



# Allen-Bradley

## 1609-PSB1

### Service Bypass Switch

Entire contents copyright © 2006 by Rockwell Automation corporation. All rights reserved. Reproduction in whole or in part without permission is prohibited. A-B and Allen-Bradley are registered trademarks of Rockwell Automation Corporation. All other trademarks are the property of their respective owners.

90-007 rev 1

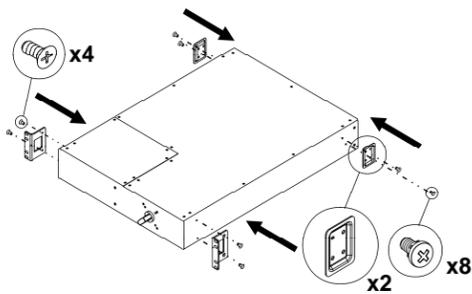
Note: Read the safety information sheet before installation.

Illustrations in this document may differ slightly from the actual hardware.

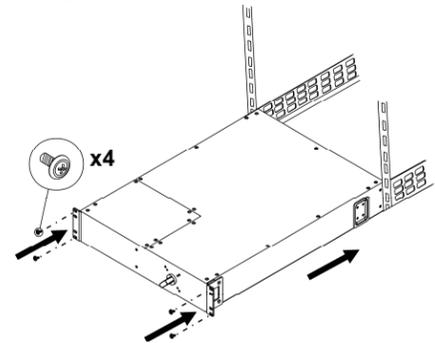
**Attention: This product is for use in a controlled environment. Refer to product specifications for environmental limits.**

#### RACK MOUNTING

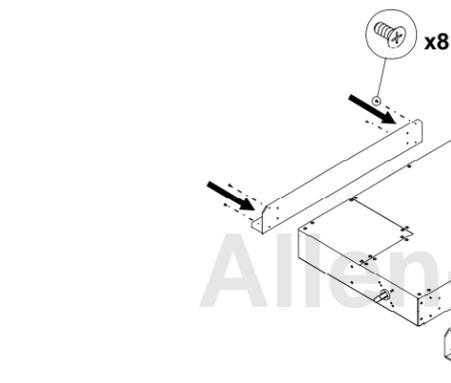
1



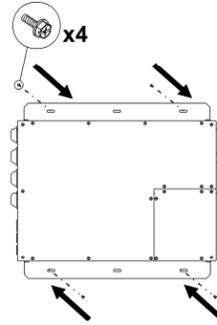
2 Set SBP in the rack. If hardwiring is required, see *Connecting Power* section before screwing into the rack.



#### WALL MOUNTING



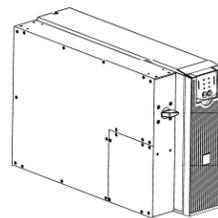
2 Whenever possible, attach one top screw and one bottom screw into a wall stud. If stud mounting is not possible, use an expandable wall anchor. **Screws are not included;** .25" x 2" lag bolts are recommended.



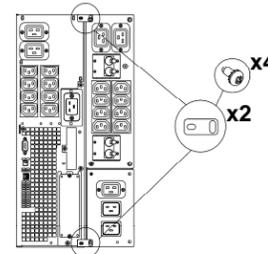
#### TOWER OPTION

1 Remove screw from the top and bottom rear of both the UPS and SBP. Install tie brackets and reattach screws.

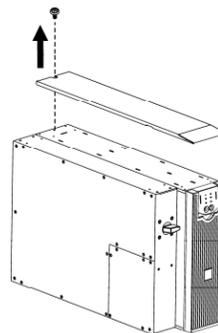
Front



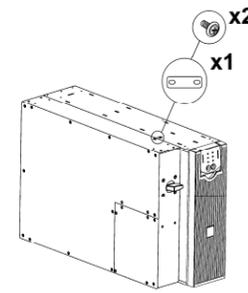
Rear



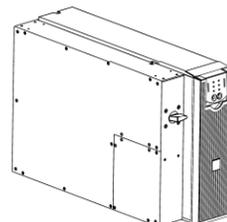
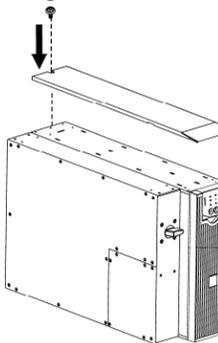
2 Unscrew and remove top cover of the UPS.



3 Attach bracket to top of UPS and SBP.



4 Reattach top cover of the UPS.



Note: The 1609-SBP1, when used in conjunction with an 1609-P3000A or 1609-P5000E UPS in a tower configuration without an external battery pack 1609-PXBP, is suitable for mounting on concrete or other non-combustible smooth surfaces only.

41063-300-01(1)

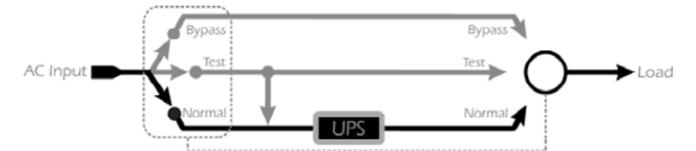
#### USER CONFIGURABLE

**Attention: When using an online UPS, put the UPS in automatic bypass mode before rotating the SBP switch.**

1. **Normal:** Power is directed from the utility outlet, through the Bypass Panel and UPS, and to connected equipment. For use during normal UPS operation.

2. **Test:** Power supplied to the UPS is not output. Use when tests are being conducted on the UPS, and connected equipment is not yet desired.

3. **Bypass:** Power from the utility outlet is filtered through the Bypass Panel, and to the connected equipment. Use to bypass the UPS, when functioning improperly.



Note: While operating in 'Test' or 'Bypass' mode, power to the connected equipment is not conditioned by the UPS. At this time, the "Equipment Protection Policy" is not valid.

#### IDENTIFYING THE PANEL

Service Bypass Panels will differ. Refer to chart for unit specifications.

Note: HW= Hardwire

| Service Bypass Panel | Corresponding UPS Systems  | Bypass Input | UPS Input | UPS Output | PDU Panel |
|----------------------|--|--------------|-----------|------------|-----------|
| 1609-PSB1            | 1609-P3000A<br>1609-P3000H<br>1609-P5000E<br>1609-P8000E<br>1609-P10000E | HW (1Ph)     | HW (1Ph)  | HW         | HW        |

\*For loads exceeding 3kVA, hardwiring is necessary.

41063-300-01(1)

## CONNECTING POWER

**Warning: Do not modify inlets or outlets. The SBP and UPS plugs and receptacles should match. For more information, contact Rockwell Automation.**

### 1. Non-Hardwired Panels

1. Plug SBP UPS output cord into UPS PDU panel.\*
2. Plug UPS input cord to SBP UPS input receptacle.\*
3. Plug customer equipment into SBP PDU panel.
4. Plug SBP into utility power outlet.

\*Units with IEC receptacles: Use jumper cables.

### 2. Hardwired Panels

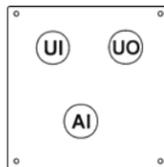
**Attention: Wiring must be performed by a qualified electrician.**

1. Switch input circuit breaker off.
2. *SBP units that will be rack-mounted:* Set SBP in the rack.
3. Unscrew and remove top access panel.
4. *If using 1609-P5000E or 1609-P8000E with a hardwired UPS:* Unscrew existing terminal block wiring. Do not touch factory wiring (see **E**).
5. *If using 1609-P5000E or 1609-P8000E with a hardwired UPS:* Unscrew and remove rear input/output panel.
6. Remove circular knockouts from hardwiring input/output panel (see **A**: UO= UPS Output; UI= UPS Input; AI= AC Input; LD= Load).

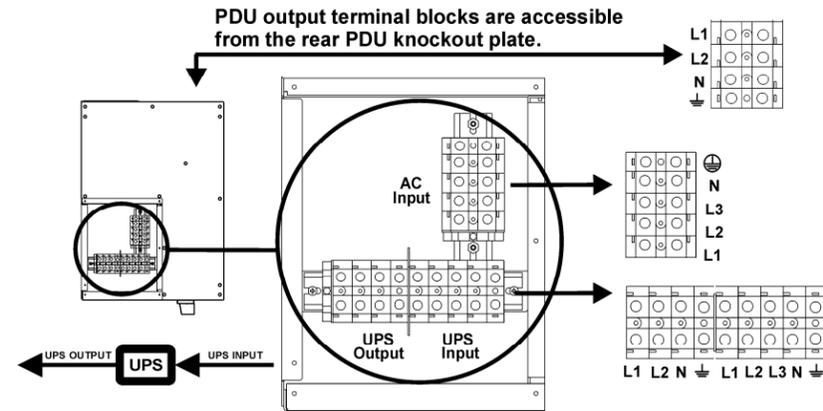
*1609-PSB1 units:* Also, remove circular knockouts from PDU output panel.

7. Connect wires to terminal blocks (see **B**). Adhere to all national and local electrical codes.
8. Reinstall access panel.
9. Install hardwiring input/output panel.
10. *SBP units that will be rack-mounted:* Screw SBP into the rack.

#### A.



#### B. 1609-PSB1



## TROUBLESHOOTING

Use the chart below to solve minor SBP installation problems. Also, refer to the UPS User Manual *Troubleshooting* section.

| Problem and Possible Cause                                 | Solution  |
|--|---|
| <b>UPS WILL NOT TURN ON AFTER ON BUTTON IS PUSHED</b>      |   |
| SBP handle is in 'Bypass' position.                        | Rotate the SBP handle to the 'Normal' position.   |
| There is no power at UPS input.                            | Check that the power cables from the SBP to the utility power, and from the SBP to the UPS Input are securely connected.  |
| UPS is faulty or damaged.                                  | Rotate the SBP handle into the 'Test' position. If the connected equipment becomes energized, the UPS may be faulty. To confirm this, refer to UPS User Manual <i>Troubleshooting</i> .   |
| There is no power at the utility power outlet.             | Rotate the SBP handle into the 'Test' position. If the connected equipment fails to become energized, the utility power outlet may be faulty. Check the utility power supply by plugging a table lamp into the suspect outlet. If the utility outlet fails to power the lamp, contact qualified service personnel to restore power. |
| <b>UPS IS ONLINE; NOT POWERING ALL CONNECTED EQUIPMENT</b> |   |
| SBP output circuit breaker tripped.                        | Reduce the load by unplugging equipment. Reset the breaker.   |
| There is no power at SBP output.                           | Check that the power cable from the SBP to the UPS output is securely connected.  |