MODEL K79-13493B-360/-500
Logic Board Replacement Kit

APPLICATION REQUIREMENTS:

Model FDOB operator with charge circuit board incorporating firmware versions 06-FDOB-360 or 06-FDOB-500.

FUNCTION:

Replacement of the logic board in an FDOB.

⚠ WARNING

To prevent possible SERIOUS INJURY or DEATH from electrocution or fire, BEFORE proceeding:

- Disconnect AC power at the fuse box.
- Disconnect DC power at the battery connection.

INSTALLATION INSTRUCTIONS

REMOVE AC AND DC POWER

1. Disconnect AC power to the operator.
2. Open operator cover.
3. Remove DC power by disconnecting the battery connection.

REMOVE EXISTING BOARD

1. Match replacement logic board dip switch settings to the current logic board. Refer to page 7, if needed.
2. Reference page 2 for mechanical assembly details. Remove all the ends of the wires connected to the existing board and neatly lay them over the side of the electrical box. Leave jumper wires located on the board connected until new logic board wiring.
3. Remove the nylon nuts (7) holding the logic board to the electrical box and hold for reassembly of new board.
4. Remove the screw holding the heat sink to the electrical box and hold for reassembly of new board.
5. Remove logic board from the box, leaving the existing standoffs in place.

INSTALL NEW BOARD

1. Install the new logic board in the electrical box using the old standoffs. Be sure to install in the same configuration as it was removed.
2. Secure logic board in place with the nylon nuts (7) removed in step 3.
3. Secure the heat sink to the electrical box with the screw removed in step 4.

NOTE: *For any additional help, refer to assembly drawing on page 2.*

LOGIC BOARD WIRING

1 PHASE OPERATORS

Follow wiring directions on page 3, for additional help refer to the wiring diagram on page 4.

3 PHASE OPERATORS

Follow wiring directions on page 5, for additional help refer to the wiring diagram on page 6.

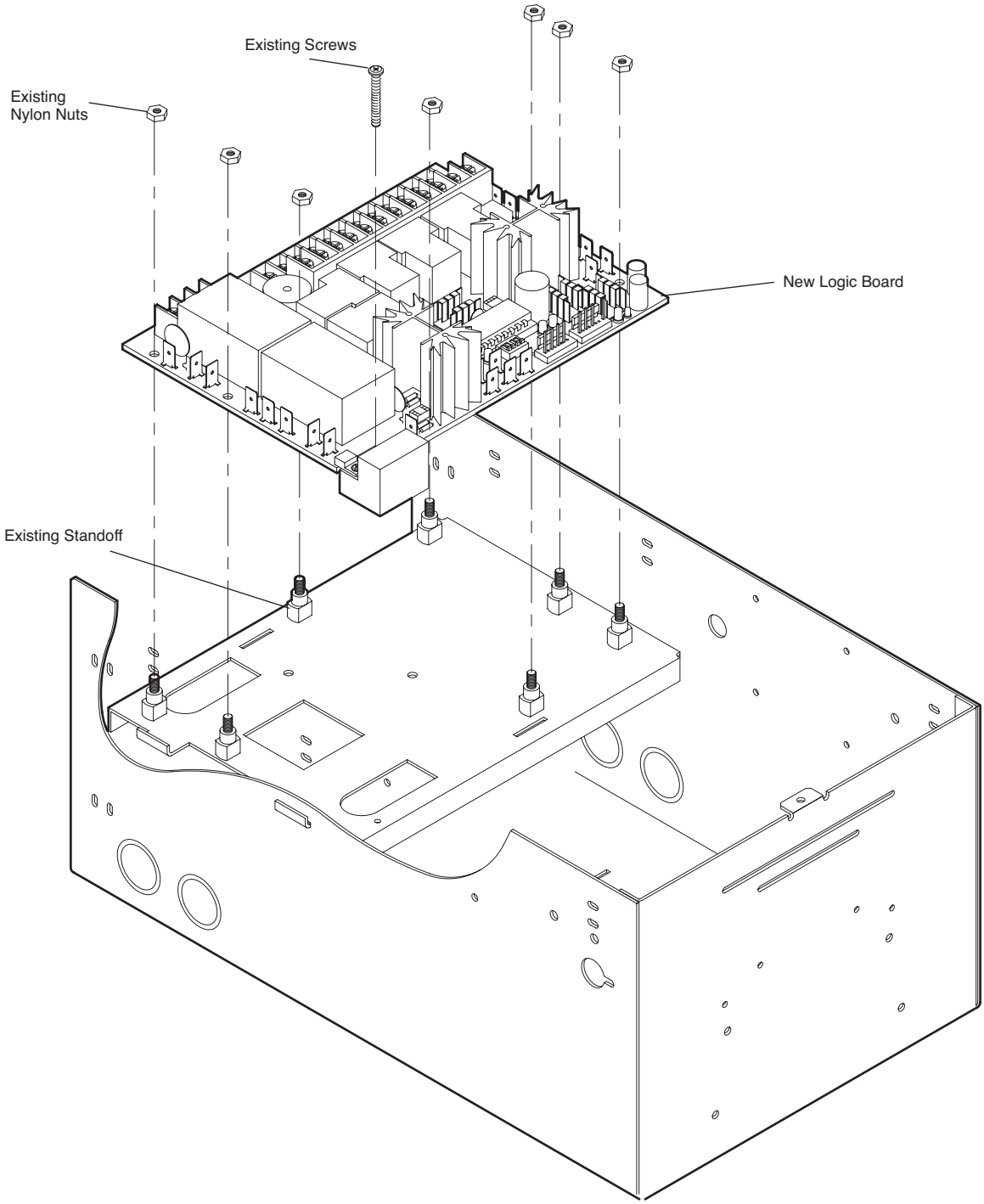
PROGRAM SETTINGS

Follow instructions on page 7 for optional control settings.

CONTROL CONNECTIONS

Follow instructions on page 8 for optional control settings.

LOGIC BOARD REPLACEMENT ASSEMBLY



SINGLE PHASE WIRING

NOTE: *For additional help with wiring, refer to the wiring diagram on next page.*

EXISTING WIRES

JUMPER WIRES

NOTE: *Remove jumpers from original board and install them on new logic board as follows.*

1. Reconnect the original blue wire from pin **J18** to pin **J12**.
2. Reconnect the original yellow wire from pin **J23** to pin **J22**.
3. Reconnect the original blue wire from pin **J21** to pin **J20**.
4. Reconnect the original orange wire from pin **J24** to pin **J25**.
5. Reconnect the original brown wire that runs from **#16** to **#20** on the **J2 TERMINAL BLOCK**.
6. Reconnect the original red wire that runs from **J12** through the in-line fuse to **#18** on the **J2 TERMINAL BLOCK**.

TRANSFORMER

1. Reconnect the original black wire that runs from the motor to pin **J20**.
2. Reconnect the original white wire that runs from the primary on the transformer to pin **J27**.
3. Reconnect one of the original brown wires that runs from the secondary on the transformer to pin **J9**.
4. Reconnect one of the original brown wires that runs from the secondary on the transformer to pin **J8**.

BRAKE

1. Reconnect the original black wire that runs from the brake to pin **J17**.
2. Reconnect the original red wire that runs from the brake to pin **J16**.

LIMIT SWITCHES

Reconnect the original limit harness to the 4 pin terminal on the board marked **J3 LIMIT SWITCH**.

RPM BOARD

Reconnect the original RPM harness to the 4 pin terminal on the board marked **J4 RPM BOARD**.

MOTOR

1. Reconnect the original grey wire from the motor to pin **J6**.
2. Reconnect the original blue wire from the motor to pin **J28** (115V only).
3. Reconnect the original purple wire from the motor to pin **J7**.
4. Reconnect the original yellow wire from the motor to pin **J5**.

OVERLOAD

1. Reconnect one of the original black wires from the overload to pin **J27**.
2. Reconnect one of the original black wires from the overload to pin **J26**.

CHARGER BOARD

1. Reconnect the original black wire from the **J6** charger terminal to **J15** on the logic board.
2. Reconnect the original white wire from the **J1** charger terminal to **#13** on the logic board **J2 TERMINAL BLOCK**.
3. Reconnect the original white wire from the **J2** charger terminal to **#14** on the logic board **J2 TERMINAL BLOCK**.
4. Reconnect the original blue wire from the **J7** charger terminal to **J19** on the logic board.
5. Reconnect the original red wire from the **J4** charger terminal to **J13** on the logic board.

NOTE: *For pushbuttons, sensing devices, power wiring and other additional options, refer to the wiring diagram on next page.*

POWER RESISTOR

Reconnect the original black wire from the power resistor to pin **J30**.

BATTERY

Reconnect the original black wire from the battery through the power disconnect to pin **J14**.

STROBE LIGHT

1. Reconnect the original red wire from the strobe light to **#17** on the logic board **J2 TERMINAL BLOCK**.
2. Reconnect the original black wire from the strobe light to **#15** on the logic board **J2 TERMINAL BLOCK**.

VOICE BOARD

1. Reconnect the original red wire from the voice board to **#19** on the logic board **J2 TERMINAL BLOCK**.
2. Reconnect the original black wire from the voice board to **#15** on the logic board **J2 TERMINAL BLOCK**.

AUXILIARY TERMINAL BLOCK

1. Reconnect the original purple wire from the terminal **#10** of the **auxiliary terminal block** to **#22** on the logic board **J2 TERMINAL BLOCK**.
2. Reconnect the original yellow wire from the terminal **#9** of the **auxiliary terminal block** to **#21** on the logic board **J2 TERMINAL BLOCK**.
3. Reconnect the original orange wire from the terminal **#9** of the **auxiliary terminal block** to pin **J9**.
4. Reconnect the original red wire from the terminal **#7** of the **auxiliary terminal block** to pin **J8**.

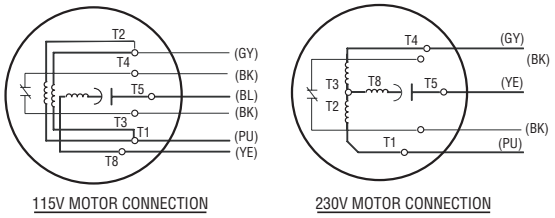
SYSTEM TEST

1. Restore AC and reconnect DC power.
2. Allow the system to stabilize. The alarm may sound for the first minute. The alarm should remain off after 3 minutes.
3. Verify the OPEN, CLOSE, STOP buttons operate correctly.
4. Verify the safety edge and eyes operate correctly, if appropriate.
5. Verify the alarm functionality by initiating a Key-Test.

SINGLE PHASE WIRING DIAGRAM

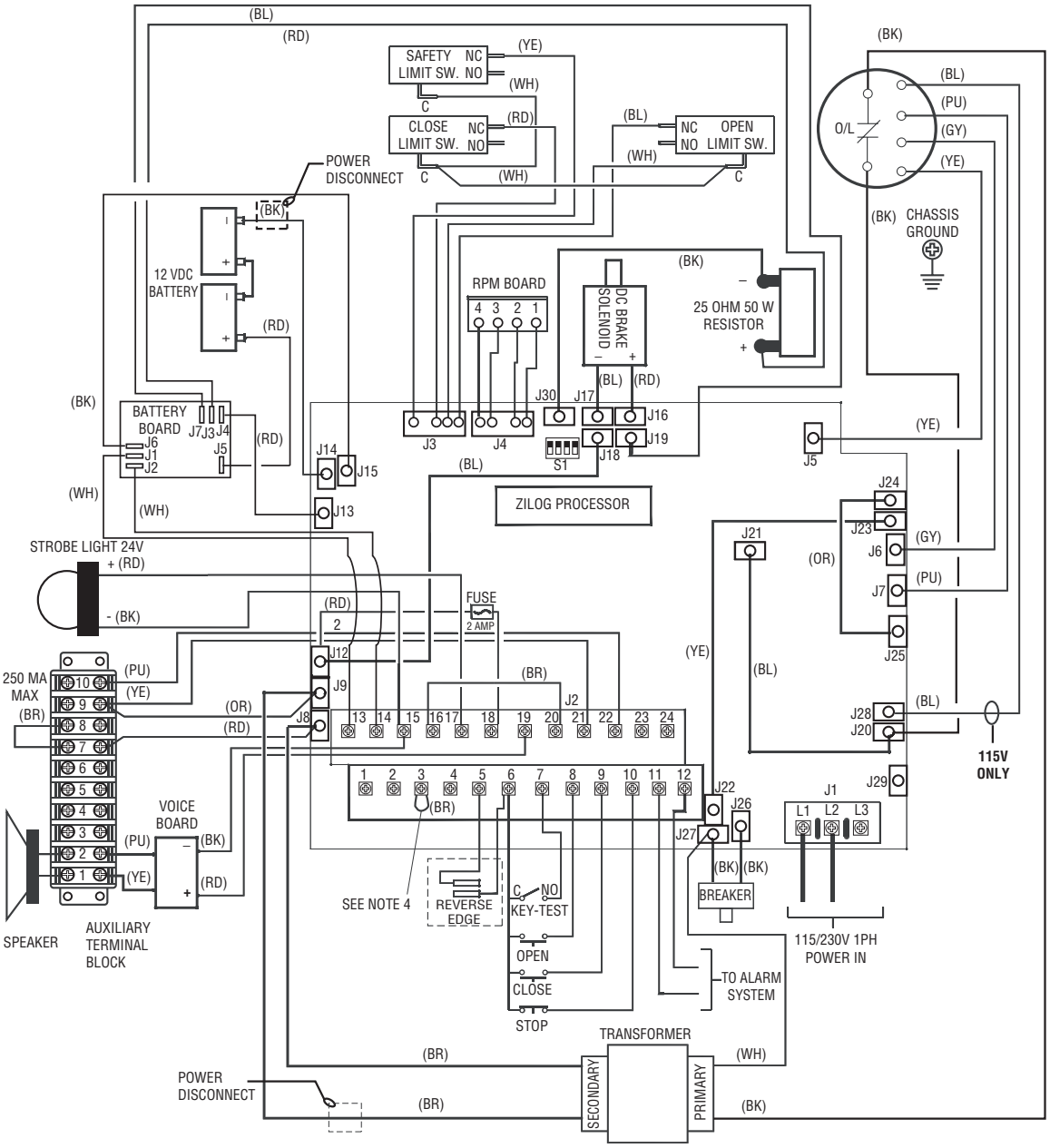
NOTES:

- *Place a jumper between J2-3 and J2-6 when 24 tooth door sprocket is used.*
- *See Owner's Manual for Dip Switch Functions and Programming Procedures.*
- *To reverse motor direction, reverse purple and gray motor wires.*
- *For B2 wiring, remove one end of jumper from J2-3 and connect to J2-16.*



115V MOTOR CONNECTION

230V MOTOR CONNECTION



THREE PHASE WIRING

NOTE: *For additional help with wiring, refer to the wiring diagram on next page.*

EXISTING WIRES

JUMPER WIRES

NOTE: *Remove jumpers from original board and install them on new logic board as follows.*

1. Reconnect the original blue wire from pin **J18** to pin **J12**.
2. Reconnect the original blue wire from pin **J27** to pin **J26**.
3. Reconnect the original brown wire that runs from **#16** to **#20** on the **J2 TERMINAL BLOCK**.
4. Reconnect the original brown wire that runs from **J12** through the in-line fuse to **#18** on the **J2 TERMINAL BLOCK**.

TRANSFORMER

Reconnect one of the original brown wires that runs from the secondary on the transformer to pin **J8**.

BRAKE

1. Reconnect the original black wire that runs from the brake to pin **J17**.
2. Reconnect the original red wire that runs from the brake to pin **J16**.

CHARGER BOARD

1. Reconnect the original black wire from the **J6** charger terminal to **J15** on the logic board.
2. Reconnect the original white wire from the **J1** charger terminal to **#13** on the logic board **J2 TERMINAL BLOCK**.
3. Reconnect the original white wire from the **J2** charger terminal to **#14** on the logic board **J2 TERMINAL BLOCK**.
4. Reconnect the original blue wire from the **J7** charger terminal to **J19** on the logic board.
5. Reconnect the original red wire from the **J4** charger terminal to **J13** on the logic board.

LIMIT SWITCHES

Reconnect the original limit harness to the 4 pin terminal on the board marked **J3 LIMIT SWITCH**.

RPM BOARD

Reconnect the original RPM harness to the 4 pin terminal on the board marked **J4 RPM BOARD**.

MOTOR

1. Reconnect the original grey wire from the motor to pin **J7**.
2. Reconnect the original purple wire from the motor to pin **J6**.
3. Reconnect the original yellow wire from the motor to pin **J5**.

OVERLOAD

1. Reconnect the original brown wire from **95** on the overload to pin **J9**.
2. Reconnect the original black wire from **T3** on the overload to pin **J24**.
3. Reconnect the original black wire from **T2** on the overload to pin **J25**.
4. Reconnect the original black wire from **T1** on the overload to pin **J21**.
5. Reconnect the original black wire from **L1** on the overload to pin **J27**.
6. Reconnect the original black wire from **L2** on the overload to pin **J20**.
7. Reconnect the original black wire from **L3** on the overload to pin **J29**.

NOTE: *For pushbuttons, sensing devices, power wiring and other additional options, refer to the wiring diagram on next page.*

POWER RESISTOR

Reconnect the original black wire from the power resistor to pin **J30**.

BATTERY

Reconnect the original black wire from the battery through the power disconnect to pin **J14**.

STROBE LIGHT

1. Reconnect the original red wire from the strobe light to **#17** on the logic board **J2 TERMINAL BLOCK**.
2. Reconnect the original black wire from the strobe light to **#15** on the logic board **J2 TERMINAL BLOCK**.

VOICE BOARD

1. Reconnect the original red wire from the voice board to **#19** on the logic board **J2 TERMINAL BLOCK**.
2. Reconnect the original black wire from the voice board to **#15** on the logic board **J2 TERMINAL BLOCK**.

AUXILIARY TERMINAL BLOCK

1. Reconnect the original purple wire from the terminal **#10** of the **auxiliary terminal block** to **#22** on the logic board **J2 TERMINAL BLOCK**.
2. Reconnect the original yellow wire from the terminal **#9** of the **auxiliary terminal block** to **#21** on the logic board **J2 TERMINAL BLOCK**.
3. Reconnect the original orange wire from the terminal **#9** of the **auxiliary terminal block** to pin **J9**.
4. Reconnect the original red wire from the terminal **#7** of the **auxiliary terminal block** to pin **J8**.

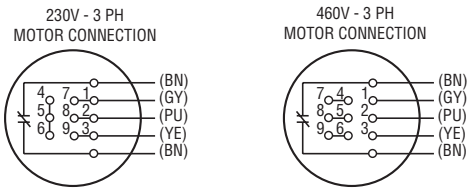
SYSTEM TEST

1. Restore AC and reconnect DC power.
2. Allow the system to stabilize. The alarm may sound for the first minute. The alarm should remain off after 3 minutes.
3. Verify the OPEN, CLOSE, STOP buttons operate correctly.
4. Verify the safety edge and eyes operate correctly, if appropriate.
5. Verify the alarm functionality by initiating a Key-Test.

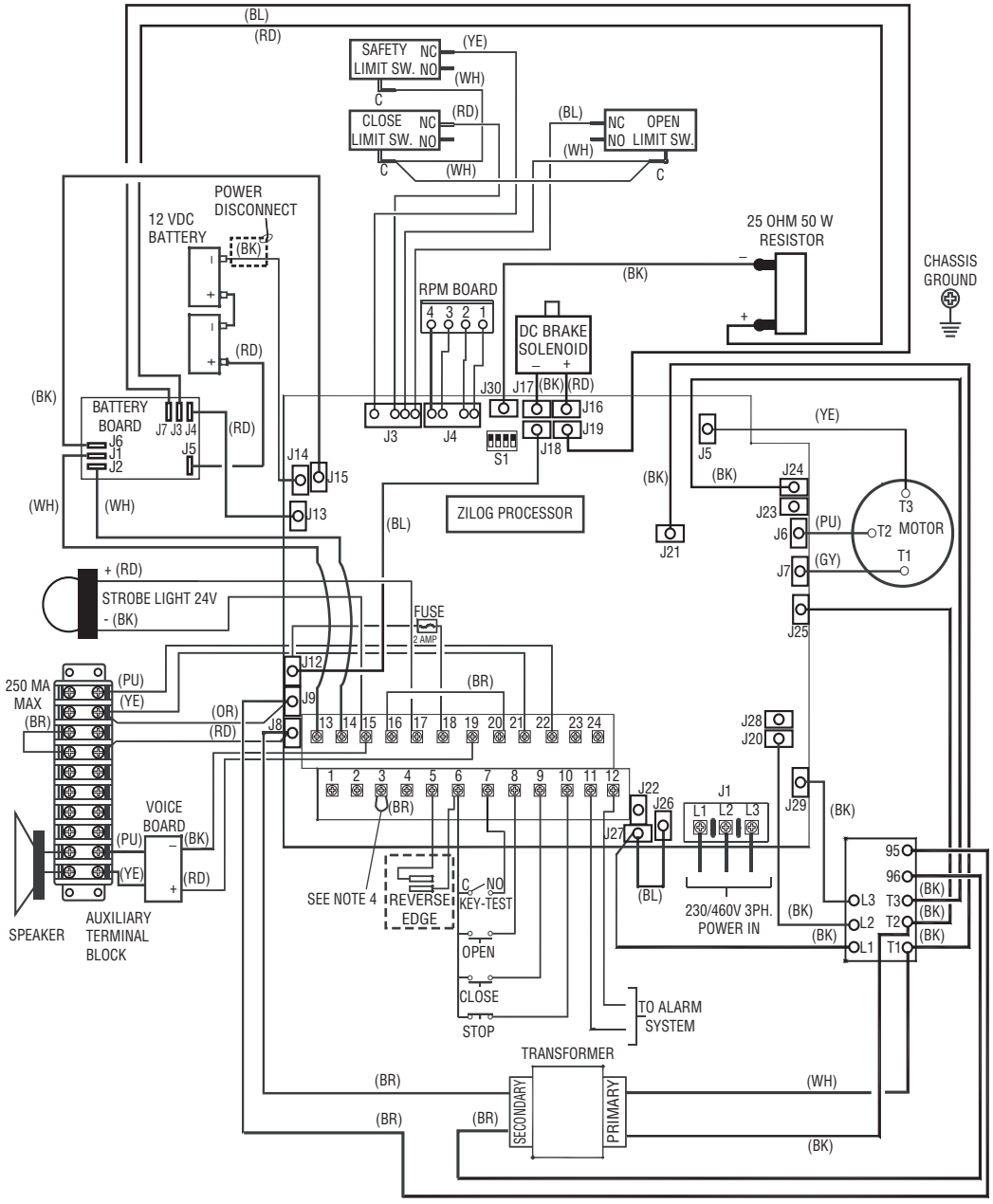
THREE PHASE WIRING DIAGRAM

NOTES:

- *Place a jumper between J2-3 and J2-6 when 24 tooth door sprocket is used.*
- *See Owner's Manual for Dip Switch Functions and Programming Procedures.*
- *To reverse motor direction, reverse purple and gray motor wires.*
- *For B2 wiring, remove one end of jumper from J2-3 and connect to J2-16.*



INTERNAL MOTOR CONNECTIONS



OPTIONAL CONTROL SETTINGS

NOTE: *All functions are independent of each other and do not require other control settings to be set at any certain configuration. Switch 4 is not used but must be set in the off position in order for the operator to work properly.*

ALARM DELAY TO CLOSE

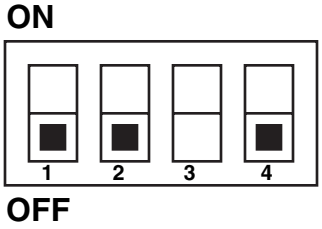
S1,1 and S1,2 set the Alarm Delay to Close time of the operator. Alarm Delay to Close is the time between when the operator first receives an active alarm signal and the door starts to close. Refer to illustrations at right for various settings.

FIRE ALARM SYSTEM

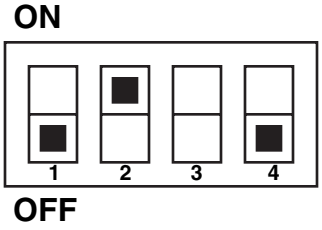
Select the alarm system being used. If the alarm is a normally open system, then S1,3 must be OFF. If the alarm is a normally close system, then S1,3 must be ON.

ALARM DELAY TO CLOSE

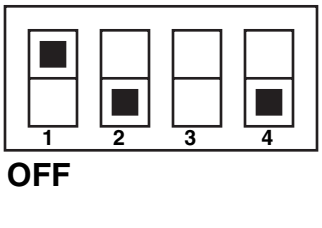
10 Second Delay



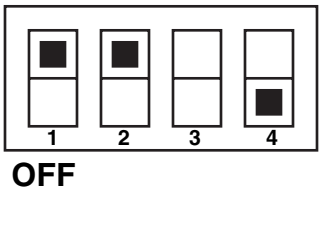
30 Second Delay



45 Second Delay

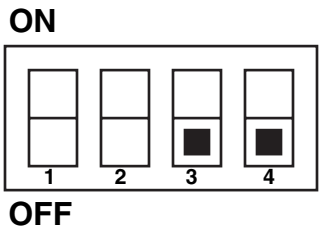


60 Second Delay

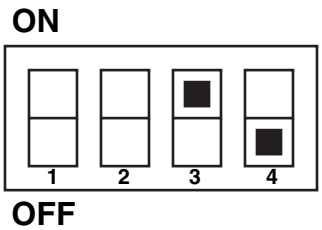


FIRE ALARM SYSTEM

N.O. Alarm



N.C. Alarm

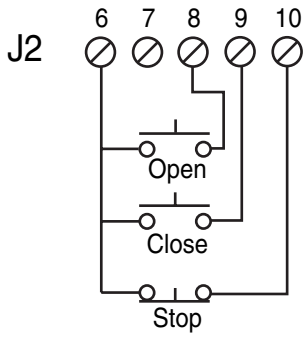


CONTROL CONNECTION DIAGRAM

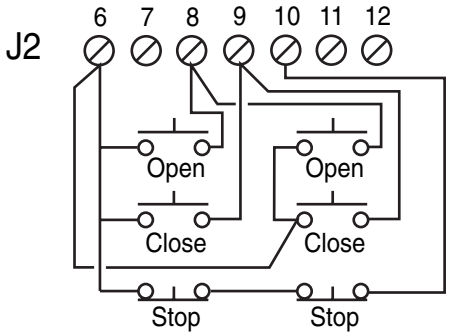
IMPORTANT NOTE:
The 3-Button Control Station provided must be connected for operation.

3 BUTTON STATION OR 3 POSITION KEYSWITCH WITH SPRING RETURN TO CENTER AND STOP BUTTON

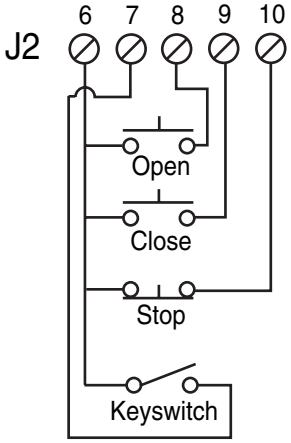
STANDARD



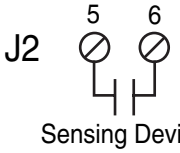
2 OR MORE



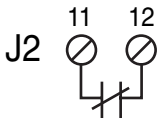
KEY-TEST



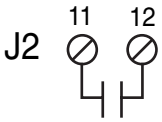
SENSING DEVICE TO REVERSE OR STOP



ALARM SYSTEM
NO OR NC CONTACTS

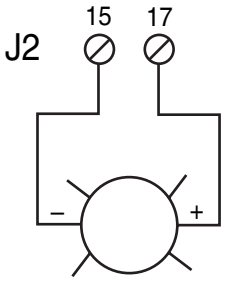


Must set DIP switch #3 (S1,3) to **ON**.

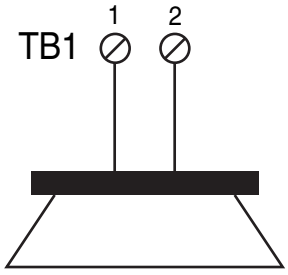


Must set DIP switch #3 (S1,3) to **OFF**.

STROBE LIGHT/SPEAKER WIRING



Strobe Light



Speaker

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.