the LAPC on terminals “LD 1 – LD 4”, “H”, “N”, and “G” on terminal block TB1.
9. Before proceeding to **STEP 10**, be sure to communicate with local management that the “critical circuits” will have to be shut off temporarily to perform the system tie in. Local management may want to power down certain computers and other equipment before turning off the “critical circuit breakers”.
10. Turn off all the “critical circuit breakers” and verify that the equipment plugged into the “critical circuits” goes off.
11. Remove the hot conductor (black) from the breaker, neutral conductor (white) from the neutral bar, and safety ground (green) from the ground bar. Use wire nuts or butt connectors to splice each set of output branch conductors to each set of output conductors coming from the LAPC.
12. Remove all existing surge strips, filters, and / or UPS devices plugged into the output equipment receptacles.
13. Turn the Transfer Switch on the LAPC CLOCKWISE to the “Bypass” position. Turn on the circuit breaker feeding input power to the LAPC. Both the “Input” and “Output” pilot lights should be illuminated, and all the connected “critical circuit” equipment should come back on.
14. Plug the AMETEK Powervar UPS into the receptacle located on the REAR side exterior of the LAPC. Plug the cable coming from the bottom of the LAPC into one of the receptacles on the back of the AMETEK Powervar UPS.
15. Turn on the AMETEK Powervar UPS by pressing the “on/off” switch (Left hand of front panel) and holding for several seconds until the row of six status indicator lights at the bottom of the bezel begins to illuminate. Allow the UPS to go through the self-test mode, which is finished when the green indicator light with the AC power symbol (2nd from left) illuminates continuously, and all the others go off. See the AMETEK Powervar UPS manual if any conditions other than the one described occurs.

IMPORTANT NOTE

If the input circuit breaker to the LAPC trips off during the startup of the AMETEK Powervar UPS, it is typically not a problem with the UPS but with the circuit breaker itself. The circuit breaker should be replaced with one that is rated for High Magnetic inrush loads. See Page 6 in this manual for more information.

16. Turn the Transfer Switch on the LAPC COUNTER-CLOCKWISE to the “Normal” position.
17. Reinstall the LAPC side cover using the ten screws removed in **STEP 4**.
18. Advise local management that the installation is complete and all the “Critical Electronic Systems” that are tied in will have battery backup, power conditioning, and surge protection. Show local management the “input” and “output” pilot lights on the LAPC and how to use the “Bypass” switch in the event of UPS failure or service. Also review AMETEK Powervar UPS operation and provide the operation manual (on CD ROM) to local management.

NEW INSTALLATIONS

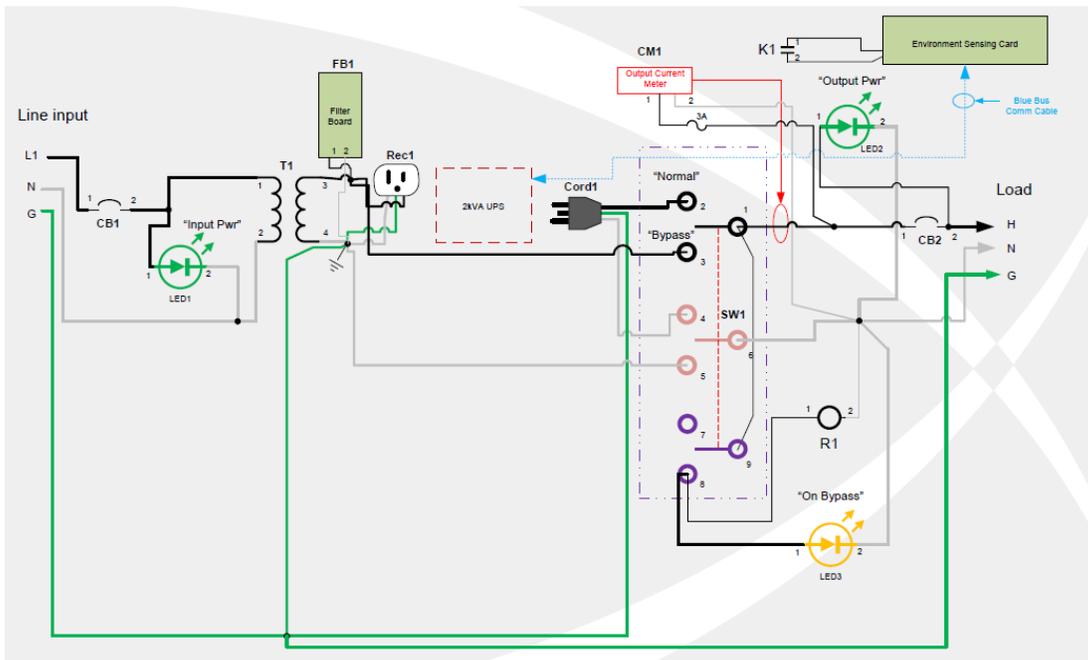
For all new installations, follow the previous instructions except for **STEP 7** and **STEP 11**. In new installations, output branch circuits can be piped directly into the LAPC and connected directly to the LAPC terminal block TB2.

IMPORTANT NOTE

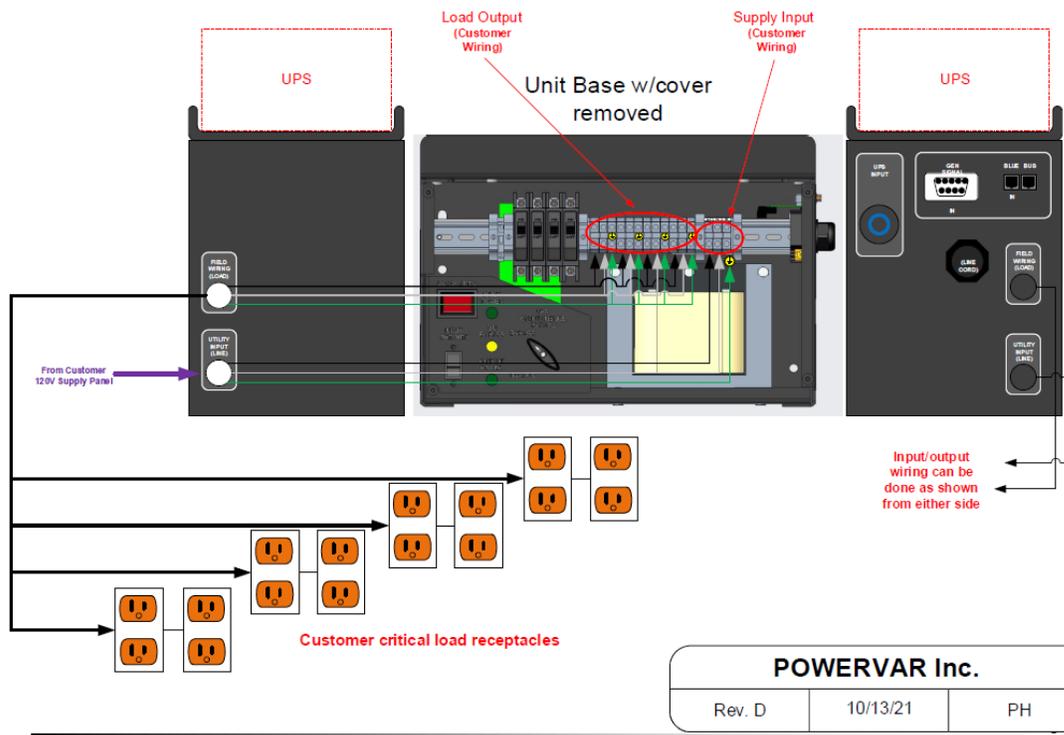
For maximum performance, Powervar recommends power conditioning be placed at the point of load. In applications where the load is non-standard in length, please consult a Powervar professional for specific application assistance.

See **Next Page** for the One Line Wiring Diagram and the Customer Wiring Diagram.

ONE LINE WIRING DIAGRAM



2-3kVA LAPC Customer Wiring (optional: either side)



POWERVAR Inc.		
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