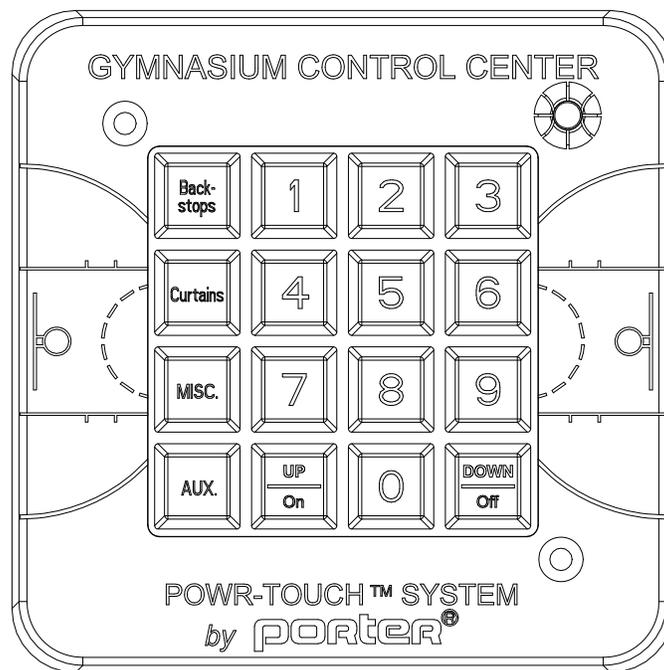


## INSTALLATION, OPERATION & MAINTENANCE MANUAL

### *TOTAL GYMNASIUM CONTROL CENTER No. 2555 Powr-Touch® 2.5 Control System*



### CAUTION

KEEP THIS MANUAL IN A SECURE,  
LOCKED LOCATION. IMPORTANT  
INFORMATION ABOUT SYSTEM  
SECURITY IS CONTAINED WITHIN.

THE OWNER OF THIS EQUIPMENT MUST SAVE THESE  
INSTRUCTIONS FOR FUTURE REFERENCE



**INSTRUCTIONS:** Dealer and/or Installation Supervisor  
 Please give this book to the Owner/Customer

**GUARANTEE**

All materials and workmanship of basic materials are guaranteed to be free and clear of defects. Defective material will be repaired or replaced, at our option, subsequent to complete information being received by us concerning the nature of the defect, for a period of one year from the date established by the certificate of occupancy or certificate of substantial completion, whichever shall occur first or otherwise documented and signed by an officer of Porter Athletic Equipment Company.

<b>NAME OF PROJECT:</b>	

<b>NAME OF DEALER:</b>	<b>NAME OF INSTALLATION COMPANY</b>
<b>PHONE #:</b>	<b>PHONE #:</b>

Porter Order Number: \_\_\_\_\_

Date of Scheduled shipment: \_\_\_\_\_

Date of Substantial Completion: \_\_\_\_\_

The gymnasium equipment for this project has been factory tested. Improper field wiring, handling, etc. resulting in damage to equipment, voids all warranties. Care has been taken to fabricate and install this equipment to provide years of safe, satisfactory use and trouble-free service.

The key to satisfactory service is proper operation and care. Should any malfunctions occur, please notify your supervisor and call your local Porter Dealer or Representative.

No.	QTY.	DESCRIPTION
1	12555-100	POWR-TOUCH® 2.5 TOUCHPAD
2	12555-200	POWR-TOUCH® 2.5 CONTROL PANEL
3	ELEC 00042 100	FOUR POLE TWIST-LOCK RECEPTACLE
4	ELEC 00047 060 1/2"	DEEP SURFACE COVER

**NOTE: ONE 12555-200 CONTROL PANEL AND KEYPAD CAN SIMULTANEOUSLY CONTROL UP TO FOUR BACKSTOPS. A TWO CONTROL PANEL SYSTEM OR GREATER CAN SIMULTANEOUSLY CONTROL UP TO EIGHT BACKSTOPS.**

**\*\*** LINE IN, 120 VOLTS

**\*\*** LINE IN, 120 VOLTS

**\*\*\*** LOCATION OF WIRES TERMINATING TO RELAY SETS IS CRITICAL. REFER TO SHEET E-2555-2 FOR MORE DETAILED INFORMATION.

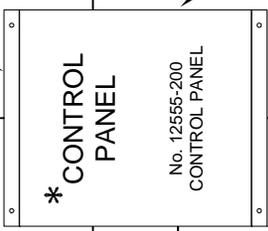
**\*** UP TO SIXTEEN (16) CONTROL PANELS CAN BE NETWORKED VIA TWO (2) COMMUNICATION WIRES TO CONTROL 128 PORTER DEVICES AND 32 AUXILIARY DEVICES.

PORTER EQUIPMENT AMPERAGE REQUIREMENTS

1/2 H.P. = 9 AMPS
3/4 H.P. = 11 AMPS
1 H.P. = 14 AMPS

**\*\*** LINE IN, 120 VOLTS

**\*\*** LINE IN, 120 VOLTS



**\*\*\*** POWER SUPPLY FROM CIRCUIT BREAKER PANEL. TWO (2) POWER FEEDS PER CONTROL PANEL REQUIRED.

**NOTE:** TWO MOTORS CAN OPERATE SIMULTANEOUSLY PER CIRCUIT. BREAKER RATING AND WIRE SIZE MUST BE BASED ON MOTOR TYPE AND QUANTITY OF EQUIPMENT TO BE OPERATED PER CIRCUIT.

**\*\*\*** 3-WIRES (UP, DOWN, NEUTRAL)

**NOTE:** THREE (3) WIRES (UP, DOWN, NEUTRAL) REQUIRED PER DEVICE.

EACH PANEL CONTROLS UP TO EIGHT (8) PORTER DEVICES AND POWER CONTROL FOR TWO (2) AUXILIARY DEVICES.

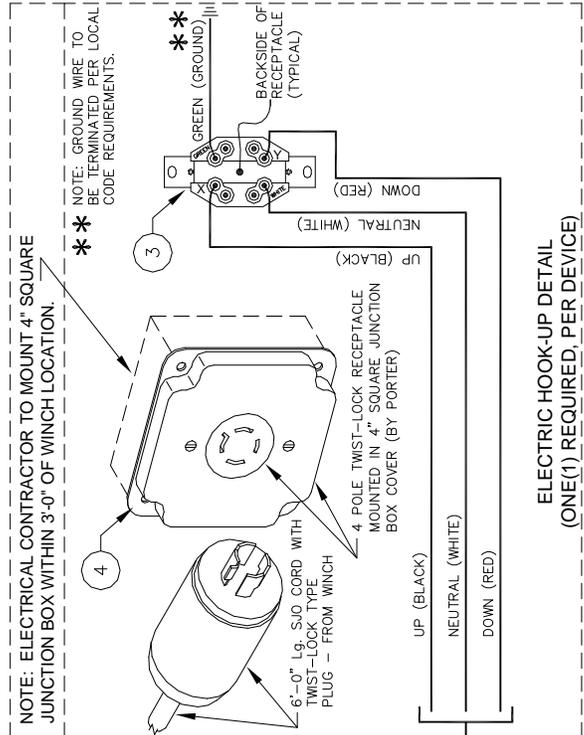
FOUR (4) WIRES (TWO (2) 12 VOLT POWER, TWO (2) COMMUNICATION) TYPICAL ALL TOUCHPAD LOCATIONS. 18 GA. SHIELDED CABLE REQUIRED (BY OTHERS).

UP TO SEVEN (7) TOUCHPADS CAN INTERFACE WITH A CONTROL PANEL NETWORK.

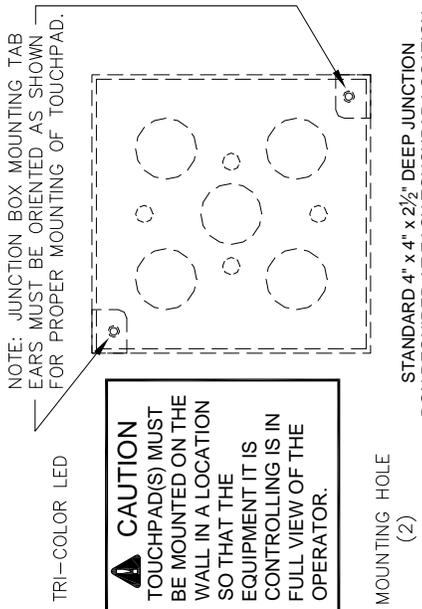
**\*** NOTE: CONTROL PANELS TO BE LOCATED AND INSTALLED BY AN ELECTRICAL CONTRACTOR IN A CENTRAL LOCATION OF EQUIPMENT TO MINIMIZE LENGTH OF 120V. POWER WIRING.

— 12555-100 POWR-TOUCH® 2.5 ELECTRONIC TOUCHPAD ONE (1) REQUIRED (MINIMUM)

— 12555-200 POWR-TOUCH® 2.5 ELECTRONIC CONTROL PANEL (CONTROLS UP TO EIGHT (8) PORTER DEVICES AND TWO (2) AUXILIARY DEVICES)



**ELECTRIC HOOK-UP DETAIL (ONE(1) REQUIRED, PER DEVICE)**



**STANDARD 4" x 4" x 2 1/2" DEEP JUNCTION BOX REQUIRED AT EACH TOUCHPAD LOCATION (PROVIDED AND INSTALLED BY OTHERS)**

REVISION	DATE	PORTER No.
		CUSTOMER No.
	DATE	
	1-17-2008	

**02555-000**  
**POWR-TOUCH® 2.5 SIMULTANEOUS OPERATION GYMNASIUM CONTROL CENTER**

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**PORTER®**  
 WORLD LEADER  
 IN QUALITY SPORTS EQUIPMENT  
 2500 S. 25th AVENUE  
 BROADVIEW, ILLINOIS 60155  
 www.porter-ath.com

DRAWING BY	TJK
CHECKED BY	RJM
PAGE No.	E-2555

REFER TO SHEET E-2555-2 FOR A FULL ELECTRICAL WIRING DIAGRAM (INCLUDES AUXILIARY DEVICE WIRING).

# SPECIFICATIONS

## **PORTER No. 02555-000 POWR-TOUCH® 2.5 SIMULTANEOUS OPERATION** **GYMNASIUM CONTROL CENTER**

Wall-mounted TouchPad control system shall be designed as an alternate to conventional keyswitch-type controls, to operate basketball backstops, divider curtains, electric height adjusters, overhead volleyball systems, batting cages, mat movers, and power control for auxiliary gymnasium electrical equipment such as lighting, scoreboards, etc. (Standard keyswitch-type operation shall not be considered as equal.) TouchPad control shall be capable of operating a maximum of 128 basketball backstops or other gymnasium apparatus, and a maximum of 32 units of auxiliary equipment. For safety of operation, the Powr-Touch® 2.5 TouchPad is designed to require constant pressure on the pad button to control the gymnasium apparatus. Control of the auxiliary equipment is accomplished by a single touch of the appropriate button.

The Powr-Touch® 2.5 TouchPad control system shall offer a time saving operational control feature for multiple operation of basketball backstops, height adjusters and curtains without requiring additional control wiring. Basketball backstops, height adjusters and curtains may be operated individually or simultaneously by pressing a single button (for safety reasons; a maximum of eight backstops or height adjusters, and a maximum of four curtains per TouchPad\*). Systems that allow for more than eight backstops or height adjusters, or more than four curtains and other equipment to be operated simultaneously from the same TouchPad, shall not be accepted. Each relay set can be programmed to accept eight memory address assignments for up to eight different operation combinations for each basketball backstop, height adjuster or curtain (operate one, two, three and up to eight units individually or simultaneously, curtain simultaneous maximum is four units). Each desired operation mode shall be selected at the TouchPad by entering the assigned backstop, height adjuster or curtain number, or combination backstops, height adjusters or curtain number. Systems without simultaneous operation and multiple operation mode capability shall not be considered equal.

TouchPad shall incorporate a four-digit programmable security code to prevent usage by unauthorized personnel. The TouchPad security code may be easily reprogrammed at any time as desired to prevent unauthorized usage. TouchPad will automatically revert back to the secure mode if no button is used within a thirty-second time period. Multiple TouchPads may be utilized (seven maximum) when operation from various locations is desirable – specify as required. Systems without multiple TouchPad capability shall not be considered equal. TouchPad assembly shall be flush mounted in a standard four inch square electrical box (4" x 4" x 2½") with a 12-volt control circuit to relay panels strategically located on walls or roof framing structure, to minimize power conduit runs and to provide substantial savings on electrical wiring requirements.

The Powr-Touch® 2.5 control system shall include a minimum of one dual powered relay panel\* (16 maximum, per network). Each relay panel shall contain two banks of eight (16 total) 30 amp load rated relays for operating eight momentary-controlled type (up and down) 120 volt or low voltage pieces of equipment. Each bank of relays shall be independently powered by 120 volt line power (two (2) dedicated circuit breakers per relay panel). Each relay panel shall also include two maintained 30 amp load rated relays for power control of lighting, etc. Single circuit (120 volt line power) relay panels and relays with a load rating of less than 30 amps shall not be considered equal. Size of each relay panel enclosure is 4-3/8" x 14" x 17" (11.2cm x 36cm x 43cm).

The Powr-Touch® 2.5 control system shall feature a tri-color LED at the TouchPad for positive user feedback. The TouchPad LED illuminates when the proper security code is entered (green), when confirming a TouchPad button is fully depressed (amber), and while operating equipment up or down (red). The system shall also include additional LED's at the TouchPad and relay panel circuit boards to ensure the system is receiving power, wired correctly, and that the relays are functioning properly. TouchPad wiring shall also be fuse protected for additional circuit protection.

To assist in identifying the equipment number assignment for single or multiple operation, the Porter No. 92500-000 Custom Equipment Legend shall be provided as standard equipment with every Powr-Touch® 2.5 control system. The wall mounted legend is positioned above the TouchPad location for a visual reference of the equipment layout. Refer to sheet E-92500 for more information and specifications. Control systems not offering a custom equipment legend shall not be considered equal.

Wiring of all electrical components shall be in accordance with local codes, and in accordance with manufacturer's instructions. All conduit, wiring, junction boxes, and components not specified herein shall be furnished and installed by the electrical contractor. In addition, relay panel dip switch settings and relay set programming per the facility's requirements shall be the responsibility of the electrical contractor.

\* One relay panel (02555-000) system can individually or simultaneously control four backstops, two relay panels are required to operate up to eight backstops simultaneously. Curtain maximum is four regardless of number of relay panels in system.

ISSUED JANUARY 1, 2008, SUBJECT TO CURRENT MANUFACTURING PROCEDURES AND CHANGES  
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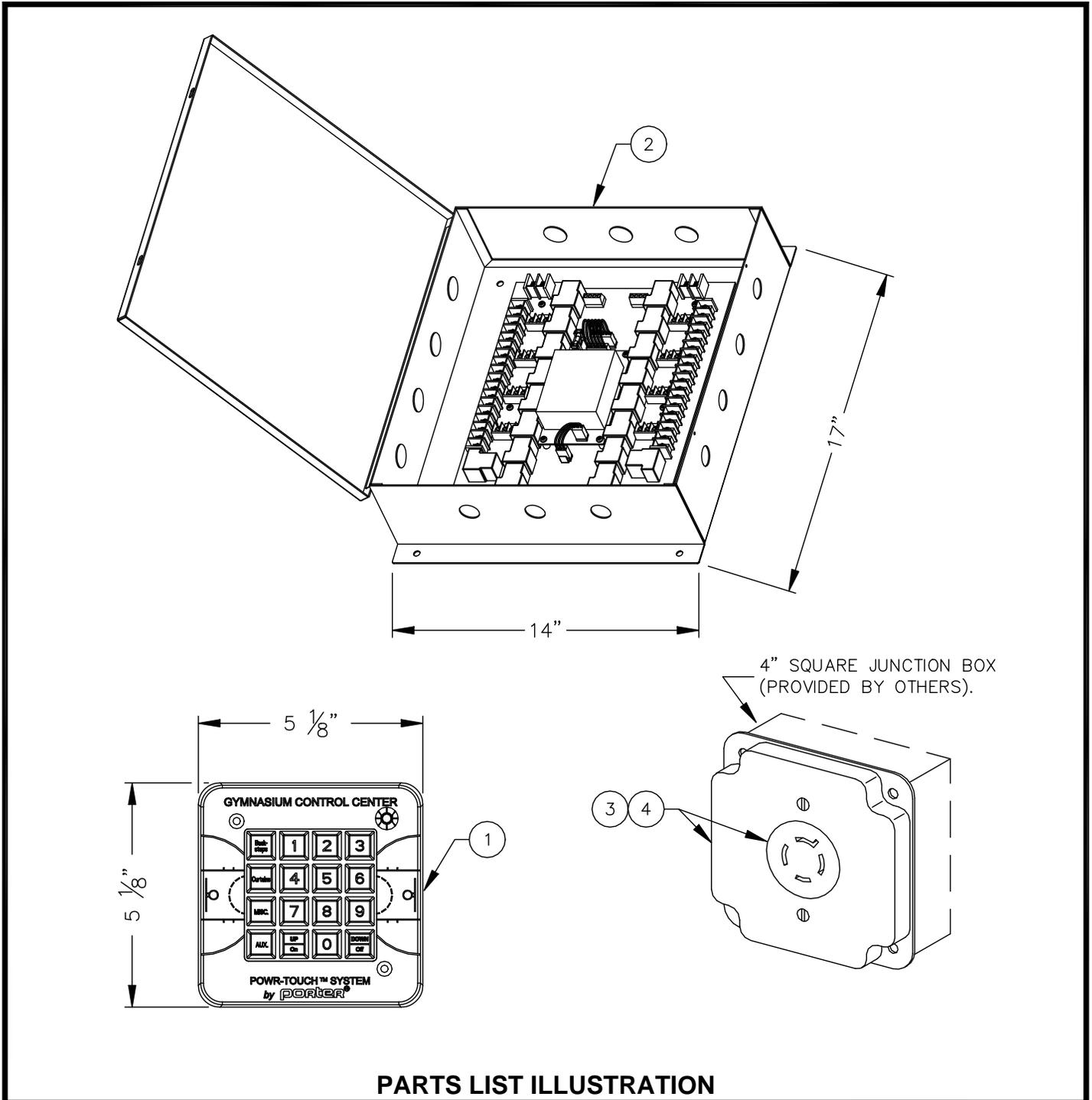
**E-2555**

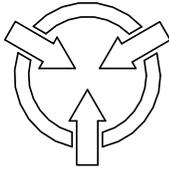
## PARTS LIST

Item No.	Qty.	Part Number	Description
1	*	12555-100	Electronic Powr-Touch® 2.5 TouchPad
2	**	12555-200	Electronic Powr-Touch® 2.5 Relay Panel
3		ELEC 00042 100	4-pole Twist-Lock
4		ELEC 00047 0G0	1/2" deep Cover Plate

\* Minimum of one (1) Powr-Touch® 2.5 No. 12555-100 TouchPad required per system.

\*\* One (1) Powr-Touch® 2.5 No. 12555-200 relay panel required per eight (8) Porter devices or two (2) auxiliary devices.





## ELECTROSTATIC SENSITIVE DEVICES

### ELECTRICIAN NOTE: EQUIPMENT REQUIRES SPECIAL HANDLING PRECAUTIONS

- LEAVE STATIC SENSITIVE DEVICES IN ORIGINAL PACKAGING UNTIL READY TO INSTALL
- TOUCH A KNOWN GROUNDING SOURCE BEFORE HANDLING DEVICES
- HANDLE DEVICES BY TOUCHING ONLY THE EDGES OF THE CIRCUIT BOARD

## Programming Guide

This "Guide" section of the instructions allows individuals familiar with the Powr-Touch® 2.5 system to quickly program the relay panels, erase device assignments and change the factory default password. Individuals not familiar with the system potential should refer to the main section of the instructions for complete system features.

- Verify relay panel address settings (see chart on page 14), and identify equipment terminated to each relay set (refer to gymnasium floorplan or the Custom Equipment Legend for equipment number assignment). Sheets illustrating the relay panel board are included at the end of this instruction manual to annotate the equipment number assignments.
- Set the TouchPad to address "0" (program mode) by pushing all three dip switches (back face of TouchPad, see page 9) to the closed position.
- Begin programming the relay sets by following the examples listed below.

### Individual Operation

#### Example No. 1:

To program **Backstop 3** to relay set "**B**" (002) on panel address "**0**", perform the following steps:

1. Enter the relay set number: "002"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "03"
4. Press the TouchPad **down/off** button.

#### Example No. 2:

To program **Backstop 4** to relay set "**E**" (005) on panel address "**0**", perform the following steps:

1. Enter the relay set number: "005"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "04"
4. Press the TouchPad **down/off** button.

#### Example No. 3:

To program **Backstop 5** to relay set "**A**" (009) on panel address "**1**", perform the following steps:

1. Enter the relay set number: "009"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "05"
4. Press the TouchPad **down/off** button.

**Example No. 4:**

To program **Backstop 6** to relay set "G" (015) on panel address "1", perform the following steps:

1. Enter the relay set number: "015"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "06"
4. Press the TouchPad **down/off** button.

## Multiple Operation

**Example No. 1:**

To program **Backstop 3** to relay set "B" (002) on panel address "0", perform the following steps:

1. Enter the relay set number: "002"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "50"
4. Press the TouchPad **down/off** button.

**Example No. 2:**

To program **Backstop 4** to relay set "E" (005) on panel address "0", perform the following steps:

1. Enter the relay set number: "005"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "50"
4. Press the TouchPad **down/off** button.

**Example No. 3:**

To program **Backstop 5** to relay set "A" (009) on panel address "1", perform the following steps:

1. Enter the relay set number: "009"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "50"
4. Press the TouchPad **down/off** button.

**Example No. 4:**

To program **Backstop 6** to relay set "G" (015) on panel address "1", perform the following steps:

1. Enter the relay set number: "015"
2. Enter the device type: "Backstop"
3. Enter the assigned device number: "50"
4. Press the TouchPad **down/off** button.

In the above individual and multiple programming examples, backstops 3, 4, 5 or 6 will operate individually when the operator at the TouchPad enters "**Backstop 3, 4, 5 or 6**" and presses and holds either the "up" or "down" button. These four backstops will operate simultaneously when the operator at the TouchPad enters "**Backstop 50**" and presses and holds either the "up" or "down" button.

**Multiple operation notes:**

- A maximum of eight (8) backstops or height adjusters can be operated simultaneously, and a maximum of four (4) curtains can be operated simultaneously (multiple operation).
- Only two members of a multiple set can be powered per relay bank (see pages 11, 16 and 17).
- Any device number can be assigned to operate a multiple set, but number assignments 50 thru 90 are recommended.
- Only the "**Backstop**" and "**Misc.**" function keys can be programmed for multiple operation.
- A single relay panel Powr-Touch II system can control only two devices simultaneously. A minimum of two relay panels is required to control a multiple set maximum of four devices.

To test the operation of the equipment, set the TouchPad dip switch module to a logical address (1 thru 7) that does not conflict with other TouchPad address settings in the system network. Enter the factory default four digit password (1 1 1 1). Operate the device by selecting the device button and corresponding number, then push and hold the "up" or "down" button for the desired direction of travel.

## Programming Erase Guide

All devices that are programmed properly in the Powr-Touch® 2.5 are held in the system's memory. If a device number has been programmed/assigned to eight relay sets, it cannot be programmed to additional relay sets. If a mistake was made during the programming sequence and a device number was accidentally assigned to the wrong relay set, an erase procedure will be required. Refer to the erase options examples below.

### Complete system erase:

**Note:** This procedure will erase **all** device assignments in the Powr-Touch® 2.5 system.

1. Set the No. 12555-100 TouchPad dip switch to address "0" (program mode, see TouchPad illustration, page 9)
2. Enter **999**
3. Enter "**Backstop 00**"
4. Press the **down/off** button.

### Individual device assignment erase:

**Note:** This procedure will erase the device number assignment selected in the Powr-Touch® 2.5 system.

1. Set the No. 12555-100 TouchPad dip switch to address "0" (program mode, see TouchPad illustration, page 9)
2. Enter **900**
3. Enter the device type and number. Example: "**Backstop 03**"
4. Press the **down/off** button.

In the above example, "Backstop 3" will be erased from all memory locations (single and multiple operation) in the Powr-Touch® 2.5 system.

### Relay panel erase:

**Note:** This procedure will erase all device number assignments in the selected Powr-Touch® 2.5 relay panel.

1. Set the No. 12555-100 TouchPad dip switch to address "0" (program mode, see TouchPad illustration, page 9)
2. Calculate the code number to enter. To erase relay panel address "0", add the number "1" to the relay panel address number, then add the constant number "900". Example: Relay panel address "**0**" +1 + **900** = **901**.
3. Enter **901**
4. Enter "**Backstop 00**"
5. Press the **down/off** button.

In the above example, all device number assignments in relay panel address "0" will be erased.

## TouchPad Password Guide

A factory default, four digit password (**1 1 1 1**) is used to unlock the system. The password can be easily changed at any Touchpad location. The password can also be easily reverted back to the factory default at both the Touchpad or at relay panel address "0" (refer to page 15).

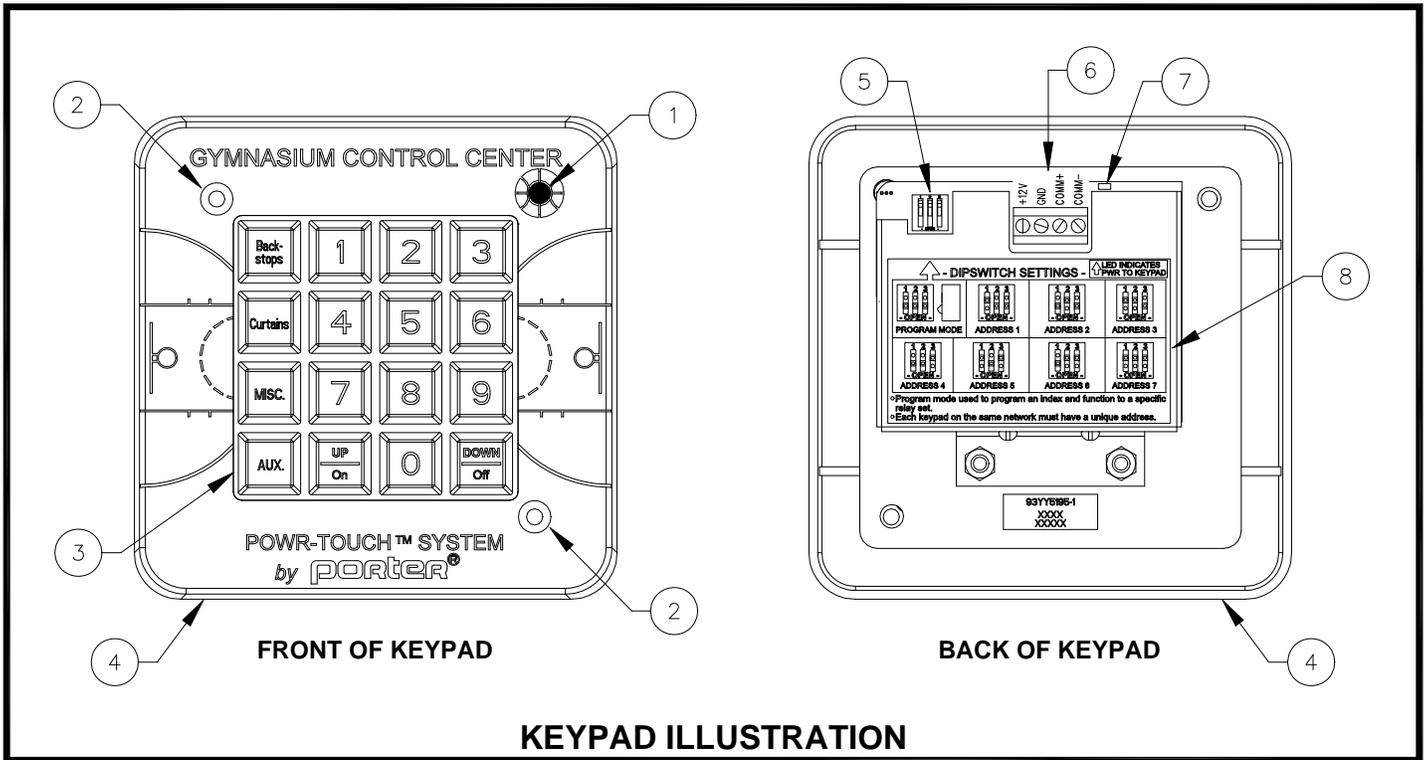
Changing the password is accomplished by following the steps below:

1. Enter the existing code (enter factory code of 1 1 1 1 if setting code for the first time). If performed correctly, the indicator LED will illuminate green.
2. Press both the **7 and 9** buttons simultaneously. The indicator LED will flash (amber color) approximately twice a second.
3. Enter the new four digit password code **twice** within **ten seconds** of step 2. If performed correctly, the TouchPad LED will illuminate **red** for approximately **one second**.

After the TouchPad LED light turns off. Enter the newly assigned password to confirm that it has been changed.

# No. 12555-100 TouchPad

The face of the No. 12555-100 TouchPad consists of a sixteen button TouchPad (3), an ABS plastic mounting bezel (4) and a tricolor indicator LED (1). The back of the TouchPad has a 3-position dip switch (5) used for address and program mode selection, a 4-position terminal strip (6) and a power indicator LED (7). The indicator LED (7) is mounted to the back of the TouchPad circuit board to indicate that the TouchPad is receiving 12 volt power. The 3-position dip switch (5) is used to assign a unique address to each No. 12555-100 TouchPad (addresses 1 thru 7), or to set the No. 12555-100 TouchPad to program mode (address "0"). A dip switch legend sticker (8) is affixed to the backside of the No. 12555-100 TouchPad for quick dip switch address reference. The No. 12555-100 TouchPad mounting bezel is designed to be flush mounted to a two gang (4" x 4" x 2-1/2" deep) electric junction box that is recessed into a wall. **The orientation of the electric junction box mounting tab ears is critical.** Refer to sheet E-2555 on page 3 for an illustration of the proper mounting tab ears orientation.



**KEYPAD ILLUSTRATION**

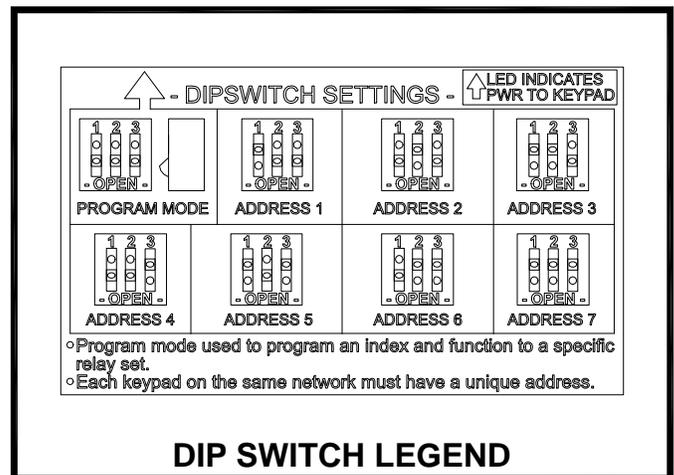
### Legend

- |                                |                              |
|--------------------------------|------------------------------|
| 1. Tri-Color LED Light         | 5. TouchPad Dip Switch       |
| 2. TouchPad Mounting Holes (2) | 6. TouchPad Terminal Strip   |
| 3. TouchPad Buttons            | 7. Power LED                 |
| 4. Bezel                       | 8. Dip Switch Address Legend |

## No. 12555-100 Multiple TouchPad Option

Multiple No. 12555-100 TouchPads can interface with one or more No. 12555-200 relay panels in a networked system to allow operation from various locations. Preferably, the No. 12555-100 TouchPad in closest proximity should be used to control the equipment. Thus, allowing the operator a full view of the equipment operation.

A maximum of seven No. 12555-100 TouchPads can control up to sixteen No. 12555-200 relay panels in a networked system. In a multiple No. 12555-100 TouchPad configuration, any No. 12555-100 TouchPad can control any of the devices that are part of the No. 12555-200 relay panel system. No. 12555-100 TouchPads can also be used simultaneously in a system. However, only relay panel banks (relay bank "A" or "B") with activity of one device or less can be addressed simultaneously by another No. 12555-100 TouchPad.



**DIP SWITCH LEGEND**

The No. 12555-200 relay panel assigns priority to the No. 12555-100 TouchPad that input is received from first. The second No. 12555-100 TouchPad is locked out (if two devices per relay bank are already active) while the No. 12555-100 TouchPad with priority is being used. Key input from the second No. 12555-100 TouchPad while it is locked out will not be recognized by that relay panel bank.

Refer to the notes below for multiple No. 12555-100 TouchPad features.

1. A maximum of seven No. 12555-100 TouchPads and sixteen No. 12555-200 relay panels can form a networked system to control up to 128 Porter® devices and 32 units of auxiliary equipment.
2. The networked system (No. 12555-100 TouchPads and No. 12555-200 relay panels) is unlocked by entering the correct password code from any No. 12555-100 TouchPad in the same networked system.
3. Any No. 12555-100 TouchPad can operate a backstop, height adjuster or curtain individually or in a multiple set (eight maximum, curtains: four maximum).
4. No. 12555-100 TouchPads can be operated simultaneously to control devices, provided that the devices to be operated are not connected to a relay bank (relay bank "A" or "B") that is already controlling two devices via a separate No. 12555-100 TouchPad. Input from a TouchPad to a relay bank (relay bank "A" or "B") that is actively controlling two devices will not be recognized by that relay panel bank.

### **No. 12555-100 TouchPad LED Reference**

The No. 12555-100 TouchPad's tricolor LED (1) (red, green and amber) is used for operator feedback when operating the TouchPad. After a user successfully enters in the four digit password code (factory default **1 1 1 1**), the LED (1) will illuminate green, indicating that the system is unlocked. Subsequent key presses, with the exception of the "up" and "down" buttons, will cause the LED (1) to illuminate amber, acknowledging the key input. The system will revert back to the locked state if no key activity is detected on any TouchPad in the system for a period of **thirty seconds**. The LED illuminates red, when a device is correctly selected and the "up" or "down" button is held pressed. The LED remains red for as long as the "up" or "down" button is held in the depressed position.

### **Entering or Changing the Four-Digit Password Code**

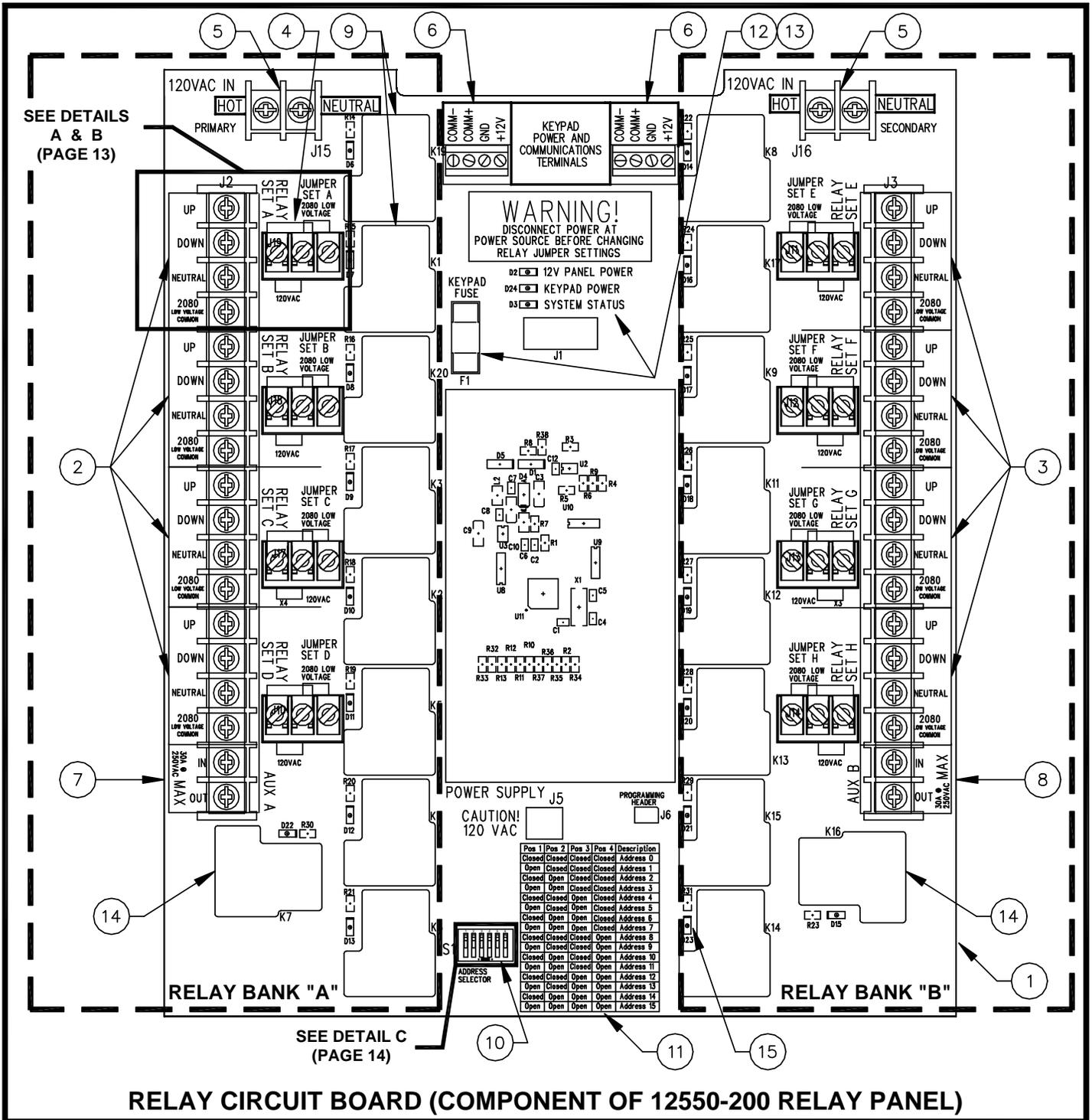
A factory default, four digit password (**1 1 1 1**) is used to unlock the system. Any No. 12555-100 TouchPad can be used to program a new unlock code. However, if the system is already unlocked, only the TouchPad which unlocked the system can change the code.

Changing the password is accomplished by following the steps below:

4. Enter the existing code (enter factory code of 1 1 1 1 if setting code for the first time). If performed correctly, the indicator LED will illuminate green.
5. Press both the **7 and 9** buttons simultaneously. The indicator LED will flash (amber color) approximately twice a second.
6. Enter the new four digit password code **twice** within **ten seconds** of step 2. If performed correctly, the TouchPad LED will illuminate **red** for approximately **one second**.

Refer to the "Resetting the Password Code to Factory Default" section on page 15 for resetting the password to the factory default password (**1 1 1 1**).

# No. 12555-200 Relay Panel



**RELAY CIRCUIT BOARD (COMPONENT OF 12550-200 RELAY PANEL)**

## Legend

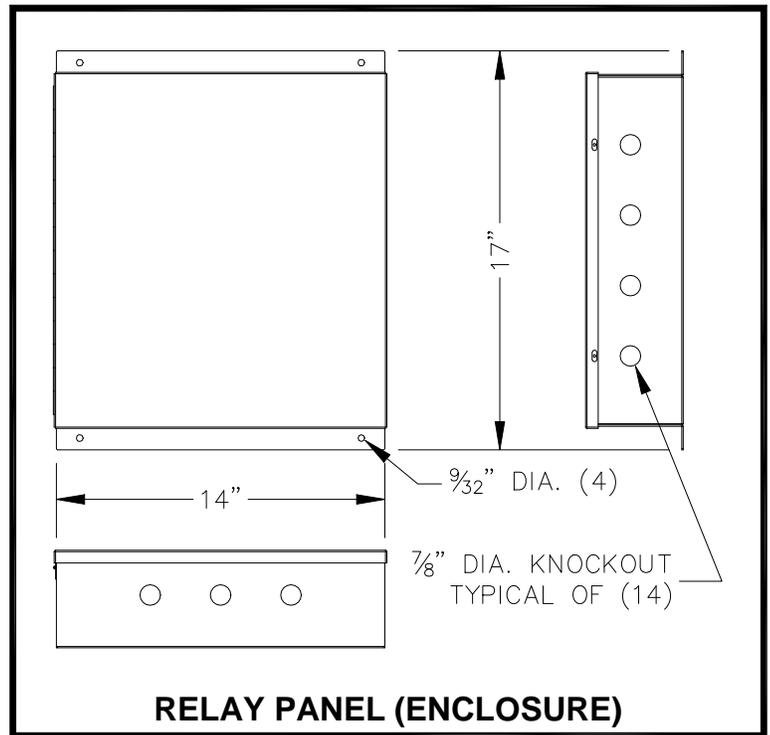
1. Relay Circuit Board
2. Relay Set Terminals (A thru D)
3. Relay Set Terminals (E thru H)
4. Relay Set Jumper (See Details A & B)
5. Line In Power 120v AC (Typical of 2)
6. TouchPad or Networking Terminals
7. Auxiliary Terminal "A"
8. Auxiliary Terminal "B"
9. Relay Set (Typ. of 8 Sets)
10. Dip Switch Module
11. Dip Switch Address Legend
12. System Status LED's
13. TouchPad Power Fuse
14. Auxiliary Relay (Typical of 2)
15. Relay LED (Typical of 18)

## No. 12555-200 Relay Panel Enclosure Specifications

- NEMA 1 enclosure, 16 Ga. steel
- Size, 4 3/8"D x 14"W x 17"H
- Fourteen (14) 7/8" dia. knockouts
- Hinged cover (face of panel)
- Externally accessible mounting holes (4)

## No. 12555-200 Relay Panel Overview

The Powr-Touch® 2.5 No. 12555-200 system utilizes a relay circuit board to operate up to eight Porter® devices and two auxiliary devices. In an expanded Powr-Touch® 2.5 system, a maximum of sixteen relay panels and seven TouchPads can be networked to control up to 128 Porter® devices and 32 units of auxiliary equipment.



The No. 12555-200 relay panel consists of two banks of relays (four relay sets per bank, up and down), two auxiliary relays (on or off), a six position dip switch, three indicator LED's at the top center of the panel, two 120VAC power input terminals, and two low voltage screw terminals for connection of the TouchPad(s) or networking additional relay panel(s). Each bank of relays ("A" and "B"), see illustration on page 11) is independently powered via a 120VAC terminal strip located at the top left and right hand section of the circuit board. The 120VAC terminals are identified as "primary" and "secondary". The primary 120VAC terminal provides power to bank "A" and to the relay board electronic logic, while the secondary 120VAC terminal only provides power to bank "B".

The No. 12555-200 relay panel will function properly with only the primary 120VAC terminal connected to the power source, but only bank "A" will receive 120VAC power. In certain circumstances, a single power line feed to the No. 12555-200 relay panel's primary 120VAC terminal is acceptable, but the panel's design potential will be limited. For example, bank "A" will receive and provide power to the devices connected to any of its four relay sets, but bank "B" will be limited to only controlling low voltage devices connected to any of its four relay sets. Thus, a single 120VAC powered No. 12555-200 relay panel has limited multiple set operation capabilities.

Each relay set (9) consists of two relays, one for the "up" and one for the "down" direction of travel. An indicator LED (15) is also positioned next to each relay for confirmation of actuation. When a relay is tripped, the indicator LED will illuminate, giving a visual reference of relay activity.

The dip switch (10) is used to assign a unique address to each No. 12555-200 relay panel in a system. Each No. 12555-200 relay panel in a system must have a unique address. In addition, each system must have one No. 12555-200 relay panel with an address setting of "0". The address "0" panel is the master panel which controls the lock status of the system. It is important to note that the unlock code is stored in the relay panel with address "0" (master panel) and not in any of the TouchPads, thus allowing multiple TouchPad logic. Dip switch location five is reserved for future use. Dip switch location six is used to erase the relay board memory assignments, and as with the No. 12555-100 TouchPad, resetting the password to factory default (1 1 1 1).

The three indicator LED's (12) near the top of the panel indicate 12 volt panel power, TouchPad power, and system status. The 12 volt panel power LED is illuminated when the system is receiving 120 VAC in and the 12 volt power supply is functioning properly. The TouchPad power LED is also illuminated when the panel is receiving power. This indicates that 12 volts is being supplied to the +12V screw terminal on the four position screw terminals. The third LED is labeled "System Status". This LED illuminates when the system is unlocked by a No. 12555-100 TouchPad. Refer to the relay circuit board illustration for the location of referenced circuit board components.

## No. 12555-200 Relay Panel Wiring and Voltage Output Jumper Settings (See Detail A or B)

A small three-screw terminal strip (4) is located adjacent to each of the eight relay sets (A thru H). The terminal strip (4), with use of a metal jumper, controls the matching relay set. The three-screw terminal strip is tagged with the same matching letter suffix (A thru

H) as the relay set it controls. The metal jumper that is installed in each terminal strip bridges two of the terminal screws in order for the relay set to function properly. The position of the terminal jumper is dependent on the required operation mode (See Details A & B). Each three-position terminal's silk screen markings identify the jumper function based on jumper position. **IMPORTANT: The control voltage (120 volt or low voltage) required for each device, and the relay set controlling each device must be determined before applying power to the relay panel.**

**Warning: Disconnect power at power source before changing relay jumper settings.** Refer to the information below for a description of the jumper functions.

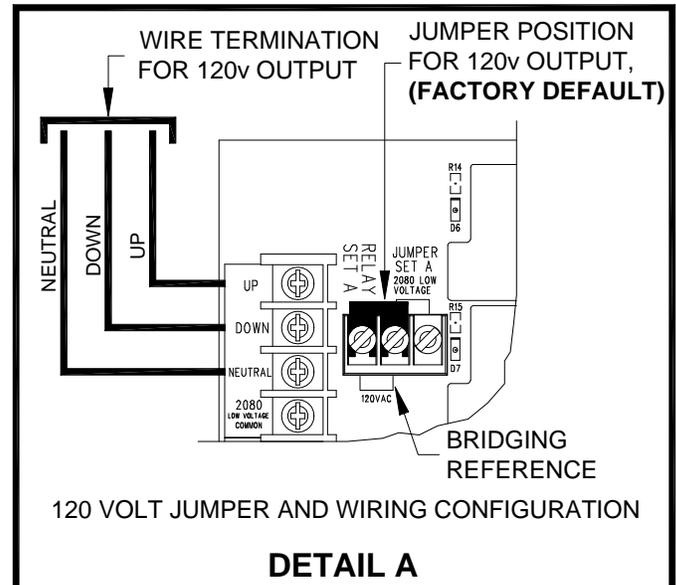
**Note:** All 12555-200 relay panels are shipped from the factory with the **jumper** installed in the "120VAC" position.

**1. The two-position jumper installed in the "120VAC" position. See Detail "A"**

At the main output terminals for the matching relay set, 120 volt power is provided at either the "up" or "down" screw terminal and the relay set's "neutral" screw terminal is utilized. The "2080 low voltage common" screw terminal for the relay set is **not** utilized.

**2. The two-position jumper installed in the "2080 low voltage" position. See Detail "B" NOTE: CONFIGURATION REQUIRED FOR ALL DUAL MOTOR 2080 CURTAINS.**

At the main output terminals for the matching relay set, no power is provided at either the "up" or "down" screw terminal and the "2080 low voltage common" screw terminal is utilized. The "neutral" screw terminal for the relay set is **not** utilized.



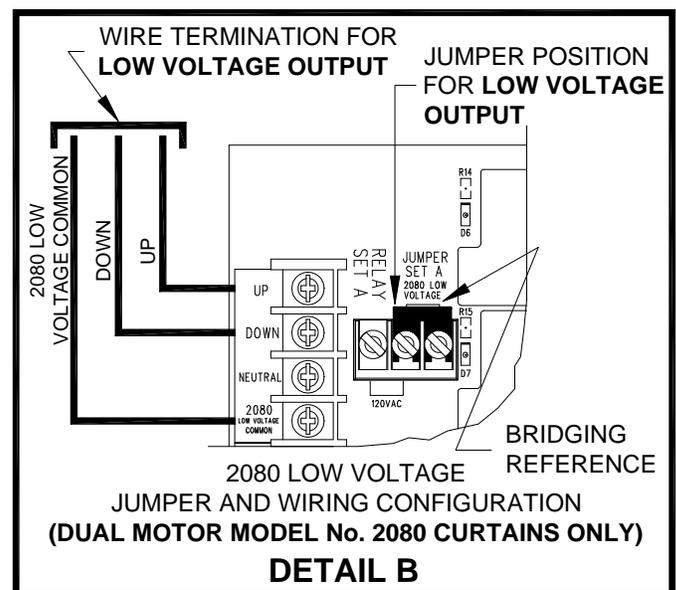
**Programming the No. 12555-200 Relay Panel**

Up to 128 unique relay sets can exist on a system of sixteen No. 12555-200 relay panels. When the No. 12555-200 relay panel dip switch (10) address is "0", relay sets A through H are relay sets 1 through 8. When the dip switch address is "1", relay sets A through H become 9 through 16 and so on ending at address 15 where sets A through H become sets 121 through 128. The two auxiliary relays located on each circuit board have a permanent index number assignment. The auxiliary index number assignment is based on the No. 12555-200 relay panel dip switch address. Auxiliary relays A and B are index numbers 1 and 2 on dip switch address "0", index numbers 3 and 4 on dip switch address "1", and index numbers 31 and 32 on dip switch address "15". Refer to the dip switch address matrix chart on page 14 for a complete list of index number assignments. Refer to the TouchPad section for TouchPad address assignment.

In order to operate devices connected to the system, the program relay sets must be programmed and linked to a device function button using an index number (1 thru 99). The No. 12555-100 TouchPad function buttons (Backstops, Curtains, and Misc) can have 99 index numbers linked to each button. Refer to the No. 12555-100 TouchPad illustration. To program the relay sets, the following steps must be performed.

1. Set No. 12555-100 TouchPad dip switch (5) to address "0" (refer to No. 12555-100 TouchPad dip switch location and address chart, page 9).
2. Enter a three digit relay set number: 001 through 128 (refer to the dip switch address matrix chart, page 14).
3. Press one of the three apparatus buttons: Backstop, Curtains, or Misc. (refer to No. 12555-100 TouchPad illustration, page 9).
4. Enter the desired two digit index number: 01 through 99.
5. Press the **down/off** button.

If the proper programming sequence has been performed, the TouchPad LED will illuminate **red** for half a second.



## No. 12555-200 Relay Panel Programming Example

### Example:

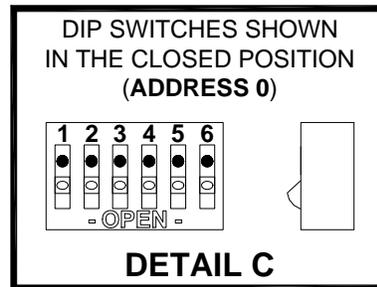
To program **Backstop 1** to relay set "**D**" with panel address "**0**" (see Detail "C" below), perform the following steps:

1. Set the No. 12555-100 TouchPad dip switch to address "0" (program mode, see TouchPad illustration, page 9).
2. Enter the corresponding relay set number: **"004"**
3. Enter the device type: **"Backstop"**
4. Enter the assigned device number: **"01"**
5. Press the TouchPad **down/off** button.

If the programming sequence has been performed properly, the TouchPad LED will illuminate **red** for half a second. After programming is complete, the TouchPad dip switch (page 9) must be set to a valid address (1 thru 7). For additional individual or multiple operation programming examples, refer to the "Guide" section of the manual, pages 6 and 7.

### No. 12555-200 Relay Panel Dip Switch Address Matrix

**Electrician Note:** Multiple relay panel systems require changing the factory default dip switch address setting (other than "Master Panel Address "0"). Refer to the matrix chart below for dip switch positions.



Relay Panel Address No.	Relay Set No.	Aux. Set No.	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6
<b>Address 0 *</b>	001 thru 008	1 & 2	Closed	Closed	Closed	Closed	N/A	Closed
<b>Address 1</b>	009 thru 016	3 & 4	Open	Closed	Closed	Closed	N/A	Closed
<b>Address 2</b>	017 thru 024	5 & 6	Closed	Open	Closed	Closed	N/A	Closed
<b>Address 3</b>	025 thru 032	7 & 8	Open	Open	Closed	Closed	N/A	Closed
<b>Address 4</b>	033 thru 040	9 & 10	Closed	Closed	Open	Closed	N/A	Closed
<b>Address 5</b>	041 thru 048	11 & 12	Open	Closed	Open	Closed	N/A	Closed
<b>Address 6</b>	049 thru 056	13 & 14	Closed	Open	Open	Closed	N/A	Closed
<b>Address 7</b>	057 thru 064	15 & 16	Open	Open	Open	Closed	N/A	Closed
<b>Address 8</b>	065 thru 072	17 & 18	Closed	Closed	Closed	Open	N/A	Closed
<b>Address 9</b>	073 thru 080	19 & 20	Open	Closed	Closed	Open	N/A	Closed
<b>Address 10</b>	081 thru 088	21 & 22	Closed	Open	Closed	Open	N/A	Closed
<b>Address 11</b>	089 thru 096	23 & 24	Open	Open	Closed	Open	N/A	Closed
<b>Address 12</b>	097 thru 104	25 & 26	Closed	Closed	Open	Open	N/A	Closed
<b>Address 13</b>	105 thru 112	27 & 28	Open	Closed	Open	Open	N/A	Closed
<b>Address 14</b>	113 thru 120	29 & 30	Closed	Open	Open	Open	N/A	Closed
<b>Address 15</b>	121 thru 128	31 & 32	Open	Open	Open	Open	N/A	Closed

\* Address 0 is used to assign a relay panel as master. One master panel must be present in a system.

# Operation

Once the relay sets have been assigned to a device, the device can be operated. This is accomplished by performing the following steps:

1. Unlock the system by entering in the default four digit password code. (**1 1 1 1**). The TouchPad LED will illuminate green.
2. Press one of the function buttons: **Backstop**, **Curtains**, **Misc.** or **Aux**.
3. Enter the index number (single digit numbers do not require a leading zero).
4. Press the desired direction button. If the device and index numbers were entered correctly, the device will move in the direction selected for as long the button is held pressed, or until the device limit switch is tripped. The indicator LED will change from green to red for as long as the direction button is pressed. Note: For Auxiliary devices, the **"on"** button closes the relay contacts (power on) and the **"off"** opens the relay contacts (power off).

If the system has been unlocked by another TouchPad, the user can start at step 2. At any time the system is unlocked, the user can start from step 2 to operate another device. It is important to note that only two relay sets per bank (bank "A" or "B") can be active simultaneously. If a second TouchPad tries to operate a third relay set belonging to a bank with two relay sets already active, the input from the second TouchPad will be ignored. The system will allow multiple TouchPads to operate multiple relay sets simultaneously, provided that the TouchPad does not address relay sets located in a relay bank (bank "A" or "B") already controlling two devices.

If a motor is turned on and the direction button is released and the opposite direction button pressed immediately, the system will pause approximately **three seconds** before turning on the motor in the opposite direction. This prevents damage to the motor. If a direction button is released and the same button is pressed again, the system will turn the motor on after a **one second** delay. The one second delay eliminates relay chatter and possible damage to the relay contacts.

## Changing the Four Digit Password Code

Refer to the "Guide section" or the No. 12555-100 TouchPad section, pages 8 or 10.

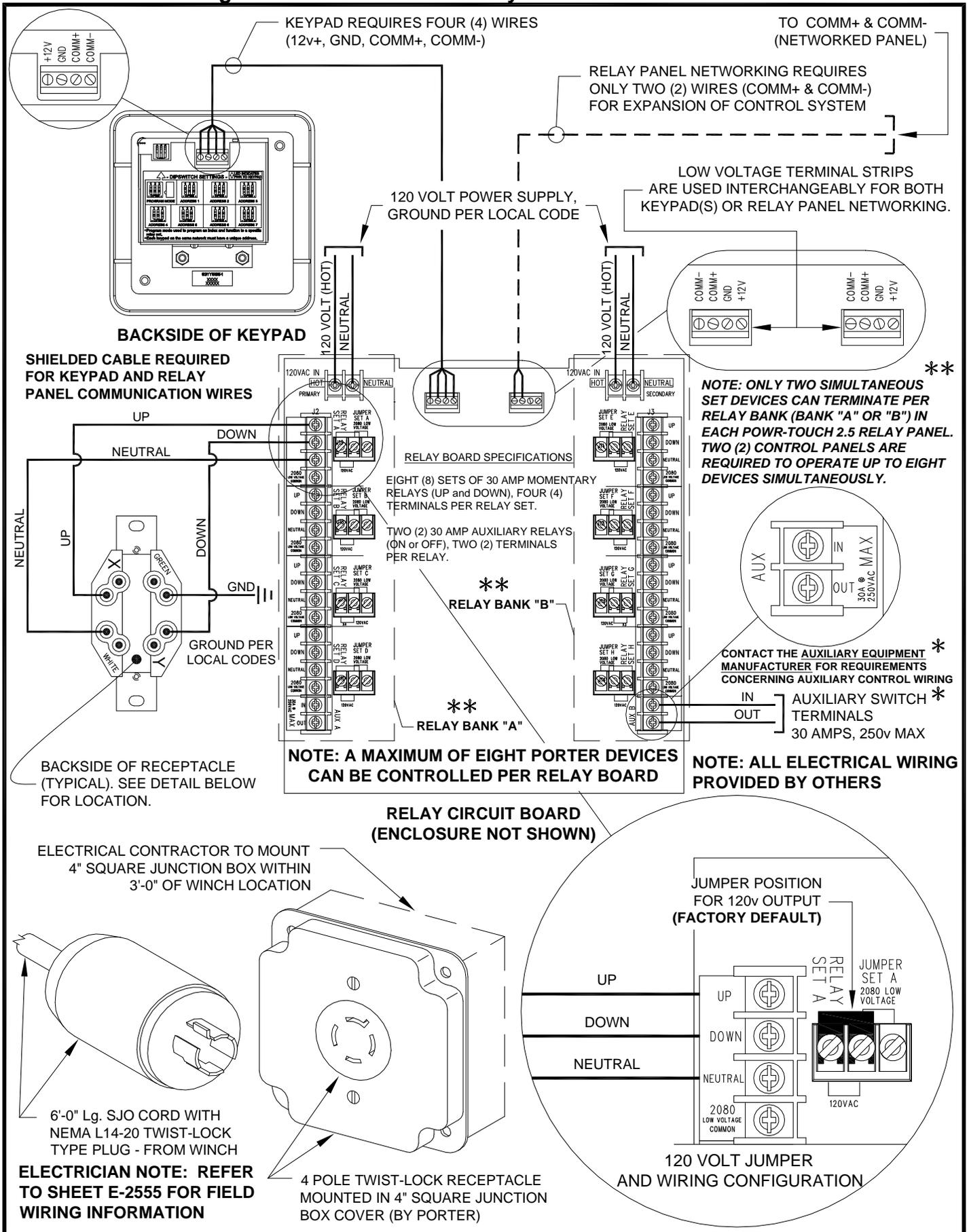
## Resetting the Password Code to Factory Default

In the event the password code is lost, it can be reset to the factory (**1 1 1 1**) by either of the following two methods listed below:

1. At the Master Panel (panel with address **"zero"**): Set dip switch **six** to the open position for one second, then set back to the closed position. **Note: This method will also erase the relay board memory address assignments.**
2. At a TouchPad: Set all the dip switches on the back of the TouchPad to the closed position (program mode/address "0"), then simultaneously press the **7 and 9** TouchPad buttons. If performed correctly, the LED on the front of the TouchPad will illuminate **red** for half a second. Set the TouchPad back to its previous address.

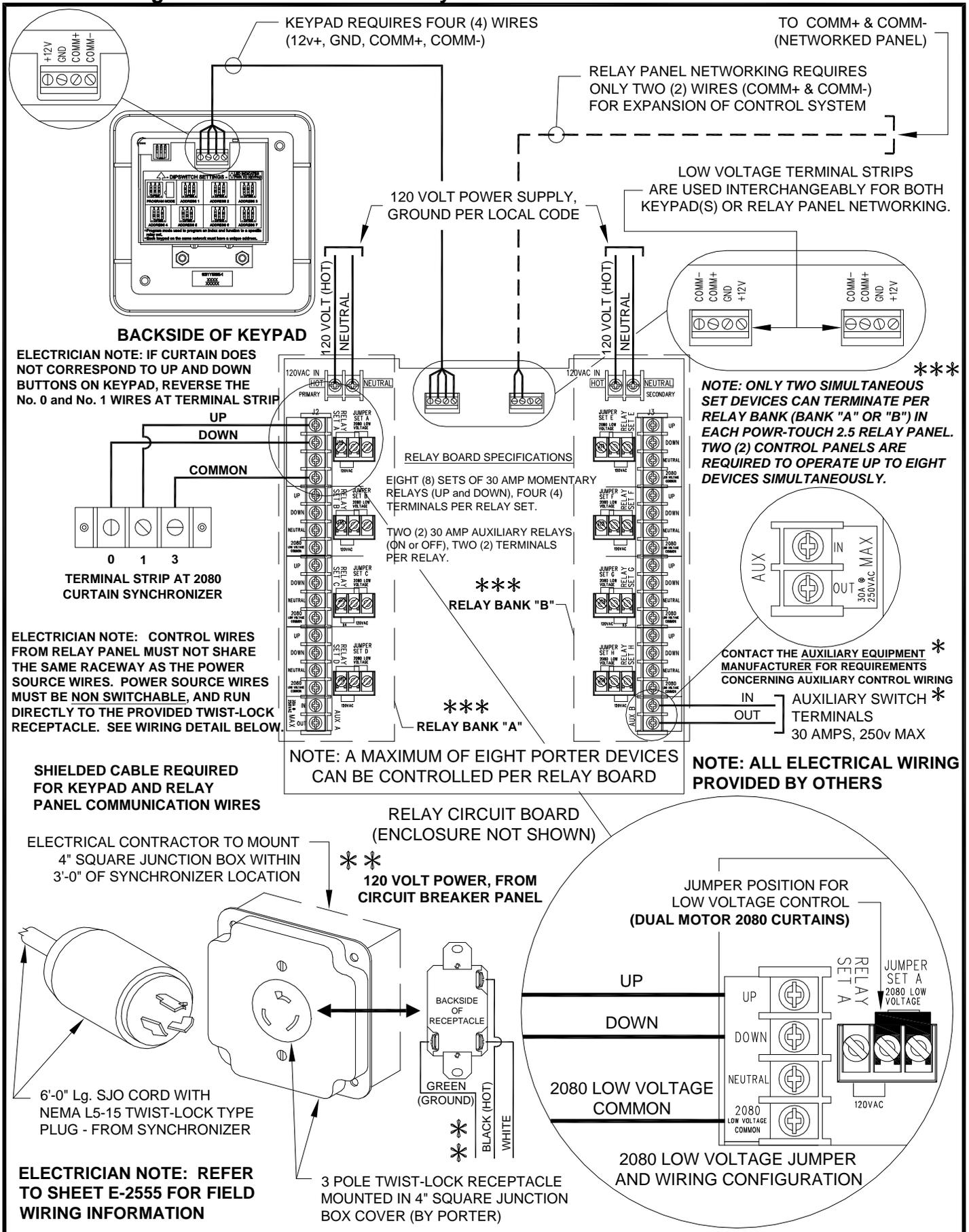
# 120 Volt Wiring Diagram

**Note: Wiring connection shown for relay set that controls a 120 volt device**



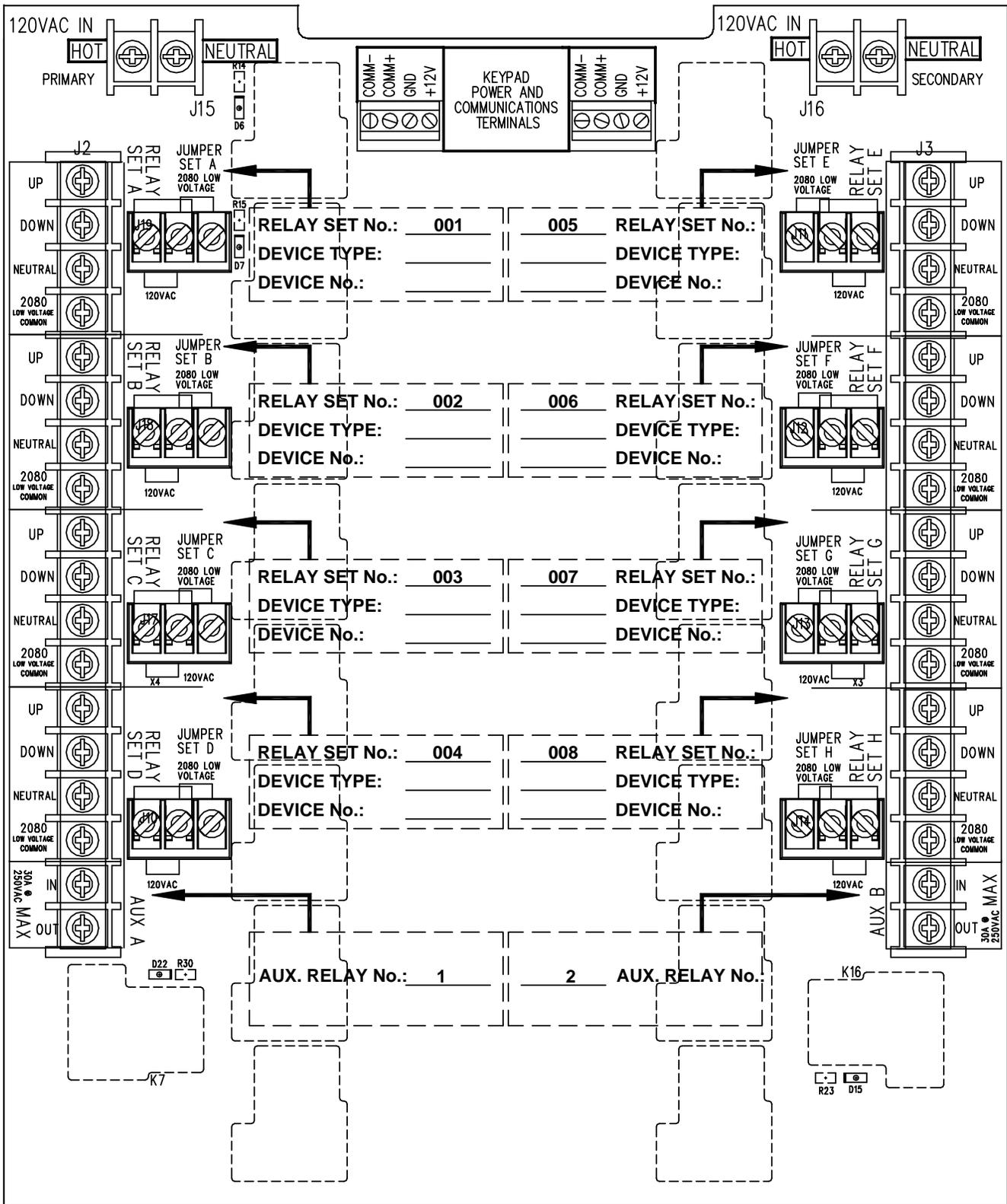
# Dual Motor Model No. 2080 Curtain Low Voltage Wiring Diagram

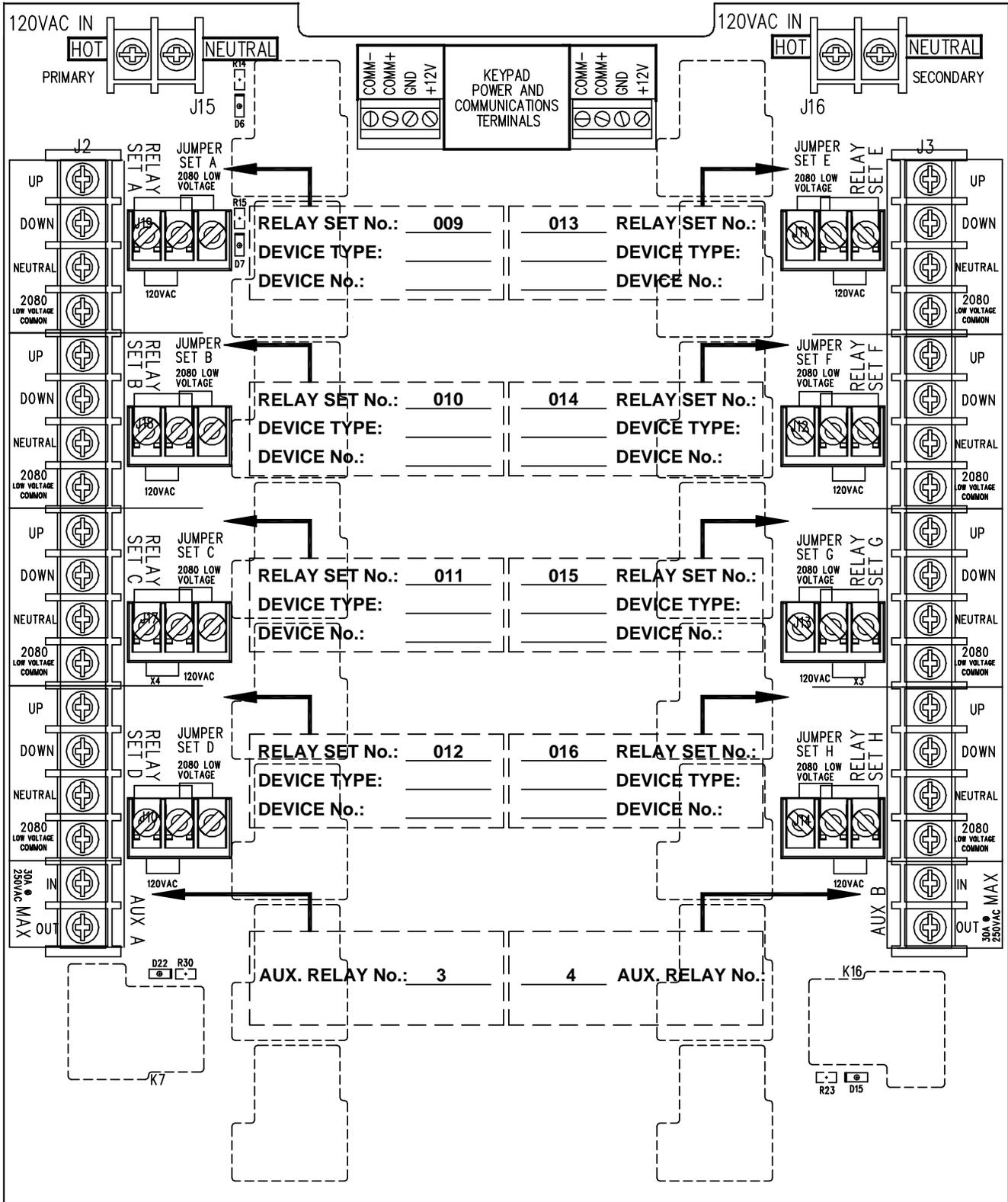
**Note: Wiring connection shown for relay set that controls a No. 2080 Dual Motor Curtain**



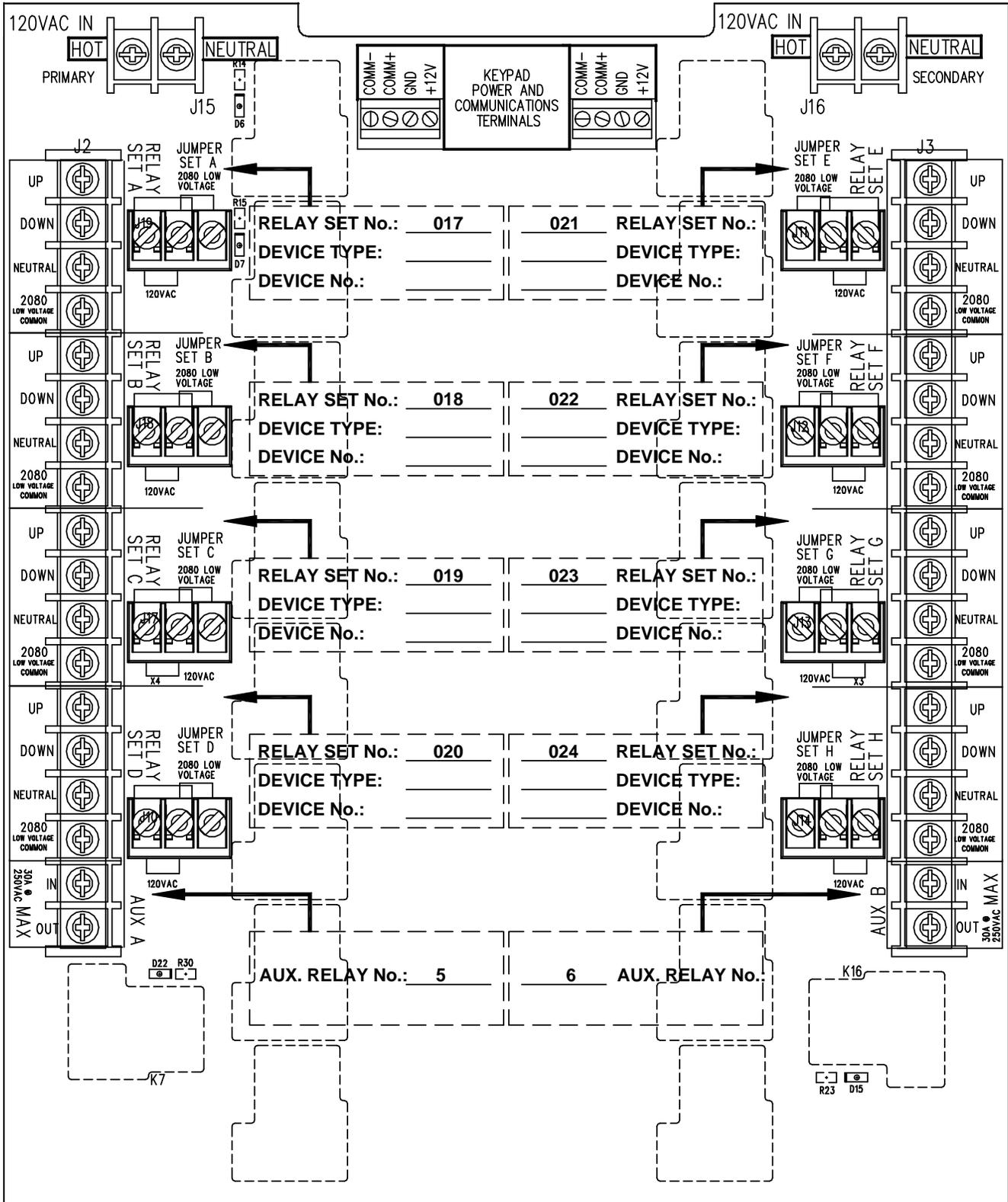


# Relay Set Terminal Assignment Worksheets

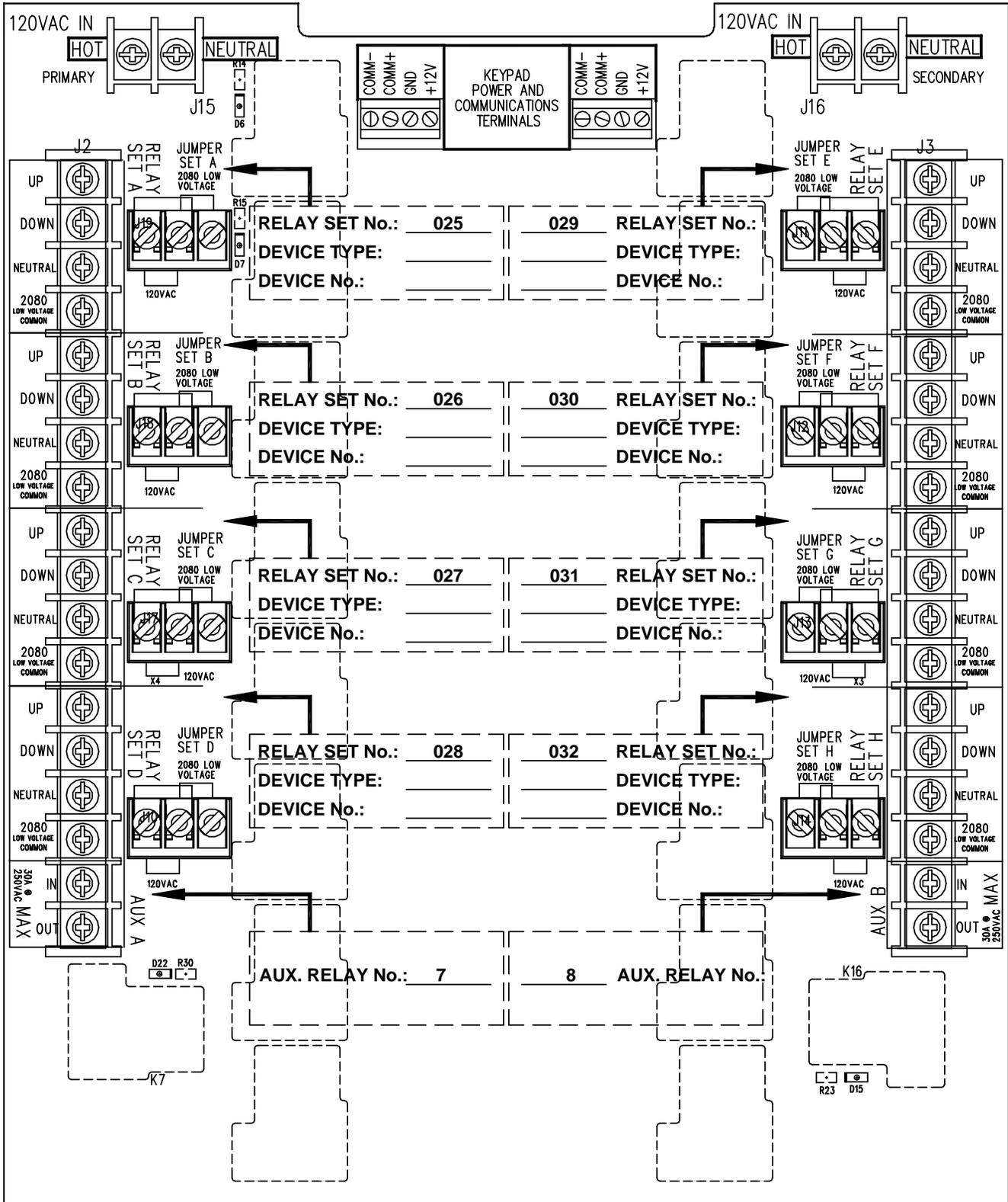




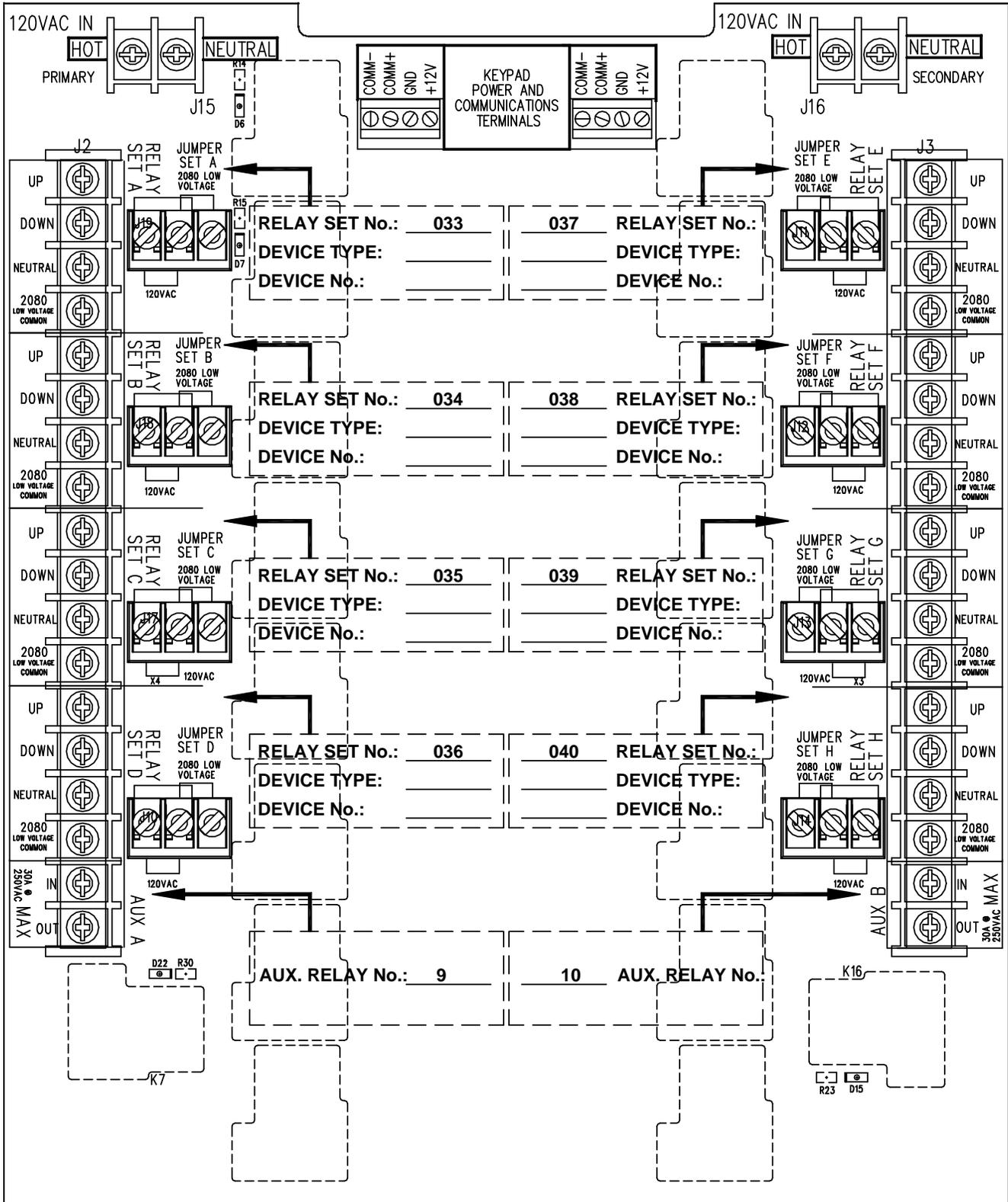
**- TERMINAL ASSIGNMENTS -  
RELAY PANEL ADDRESS = 1**



- TERMINAL ASSIGNMENTS -  
RELAY PANEL ADDRESS = 2



- TERMINAL ASSIGNMENTS -  
RELAY PANEL ADDRESS = 3



- TERMINAL ASSIGNMENTS -  
RELAY PANEL ADDRESS = 4



## CAUTION

**KEEP THIS MANUAL IN A SECURE,  
LOCKED LOCATION. IMPORTANT  
INFORMATION ABOUT SYSTEM  
SECURITY IS CONTAINED WITHIN.**

**porter**

**Porter Athletic Equipment Company**

2500 South 25<sup>th</sup> Avenue, Broadview, IL U.S.A., 60155

Toll Free: (800) 947-6783 • Phone: (708) 338-2000 • Fax: (708) 338-2060

[www.porter-ath.com](http://www.porter-ath.com)

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