Power Conversion®

P90L-ISO6MB & ISO10MB

for 6kVA, 10kVA Models

User & Installation Manual

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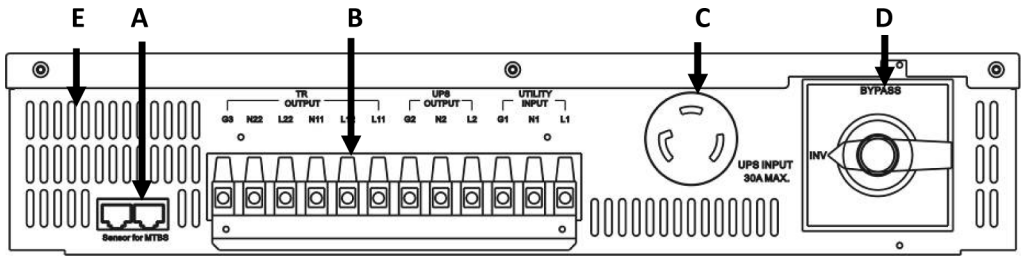
Important Safety Instructions

An Important Notice

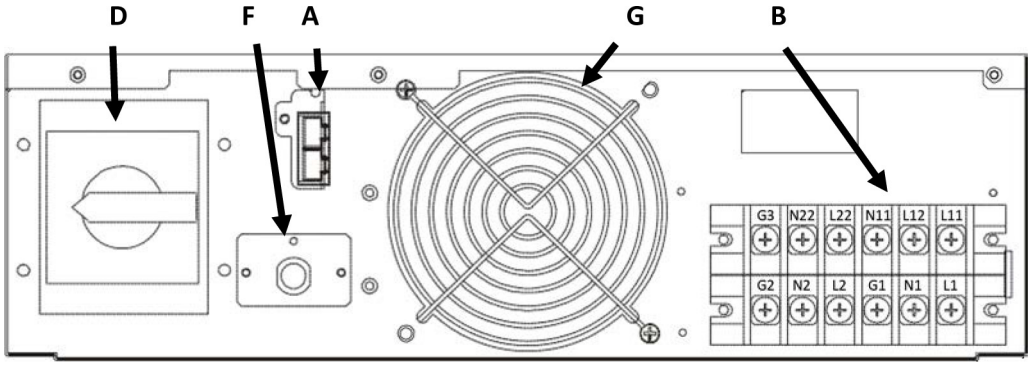
- There is a tiny leakage current from the Transformer Module, so make sure to it is correctly grounded before connecting to the UPS, Utility or Output Device.
- Do not open the case, as there are no serviceable parts inside, or your warranty will be void.
- Do not try to repair the unit yourself; contact your local supplier or your warranty will be void.
- Non-authorized technician is not allowed to install the unit in the following areas:
    a) Medical equipment directly related to human life.
    b) Elevator, Metro(Subway) system or any other equipment related to human safety.
    c) Public System or critical computer Systems.
- Any installation related to human safety, public system, or emergency device shall be consulted with dealer first; otherwise, your warranty will be void.
- If any liquid is split onto the unit or foreign objects dropped into the unit, the warranty will be null and void.
- Do not install the unit in an environment with sparks, smoke, or gas.
- Make sure the unit is installed within a proper environment as specified:
    a) Keep it in the place of 0 -40 C and 30-90% non-condensing humidity
    b) Keep away from direct sunlight
    c) Keep away from the objects that give off excessive heat and areas that are excessively wet.
    d) Keep away from the environment that generates ARCs.
    e) Keep away from dusty, corrosive and salty environments
    f) Install the unit indoors as it is not designed for installation outdoors.
- To eliminate any overheating of the unit, keep all ventilation openings free from obstruction, and do not store items on the top of the unit. Keep the unit 30 cm away from the wall.
- The unit is recommended to install in an environment with 5M3 airflow per hour.
- Make sure the unit is completely turned off when moving the unit from one place to the other. It might cause electrical shock if the input or output is not turned off completely.
- Improper grounding might cause unexpected leakage current, so please make sure that the utility ground is properly connected.
- This unit includes an optional Maintenance Bypass Switch. Please make sure you may follow the operation procedure
- When use a damp cloth to clean the unit, please make sure the unit is turned off to avoid any hazardous risk.
- Do not touch any terminals of the unit if it is connected to the Utility.

Rear Panel Explanation

6kVA



10kVA

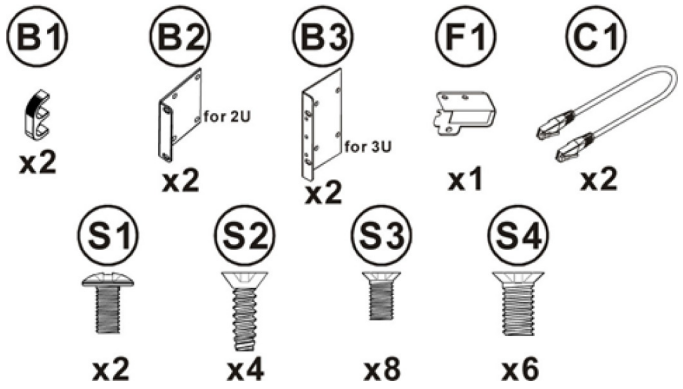


A. RJ-45 Communication port
B. Input & Output Terminal Block
C. For UPS Input (6kVA only)
D. Maintenance Bypass Switch
E. Air Ventilation Openings (6kVA only)
F. Thermal breaker for the protection of Load in abnormal condition: CB3 (10kVA only)
G. Cooling Fan (10kVA only)

Installation And Operation

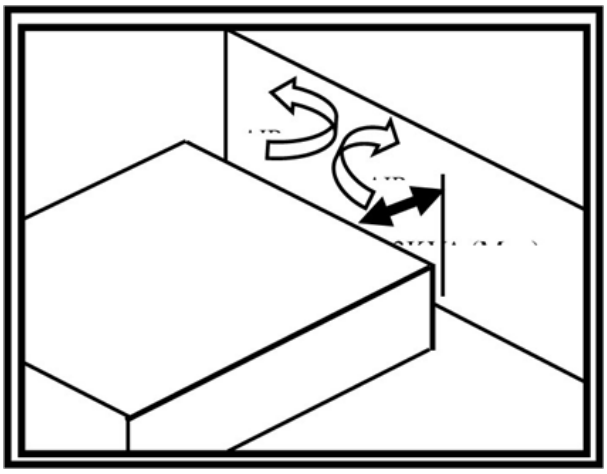
UPS Unpacking

- Remove the unit from PE foam.
- Check Accessories
  - o one set of user's manual
  - o one set of accessory kit
  - o RJ45 - molex cable
  - o (2) 12" NEMA L6-30P cables (6kVA only)
  - o (1) 12" NEMA L6-30R cable (6kVA only)



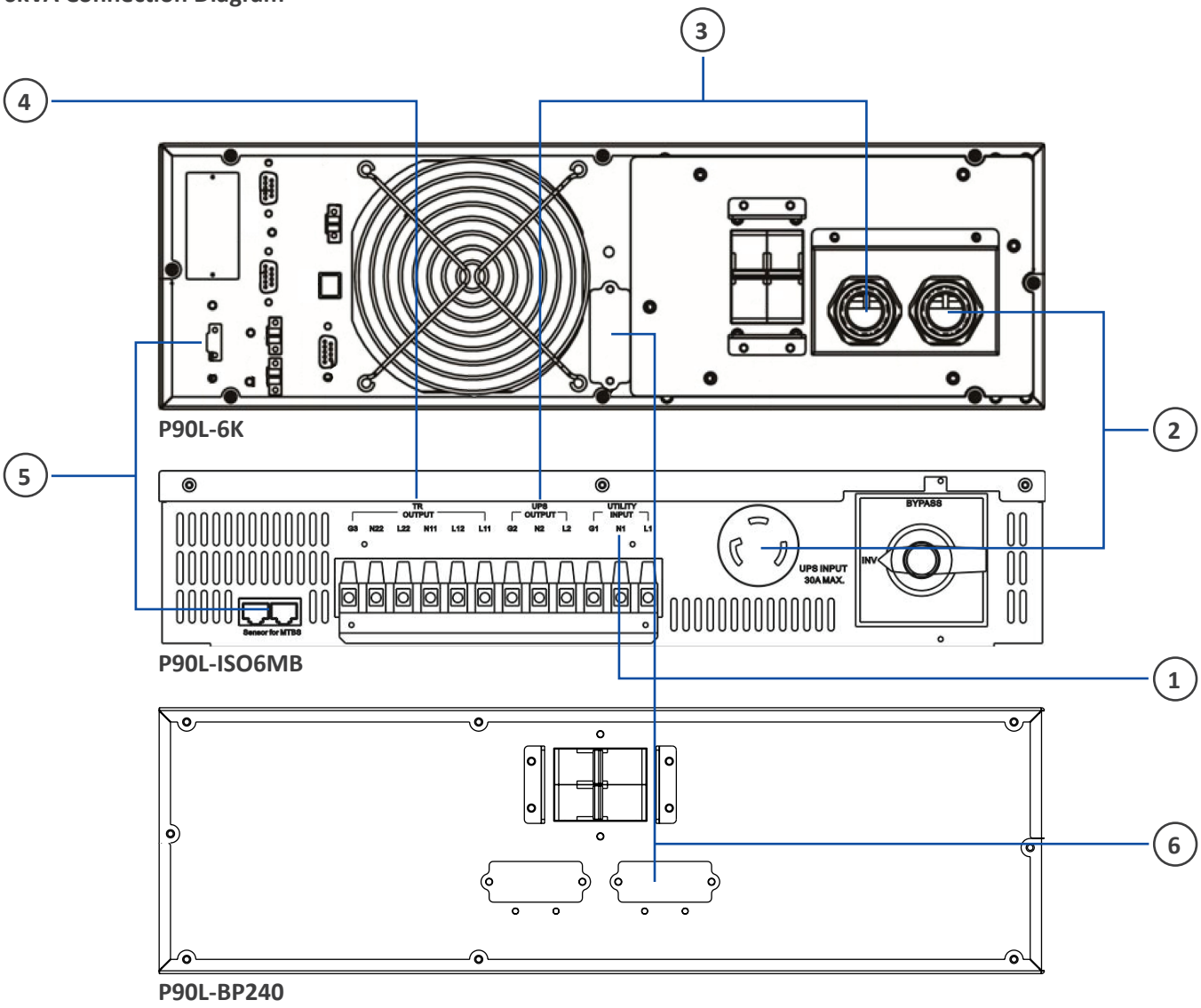
Selecting Installation Position

- It is necessary to select a proper environment to install the unit, in order to minimize the possibility of damage to the unit and extend the life of the unit. Please follow the advice below:
- Keep at least 30 cm (12 inches) clearance from the rear panel of the unit to the wall. Do not block the air-flow to the ventilation openings of the unit. Also check the installation site to avoid over-heat and excessive moisture.
- Do not place the unit in an environment near dust, corrosive or salty material or flammable objects.
- Do not expose the unit to outdoors.



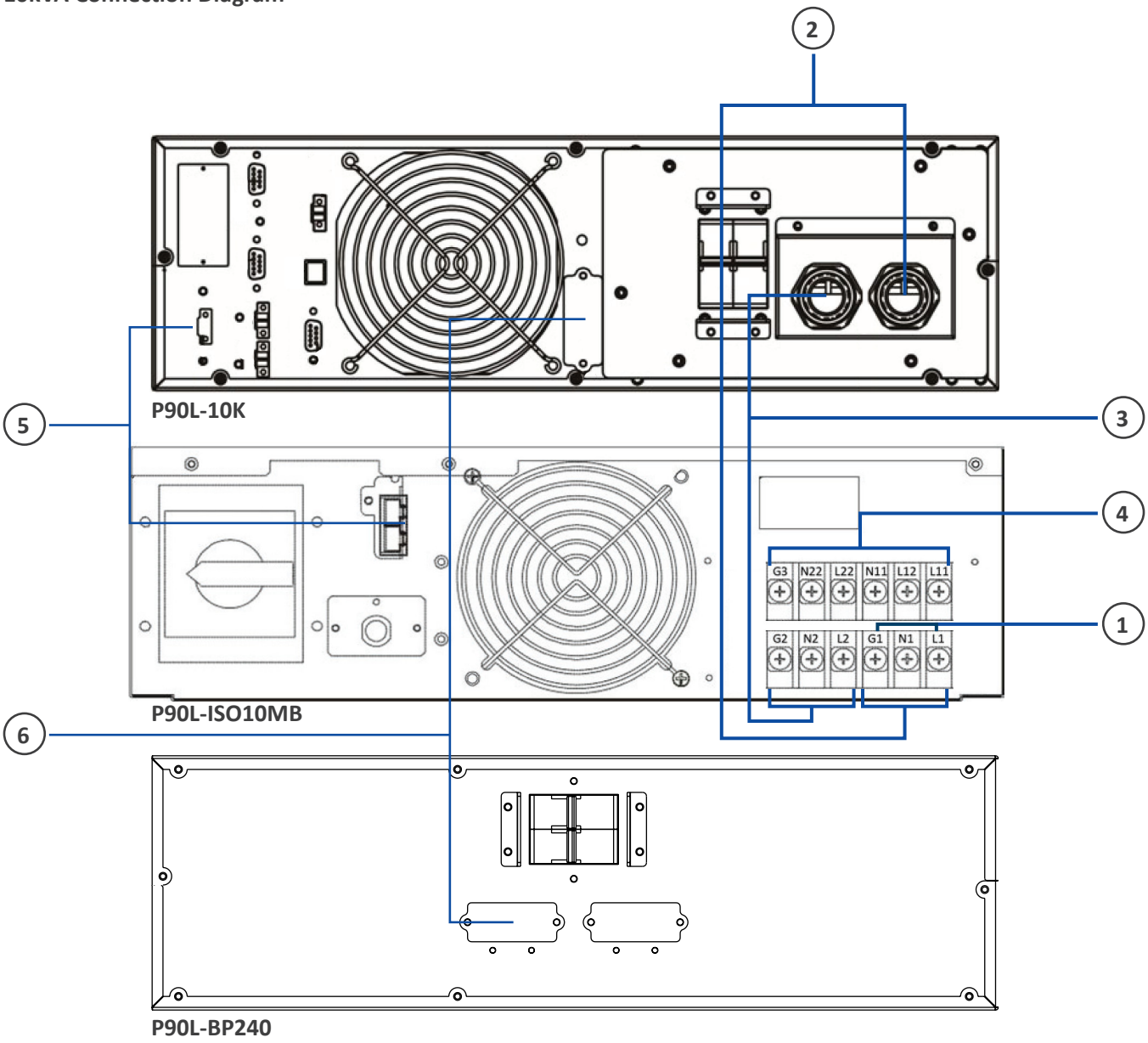
Installation

6kVA Connection Diagram



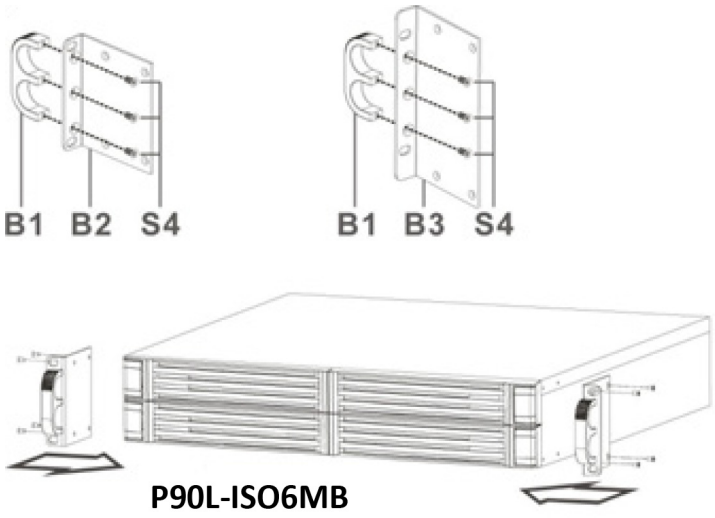
1. Hardwired input from Utility Input
2. L6-30P cord from UPS input connectes to L6-30R on P90L-ISO6MB UPS Input
3. L6-30R cord from UPS connects with L6-30P on P90L-ISO6MB UPS Output
4. Hardwired TR Output to load
5. RJ45 on P90L-ISO6MB to Molex connector on P90L-6K for static bypass interlock
6. Battery connection; Anderson to Anderson

10kVA Connection Diagram



1. Hardwired input from utility (UPS input shares utiltiy input terminal)
2. Hardwired input cord with ring terminals connects to utility input terminals on P90L-ISO10MB terminal block
3. Hardwired output cord with ring terminals connets to UPS output terminals on P90L-ISO10MB terminal block
4. Hardwired output to load
5. RJ45 on transformer to Molex connector on UPS for static bypass interlock
6. Battery connection; Anderson to Anderson

Installation as a Rack Unit



P90L-ISO6MB

Terminal Block Explanations for Input, Output

Terminal Block Explanation

6K

TR OUTPUT						UPS OUTPUT			UTILITY INPUT		
G3	N22	L22	N11	L12	L11	G2	N2	L2	G1	N1	L1
L11,L12,N11,L22,N22: GTM CONFIGURATION OUTPUT G3 : OUTPUT EARTH GROUND						L2-N2: UPS OUTPUT G2 : OUTPUT EARTH GROUND			L1-N1: UTILITY INPUT G1 : INPUT EARTH GROUND		

10K

TB1	TR OUTPUT					
	G3	N22	L22	N11	L12	L11
TB2	TO UPS OUTPUT			UTILITY INPUT		
	G2	N2	L2	G1	N1	L1

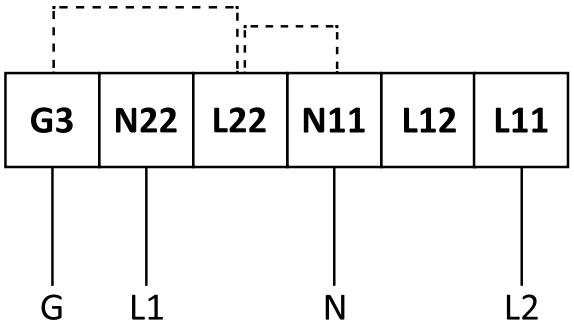
UPS Input shares Utility Input terminal

L1–N1: Utility Input / UPS Input (use same terminals as Utility Input)
G1: Input Ground
L2–N2: Connect to UPS Output Terminal
G2: Connect to UPS Output Ground Terminal
L11–L12–N11–L22–N22: the Output Terminals of the Unit
G3: The Output Ground Terminals of the Unit

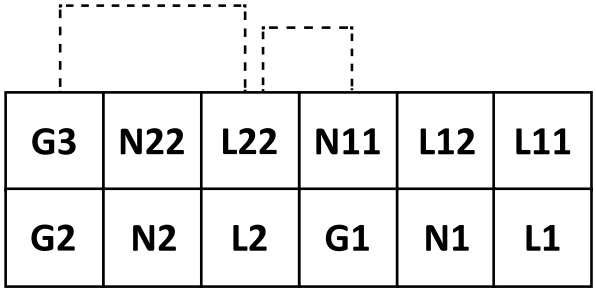
Output Wiring Explanation

- The maximum output current for each terminal is 30A (6K) or 50A (10K).
- If the input of L2-N2 from UPS OUTPUT block is 208Vac, the output voltage shall be 240Vac/120Vac

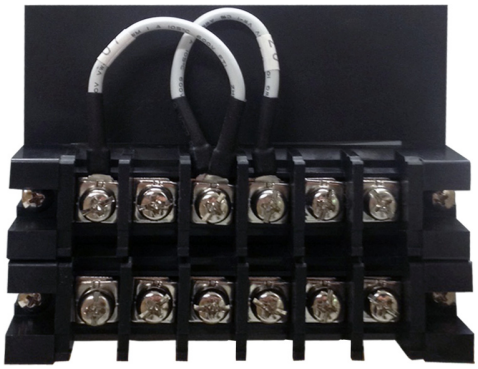
P90L-ISO6MB Output Terminal Block



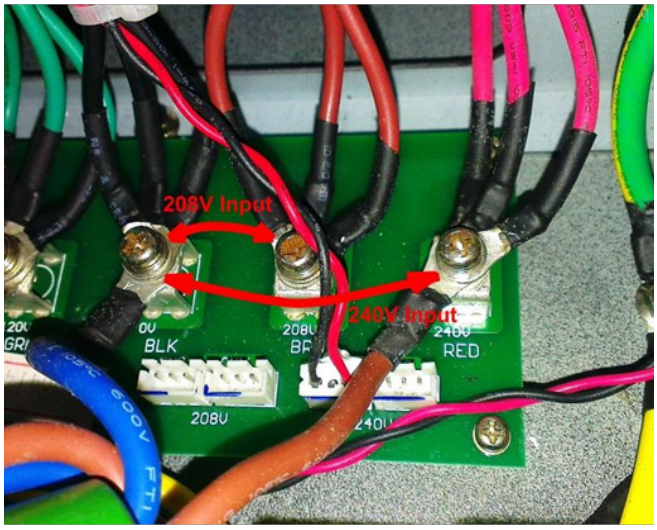
P90L-ISO10MB Output Terminal Block



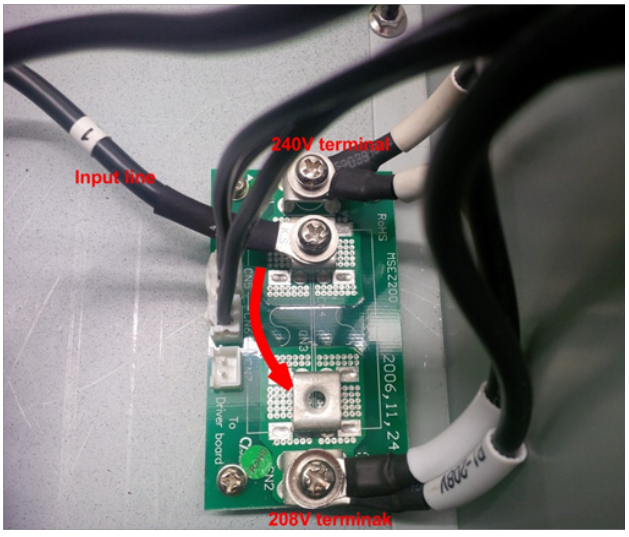
The drawing shown above is the default configuration. Jumpers are pre-installed for this configuration internally for 6kVA only. 10kVA jumpers are to be made in the field (shown below).



Contact Technical Support for additional voltage configurations if needed.



P90L-ISO6MB Internal Jumper



P90L-ISO10MB Internal Jumper

Connect Maintenance Bypass Switch communication cable (C1) from RJ45 port on P90L-ISO6MB or P90L-ISO10MB to green molex connector on UPS. This prevents UPS damage should it not be in bypass prior to activating Maintenance Bypass Switch on P90L-ISO6MB or P90L-ISO10MB

Troubleshooting

If the unit cannot be operated normally, please check if all the cables are properly connected and the Utility is under normal condition. If the problem cannot be solved, please consult with your dealer immediately.

Specifications

Item	Description	Condition		Specifications	
				P90L-ISO6MB	P90-ISO10MB
AC Input Terminal					
	Voltage	Unit w/o Bypass Switch		160 - 280Vac (1Φ)	
		Unit w/ Bypass Switch	INV	160 - 280Vac (1Φ)	
			BYPASS	184 - 280Vac (1Φ)	
	Current	N/A		30A (max)	50A (max)
	Frequency	N/A		50Hz/60Hz ± 5Hz	
Output Terminal					
	Voltage	N/A		184 - 280Vac (1Φ)	
	Current	N/A		30A (max)	50A (max)
	Frequency	N/A		50Hz/60Hz ± 3Hz	
Maintenance Bypass Switch					
	Transfer Time	0-100% Load		<2ms	
Communication					
	Bypass Detection	For Unit w/ Maintenance Bypass Switch		RJ-45 connector	
Overview					
	W x D x H			17.3 x 28.7 x 3.5 in (P90L-ISO6MB) 17.3 x 28.7 x 5.2 in (P90L-ISO10MB)	
Weight		Unit w/ Maintenance Bypass Switch		92.6 lbs	116.8 lbs
		Unit w/o Maintenance Bypass Switch		90.4 lbs	114.6 lbs
Current Leakage		100% Load		<3mA	
Marks	CE, cUL, UL				