PowerShield Maintenance Bypass Switch

PSMBSR10K for 6KVA or 10KVA UPS

Quick Guide

www.powershield.com.au

1. Introduction

The PSMBSR10K is used as an external maintenance bypass switch module to provide uninterrupted power to the connected loads during UPS scheduled maintenance, battery replacement and or UPS replacement. It is suited for use with the 6kVA or 10kVA UPS.

PSMBSR10K Rack Mount Installation

The PSMBSR10K may be mounted with its front panel aligned to the front or rear of the 19" rack enclosure. It can also be mounted above or below the UPS but it is usually more convenient above.
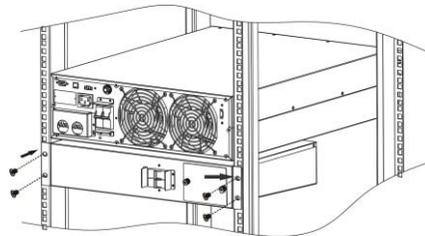
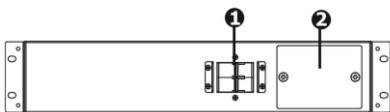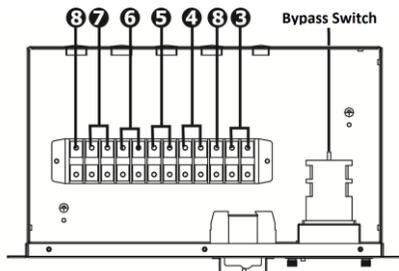## 2. Product Overview of PSMBSR10K

Diagram 1: Front View   **Diagram 2: Top View**

❶ PSMBSR10K input breaker
❷ Front cover and Bypass Switch (behind)
❸ EMBS control terminals (C1,C2)
❹ Output terminals to Load
❺ UPS output terminal
❻ UPS input terminal
❼ Utility Mains input terminal
❽ Earth terminal

3. Installation and Operation

Inspection

Unpack the equipment and check the contents for the following items:
- Maintenance bypass switch module x 1
- Quick guide x 1

NOTE: Before installation, please inspect the unit and check for damage during transportation. If there is any evidence of damage, or missing parts, do not apply power to the unit and immediately notify the carrier and or dealer.

Initial Setup

The Installation and wiring must be performed in accordance with the local electrical laws/regulations and must be carried out only by qualified and certified personnel.

- The cable for 6K/6KL should be rated to carry up to 40A current.
- The cable for 10K/10KL should be rated to carry up to 63A current.

Connect UPS to the External Maintenance Bypass Switch Module
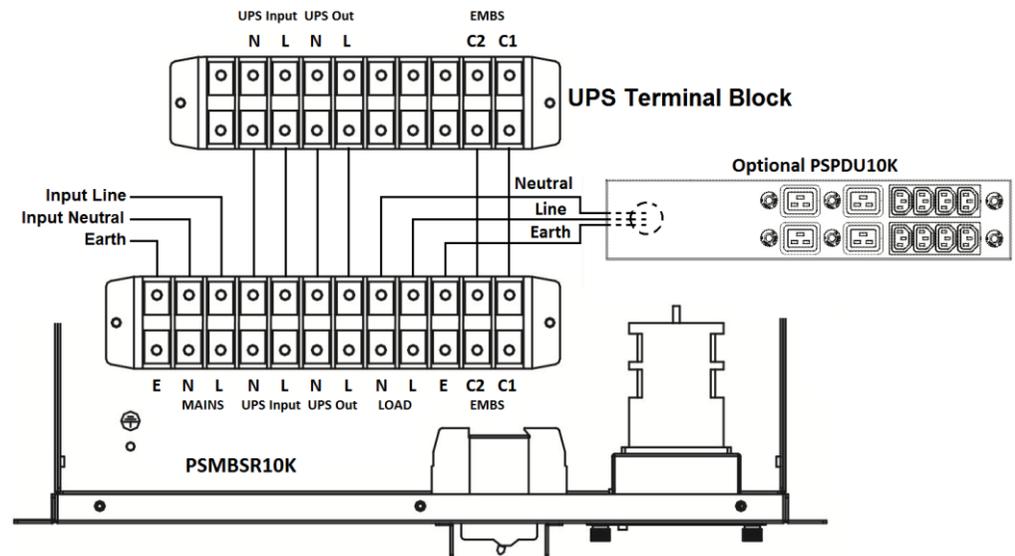
WARNING: It is essential to connect the EMBS (C1, C2) terminals on the UPS to the EMBS (C1, C2) terminals on the PSMBSR10K (Maintenance Bypass Switch module). Failure to do so will cause damage to the UPS and void the warranty. Check the UPS model User manual for the rear panel UPS Terminal Block pin assignment.

4. Operation

Transfer to Maintenance Bypass
To transfer from UPS mode to maintenance "Bypass", follow the steps below:

Step 1:

To transfer the UPS to static bypass mode automatically, unscrew the two fasteners and remove the maintenance switch front cover. This will automatically release the micro switch located behind the maintenance cover (and will connect C1 to C2 on the normally open micro switch contacts across the EMBS terminals).
Important: Verify the UPS has now switched to static bypass mode on the LCD located on the front panel of the UPS. If this does not happen then do NOT proceed any further.

Step 2:

1) For Bypass and Test mode - rotate switch to "BYPASS" position. In this position the UPS will still receive mains power however the load will be fed from the mains. Testing can now be performed on the UPS.

2) For Bypass and Isolate mode - switch PSMBSR10K input breaker to "OFF". In this position the UPS will receive no power whatsoever and the load will be supplied from mains. After confirming there is no voltage present on the terminals the UPS can be safely removed from the circuit.

All load devices will now be powered directly by the utility and not through the UPS. After disconnecting the batteries from the UPS, the service and maintenance of the equipment may commence.

Transfer back to UPS mode
To transfer from maintenance "Bypass" / "Bypass and Isolate" to UPS mode, follow the steps below:

Important: Ensure PSMBSR10K maintenance switch front cover is off.

Step 1:

Reconnect Battery system, switch UPS input breaker to "ON" and switch the PSMBSR10K input breaker to "ON". The UPS will then start in static bypass mode.
Important: Verify the UPS has now switched on and is in static bypass mode on the LCD located on the front panel of the UPS. If this does not happen then do NOT proceed any further.

Step 2:

Rotate switch to "UPS" position. All load devices will now be powered by the utility through the UPS which is still operating in static bypass mode.

Step 3:

Replace and secure the PSMBSR10K maintenance switch front cover.

Step 4:

Press "ON" button located on the front panel of the UPS unit. Confirm UPS output is operating through the inverter on LCD (inverter mode). All the Load devices will now be fully protected by the UPS.

5. Specifications

Parameter		Max.
Input breaker	Current	63 A
	Voltage	250 V
Bypass switch	Current	63 A
	Voltage	690 V
Input/Output terminal	Current	60 A
	Voltage	600 V
Physical		
Dimensions, D x W x H (mm)		254 x 433 x 88
Net weight (Kgs)		5.9