

LCN®



740100-00

Middle Swing Control Box

2900 Series, 9700 Series

Senior Swing Control Box

2800 Series, 9500 Series

Mid/Sr Swing
Control Box
REVIEW COPY
Version B

Installation Instructions

LCN®

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IMPORTANT

These instructions are presented in step-by-step sequence. It is very important that installation begins with "1. Pre-Installation Site and Product Check" (page 3) and continues as directed after each section.



WARNINGS

- Always disconnect main power to the operator prior to replacing.
- Control box contains no serviceable parts inside.

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GENERAL INFORMATION

The Middle and Senior Swing Control Boxes are for use with the Middle and Senior Swing Power Operator Systems, respectively. The systems can operate a single door (2810, 9530, 9540, 2910, 9730, and 9740 Series), a simultaneous pair of doors (2850, 9550, 2950, and 9750 Series), or an independent pair of doors (2860, 9560, 2960, and 9760 Series).

ANSI/BHMA A156.19 Compliance

The Middle and Senior Swing Power Operator Systems are low energy products and **must** conform to the latest version of ANSI/BHMA A156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors).

Installation Instructions

All installation instructions are valuable references and should be given to the building owner or maintenance supervisor after installation is complete.

The Middle and Senior Swing Control Box installation instructions and the manufacturer's instruction manual accompanying any sensor must be referenced to ensure proper installation, setup, and operation.

ELECTRICAL SPECIFICATIONS

| | |
|---------------------------------|---|
| AC input voltage | 120 VAC |
| AC fuse | 120 VAC, 2.5 A time-delay fuse |
| Motor protection | Solid state failure detection and shutdown |
| Activate inputs | dry NO contacts (close contacts to open door) |
| Safety inputs | dry NO contacts (closed contacts indicate an obstruction) |
| Breakaway input | dry NC contacts (open contacts indicate breakaway) |
| 3-position switch input | dry 3-position switch |
| Power Boost disable input | dry NO contacts (close contacts to disable Power Boost) |
| Lock output | Form C dry relay contacts rated 8 A, 30 VDC maximum |
| Accessory power output | 24 VAC, 1.5 A (protected by resettable thermal fuse) |
| Logic power output | 5 V, 50 mA (protected by resettable thermal fuse) |

1. PRE-INSTALLATION SITE AND PRODUCT CHECK

| ⚠ IMPORTANT | | |
|---|----------------|-------------------------|
| Factory Authorized Door Leaf Size and Weight | | |
| Type | Width per Leaf | Maximum Weight per Leaf |
| Single Door | 36" to 48" | 200 lb. |
| Simultaneous Pair | 30" to 48" | 200 lb. |

- 1.1. All required installation steps listed before "8. Control Box Installation" in the Astro/Middle/Senior Swing installation instructions (part No. 740132-00) should be completed before installing the Middle/Senior Swing control box.
- 1.2. Check that the control box model (indicated on control box label; Figure 1-1) is correct for the application.
- 1.3. Check that the available AC voltage matches the control box voltage requirement (120 VAC).
- 1.4. Check that all accessories required for the application are on hand.

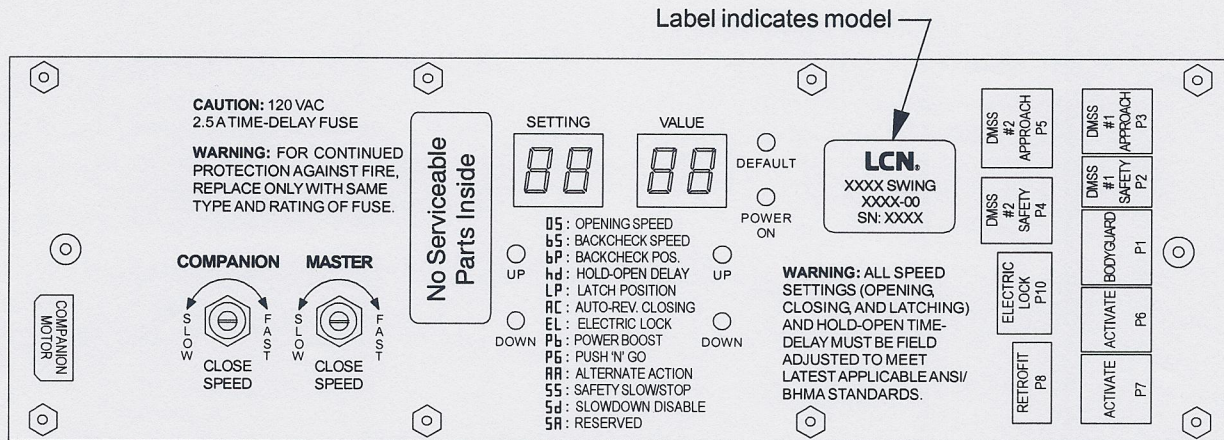


Figure 1-1

2. INSTALLATION

To install the Middle or Senior Swing Control Box, follow the Astro/Middle/Senior Swing installation instructions (part No. 740132-00) beginning with "8. Control Box Installation" on page 12 of those instructions.



CAUTION

Improper installation or set up may result in personal injury or property damage. Follow instructions carefully. For answers to questions, call LCN at: 1-800-526-2400

3. WIRING

- Review the separate wiring diagrams in the accessory instructions so that all wiring can be completed.
- See Figure 3-1 for system configuration terminology.
- See Figure 3-2, Figure 3-3, and Figure 3-4 for names and locations of control box connectors.
- See Figure 3-5 for control box plug and jack descriptions, wiring, and mating cables.
- See Figure 3-6 for electric strike locking device sample wiring.
- See Figure 3-7 for EL (electric latch retraction) locking device sample wiring.



CAUTION

When joining or separating a plug and receptacle, do not push or pull on wires. This may cause a wire to be pulled loose from a terminal, which may result in a malfunction.

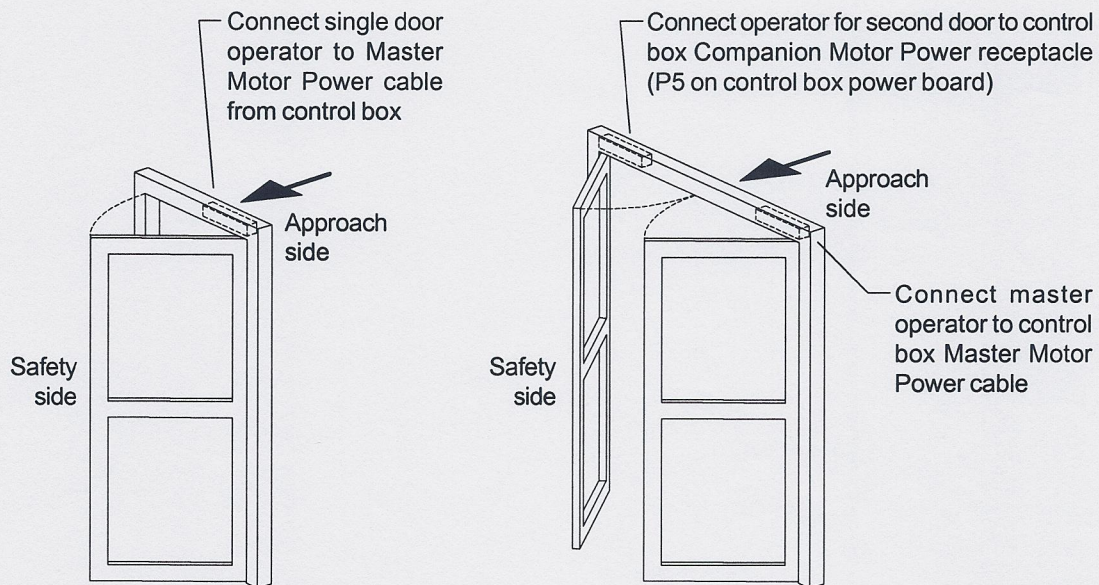


Figure 3-1

3. WIRING (continued)

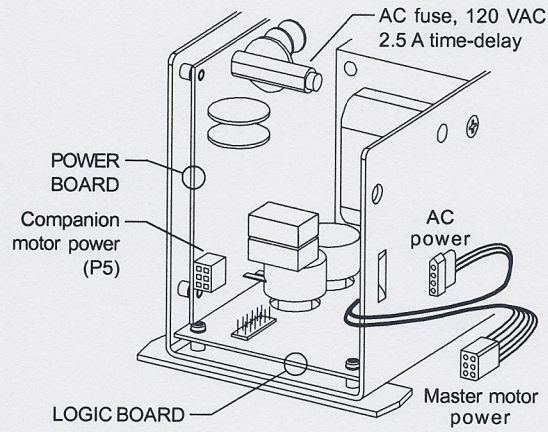


Figure 3-2. Control box power board connectors.

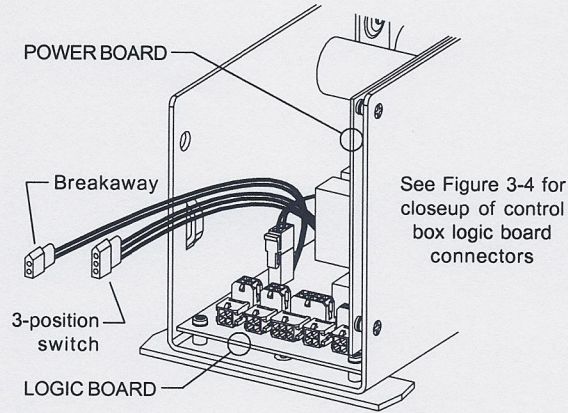


Figure 3-3. Control box logic board connectors.

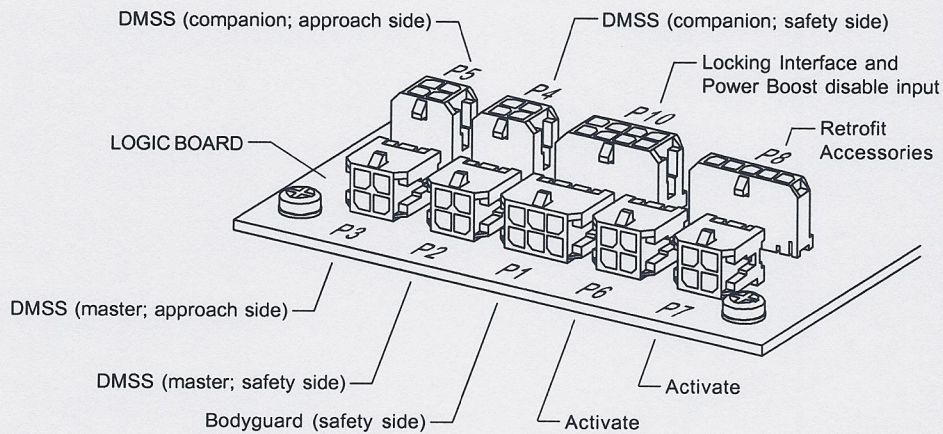


Figure 3-4. Closeup of control box logic board connectors.

3. WIRING (continued)

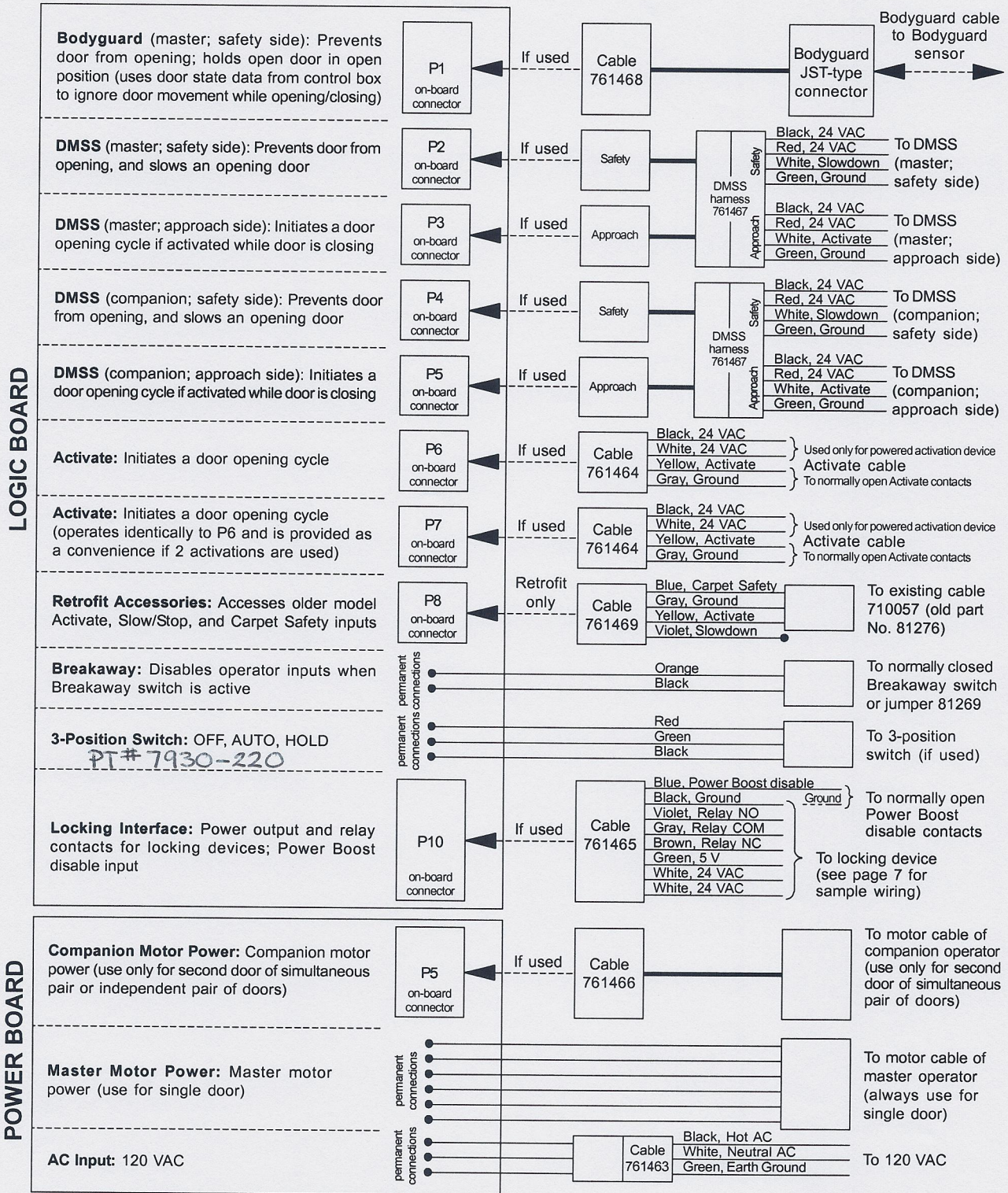
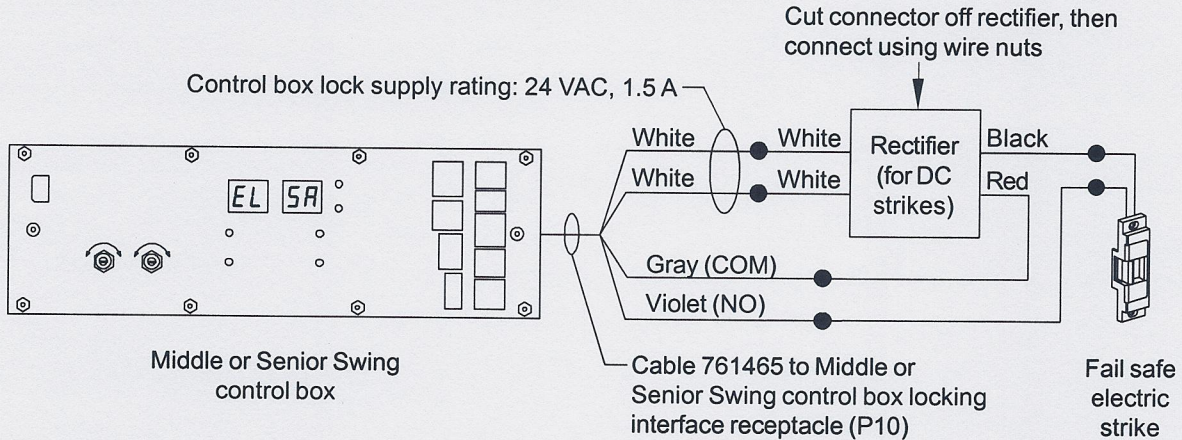


Figure 3-5

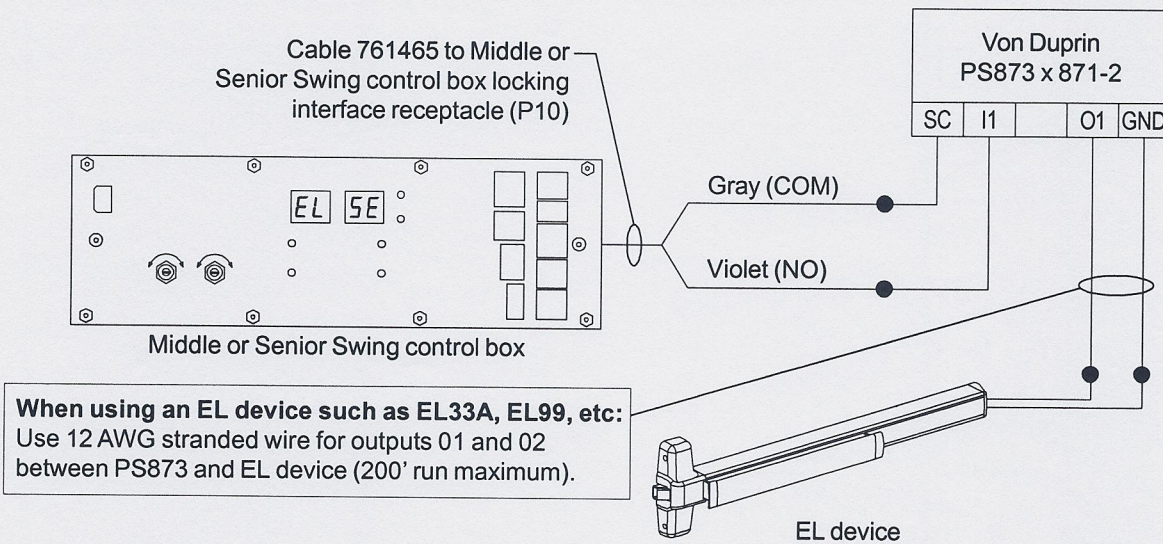
3. WIRING (continued)

NOTE
 Always wire the locking device to the NO (normally open) contact of the control box locking interface and use the keypad to set the EL (electric lock) setting to either SA (fail safe) or SE (fail secure).



The keypad EL (electric lock) setting is SA (fail safe). When the operator is on, the strike is locked when the door is closed and unlocked when the door is opening. When the 3-position switch is set to OFF, the strike is unlocked.

Figure 3-6. Sample Wiring for a Fail Safe Electric Strike Locking Device



The keypad EL (electric lock) setting is SE (fail secure). The control box locking relay signals the PS873 x 871-2. When the operator is on, the EL device is locked when the door is closed and unlocked when the door is opening. When the 3-position switch is set to OFF, the EL device is locked.

Figure 3-7. Sample Wiring for a Fail Secure EL (Electric Latch Retraction) Locking Device

4. KEYPAD SETTINGS

Settings (except for close speed) for the Middle and Senior Swing Power Operator System are changed using keypad pushbuttons and an alphanumeric display on the Astro Swing control box (Figure 4-1 and Figure 4-2). Close speed is changed using dials on the control box (Figure 4-1).

See page 9 and page 10 for directions for changing the values of settings.

CAUTION

Adjust the operator for the slowest operation practical in accordance with the latest revisions of Americans with Disabilities Act, ANSI/BHMA A156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors), and local codes.

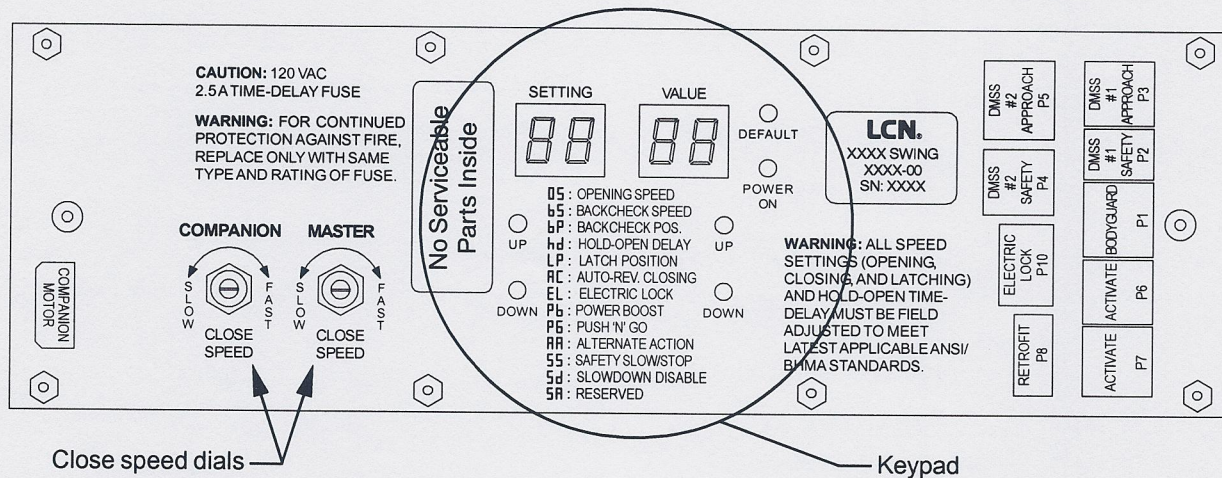


Figure 4-1. Control Box Panel with Keypad

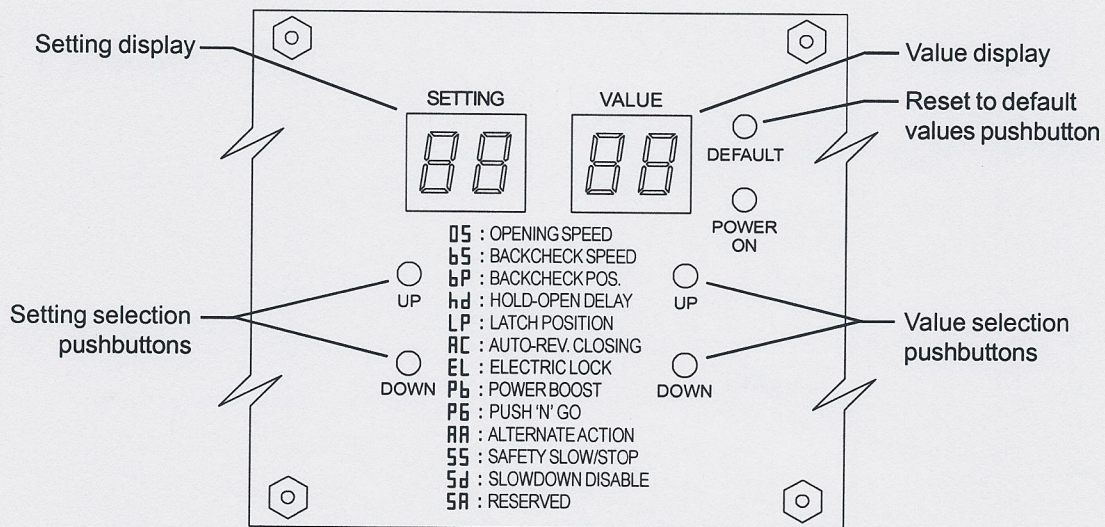


Figure 4-2. Closeup of Control Box Keypad