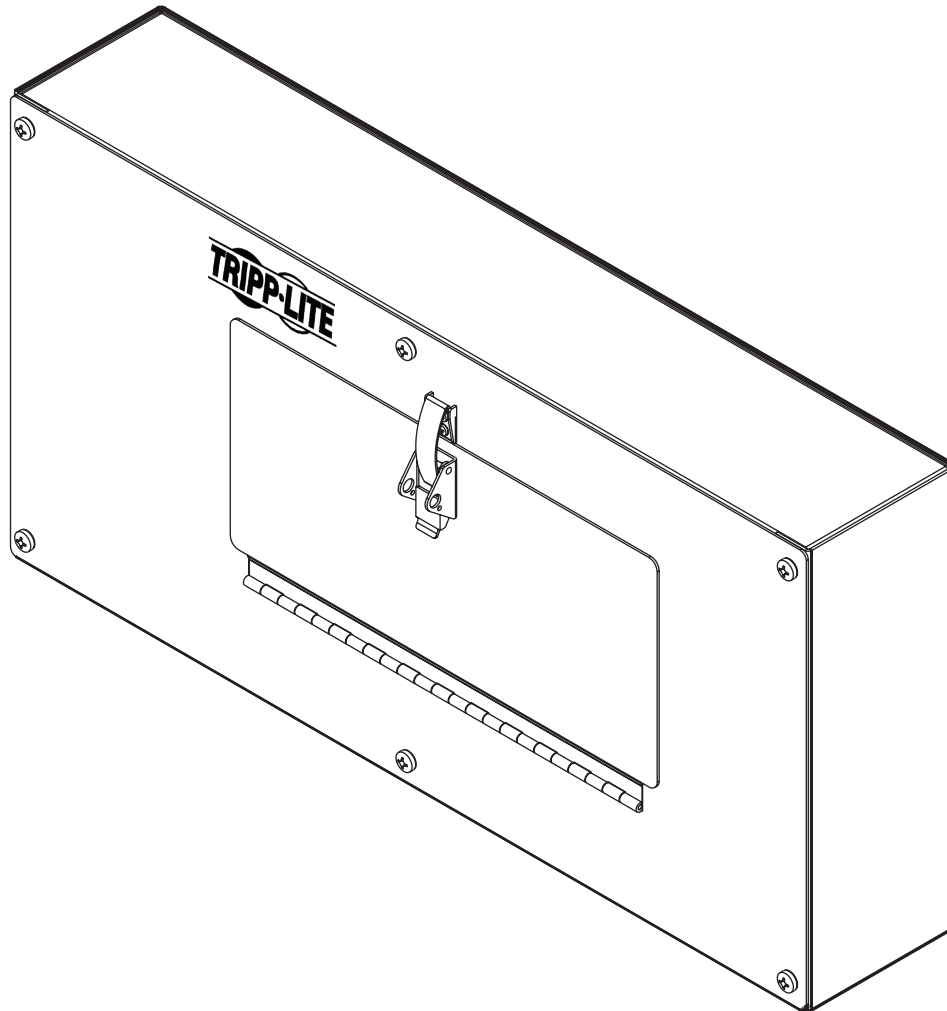


Installation and Operation Manual

Maintenance Bypass Panel

Model: SU2030KMBP



Tripp Lite follows a policy of continuous improvement. Product specifications are subject to change without notice.



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Table of Contents

1) Important Information About this Manual	3
1.1) Manual Symbols	3
2) Introduction	3
3) Safety Precautions	3
4) Inspection Upon Receipt of Goods	4
4.1) General	4
4.2) Visible Damage	4
4.3) Concealed Damage	4
4.4) Return of Damaged Goods	4
5) System Overview	4
6) System Specifications	5
6.1) AC Input/Output	5
6.2) General Specifications	5
7) Installation	6
7.1) Preparation	6
7.1.1) Equipment Inspection	6
7.1.2) Necessary Equipment and Tools	6
7.1.3) Installation Safety Precautions	6
7.2) Installation Steps	6
7.2.1) Equipment Location	6
7.2.2) Equipment Mounting	6
7.2.3) Equipment Connections	6
8) System Operation	7
9) Reference Materials	8
10) Warranty	10

1) Important Information About this Manual

SAVE THESE INSTRUCTIONS!

This manual contains important information that is needed during the installation and maintenance of the system.

1-1 Manual Symbols



Warning:

Indicates information provided to protect the user against personal injury and/or safety hazards.



Caution:

Indicates information provided to protect the user against safety hazards and/or possible equipment damage.



Important:

Indicates information provided as an installation or operating instruction or tip.

2) Introduction

Tripp Lite would like to thank you for choosing our product for your equipment needs. We know there are a lot of choices and we appreciate the opportunity to supply each of our customers with the highest quality power products manufactured in the United States today. All of our solutions are factory tested to the highest standards.

Sales support for future equipment needs or upgrades is provided by our regional sales staff and qualified representatives. All technical questions and service issues should be directed to our main office by visiting www.tripplite.com/support.

Tripp Lite

www.tripplite.com

Technical Support

www.tripplite.com/support

3) Safety Precautions



Before installing or maintaining this system, it is extremely important to read this manual and be sure that all system drawings and schematics are reviewed and clearly understood. If there are any questions concerning this manual or any of the installation or maintenance procedures and/or requirements, please contact a Tripp Lite representative before proceeding.



When installing this power system, follow all applicable federal, state and local regulations as well as industry guidelines to ensure proper system installation.



Only qualified electricians should attempt to install or service this equipment.



System installation and maintenance should always be performed with properly insulated tools.



Always wear eye protection when installing or maintaining batteries and/or power equipment.



Maintenance Bypass Panel systems can be very heavy. Use a minimum of two people when unloading and setting equipment in place.



For the safety of others, never leave an open cabinet or panel unattended.



Be sure to fully read and understand this manual and verify that all electrical connections are correct and properly torqued. Use extreme caution when installing and maintaining the system!



To avoid personal injury including electrical shock, severe burns and possible death, all jewelry including bracelets, rings and watches must be removed prior to installing or servicing this system.

4) Inspection Upon Receipt of Goods

4-1 General

Special precautions and care have been taken to ensure the system arrives safe and undamaged. However, upon receipt, you should inspect the entire shipment, including the crate and any boxes, for evidence of damage that may have occurred during transit.

4-2 Visible Damage

It is the responsibility of the person receiving the shipment to inventory and fully inspect all materials against the bill of lading or weigh bill IMMEDIATELY while the carrier representative is still present. Ensure that all items are accounted for, including number of skids and quantity of boxes. Also note any visible external damage that may have occurred during transit. Make all applicable notations on the delivery receipt before signing and file a damage report with the carrier.

4-3 Concealed Damage

Within 3 to 30 days of receipt (depending on courier), unpack the system and check for any concealed damage. Check the materials received against the detailed packing list to verify the quantity and the condition as complete and satisfactory.

Note any damage to the internal packaging. Then request an inspection by the carrier and file a concealed damage claim. If there is a material shortage, visit www.triplite.com/support to file a claim.

Please contact your shipping company for all shipping damage. Tripp Lite is not responsible for any shipping damage.

4-4 Return of Damaged Goods

Should equipment be damaged and require return to Tripp Lite for repair, a representative will provide instructions along with an RMA number to expedite the return.

An RMA number must be obtained before returning equipment to Tripp Lite.

5) System Overview

The Tripp Lite *SU2030KMBP* Maintenance Bypass Panel (MBP) is used in conjunction with an Uninterruptable Power Supply (UPS) to maintain total continuity of power to connected load circuits when bypass of the UPS equipment is required for performance of regular service and maintenance.

The *SU2030KMBP* Series MBPs are available with current capacities ranging from 40 to 100 Amperes with multiple input voltage options available.

The MBP contains two or three Cutler Hammer CH Type circuit breakers that are protected by a mechanical interlock system.

6) System Specifications

6-1 AC Input/Output

Voltage: Multiple options available. See equipment label for configuration-specific information.

PRIMARY APPLICATION: 208Y/120 VAC, 3-Phase, 4-Wire, Ground

System Capacity: Max 100 Amperes per phase. See equipment label for configuration-specific information.

Circuit Breakers: UL listed, multiple voltage rating options available, 10 KAIC. See equipment label for configuration-specific information.

AC Input/Output Terminations: Mechanical lugs are used for both input and output field wiring terminals.

Wire Size and Type: Follow the NEC (NFPA 70) and/or all applicable national local codes.

Internal breakers "SW2" and "SW3" are connected using (1) #2 AWG wire per phase.

"SW1" and "SW3" breaker lugs accept #10 – 1/0 AWG wire per phase.

Utility input and output to load accept (1) #6 – 2/0 AWG wire per phase.

Neutral accepts (4) #8 - #2 AWG wires.

Ground accepts (4) #14 - #2 AWG wires.

6-2 General Specifications

Cabinet Size (HWD): 12" x 24" x 4.6"

Operating Temperature: 0°C to 40°C (32°F to 104°F)

Storage Temperature: -15°C to 50°C (5°F to 122°F)

Weight (Approximate): 20 lbs.

SU2030KMBP is UL/cUL listed per UL 891 and C22.2 No. 244.

7) Installation

7-1 Preparation

7-1-1 Equipment Inspection

Remove the equipment from the packaging material and inspect for any shipping damage that may have been overlooked upon receipt of goods. Verify that the system includes all necessary hardware for installation.

7-1-2 Necessary Equipment and Tools

- Properly insulated tools
- Properly sized and rated mounting hardware

7-1-3 Installation Safety Precautions



Before proceeding with system installation, be sure to review and understand all of the SAFETY PRECAUTIONS in this manual!



AC VOLTAGE WARNING

The input/output voltage in this equipment can be up to 240 VAC. Be sure to fully read and understand this manual and verify that all AC connections are correct and properly torqued. Use extreme caution when installing and maintaining the system!

7-2 Installation Steps



Before installing or maintaining this system, it is extremely important to read this manual and be sure that all system drawings and schematics are reviewed and clearly understood. If there are any questions concerning this manual or any of the installation or maintenance procedures and/or requirements, please contact a Tripp Lite representative before proceeding.

7-2-1 Equipment Location



This equipment is intended to be installed in a restricted access location.

Prior to installation, verify all applicable codes pertaining to the related equipment. Clearance around the equipment should be as suggested by NEC (NFPA 70) and/or all applicable national and local codes.

7-2-2 Equipment Mounting

Remove the front cover from the Maintenance Bypass Panel to gain access to the mounting holes. Secure the panel to the rigid vertical structure with appropriate anchoring hardware utilizing the four 0.375-inch diameter mounting holes located in the back of the panel. (See drawings in Reference Materials section.)

7-2-3 Equipment Connections

The Product Schematic Drawing for this specific MBP configuration is included in the Reference Materials section of this manual. Follow this schematic drawing for cable connections relative to main lug input/output and feeds associated with UPS input and output. Cable ingress and egress can be facilitated through knockouts fabricated in either the top, bottom or side panels of the cabinet.



Do not operate the “SW2” circuit breaker unless the UPS is in BYPASS mode! Refer to your UPS manual for more information. Failure to follow the operating instructions for this equipment could result in equipment damage, fire, severe injury or death!



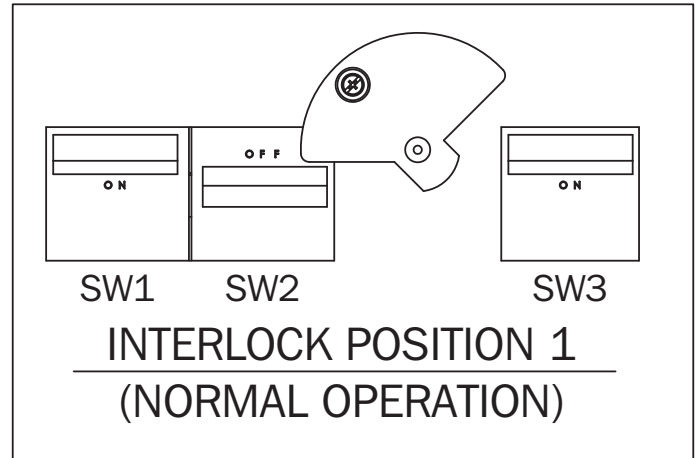
The door of the SU2030KMBP Maintenance Bypass Panel can be locked with a user-supplied padlock to prevent unauthorized access.

8) System Operation

The following User Instructions are for the three circuit breaker MBP configured to be controlled by a mechanical interlock system.

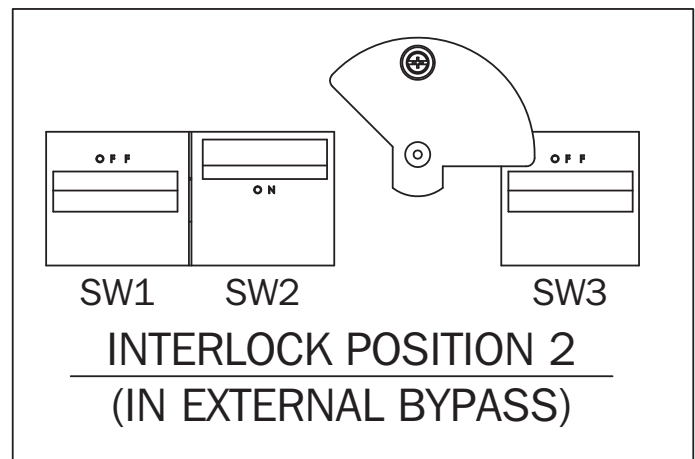
Normal Operation

The UPS AC Input Breaker “SW1” is *CLOSED/ON*. The Maintenance Bypass Breaker “SW2” is locked *OPEN/OFF* with the interlock plate thumb screw secured in position 1, as shown. The Maintenance Isolation Breaker from the UPS output “SW3” is *CLOSED/ON*.



Transfer to Maintenance Bypass

1. Transfer the UPS to Bypass mode.
2. Loosen the interlock plate thumb screw and rotate the interlock plate clockwise to allow the “SW2” breaker handle to operate.
3. *CLOSE*/turn *ON* the “SW2” breaker.
4. *OPEN*/turn *OFF* the “SW3” breaker.
5. Rotate the interlock plate clockwise and secure the thumb screw in position 2, as shown, to lock the “SW3” breaker in the *OPEN/OFF* position.
6. The UPS is now ready for routine maintenance. If further maintenance requires a total shutdown of the UPS and isolation from the input, the UPS AC Input Breaker “SW1” must be *OPEN/OFF* and the battery supply to the UPS must be disconnected. Refer to your UPS manual for proper shutdown procedures.



Return the UPS and Bypass Switch to Normal Operation

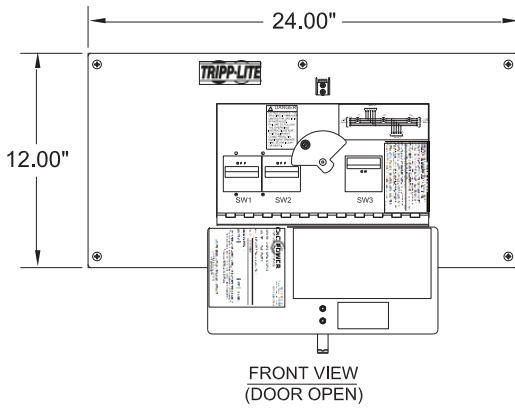
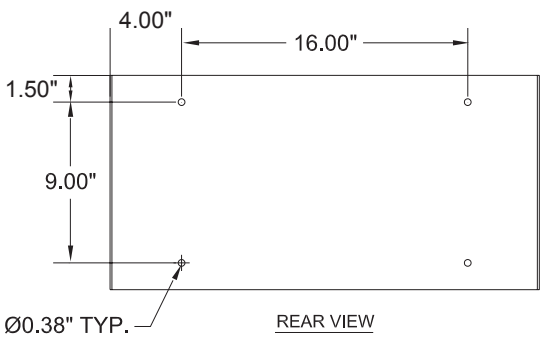
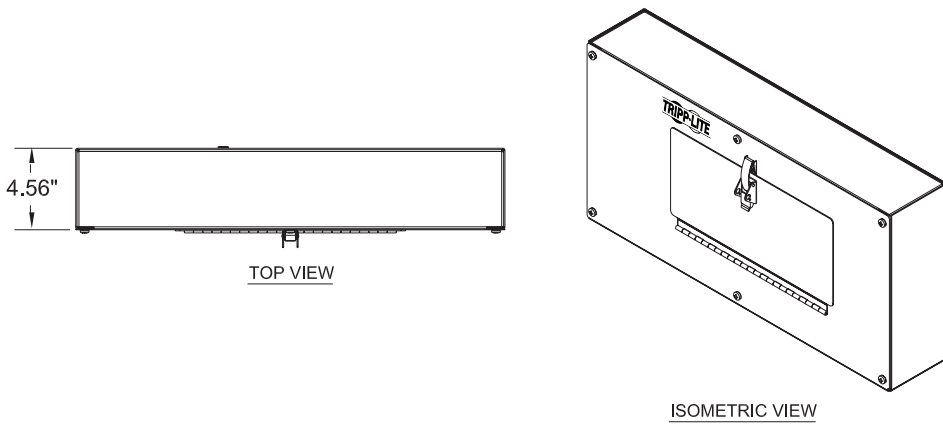
1. If the UPS AC input breaker “SW1” is *OPEN*/turned *OFF* for maintenance, then follow the UPS manual for proper startup procedures. To restore input power to the UPS, *CLOSE*/turn *ON* the UPS AC Input Breaker “SW1.” **Verify that the UPS is in Internal Bypass mode before proceeding!**
2. Loosen the interlock plate thumb screw and rotate the interlock plate counterclockwise to allow the “SW3” breaker handle to operate.
3. *CLOSE*/turn *ON* the “SW3” breaker.
4. *OPEN*/turn *OFF* the “SW2” breaker.
5. Rotate the interlock plate counterclockwise and secure the thumb screw in position 1 to lock the “SW2” breaker in the *OPEN/OFF* position.
6. Transfer the UPS from Bypass mode to Normal mode, as per the UPS manual.

9) Reference Materials

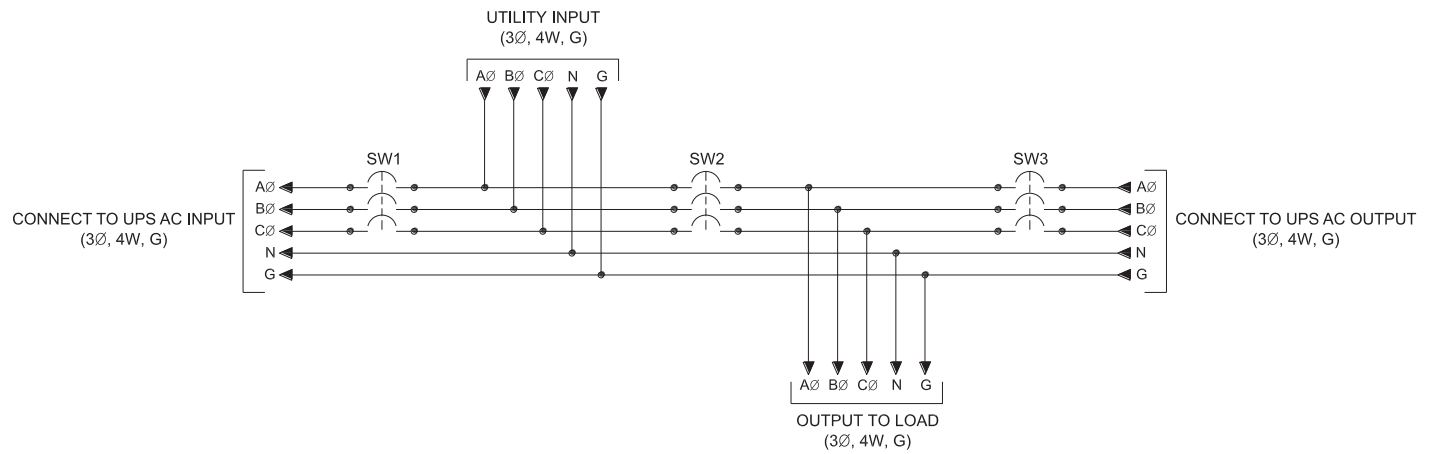
NOTES:

APPROXIMATE WEIGHT: 20 LBS.

1. ASSEMBLY IS UL/CUL LISTED PER UL 891 AND C22.2 NO. 244.
2. NEMA 1 WALL MOUNT ENCLOSURE.
3. THE BOX & TRIM ARE CONSTRUCTED OF GALVANIZED 16GA. STEEL.
4. THE TRIM FINISH IS POWDER COATED ON ALL EXTERNAL AND VISIBLE SURFACES, BOX AND ALL INTERNAL MOUNT BRACKETS ARE GALVANIZED FINISH.
5. THE PANEL IS PROVIDED WITH A PAD LOCK LATCH ON THE ACCESS COVER.
6. THE PANEL IS TO BE MOUNTED THROUGH THE Ø0.375" HOLES IN THE BACK OF THE ENCLOSURE.



9) Reference Materials



NOTES:

1. "SW1" UPS INPUT BREAKER.
2. "SW2" MAINTENANCE BYPASS BREAKER.
3. "SW3" MAINTENANCE ISOLATION BREAKER (FROM UPS OUTPUT).
4. "SW2" AND "SW3" BREAKERS CONNECTED USING (1) #2 AWG WIRE PER PHASE.
5. "SW1" & "SW3" BREAKER LUGS ACCEPT (1) #10 - 1/0 AWG WIRE PER PHASE.
6. NEUTRAL LUG ACCEPTS (4) #8 - #2 AWG WIRES.
7. GROUND LUG ACCEPTS (4) #14 - #2 AWG WIRES.
8. MECHANICAL LUGS USED FOR THE UTILITY INPUT & THE OUTPUT TO LOAD ACCEPT (1) #6 - 2/0 AWG WIRE PER PHASE.
9. THIS DRAWING IS TO BE USED FOR ELECTRICAL PURPOSES ONLY AND DOES NOT REPRESENT THE ACTUAL MECHANICAL LAYOUT OF THE EQUIPMENT.

10) Warranty

LIMITED WARRANTY AND EXCLUSIONS

Tripp Lite strives to produce quality products at reasonable prices. If you are not satisfied with our product because of a defect, we will repair or replace the defective part or parts free of charge for a period of one year from the date of purchase. In the event you claim that the product contains a defect, simply notify Tripp Lite of the defect, and we will arrange for repair or replacement. The sole and exclusive remedy against Tripp Lite relating in any way to a product defect shall be the repair or replacement of defective parts as provided for under this LIMITED WARRANTY. No other remedy, including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss, is available. This LIMITED WARRANTY shall not be deemed to have failed of its essential purpose so long as Tripp Lite is willing and able to repair or replace defective parts in the manner prescribed in this LIMITED WARRANTY.

Certain integrated products, which are not manufactured by Tripp Lite, will be warranted by the applicable manufacturer. These warranties shall be between the manufacturer and the user. Terms and conditions may vary. These integrated products include, but may not be limited to, the following products: Batteries, Inverters and UPS Systems.

Any action for breach relating to the sale of a Tripp Lite product must be commenced within one year after the cause of action has been accrued.

THIS LIMITED WARRANTY IS IN LIEU OF ANY OTHER WARRANTY, EXPRESS OR IMPLIED, AND ALL SUCH WARRANTIES ARE EXCLUDED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.



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