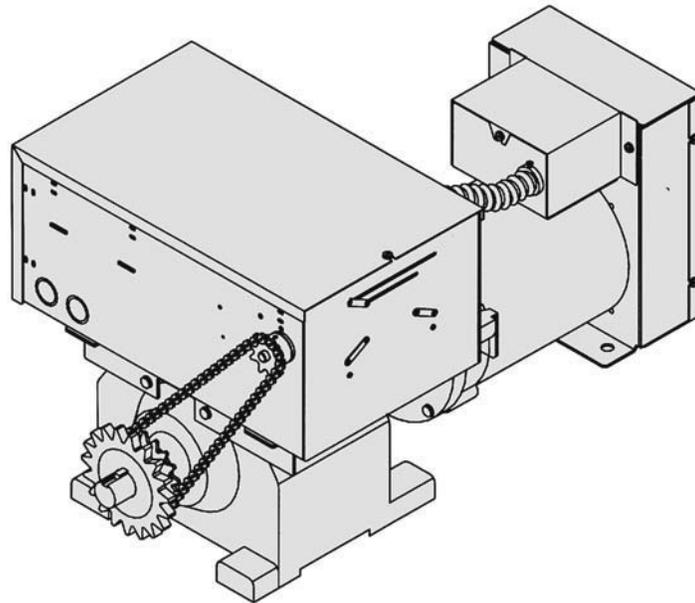


COOKSON OWNER'S MANUAL FDO AU & BU

**ADVANCED LOGIC
COMMERCIAL/INDUSTRIAL DUTY
DOOR OPERATOR**



**THIS PRODUCT IS TO BE INSTALLED AND SERVICED
BY A TRAINED DOOR SYSTEMS TECHNICIAN ONLY.**

2 YEAR WARRANTY

Serial # Box _____

Installation Date _____

NOT FOR RESIDENTIAL USE



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SAFETY INFORMATION

⚠ WARNING

Mechanical

⚡ WARNING

Electrical

CAUTION

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of **serious injury** or **death** if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock. Read the warnings carefully.

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your door and/or the door operator if you do not comply with the cautionary statements that accompany it. Read them carefully.

IMPORTANT NOTES:

- *BEFORE attempting to install, operate or maintain the operator, you must read and fully understand this manual and follow all safety instructions.*
- *DO NOT attempt repair or service of your commercial door and operator unless you are an Authorized Service Technician.*

SPECIFICATIONS

OPERATOR SPECIFICATIONS

CONTINUOUS POWER RATING

1/2 HP: 175 ft-lbs/sec
1 HP: 275 ft- lbs/sec

OUTPUT TORQUE

1/2 HP:560 in-lbs.
1 HP:.....900 in-lbs.

MOTOR

TYPE: Continuous duty
HORSEPOWER: 1/2 HP and 1 HP
SPEED:1725 RPM
VOLTAGE:.....115/230 1 Phase
230/460 3 Phase

CURRENT (Amperage):

Model FDO5011AU / BU	Voltage-Phase 115-1Ø, 60Hz	1/2 HP 11.2
Model FDO5021AU / BU	Voltage-Phase 230-1Ø, 60Hz	1/2 HP 5.6
Model FDO1023AU / BU	Voltage-Phase 230-3Ø, 60Hz	1 HP 6
Model FDO1043AU / BU	Voltage-Phase 460-3Ø, 60Hz	1HP 3

ELECTRICAL

TRANSFORMER:24 Vac, 75 VA
CONTROL STATION: 3-Button Station
OPEN/CLOSE/STOP
WIRING TYPE: C2 (Standard)/B2
(Optional with LiftMaster Monitored Entrapment
Protection (LMEP) installed)
LIMIT ADJUST:.....Linear driven, fully adjustable
screw type cams. 70 revolutions
maximum at limit shaft
FUSE: 250V, 3AG, 2 AMP Slow-Blow

MECHANICAL

DRIVE REDUCTION 1/2 HP:50:1 Reduction In Line Gear
Reduced Motor
DRIVE REDUCTION 1 HP:.....56:1 Reduction In Line Gear
Reducer
MAX. BACK DRIVING FORCE..... 140 in-lbs.
OUTPUT SHAFT SPEED:..... 1/2 HP (30 RPM) & 1 HP
(35 RPM)
DOOR SPEED 1/2 & 1 HP:12" per second depending on door
BRAKE:..... Solenoid actuated disc brake

SPECIFICATIONS

DOOR TYPE AND MAXIMUM DOOR AREA (SQ FT.)

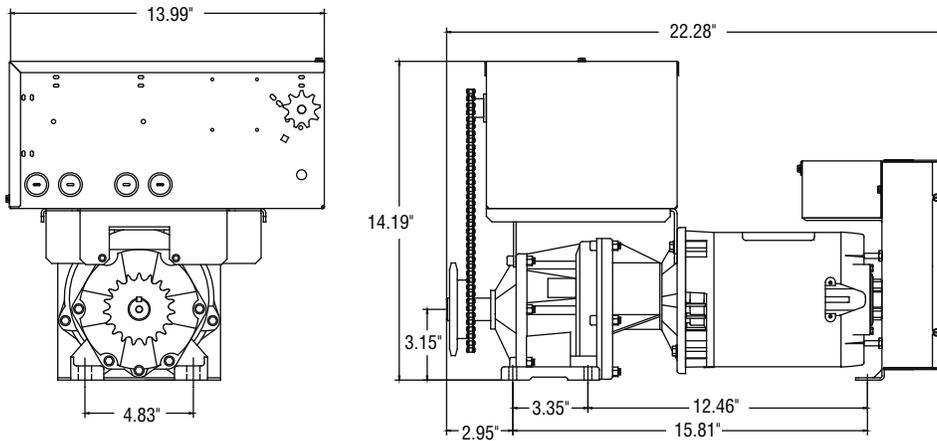
For use on overhead rolling doors.

1/2 HP not to exceed 355 sq ft.

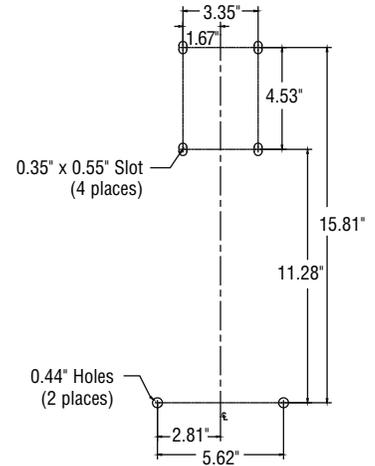
1 HP not to exceed 576 sq ft.

NOTE: Door size may vary due to door manufacturer's qualification testing. Do not exceed door manufacturer's maximum qualified door size for this operator.

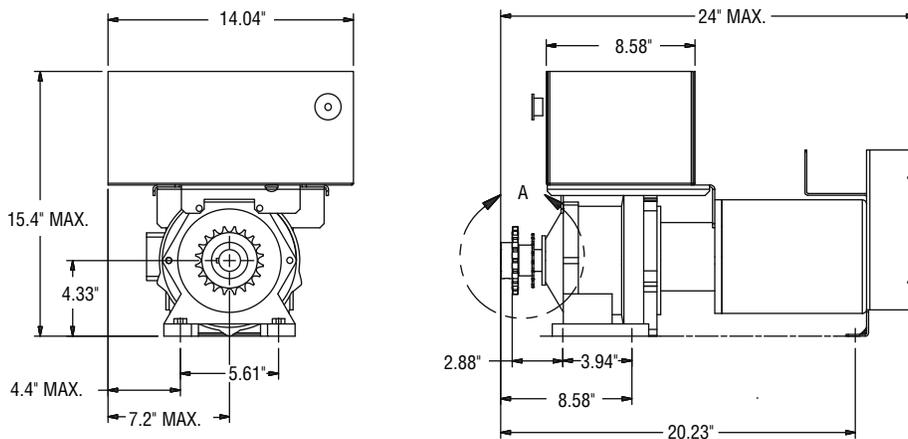
DIMENSIONS 1/2 HP



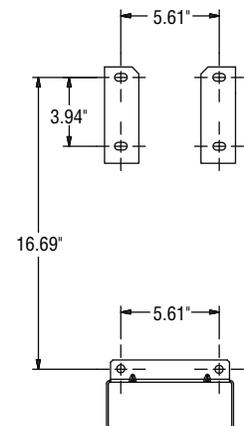
MOUNTING DIMENSIONS



DIMENSIONS 1 HP



MOUNTING DIMENSIONS



THEORY OF OPERATION

GENERAL DESCRIPTION:

The Door Operator, FDO-A or FDO-B, is intended for use within an integrated fire door control system. It is designed to interface with a normally close (NC) or normally open (NO) dry contact alarm system to control the operation of a fire door. The control station is the standard B2/C2 wiring. There are two (2) models for the FDO:

- **A model:** A (AC only) model has no battery backup nor electronic speed control for door's descent. The brake is disengaged when there is no AC power.
- **B model:** B (Battery backup) model provides battery backup operations and electronic speed control for door's descent when there is no AC power. The brake is engaged when there is no power.

NOTE: This operator is not a fire alarm system. It can not detect a fire condition.

NOTE: This operator supports three (3) types of entrapment protection:

- 1) CPS-EI, a LiftMaster Monitored Entrapment Protection (LMEP) 4 wire edge interface.
- 2) CPS-U or CPS-UN4 LMEP photoelectric sensors.
- 3) Operation under constant pressure to close mode with no LMEP installed.

Optionally a non-monitored 2-wire edge may be used in combination with the CPS-U, CPS-UN4 or constant pressure to close modes to provide additional entrapment protection. The following descriptions of operation are with a reversing device installed.

1. FDO-A MODEL:

IMPORTANT: Door Descent Speed Control is required for FDO-A model.

1.1 UNIT HAS AC POWER & NO ALARM CONDITION:

- The B2/C2 control station is used to operate the door electrically.
- Activation of the simple, non-monitored 2-wire safety edge or LMEP safety device while door is closing will cause it to reverse to full open limit.
- Activation of safety edge while door is opening will cause it to stop. LMEP will have no effect.
- Activating the optional key-test switch for at least 6 seconds will put the operator in active alarm mode.

NOTE: The key test mode will expire in 1 minute.

1.2 UNIT HAS AC POWER & ACTIVE ALARM CONDITION:

- The warning system (optional in FDO-A) will activate. The door will automatically close after the preset time delay. The time delay is set by means of dip switches 1 and 2, (see page 16).
- The door will reverse to full open limit if an obstruction is encountered while closing. The door will automatically close again after the preset time delay. If the obstruction is not cleared, upon the 3rd attempt to close, the door will stop on the obstruction and activate the warning system (optional) then release the brake after 10 seconds. Subsequent obstruction will cause the door to stop for two (2) seconds then release the brake.

1.3 UNIT HAS NO AC POWER:

- The unit is not functional and the brake is released.

2. FDO-B MODEL:

2.1 BATTERY MANAGEMENT SYSTEM:

- The battery is charged, tested and monitored automatically by the logic based system.

Battery Test

The FDO-B provides internal battery testing to ensure the battery capacity is sufficient and that it has not been disconnected and the system can perform it's intended functionality in the event of a loss of AC power. The battery is checked for presence once an hour for 10 seconds. If this test fails, the battery has failed or is significantly depleted. A major fault (see "a" and "b" examples) is declared and must be immediately rectified. The battery is also load tested for five minutes. The five minute load test is performed once per week to ensure that the power remaining in the batteries is sufficient to handle an emergency condition. The test will occur within 12 hours of a power outage or an aborted test due to user input.

The severity of the battery test failures are defined as a minor fault and a major fault and are described as follows:

- a. Minor Fault.** This fault mode occurs when the system determines that the batteries fail to maintain the minimum voltage between 10 seconds and 5 minutes of load testing. The alarm within operator will begin notification immediately at 3 seconds per minute. The batteries will be retested every week. The controller will attempt to close the door after 45 days of notification and test failures.
- b. Major Fault.** This fault mode occurs when the system determines the batteries fail to maintain the minimum voltage for less than 10 seconds of load testing. The batteries are either not connected or are core (significantly) depleted, and the batteries must be replaced. The system will attempt to close the door after the dip switch selected alarm delay (see page 16). Notification will occur as a 1 second on 1 second off pulse train until Battery Test passes. Whenever a major fault battery failure occurs, the batteries must be connected or replaced immediately in order to ensure normal system operation. If for any reason the battery voltage drops below the minimum voltage, the unit will activate the optional warning system and automatically close the door via a controlled descent. If the system passes the Battery Test, then all alarms are cleared.

Battery Disposal

Replaced batteries must be treated as a hazardous waste and disposed on in accordance with State, Local and Federal Regulations. See the battery manufacturer's Material Safety Data Sheets (01-30839 "MSDS Sheets, Battery, Standard").

Battery Replacement

To order a replacement battery kit, see contact information on page 22.

Battery Maintenance / Testing

The batteries are maintenance free. However, to insure proper and safe operation, it is recommended that the batteries be replaced every two years. Battery testing is conducted automatically. See the Battery Test Description.

Battery Handling / Storage

Refer to the battery manufacturer's Safety Data Sheets (01-30839 "MSDS Sheets, Battery, Standard"). LiftMaster does not recommend storage of batteries in the field. Batteries are intended for immediate use.

- The battery connections in the system are tested once every hour. If the batteries are not connected, the operator will attempt to close the door after dip switch selected Alarm Delay or Close. The alarm within the operator will sound pattern of one second on, one second off until the batteries are reconnected or replaced in the event of a major fault.

THEORY OF OPERATION

(Battery Handling / Storage Continued)

- During a power loss, the operator will activate the warning system and automatically close the door whenever the battery voltage drops below the minimum voltage. When this occurs the strobe will flash until the battery is sufficiently charged.

2.2 UNIT HAS AC POWER & NO ALARM CONDITION:

- The B2/C2 control station is used to operate the door electrically.
- Activation of the simple, non-monitored 2-wire safety edge or LMEP safety device while door is closing will cause it to reverse to full open limit.
- Activation of safety edge while door is opening will cause it to stop. LMEP will have no effect.
- Activating the optional key-test switch for at least 6 seconds will put the operator in active alarm mode.

NOTE: The key test mode will expire in 1 minute.

2.3 UNIT HAS AC POWER & ACTIVE ALARM CONDITION:

- The warning system will activate. The door will automatically close after the preset time delay.

The time delay is set by means of dip switches 1 and 2, (see page 16).

- The door will reverse to full open limit if obstruction is encountered while closing. The door will automatically close again after the preset time delay. If the obstruction is not cleared, upon the 3rd attempt to close, the door will stop on the obstruction and activate the warning system then release the brake, after 10 seconds. Subsequent obstruction will cause the door to stop for two (2) seconds then release the brake with a 2-wire non-monitored reversing edge. An LMEP will not perform subsequent obstruction detection.
- After the 3rd attempt to close, the integrated braking system controls the door's descending speed.

2.4 UNIT HAS NO AC POWER & NO ALARM CONDITION:

- The CLOSE and STOP buttons of the B2/C2 control station are functional. The close button will disengage the brake. The door's descending speed is controlled by the integrated braking system. The stop button will re-engage the brake.
- The door will stop if obstruction is encountered while closing.
- The OPEN button is NOT functional.

2.5 UNIT HAS NO AC POWER & ACTIVE ALARM CONDITION:

- The warning system (optional) will activate. The door will automatically close after the preset time delay. The time delay is set by means of dip switches 1 and 2, (see page 16). The brake will release and the door's descending speed will be controlled by the integrated braking system.
- **2-wire non-monitored reversing edge:** If an obstruction is encountered the door will stop for 2 seconds then release the brake. Subsequent obstruction will cause the door to stop for 2 seconds then release the brake.
- **LiftMaster Monitored Entrapment Protection:** LMEP is disabled and will have no effect.

2.6 ACTIVATION OF THE KEY TEST SWITCH:

- Activating the key test switch for at least 6 seconds will put the operator into an Active Alarm condition with AC power. (See ACTIVE ALARM section 2.3 for detailed operation.)

INSTALLATION

IMPORTANT INSTALLATION INSTRUCTIONS

WARNING

To reduce the risk of SEVERE INJURY or DEATH:

1. READ AND FOLLOW ALL INSTALLATION WARNINGS AND INSTRUCTIONS.
2. Install door operator ONLY on a properly operating, balanced and lubricated door. An improperly balanced door may NOT reverse when required and could result in SEVERE INJURY or DEATH.
3. ALL repairs to cables, spring assemblies and other hardware MUST be made by a trained door systems technician BEFORE installing operator.
4. Disable ALL locks and remove ALL ropes connected to door BEFORE installing operator to avoid entanglement.
5. Install door operator 8 feet (2.44 m) or more above floor.
6. NEVER connect door operator to power source until instructed to do so.
7. NEVER wear watches, rings or loose clothing while installing or servicing operator. They could be caught in door or operator mechanisms.
8. Install control station:
 - within sight of the door.
 - out of reach of children at minimum height of 5 feet (1.5 m).
 - away from ALL moving parts of the door.
9. Install the control station far enough from the door to prevent the user from coming in contact with the door while operating the controls.
10. Install the entrapment warning placard on wall next to the control station in a prominent location that is visible from the door.
11. Place manual release/safety reverse test label in plain view on inside of door.
12. Upon completion of installation, test entrapment protection device.
13. **SAVE THESE INSTRUCTIONS.**

INSTALLATION

Before your operator is installed, be sure the door has been properly aligned and is working smoothly. The operator may be wall mounted or mounted on a bracket or shelf. Refer to the illustration and instructions below that suits your application.

OPERATOR MOUNTING

Wall Mount: The operator should generally be installed below the door shaft, and as close to the door as possible (Figure 1).

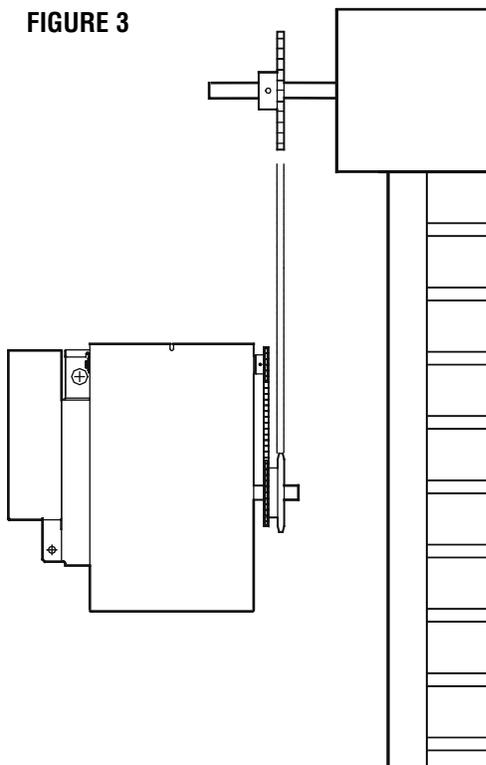
Bracket Shelf Mounting: The operator may be mounted either above or below the door shaft (Figure 2).

IMPORTANT: The shelf or bracket must provide adequate support, prevent play between operator and door shaft, and permit operator to be fastened securely and with the drive shaft parallel to the door shaft.

NOTE: The optimum distance between the door shaft and operator drive shaft is between 12" - 15".

1. Place door sprocket on the door shaft. Do not insert the key at this time.
2. Place drive sprocket on the appropriate side of the operator. Do not insert the key at this time.
3. Wrap drive chain around door sprocket and join roller chain ends together with master link.
4. Raise operator to approximate mounting position and position chain over operator sprocket.
5. Raise or lower operator until the chain is taut (not tight). Make sure the operator output shaft is parallel to door shaft and sprockets are aligned. When in position, secure the operator to wall or mounting bracket (Figure 3).
6. Align sprockets and secure.

FIGURE 3



⚠️ WARNING

To prevent possible SERIOUS INJURY or DEATH:

- DO NOT connect electric power until instructed to do so.
- If the door lock needs to remain functional, install an interlock switch.
- ALWAYS call a trained professional door serviceman if door binds, sticks or is out of balance. An unbalanced door may NOT reverse when required.
- NEVER try to loosen, move or adjust doors, door springs, cables, pulleys, brackets or their hardware, ALL of which are under EXTREME tension and can cause SERIOUS PERSONAL INJURY.
- Disable ALL locks and remove ALL ropes connected to door BEFORE installing and operating door operator to avoid entanglement.
- To prevent possible SERIOUS INJURY or DEATH from a falling door, ALL doors intended to be motor operated should be manufactured with solid door shafts.
- Fasten the operator SECURELY to structural supports if not mounted to door shield.
- Concrete anchors MUST be used if installing ANY brackets in masonry.

FIGURE 1

(Right-Hand Wall Mount Shown)

(Left-Hand Wall Mount Shown)

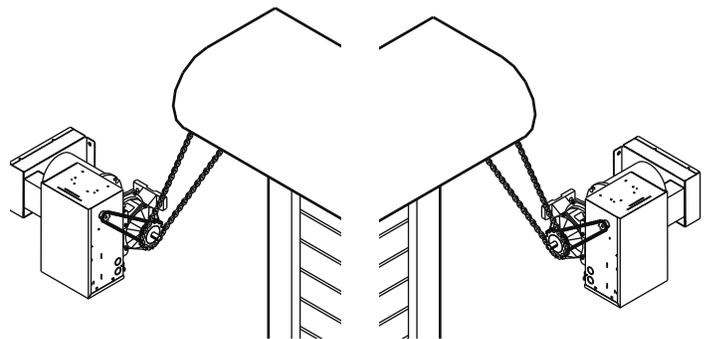
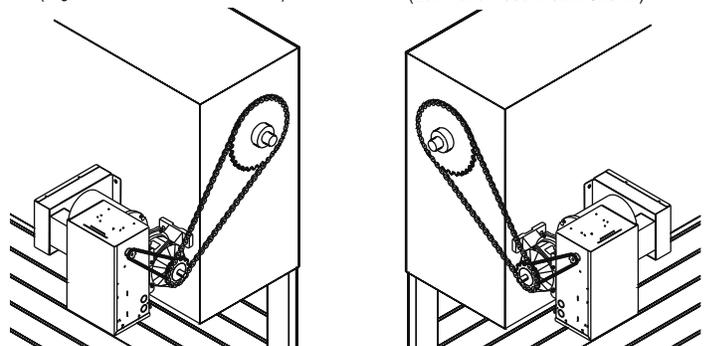


FIGURE 2

(Right-Hand Hood Mount Shown)

(Left-Hand Hood Mount Shown)



ADJUSTMENT

IMPORTANT SAFETY INSTRUCTIONS

WARNING

To reduce the risk of **SEVERE INJURY** or **DEATH**:

1. READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS.
2. ALWAYS keep remote controls out of reach of children. NEVER permit children to operate or play with door control push buttons or remote controls.
3. ONLY activate door when it can be seen clearly, it is properly adjusted and there are no obstructions to door travel.
4. Personnel should keep away from a door in motion and ALWAYS keep door in sight until completely closed. NO ONE SHOULD CROSS THE PATH OF THE MOVING DOOR.
5. NO ONE SHOULD GO UNDER A STOPPED, PARTIALLY OPENED DOOR.
6. If possible, use manual release handle to disengage door ONLY when door is CLOSED. Weak or broken springs or unbalanced door could result in an open door falling rapidly and/or unexpectedly causing SEVERE INJURY or DEATH.
7. NEVER use manual release handle unless doorway is clear of persons and obstructions.
8. After ANY adjustments are made, the entrapment protection device MUST be tested. Failure to adjust the operator properly may cause SEVERE INJURY and DEATH.
9. Entrapment Protection device MUST be tested every month. Failure to adjust the operator properly may cause SEVERE INJURY and DEATH.
10. ALWAYS KEEP DOOR PROPERLY OPERATING AND BALANCED. An improperly balanced door may NOT reverse when required and could result in SEVERE INJURY or DEATH. See door manufacturer's owners manual.
11. ALL repairs to cables, spring assemblies and other hardware, ALL of which are under EXTREME tension, MUST be made by a trained door systems technician.
12. ALWAYS disconnect electric power to door operator BEFORE making ANY repairs or removing covers.
13. **SAVE THESE INSTRUCTIONS.**

LIMIT SWITCH ADJUSTMENT

NOTE: Make sure the limit nuts are positioned between the limit switch actuators before proceeding with adjustments.

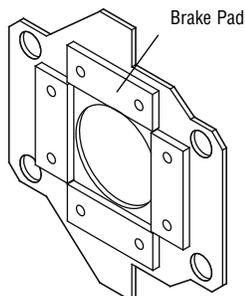
1. Depress retaining plate to allow nut to spin freely. After adjustment, release plate and move nut back and forth to ensure it is fully seated in slot.
2. To **increase** door travel, spin nut **away** from actuator. To **decrease** door travel, spin limit nut **toward** actuator.
3. Adjust open limit nut so that door will stop in open position with the bottom of the door even with top of door opening.
4. Repeat steps 1 and 2 for close cycle. Adjust close limit nut so that actuator is engaged as door fully seats at the floor.

If other problems persist, call our toll-free number for assistance:

1-800-294-4358.

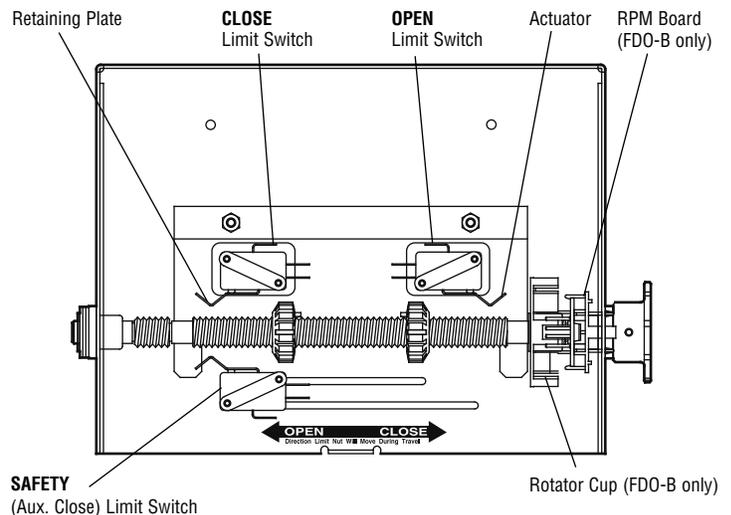
BRAKE ADJUSTMENT

The brake is adjusted at the factory and should not need additional adjustment for the life of the friction pad. Replace friction pads when necessary. Refer to the illustrations on page 24, 26, 28 and 30 for identification of components for the solenoid type brake system.



WARNING

To avoid **SERIOUS PERSONAL INJURY** or **DEATH** from electrocution, disconnect electric power **BEFORE** manually moving limit nuts.



POWER WIRING & GROUND WIRING

WARNING

To reduce the risk of SEVERE INJURY or DEATH:

- ANY maintenance to the operator or in the area near the operator MUST NOT be performed until disconnecting the electrical power and locking-out the power. Upon completion of maintenance the area MUST be cleared and secured, at that time the unit may be returned to service.
- Disconnect power at the fuse box BEFORE proceeding. Operator MUST be properly grounded and connected in accordance with national and local electrical codes. The operator should be on a separate fused line of adequate capacity.
- ALL electrical connections MUST be made by a qualified individual.
- DO NOT install ANY wiring or attempt to run the operator without consulting the wiring diagram.
- ALL power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- ALL power and control wiring MUST be run in separate conduit.

Remove the cover from the electrical enclosure. Inside this enclosure you will find the wiring diagram(s) for your unit. Refer to the diagram (glued on the inside of the cover) for all connections described below. If this diagram is missing, see contact information on page 22.

POWER WIRING CONNECTIONS

1. Be sure that the power supply is of the correct voltage, phase, frequency, and amperage to supply the operator. Refer to page 3 for current/amperage specifications.
2. Using the 7/8" conduit access knockout as shown, bring supply lines to the operator and connect wires to the terminals indicated on the WIRING CONNECTIONS DIAGRAM.

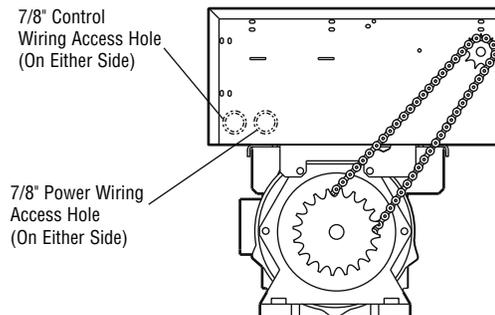
NOTES:

- Do not turn power on until you have finished making all power and control wiring connections and have completed the limit switch adjustment procedure.
- **On three phase machines ONLY**, incorrect phasing of the power supply will cause the motor to rotate in the wrong direction (open when CLOSE button is pressed and vice-versa). To correct this, interchange any two of the incoming three phase power lines with power off.

GROUND WIRING CONNECTIONS

1. Connect earth ground to the chassis ground screw in the electrical box enclosure.
2. Use same conduit entry into the electrical box as the power wiring.

IMPORTANT NOTE: This unit must be properly grounded. Failure to properly ground this unit could result in electric shock and serious injury.



CONTROL STATION WIRING AND INSTALLATION

WARNING

To prevent possible SERIOUS INJURY or DEATH from electrocution:

- Be sure power is NOT connected BEFORE installing door control.

To prevent possible SERIOUS INJURY or DEATH from a closing door:

- Install door control within sight of door, out of reach of children at a minimum height of 5 feet (1.5 m) and away from ALL moving parts of door.
- Install the control station far enough from the door to prevent the user from coming in contact with the door while operating the controls.

- Install the entrapment warning placard on wall next to the control station in a prominent location that is visible from the door.
- NEVER permit children to operate or play with door control push buttons or remote controls.
- Activate door ONLY when it can be seen clearly, is properly adjusted and there are no obstructions to door travel.
- ALWAYS keep door in sight until completely closed. NEVER permit anyone to cross path of closing door.

IMPORTANT NOTE: ALL inputs MUST be dry contact only! This includes: alarm inputs, control inputs, sensing edges and sensing devices. For any other devices not mentioned, please consult the factory.

CONTROL STATION WIRING

Refer to Control Connection Diagrams on pages 17 and 32. Make connection through hole marked with the label shown below. Be sure to use the control box opening with the 7/8" knockout for CONTROL cable(s).

CONTROL WIRING
USE COPPER WIRE ONLY 40-10032B

All power wires use the 1-1/16" knockout. Do not run control wires in the same conduit as power wires.

Complete electrical connections to the operator and the control station. Fasten the control station to the wall and MOUNT THE ENTRAPMENT WARNING PLACARD BESIDE OR BELOW THE PUSH BUTTON STATION.

1. Apply power to the operator. Press OPEN push button and observe direction of door movement and then press the STOP button.

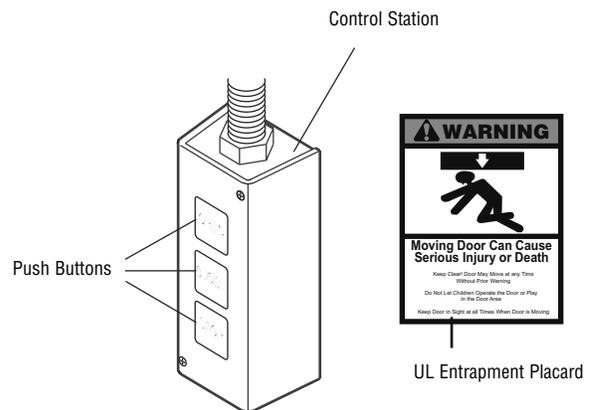
If door did not move in the correct direction, check for improper wiring at the control station or between operator and control station.

If the operator is three phase and control station wiring is correct, exchange any two of the three incoming power leads.

If electrical problems persist, see contact information on page 22.

MOUNTING INSTRUCTIONS

1. Mount control stations no further than (12") from each other.
2. Mount control stations (12") from the door enclosure.
3. Mount ENTRAPMENT WARNING PLACARD beside or below the control station.



ENTRAPMENT PROTECTION

LIFTMASTER MONITORED ENTRAPMENT PROTECTION (LMEP)

IMPORTANT INFORMATION ABOUT THE LIFTMASTER MONITORED ENTRAPMENT PROTECTION DEVICES

A LiftMaster Monitored Entrapment Protection (LMEP) device is required for most wiring types. If a LiftMaster Monitored Entrapment Protection device is not installed, constant pressure to close will be required from the control station.

When properly connected and aligned, the photoelectric sensors will detect an obstruction in the path of its invisible light beam. If an obstruction breaks the light beam while the door is closing, the door will stop and typically reverse to the full open position.

The photoelectric sensors must be installed facing each other across the door, no more than 6" (15 cm) above the floor.

Each photoelectric sensor has an LED that will glow steady when the sensor is properly connected and aligned. The LEDs on both photoelectric sensors will flicker rapidly when obstructed or misaligned.

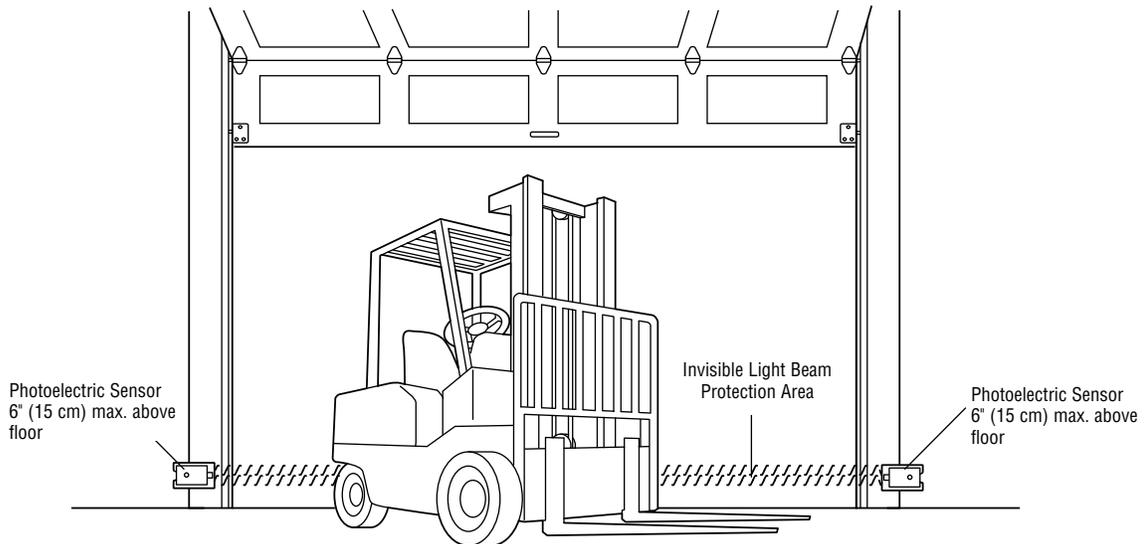
WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from a closing door:

- Be sure power is **NOT** connected to the door operator **BEFORE** installing the photoelectric sensor.
- The door **MUST** be in the fully opened or closed position **BEFORE** installing the LiftMaster Monitored Entrapment Protection device.

To prevent **SERIOUS INJURY**, **DEATH**, **ENTRAPMENT**, or **PROPERTY DAMAGE**:

- Correctly connect and align the photoelectric sensor.
- Install the photoelectric sensor beam **NO HIGHER** than 6" (15 cm) above the floor.
- This is a required safety device for B2, TS, T, and FSTS wiring types and **MUST NOT** be disabled. For D1, C2, and E2 wiring the installation of an entrapment device is recommended.
- LiftMaster Monitored Entrapment Protection devices are for use with LiftMaster Commercial Door Operators **ONLY**. Use with **ANY** other product voids the warranty.
- If an edge sensor is being used on a horizontal slide door, then place one or more edge sensors on both the leading and trailing edge.
- If an edge sensor is being used on a vertically moving door, then place one or more edge sensors on the bottom edge of the door.



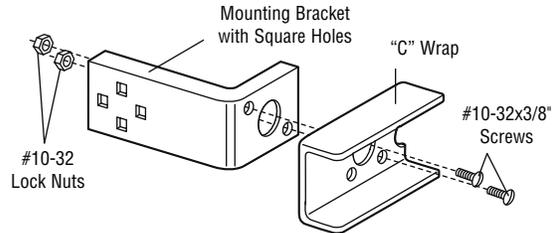
ENTRAPMENT PROTECTION

INSTALL THE PHOTOELECTRIC SENSORS (PROVIDED)

The following instructions show recommended assembly of the bracket(s) and "C" wrap based on the wall installation of the photoelectric sensors on each side of the door or on the door tracks themselves. There are also alternate mounting methods which may fit your installation requirements better.

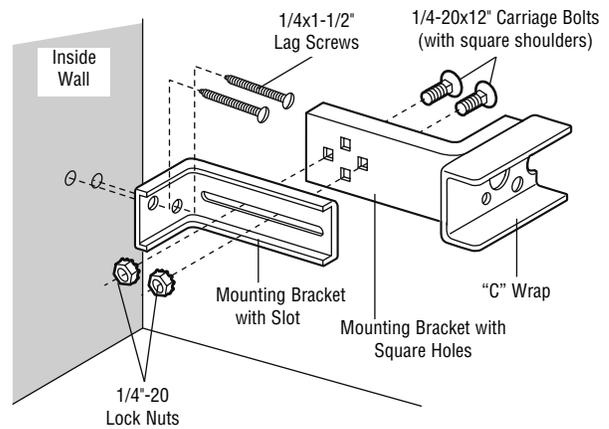
Make sure the wraps and brackets are aligned so the photoelectric sensors will face each other across the door.

1. Fasten the "C" wraps to the mounting brackets having square holes, using hardware shown.

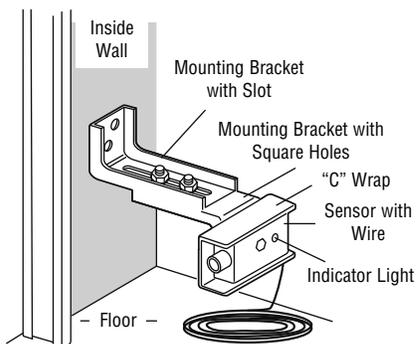


WALL INSTALLATION

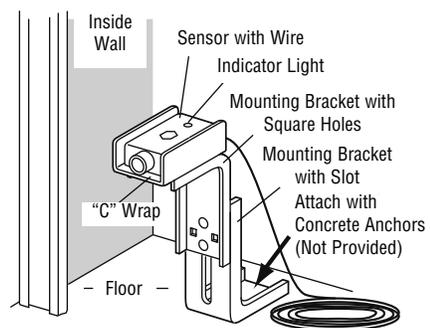
2. Connect each assembly to a slotted bracket, using the hardware shown. **Note alignment of brackets for left and right sides of the door.**
3. Finger tighten the lock nuts.
4. Use bracket mounting holes as a template to locate and drill (2) 3/16" diameter pilot holes on both sides of the garage door, 4-6 inches (10-15 cm) above the floor. Do not exceed 6 inches (15 cm).
5. Attach bracket assemblies with 1/4"x1-1/2" lag screws.
6. Adjust right and left side bracket assemblies to the same distance out from mounting surface. Make sure all door hardware obstructions are cleared. Tighten the nuts securely.



ALTERNATE WALL INSTALLATION



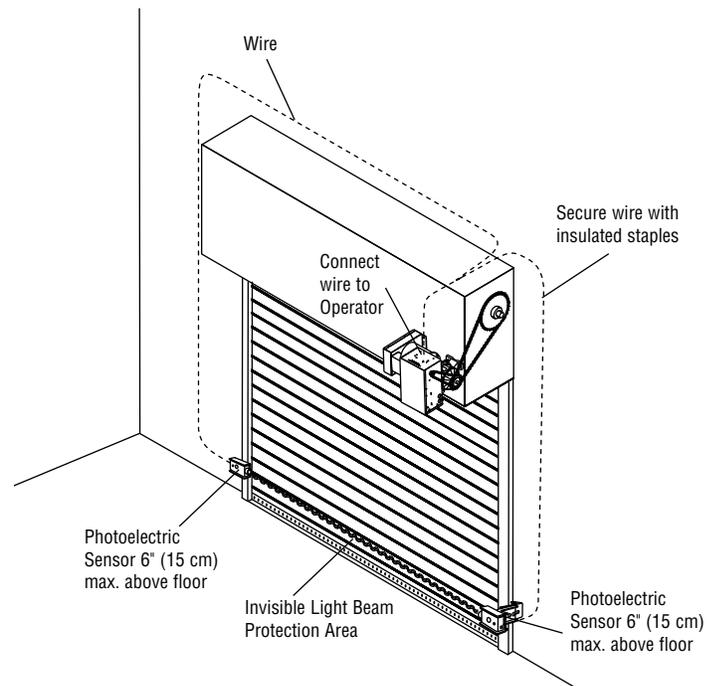
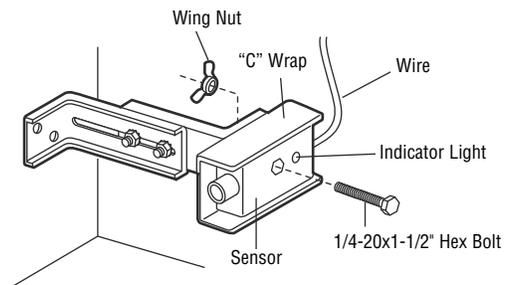
ALTERNATE FLOOR INSTALLATION



ENTRAPMENT PROTECTION

MOUNT THE PHOTOELECTRIC SENSORS (PROVIDED)

1. Center each sensor in the bracket with the lenses pointing toward each other across the door.
2. Attach the sensors to the brackets with the provided hardware. Finger tighten the *receiving sensor* wing nut. Securely tighten the *sending sensor* wing nut.
3. Run the wires from both sensors to the operator. Use insulated staples to secure wire to the wall and ceiling.
4. Connect the sensor wires to the operator.



ENTRAPMENT PROTECTION

ENTRAPMENT PROTECTION ACCESSORIES

2-WIRE NON-MONITORED SENSING EDGES (C2 mode only)

All types of sensing edges with an isolated normally open (N.O.) output are compatible with your operator. This includes pneumatic edge. If your door does not have a bottom sensing edge and you wish to purchase one, contact your local LiftMaster authorized dealer.

The operator has been pre-wired to accept connection of a reversing edge device. Connect the normally open contacts to terminals J2-5 and J2-6 on the PCB Board. The cut-off switch will de-activate the safety device during the last few inches of the door's downward travel.

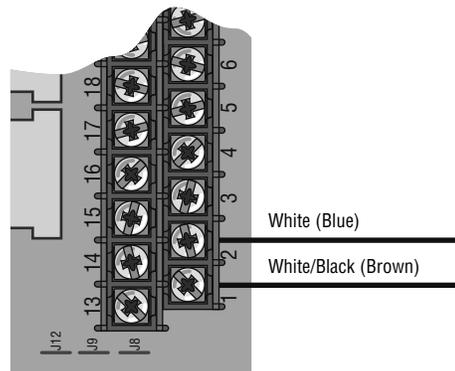
IMPORTANT NOTES:

- Proceed with Limit Switch Adjustments described on the next page before making any sensing edge wiring connections to operator.
- Electrician must hardwire the junction box to the operator electrical box in accordance with local codes.
- See safety edge coil cord/take-up installation instructions for details.

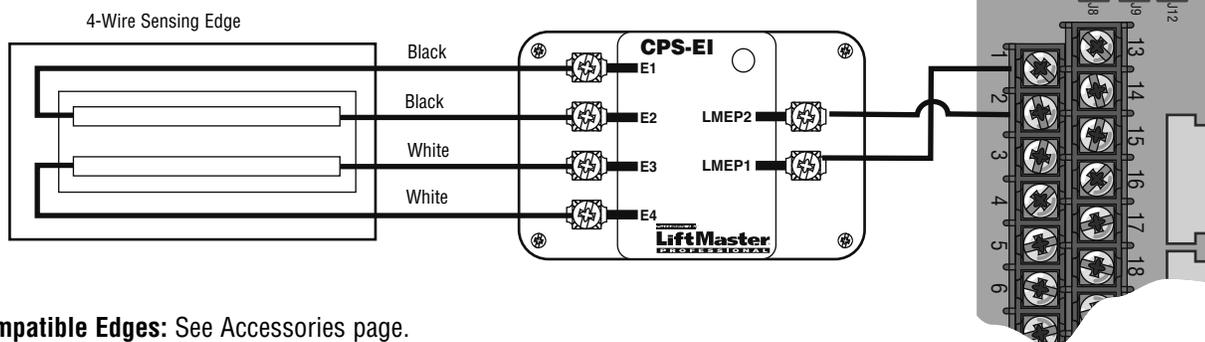
LIFTMASTER MONITORED ENTRAPMENT PROTECTION WIRING (Required for B2 mode)

Connect the LiftMaster Monitored Entrapment Protection (LMEP) device to the logic board according to the models shown below:

CPS-U and CPS-UN4



CPS-EI



Compatible Edges: See Accessories page.

⚠ WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from a closing door:

- Be sure power is **NOT** connected to the door operator **BEFORE** installing the sensing edge.

To prevent **SERIOUS INJURY**, **DEATH**, **ENTRAPMENT**, or **PROPERTY DAMAGE**:

- Correctly connect the sensing edge.
- If an edge sensor is being used on a horizontal slide door, then place one or more edge sensors on both the leading and trailing edge.
- If an edge sensor is being used on a vertically moving door, then place one or more edge sensors on the bottom edge of the door.

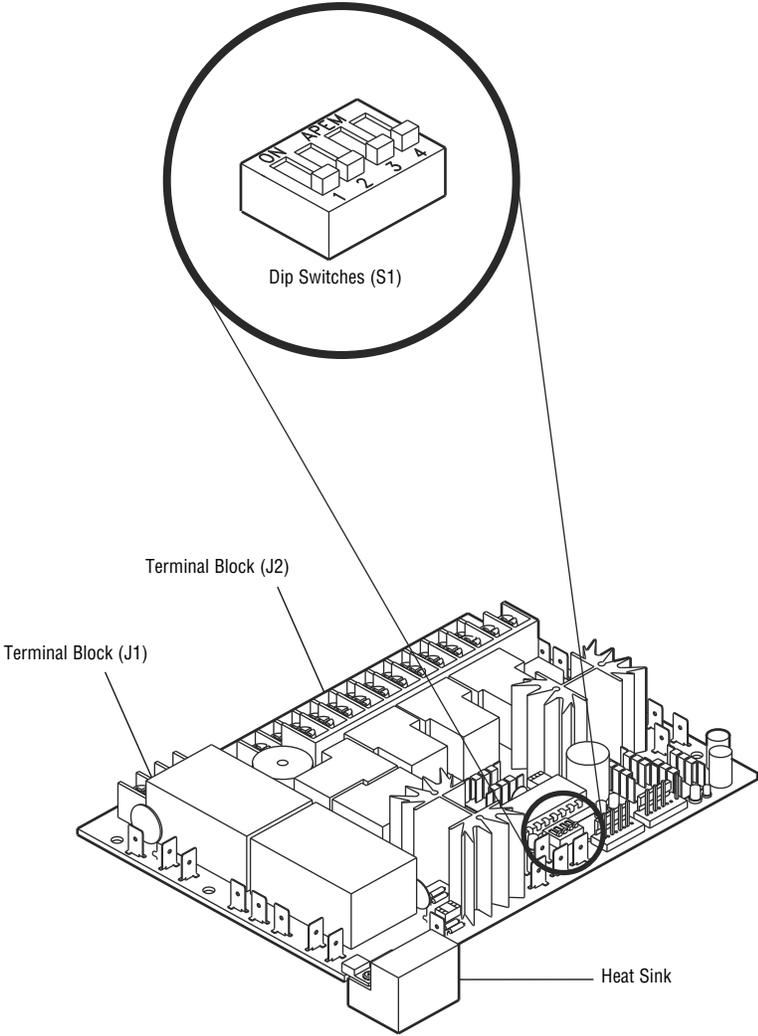
NOTICE:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

CONTROL SETTINGS

LOGIC BOARD ILLUSTRATION

NOTE: For dip switch field settings, see page 16.



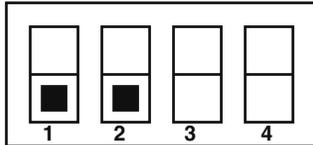
CONTROL SETTINGS

OPTIONAL CONTROL SETTINGS

ALARM DELAY TO CLOSE

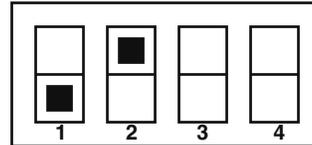
S1-1 and S1-2 set the Alarm Delay to Close time of the operator. Alarm Delay to Close is the time between when the operator first receives an active alarm signal and the door starts to close. Refer to illustrations below for various settings.

ON 10 SECOND DELAY



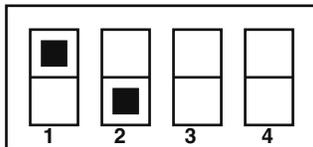
OFF

ON 30 SECOND DELAY



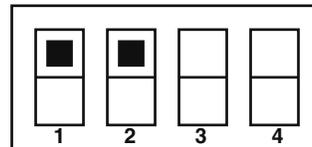
OFF

ON 45 SECOND DELAY



OFF

ON 60 SECOND DELAY

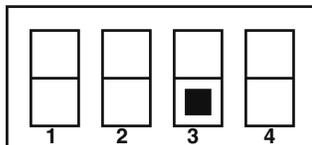


OFF

FIRE ALARM SYSTEM

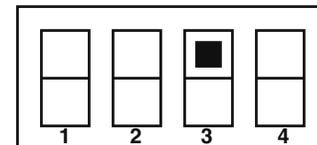
Select the alarm system being used. If the alarm is a normally open system then S1-3 must be off. If the alarm is a normally close system then S1-3 must be on.

ON N.O. ALARM



OFF

ON N.C. ALARM



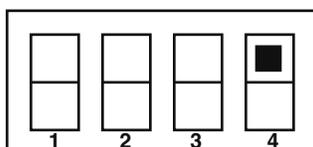
OFF

LiftMaster Monitored Entrapment Protection (LMEP)

S1-4 must be on if LiftMaster Monitored Entrapment Protection (LMEP) is connected.

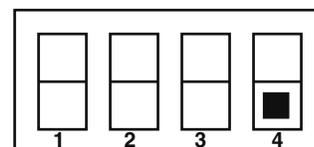
S1-4 must be off if LiftMaster Monitored Entrapment Protection (LMEP) is not connected.

ON LIFTMASTER MONITORED ENTRAPMENT PROTECTION CONNECTED



OFF

ON LIFTMASTER MONITORED ENTRAPMENT PROTECTION NOT CONNECTED



OFF

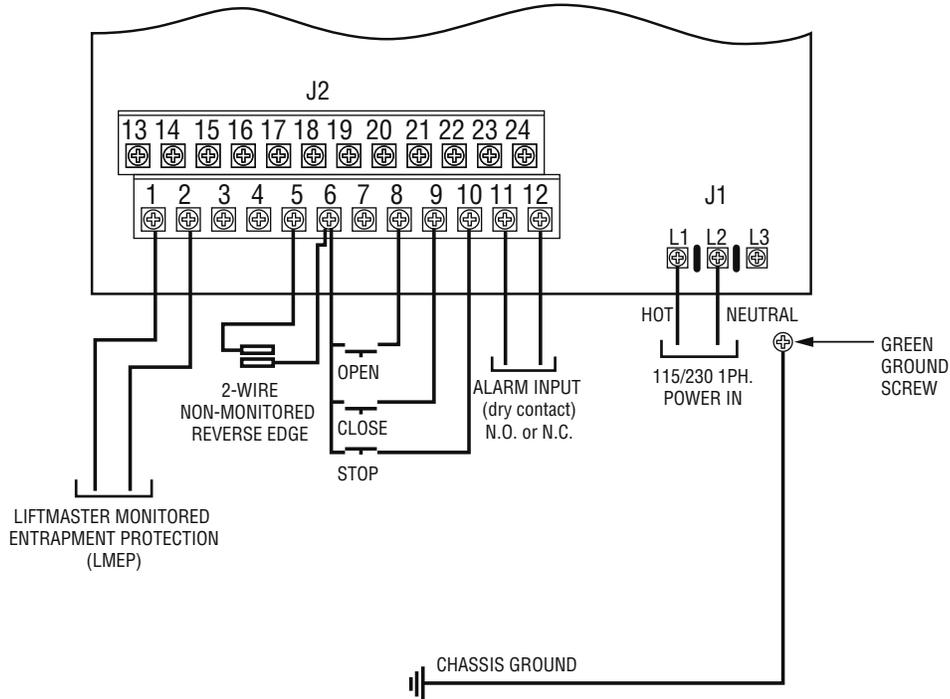
DIAGRAMS

STANDARD POWER & CONTROL CONNECTION DIAGRAMS

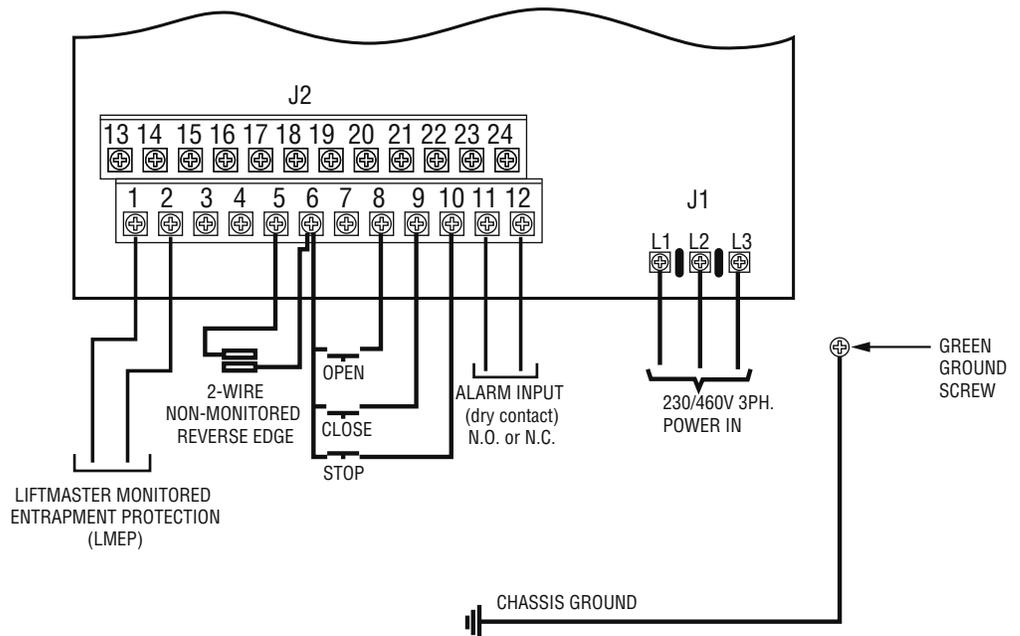
NOTE: The operator should be on a separate fused line of adequate capacity.

Operator must be permanently wired as per NFPA 70 (National Electrical Code). Ground must be pulled with each service. Service voltage must be run SEPARATELY from class 2 circuits (controls).

LMPLC BOARD - 115V/230V 1PH



LMPLC BOARD - 230V/460V 3PH



DIAGRAMS

1 PHASE WIRING DIAGRAM (FDO5011AU & FDO5021AU)

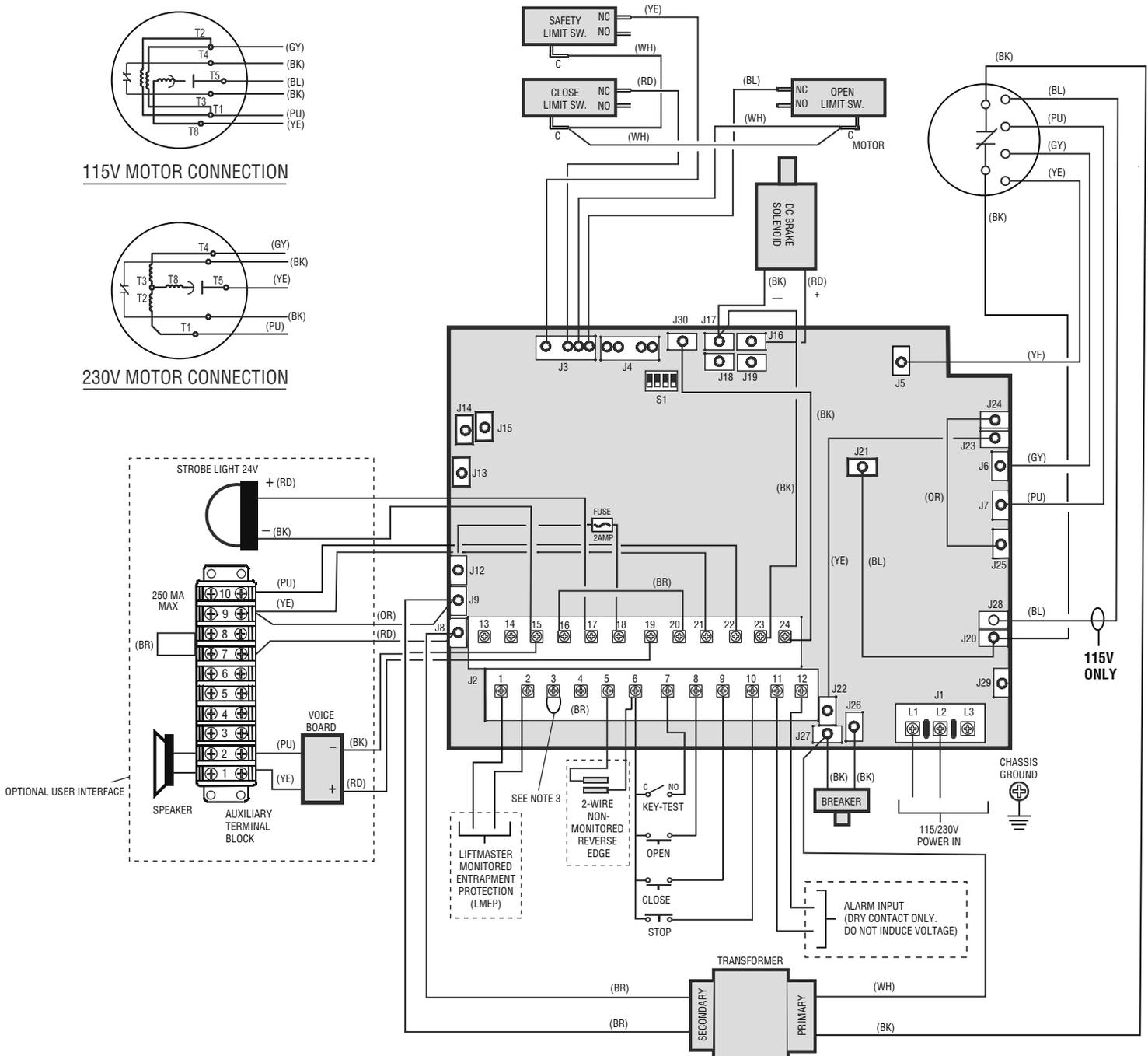
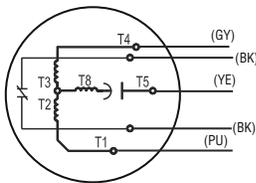
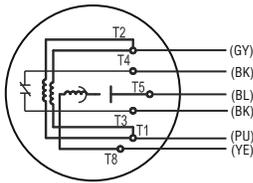
NOTES:

1. See owner's manual for dip switch functions and programming procedures.
2. To REVERSE motor direction; REVERSE purple and gray motor wires at J6 & J7.
3. Unit comes standard in C2 wiring mode. B2 wiring mode requires a LiftMaster Monitored Entrapment Protection device. For B2 mode, remove one end of jumper from J2-3 and connect to J2-16. Dip switch #4 (S1-4) must be in the **ON** position.

⚠ WARNING

To protect against fire and electrocution:

- Replace **ONLY** with fuse of same type and rating.



DIAGRAMS

1 PHASE WIRING DIAGRAM (FDO5011BU & FDO5021BU)

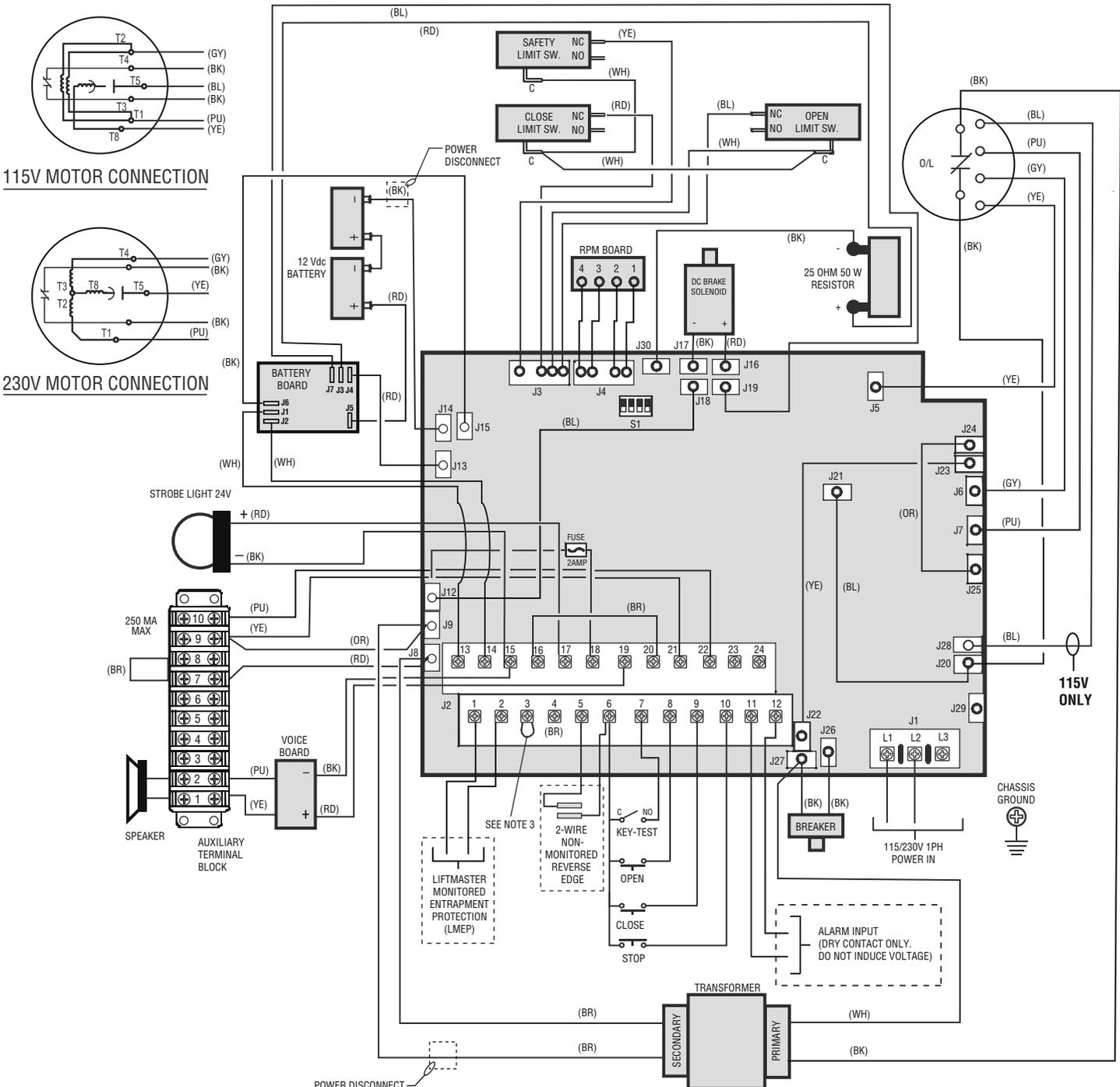
NOTES:

1. See owner's manual for dip switch functions and programming procedures.
2. To REVERSE motor direction; REVERSE purple and gray motor wires at J6 & J7.
3. Unit comes standard in C2 wiring mode. B2 wiring mode requires a LiftMaster Monitored Entrapment Protection device. For B2 mode, remove one end of jumper from J2-3 and connect to J2-16. Dip switch #4 (S1-4) must be in the **ON** position.

⚡ WARNING

To protect against fire and electrocution:

- Replace **ONLY** with fuse of same type and rating.



DIAGRAMS

3 PHASE WIRING DIAGRAM (FDO1023AU & FDO1043AU)

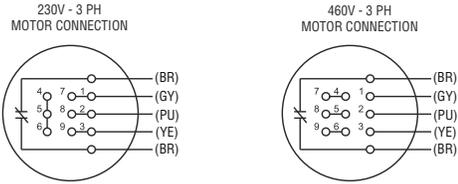
NOTES:

1. See owner's manual for dip switch functions and programming procedures.
2. To REVERSE motor direction; REVERSE purple and gray motor wires at J6 & J7.
3. Unit comes standard in C2 wiring mode. B2 wiring mode requires a LiftMaster Monitored Entrapment Protection device. For B2 mode, remove one end of jumper from J2-3 and connect to J2-16. Dip switch #4 (S1-4) must be in the **ON** position.

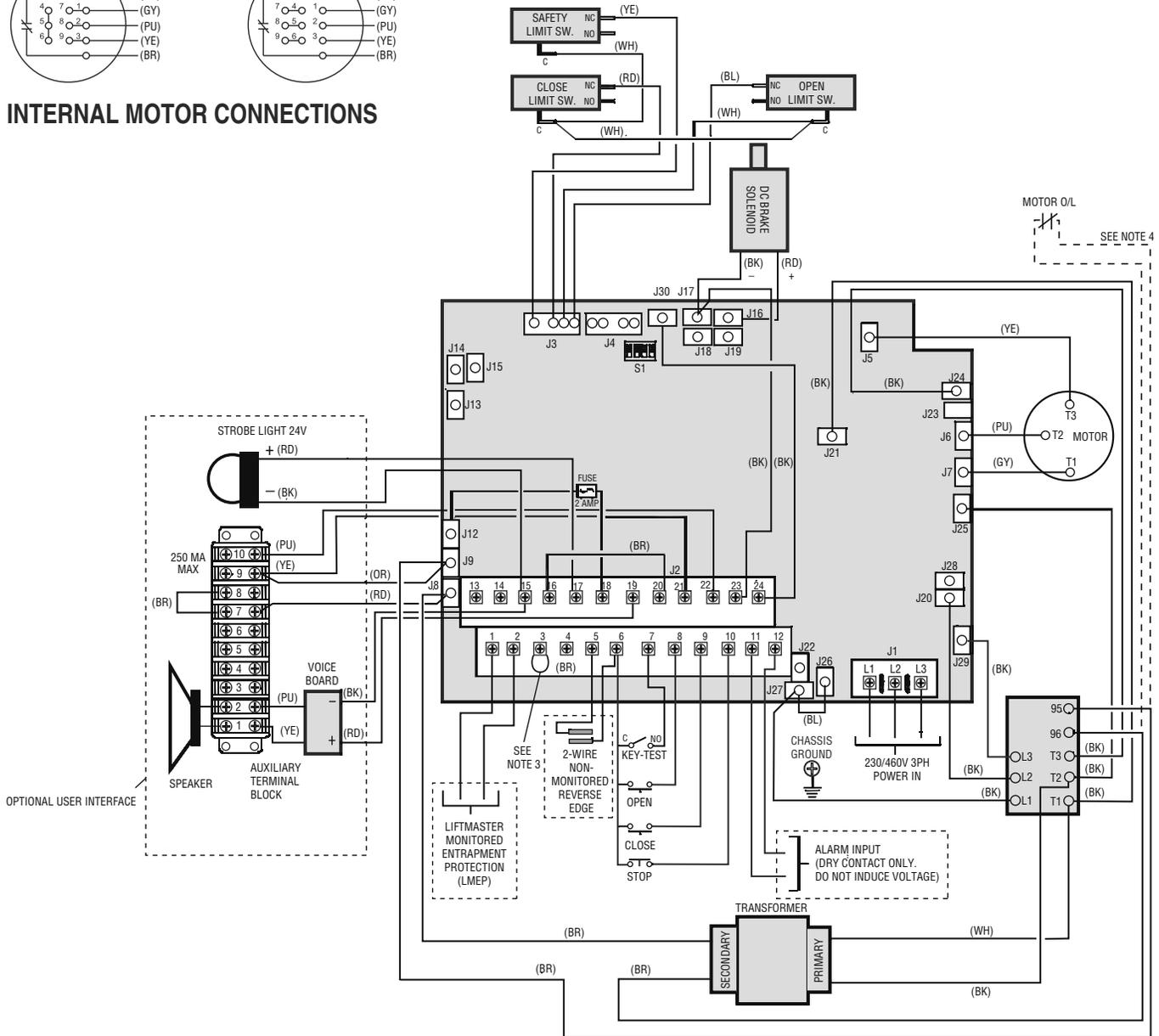
⚡ WARNING

To protect against fire and electrocution:

- Replace **ONLY** with fuse of same type and rating.



INTERNAL MOTOR CONNECTIONS



DIAGRAMS

3 PHASE WIRING DIAGRAM (FDO1023BU & FDO1043BU)

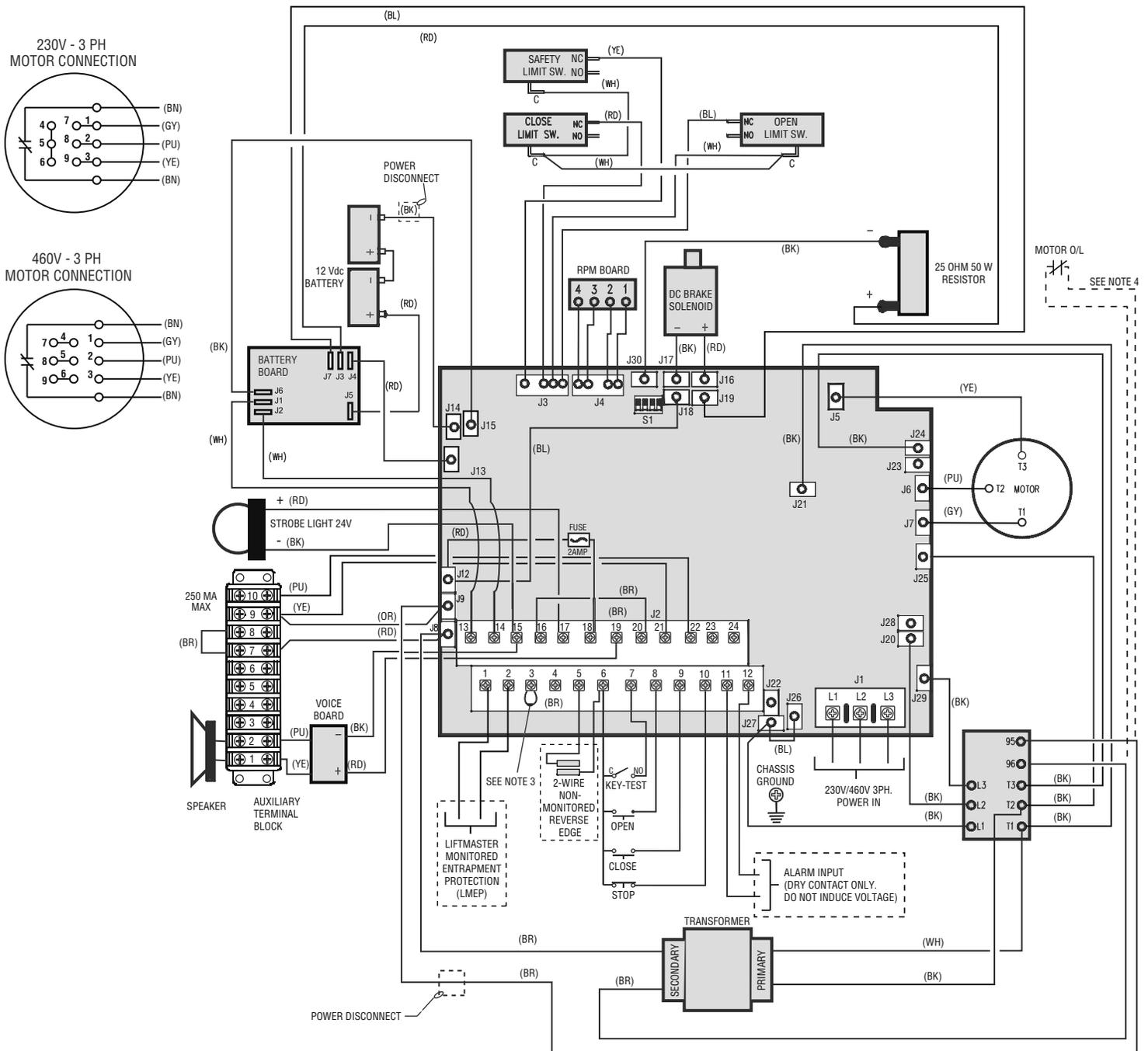
NOTES:

1. See owner's manual for switch functions and programming procedures.
2. To REVERSE motor direction; REVERSE purple and gray motor wires at J6 & J7.
3. Unit comes standard in C2 wiring mode. B2 wiring mode requires a LiftMaster Monitored Entrapment Protection device. For B2 mode, remove one end of jumper from J2-3 and connect to J2-16. Dip switch #4 (S1-4) must be in the **ON** position.

WARNING

To protect against fire and electrocution:

- Replace **ONLY** with fuse of same type and rating.



MAINTENANCE SCHEDULE

Check at the intervals listed in the following chart:

ITEM	PROCEDURE	EVERY 3 MONTHS	EVERY 6 MONTHS	EVERY 12 MONTHS	EVERY 24 MONTHS
Drive Chain	Check for excessive slack Check and adjust as required Lubricate	•		◆	
Sprockets	Check set screw tightness	•		◆	
Fasteners	Check and tighten as required		•	◆	
Bearings and Shafts	Check for wear and lubricate	•		◆	
Battery Maintenance	Replace batteries				•

- Use SAE 30 Oil. (Never use grease or silicone spray.)
- ◆ Repeat ALL procedures.
- Do not lubricate motor. Motor bearings are rated for continuous operation.
- Inspect and service whenever a malfunction is observed or suspected.

WARNING

- To avoid SERIOUS PERSONAL INJURY or DEATH:
- Disconnect electric power BEFORE performing ANY adjustments or maintenance.
 - ALL maintenance MUST be performed by a trained door systems technician.

HOW TO ORDER REPAIR PARTS

OUR LARGE SERVICE ORGANIZATION SPANS AMERICA

For installation and service information

Call our TOLL FREE number:

1-800-294-4358

REPAIR PARTS

REPAIR PARTS KITS - FDO5011BU & FDO5021BU

Refer to the parts lists below for replacement kits available for your operator. If optional modifications and/or accessories are included with your operator, certain components may be added or

removed from these lists. Individual components of each kit may not be available. Please consult a parts and service representative regarding availability of individual components.

K-FDO5011BU & K-FDO5021BU - ELECTRICAL BOX KIT			
ITEM	PART #	DESCRIPTION	QTY
E1	K74-16437	RPM Sensor Assembly	1
E2	K75-17351-3	Electrical Box Cover	1
E3		Electrical Box	1
E4		Battery Top Plate	1
E5		Battery Strap	1
E6	21-16699	Transformer, 75VA PT Series	1
E7	See Variables	Overload	1
E8	29-NP712	Battery, 12V	2
E9	29-R250B7KWR	Power Resistor	1
E10	35-313-002	Fuse, 2 AMP	1
E11	42-110	10 Pole Terminal Block	1
E12	79-30805-FDO	Voice Board	1
E13		Standoff Assembly, FDO PCB	7
E14	K79-13493B-600	Logic Board Kit	1
E15		Bracket, Resistor	2
E16	25-3000-K	Overload Bracket (3-PH only)	1
E17	K002D0776	PCB Battery Board	1
*Electrical Box Kits include parts from K72-13580 and K75-13816			

K75-32620 - BRAKE ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
B1		Brake Release Lever	1
B2		Brake Disc	1
B3		Brake Cover	1
B4		Plate, DC Solenoid	1
B5		Solenoid Cover	1
B6		Spring Cup	4
B7		Brake Stud	4
B8		Spring, Brake	4
B9	19-48001	Chain, #48 x 1 Pitch	1
B10	22-13028	DC Solenoid	1
B11		Standoff	2
B12		Pressure Plate Assembly	1
B13		Mounting Bracket Assembly	1
B14		Cotter Pin, 1/8" x 1-1/4"	2
B15		Stop, DC Solenoid	1

K20-1050C-2PSF - MOTOR KIT			
ITEM		DESCRIPTION	QTY
M1		Motor	1

K75-13816 - LIMIT SWITCH ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
S1		Depress Plate	1
S2		Nut Plate Switch	3
S3		Backup Plate	3
S4		Depress Spring	2
S5	23-10041	Limit Switch	3
S6		Standoff, Switch	3
S7		Screw, #4-40 Pan Head	6
S8		Screw, #6-32 Pan Head	2
S9		Lock Nut, #6-32	2

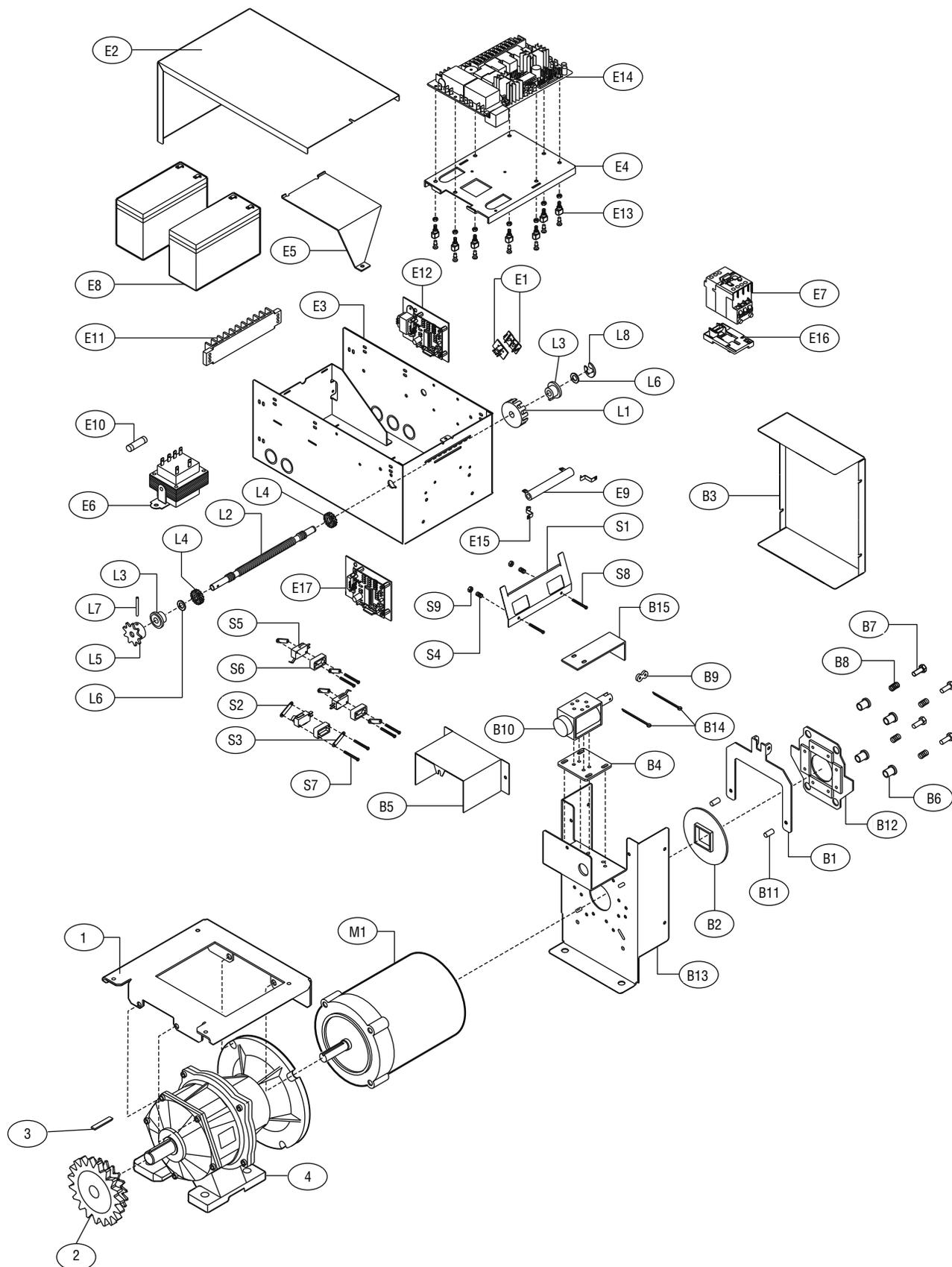
K72-13580 LIMIT SHAFT ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
L1		Rotator Cup	1
L2		Limit Shaft	1
L3	12-10028	Flange Bearing	2
L4	13-10024	Limit Nut	2
L5	15-48B9A1	Sprocket, #48B9 x 3/8" Bore	1
L6		Washer, Spacer	2
L7		Roll Pin, 1/8" x 1" long	1
L8		E-Ring, 3/8"	1

INDIVIDUAL COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
1		Electrical Box Bracket	1
2	15-14650	Sprocket	1
3	80-207-19	Key	1
4	32-16214	Gear Reducer	1

VARIABLE COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
E7	25-2010	Overload 115V	1
	25-2006	Overload 230V	1

REPAIR PARTS

ILLUSTRATED PARTS - FDO5011BU & FDO5021BU



REPAIR PARTS

REPAIR PARTS KITS - FDO5011AU & FDO5021AU

Refer to the parts lists below for replacement kits available for your operator. If optional modifications and/or accessories are included with your operator, certain components may be added or

removed from these lists. Individual components of each kit may not be available. Please consult a parts and service representative regarding availability of individual components.

K-FDO5011AU & K-FDO5021AU - ELECTRICAL BOX KIT			
ITEM	PART #	DESCRIPTION	QTY
E1	K75-17351-3	Electrical Box Cover	1
E2		Electrical Box	1
E3		Battery Top Plate	1
E4	21-16699	Transformer	1
E5	See Variables	Overload	1
E6	42-110	10 Pole Terminal Block	1
E7	79-30805	Voice Board (Optional)	1
E8		Standoff Assembly, FDO PCB	7
E9	K79-13493A-600	Logic Board Kit	1
E10	25-3000-K	Overload Bracket (3-PH only)	1
* Electrical Box Kits include parts from K72-13581 and K75-13816			

K75-32621 - BRAKE ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
B1		Brake Disc	1
B2		Brake Release Lever	1
B3		Brake Cover	1
B4		Extension Bracket	1
B5		Spring Cup	4
B6		Spring Cap	2
B7		Brake Stud	4
B8		Standoff	2
B9		Spring, Compression	1
B10		Spring, Compression	1
B11	19-48001	Chain, #48 x 1 Pitch	1
B12	22-13028	DC Solenoid	1
B13		Pressure Plate Assembly	1
B14		Mounting Bracket Assembly	1
B15		Screw, #6-32 Pan Head	2
B16		Cotter Pin, 1/8" x 1-1/4"	2
B17		Plate, DC Solenoid	1
B18		Stop, DC Solenoid	1

VARIABLE COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
E5	25-2010	Overload, 115V	1
	25-2006	Overload, 230V	1

K75-13816 - LIMIT SWITCH ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
S1		Depress Plate	1
S2		Nut Plate Switch	3
S3		Backup Plate	3
S4		Depress Spring	2
S5	23-10041	Limit Switch	3
S6		Standoff, Switch	3
S7		Screw, #4-40 Pan Head	6
S8		Screw, #6-32 Pan Head	2
S9		Lock Nut, #6-32	2

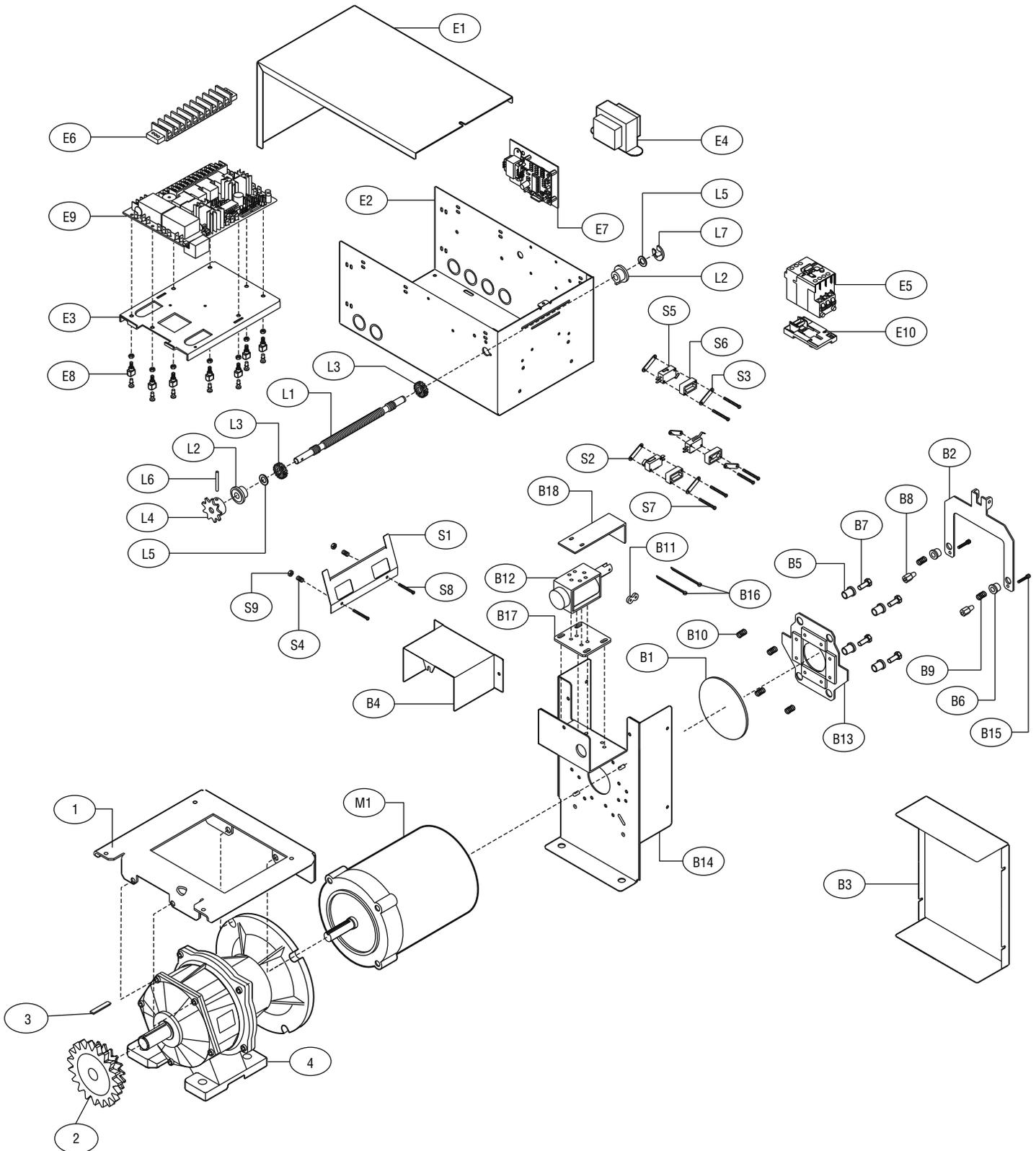
K20-1050C-2PSF - MOTOR KIT			
ITEM	DESCRIPTION	QTY	
M1	Motor	1	

K72-13581 LIMIT SHAFT ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
L1		Limit Shaft	1
L2	12-10028	Flange Bearing	2
L3	13-10024	Limit Nut	2
L4	15-48B9A1	Sprocket, #48B9 x 3/8" Bore	1
L5		Washer, Spacer	2
L6		Roll Pin, 1/8" x 1" long	1
L7		E-Ring, 3/8"	1

INDIVIDUAL COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
1		Bracket, Electrical Box	1
2	15-14650	Sprocket	1
3	80-207-19	Key	1
4	32-16214	Gear Reducer	1

REPAIR PARTS

ILLUSTRATED PARTS - FDO5011AU & FDO5021AU



REPAIR PARTS

REPAIR PARTS KITS - FDO1023BU & FDO1043BU

Refer to the parts lists below for replacement kits available for your operator. If optional modifications and/or accessories are included with your operator, certain components may be added or

removed from these lists. Individual components of each kit may not be available. Please consult a parts and service representative regarding availability of individual components.

K-FDO1023BU & K-FDO1043BU - ELECTRICAL BOX KIT			
ITEM	PART #	DESCRIPTION	QTY
E1	K74-16437	RPM Sensor Assembly	1
E2	K75-17351-3	Electrical Box Cover	1
E3		Electrical Box	1
E4		Battery Top Plate	1
E5		Battery Strap	1
E6	21-16698	Transformer, 75VA PT Series	1
E7	See Variables	Overload	1
E8	29-NP712	Battery, 12V	2
E9	29-R250B7KWR	Power Resistor	1
E10	35-313-002	Fuse, 2 AMP	1
E11	42-110	10 Pole Terminal Block	1
E12	79-30805-FDO	Voice Board	1
E13		Standoff Assembly, FDO PCB	7
E14	K79-13493B-600	Logic Board	1
E15		Bracket, Resistor	2
E16	25-3000-K	Overload Bracket (3-PH only)	1
E17	K002D0776	PCB Battery Board	1
* Electrical Box Kits include parts from K72-13580 and K75-13816			

K75-14995 - BRAKE ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
B1		Brake Release Lever	1
B2		Brake Disc	1
B3		Brake Cover	1
B4		Plate, DC Solenoid	1
B5	10-14647	Solenoid Cover	1
B6		Spring Cup	4
B7		Brake Stud	4
B8		Spring, Brake	4
B9	19-48001	Chain, #48 x 1 Pitch	1
B10	22-13028	DC Solenoid	1
B11		Standoff	2
B12		Pressure Plate Assembly	1
B13		Mounting Bracket Assembly	1
B14		Cotter Pin, 1/8" x 1-1/4"	2
B15		Stop, DC Solenoid	1

VARIABLE COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
E4	25-4004-K	Overload 3.3-5.5 Amp (230V 3 Ph)	1
	25-4002-5K	Overload 1.6-2.5 Amp (460V 3 Ph)	1

K75-13816 - LIMIT SWITCH ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
S1		Depress Plate	1
S2		Nut Plate Switch	3
S3		Backup Plate	3
S4		Depress Spring	2
S5	23-10041	Limit Switch	3
S6		Standoff, Switch	3
S7		Screw, #4-40 Pan Head	6
S8		Screw, #6-32 Pan Head	2
S9		Lock Nut, #6-32	2

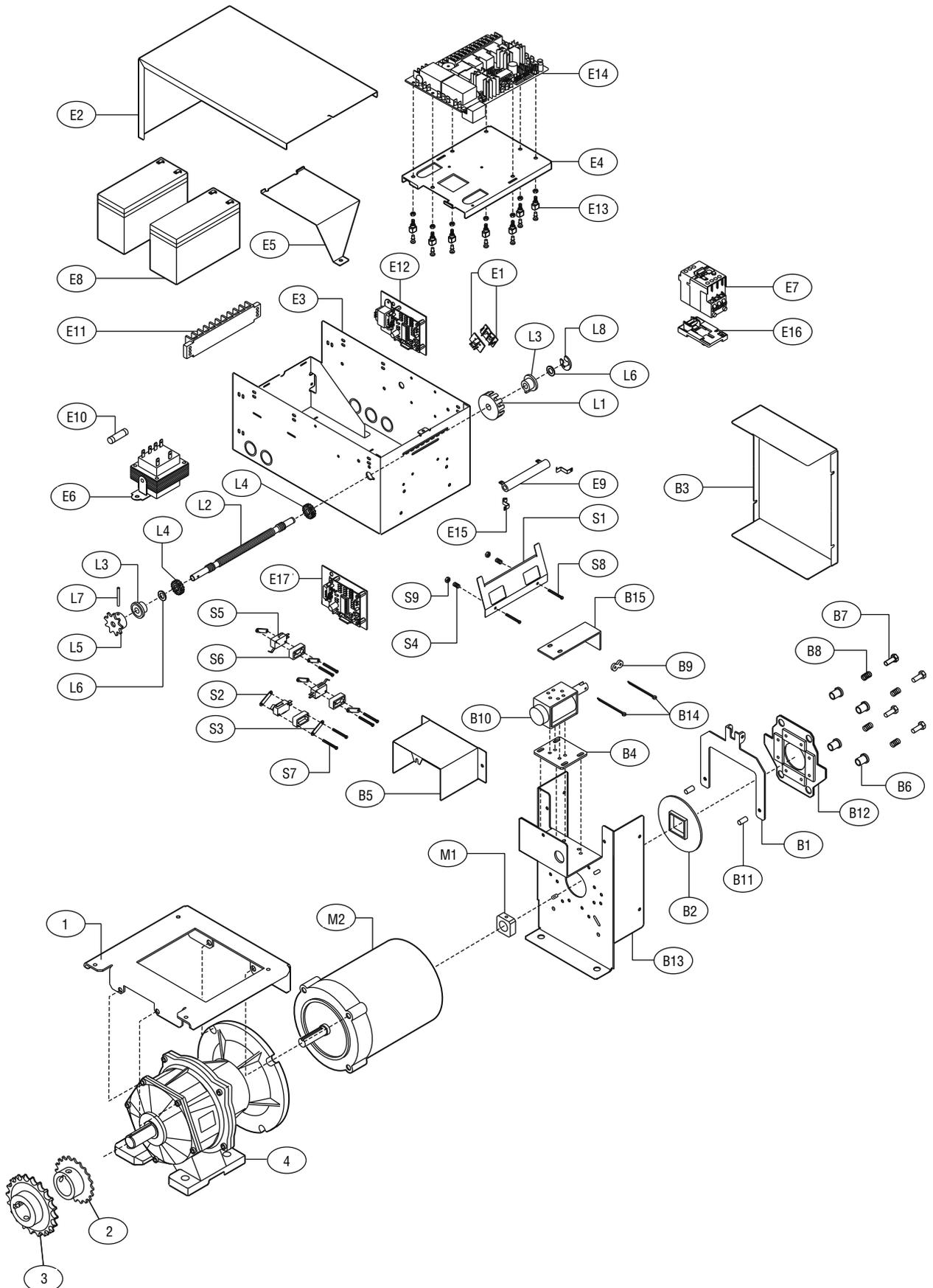
K75-13742 - MOTOR KIT			
ITEM	PART #	DESCRIPTION	QTY
M1		Brake Hub	1
M2	20-3100C-4T	Motor, 1 HP 230/460V 3Ph, TEFC	1

K72-13580 LIMIT SHAFT ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
L1		Rotator Cup	1
L2		Limit Shaft	1
L3	12-10028	Flange Bearing	2
L4	13-10024	Limit Nut	2
L5	15-48B9A1	Sprocket, #48B9 x 3/8" Bore	1
L6		Washer, Spacer	2
L7		Roll Pin, 1/8" x 1" long	1
L8		E-Ring, 3/8"	1

INDIVIDUAL COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
1		Electric Box Bracket	1
2	15-48B18QGH	Sprocket 48B18	1
3	15-50B18QGH	Sprocket 50B18	1
4	32-16234	Gear Reducer	1

REPAIR PARTS

ILLUSTRATED PARTS - FDO1023BU & FDO1043BU



REPAIR PARTS

REPAIR PARTS KITS - FDO1023AU & FDO1043AU

Refer to the parts lists below for replacement kits available for your operator. If optional modifications and/or accessories are included with your operator, certain components may be added or

removed from these lists. Individual components of each kit may not be available. Please consult a parts and service representative regarding availability of individual components.

K-FDO1023AU & K-FDO1043AU - ELECTRICAL BOX KIT			
ITEM	PART #	DESCRIPTION	QTY
E1	K75-17351-3	Electrical Box Cover	1
E2		Electrical Box	1
E3		Battery Top Plate	1
E4	21-16698	Transformer	1
E5	See Variables	Overload	1
E6	42-110	10 Pole Terminal Block	1
E7	79-30805-FDO	Voice Board (Optional)	1
E8		Standoff Assembly, FDO PCB	7
E9	K79-13493A-600	Logic Board	1
E10	25-3000-K	Overload Bracket	1
* Electrical Box Kits include parts from K72-13581 and K75-13816			

K75-15006 - BRAKE ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
B1		Brake Disc	1
B2		Brake Release Lever	1
B3		Brake Cover	1
B4		Solenoid Cover	1
B5		Spring Cup	4
B6		Spring Cap	2
B7		Brake Stud	4
B8		Standoff	2
B9		Spring, Compression	2
B10		Spring, Compression	4
B11	19-48001	Chain, #48 x 1 Pitch	1
B12	22- 13028	DC Solenoid	1
B13		Pressure Plate Assembly	1
B14		Mounting Bracket Assembly	1
B15		Screw, #6-32 Pan Head	2
B16		Cotter Pin, 1/8" x 1-1/4"	2
B17		Plate, DC Solenoid	1
B18		Stop, DC Solenoid	1

VARIABLE COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
E5	25-4004-K	Overload 3.3-5.5 Amp (230V 3 Ph)	1
	25-4002-5K	Overload 1.6-2.5 Amp (460V 3 Ph)	1

K75-13816 - LIMIT SWITCH ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
S1		Depress Plate	1
S2		Nut Plate Switch	3
S3		Backup Plate	3
S4		Depress Spring	2
S5	23-10041	Limit Switch	3
S6		Standoff, Switch	3
S7		Screw, #4-40 Pan Head	6
S8		Screw, #6-32 Pan Head	2
S9		Lock Nut, #6-32	2

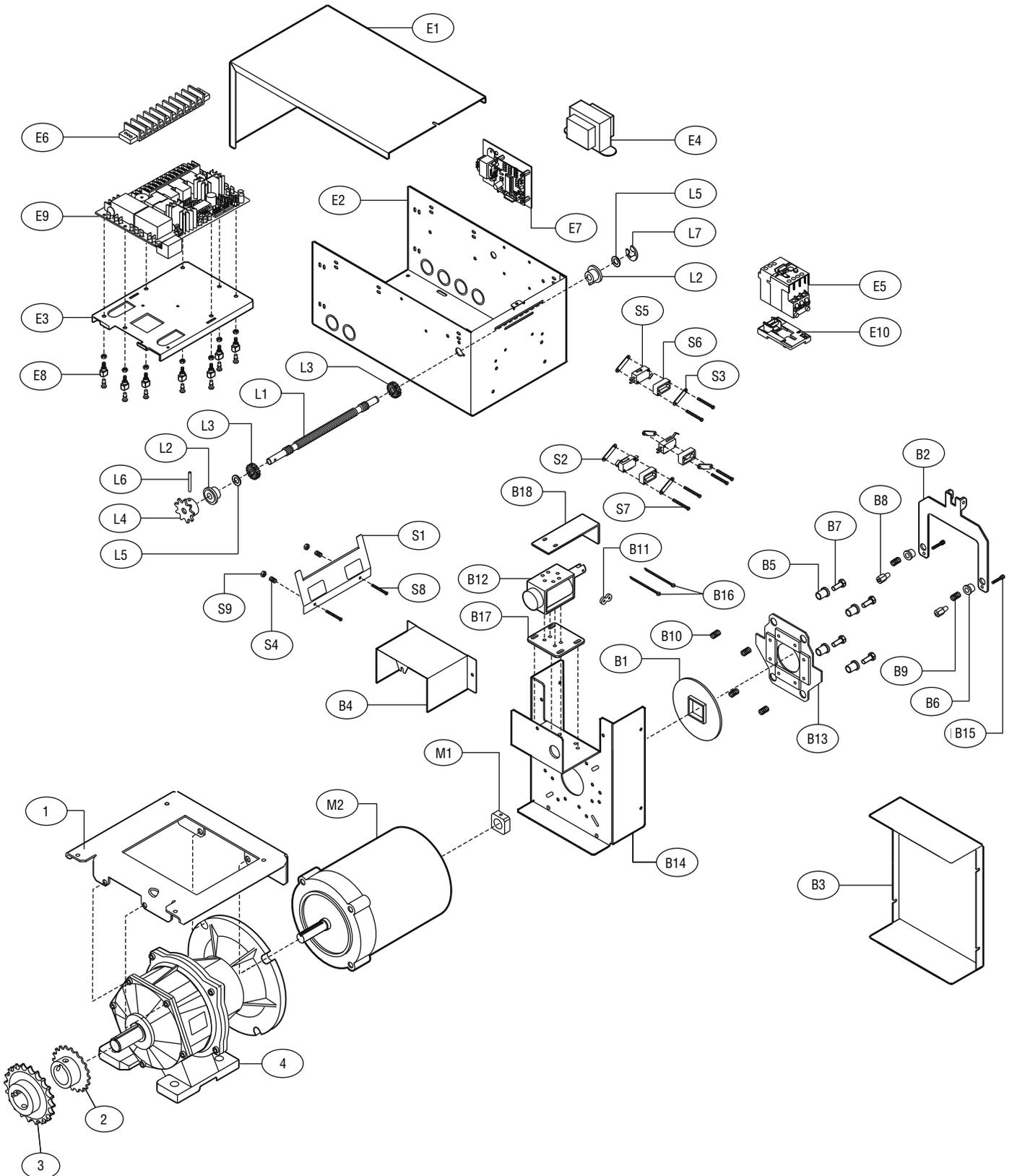
MOTOR			
ITEM	PART #	DESCRIPTION	QTY
M1		Brake Hub	1
M2	20-3100C-4T	Motor, 1 HP 230/460V 3Ph, TEFC	1

K72-13581 LIMIT SHAFT ASSEMBLY KIT			
ITEM	PART #	DESCRIPTION	QTY
L1		Limit Shaft	1
L2	12-10028	Flange Bearing	2
L3	13-10024	Limit Nut	2
L4	15-48B9A1	Sprocket, #48B9 x 3/8" Bore	1
L5		Washer, Spacer	2
L6		Roll Pin, 1/8" x 1" long	1
L7		E-Ring, 3/8"	1

INDIVIDUAL COMPONENTS			
ITEM	PART #	DESCRIPTION	QTY
1		Electric Box Bracket	1
2	15-48B18QGH	Sprocket 48B18	1
3	15-50B18QGH	Sprocket 50B18	1
4	32-16234	Gear Reducer	1

REPAIR PARTS

ILLUSTRATED PARTS - FDO1023AU & FDO1043AU



ACCESSORIES

CONTROL STATION AND KEYSWITCH

02-103



3-Button Control Station:
Steel enclosure.

02-109 FDO

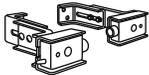


Test Keyswitch:

ENTRAPMENT PROTECTION DEVICES

MONITORED

CPS-U



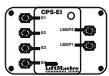
Commercial Protector System®:
Provides protection on doors up to 30' wide.

CPS-UN4



Commercial Protector System®:
Provides protection on doors up to 45' wide.
NEMA-4 rated.

CPS-EI



Monitored Safety Edge Interface:
For use with the approved 4-wire safety edge (see below).

65ME1234XX

Miller ME123 4-Wire Monitored Safety Edge:
For rolling doors.

65ME123

Miller ME123 2-Wire Non-Monitored Safety Edge:
For rolling doors.

65ME113

Miller ME113 2-Wire Non-Monitored Safety Edge:
For rolling doors.

MOUNTING CHANNELS

65ME123C1

T-Shaped Mounting Channel:

For 65ME1234 or 65ME123 edge when installed on a rolling door. Fits between L-shaped angles used to construct a bottom bar on rolling doors.

65ME113C1

T-Shaped Mounting Channel:

For 65ME1134 or 65ME113 edge when installed on a rolling door. Fits between L-shaped angles used to construct a bottom bar on rolling doors.

FDO ALARM AND NOTIFICATION DEVICES

LM4WB

Smoke Detector 24 Vdc 4-Wire Photo:

Plug-in detector line mounting base included. N.O. contact output. Power from external source.

LM4WTB

Smoke Detector 24 Vdc 4-Wire Photo Thermal and Form C Relay:

Same as LM4WB but with restorable, built-in, fixed temperature (135° F) thermal detector.

LMHS2475ADA

Horn/Strobe

24 Vdc

FIELD MODIFICATION KITS

K90-FDOS-24V

Field Installation Kit

Provides a 24 V speaker strobe only.

K90-FDOSV-24V

Field Installation Kit

Provides both a 24 V speaker strobe and voiceboard.

90-FDOS-24V

Field Installation Kit

Factory modification adding the 24 V speaker strobe only.

90-FDOSV-24V

Field Installation Kit

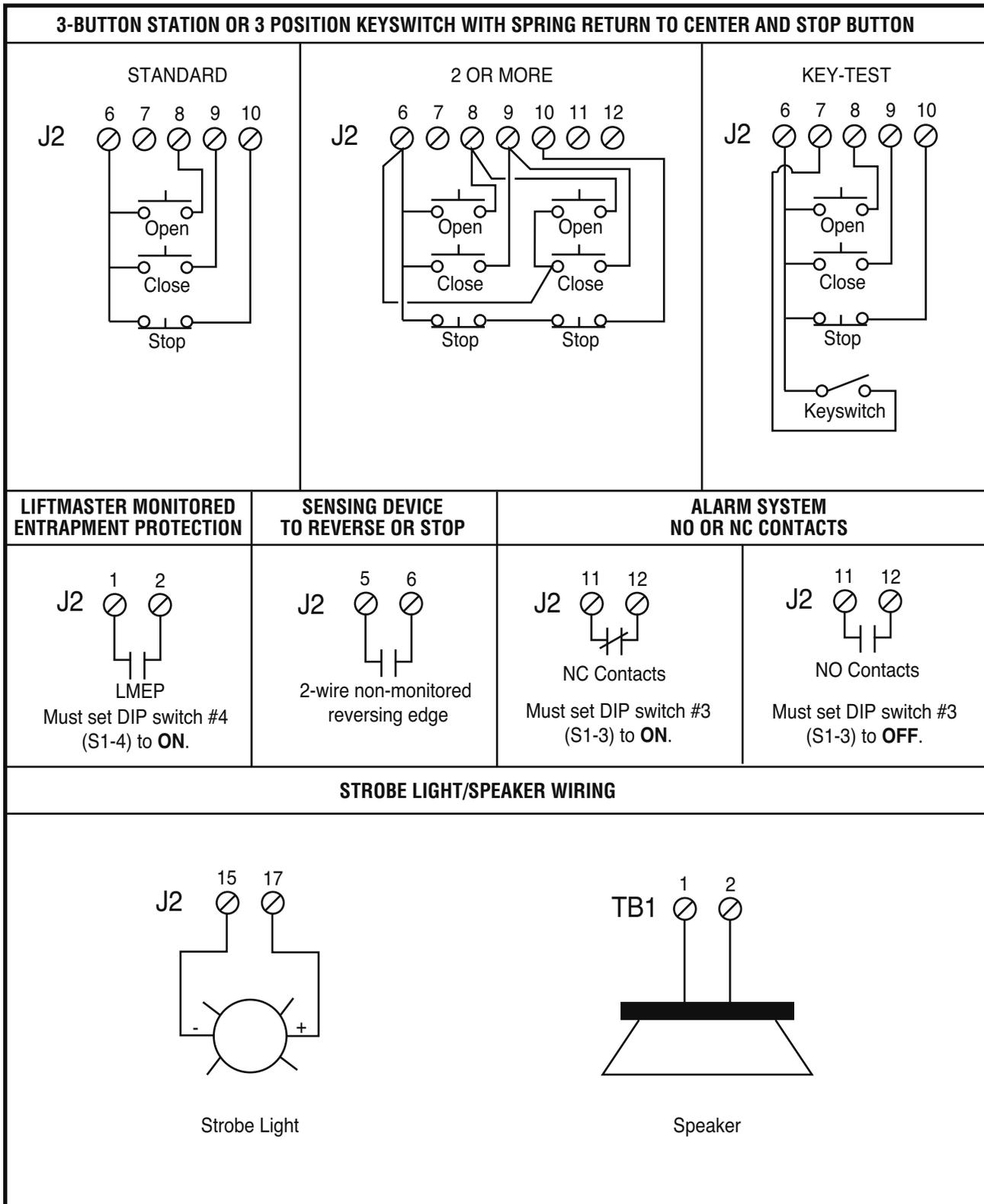
Factory modification adding the 24 V speaker strobe and voiceboard.

CONTROL CONNECTION DIAGRAM



IMPORTANT NOTE:

The 3-Button Control Station provided must be connected for operation.



IMPORTANT: All inputs must be contact only! This includes: Alarm Inputs, Control Inputs, Sensing Edges and Sensing Devices. For any other devices not mentioned please consult the factory.