

# External Maintenance Bypass Switch with Interlock

Technical Guide: 020-EMBS-INT-J0

Effective: 07/2019





# External Maintenance Bypass Switch for Uninterruptible Power Supply Systems

 **NOTE:**

---

**Photographs contained in this manual are for illustrative purposes only. These photographs may not match your installation.**

 **NOTE:**

---

**Operator is cautioned to review the drawings and illustrations contained in this manual before proceeding. If there are questions regarding the safe operation of this powering system, contact Alpha Technologies or your nearest Alpha representative.**

 **NOTE:**

---

**Alpha shall not be held liable for any damage or injury involving its enclosures, power supplies, generators, batteries, or other hardware if used or operated in any manner or subject to any condition inconsistent with its intended purpose, or if installed or operated in an unapproved manner, or improperly maintained.**

For technical support, contact Alpha Technologies:

Canada and USA: **1-888-462-7487**

International: **+1-604-436-5547**

Email: **support@alpha.ca**

## Copyright

Copyright © 2019 Alpha Technologies Ltd. All rights reserved. Alpha is a registered trademark of Alpha Technologies.

No part of this documentation shall be reproduced, stored in a retrieval system, translated, transcribed, or transmitted in any form or by any means manual, electric, electronic, electromechanical, chemical, optical, or otherwise without prior explicit written permission from Alpha Technologies.

This document, the software it describes, and the information and know-how they contain constitute the proprietary, confidential and valuable trade secret information of Alpha Technologies, and may not be used for any unauthorized purpose, or disclosed to others without the prior written permission of Alpha Technologies.

The material contained in this document is for information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, Alpha Technologies assumes no liability resulting from errors or omissions in this document, or from the use of the information contained herein. Alpha Technologies reserves the right to make changes in the product design without reservation and without notification to its users.



# Table of Contents

1. Product Safety Information .....	4
1.1 Safety Symbols .....	4
1.2 General Warning and Cautions.....	4
1.3 Certification and Compliance .....	5
2. Introduction .....	6
2.1 What this Manual Covers.....	6
2.2 Who Should Read this Manual .....	6
2.3 How to Use this Manual .....	6
2.4 Symbols Used on the Product .....	6
2.5 Related Documents .....	6
3. Features.....	7
3.1 Auxiliary Contacts for Remote Monitoring / Control .....	8
3.2 Lockout with a Padlock .....	9
4. Inspection.....	10
4.1 Packing Materials.....	10
4.2 Check for Damage .....	10
4.3 General Receipt of Shipment.....	10
5. Installation.....	11
6. Installation.....	14
6.1 Wiring the Alpha MBS .....	15
6.2 Aligning the Outside Handle and Maintenance Handle.....	15
6.3 Connecting TB4 of the MBS to the AMPS .....	16
7. MBS Schematics.....	17
8. Operations .....	21
8.1 Maintenance Bypass Switch Operation .....	22
9. Maintenance/Troubleshooting.....	23
9.1 Lamp Test Procedure .....	23
9.2 Manual Release of Bypass Switch Solenoid.....	24
10. Specifications.....	25
11. Warranty.....	26

# 1. Product Safety Information

---

**SAVE THESE INSTRUCTIONS:** This manual contains important safety instructions that must be followed during the installation, servicing, and maintenance of the product. Keep it in a safe place. Review the drawings and illustrations contained in this manual before proceeding. If there are any questions regarding the safe installation or operation of this product, contact Alpha Technologies or the nearest Alpha representative.

## 1.1 Safety Symbols

To reduce the risk of injury or death, and to ensure the continued safe operation of this product, the following symbols have been placed throughout this manual. Where these symbols appear, use extra care and attention.



### NOTE:

**A NOTE provides additional information to help complete a specific task or procedure. Notes are designated with a check mark, the word NOTE, and a rule beneath which the information appears.**



### CAUTION!

**CAUTION indicates safety information intended to PREVENT DAMAGE to material or equipment. Cautions are designated with a yellow warning triangle, the word CAUTION, and a rule beneath which the information appears.**



### WARNING!

**WARNING presents safety information to PREVENT INJURY OR DEATH to personnel. Warnings are indicated by a shock hazard icon, the word WARNING, and a rule beneath which the information appears.**

## 1.2 General Warning and Cautions



### WARNING!

**You must read and understand the following warnings before installing the Alpha MBS and its components. Failure to do so could result in personal injury or death.**



### WARNING!

**This maintenance bypass switch has make before break contacts.**

**Follow instructions before operation the switch.**

**Multiple power inputs. Disconnect all inputs before servicing to avoid electric shock.**

- Read and follow all instructions included in this manual before proceeding and be sure you understand its intent.
- Do not work alone under hazardous conditions.
- Only qualified personnel are allowed to install, operate and service this system and its components.
- Always assume electrical connections or conductors are live. Turn off all circuit breakers and double-check with a voltmeter before performing installation or maintenance.

- Keep tools away from walk areas where you or others could fall over them.
- Wear safety glasses when working under any conditions that might be hazardous to your eyes.
- Do not work on the system, or connect, or disconnect cables during periods of lightning activity.
- If you have an installation configuration that is not described in this manual contact Alpha for assistance.

### **1.3 Certification and Compliance**

The Alpha MBS has been designed, manufactured, and tested to the requirements of the national and international safety standards UL508A.

## 2. Introduction

---

### 2.1 What this Manual Covers

This manual provides full procedures for the safe and proper installation and operation of the Alpha External Maintenance Bypass Switch (Alpha MBS) with meter controlled solenoid lockout.

### 2.2 Who Should Read this Manual

This manual is intended for qualified installers – trained electricians or technicians who are fully educated on the hazards of installing electrical equipment such as uninterruptible power supplies and their associated batteries and accessories. The Product Safety Information chapter is intended for anyone who will be operating the Alpha MBS as a non-technical user.

### 2.3 How to Use this Manual

Before you begin installing the Alpha MBS, read all the warnings and cautions described in the product safety information at the beginning of this document. Once you are aware of all safety issues, start planning the installation by reading the pre-installation instructions in Chapter Figure 6 on page 13 and then the operations information in Chapter Figure 6 on page 13.

### 2.4 Symbols Used on the Product



Risk of electric shock.

### 2.5 Related Documents

- Local electrical codes (e.g. National Electrical Code, or NFPA 70 in the United States, Canadian Electrical Code or CSA C22.1 in Canada).

### 3. Features

The Alpha MBS is a manually operated mechanical switch for use with the Alpha Uninterruptible Power Supply (UPS) series. It provides a simple and effective means for bypassing uninterruptible power supplies (UPS) while maintaining continuity of power to critical loads. (A schematic at the end of the manual shows the MBS with the Alpha AMPS HP2 power system.)

Normally the output to the critical load is powered by the UPS with the bypass switch in the UPS position. Before the UPS is taken off-line for service or maintenance, the bypass switch can be switched to the BYPASS position and the critical loads then receive power directly from the utility supply.

The Alpha MBS includes the following safety features:

- UPS in bypass detection with lockout
- Safe-to-switch (UPS-IN-Bypass) lamp
- Electromechanical manual override
- Auxiliary contacts for remote monitoring
- Padlock bar for lockout



### 3.1 Auxiliary Contacts for Remote Monitoring / Control

The operation of the Alpha MBS is "make-before-break". The auxiliary contacts are available to indicate the MBS position. Figure 6 shows the system conditions alarm/control contacts that are available on TB4. The contacts close on alarm. Internal wiring and external connections are shown in the schematic drawings on pages 14 and 16.

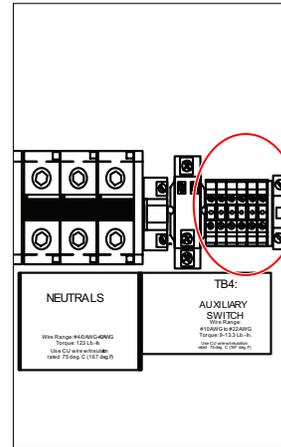
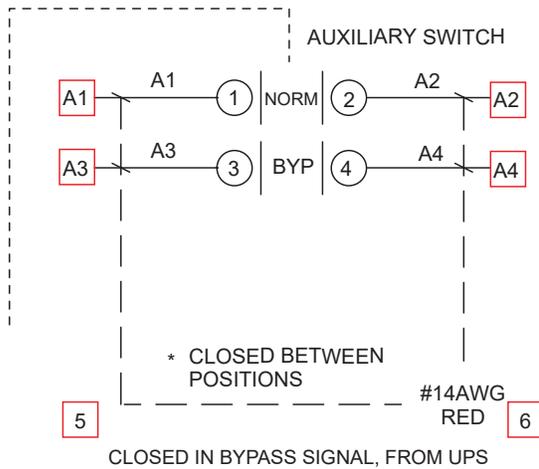


Figure 1 — Auxiliary Contacts and Signal from UPS

MBS Function	
BYPASS	A3-A4 (BYP) Closed
UPS	A1-A2 (UPS) Closed

Voltage Rating	250V (max)
Current Rating	15A

### 3.2 Lockout with a Padlock

When someone is working on the UPS, they may want to padlock the handle in the BYPASS position to prevent anyone changing the handle position while the work is in progress.

A padlock can be attached to the red bar at the bottom of the manual switch. Push the red bar in, and route a padlock (or lockout bar) through the openings on the face, down toward the bottom (see Figure 6).

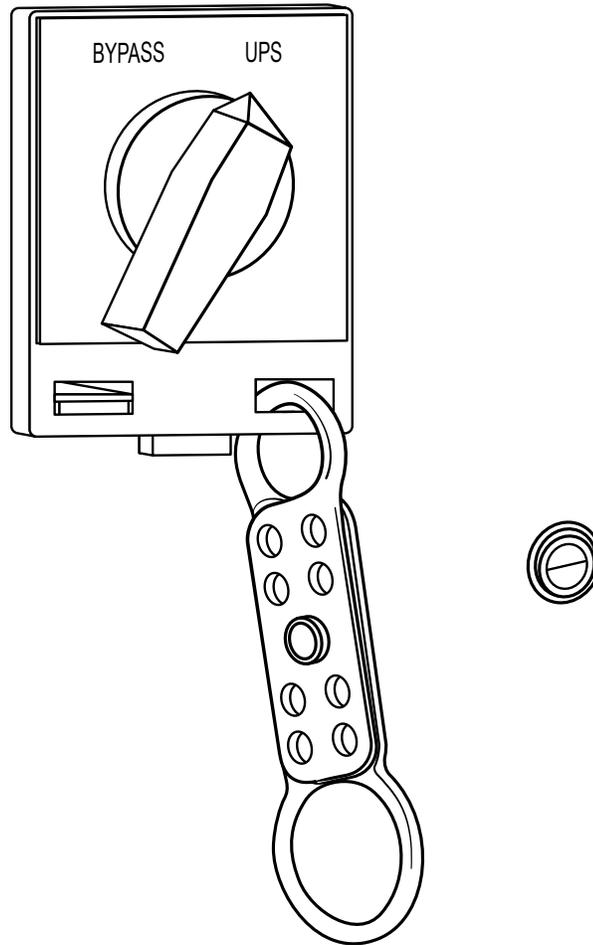


Figure 2 — Lockout with a Padlock

## 4. Inspection

### 4.1 Packing Materials

Alpha is committed to providing products and services that meet our customers' needs and expectations in a sustainable manner, while complying with all relevant regulatory requirements. As such Alpha strives to follow our quality and environmental objectives from product supply and development through to the packaging for our products.

Rectifiers and batteries are shipped on individual pallets and are packaged according to the manufacturer's guidelines.

Almost all of Alpha's packaging material is from sustainable resources and/or is recyclable. See the following table for the material and its environmental codes.

 PAP/PCB	 PET	 PE-LD	 PS	 FE	 ALU	 NW
<b>Cardboard</b>	<b>Polyethylene Terephthalate</b>	<b>Low Density Polyethylene</b>	<b>Polystyrene</b>	<b>Steel</b>	<b>Aluminum</b>	<b>Wood</b>
Packing boxes Caps	Flexible film Packaging	Bubble wrap Shrink wrap Plastic bags	Foam	Strapping on pallets	Strapping on pallets	Pallets Lumber

#### 4.1.1 Returns for Service

Save the original shipping container. If the product needs to be returned for service, it should be packaged in its original shipping container. If the original container is unavailable, make sure that the product is packed with at least three inches of shock-absorbing material to prevent shipping damage.

Alpha Technologies is not responsible for damage caused by improper packaging of returned products.

### 4.2 Check for Damage

Before unpacking the product, note any damage to the shipping container. Unpack the product and inspect the exterior for damage. If any damage is observed, contact the carrier immediately.

Continue the inspection for any internal damage. In the unlikely event of internal damage, inform the carrier and contact Alpha Technologies for advice on the impact of any damage.

### 4.3 General Receipt of Shipment

The inventory included with your shipment depends on the options you have ordered. The options are clearly marked on the shipping container labels and bill of materials.

Call Alpha Technologies if you have any questions before you proceed: 1 888 462-7487.

# 5. Installation

---



## WARNING!

**Branch Circuit Protection:** The utility line connected to the input of the Alpha MBS **MUST** be protected by an over-current, current limiting device that limits the short circuit current. The device must be certified for this use in accordance with the local electrical code.



## NOTE:

**Note on Grounding:** The Alpha MBS is suitable both for installation as part of the Common Bonding Network and the Isolated Bonding Network.



## NOTE:

The Alpha MBS is suitable for installations in Network Telecommunication Facilities and locations where the National Electrical Code applies.



## CAUTION!

**Make sure that the enclosure is free from all metal debris BEFORE wiring.**

### 5.3.1 Mounting

Consult local electrical codes to determine a suitable location for mounting the Alpha MBS.

Use the dimensions in the following drawings to wall mount the Alpha MBS with adequate clearance from the adjoining wall. Based on conduit size, use a hole punch tool such as a Greenlee for wiring the UPS IN, UPS source and the critical load.

#### Tools Required:

- Vacuum
- Plastic bag
- Drop cloth
- Power drill

#### Preparing and drilling the wall-mount holes

1. Place bag over switch cylinder.
2. Place the enclosure up against the wall to mark the holes that need to be drilled.
3. Remove the enclosure from the wall.
4. Drill the holes in the wall.

#### Preparing and drilling the enclosure holes

1. Place a drop cloth inside the unit to catch debris.
2. Drill and punch conduit holes in the enclosure.
3. Vacuum the enclosure, remove drop cloth, then remove plastic bag, then vacuum the enclosure again.

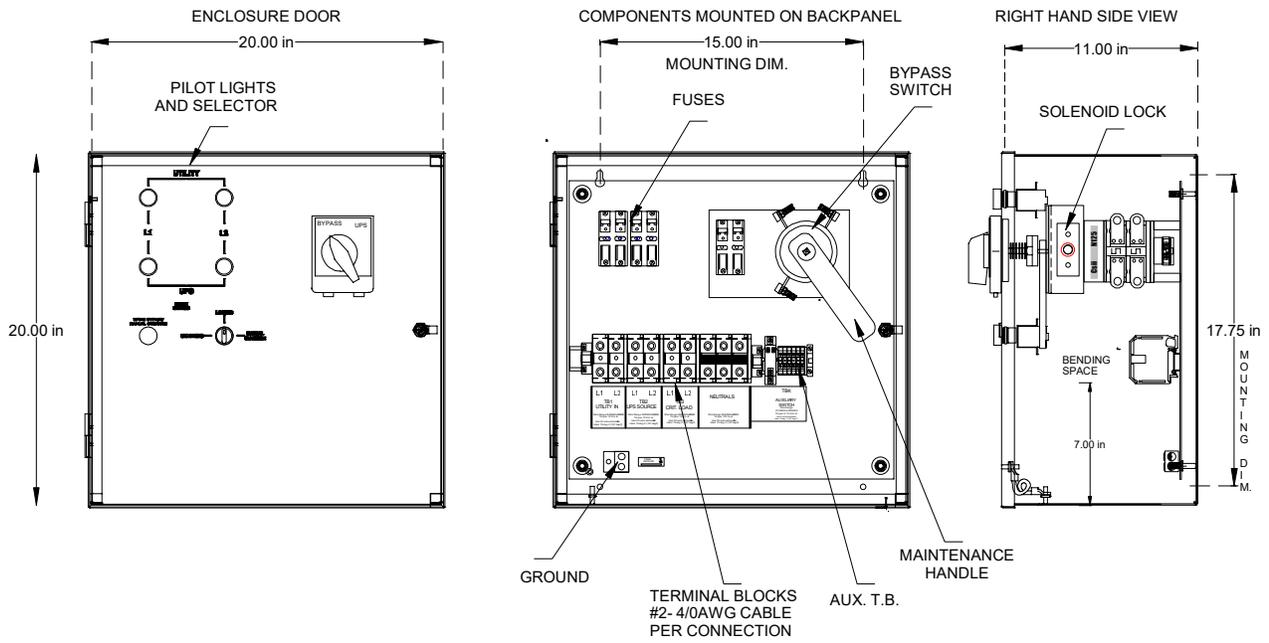


Figure 3 — 0200220-INT, 2 Pole, 100A

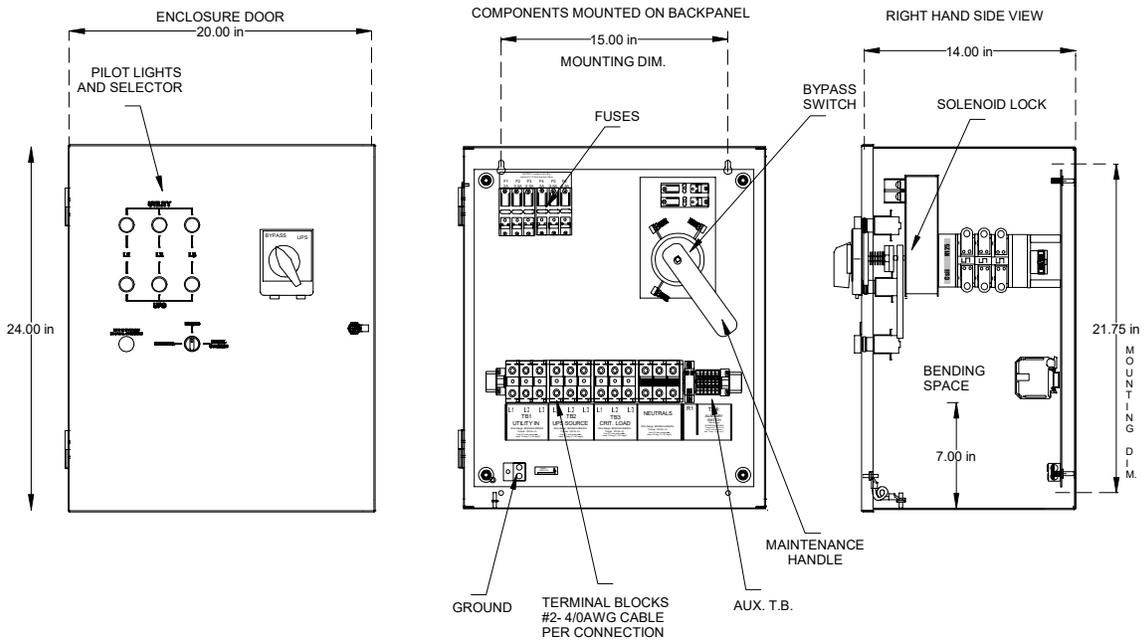


Figure 4 — 0200221-INT, 3 Pole, 100A

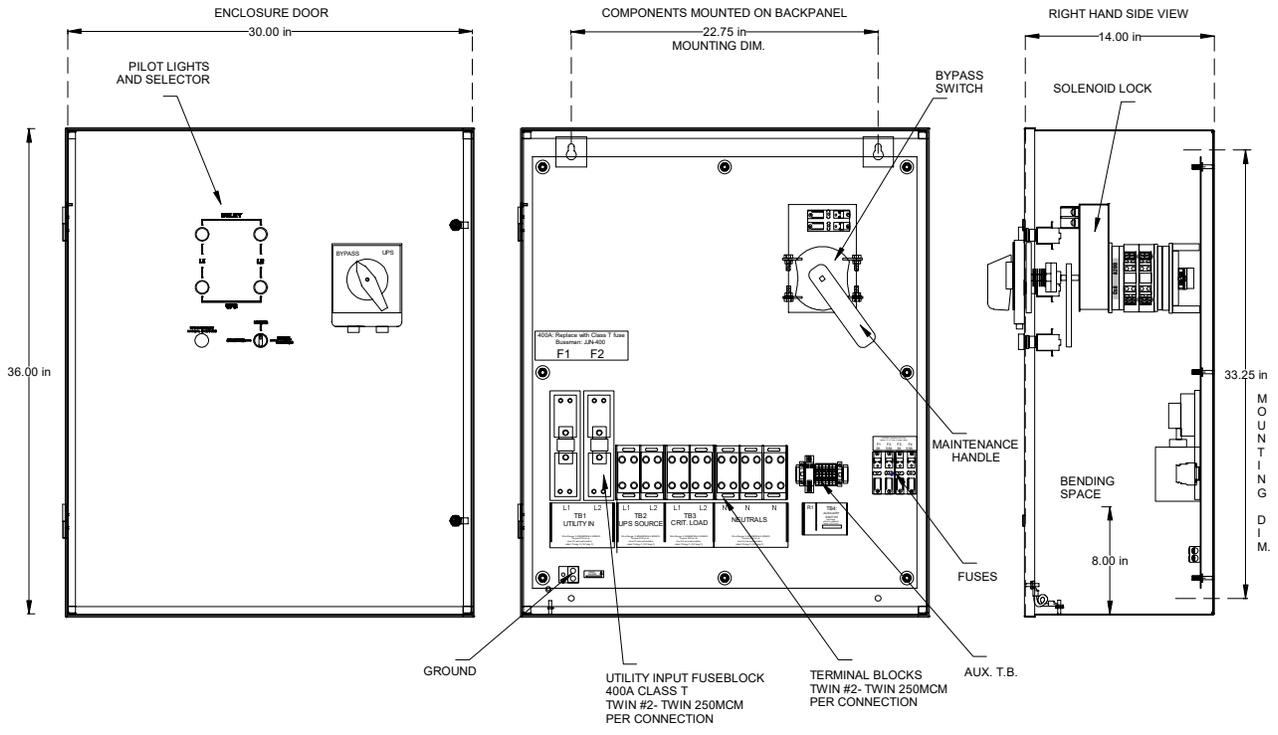


Figure 5 — 0200222-INT, 2 Pole 200A

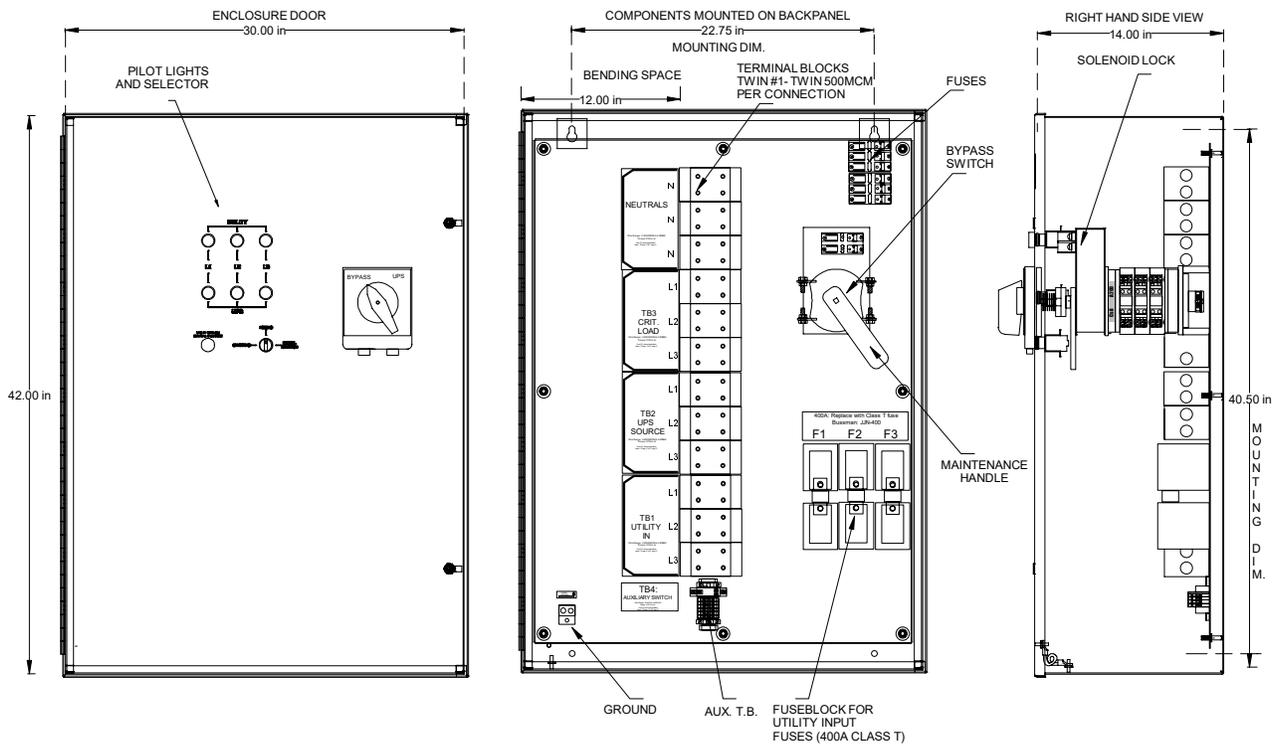


Figure 6 — 0200223-INT, 3 Pole 250A

# 6. Installation

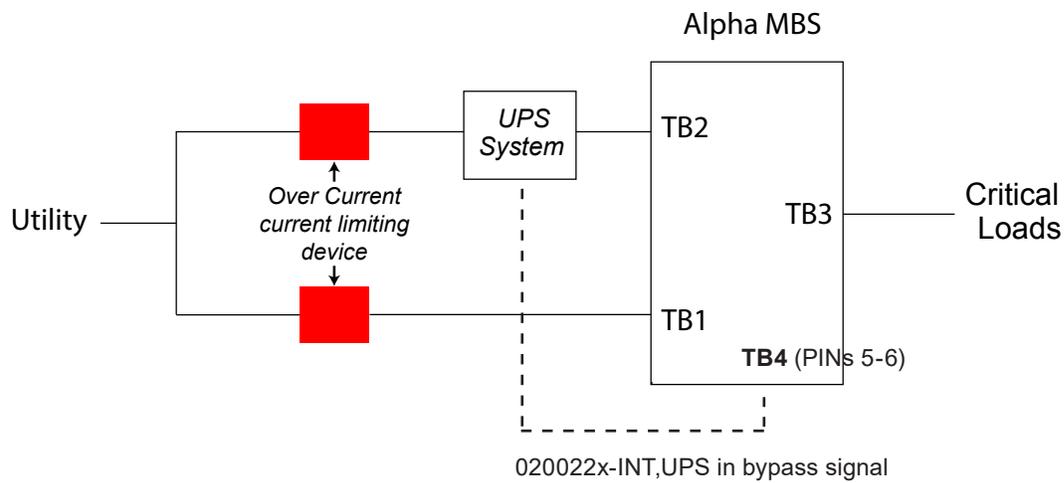
**WARNING!**

Ensure the wire size, circuit breakers, and fuses are sized according to the applicable electrical code and **LIMIT THE SHORT CIRCUIT CURRENT.**

Part Number	A C
0200220/-INT	5k
0200221/-INT	5k
0200222/-INT	10k
0200223/-INT	10k

**WARNING!**

Use minimum copper 75 °C rated wire.



See label below AC box lug for torque specifications.

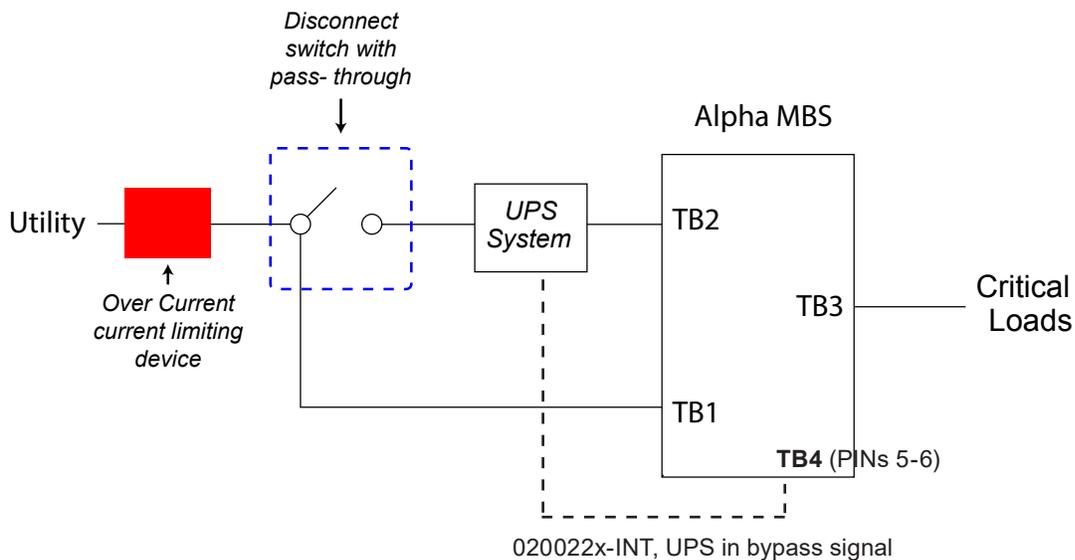


Figure 7 — Typical MBS Wiring Diagrams

Connect the closed in bypass dry contacts from the UPS to the TB4 to PINs 5 + 6 of the MBS.

## 6.1 Wiring the Alpha MBS

1. Wire the MBS as per wire gauge ranges and torques shown in the table below.

Model Number	Wire Gauge Range	Torque
0200220-INT	#4/0 AWG to #2 AWG	123 .lb - in
0200221-INT	#4/0 AWG to #2 AWG	123 .lb - in
0200222-INT	2-#250 MCM to 2-#2 AWG	275 .lb - in
0200223-INT	2-#500 MCM to 2-#2 AWG	375 .lb - in

2. To monitor the state of the 02002XX-INT MBS, connect the AUX PINs A1 through A4 of TB4 to the AMPS HP2 as shown in the drawing below.
3. Connect the "UPS in bypass" PINs 5 and 6 of TB4 of the MBS to the "closed in bypass" connection in the AMPS system located in the AMPS AC wiring compartment. See the figures on the following page.
4. Refer to the controller manual for the programming available digital inputs to monitor the MBS position.

## 6.2 Aligning the Outside Handle and Maintenance Handle



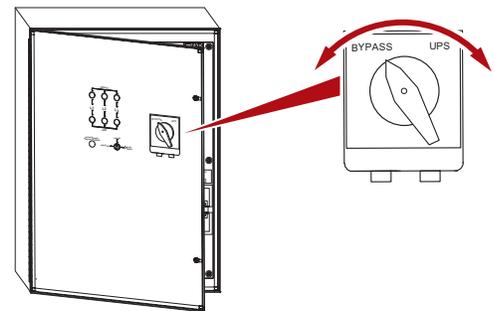
### WARNING!

Hazardous energy may be present! Only qualified electricians should open the cabinet.

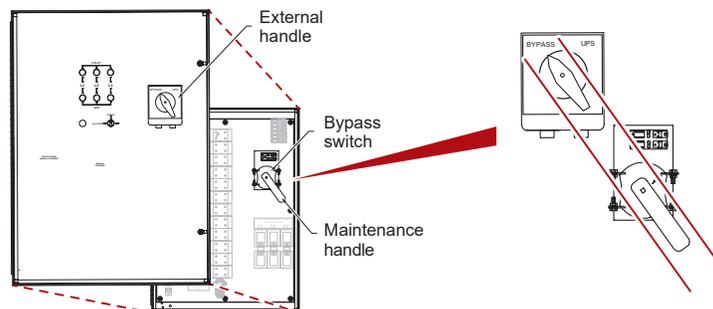


### NOTE:

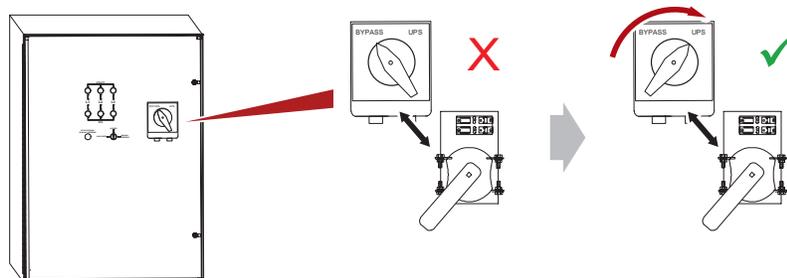
When the door is opened, the outside handle may move independently of the inside maintenance handle.



1. When closing the door of the MBS, ensure the outside handle and the inside maintenance handle are aligned.

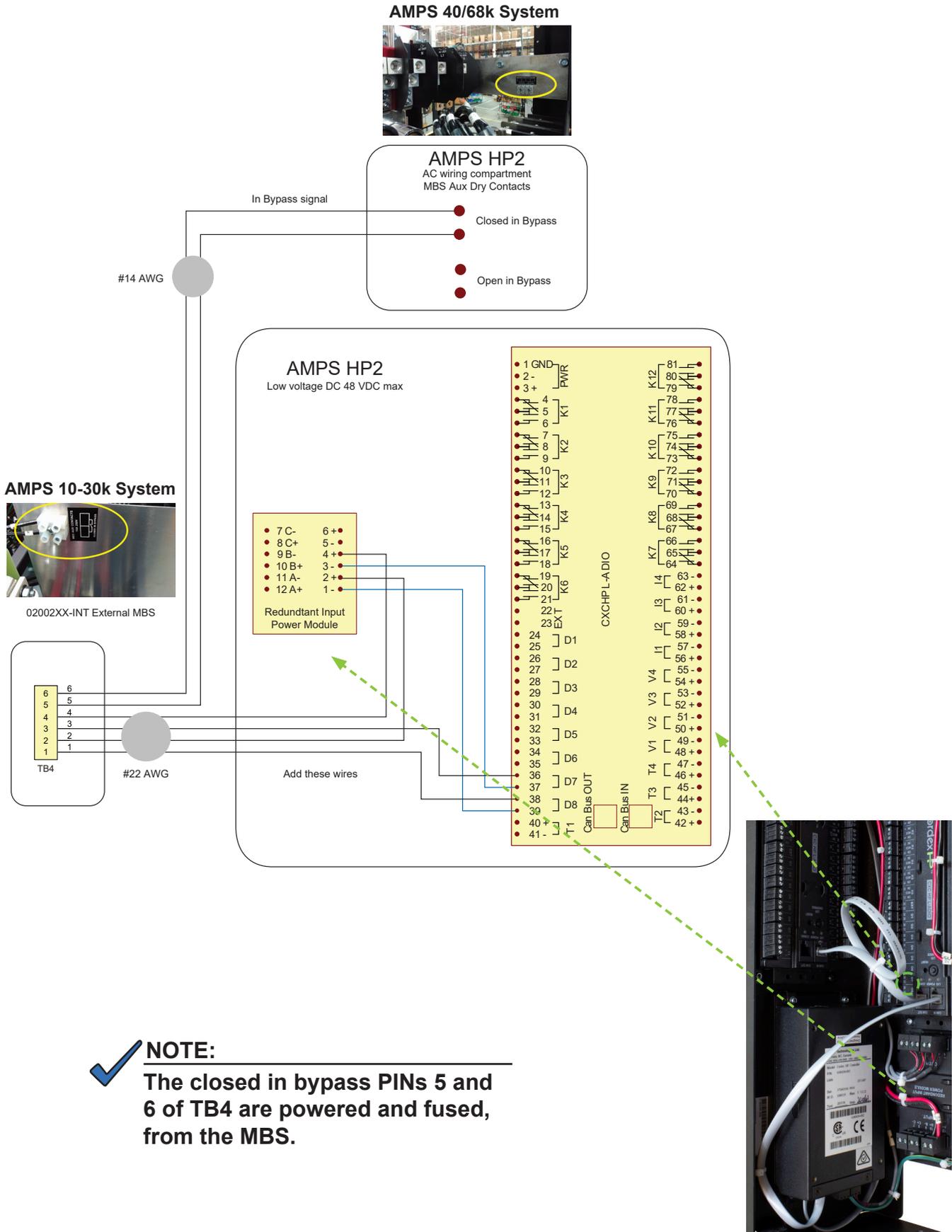


2. If the two handles are not aligned when the door is closed, turn the outside handle until it engages with the maintenance handle. **Note:** You will hear a **clicking** sound with the two handles engage.

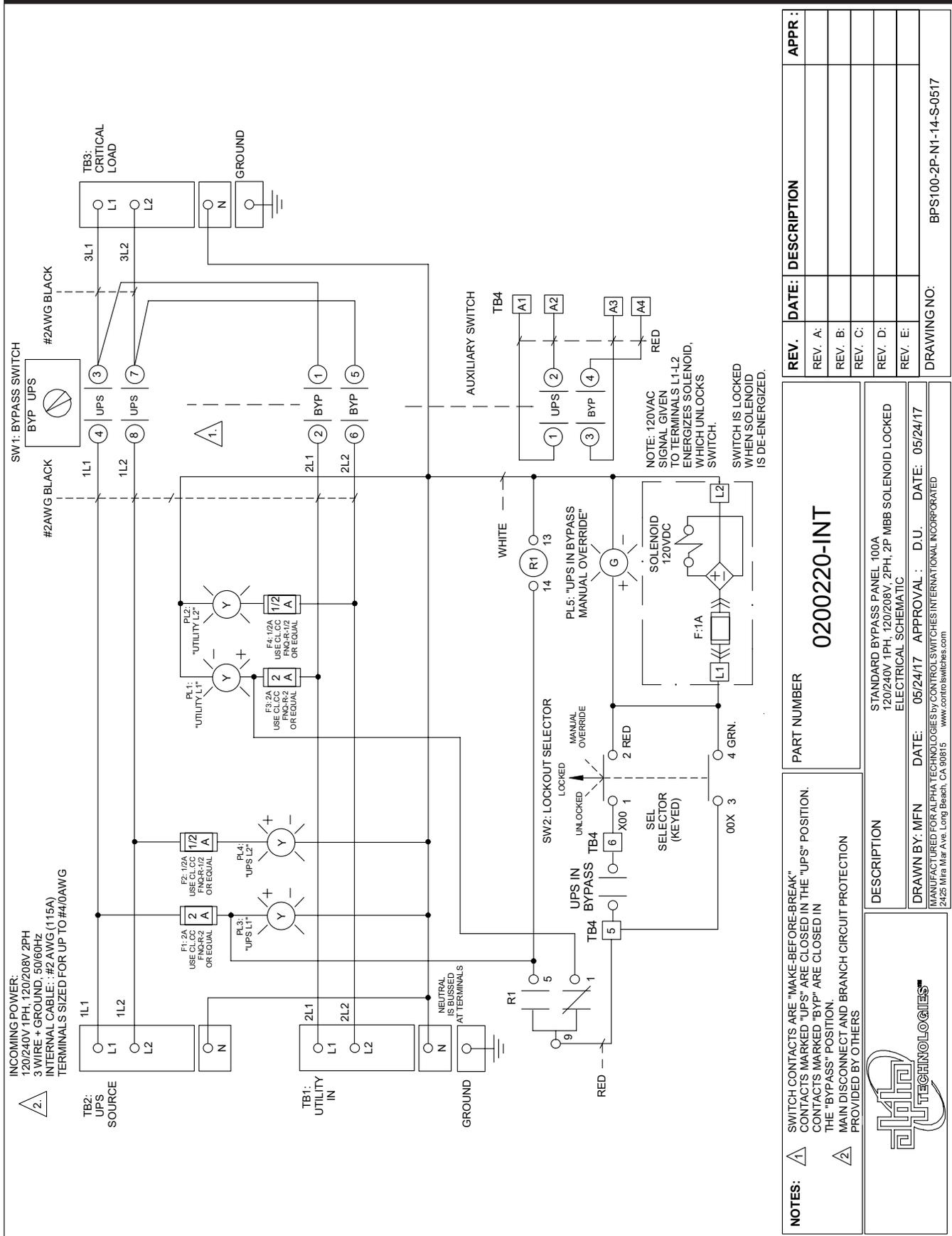


3. To prevent the outside maintenance handle from moving, lock it into position with a padlock.

## 6.3 Connecting TB4 of the MBS to the AMPS



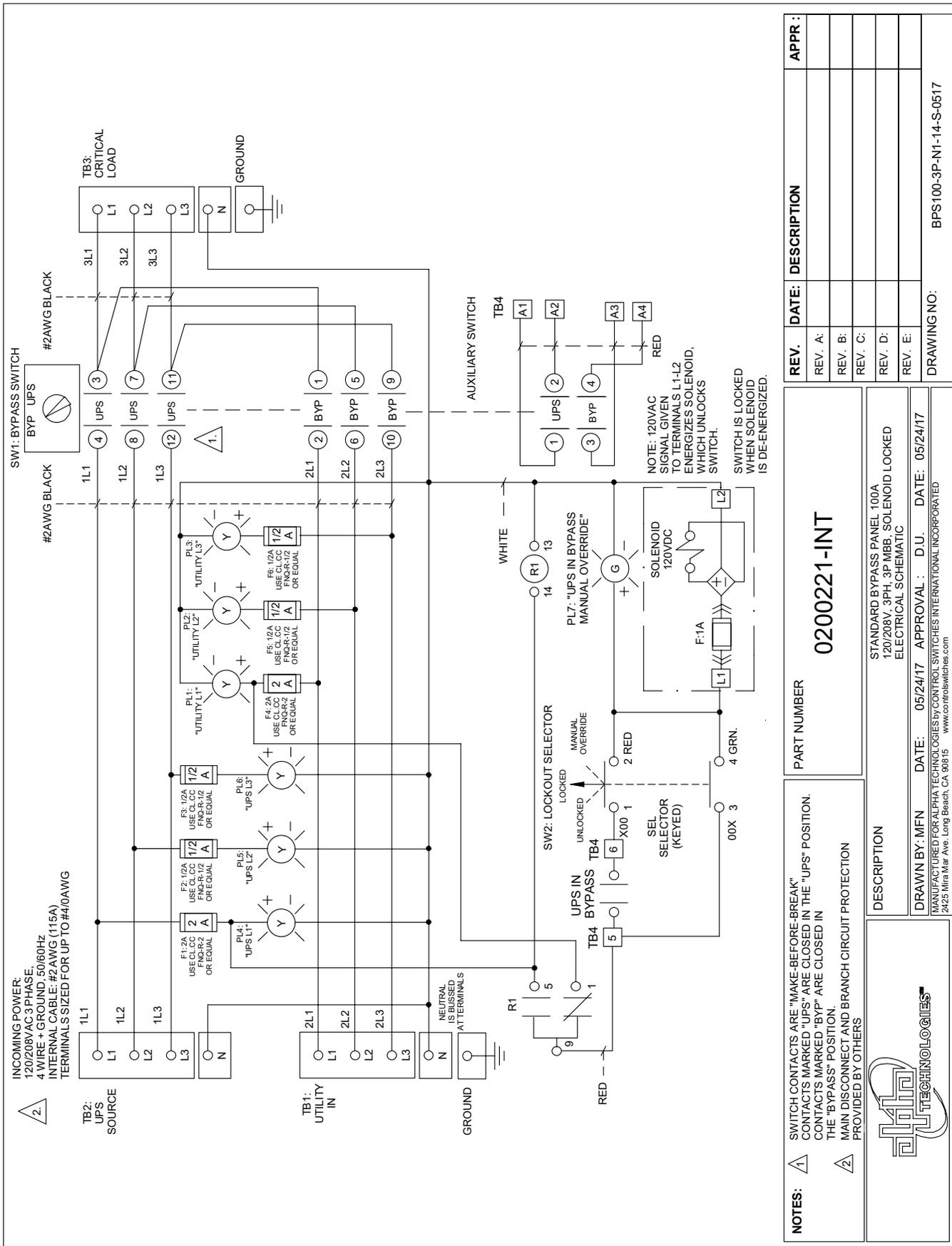
# 7. MBS Schematics



REV.	DATE:	DESCRIPTION	APPR.:
REV. A:			
REV. B:			
REV. C:			
REV. D:			
REV. E:			

<b>0200220-INT</b>	
PART NUMBER	
STANDARD BYPASS PANEL 100A 120/240V 1PH, 120/208V, 2PH, 2P MBB SOLENOID LOCKED ELECTRICAL SCHEMATIC	
DRAWN BY: MFN	DATE: 05/24/17
APPROVAL: D.U.	DATE: 05/24/17
DRAWING NO: BPS100-2P-N1-14-S-0517	

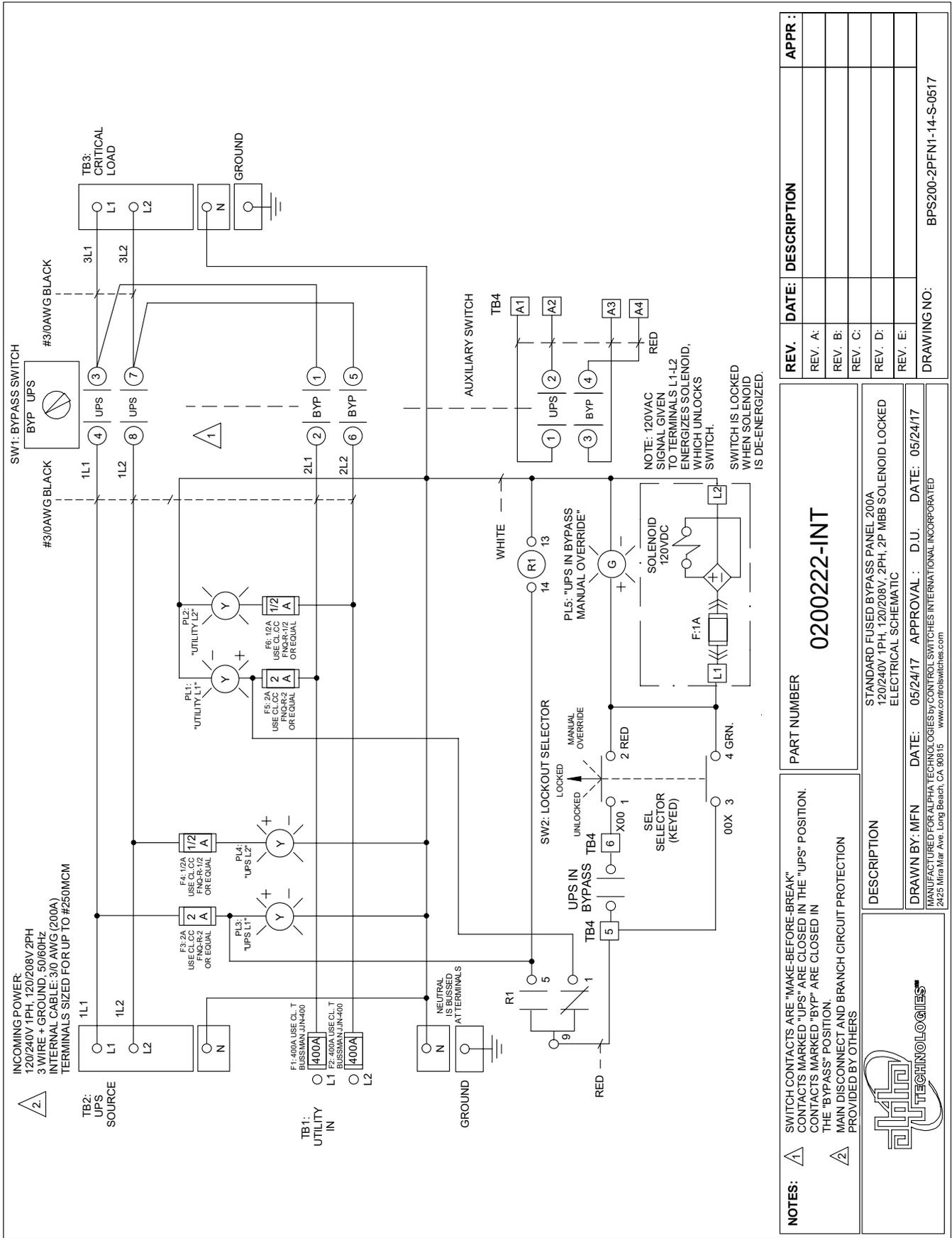
<b>NOTES:</b> 1 SWITCH CONTACTS ARE "MAKE-BEFORE-BREAK". CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS" POSITION. THE "BYPASS" POSITION. MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED BY OTHERS 2	<b>DESCRIPTION</b> STANDARD BYPASS PANEL 100A 120/240V 1PH, 120/208V, 2PH, 2P MBB SOLENOID LOCKED ELECTRICAL SCHEMATIC
	MANUFACTURED FOR ALPHA TECHNOLOGIES by CONTROL SWITCHES INTERNATIONAL INCORPORATED 2422 Mira Mar Ave, Long Beach, CA 90815 www.controlswitches.com



REV.	DATE:	DESCRIPTION	APPR.:
REV. A:			
REV. B:			
REV. C:			
REV. D:			
REV. E:			

<b>0200221-INT</b>	<b>PART NUMBER</b>
STANDARD BYPASS PANEL 100A 120/208V, 3PH, 3P MBB, SOLENOID LOCKED ELECTRICAL SCHEMATIC	<b>DESCRIPTION</b>
DRAWN BY: MFN DATE: 05/24/17 APPROVAL: DU DATE: 05/24/17	<b>DRAWING NO:</b> BPS100-3P-N1-14-S-0517
<small>MANUFACTURED FOR ALPHA TECHNOLOGIES BY CONTROL SWITCHES INTERNATIONAL INCORPORATED        2425 MiraMar Ave. Long Beach, CA 90805 www.controlswitches.com</small>	

<b>NOTES:</b> 1 SWITCH CONTACTS ARE "MAKE-BEFORE-BREAK" CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS" POSITION. THE "BYPASS" POSITION. MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED BY OTHERS 2	<b>ALPHA TECHNOLOGIES</b>
---	---------------------------

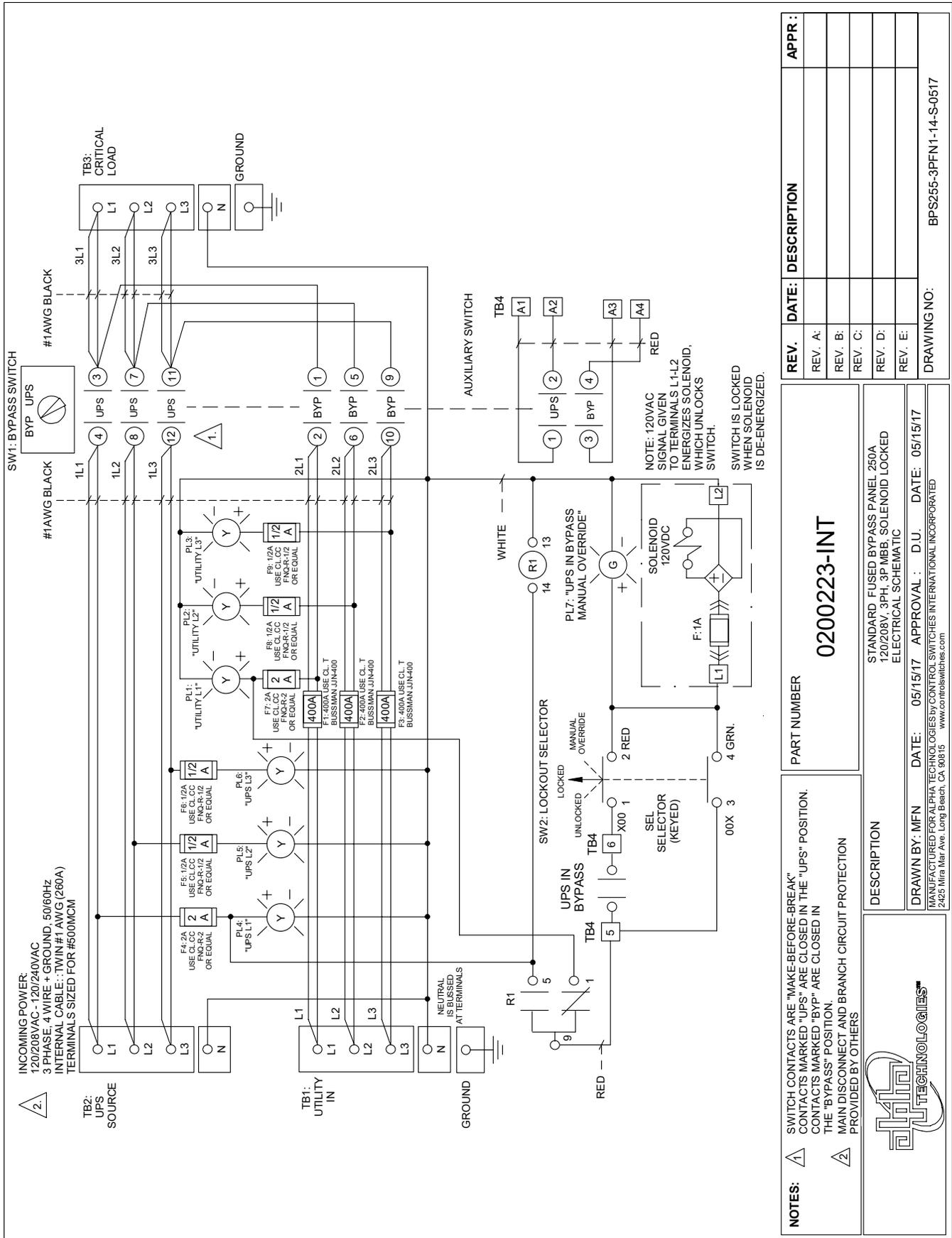


REV.	DATE:	DESCRIPTION	APPR.:
REV. A:			
REV. B:			
REV. C:			
REV. D:			
REV. E:			

DRAWING NO: BPS200-2PFN1-14-S-0517

<b>0200222-INT</b>	
PART NUMBER	
STANDARD FUSED BYPASS PANEL 200A 120/240V 1PH, 120/208V 2PH, 2P MBB SOLENOID LOCKED ELECTRICAL SCHEMATIC	
DRAWN BY: MFN	DATE: 05/24/17
APPROVAL:	D.U. DATE: 05/24/17
MANUFACTURED FOR ALPHA TECHNOLOGIES BY CONTROL SWITCHES INTERNATIONAL INCORPORATED 2422 MiraMar Ave. Long Beach, CA 90805 www.controlswitches.com	

<b>ALPHA TECHNOLOGIES</b>	
DESCRIPTION	
SWITCH CONTACTS ARE "MAKE-BEFORE-BREAK" CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS" POSITION. THE "BYPASS" POSITION. MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED BY OTHERS.	



REV.	DATE:	DESCRIPTION	APPR.:
REV. A:			
REV. B:			
REV. C:			
REV. D:			
REV. E:			
DRAWING NO:			BPS255-3PFN1-14-S-0517

<b>0200223-INT</b>	
PART NUMBER	
STANDARD FUSED BYPASS PANEL 250A 120/208V, 3PH, 3PMB, SOLENOID LOCKED ELECTRICAL SCHEMATIC	
DRAWN BY: MFN	DATE: 05/15/17
APPROVAL: [Signature]	DATE: 05/15/17
MANUFACTURED FOR ALPHA TECHNOLOGIES BY CONTROL SWITCHES INTERNATIONAL INCORPORATED 2425 Mira Mar Ave, Long Beach, CA 90805 www.controlswitches.com	

<p><b>NOTES:</b></p> <ul style="list-style-type: none"> <li>1 SWITCH CONTACTS ARE "MAKE-BEFORE-BREAK" CONTACTS MARKED "UPS" ARE CLOSED IN THE "UPS" POSITION. THE "BYPASS" POSITION.</li> <li>2 MAIN DISCONNECT AND BRANCH CIRCUIT PROTECTION PROVIDED BY OTHERS</li> </ul>	<p><b>DESCRIPTION</b></p> <p style="text-align: center;"><b>ALPHA TECHNOLOGIES</b></p>
---	--

## 8. Operations

---



### CAUTION!

The BYPASS switch positions cannot be changed if power is not present from either power source. The Alpha MBS operates normally if at least one power source is present. See Table A.



### CAUTION!

The MANUAL OVERRIDE key can be used to change the source selections of the Alpha MBS even when operation could cause damage to the critical loads.



### WARNING!

Make sure that you have read and understood all the information given in "0200223-INT, 3 Pole 250A" on page 13.



### CAUTION!

Always operate the switch with a quick continuous motion, do not hold it in mid-position.



### CAUTION!

**DO NOT** operate the bypass switch while the UPS is in inverter mode (front display on the UPS shows INVERTER).

## **8.1 Maintenance Bypass Switch Operation**

### **Locked Conditions**

Key in LOCKED position prevents power transfer.

### **Unlocked Power Transfer**

Allows safe power transfer only when UPS is in BYPASS mode.

1. Put the UPS/Inverter in BYPASS mode.
2. Verify the UPS in BYPASS lamp is on.
3. Verify all target source phase lamps are on.
4. Engage key to UNLOCKED positions to allow transfer.
5. Transfer power using rotary switch.
6. Engage key to LOCKED positions to prevent transfer.

UPS in BYPASS lamp is on only when UPS is in BYPASS mode.

### **Override Power Transfer**

Allows power transfer without UPS in BYPASS mode.

1. Engage OVERRIDE using the key.
2. Verify the OVERRIDE lamp is on.
3. Transfer power using the rotary switch.
4. Engage key to LOCKED position to prevent transfer.

This procedure may be unsafe in some conditions.

## 9. Maintenance/Troubleshooting

---

For the 0200222 and 02000223 use replacement fuses: 400A Class T Bussman JLN400. Replacement key part # 6470030.

### 9.1 Lamp Test Procedure

Bypass Lamp: To test the UPS in bypass lamp indicator, turn the key to override, if lamp does not lite, do the following:

1. Make sure the UPS is in bypass.
2. Making sure the voltage lights are on.
3. Have an electrician confirm if voltage is present on each phase. If voltage is present, replace the bulb, part number (3920056).

Voltage Lamp: The voltage lamp indicators will be lit when voltage is present, if a voltage lamp is not lit, investigate by having an electrician confirm if voltage is present on each phase. If voltage is present, replace bulb, part number(3920055).



#### **NOTE:**

---

**When the door is opened, the outside handle may move independently of the inside maintenance handle. Make sure you line up the inside and outside handle before closing door as outlined on "Aligning the Outside Handle and Maintenance Handle" on page 15.**

## 9.2 Manual Release of Bypass Switch Solenoid

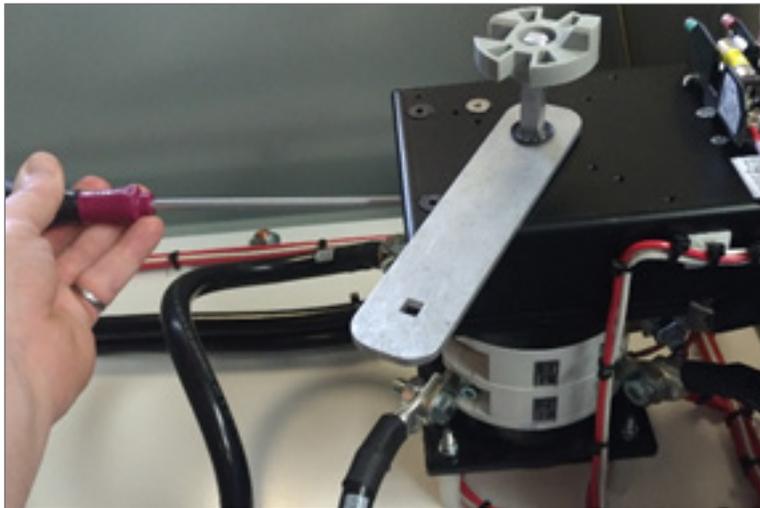


### WARNING!

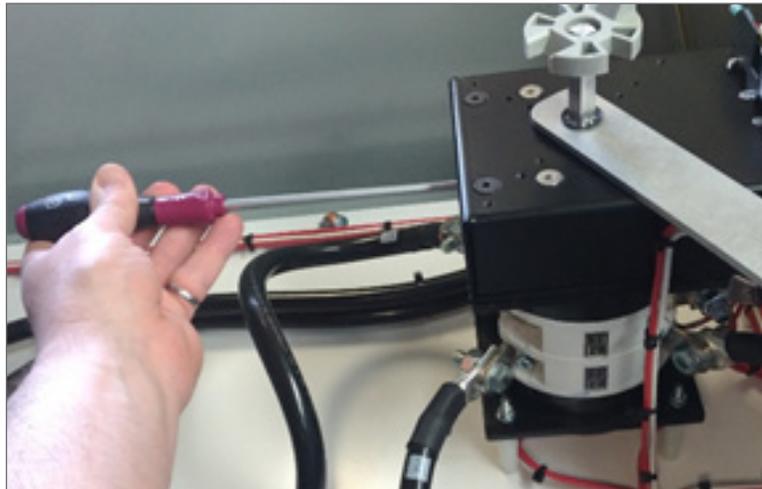
**Make sure that you have read and understood all the information given in "0200223-INT, 3 Pole 250A" on page 13.**

The BYPASS switch position cannot be changed if power is not present from either power source. Use the following procedure to release the bypass switch solenoid if a situation arises where all power is lost and it is necessary to change the position of the switch.

1. Release the solenoid by inserting a non-conductive device (e.g., plastic pen) into the hole in the bottom of the switch mount,.



2. Listen for the audible click of the solenoid as it releases.



3. Move handle.

# 10. Specifications

Table C — Specifications -INT models					
Electrical					
Part Number	0200220-INT	0200221-INT	0200222-INT	0200223-INT	
System Input Voltage	120Vac Single Phase (or) 120/208Vac 2-Pole (or) 120/240Vac Split-Phase	120/208Vac 3-Phase	120/208Vac 2-Pole (or) 120/240Vac Split-Phase	120/208Vac 3-Phase	
Current Rating(Amps)	100	100	200	250	
Short Circuit Current Rating (Utility Feed kAIC)	5		10		
Switches*	L1 & L2	L1, L2 & L3	L1 & L2	L1, L2 & L3	
Internal Fuse (Utility Feed)	None		2 x 400A	3 x 400A	
Mechanical					
Dimensions HxWxD	in	20 x 20 x 11	24 x 20 x 14	36 x 30 x 14	42 x 30 x 14
	mm	508 x 508 x 279.4	609.6 x 508 x 355.6	914.4 x 762 x 355.6	1066.8 x 762 x 355.6
AC Connections	#2 to 4/0 AWG	#2 to 4/0 AWG	#2 to 250mcm (dual) AWG	#1 to 500mcm (dual) AWG	
Aux Connections	#10-20 AWG				
Weight	66 .lb ( 30 kg)	86 .lb (39 kg)	193 .lb (87.5 kg)	244 .lb (110.5 kg)	
Environmental					
Temperature	Operating: -25 to 50°C (-13 to 122°F)				
	Storage: -40 to 75°C (-40 to 167°F)				
Relative Humidity	Up to 95%, non-condensing				
Altitude	Operating: Up to 3,858 m (12,000ft) above sea level				
	Storage: Up to 4,572m (15,000ft) above sea level				
Agency Compliance					
Safety	UL508A / CSA C22.2 No.14				

Selection Guide				
	0200220-INT (100A, 2-Pole)	0200221-INT (100A, 3-Pole)	0200222-INT (200A, 2-Pole)	0200223-INT (250A, 3-Pole)
AMPS HP2 Medium 10kVA	X			
AMPS HP2 Medium 20kVA	X			
AMPS HP2 Medium 30kVA		X		
AMPS HP2 Large 40kVA			X	
AMPS HP2 Large 68kVA N+1				X
*Neutral is not switched				

# 11. Warranty

---

## Technical Support

In Canada and the USA, call toll free 1-888-462-7487.

Customers outside Canada and the USA, call +1-604-436-5547.

## Warranty Statement

For full information details review Alpha's online Warranty Statement at [www.alpha.ca/support](http://www.alpha.ca/support).

## Product Warranty

Alpha warrants that for a period of two (2) years from the date of shipment its products shall be free from defects under normal authorized use consistent with the product specifications and Alpha's instructions, the terms of the manual will take precedence.

The warranty provides for repairing, replacing or issuing credit (at Alpha's discretion) for any equipment manufactured by it and returned by the customer to the factory or other authorized location during the warranty period.

There are limitations to this warranty coverage. The warranty does not provide to the customer or other parties any remedies other than the above. It does not provide coverage for any loss of profits, loss of use, costs for removal or installation of defective equipment, damages or consequential damages based upon equipment failure during or after the warranty period. No other obligations are expressed or implied. Warranty also does not cover damage or equipment failure due to cause(s) external to the unit including, but not limited to, environmental conditions, water damage, power surges or any other external influence.

The customer is responsible for all shipping and handling charges. Where products are covered under warranty Alpha will pay the cost of shipping the repaired or replacement unit back to the customer.

## Battery Warranty

Note that battery warranty terms and conditions vary by battery and by intended use. Contact your Alpha sales representative or the Technical Support team at the above number to understand your entitlements under Battery Warranty.

## Warranty Claims

Any claim under this Limited Warranty must be made in writing to Alpha BEFORE sending material back. Alpha will provide Product return instructions upon approval of return request. A Service Repair Order (SRO) and / or Return Authorization (RA) number will be issued ensuring that your service needs are handled promptly and efficiently.

Claims must be made online at: [www.alpha.ca](http://www.alpha.ca).

## Service Information

For a list of international service centers, refer to the Alpha website: [www.alpha.ca](http://www.alpha.ca)









**Alpha Technologies Ltd.**

**For more information visit [www.alpha.com](http://www.alpha.com)**

Canada: Burnaby, British Columbia T: 604.436.5900 F: 604.436.1233  
United States: Bellingham, Washington T: 360.647.2360 F: 360.671.4936

#020-EMBS-INT-J0 (07/2019)

Alpha Technologies reserves the right to make changes to the products and information contained in this document without notice. Copyright © 2019 Alpha Technologies. All Rights Reserved.  
Alpha® is a registered trademark of Alpha Technologies.