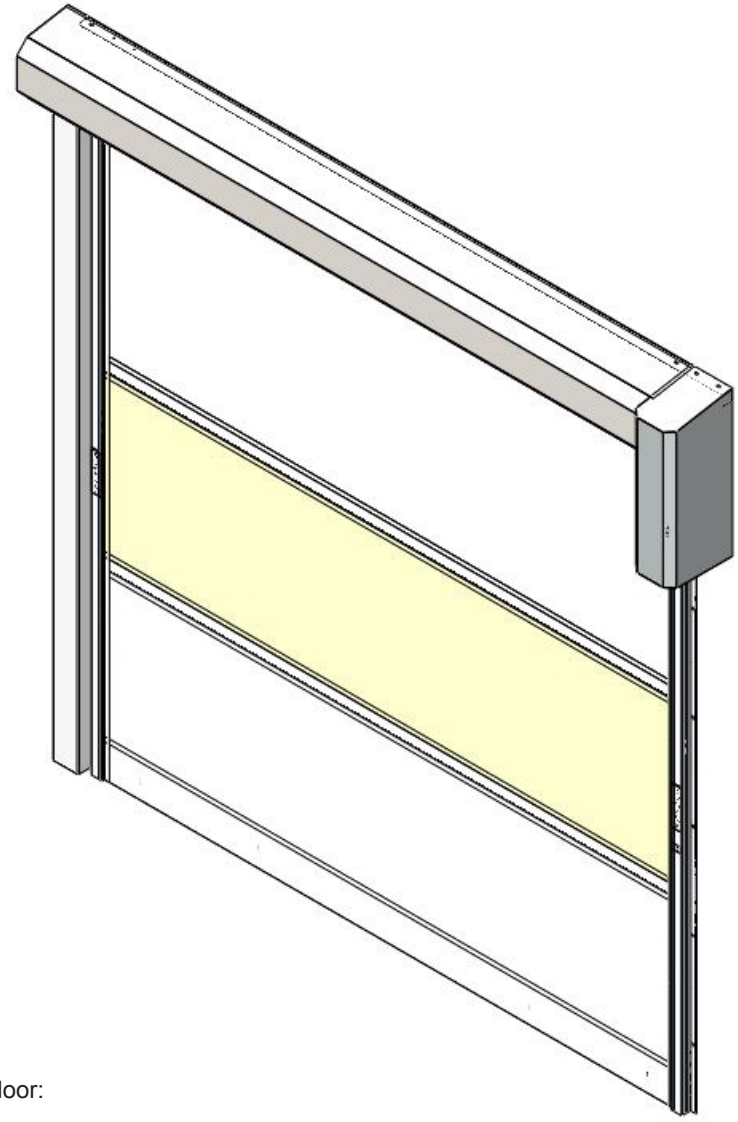
LITESPEED™
AND
LITESPEED™ CLEAN



This manual to remain with the door:
Date Installed:_____

ISO 9001 CERTIFIED

RITE-HITE
ALWAYS LOOKING AHEAD

Made In the U.S.A.

This Manual Covers All Doors Shipped To Date

PRINTED IN U.S.A
E-mail: printshop@RITEHITE.com

Publication No. LTSPDD
January 2015

TABLE OF CONTENTS

SPECIAL FEATURES

i-COMM™ Universal Controller	Adjustable Speeds
Soft-Edge™ Technology	Full Width Vision
I-Zone™ Area Detection System	Pre-wired Control Cable
Turn-Tite® Seal	Encoder Positioning
Stainless Steel “Clean” Capable	No Springs
Wireless / Touchless Activation	Black Anodized Aluminum
True Auto Re-Feed™	Small Footprint
USDA, FDA, GMP Compliance	Virtual Vision
Non-Powered Opening	Thru-Wall Brake Release
Slack Sensor	Quiet Operation

RECOMMENDED SERVICE PARTS

Fuse, 1 Amp, 250V, Time Delay	51000002 (2)
Fuse, 2 Amp, 250V, Time Delay	51000005 (2)
Kit, Encoder, Gearbox, Worm	53700842 (1)
Kit, Encoder, Gearbox, Bevel	53700888 (1)
Kit, i-COMM ii	53700860 (1)
Kit, LTSPD, Buttons, Qty 20	53700893 (1)
Kit, LTSPD, Guide, Refeed, Assembly	53700894 (2)
Shim, Retainer Roller, LTSPD	69000019 (4)

NOTICE TO USER

Our mission is to "Improve Industrial Safety, Security and Productivity Worldwide Through Quality and Innovation."

Thank you for purchasing the LiteSpeed™ door from RITE-HITE DOORS, INC. The LiteSpeed door is a unique fabric door that can fit most opening configurations while helping to keep different atmospheres separate.

This manual should be thoroughly read and understood before beginning the installation, operation or servicing of this door. This owners manual MUST be stored near the door. Complete final checklist prior to leaving site.

RITE-HITE DOORS, INC. reserves the right to modify the electrical and architectural drawings in this manual, as well as the actual parts used on this product, which are subject to manufacturing changes and may be different than shown in this manual. Due to unique circumstances with varying requirements, separate prints may be included with the unit.

The information contained in this manual will allow you to operate and maintain the door in a manner which will insure maximum life and trouble free operation.

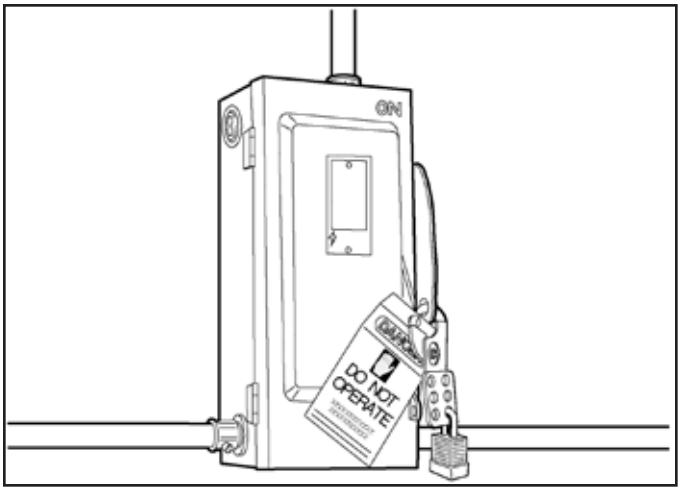
Your local RITE-HITE Representative provides the Planned Maintenance Program (P.M.P.) which can be fitted to your specific operation. If any procedures for the installation, operation, or maintenance of the LiteSpeed have been left out of this manual, are not complete, or if you have suggestions, contact RITE-HITE DOORS, INC. Technical Support at 1-563-589-2722.

LOCKOUT/TAGOUT PROCEDURES

The Occupational Safety and Health Administration (OSHA) requires, in addition to posting safety warnings and barricading the work area (including, but not limited to, trucking office and loading docks), that the power supply has been locked in the OFF position or disconnected. It is mandatory that an approved lockout device is utilized. An example of a lockout device is illustrated. The proper lockout procedure requires that the person responsible for the repairs is the only person who has the ability to remove the lockout device.

In addition to the lockout device, it is also a requirement to tag the power control in a manner that will clearly note that repairs are under way and state who is responsible for the lockout condition. Tagout devices have to be constructed and printed so that exposure to weather conditions, or wet and damp locations, will not cause the tag to deteriorate or become unreadable.

Rite-Hite does not recommend any particular lockout device, but recommends the utilization of an OSHA approved device (refer to OSHA regulation 1910.147). Rite-Hite also recommends the review and implementation of an entire safety program for the Control of Hazardous Energy (Lockout/Tagout). These regulations are available through OSHA publication 3120.



SAFETY WARNINGS

SAFETY IDENTIFICATION

⚠ DANGER

Danger indicates the presence of a hazard that *will cause severe personal injury or death.*

⚠ WARNING

Warning indicates the presence of a hazard that *can cause severe personal injury or death.*

⚠ CAUTION

Caution indicates the presence of a hazard that will or *can cause minor personal injury.*

NOTICE

Notice communicates installation, operation, or maintenance information that is safety related but not hazard related and may cause equipment or property damage.

NOTE: *A Note is used to inform you of important installation, operation, or maintenance information.*

GENERAL SAFETY ALERTS

⚠ DANGER

A qualified electrician should install the wiring in accordance with local and national electrical codes.

Use lockout and tagout procedures to prevent death or severe personal injury.

⚠ DANGER

To reduce risk of injury or death, an earth ground connection MUST BE made to the green/yellow control box ground terminal.

If metal conduit is used as the ground connector, an N.E.C. approved ground bushing and green/yellow wire MUST BE properly attached to the conduit for connection to the ground terminal.

⚠ DANGER

When working with electrical or electronic controls, make sure that the power source has been locked out and tagged according to OSHA regulations and approved local electrical codes.

⚠ WARNING

Failure to restrict the curtain speed can result in damage to product or injury to personnel. The curtain may close very quickly if the brake is fully released.

Releasing the brake partially will allow the door to close smoothly.

⚠ CAUTION

To prevent unauthorized use, barricade the door opening on both sides until the door has been completely installed.

NOTICE

Be extremely careful when drilling conduit holes into the control box. Drilling too deeply or allowing debris to fall into electrical components may cause severe equipment damage or component failure.

DO NOT turn control box upside down when drilling holes. Holes on top of control box may allow dust and moisture to enter the control box.

The safest location for conduit is at the bottom of the control box. Failure to install conduit at the bottom of the control box may void the warranty.

NOTICE

In freezer and cooler applications where a conduit passes from a warm to cold temperature zone, the conduit must be sealed with an approved material per 300.7(a) of the National Electric Code (NFPA 70).

It is important to verify the following basic information before starting with the installation.

1. Alternate dimensions in brackets are in [millimeters].
2. Make sure that you are working at the correct location and that you have the required work permits.
3. Inspect the site to make sure that there are no overhead obstructions (sprinkler pipes, air handling systems, electrical supply lines, etc.) that might interfere with the installation.
4. Detour material handling equipment during the installation.
5. Make sure that the correct electrical power is supplied to the door control box and can be shut off without interfering with other plant operations.
6. In the case of multiple doors being installed, it is imperative to install the proper control box with the matching door unit. The serial # for your door is on a label located on the side of the control box and sideframe, **“Figure 4–1” on page 24.**
7. Install activation and optional equipment after verifying door operation.
8. To verify proper installation, use “**Final Checklist” on page 45**.

NOTE: *Electrical prints included in the parts or control box supersede any prints included in this owners manual on* ***page 66—page 75.*** *Always check for electrical prints.*

⚠ DANGER

Un électricien qualifié doit installer le câblage conformément aux codes électriques locaux et nationaux. Utilisez procédures de cadenassage et d'étiquetage d'interdiction pour éviter des blessures graves ou la mort.

⚠ DANGER

Pour réduire le risque de blessure ou de décès, une connexion de mise à la terre doit être faite au vert/jaune borne de masse du boîtier de commande. Si conduit métallique est utilisé comme le connecteur de mise à la terre, un N. E. C. sol approuvé la bague et fil vert/jaune doit être correctement relié à la conduite à la borne de connexion de terre.

⚠ DANGER

Lorsque vous travaillez avec électrique ou commandes électroniques, assurez-vous que la source d'alimentation a été verrouillé et étiqueté conformément aux réglementations de l'OSHA et approuvées codes électriques locaux.

⚠ AVERTISSEMENT

Le non-respect de restreindre le rideau vitesse peut entraîner des dommages au produit ou blesser le personnel. Le rideau peut fermer très rapidement si le frein est complètement desserré. Relâchant le frein partiellement permettra à la porte pour la fermer sans heurts.

⚠ ATTENTION

Pour empêcher toute utilisation non autorisée, barricade l'ouverture des portes des deux côtés jusqu'à ce que la porte a été complètement installé.

NOTICE

Être extrêmement prudent lors du perçage de trous dans le boîtier de commande. Perçage trop profondément ou permettant aux débris d'automne en composants électriques peut provoquer de graves dommages à l'équipement ou la panne d'un composant. NE PAS tourner la commande case à l'envers lors du perçage des trous. Les trous sur le haut de la boîte de commande peut permettre à la poussière et à l'humidité d'entrer dans le boîtier de commande. La plus sûre pour emplacement conduit est au bas de la boîte de commande. Échec de l'installation conduit au bas de la boîte de commande peut annuler la garantie.

NOTICE

Dans un congélateur et d'un refroidisseur applications où une conduite passe d'un chaud froid de zone de température, le conduit doit être scellé avec un matériau approuvé par 300,7 (a) du Code électrique national (NFPA 70).

RITE-HITE DOORS NOTES PAGE

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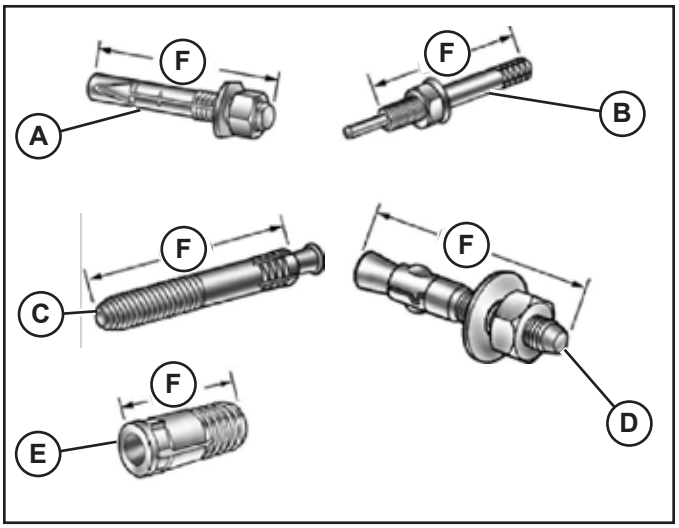
CHAPTER 1
SUGGESTED MOUNTING METHODS

Acceptable Anchor Types

These anchor types provide the necessary strength for secure attachment of the unit to the building wall.



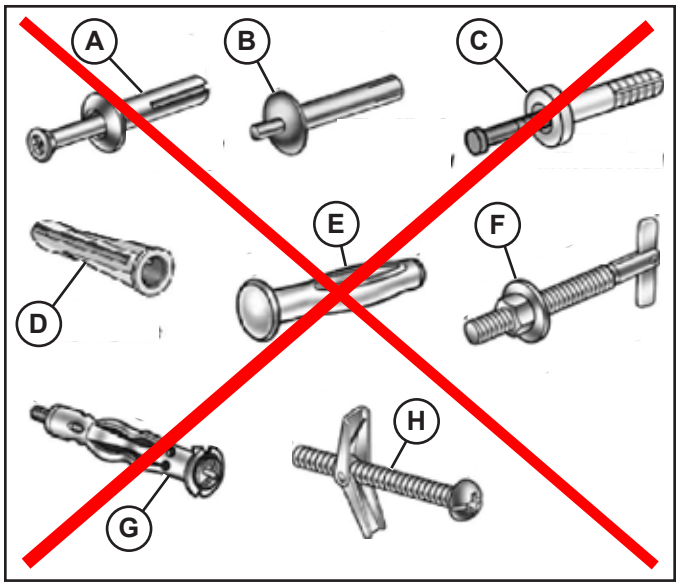
A - Sleeve Anchor	*D - Wedge Anchor*
B - Hammer Anchor	*E - Expansion Anchor*
C - Stud Anchor	*F - Length*

Figure 1–1

NOTE: *Length (F) of anchor should be long enough to engage concrete structure by a minimum of 2" [51 mm]. Length should be increased to allow anchor to extend through any brick or aggregate surface on exterior into concrete structure by a minimum of 2" [51 mm].*

Unacceptable Anchor Types

These anchor types are not strong enough for this application and do not provide the ability to tightly secure the unit to the building wall.



A - Removable Zinc Alloy	*E - Split Drive Anchor*
B - Zinc Alloy & Aluminum w/Wide Head	*F - Threaded Toggle Anchor*
C - Nylon w/Round Head	*G - Hollow Wall Anchor (Molly Bolt)*
D - Conical Polyethylene	*H - Toggle Bolt*

Figure 1–2

Acceptable Fasteners

Threaded rod can be used and cut to length in the field to suit the application. Hex head bolts can be used, but length must be determined ahead of time to ensure the fasteners will work with the application.

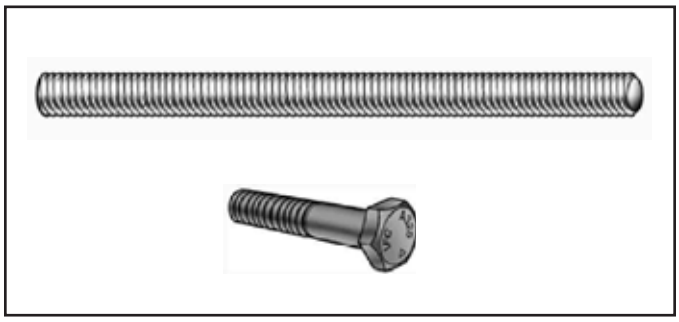


Figure 1–3

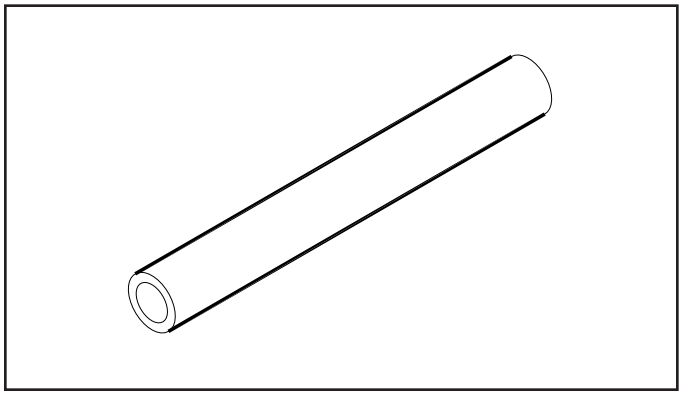


Figure 1–4: Wall Sleeve - 3/8” [10 mm] ID Ø

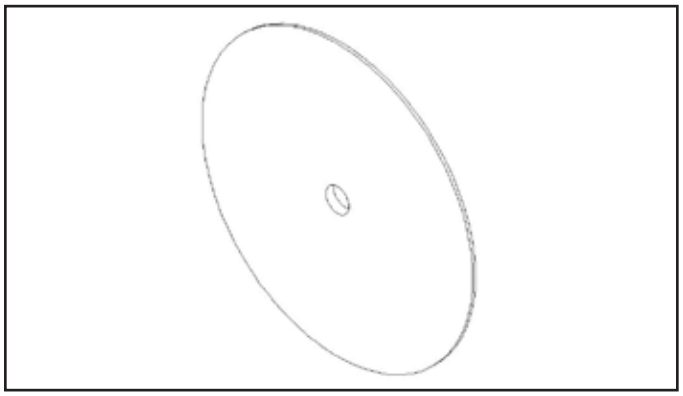
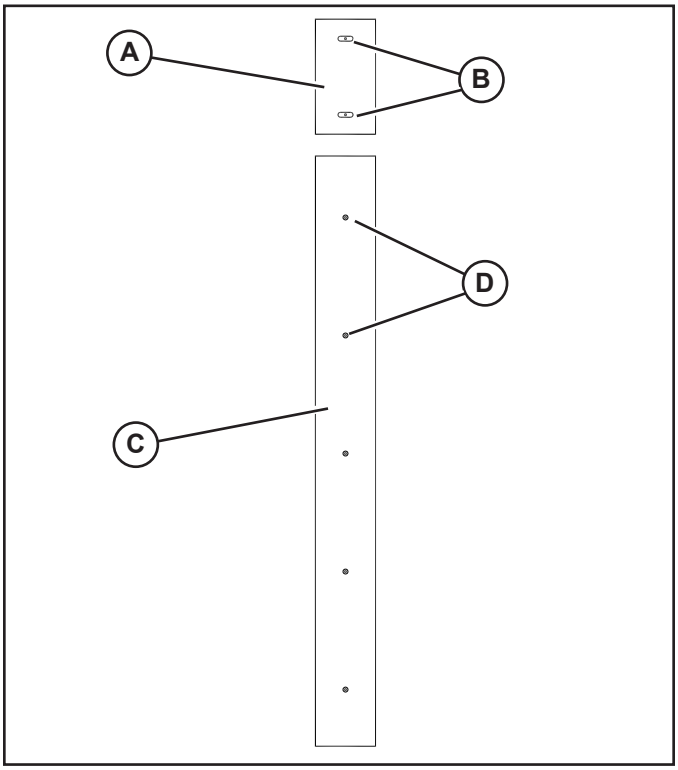


Figure 1–5: Backing Plate - 1/8” [3 mm] x 6” [152 mm] Ø

Typical Fastener Spacing



A - Header	*B - 3/8” [10 mm] Minimum Fastener*
C - Sideframe	*D - Sideframe Fasteners*

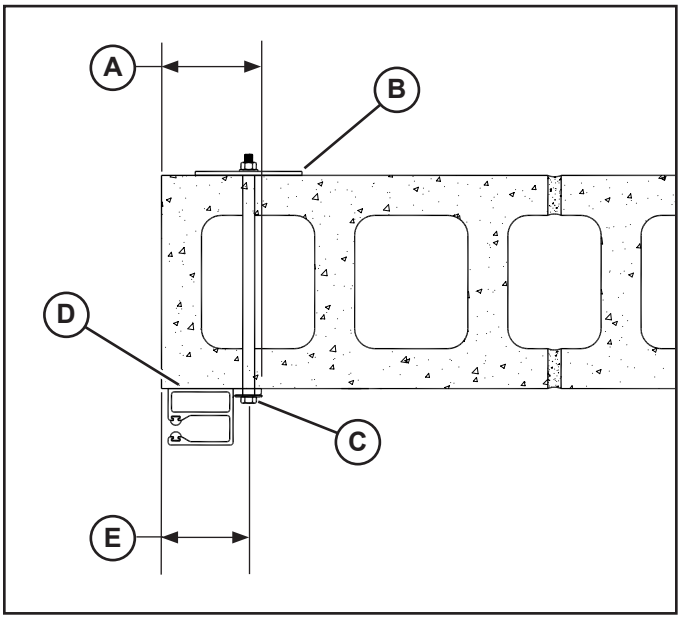
Figure 1–6

If the wall is constructed of wood, stone block or insulation, follow this fastening method. Typically sideframes on doors are required to be thru-bolted a minimum of every 4’ [1219 mm] with lag screws filling in the remaining holes. Should a door fail to open when a vehicle is approaching the non-mounted side and impact the door, the fastening method must hold to prevent the door from coming off the wall. This is the responsibility of the installer.

Sideframe requires 1/4” [6 mm] minimum fasteners (D) with thru-bolts a minimum of every 4’ [1219 mm].

Wall sleeves (Figure 1-4) and Backing Plates (Figure 1-5) may be required if wall crushes when fasteners are tightened.

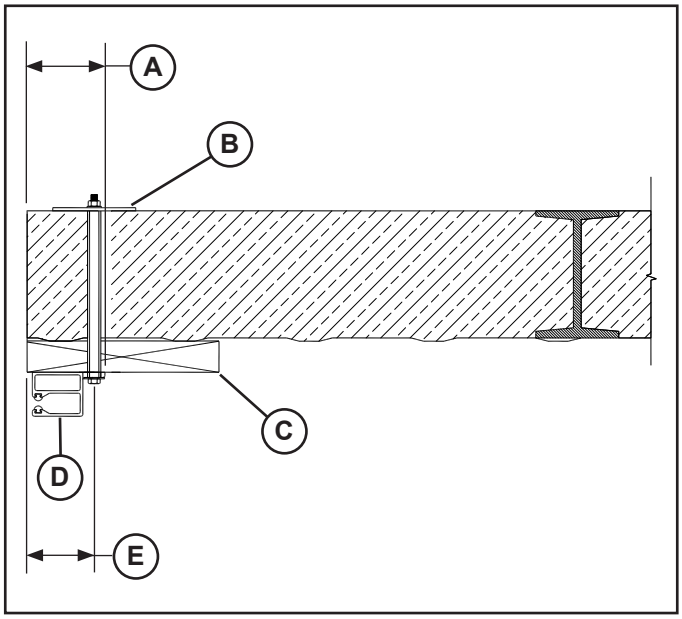
Block Wall



A - Flat Space Required: 3 3/4” [95 mm] Standard, 4” [102 mm] Stainless
B - Minimum 1/8” x 6 Ø [6x152 mm] Backer Plate (Supplied by Others)
C - 3/8” [10 mm] for Header Bracket, 1/4” [6 mm] for Sideframe Minimum Fasteners Required (Supplied by Others)
D - Sideframe
E - 3 1/4” [83 mm] Standard, 3 3/8” [86 mm] Stainless

Figure 1–7

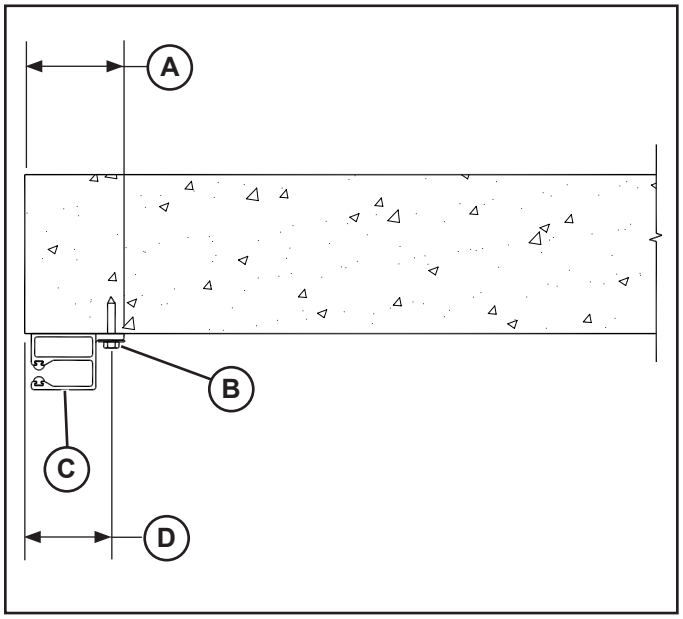
Insulated Panel Wall



A - Flat Space Required: 3 3/4” [95 mm] Standard, 4” [102 mm] Stainless
B - Minimum 1/8” x 6 Ø [6x152 mm] Backer Plate (Supplied by Others)
C - Filler Board Ordered Through Rite-Hite or Supplied by Others
D - Sideframe
E - 3 1/4” [83 mm] Standard, 3 3/8” [86 mm] Stainless

Figure 1–8

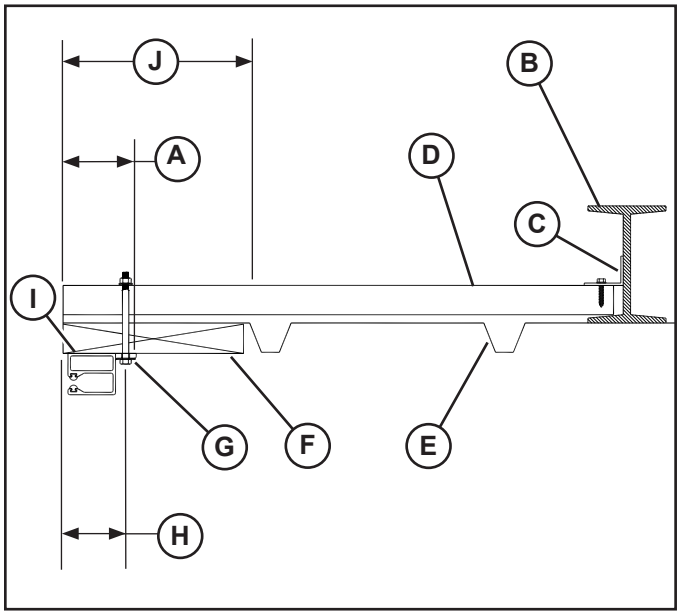
Concrete Wall



A - Flat Space Required: 3 3/4” [95 mm] Standard, 4” [102 mm] Stainless
B - 3/8” [10 mm] for Header Bracket, 1/4” [6 mm] for Sideframe Minimum Fasteners Required (Supplied by Others)
C - Sideframe
D - 3 1/4” [83 mm] Standard, 3 3/8” [86 mm] Stainless

Figure 1–9

Ribbed Metal Wall

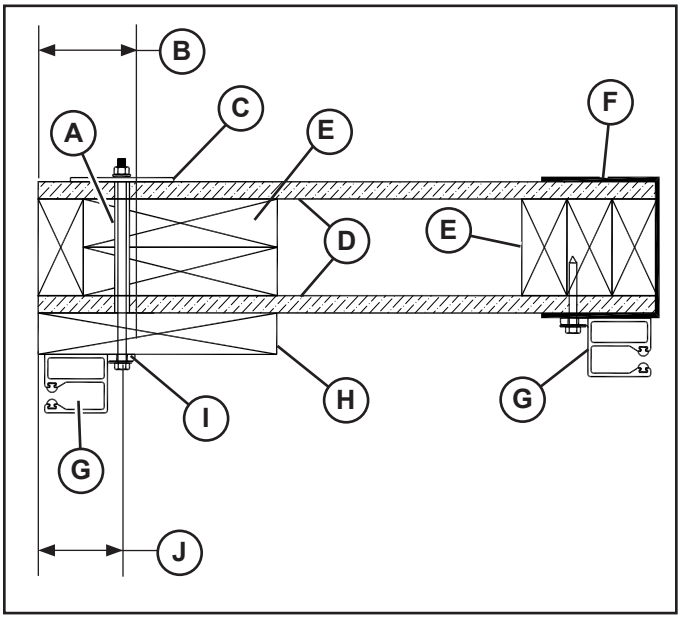


A - Flat Space Required: 3 3/4” [95 mm] Standard, 4” [102 mm] Stainless
B - Building Structural Member
C - Angle Bracket (Supplied by Others)
D - 2”x6” [51x152 mm] or Structural Steel Channel Backer (Supplied by Others)
E - Corrugated Metal Siding
F - Filler Board Ordered Through Rite-Hite or Supplied by Others
G - 3/8” [10 mm] for Header Bracket, 1/4” [6 mm] for Sideframe Minimum Fasteners Required (Supplied by Others)
H - 3 1/4” [83 mm] Standard, 3 3/8” [86 mm] Stainless
I - Sideframe
J - 11” [297 mm] - Approximate flat space required to install motor assembly

Figure 1–10

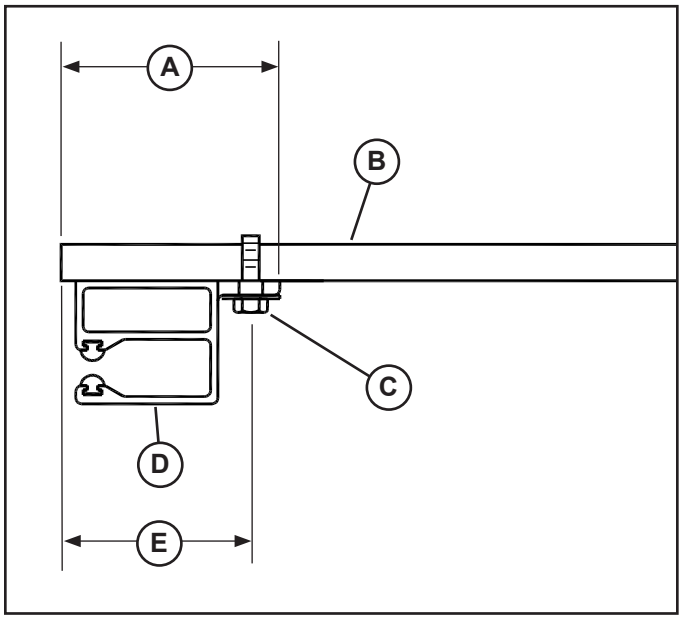
Drywall

Figure 1–11



A - Wall Sleeve
B - Flat Space Required: 3 3/4” [95 mm] Standard, 4” [102 mm] Stainless
C - Minimum 1/8” x 6 Ø [6x152 mm] Backer Plate (supplied by others)
D - Drywall
E - Stacked 2x4 or 2x6 or 2x8 [51x102 or 51x152 or 51x203 mm]
F - Any Jamb Wrap: Must be at Least 4” [102 mm] Flange/Leg for Even Mounting Surface
G - Sideframe
H - Filler Board Ordered Through Rite-Hite or Supplied by Others
I - 3/8” [10 mm] for Header Bracket, 1/4” [6 mm] for Sideframe Minimum Fasteners Required (Supplied by Others)
J - 3 1/4” [83 mm] Standard, 3 3/8” [86 mm] Stainless

Steel Member



A - Flat Space Required: 3 3/4” [95 mm] Standard, 4” [102 mm] Stainless
B - 5/16” [8 mm] Minimum Steel Member
C - 3/8” [10 mm] for Header Bracket, 1/4” [6 mm] for Sideframe Minimum Fasteners Required (Supplied by Others)
D - Sideframe
E - 3 1/4” [83 mm] Standard, 3 3/8” [86 mm] Stainless

Figure 1–12

DOOR JAMB

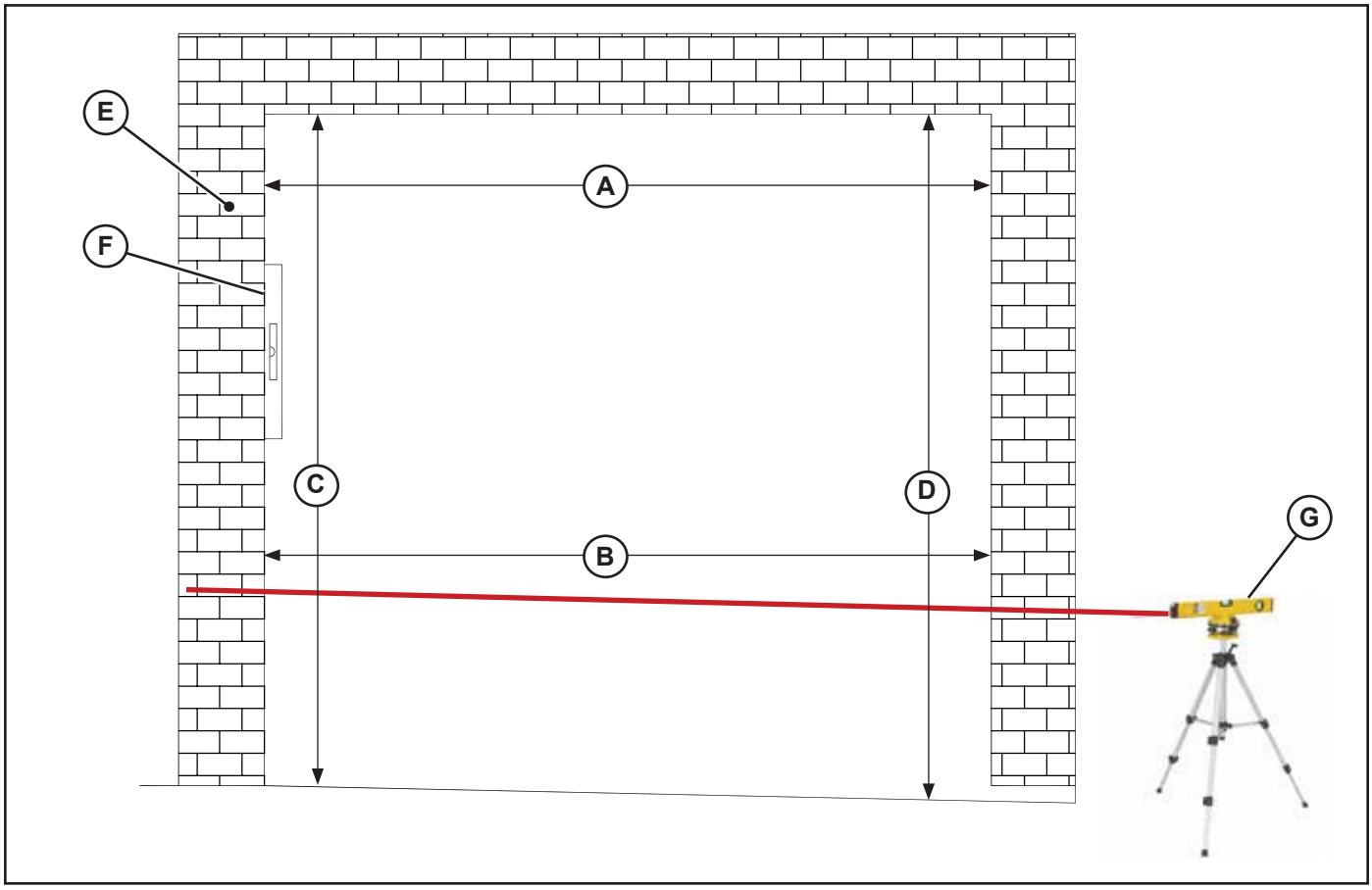


Figure 1–13

NOTE: *For space clearance requirements, see Architectural Drawings on* ***pages 87—86.***

1. Measure door opening width at the top (A).
2. Measure door opening width at the bottom (B).
3. Measure door opening height at left side (C). In the diagram above, this is the “High Side.”
4. Measure door opening height at right side (D). In the diagram above, this is the “Low Side.”
5. Dimensions from steps 1–4 should be within ± 1/2” [13 mm] of the dimensions listed on the serial number label. If the measurements do not agree, STOP! Contact your RITE-HITE representative.
6. Surface (E) MUST be flat, smooth, and collinear with opposite side.
7. Using a 6’ [1829 mm] carpenter’s level (F), verify that the door jambs and header are plumb and perpendicular.
8. Using a laser level (G), place a mark where the laser is sighted on each side of the jamb to determine if the floor is level. Measure both sides from floor to the mark and if the floor is not level to within 1/8” [3 mm], shim under the sideframe that will be located on the “Low Side” (greatest measurement) of the door opening.

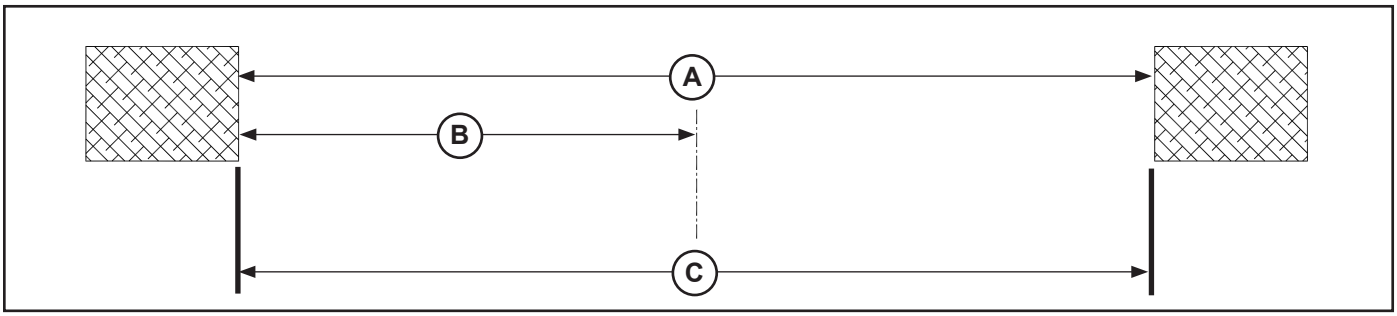


Figure 1–14

1. Measure Door Opening Width (A), find center, and place mark on the floor.
2. From centerline, measure over 1/2 Ordered Door Width + 1/4” [6 mm] (+ 1/16” [1.5 mm], -0”) (B) and place a 6” [152 mm] mark on the floor. From this mark, measure over Ordered Door Width + 1/2” [13 mm] (+ 1/8” [3 mm], -0”) (C) and place a 6” [152 mm] mark on the floor.

INSTALLATION TOOLS REQUIRED	
Small Straight & Phillips Screwdrivers	Fork lift
Allen Wrench Set (1/8” & 5/32”) [3 & 4 mm]	Laser Level
7/16”, 9/16” [11 & 14 mm] Socket/wrench	Ladder (6’-8’) [1829 - 2438 mm]
25’ [7620 mm] Tape measure	Plumb Bob
6’ [1829 mm] Carpenters level	Hammer Drill
Scissors Lift	Drill Bits
“C” Clamps	Straight Edge
Drill (cordless or electric)	5/16” [8 mm] Nut Driver
Phillips Bit for Drill	1/8” [3 mm] Allen Driver
Wire Strippers	—

LITESPEED COMPONENTS IN THE CRATE	
Header (Roller Tube, Curtain, Drive System)	Optional Poly Lumber
RH and LH Sideframe	Optional Remote Mounted Controls
Prewired Control Box	Optional Header Shroud
Hardware Box	Optional Motor Cover
Optional Activation Devices	Optional Step-Down Transformer
Optional Curtain Fans	Optional Thru-Wall Brake Release
Optional I-Zone	Optional Virtual Vision
Optional Metal Jamb Mounting Kit	Optional Non-Powered Open Counterweight Components: Counterweight and Tube Cover Belt Clamp, Bottom Tube Mounting Hardware

CHAPTER 2

HEADER / SIDEFRAME INSTALLATION

NOTICE

It is imperative that the sideframes be mounted at the proper width.

If mounted too wide, excess wear is placed on the edge.

If too narrow, the curtain may appear wavy or crease in the center.

NOTE:

- *If door is equipped with Poly Lumber option, proceed to* ***page 47****.*
- *If door is equipped with Weld Plate option, proceed to* ***page 53****.*

10 STEP BASIC INSTALLATION

1. Place sideframes and header on the floor in front of the opening.
2. If lifting with forks under the roller tube and shroud is not present, remove the lower spreader bar. If optional center shroud is present, remove shroud and lower spreader bar from header.
3. Attach sideframes to header.
4. Lift unit in place and fasten to the wall.
5. Feed curtain into the sideframes.
6. Attach encoder cable and motor / brake cables, and connect photoeye wires to the terminal block.
7. i-COMM / Encoder setup.
8. Operate and adjust open / close positions.
9. Install spreader bar and optional shrouds.
10. Install optional activation devices.

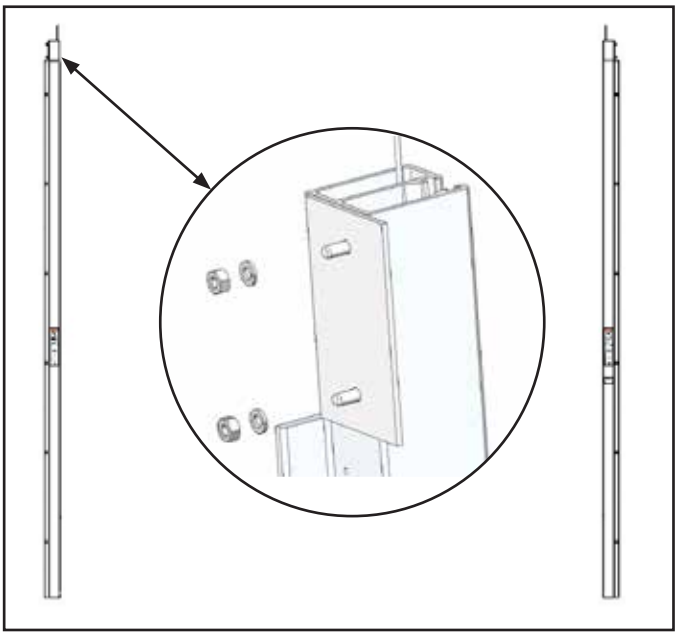


Figure 2–1: Sideframes (Viewed Looking At The Floor)

1. Place sideframes on the floor in front of the opening at approximately Ordered Door Width.

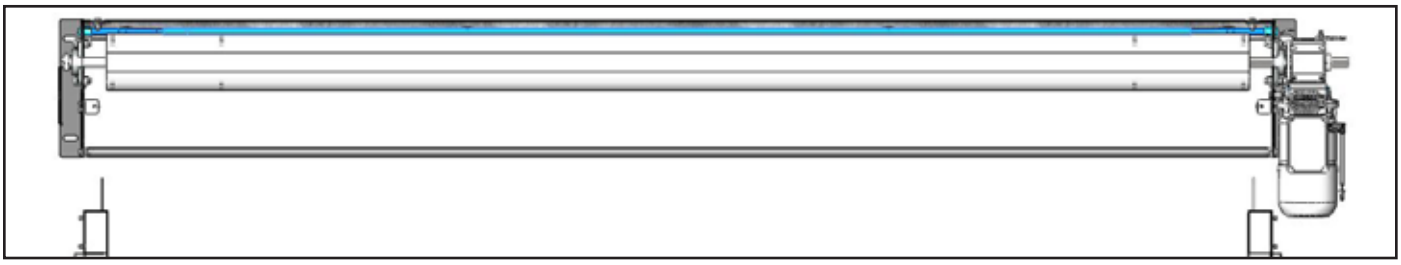


Figure 2–2: Header (Viewed Looking At The Floor)

2. Place header in front of the opening at the top of the sideframes.

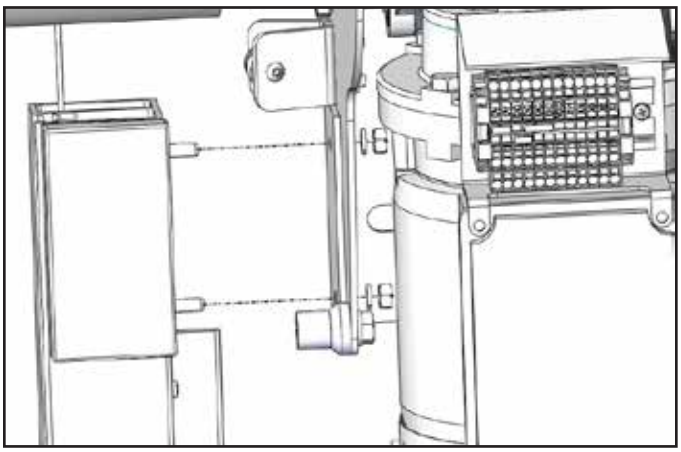


Figure 2–3

3. Remove the (2) sets of 1/4” [6 mm] nuts and washers from the studs at the top of the drive sideframe and fasten to the header. 7/16” [11 mm] wrench required.

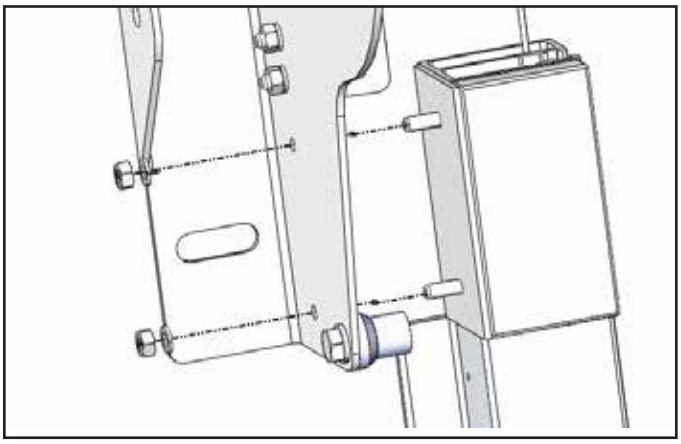


Figure 2–4

4. Remove the (2) sets of 1/4” [6 mm] nuts and washers from the studs at the top of the non-drive sideframe and fasten to the header. 7/16” [11 mm] wrench required.

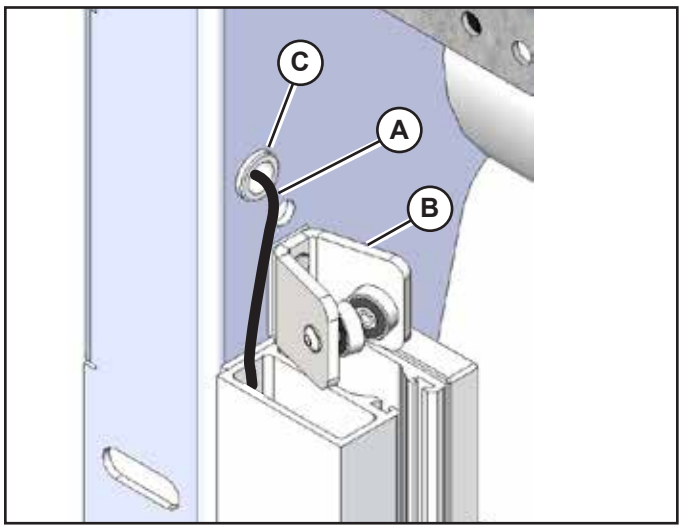


Figure 2–5

5. Remove the coiled photo eye cable (A) tied to the top of each sideframe. Route the photo eye cable behind the drive and non-drive guide roller assembly (B) and through the rubber grommets (C) located on the header end plate. DO NOT leave cable slack as curtain may rub against it.

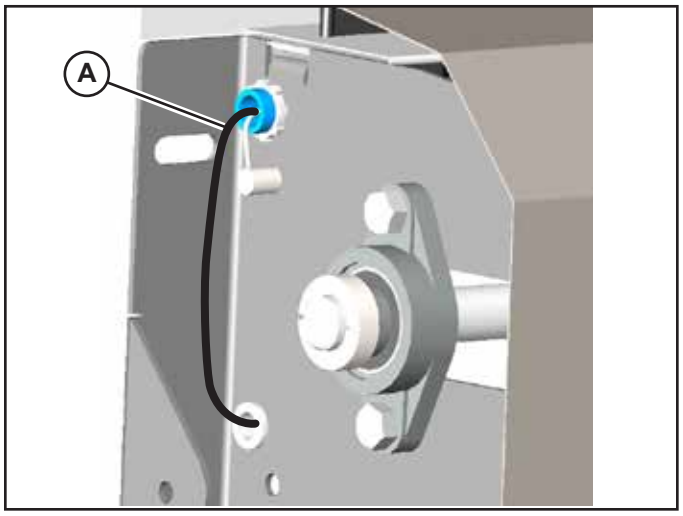


Figure 2–6

6. Locate the taped down string coming out of the non-drive header wire raceway. Tie the photo eye cable (A) to the string. On the drive side, pull the string to bring the non-drive photo eye cable to the drive side.

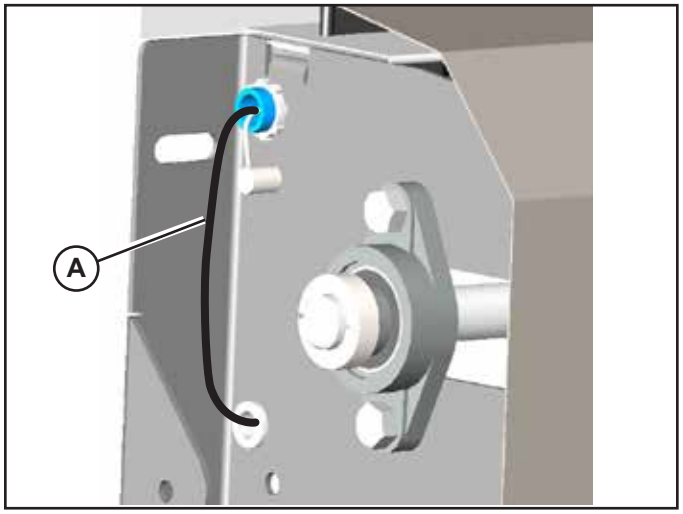


Figure 2–7

7. Route drive side header photoeye cable thru the grommet.
8. Wrap up and safely store all photo eye cables (A). (They will be terminated to the motor terminal block when the pre-wired control cable is attached to the motor.)

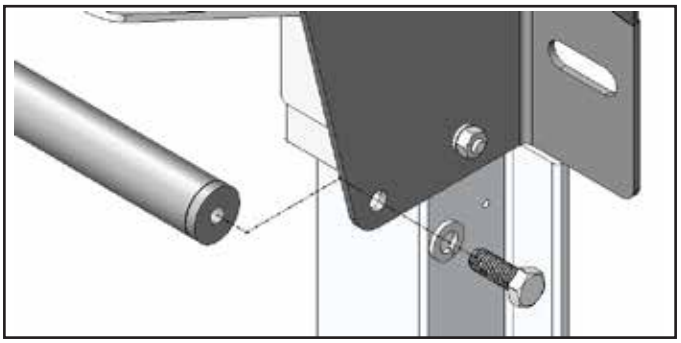


Figure 2–8

9. ***Only required if lifting with forklift under curtain:*** Remove the 3/8” [10 mm] bolt and washer from the header support bar on drive side.

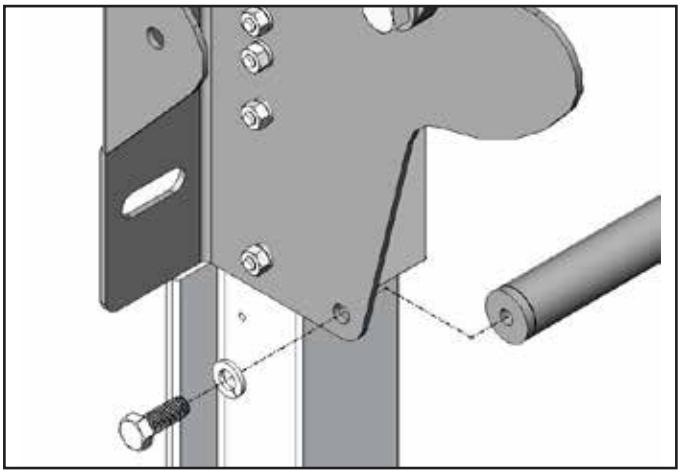


Figure 2–9

10. ***Only required if lifting with forklift under curtain:*** Remove the 3/8” [10 mm] bolt and washer from the header support bar on non-drive side.

LIFTING THE UNIT INTO POSITION

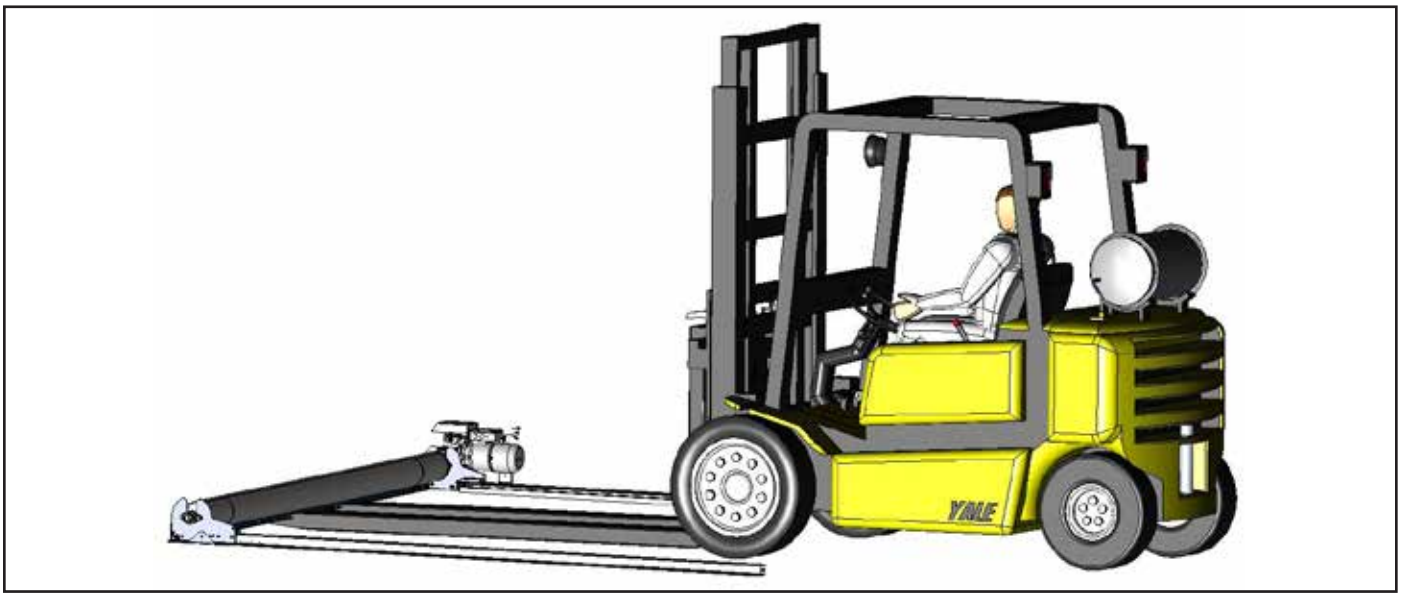


Figure 2–10

11. Door should be lifted by the header/roll tube (using a sling around the roll tube is recommended). If lifting with forks from under the roll tube, you must provide a smooth and clean surface where the forks will contact the curtain fabric.

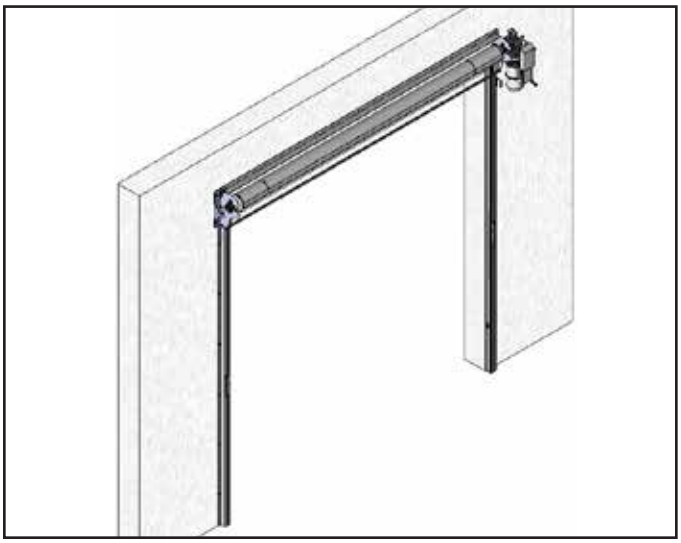


Figure 2–11

12. Lift the unit against the wall mounting surface. Level, plumb, square and verify proper spacing between sideframes. Attach the unit to the wall with adequate fasteners into all sideframe and header mounting holes.
13. Reattach the front header support bar with the 3/8” [10 mm] (9/16” [14 mm] wrench) hardware removed earlier.

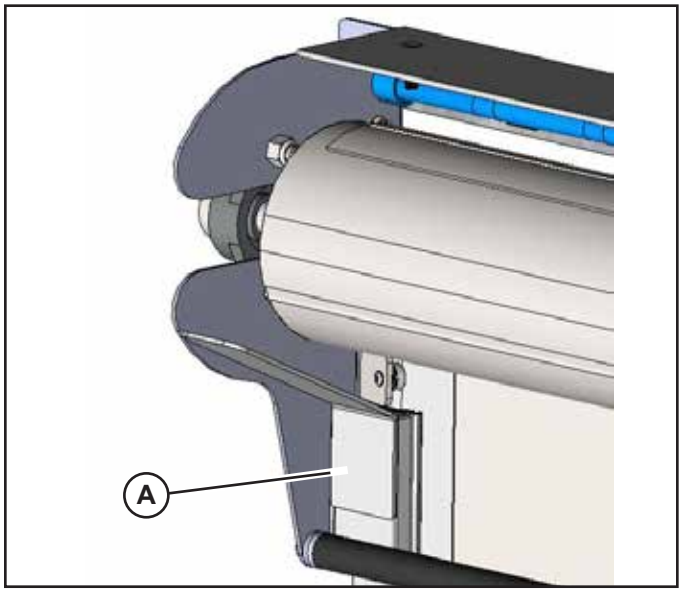


Figure 2–12

For doors without a shroud, a curtain guide (A) is provided to prevent the curtain from unwrapping too far.

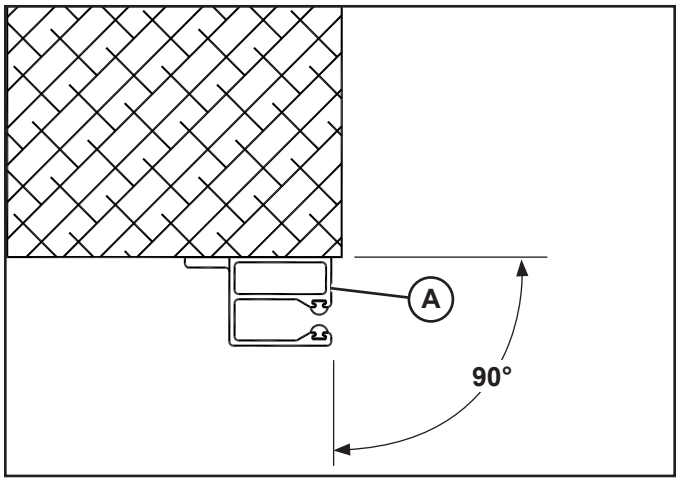


Figure 2–13

14. Place non-drive sideframe at the previously made mark on the floor. Sideframe must be 90° to wall. Measure the angle from the flat surface of the sideframe (A). Use shims as required to square.

    Using a 6' [1829 mm] level, make sure that the sideframe is plumb in both directions. Clamp in place.

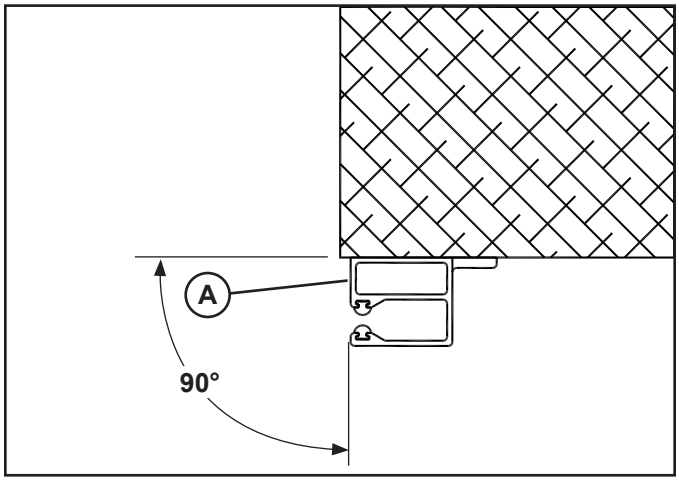


Figure 2–14

15. Place drive sideframe at the previously made mark on the floor. Sideframe must be 90° to wall. Measure the angle from the flat surface of the sideframe (A). Use shims as required to square.

    Using a 6' [1829 mm] level, make sure that the sideframe is plumb in both directions. Clamp in place.

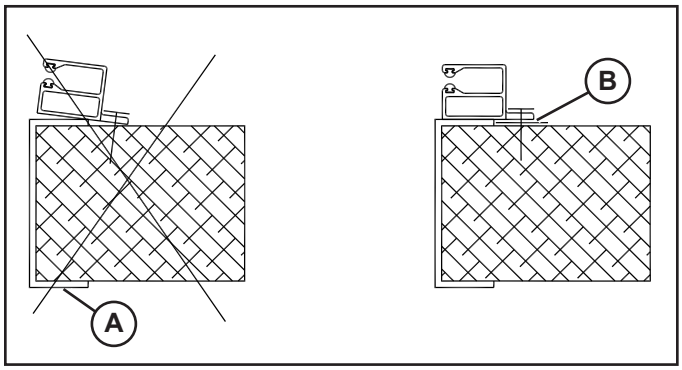


Figure 2–15

16. If wall has a jamb cap (A), the sideframe MUST be shimmed out (B).

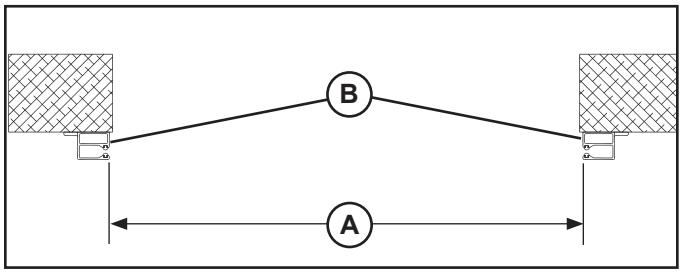


Figure 2–16

17. ***Verify Critical Dimension (A)***: Ordered Door Width plus 1/2" [13 mm] (+ 1/8" [3 mm], -0"). Take this measurement from the flat surfaces of the sideframes (B).

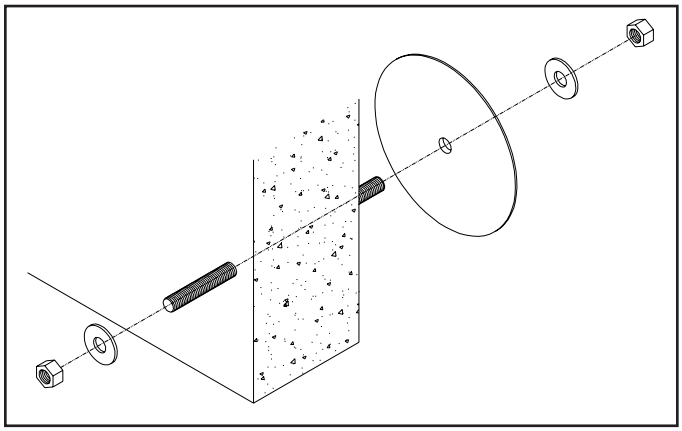


Figure 2–17

18. If backer plates are being used, they must be clean and either be painted or a non-ferrous material.

CHAPTER 3
CURTAIN INSTALLATION

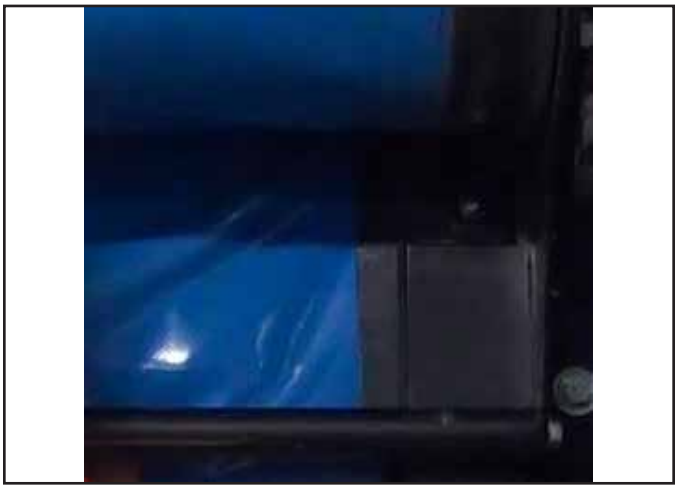


Figure 3–1

1. Remove the (2) hook and loop straps around the curtain.
2. Release the brake and guide each outside curtain bulb between and behind the roller guides, **Figure 3–6.**

Figure 3–2

NOTE: *If power is available proceed to* ***Figure 3–7*** *and* ***CHAPTER 4****, then Step 3 through Step 10.*

3. Slowly lower the curtain to the closed position, verifying that curtain buttons and bulb are not tight.
4. Raise the curtain to the full open position to see if the curtain telescopes in toward the center of the door when rolling up. If contact between the curtain bulb and re-feed roller occurs, the curtain will need to be shimmed.

Figure 3–3

5. To shim the curtain, place the door in the closed position, unwind the curtain to where it is attached to the hook and loop fastener on the roll tube and place a piece of fabric at the edge of the roll tube on the side where the curtain is telescoping inward (Figure 3-3). Place shim(s) on one side only.

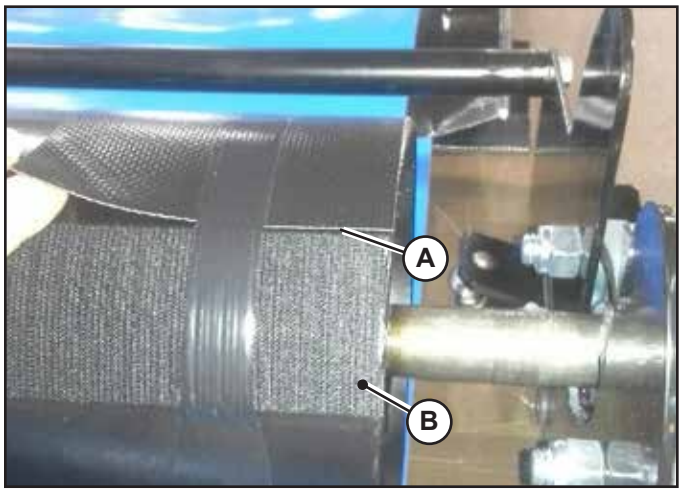


Figure 3–4

6. Apply shim (A) around the roller tube (B) and secure with electrical tape. This may require several attempts to place the correct thickness of shim. Two (2) are supplied.

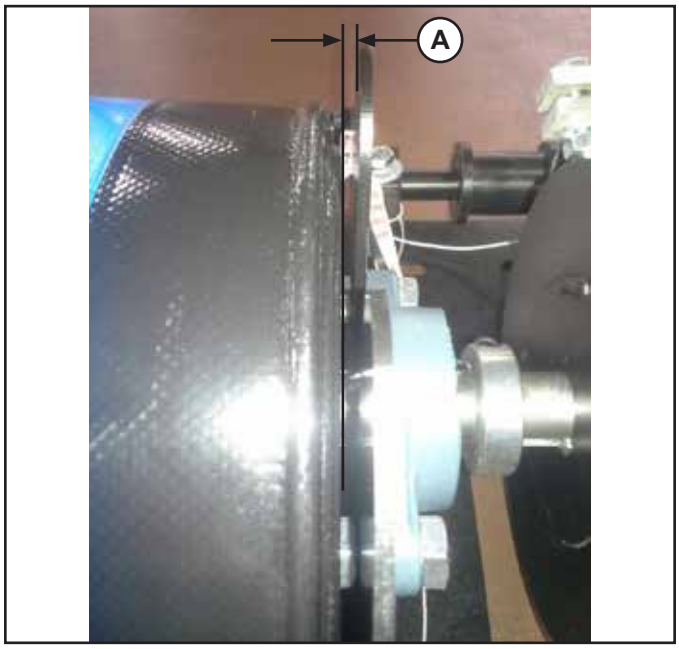


Figure 3–5

7. Once shimming is complete, the curtain should track as shown in Figure 3-5. Distance from inside edge of plate to bulb can be 1/4" - 3/4" [6 - 19 mm]. See dimension (A).

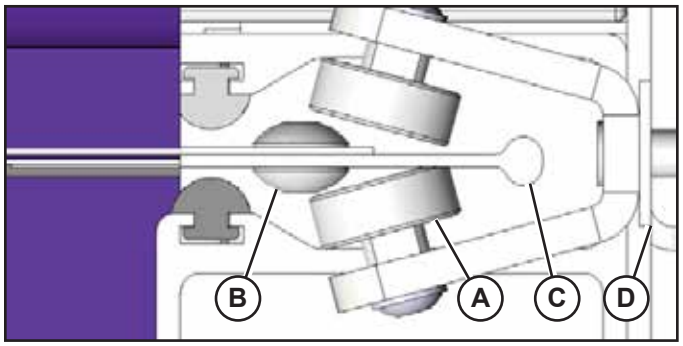


Figure 3–6

8. See note attached to the rollers. Figure 3-6 shows the ideal button and edge clearance.
9. Verify rollers (A) spin free, buttons (B) and curtain bulb (C) are not tight against roller. (D) refers to shim in place. If tight, refer back to Figures 3-3 3-4.
10. Under normal operation, buttons and curtain bulb should not be tight against rollers.

Figure 3–7

11. Position the bottom edge approximately 12" [305 mm] below the opening and engage the brake.
12. Proceed to **CHAPTER 4**.

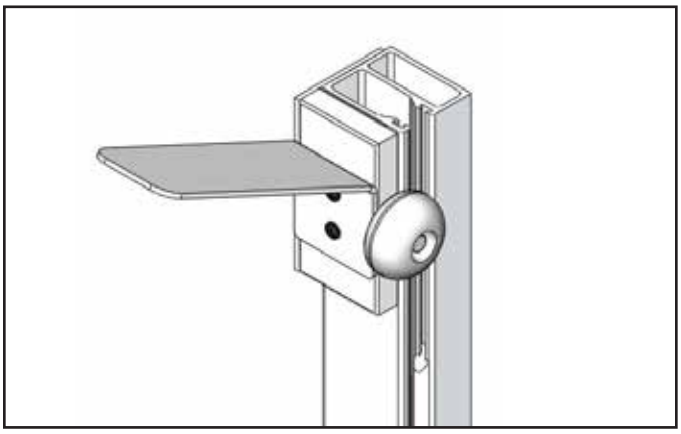


Figure 3–8

13. Re-feed assist roller assists with refeeding curtain if curtain is broken out of sideframe(s).

NOTE: *If replacing existing curtain, remove any roll tube shims that may be present for a starting point.*

CHAPTER 4
ELECTRICAL INSTALLATION

1. It is the responsibility of the end user to provide electrical service up to the control box with proper branch service protection and an approved means of disconnect. The disconnect on the front of the control box is not a true disconnect.
2. 20 or 30 amperage service may be required for cable runs longer than 300' [91,440 mm].
3. Local electrical codes may require the use of rigid conduit rather than flexible conduit. If so, remove conduit connector and control cables from the flexible conduit, install the rigid conduit in its place, and rewire. The door can also be ordered without the standard flexible conduit.
4. Mount control box adjacent to the door at approximately 54" [1372 mm] above the floor and 12" [305 mm] from sideframe.
5. If possible, mount on the warm side regardless of door mount side.
6. **All holes drilled through the control box must be through the bottom of the box. Conduit entering the sides or top of the enclosure will void the warranty.**
7. Use the proper sealed connectors to maintain the NEMA rating on the enclosure
8. Incoming 3-phase power must connect into fuse holder terminals F1, F2, F3 and ground terminal. Terminals in the control box will not accommodate wires larger than 12 gauge wire.
9. Route all field installed wires so that separation is maintained between line voltage wires and low voltage class II wiring.
10. **DO NOT splice control wiring.**
11. The control box is provided with time delay (class CC) protective fusing for the incoming power.
12. Clamp conduit to wall after complete.
13. The control box cable is pre-wired to the control box unless the door is ordered without the flex conduit. Attach control box cable to the conduit mounting bracket on the gearbox. Connect motor / brake cables, and fasten Terminal Strip to the motor junction box. If the flexible conduit is too long, unwire control box cable wires and cut the protective outer casing by the required amount. DO NOT coil or let conduit hang on the floor.
14. In freezer and cooler applications where a conduit passes from a warm to cold temperature zone, the conduit must be sealed with an approved material per 300.7(a) of the National Electric Code (NFPA 70).
15. Refer to electrical diagrams for this door for further information.

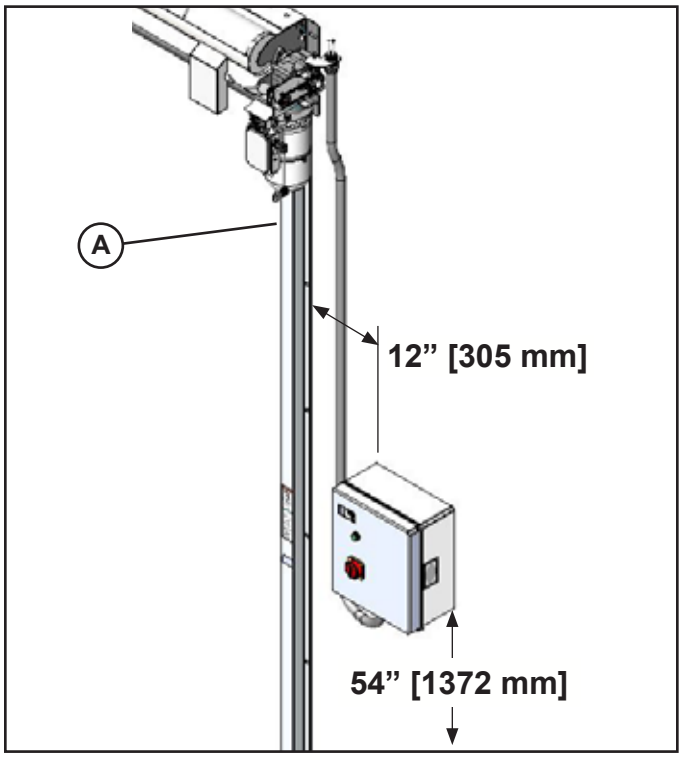


Figure 4–1

16. Connect ground wire (A) from motor cable to sideframe.

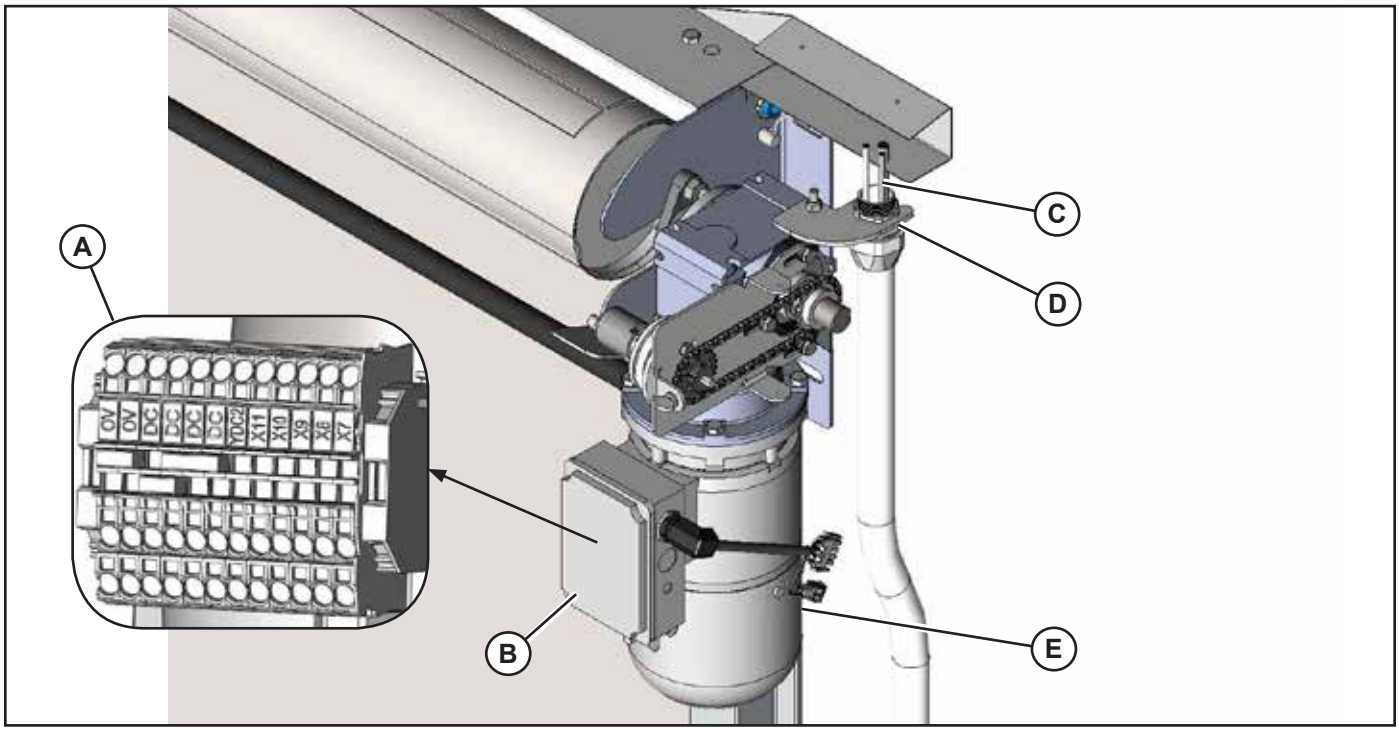


Figure 4–2

NOTE: *The Drive System is pre-assembled on the roller tube shaft.*

1. Mount the terminal block (A) to the motor junction box (B). Control box cable is pre-wired to the Terminal Strip. Use electrical drawing on **page 66** for details. Terminal X7 can be used to connect activation devices.
2. Route the control cable (C) to the motor/brake/gearbox assembly (E) and attach the control cable to the provided bracket (D).
3. Tighten the lock collar to 115 in/lbs [13 N-m].
4. The set screw on the drive sprocket uses a 3/32" [2 mm] allen wrench. Tighten to 5 in/lbs [0.6 N-m].

NOTE: *Sprocket does NOT require a key.*

5. Brake release options:
   - **For doors without NPO**, pull brake release handle down and rotate lock down bracket if required.
   - **For doors with Aluminum frames and NPO**, pull chain on back side of motor and allow curtain to slowly open.
   - **For doors with Stainless Steel frame and NPO**, rotate handle in sideframe and allow curtain to slowly open.

As curtain nears the top, allow it to slow down so it does not overtravel.

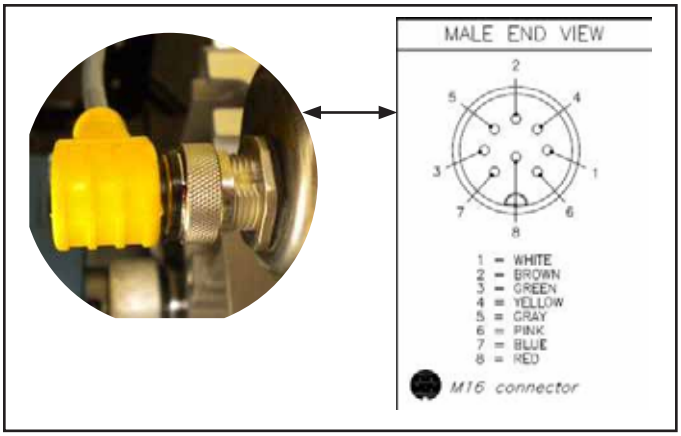


Figure 4–3

6. Connect the encoder cable to the encoder. Make sure to line up pins properly. Make sure connector is tight, but do not over-tighten as pins will twist. Once tight, the connector should not be able to move back and forth.

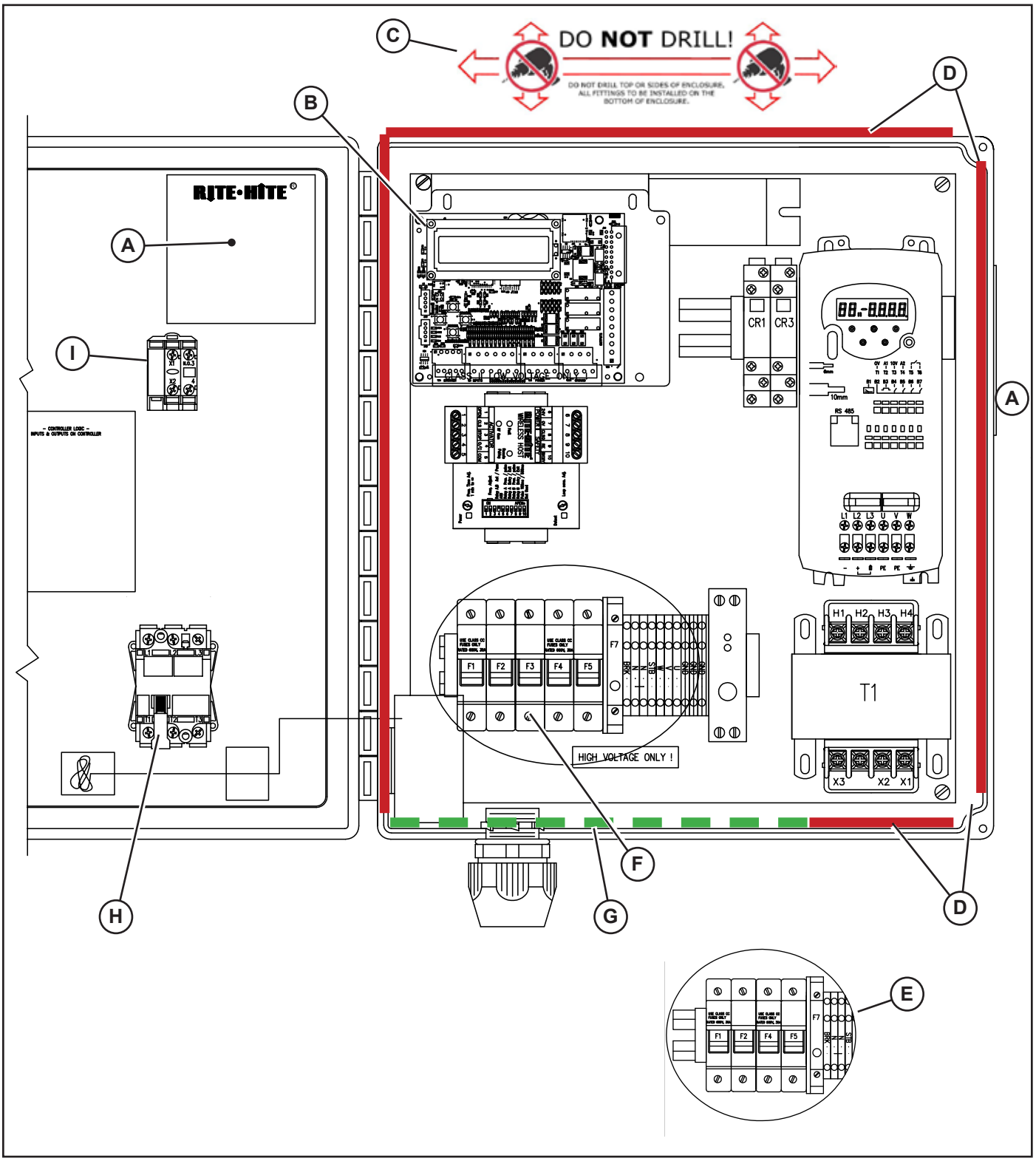

DO NOT DRILL!
DO NOT DRILL TOP OR SIDES OF ENCLOSURE. ALL FITTINGS TO BE INSTALLED ON THE BOTTOM OF ENCLOSURE.
RITE-HITE
A
B
C
D
E
F
G
H
I
CR1
CR3
RS 485
T1
HIGH VOLTAGE ONLY !
F1
F2
F3
F4
F5
F7
H1
H2
H3
H4
X1
X2
X3

Figure 4–4

A	*Serial Number Label*
B	*i-COMM*
C	*Do Not Drill Label—Remove After Installation Is Complete*
D	*Red Bold Solid Line Indicates Unsafe Area for Drilling Holes*
E	*Incoming Power Terminals F1, F2 for 220V 1Ø*
F	*Incoming Power Terminals F1, F2, F3 for 230/460/400/575V 3Ø Configuration*
G	*Green Bold Dashed Line Indicates Safe Area for Drilling Holes*
H	*Red Disconnect Switch*
I	*Green Open/Reset Button*

The i-COMM (B) is used to control all functions of the door. See logic chart for the i-COMM inputs and outputs (**page 28**).

The red disconnect switch (H) stops door operation. The control is rotated to the “ON” position for normal door operation. To stop door operation, rotate the control to the “OFF” position. Whenever the door operation is stopped by using the disconnect switch, you must do the following to resume operation:

1. Rotate the red disconnect switch to the “ON” position.
2. Press the “OPEN/RESET” button to reset and operate the door.

The green button (I) opens and resets the door after a fault. To “OPEN,” press and release the button. The i-COMM will automatically close the door after the preset time has expired.

I-COMM LOGIC CHART

RITE-HITE DOORS

LiteSpeed ™Encoder i-COMM II Quick Reference

INPUT TABLE	
Input	Function
X0	Open PB
X1	Stop PB
X2,X3,X6,X7	Activation Command
X4	Close PB
X5	Toggle Command
X8*,X9*	IZone Sensors (R & L)
X10*	18" Photoeye Input
X11*	Header Photoeye Input
X12	Open/Reset PB
X13	Induction Loop Input
X14*	Fault Input
X15*	Input Power

* Not shown in I/O menu and not programmable

OUTPUT TABLE	
Relay Output	Function
YK0	Interlock Out
YK1	Programmable
YK2	Programmable
DC Output	Function
YDC0	On when door Open
YDC1	Photoeye Test
*YDC2	Photoeye Test
*YDC3	Open/Reset PB Light
*YDC4	I-Zone Alarm
YDC5	Preannounce to Close
YDC6	Disabled
*YDC7	Disabled

Encoder Adjustment Descriptions

(Refer to i-COMM and Owners Manuals for additional detail)

Open Distance	Use this option to set the overall opening distance of the door (in feet). This measurement is used for initial position setup only. For small adjustments of the open and close position, use "Close Position Adjust" or "Open Position Adjust"
Set Close Position	Use this option for initial position setup. Manually place door in the close position and select this option. Alternatively "Set Open Pos." can be used if it is more convenient to place the door in the open position.
Set Open Position	Use this option for initial position setup. Manually place door in the open position and select this option. Alternatively "Set Close Pos." can be used if it is more convenient to place the door in the closed position.
Close Position Adjust	Use this option to make small adjustment to the closed position. The number displayed is the relative displacement of the closed position.
Open Position Adjust	Use this option to make small adjustment to the open position. The number displayed is the measurement between the open and closed position.
Motor Drive Side	Use this option to change the encoder rotation direction. For a motor mounted on the right side of the drive tube, select "Right Drive". For a motor mounted on the left side of the drive tube, select "Left Drive".

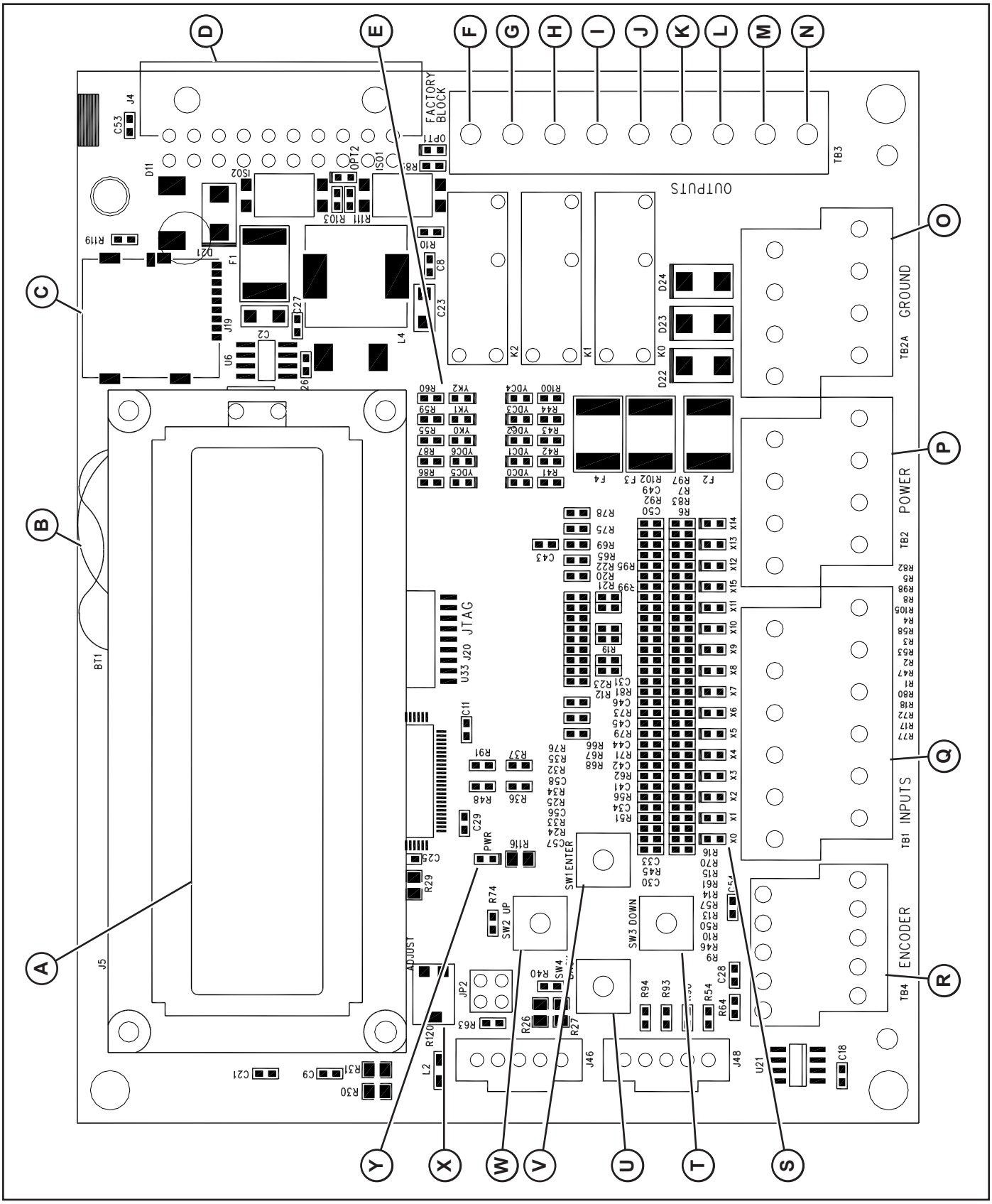
Timer Adjustment

1. Press [ENTER], Controller will stop and fault door.
2. Press [UP] or [DOWN] until the timer folder is displayed.
3. Press [ENTER], to enter the timer folder.
4. Using [UP] & [DOWN] keys select desired timer.
5. Press [ENTER] to view the current timer value.
6. Use [UP] or [DOWN] keys set the desired value.
7. Press [ENTER] to save the value and return to the timer folder.
8. Press [BACK] until "Door Faulted" is displayed.
9. Reset Door.

Preannounce Timer is the amount of time the Preannounce to close output will be on before door closes.
Close Timer is the amount of time the door will remain open before the preannounce to close timer activates
Autocycle Time is the amount of time between each automatic cycle of the door (disabled by default).

53850677-1

I-COMM LAYOUT



I-COMM LAYOUT

A	*Display*
B	*Battery–CR2032 3V*
C	*SD Card*
D	*J4 Connector*
E	*Output LED's K0–K2 Y0–Y5*
F	*YK2N*
G	*YK2*
H	*YK1N*
I	*YK1*
J	*YK0N*
K	*YK0*
L	*YDC2*
M	*YDC1*
N	*YDC0*
O	*OV Terminals*
P	*DC Terminals*
Q	*Input Terminals*
R	*Encoder Terminals*
S	*Input LED's X0–X15*
T	*Down Button*
U	*Back Button*
V	*Enter Button*
W	*Up Button*
X	*Contrast*
Y	*Power LED*

I-COMM ENCODER SETUP

MUST COMPLETE BEFORE OPERATING DOOR. Automatic door operation ceases when in the menu system.

ENCODER SETUP INSTRUCTIONS

1. Verify wiring from encoder is properly terminated.
2. Place bottom of curtain 12" [305 mm] below the lintel if open or on the floor if closed.
3. Power up the door and press enter button on the i-COMM. Display should state **"MAIN MENU - ENCODER FOLDER".**
4. Press enter. Display should state "**Open Distance**.
5. Press enter to view parameter value (measured in feet). The value should be O.D.H. Change the value using the up or down buttons. Round down if less than the next foot increment. Press enter.
6. Press up button. Display should state "**Motor Drive Side**". Press enter and select "**Right Drive**" or "**Left Drive**". Press enter
7. Press up button. Display should state "**Set Open Pos**." (use if curtain is open) or go to "**Set Close Pos."** (use if curtain is closed) and press enter button. Display should state "**Set Open (or Close) Pos.**" and toggle between **RESET ALL LIMITS** and **Push Up to Start** ". Press Up button.
8. Press the green flashing Open/Reset button on the front of the control box. Door should time out and close or open. Proceed to "Open and Close Position Adjustment".

OPEN AND CLOSE POSITION ADJUSTMENT

To adjust the OPEN position:

1. Using up button, scroll to "**Open Pos. Adjust**".
2. Press enter button to view parameter value. This parameter will show a coded value on the left and the opening height in inches on the right. This value will always be less than the door opening height.

   Change the value using the up and down buttons.

   To bring the open position down (closer to the floor) adjust this value to be less than the current value. To open the door more relative to the floor, adjust this parameter in a positive direction. (i.e. to open the door 4 [102 mm] more, and the current value is 72.0" [1829 mm]. Change the value for "**Open Pos. Adjust**" to be 76.0" [1930 mm]). Changing this value will not affect the close position.

To adjust the CLOSE position:

3. Using up button, scroll to "**Close Pos. Adjust**".
4. Press enter button to view parameter value. This parameter will show a coded value on the left and relative change in inches on the right. When entering this parameter the value will always start at 0.0".

   Change values using the up or down buttons.

   To bring the curtain closer to the floor, adjust this value so that it is less than zero (i.e., to close the door 4" [102 mm] more, the value for "**Close Pos. Adjust**" will be -4.0" [102 mm]). Moving this parameter in the positive direction raises the curtain relative to the floor. Changing this value will not affect the open position.

   NOTE: If you leave this parameter and return to it, its value will again be zero. Any changes made before leaving the parameter will still be effective. For example: If you lowered the door 4.0" [102 mm], leave the parameter and return, the parameter will display 0.0". Even though the display shows 0.0" the -4.0" [102 mm] change has been recorded.

   TIP: At any point in the menu mode, press the back button until screen states "Door Faulted - Service Required". This will cause the controller to automatically accept all the changes made and exit the system.
5. Changes are not saved until the menu mode is exited. Turning power off while in the menu mode will cancel all changes.
6. Test operation of door and continue adjustment.
7. Press green Open/Reset button.
   - The door should begin to open. Be ready to shut down the door if it begins to move in the wrong direction. If motor phase is changed, start over at step #2.
   - If rotation is correct, proceed to the instructions for adjusting the "Open and Close positions".
8. Press the back (left button) to exit system.

I-COMM II DISPLAY SETUP DESCRIPTIONS

Option	Description
Open Distance	This is used to set the overall opening distance of the door (in feet). For example, for an 8’ [2438 mm] tall LiteSpeed, this should be set to 8’ [2438 mm]. This measurement is used for initial position setup only. For small adjustments of the open and close positions, use “Close Position Adjust” or “Open Position Adjust.”
Set Close Pos	Use this for initial position setup. Manually place door in the close position and select this option. Alternatively “Set Open Pos.” can be used if it is more convenient to place the door in the open position. NOTE: This option approximately sets the open and close positions. For additional adjustment of the open and close positions, use “Close Position Adjust” or “Open Position Adjust.”
Set Open Pos	Use this for initial position setup. Manually place door in the open position and select this option. Alternatively, “Set Close Pos.” can be used if it is more convenient to place the door in the closed position. NOTE: This option approximately sets the open and close positions. For additional adjustment of the open and close positions, use “Close Position Adjust” or “Open Position Adjust.”
Open Pos Adjust	Use this to make small adjustment to the open position. The number displayed is the measurement between the open and close position. For example, if this was set to 100” [2540 mm], the door would open 100” [2540 mm] from the close position. It is recommended to adjust the close position of the door first before adjusting the open position.
Close Pos Adjust	Use this to make small adjustment to the closed position. The number displayed is the relative displacement of the closed position. For example, if this was set to -1.0” [-25 mm], the door would close approximately 1.0” [25 mm] more. If this was set to 2.0” [51 mm], the door would close 2.0” [51 mm] less.
Apr Open Pos	This approach open position is factory set and should not be adjusted. This is a measurement in inches from the open position. For example, if this was set to 19.5” [495 mm], the door would slow down 19.5” [495 mm] from the open position.
Encoder Startup	The controller is waiting for valid data from the encoder. It the controller does not receive a response at startup, this will remain on the screen indefinitely. If this does not clear with 5 seconds, please check all encoder wiring.
Encoder Read	The controller is unable to read valid data from the encoder. Check all wiring and M12 cable connections. Ensure that the shield on the encoder cable is connected to ground, and that the control box is grounded. The error requires the power to be cycled to reset.

Option	Description
Encoder Velocity	The controller has received a signal from the encoder that the door is moving faster than allowed. This can occur if the encoder is not properly attached to the shaft (check set screws on encoder collar and sprockets), bad electrical connection to the i-COMM, or improper grounding. The error requires the power to be cycled to reset.
Open time limit	Door tried to run, but did not reach the open or close position within 8 seconds.
Photoeye failure	Check for alignment and power to each.

I-COMM II DISPLAY MESSAGES

LCD DISPLAY MESSAGES			
Top Display	**Bottom Display**	**Reason / Fault Messages**	**Action Required**
Door Faulted	Bag Up Fault	Refeed curtain	Jog To Close*
	Breakaway	Door is in breakaway mode	Reset / Jog Door*
	Emergency Stop	E-Stop pushed	Push Open/Reset*
	Encoder NC	Encoder Connection	Service Required
	Encoder Read	i-COMM has detected a bad encoder read	Service Required
	Encoder Velocity	i-COMM has detected a velocity error	Service Required
	LZR Failed	LZR test failed	Jog To Close*
	Limit Failure	Limit has failed	Service Required*
	Limit Pulse Fail	Limit pulse time	Service Required
	Menu Interrupt	Menu Interrupted	Push Open/Reset*
	No Power	Encoder no power	Service Required
	Normal Power Up	Indicates loss of power	Push Open/Reset*
	Obstruction	Door has detected obstruction and reversed 3 times	Inspect & Reset*
	Photoeye Failure	Indicates problem with photoeye system	Jog To Close*
	Program Inverter	Inverter is not programmed for proper door operation	Service Required
	Rev Edge Failure	Check rev. edge	Jog To Close*
	Run Timer Close	Close time limit	Service Required
	Run Timer Open	Open time limit	Service Required
	State OB	Unknown State	Service Required
	System Clock	System clock read failed	Service Required*
	VFD Fault Relay	Indicates problem with inverter relay (CE specifications only)	Service Required*
	VFD Trip	Inverter is in fault xxx Indicates the active inverter fault	Push Open/Reset
	VFD Comm. Loss	i-COMM has lost communication with inverter	Check connection
	Watchdog Timer	Indicates the board's watchdog timer has reset	Service Required*
			**Displays on Screen during jog only*
Door is Opening		**DOOR IS OPENING**	
		DOOR IS OPEN	
Door Is Open		When not in pre-announce to close	None
Stand Clear		When in pre-announce to close	None
	Activation On	Indicates activation on (overrides timer display)	Device Holding Open
	Closing in xx.xs	Displays closing time	None
	I-Zone Detection	I-Zone active (overrides timer display)	Remove Detection
	Photoeye Blocked	Photoeye is blocked (overrides timer display)	Remove Obstruction
	Waiting for cmd	Indicates door is waiting for manual close cmd.	Close Door
Stand Clear	Door Closing	**DOOR IS CLOSING**	None
		DOOR IS CLOSED	
Door Closed	Cycles: xxxxxx	Displays cycle count	None
Door Closed	Interlock Active	Door is interlocked and cannot be opened	Perform Interlocking
Door Stopped	Push Open/Close	**DOOR IS STOPPED**	Open/Close Door

I-COMM II PROGRAMMING FOLDERS

Use the Enter, Up, Down, and Back buttons on the i-COMM to navigate through the folders. To exit system, use back button until "**Door Faulted**" appears.

ENCODER FOLDER

See Encoder Folder Layout Chart to change / view settings.

NOTE: **MUST perform encoder setup for door operation.**

I/O SETUP FOLDER

See I/O Setup Layout Chart to change / view settings.

Use to set up Input and Output functions.

TIMER FOLDER

See Timer Layout Chart to change / view settings.

Use to change reclose or pre-announce timer.

GENERAL FOLDER

See General Layout Chart to change / view settings.

Use to set up Clock and Maintenance cycles.

VIEW FOLDER

See View Layout Chart to change / view settings.

Use to view cycle count, fault history, and door information.

LOAD / SAVE FOLDER

See Load / Save Layout Chart to change / view settings.

See Legal information.

Use for programming.

INVERTER FOLDER

See Inverter Layout Chart to change / view settings.

Use to change door speeds and torque settings.

I-COMM PROCEDURES

RECLOSE TIMER ADJUSTMENT:

1. Press ENTER button.
2. Use UP button to scroll to TIMER FOLDER. Press enter. Display should read "Set Close Timer".
3. Press ENTER button.
4. To increase reclose time, press UP button
5. To decrease reclose time, press DOWN button.
6. Press BACK button when complete.

CLOCK ADJUSTMENTS:

1. Press ENTER button.
2. Use UP button to scroll to GENERAL FOLDER. Press enter. Display should read "Clock".
3. Press ENTER button. Display should read M/D/Y and time.
4. Press UP, set year - press enter, set month - press enter, set day - press enter, set hour - press enter, set minute - press enter.
5. Press BACK when complete.

CHECKING FAULT HISTORY:

1. Press ENTER button.
2. Use UP button to scroll to VIEW FOLDER. Press enter. Display should read "Fault History".
3. Press ENTER button. Display should read the last fault / flash the date / time it occurred.
4. This displays the last 20 faults.
5. Press BACK when complete.

PROGRAM DOWN LOADING:

1. Turn off power to the door and insert SD card into socket.
2. Turn on power and press ENTER button.
3. Use UP button to scroll to "LOAD / SAVE Folder", press enter, scroll to "Copy from SD" and press ENTER button.
4. Press the UP button when prompted.
5. If "Choose file...." displays, choose the correct file and press ENTER to start update.
6. After the i-COMM reboots, remove SD card and operate door.

NOTE: *When setting Maintenance timer, Open / Reset button will flash slowly when set time / cycles have expired, and display will read* ***Maintenance Required****.*

To reset Maintenance light, press ENTER button; scroll to General Folder, press ENTER button; scroll to Reset Maintenance, press ENTER; then press UP to start, then press BACK button until at MAIN MENU, then press green Open Button. This will reset flashing Open / Reset button.

I-COMM II FOLDERS

NUMBER IS NOT SHOWN IN I-COMM MENU					
FOLDER	**NUMBER**	**NAME**	**VALID VALUES**	**DESCRIPTION**	**DEFAULT**
Encoder Folder	0	Open Distance	3–24	Used to Set Opening distance for door.	8
	1	Motor Drive Side	Right Drive / Left Drive	Used to select motor drive side.	Right
	2	Set Close Position	Press UP to Start	Use for initial setup of close position.	—
	3	Set Open Position	Press UP to Start	Use for initial setup of open position.	—
	4	Close Position Adjust	+/- 100.0	Use to adjust close position.	0.0
	5	Open Position Adjust	0–990.00	Use to adjust door open position.	—
	6	Encoder Position	0–01FFFF	Current encoder position.	—
	7	Encoder Baud	433 kbps	Used to select encoder data rate.	433 KBPS
	8	Approach Open Pos.	999.0	Used to select Approach Open Position.	19.5
	9	Approach Close Pos.	999.0	Used to select Approach Close Position	40.0
I/O Setup Folder	10	Set Open PB Function	Auto Close Mode; Toggle & Auto Close, Reset/Jog only; Toggle Mode	Use to select the function of the Open/Reset button.	Auto Close Mode
	11	Set Loop Function	Auto Close Mode, Reverse / Hold Open	Use to select induction loop input function.	Auto Close Mode
	12	I - Zone System	Enabled / Disabled	Use to Enable / Disable the I-Zone system.	Disabled
	13	Output Def. YK0	0–33 (See Table)	User configurable relay.	0
	14	Output Def. YK1	0–33 (See Table)	User configurable relay.	20
	15	Output Def. YK2	0–33 (See Table)	User configurable relay.	20
	16	Output Def. YDC0	0–33 (See Table)	User configurable DC output.	3
	17	Output Def. YDC1	0–33 (See Table)	User configurable DC output.	29
	18	Output Def. YDC2	0–33 (See Table)	Internal - not available DC output.	29
	19	Output Def. YDC3	0–33 (See Table)	Internal - not available DC output.	20
	20	Output Def. YDC4	0–33 (See Table)	Internal - not available DC output.	20
	21	Output Def. YDC5	0–33 (See Table)	User configurable DC output.	2
	22	Output Def. YDC6	0–33 (See Table)	Internal - not available DC output.	20
	23	Output Def. YDC7	0–33 (See Table)	Internal - not available DC output.	20
	24	Input Define X0	0–17 (See Table)	User configurable input.	8
	25	Input Define X1	0–17 (See Table)	User configurable input.	7
	26	Input Define X2	0–17 (See Table)	User configurable input.	2
	27	Input Define X3	0–17 (See Table)	User configurable input.	2
	28	Input Define X4	0–17 (See Table)	User configurable input.	4
	29	Input Define X5	0–17 (See Table)	User configurable input.	3
	30	Input Define X6	0–17 (See Table)	User configurable input.	2
	31	Input Define X7	0–17 (See Table)	User configurable input.	2
	32	Open Alarm Time	0–255	Open Alarm Time in minutes. Requires at least one output to be configured to function 25; menu is hidden if not.	0
	33	X10 PE Cut-Out	0–30	X10 Photoeye cut-out height.	24
	34	X11 Slack Sensor	0–66	Header Curtain Slack Sensor	60
	35	I-Zone Cut-Out	0–48	I-Zone cut out height.	42
Timer Folder	36	Set Close Timer	0–255 / Toggle Mode	Close Timer in seconds. Set to Toggle Mode to disable automatic closing.	6
	37	Set Pre-announce	0–255	Pre-announce to close timer in seconds.	2
	38	Auto-cycle Time	0–255 Disabled	Auto-cycle Time in minutes.	Disabled

NUMBER IS NOT SHOWN IN I-COMM MENU					
FOLDER	**NUMBER**	**NAME**	**VALID VALUES**	**DESCRIPTION**	**DEFAULT**
General Folder	39	Clock	—	Displays current time and date. To set: press UP, scroll to year- press Enter; scroll to month - press Enter; scroll to day - press Enter; scroll to hour - press Enter; scroll to minute - press Enter.	—
	40	Language	English,Espanol,Portuguese	Set LCD display language.	English
	41	PassCode	—	Use to change access mode.	—
	42	Rev. Edge Option	Enabled / Disabled	Use to enable reversing edge.	Disabled
	43	Spec. Package	Disabled, CE, Canada Opt	Used to enable specification packages.	Disabled
	44	Remote Display	Enabled / Disabled	Used to enable remote LCD.	Disabled
	45	Partial Config.	—	Consult Engineering. Special Applications only.	—
	46	Reverse Delay	xx	Reverse Delay.	0
	47	AB Inverter Delay	—	Consult Engineering. Special Applications only.	—
	48	Voltage	208/220/230/400/460/575	Voltage of door.	460
	49	Square Feet	0–999	Square footage of door: Width x Height.	0
	50	Non-Powered Open	Enabled / Disabled	Enables non-powered open for LiteSpeed.	Disabled
	51	Maintenance Months	xx	Number of months before maintenance indicator goes off. **Note:** Once changed, user must initiate “Reset Maintenance” Procedure.	Disabled
	52	Maintenance Cycles	0–100000	Number of cycles before maintenance indicator goes off. **Note:** Once changed, user must initiate “Reset Maintenance” Procedure.	Disabled
	53	Reset Maintenance	—	Resets Maintenance Counters and Timers. Press Up to initiate the reset.	Disabled
	54	Reset to Default	—	Resets all settings back to factory defaults.	Disabled
View Folder	55	Display Cycle Count	0–99999999	Displays current Cycle Count.	—
	56	Fault History	—	Displays fault log. Use Up and Down to scroll.	—
	57	Display Model #	—	Displays door model number.	—
	58	Display RHC #	—	Displays RHC number.	—
	59	Display Serial #	—	Displays door serial number.	—
	60	Firmware Revision	—	Displays current program revisions.	—
Load / Save Folder	61	Copy from SD	Press UP to Start Copy	Use to upgrade i-COMM II program. Correct .BIN file must be saved so SD Card. Note Card must be SD - 2GB or SDHC - 4,8,16 or 32 GB.	—
	62	Copy to SD Card	Press UP to Start Copy	Use to copy i-COMM II program to SD Card in .BIN format.	—
	63	Legal info to SD	Press UP to Start Copy	Use to display legal information about program. Legal.txt will be saved to SD card.	—
	64	Bootloader Upgrade	Press UP to Start Copy	Used to upgrade bootloader. CAUTION: DO NOT INTERRUPT THIS PROCESS.	—
	65	Export Settings	Press UP to Start Copy	Use to save i-COMM II settings to SD Card in .BIN format.	—
	66	Import Settings	Press UP to Start Copy	Use to copy i-COMM II settings to SD Card in .BIN format.	—
Inverter Folder	67	Inverter Type	T SK MODBUS, AB PF40 MODBUS, CT SK NO MODBUS, AP PF NO MODBUS, No Inverter	Used to set inverter type.	CT SK MODBUS
	68	Program Inverter	Press UP to Start Copy	Use to program inverter.	—
	69	Open Speed	0–70 Hz	Open Speed.	60.0
	70	Close Speed	0–70 Hz	Close Speed.	25.0
	71	Approach Speed	0–70 Hz	Approach Open Speed.	25.0
	72	Accel Time	0–10.0 s	Acceleration Rate.	0.5
	73	Decel Time	0–10.0 s	Deceleration Rate.	0.5
	74	Torque Reverse Level	0–100 %	Torque Reversing Level.	Disabled
	75	DC Brake Time	0–10.0 s	Injection Braking Time.	0.7
	76	DC Brake Level	0–100 %	DC Injection Braking Level.	70.0 %

I-COMM II INPUT / OUTPUT VALUES

TYPE	NUMBER	FUNCTION	DESCRIPTION
INPUT	0	Interlock In	Interlock Input - When Input is set to this function door will not open until input is ON. Valid only for inputs X3, X4, and X5.
	1	Stop N.C.	Stops the door when input is OFF.
	2	Activation	Opens the door when input is ON, w/ Auto close.
	3	Toggle	Open and Closes the door when ON. Door will not automatically close when opened by a toggle input.
	4	Close	Closes the door when input is ON.
	5	Sequential Activation	Activates door and blocks sequential activation output from triggering opposite door. Use only for sequential interlocks.
	6	Reverse	Reverses the door when input is ON.
	7	Stop N.O.	Stops the door when input is ON.
	8	Manual Open	Opens the door when input is ON. This input will open from a stop condition, unlike activation. Do not connect motion sensors or other automatic devices to a manual open input.
	9	Auto / Manual	When input is ON reclose timer is disabled.
	10	Partial Open Activation	Opens the door to the partial open position when ON
	11	Partial Open Toggle	Toggle open/close door to and from partial open position. See function #3 above.
	12	Toggle w/ Auto Close	Open and Closes the door when ON. Door will automatically close when opened by this type of toggle input.
	13	Hand / Auto Mode	When input is ON reclose timer is disabled and hold-to-run close is enabled.
	14	Disabled	Input disabled.
	15	Reverse N.C.	Reverses the door when input is OFF.
	16	Clean	Opens door to “Cleaning” position when on.
	17	E-Stop	Places door in fault when OFF.
	18	Seq. Activation 2	Consult Engineering
	19	LZR in N.C.	Reverses the door when off and monitors the input for fault
	20	Pre-announce to Open	Opens the door after the set amount of time in the Preann. to Open timer. Immediate reversal / activation if the door is not closed.
	21	Interlock Override	Opens the door and overrides any standard interlock configuration
OUTPUT	0	Interlock	ON when door is closed.
	1	Interlock N.C.	OFF when door is closed.
	2	Pre-announce	ON during pre-announce to close, and stays on until the door is closed.
	3	Open	ON when door is open.
	4	Open N.C.	OFF when door is open.
	5	Fault	ON during fault.
	6	Ready	ON when not in fault.
	7	Activation	ON during activation.
	8	Run Open	ON during run open.
	9	Run Close	ON during run close.
	10	Run	ON during run open or close.
	11	At Limits	ON when door is open or closed.
	12	I-Zone Alarm	ON during I-Zone alarm.
	13	Door Open 30 sec.	ON when door is open for more than 30 seconds.
	14	Door Open 60 sec.	ON when door is open for more than 60 seconds.
	15	Door Open 120 sec.	ON when door is open for more than 120 seconds.
	16	Sequential Activation	ON to activate opposite door. Use for sequential interlock.
	17	Run Open N.C.	OFF during run open.
	18	Run Close N.C.	OFF during run close.
	19	Run Close N.C.	OFF during run open or close.
	20	Disabled	Always OFF.
	21	Flash 3.1 Hz	Flashes at 3.125 Hz.

TYPE	NUMBER	FUNCTION	DESCRIPTION
OUTPUT (cont.)	22	Flash 1.6 Hz	Flashes at 1.5625 Hz.
	23	Partial Timer	Consult Engineering
	24	Reverse / Activation	ON when any reverse command or activation signal is on.
	25	Door Open Alarm	ON when door has been opened for time set in “Open Alarm Time.”
	26	Interlock Pass-Thru	ON when door is able to be opened (Interlock Input is not preventing door from opening).
	27	Interlock Pass-Thru N.C.	OFF when door is able to be opened (Interlock Input is not preventing door from opening).
	28	Pre-announce & Close	ON during pre-announce to close, and while closing. NOTE: This output will turn on while door is closed from Toggle or Close command or re-close timer.
	29	Photoeye Test	ON when emitters are on, OFF to test photoeyes.
	30	Encoder Bit 9	Consult Engineering
	31	Encoder Bit 10	Consult Engineering
	32	Encoder Bit 11	Consult Engineering
	33	Encoder Bit 12	Consult Engineering
	34	Pre-announce to Open	ON during the set pre-announce to open time
	35	Pre-announce to Close	ON only during pre-announce to close. Off during run close.

230/460V INVERTER (VFD) PROGRAMMING

LiteSpeed™ Inverter Program Instructions

*****These instructions are only when not using the i-COMM to change parameters.*****

When in Status mode, pressing and holding the **“M” MODE** key for 2 seconds will change the display from displaying a speed indication to displaying load indication and vice versa.

Pressing and releasing the **“M” MODE** key will change the display from status mode to parameter view mode. In parameter view mode, the left hand display flashes the parameter number and the right hand display shows the value of that parameter.

Pressing and releasing the “**M” MODE** key again will change the display from parameter view mode to parameter edit mode. In parameter edit mode, the right hand display flashes the value in the parameter being shown in the left hand display.

Pressing the **“M” MODE** key in parameter edit mode will return the drive to the parameter view mode. If the **“M” MODE** key is pressed again, the drive will return to status mode, but if either of the **“UP”** or **“DOWN”** keys are pressed to change the parameter being viewed before the **“M” MODE** key is pressed, pressing the **“M” MODE** key will change the display to the parameter edit mode again. This allows the user to very easily change between parameter view and edit modes while commissioning the drive.

“WARNING: Consult factory before changing any parameters not listed in this table.”

LiteSpeed™—Inverter (VFD) Status Modes

Left Display	Status	Explanation
rd	Drive ready	The drive is enabled and ready for a start command. The output bridge is inactive.
ih	Drive inhibited	The drive is inhibited because there is no enable command, or a coast to stop is in progress or the drive is inhibited during a trip reset.
Er	Drive has tripped	The drive has tripped. The trip code will display in the right hand display.
dC	Injection braking	DC injection braking current is being applied to the motor.
Fr		Drive output frequency in Hz
SP		Motor speed in RPM
Ld		Load current as a % of motor rated load current
A		Drive output current per phase in A

230/460V INVERTER (VFD) CODES

LiteSpeed—Inverter (VFD) Error Codes			
No.	**Trip code**	**Condition**	**Possible cause**
1	tr UU	DC bus under voltage	Low AC supply voltage, check power source. Low DC voltage when supplied by an external DC power supply.
2	tr OU	DC bus over voltage	The DC bus (Pr. 84) has exceeded 800V-460V or 400V-230VAC. Check the following: If DC bus climbs while door is not running, disconnect CE filter with power off. If fault is intermittent when door is not running try to set Automatic reset of faults. (PR. 73 = 10.34, PR. 74=10.36, PR. 63 = 3, PR 64 = on) If fault is while door is closing add braking resistor, see Control Box Explosion for a list of parts. Deceleration rate set too fast for the inertia of the machine. Mechanical load driving the motor
19	tr It.br	I^2C on braking resistor	Check door closing speed. If fault is while door is closing, add breaking resistor. See tr OV for more troubleshooting.
20	tr It. AC	I^2C on drive output	Check sideframe spacing. Motor wiring: check for loose connections or shorts. Make sure door cannot move if brake is engaged.
3	tr OI.AC	Drive output instantaneous over current	Door is mechanical binding or jammed. Check sideframe spacing. Motor wiring: check for loose connections or shorts. Make sure door cannot move if brake is engaged. Disconnect CE filter with power off. Insufficient ramp times. Phase to phase or phase to ground short circuit on the drive's output. Drive requires auto-tuning to the motor. Motor or motor connections changed; re-auto tune drive to motor. MUST wait 10 seconds to reset after trip occurs.
4	OI.br	Braking resistor instantaneous over current	Excessive braking current in braking resistor. Braking resistor value too small. MUST wait 10 seconds to reset after trip occurs.
7	O.SPd	Over speed	Excessive motor speed (typically caused by mechanical load driving the motor).
18	tunE	Auto tune stopped before complete	Run command removed before auto-tune complete.
19	It.br	I^2-t on braking resistor	Excessive braking resistor energy.
20	It.AC	I^2-t on drive output current	Excessive mechanical load. Drive requires re-auto tuning to motor. High impedance phase to phase or phase to ground short circuit at drive output.
21	O.ht1	IGBT over heat based on	Overheat software thermal model drives thermal model.
22	O.ht2	Over heat based on drive's heatsink	Heatsink temperature exceeds allowable maximum.
24	th	Motor thermistor trip	Excessive motor temperature.
26	O.LD1	User +24V or digital output overload	Excessive load or short circuit on +24V output. The Enable/Reset terminal will not reset an O.Ld1 trip. Use the Stop/Reset key.
	OUL.d	I x t overload	Reduce motor current.
	hot	Heatsink/IGBT temp is high	Reduce ambient temperature or reduce motor current.
	br.rS	Braking resistor overload	See Advanced user guide.
31	EEF	Internal drive EEPROM failure	Possible loss of parameter values.
32	PH	Input phase imbalance or input phase loss	One of the input phases has become disconnected from the drive.
33	rS	Failure to measure motors	Motor too small for drive stator resistance. Motor cable disconnected during measurement.
189	O.cL	Overload on current loop input	Input current exceeds 25mA.
	tr HF ##	Hardware Fault	The drive has detected a hardware problem; verify wiring is correct. This cannot be fixed in the field. Replace the drive.

LiteSpeed—Inverter (VFD) Error Codes			
No.	**Trip code**	**Condition**	**Possible cause**
	HF 05 trip		No signal from DSP at start up.
	HF 06 trip		Unexpected Interrupt.
	HF 07 trip		Watchdog failure.
	HF 08 trip		Interrupt crash (code overrun).
	HF 11 trip		Access to the EEPROM failed.
	HF 20 trip		Power stage—code error.
	HF 21 trip		Power stage—unrecognized frame size.
	HF 22 trip		OI failure at power up.
	HF 25 trip		DSP Communications failure.
	HF 26 trip		Soft start relay failed to close, or soft start motor failed, or braking IGBT short circuit at power up.
	HF 27 trip		Power stage thermistor fault.
	HF28 trip		DSp software overrun.
	HF xx trip		HF 1-4, 9-10,12-19,23,24,29,30 are not used.

575V INVERTER (VFD) PROGRAMMING

LiteSpeed™ Allen Bradley—575V—Inverter Program Instructions

"WARNING: Consult factory before changing any parameters not listed in this table."

Press "**ESC**" once to display the Display Group parameter.

Press "**ESC**" again to enter the group menu, the group letter will flash. Press "UP" or "DOWN" arrow to scroll through the group menu.

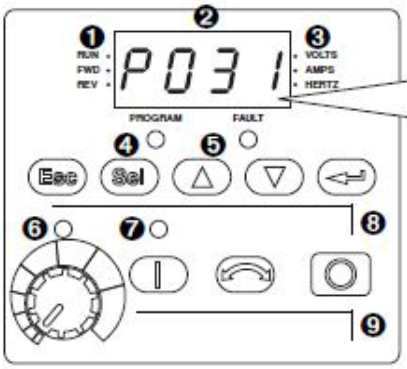
Press "**Enter**" or "**Sel**" to enter a group. Press "**UP**" or "**DOWN**" arrow to scroll through the group menu.

Press "**Enter**" or "**Sel**" to view the value of the parameter. Press "**ESC**" to exit without making any changes. Press "**Enter**" or "**Sel**" to edit parameter. When # is flashing (Program LED will illuminate if parameter can be edited), press "**UP**" or "**DOWN**" arrow to change value.

Press "**Enter**" when completed to save changes. Press "ESC" to exit and return to program list.

Parameter Number	Name	Default Value	New Value
039	Accel Time	0.5	a/r
040	Decel Time	0.5	a/r
072	Open Speed	60.0	a/r
073	Approach Open Speed	25.0	a/r
075	Close Speed	25.0	a/r
080	DC Brake Injection Time	0.7	a/r
081	DC Brake Injection Level	70	a/r
101	Program Lock	1	0

575V INVERTER (VFD) PROGRAMMING



Menu	Description
d	**Display Group (View Only)** Consists of commonly viewed drive operating conditions.
P	**Basic Program Group** Consists of most commonly used programmable functions.
A	**Advanced Program Group** Consists of remaining programmable functions.
F	**Fault Designator** Consists of list of codes for specific fault conditions. Displayed only when fault is present.

No.	LED	LED State	Description
❶	Run/Direction Status	Steady Red	Indicates drive is running and commanded motor direction.
		Flashing Red	Drive has been commanded to change direction. Indicates actual motor direction while decelerating to zero.
❷	Alphanumeric Display	Steady Red	Indicates parameter number, parameter value, or fault code.
		Flashing Red	Single digit flashing indicates that digit can be edited. All digits flashing indicates a fault condition.
❸	Displayed Units	Steady Red	Indicates the units of the parameter value being displayed.
❹	Program Status	Steady Red	Indicates parameter value can be changed.
❺	Fault Status	Flashing Red	Indicates drive is faulted.
❻	Pot Status	Steady Green	Indicates potentiometer on Integral Keypad is active.(1)
❼	Start Key Status	Steady Green	Indicates Start key on Integral Keypad is active. The Reverse key is also active unless disabled by A095 [Reverse Disable].

No.	Key	Name	Description
❽	Esc	Escape	Back one step in programming menu. Cancel a change to a parameter value and exit Program Mode.
	Sel	Select	Advance one step in programming menu. Select a digit when viewing parameter value.
	△ ▽	Up Arrow Down Arrow	Scroll through groups and parameters. Increase/decrease the value of a flashing digit. Used to adjust internal frequency of IP66, NEMA/UL Type 4X rated drives *only* when a Display Group parameter is shown and P038 [Speed Reference] is set to internal frequency, A069 [Internal Freq].
	↵	Enter	Advance one step in programming menu. Save a change to a parameter value.
❾		Potentiometer(1)	Used to control speed of drive. Default is active. Controlled by parameter P038 [Speed Reference].
		Start	Used to start the drive. Default is active. Controlled by parameter P036 [Start Source].
		Reverse	Used to reverse direction of the drive. Default is active. Controlled by parameters P036 [Start Source] and A095 [Reverse Disable].
		Stop	Used to stop the drive or clear a fault. This key is always active. Controlled by parameter P037 [Stop Mode].

(1) IP66, NEMA/UL Type 4X rated drives are not equipped with a potentiometer.

PowerFlex 40 Adjustable Frequency AC Drive FRN 1.xx - 6.xx User Manual
Publication 22B-UM001H-EN-E

CHAPTER 5

OPERATING INSTRUCTIONS

1. It is recommended that the operation of all controls on the LiteSpeed be verified monthly.
2. The door operations are controlled by a Universal Controller (i-COMM). The controller is set up and programmed during testing at the factory. Unless you are a RITE-HITE DOORS, INC. authorized service technician, you should not attempt to change the programming.
3. A quick way of determining that the door is ready to operate is to open the control box and look at the row of (X) green Input LED's on the i-COMM and the label to verify proper state. See **page 28**.
4. Are all wires connected for the photoeyes?
5. Are loose wires secured away from moving parts?
6. With the power on, press the "OPEN" button. The door should open and close automatically after a short delay. To adjust the amount of door open time, the setting must be changed in the i-COMM controller.
7. Operate and observe the door opening to make sure that it fully opens. Observe the closing action to make sure that the door operates smoothly and fully closes without excessive curtain ripple. Black edging of curtain should not impact the floor. If it is necessary to adjust either position, refer to Encoder adjustment section.
8. While the door is closing, block the reversing photoeye. The door should reverse direction and move to the open position and then continue to operate.
9. Using end user material handling equipment, approach door slowly and verify that all the activation devices being used are operating properly. DO NOT attempt to drive through a door in which the green button is flashing.
10. Use caution (honk horn) and look in all directions when approaching a door that is closing and ensure that the door will reverse before proceeding.
11. Pedestrians should be advised to use man doors when present and to not lean into the doorway.
12. Should a fault occur, press the green flashing "OPEN/RESET" button to return to normal operation.

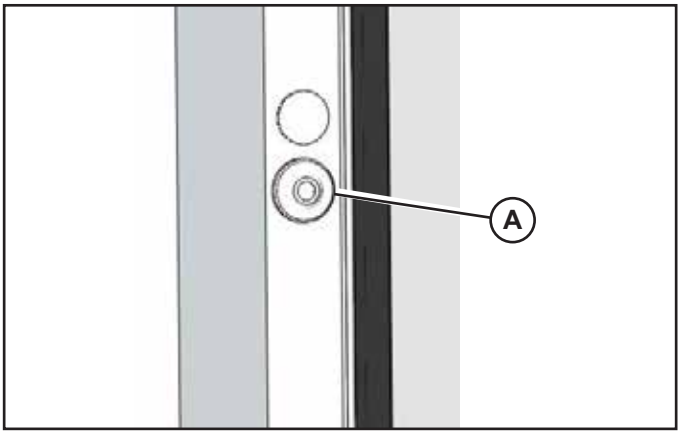


Figure 5–1

Locate the receiver photoeye (A) on the drive side sideframe and the source photoeye on the non-drive sideframe.

On non-stainless steel doors, the receiver photoeye has a clear cover to view a red light that indicates communication between receiver and emitter. Using your Android phone in front of the emitter photoeye, attempt to take a picture. A violet light should appear to indicate unit is powered. A flashing red light indicates a dirty lens or weak signal.

⚠ WARNING

Failure to restrict the curtain speed can result in damage to product or injury to personnel. The curtain may close very quickly if the brake is fully released.

Releasing the brake partially will allow the door to close smoothly.

PHOTOEYES

Photoeyes in header monitor curtain bag up.

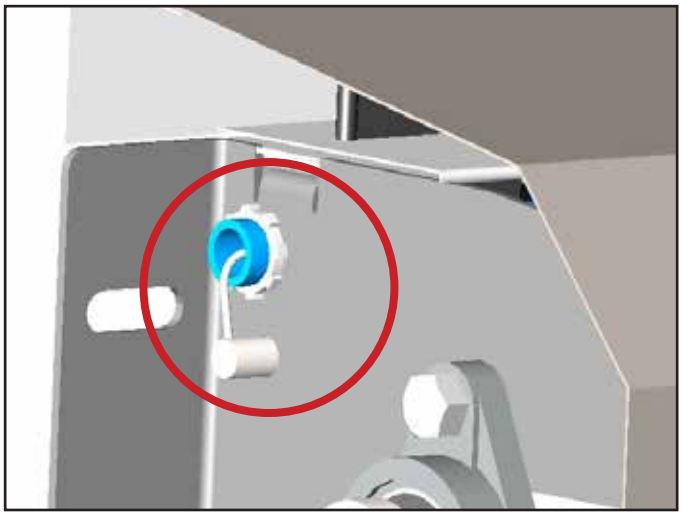


Figure 5–2: Non-Drive Side Header Photoeye

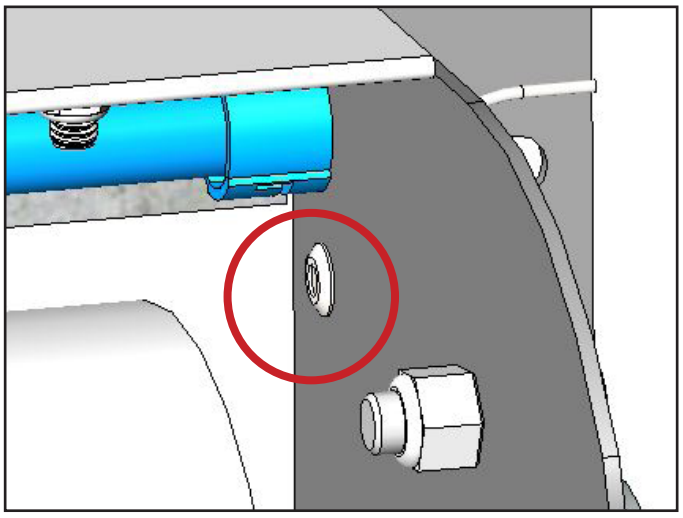


Figure 5–3: Drive Side Header Photoeye

FINAL CHECKLIST

Complete	N/A	Description
		All control box conduit must be on the bottom
		Ground wires properly terminated to ground terminal
		Shield wires properly terminated to ground terminal
		Motor ground wire terminated to sideframe ground screw
		Encoder chain / sprockets / set screws properly aligned & tightened
		Encoder cable tightened properly
		Sideframes properly spaced
		Sideframes caulked
		Sideframes square to wall
		Sideframes properly shimmed
		Proper mounting fasteners used
		Refeed rollers properly working
		Curtain refeeds when broken away
		Electrical wires properly secured away from moving parts
		Reversing photoeye reverses the door to full open position (X10)
		Curtain slack sensor test (X11)
		Drive shroud installed (Optional)
		Center shroud installed (Optional)
		Wire cover installed (if no shroud)
		Counterweight opens door (Optional)
		Curtain fans directed properly (Optional)
		Virtual Vision functioning (Optional)
		I-Zone functioning (Optional)
		Test operation of all activation devices
		Area clean of debris from installation
		Notes:

RITE-HITE DOORS NOTES PAGE

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CHAPTER 6

OPTIONAL POLY LUMBER

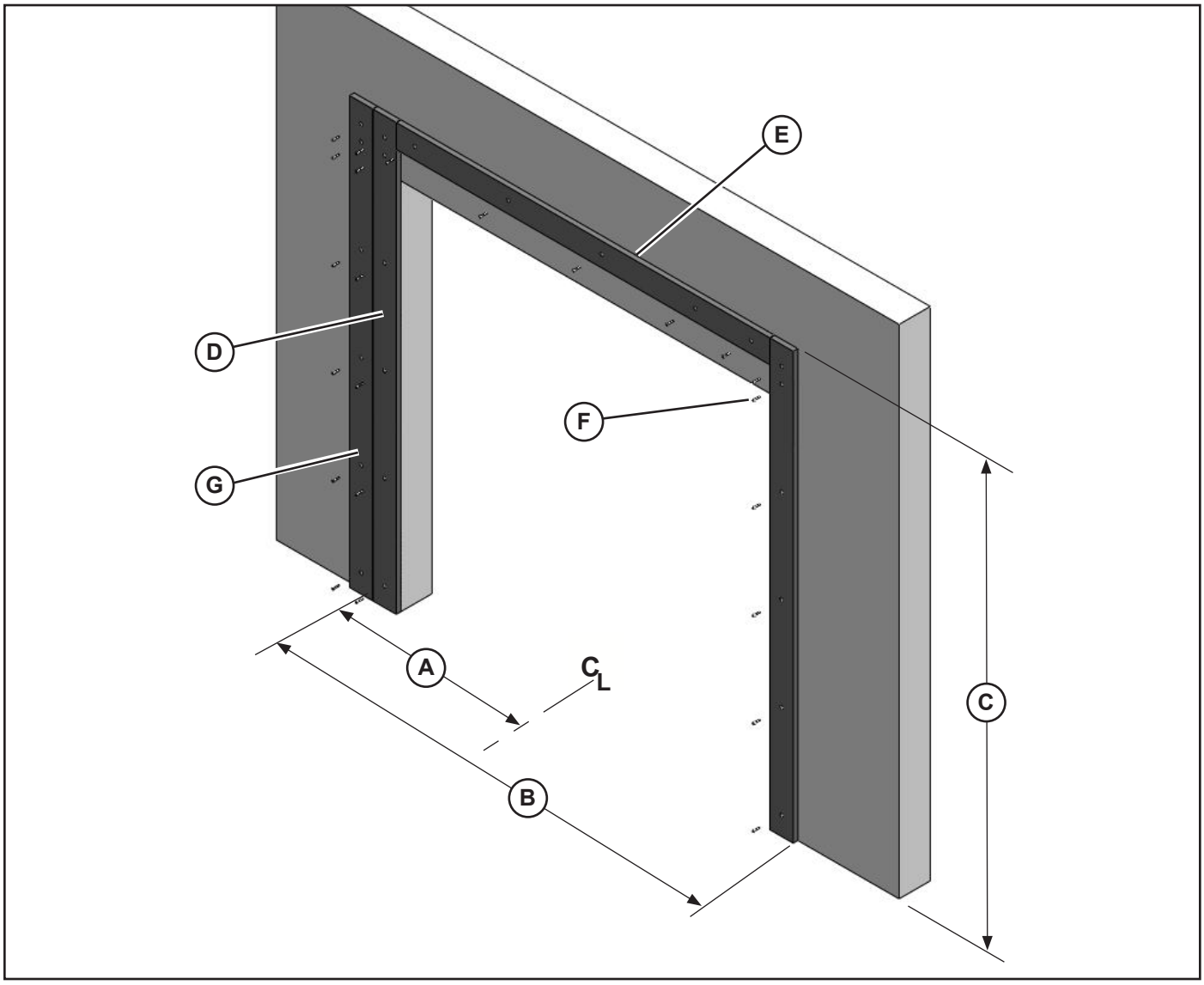


Figure 6–1

1. (A) Measure 1/2 Ordered Door Width + 7 1/2” [191 mm].
2. (B) Measure Ordered Door Width + 15” [381 mm].
3. (C) Measure Ordered Door Height + 14 1/2” [368 mm] without shroud (cut 2 1/2” [64 mm] if needed) + 17” [432 mm] with shroud.
4. Caulk behind vertical poly lumber (D).
5. Caulk behind horizontal poly lumber (E).
6. For insulated walls, use fabloks provided (F).
7. For optional counterweight, install additional vertical poly lumber (G).

OPTIONAL SHROUDS

NOTE: *Center and Drive shroud required on doors < 8'-0" [2438 mm] O.D.H.*

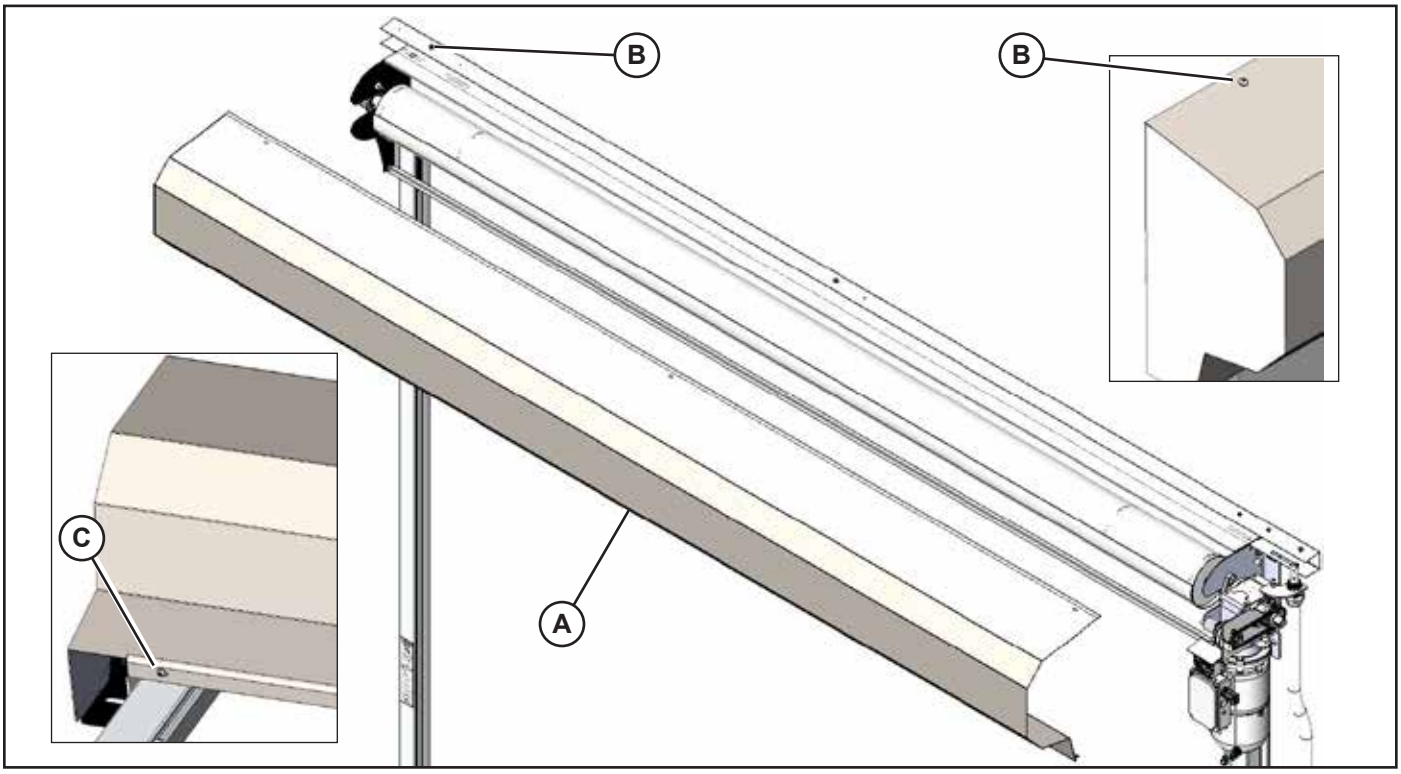


Figure 6–2

1. Fasten center shroud (A) to top of header with hardware provided (B).
2. Fasten center shroud to bottom of header with hardware provided (C).

DRIVE SHROUD INSTALLATION

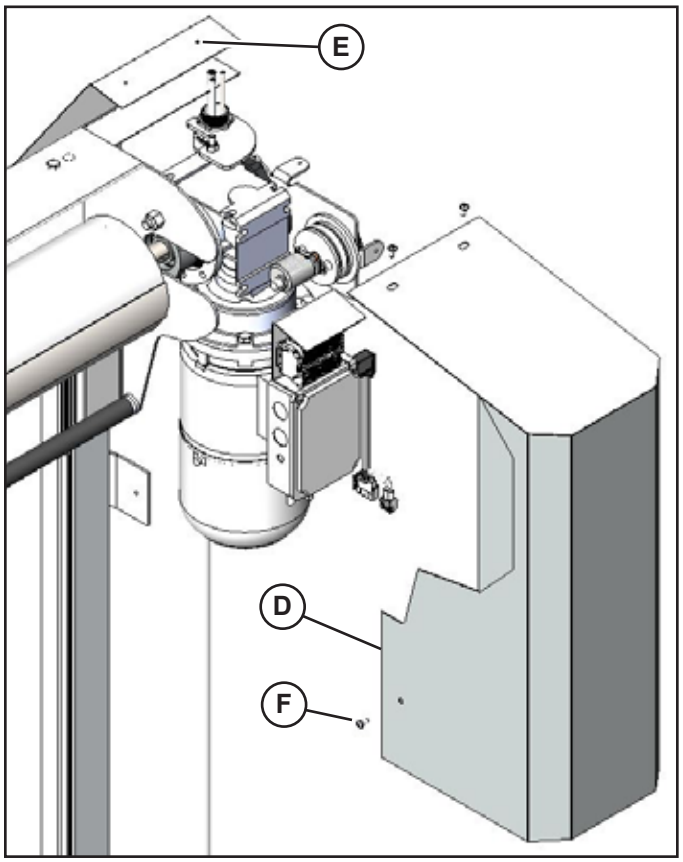


Figure 6–3

3. Fasten drive shroud (D) with (2) upper fasteners (E).
4. Fasten drive shroud with (1) lower fastener (F).

WIRE COVER INSTALLATION

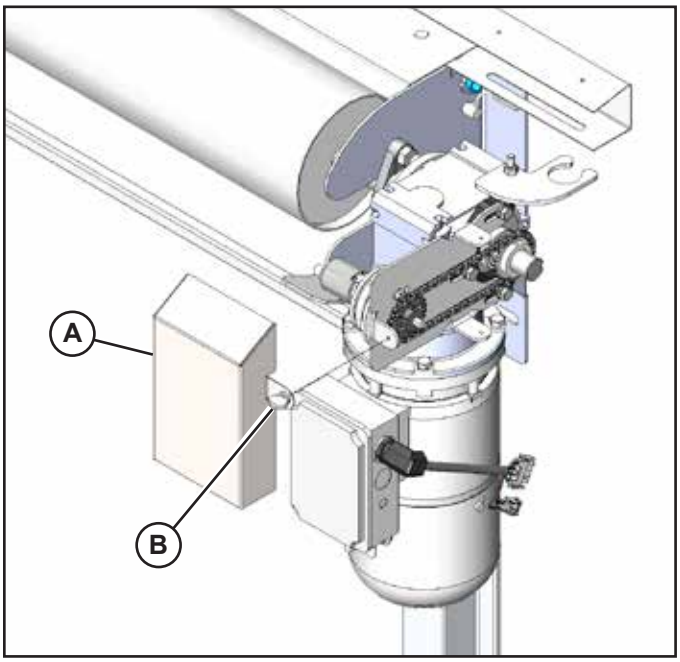


Figure 6–4

Wire cover installation is standard on doors without a drive shroud.

Fasten the wire cover (A) with (1) thumb screw (B).

COUNTERWEIGHT

NOTE: *Counterweight is not offered on doors < 7'-0" [2134 mm] O.D.H. Counterweight should be installed after the door is operating properly.*

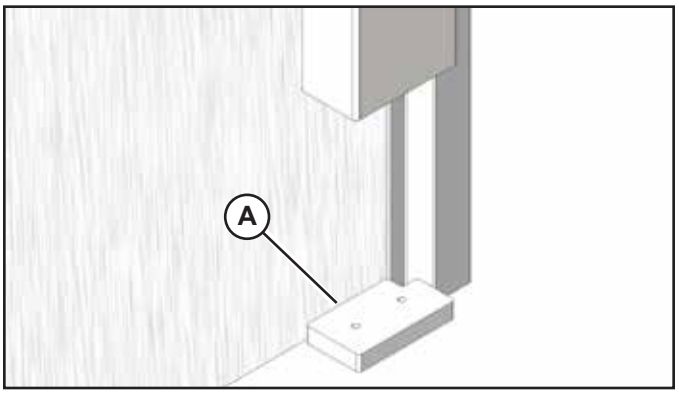


Figure 6–5

1. Anchor bottom plate (A) to the floor leaving 1/8" [3 mm] gap from plate to wall and sideframe to allow for guard to drop in place.

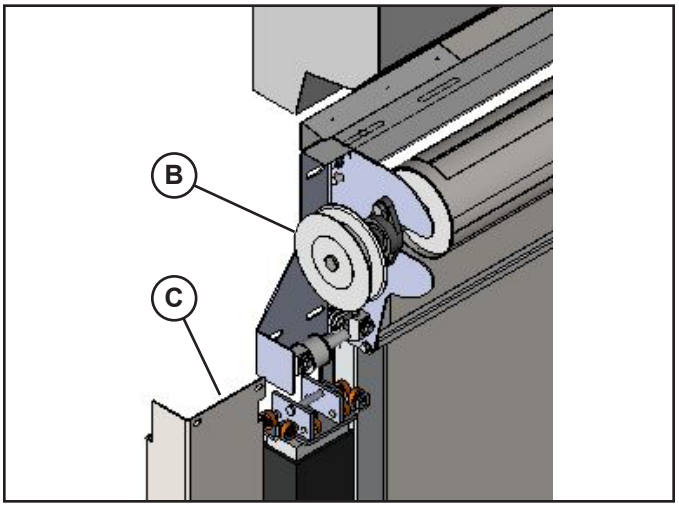


Figure 6–6

2. With curtain fully open, route counterweight belt with 1 1/2 pre-wraps coming off the front of the pulley (B). Place a 3" [76 mm]spacer on top of the bottom block. Lift and attach the counterweight to the belting.
3. Lift counterweight guard (C) over the bottom plate (Figure 6-5) and attach with the (2) bolts, lock washers, and flat washers.

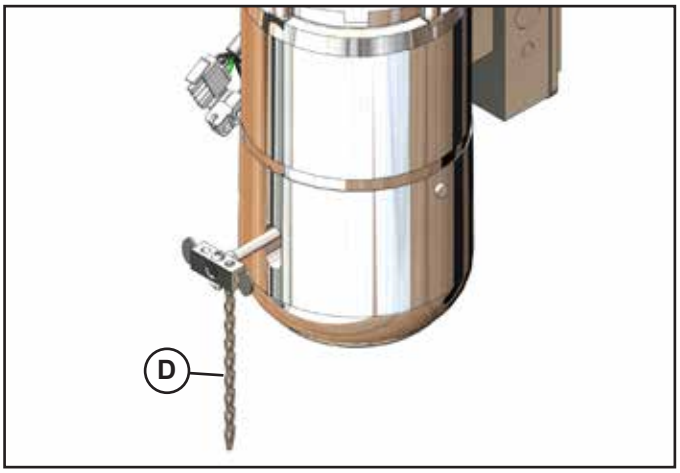


Figure 6–7

4. For doors with aluminum frames—release the brake by pulling the chain (D). As curtain nears the top, allow to slow down so it does not overtravel.

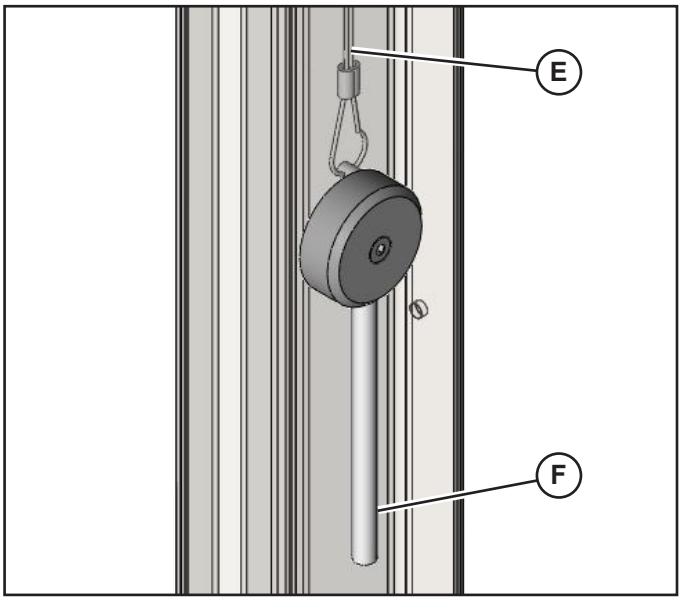


Figure 6–8

NOTE: *The cable (E) and counterweight release handle (F) shown in the illustration are only available on the LiteSpeed Clean version.*

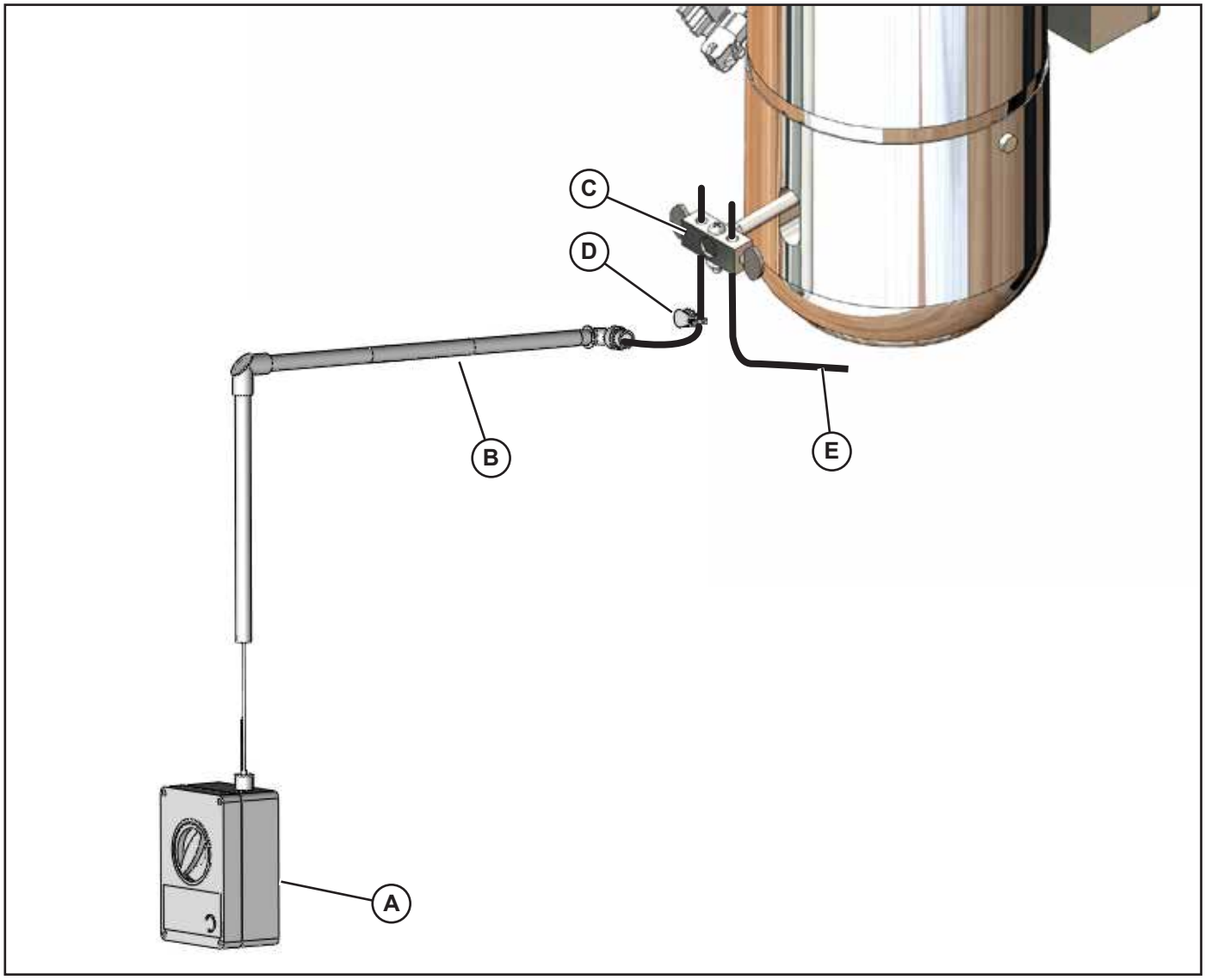
5. With door fully closed, rotate the counterweight release handle up to verify that the curtain rises.

   As curtain nears the top, allow it to slow down so it does not overtravel.

Figure 6–9

NOTE: *The gearbox breather is sealed with a rubber plug that must be removed before operating the gearbox. Remove the plug as shown in the instructional tag.*

OPTIONAL THRU-WALL BRAKE RELEASE



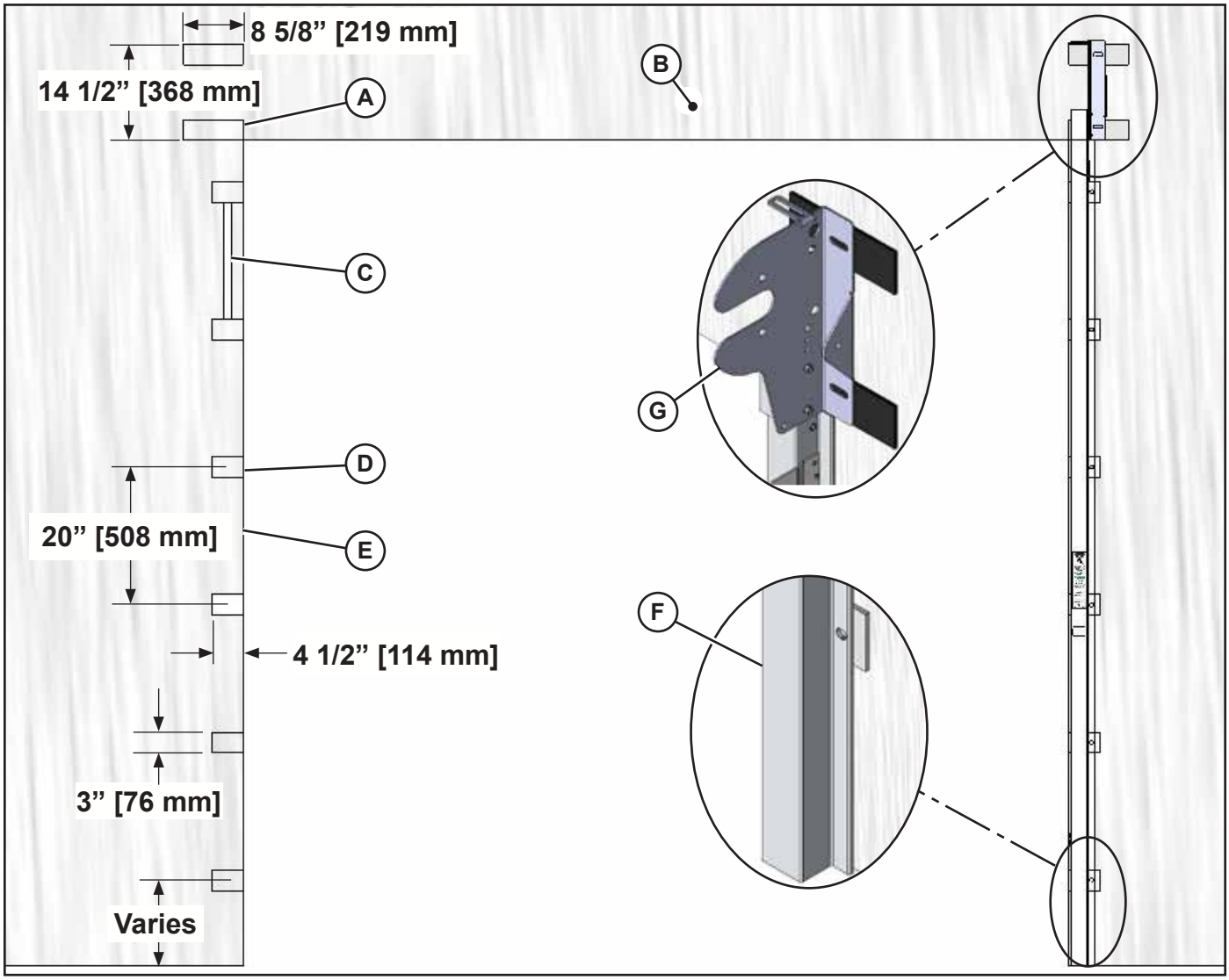
A - Thru-Wall Brake Release Handle	*D - Thru-Wall Brake Release Pulley*
B - Thru-Wall Brake Release Conduit	*E - Sideframe Brake Release Cable*
C - Thru-Wall Brake Release Handle Bracket	

Figure 6–10

NOTE: *Figure 6-9 shows the Thru-Wall brake release system without wall or door in place.*

To release the brake, rotate the handle (A). As curtain nears the top, allow it to slow down so it does not overtravel.

OPTIONAL WELD PLATE



A - Upper Weld Plates	*E - Steel Member*
B - Wall	*F - Sideframe*
C - Tape Backed Foam	*G - Wall Mount Bracket*
D - Lower Weld Plate	

Figure 6–11

1. Measure from bottom of sideframe to each hole location and position weld plates on the steel jamb at these locations and weld in place. If steel is not present at the sideframe hole locations, weld where possible.

NOTE: *There MUST be a fastener every other hole minimum, approximately 40” [1016 mm].*

2. Fasten sideframe to weld plates with self-drill/tap screws and washers provided.
3. Position upper weld plates so they catch the wall mount bracket holes. If no steel exists above the opening, it must be provided.
4. Fill gaps between weld plates with tape backed foam.

MISC. INSTALLATION

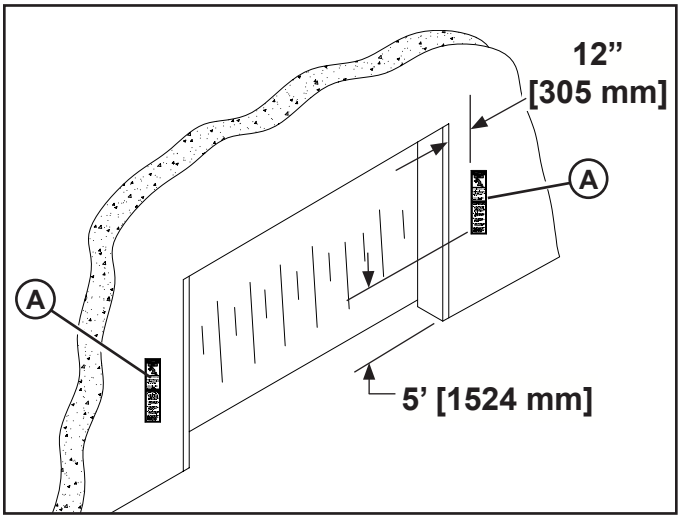


Figure 6–12: Label(s) on Back Side of Door

Clean surface where label (A) is to be placed. Peel off backing on label and apply in position.

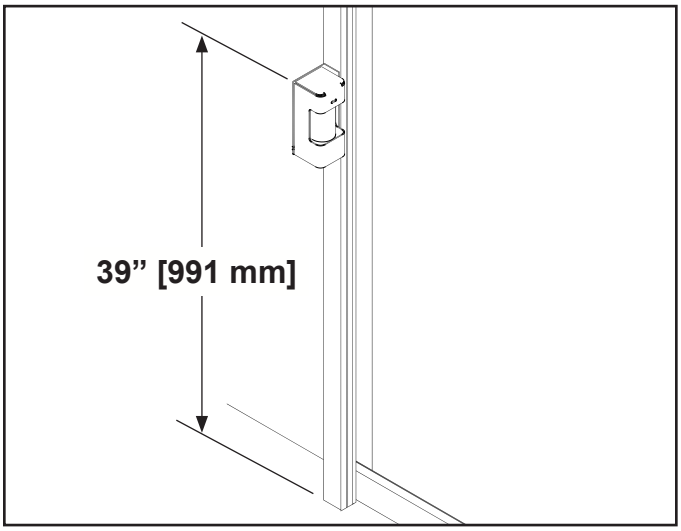


Figure 6–13: Optional I-Zone Sensors

1. Mount I-Zone sensors to the sideframes and route cables to the control box.
2. Lights on sensor will flash for 30 seconds on power up.
3. Alarm should be tested by removing the plastic cover from one of the I-Zone sensors. After 30 seconds the alarm will sound. (Door should be in the open position during this test.)

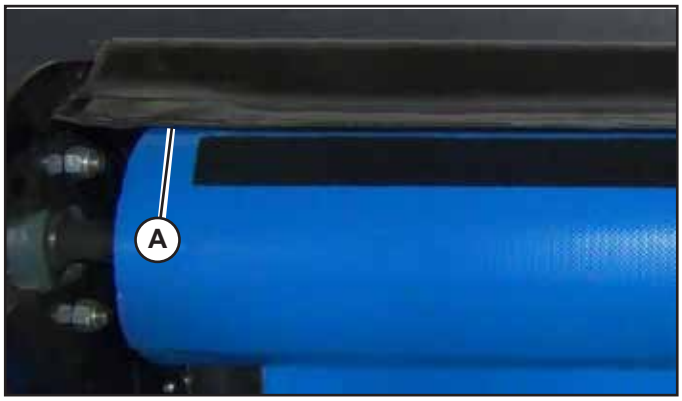


Figure 6–14: Turn-Tite® Seal

Run door to fully closed position and adjust Turn-Tite® seal (A) on hook and loop fastener. Doors with a center shroud will not include a Turn-Tite seal.

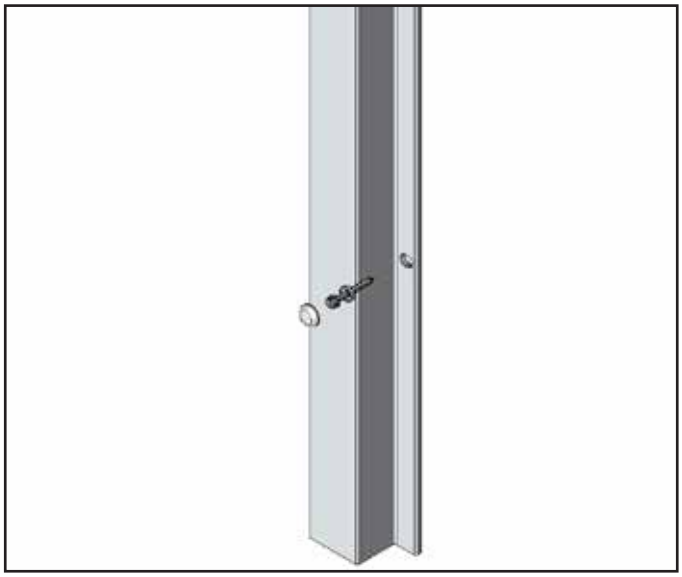


Figure 6–15: Optional Stainless Steel Fastener Cap

1. Place provided fastener through the washer.
2. If required, place a bead of silicone caulk behind fastener to seal.
3. Tighten fastener.
4. Hand tighten cap.
5. Clean any unused caulk.

CHAPTER 7

MAINTENANCE PROCEDURES

RITE-HITE DOORS, INC. PLANNED MAINTENANCE Model LITESPEED™								
Customer:	**Job #**			**Serial #**				**Date:**
Planned Maintenance Task	Recommended P.M. Intervals (Time Shown in Months)							Inspect and Perform the Following
	1	6	12	18	24	30	36	
Activation		x	x	x	x	x	x	Operate all devices to verify proper operation.
Curtain Fans (optional)		x	x		x		x	Verify that curtain fans are powered and working. Make sure that the fans are positioned properly and are removing condensation from the curtain.
Auto Re-Feed		x	x		x		x	Verify auto re-feed is operational.
Brake	x		x		x		x	Verify that brake stops the door at open and closed positions as well as when stopped in the middle of travel. To move the curtain manually, turn the brake release handle to the disengaged position. The curtain should be able to be moved manually. If brake is making noise, adjust.
Controls / Wiring			x		x		x	Clean and check all connections with disconnect off. Make sure all wires are free from moving parts.
Curtain		x		x	x		x	Inspect for wear or damage, patch immediately to prevent further damage. Clean with warm soapy water. Check edging for wear. Check drive buttons; if missing or damaged, replace. Refer to “Curtain Installation” on “Curtain Installation” on **pages 22—19.**
Door Assembly			x		x		x	Perform visual inspection for damage. Tighten all hardware. Replace any worn labels. Use air hose to remove dust and debris.
Door Operation			x	x	x	x	x	Operate door and make sure all operations are functioning properly.
Roller Tube			x		x		x	Verify roller tube is centered. Make sure bearing set screws and mounting bolts are tight.
Gearbox			x		x		x	Check gearbox fluid level; fill with Mobil - SHC 624 or Phillips 66 - Syncon 32 if low. Check lock collar set screws.
Encoder / Chain / Sprockets			x		x		x	Verify encoder chain and sprocket set screws are tight. Verify lock collar on encoder is tight. Check open and close positions; adjust as required.
Turn-Tite Seal			x		x		x	Verify Turn-Tite seal is sealing wall properly.
Motor			x		x		x	Check junction box and plug connections.
Non-Powered Opening (optional)			x		x		x	With power off, verify counterweight opens door. In the event the door travels too far open when using the counterweight, the door will go into a fault and will need to be reset.
Photoeyes			x	x	x	x	x	Verify photoeyes reverse the curtain. Clean emitter and receiver lens.
Sideframes	x	x	x	x	x	x	x	Perform visual inspection. Verify proper width and tighten all hardware.
Sideframe Wear Strips			x		x		x	Inspect sideframe wear strips. Replace if needed.
Virtual Vision (optional)			x	x	x	x	x	Verify Virtual Vision is functioning properly. Red LED’s should be lit if movement on opposite side.
Vision		x	x		x	x		Inspect vision for tears or separation. Clean with warm soapy water.

MAINTENANCE ITEMS

BRAKE

TORQUE ADJUSTMENT

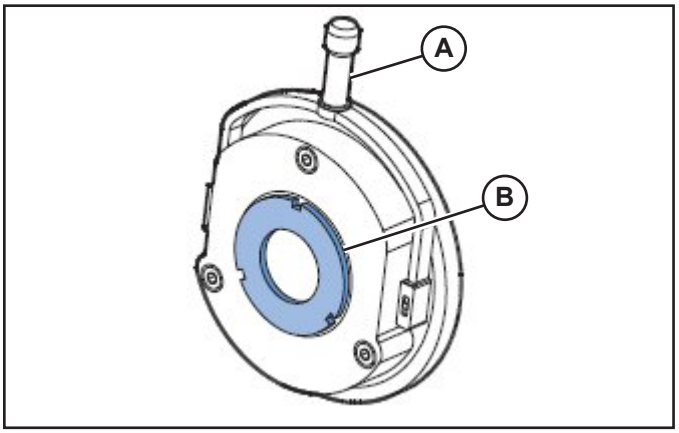


Figure 7–1

This should only be required after prolonged brake use.

Remove the brake cover by removing the three screws and brake handle (A) holding it on.

The spanner nut (B) is tight against the brake casing. To make adjustments, unscrew the spanner nut a few clicks at a time (2.5 turns starting out).

The lower the brake torque, the longer the brake stop time and the faster the brake release time.

Adjustments to the torque setting should not be performed without first consulting RITE-HITE Doors Technical Support at 563-589-2722.

AIR GAP

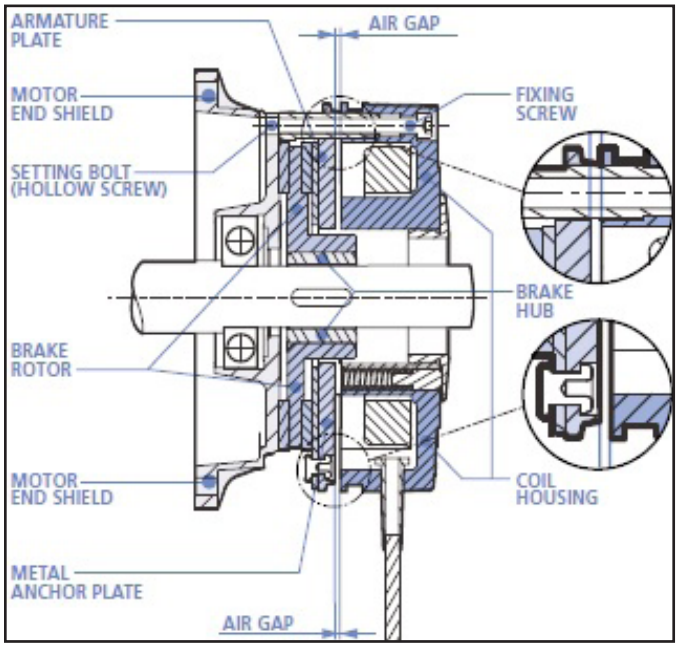


Figure 7–2

The brake air gap is checked by placing a feeler gauge between metal anchor plate and the brake coil housing as shown. Minimum gap is .008” [0.2 mm], maximum is .024” [0.61 mm].

1. Loosen the fixing screws that attach the brake to the motor’s end-shield by approximately half a turn.
2. If required, the brake assembly may be loosened slightly from the motor’s end shield by turning the threaded setting bolts (hollow screws) that surround the fixing screws, counterclockwise, into the brake coil housing.
3. Depending upon whether or not the air gap needs to be decreased or increased, turn the fixing screws accordingly until the desired nominal air gap is reached, as measured using the appropriate feeler gauge.

- Turning the fixing screws clockwise allows the brake coil housing to be moved towards the anchor plate and reduces the air gap.

- Turning the fixing screws counterclockwise allows the brake coil housing to be moved away from the anchor plate and increases the air gap.

4. If the setting bolts (hollow screws) were adjusted as suggested in Step 2, re-secure the brake coil housing firmly against the motor's end shield by turning the setting bolts (hollow screws) clockwise, out of the brake coil housing.
5. Tighten the fixing screws to the appropriate torque.
6. Re-check and measure the air gap in multiple locations to check for appropriate spacing. Repeat the steps as needed until the desired air gap spacing is uniform and consistent all the way around the brake.

CURTAIN BUTTON

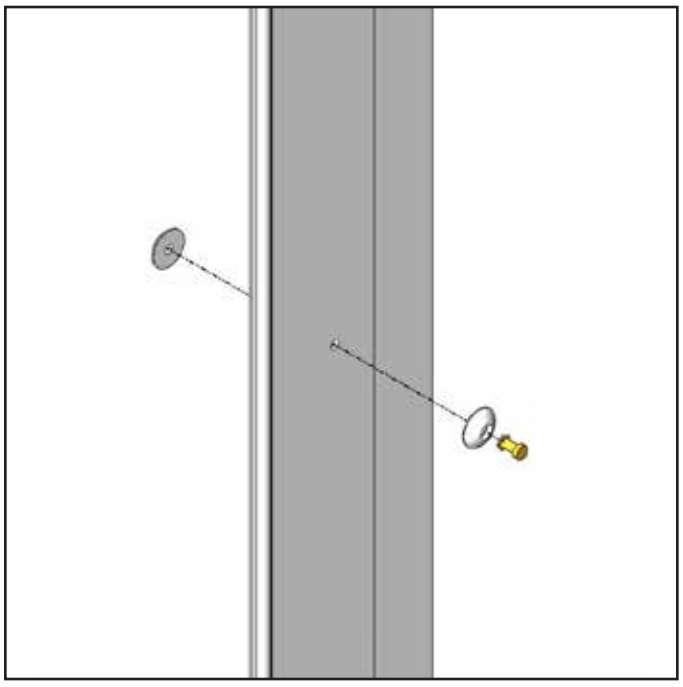


Figure 7–3

To repair or replace curtain button, remove the existing and attach new button(s) with supplied rivet.

WEAR STRIP REPLACEMENT

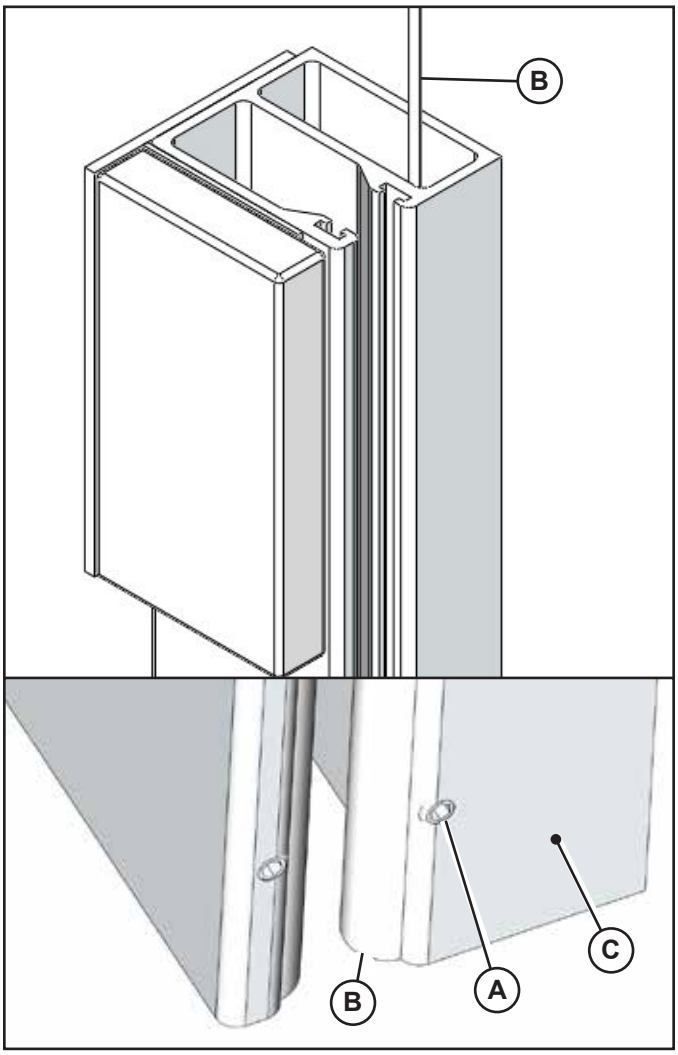


Figure 7–4

1. Turn power off and follow lock-out tagout procedures.
2. Remove screws (A) holding in wear strip edging (B) in place and slide edging out through the top of the sideframe (C).
3. Slide new strip into sideframe.
4. Fasten strip at the bottom of sideframe.

TROUBLESHOOTING

DEFINITION	FUNCTION
Activation	It is preferred not to wire activation devices until after the door is functioning properly. (Refer to Activation Drawing)
Brake	The brake is powered by 110VAC. If brake does not stop door when open or closing or if there is excessive noise, see brake adjustments on "Brake" on page 56. Brake will have approx. 270 ohms on normal readings; must disconnect from rectifier.
Breakaway	If the curtain is separated from the sideframes, press the green open/reset button and the door will auto-refeed back into the sideframes without tools or intervention. If the curtain does not auto-refeed, verify that the bottom of the curtain stops even with the spreader bar (O.D.H.) or it will not refeed. If a major separation occurs the roller tube may need to be turned manually to prevent damage to the curtain
Control Box Cable	**DO NOT DRILL HOLES ON TOP OF THE CONTROL BOX TO RUN CONDUIT AS DUST PARTICLES AND MOISTURE MAY CAUSE DAMAGE TO ELECTRICAL COMPONENTS. THE IDEAL SAFEST LOCATION IS AT THE BOTTOM.** Failure to do so will void the warranty. Supplied conduit cable is pre-wired. If it is too short, DO NOT splice wires as the cable is shielded to prevent electrical noise. Make sure the motor is grounded and the braided (drain) wire is properly grounded to prevent electrical noise.
Curtain	The curtain is driven by the roller tube. a) If buttons are missing from curtain, repair or replace. b) If curtain struggles to raise or lower or is baggy, check for proper sideframe spacing, O.D.W. + 1/2" [13 mm]. c) If curtain contacts the wall when closing, verify sideframes are not too close together.
Disconnect Switch	The disconnect switch is after fuses F1, F2, F3, and removes power from the entire control box, except for incoming wires through the fuses to bottom of disconnect.
D.O.H. or D.O.W.	D.O.H. = Door Opening Height or D.O.W. = Door Opening Width
Door does not close	a) Check status on i-COMM display to see why door is staying open ("Photoeye Blocked" or Photoeye Failure", etc.). Display should read "Door Closing in "x" seconds." b) Verify proper incoming power is reaching inverter at L1, L2 and L3 (220, 230, 400, 460, 575). c) If run timer occurs, check for binding or obstructions. d) Verify inputs X3, X5, X6 or X7 are not on. If on, remove wire from terminal to determine what is keeping light on. e) Verify outputs K1, K2, K4, K5 and YDC2 are on or coming on to signal inverter to close door. f) Verify X10 is on and that the photoeyes are lined up and not blocked. g) Verify as the curtain gets near the photoeyes that they are being shut off. h) If curtain reverses at photoeyes, verify that the photoeye wiring is not reversed, X10 is for the sideframe photoeye. i) Verify X11 is on and that the slack sensor is lined up and not blocked by the curtain. j) Verify inverter display is changing frequency. k) Verify Encoder has been set up. l) Verify rectifier has 120VAC going to it, ~ 100VDC coming out to the brake. m) Verify curtain feeds into rollers and edge is not binding.
Door does not open	a) Verify input X3, X5, or X6 are coming on when activation device is being used. b) Verify outputs K3, K4, K5 and YDC2 are on or coming on to signal inverter to open door. c) Check status on i-COMM display to see why door is staying closed. Display should read "Door Opening". d) Verify inverter display is changing frequency. e) Verify proper incoming power is reaching inverter at L1, L2 and L3.
Door slams open/ close	a) Verify the open and close positions are properly set. b) Verify encoder lock collar and sprocket set screws are tight and the chain moves when the drive tube is turning. c) Verify the encoder shaft turns when the drive tube is turned. d) Verify the inverter is changing speeds on the display. e) Verify the phasing is correct. The door should open when the green open button is pressed. f) Verify the brake is engaged and not released. g) Verify the key has been installed on the gearbox shaft. h) Verify Encoder has been setup. i) Verify rectifier has 120VAC going to it, ~ 100VDC coming out to the brake.
Drain Wire	**Verify that drain wire is terminated properly. Failure to properly terminate the drain wire may result in sporadic reversals, photoeye, and other issues due to either static electricity or electrical noise and void warranty.**
Drive Side Switch	The drive can be switched from right hand to left hand by performing the following: a) Remove and switch conduit mounting bracket to opposite side. b) Remove and switch motor torque arm bracket. c) Remove encoder bracket and move to outside holes. d) Remove and switch driven sprocket. e) Remove and switch drive and non-drive photoeyes. f) Remove curtain, flip roller tube 180°, and route on opposite side of roller tube. g) New drive shroud and bracket are required. h) Change i-COMM to state the proper right or left hand drive
Encoder	See Encoder Section. **THE ENCODER CABLE SHOULD NEVER BE SPLICED OR EXTENDED.** a) If curtain is not stopping at the same position, make sure encoder cable is grounded. b) Verify encoder chain is operating properly and sprocket set screws are tight to shafts. c) See page 34 for i-COMM Encoder errors.
Fuses	F1, F2, F3: Incoming power fuses: must have line voltage across all 3 legs (Transformer, Inverter, Motor). F4, F5: Primary side transformer fuses: must have line voltage across both legs. F7: Secondary side transformer fuse. F7 is 120V (power supply & brake).

DEFINITION	FUNCTION
i-COMM Controller™	The i-COMM controller is a circuit board that controls the actions of the door. There is a digital display that shows the cycles, status and position of the door at any time during its travel. For input and output function signals, refer to chart on **page 28**. Settings can be changed for re-close or pre-announce timers, interlocks, special activation commands, among others, refer to instructional manual included. a) Verify i-COMM is receiving 24VDC from power supply. b) If i-COMM display is blank or hard to see, adjust contrast. c) Input X10 - Lower Photoeye will be on unless photoeye is blocked, not aligned or mis-wired. d) Input X11 - Header (Slack Sensor) will be on unless it is blocked, not aligned or mis-wired. e) Input X14 - Fault needs to be on for the door to operate. f) The door can be set to close from 2 to 255 seconds. Follow i-COMM adjustment instructions.
Inverter	See **page 39—page 42** for proper parameter settings. a) Check voltage to inverter on L1, L2, L3 (same as F1, F2,F3) b) Check wire connections at terminals, U, V, and W on inverter.
I-Zone	See **page 54** and **page 66** for mounting and wiring.
Motor	a) Check voltage to inverter on L1, L2, L3 (same as F1, F2, F3). b) Check wire connections at terminals, U, V, and W and on inverter. c) Check motor / control box cable plug connections and junction box wire connections. d) 208V-240V motor will have approximately 5 - 6 ohms on normal readings. e) 400V-480V motor will have approximately 10 - 11 ohms on normal readings. f) 575V motor will have 14–15 ohms on normal readings.
Motor Phasing	If “Open/Reset” button is pressed and the door closes, phasing is reversed, switch wires in terminals, V and W. Make sure the motor is properly grounded to prevent electrical noise
Non-Powered Opening (NPO)	If issues arise with the non-powered opening counterweight, check the following: a) If power outage, rotate brake release handle to open door. b) With power off, verify counter weight opens door. c) In the event the door travels too far open when using the counterweight, the door will go into a fault and the curtain will need to be refed, then jogged close to reset.
O.D.H. or O.D.W.	O.D.H. = Ordered Door Height or O.D.W. = Ordered Door Width
Open/Reset Push Button	The open/reset push button function is when the button is pressed, a command to open the door is given. To jog door when i-COMM states “Photoeye Failure”, press and hold the “Open/Reset” button.
Pressure	If the curtain is blowing out because of high wind or negative pressure, check the following: a) Tracks MUST be mounted at O.D.W. + 1/2” [13 mm]. If mounted wider, excessive curtain wear may occur; if too narrow, curtain buckling or billowing will be greater. b) Check to make sure the curtain has all the buttons in place. c) Verify wear guides are present and functioning properly.
Photoeyes	The photoeyes are wired to the 24VDC circuit and are wired as normally closed when there is power to the unit and the emitter photoeye is aligned with the receiver photoeye. The photoeyes will reverse or hold the door open when the photoeye beam is blocked. When the beam is not broken, the door will auto-reclose. If photoeyes require adjustment, check that the sideframes are square to the wall. a) Verify Brown wires to terminal DC and Blue wires to terminal OV on motor terminal strip. b) Verify Black X10 wired to terminal X10 and Black X11 wired to terminal X11 on motor terminal strip. c) When open, i-COMM verifies photoeye inputs are off. If on, door will fault. If off, test is ok and emitters turn on. d) Red LED on the Receiver should be on when aligned. Either remove photoeye from sideframe to verify or with aluminum sideframes, view thru clear cover. e) Input X10 will go off when the lower (18”) [457 mm] photoeye is tripped. f) Input X11 will go off when the header “slack sensor” is not aligned.
Pillow Block Bearings	Are the pillow block bearing set screws tightened to 66 to 80 in.-lb. [7-9 N-m]?
Power Supply	Power Supply is powered by 120VAC from the F7 fuse and delivers 24VDC to the i-COMM.
Sideframes	Verify sideframes are properly spaced; MUST be O.D.W. plus 1/2” [13 mm].
Virtual Vision	Virtual Vision is optional on the LiteSpeed door. When motion is sensed via Falcon motion sensors, the Virtual Vision red LED’s will illuminate to notify driver of movement on the opposite side of the curtain. It is normal for the YDC3 output to flash on i-COMM during door operation.
Voltage Change	To change the voltage, see steps below: a) Change transformer taps and fuses per electrical diagram. b) Change motor wiring per junction box diagram. c) Replace Inverter with proper voltage. d) Brake resistor e) Change voltage selection on i-COMM
X0	Input programmed for a device to open the door.
X1	Input programmed for a device to stop the door.
X2, X3, X6, X7	Activation Inputs - If on and door is not closing, verify activation device is not faulty.
X4	Input programmed for a device to close the door.
X5	Input programmed for a device to toggle open / close the door.
X8, X9	I-Zone Inputs
X10	18” [457 mm] Photoeye Input - MUST be on, if off, verify aligned and powered. CE Doors—Photoeye is at 10” [254 mm]

DEFINITION	FUNCTION
X11	Header Slack Sensor - Must be on, if off, check that curtain is not bunched up.
X12	Open / Reset Button - X12 will illuminate when button is pressed.
X13	Induction loop Input - if on door will stay open - verify object is not present on the floor loop.
X14	Fault Input - Must be on to run door.
X15	Power Input - Indicates unit is powered.
YK0	Interlock output.
YK1	Programmable output.
YK2	Programmable output.
YDC0	Output programmed to be on when door open.
YDC5	Output programmed for Pre-announce to close.

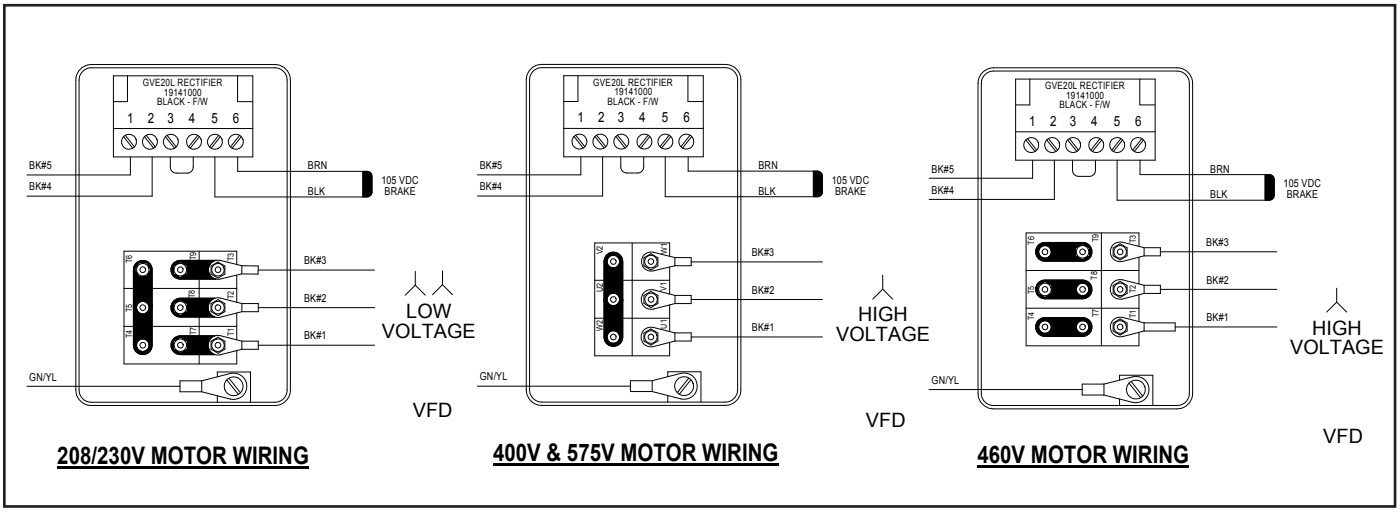


Figure 7–5

CHAPTER 8
VIRTUAL VISION / CURTAIN FAN LAYOUT (FRONT SIDE)

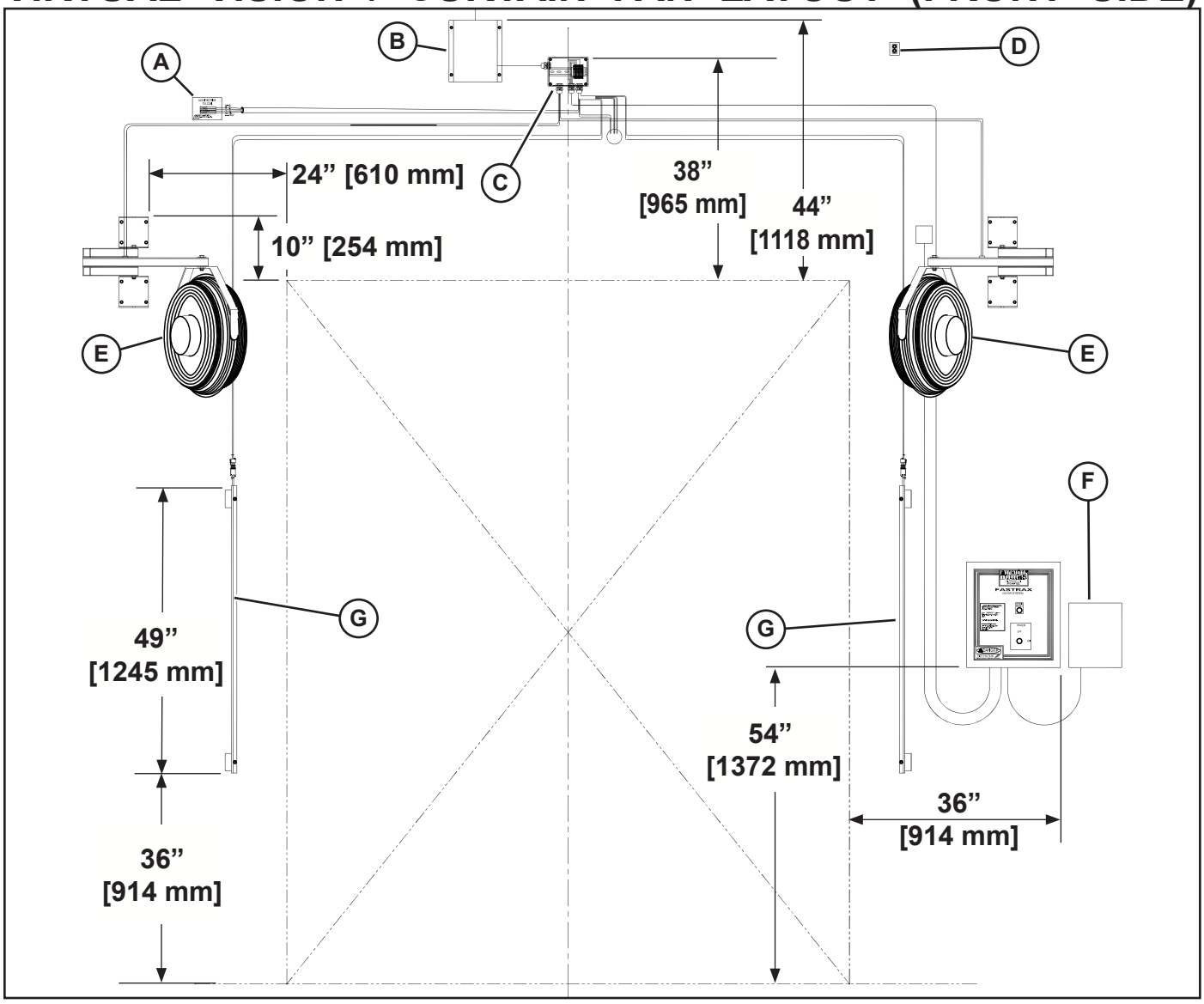


Figure 8–1

NOTE: *Curtain Fan(s) may be turned off if there is no moisture present.*

NOTE: *Backer Plates May Be Required On Curtain Fans (not provided)*

1. Install Curtain Fan(s) (E) off to the side of the door jamb, near the top of the opening. Adjust fan to move air across the curtain. If door is mounted on cold side, install fans on warm side.

NOTE: *Virtual Vision is optional on LiteSpeed doors. There will be a motion sensor mounted on each side of the door, as well as 2 red LED light bars on each side of the opening on both sides. The motion sensors will detect motion on the opposite side of the curtain to warn oncoming traffic of a possible pedestrian or forklift on the opposite side.*

2. Locate Virtual Vision light bar assemblies (G) on each side of the doorway and in clear view of oncoming traffic. They should be installed approximately 3' [914 mm] off the floor, adjacent to the doorway (e.g., goal posts or wall) and in a location that is protected from potential impact damage.
3. Virtual Vision motion sensors (A) should be installed off to the side. Sensors should be programmed for a 2-second hold time and bi-directional detection. Direct sensors so they DO NOT extend beyond the width of the door.
4. Mount step-down transformer (B) if 120V not available.
5. Plug in Virtual Vision cable (C).
6. Plug cables together and wire into junction box.

NOTE: *End user provides the disconnect (F). An optional 120V outlet (D) for fans may be installed if desired.*

To avoid cross talk when changing the settings on the Virtual Vision or activation sensors when using the remote controls, Rite-Hite offers the following three options:

1. The BEA remote control allows you to set a unique security code for each sensor. Then you would be able to enter the code for the sensor you are interested in changing, and it will only change the settings for that sensor. To accomplish this, temporarily disconnect the activation sensor(s) from its power supply (at the i-COMM), use the remote to set a security code (e.g., "1111") for the Virtual Vision sensor(s), then power up all sensors. The activation sensor will have the default security code "0000" for its settings, and the Virtual Vision sensor will have its new security code (use unlock/lock sequence). There should be no cross-talk with the remote's instructions when using this approach. Make sure to record these values for future reference.
2. If you do not wish to use security code settings, you can simply power down one unit (at the i-COMM) while setting the other unit, and then do the same thing with the other unit. This is similar to option 1, although if you want to make subsequent changes to the settings, you would need to go through the power down procedure again.
3. If you do not wish to power down the units or use security settings, you can physically cover one of the units while programming the other unit. Any opaque material (e.g., cardboard) should work. This may be difficult for units mounted high above the opening.

VIRTUAL VISION LAYOUT (BACK SIDE)

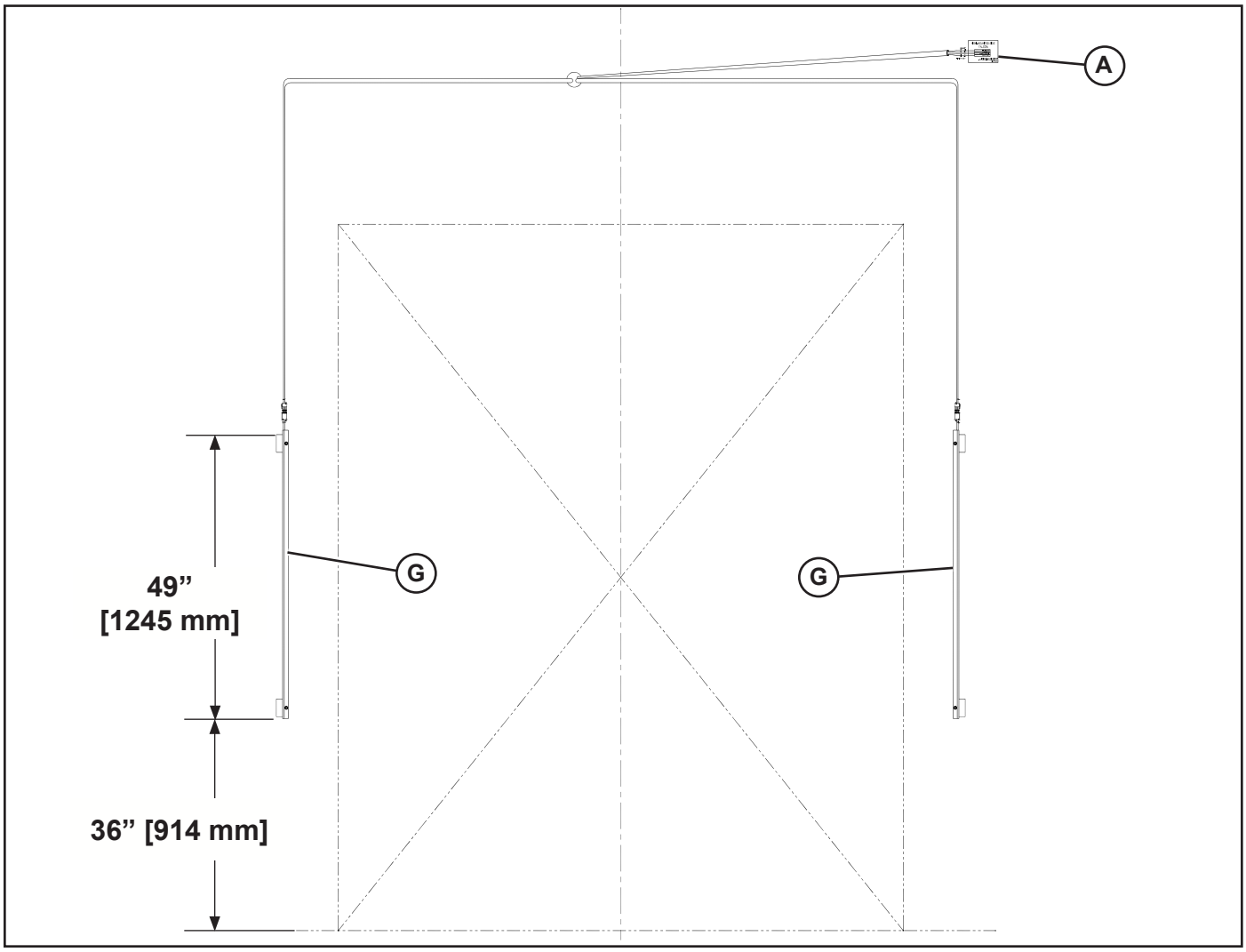


Figure 8–2

1. Mount opposite side Virtual Vision assemblies (G).
2. Mount opposite side Virtual Vision motion sensor (A).

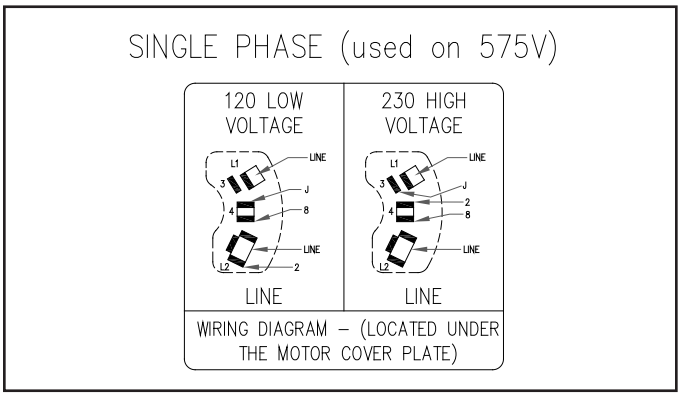


Figure 8–3

Curtain fan wiring for 220V single phase or 575V doors.

WIRELESS ACTIVATION

It is recommended to pair the unit(s) at the control box prior to mounting the unit.

To pair the host with a wireless device:

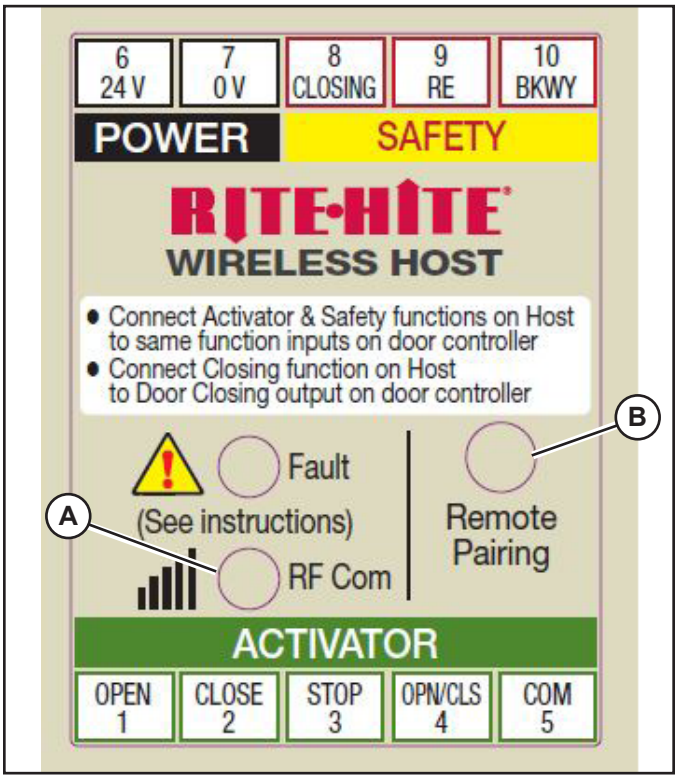
1. Open the lid and remove the plastic strip under the batteries in the remote unit to energize the device.
2. On the Host (Receiver) in the control box, press “Remote Pairing”. The “RF Com” LED will begin to flash.
3. Within 5 seconds press the pair button on the remote unit. The units will then pair.
4. Activate the door to test. Repeat procedure if necessary.
5. Mount remote unit.
6. Wiring for Host unit to Control Box i-COMM:

   4 - X6

   5 - DC

   6 - DC

   7 - OV



A - RF Com LED	B - Remote Pairing

Figure 8–4

A - Plastic Strip	B - Pair Button

Figure 8–5

OPTIONAL REMOTE MOUNTED CONTROLS

Figure 8–6

Optional remote mounted LCD is mounted on a stainless steel 2-gang wall faceplate and compatible with standard 2-gang electrical box (provided by end user).

On the face of the assembly there is a 4-button membrane switch: Green—Open/Reset (Up); Red —Stop (Exit); Yellow—Close (Down); and Grey—Enter (Left arrow).

Press and hold Enter for 5 seconds to enter the menu. The Open button on the membrane switch will reset the door after a fault. The screen flashes when in a fault.

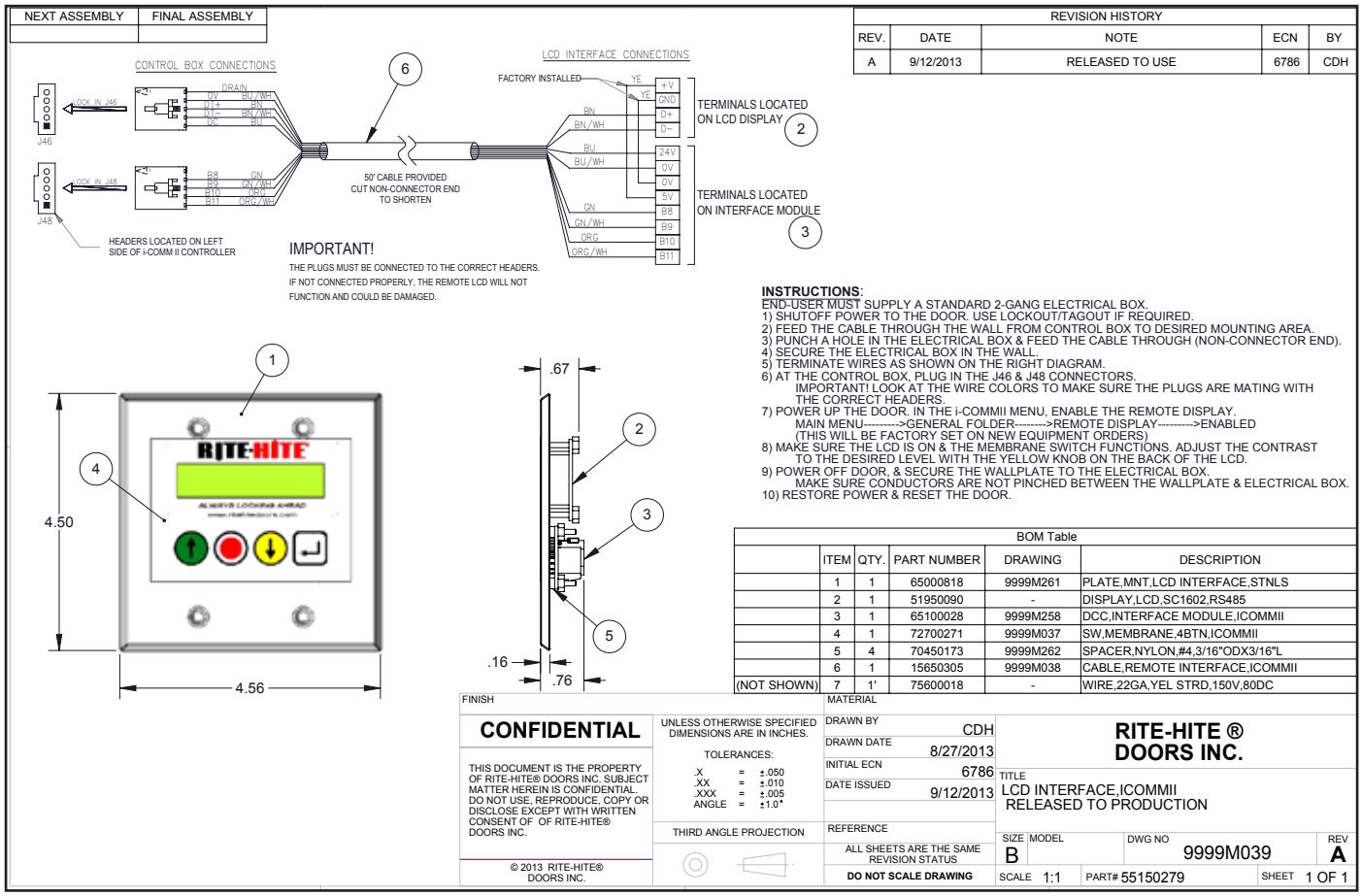
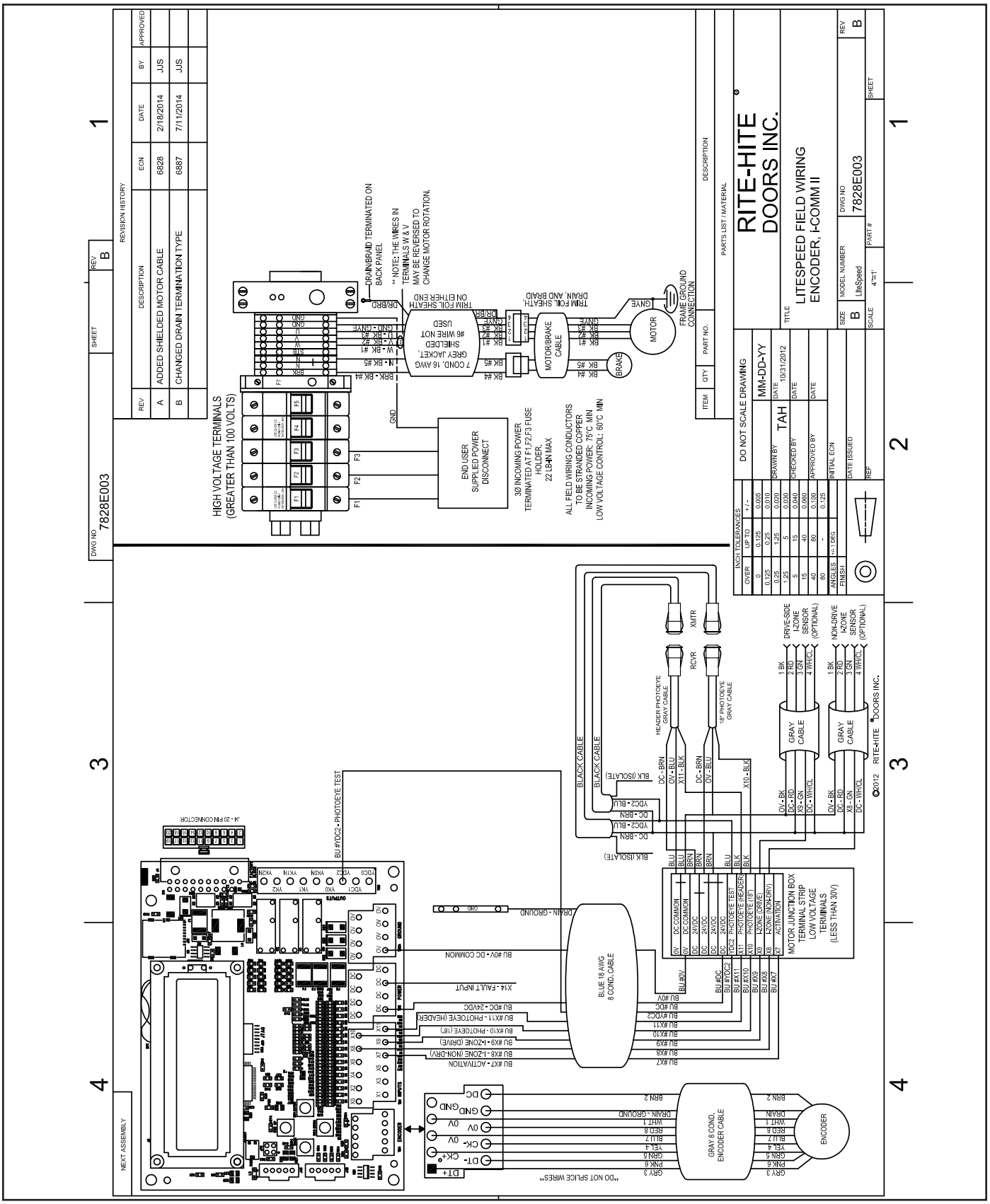
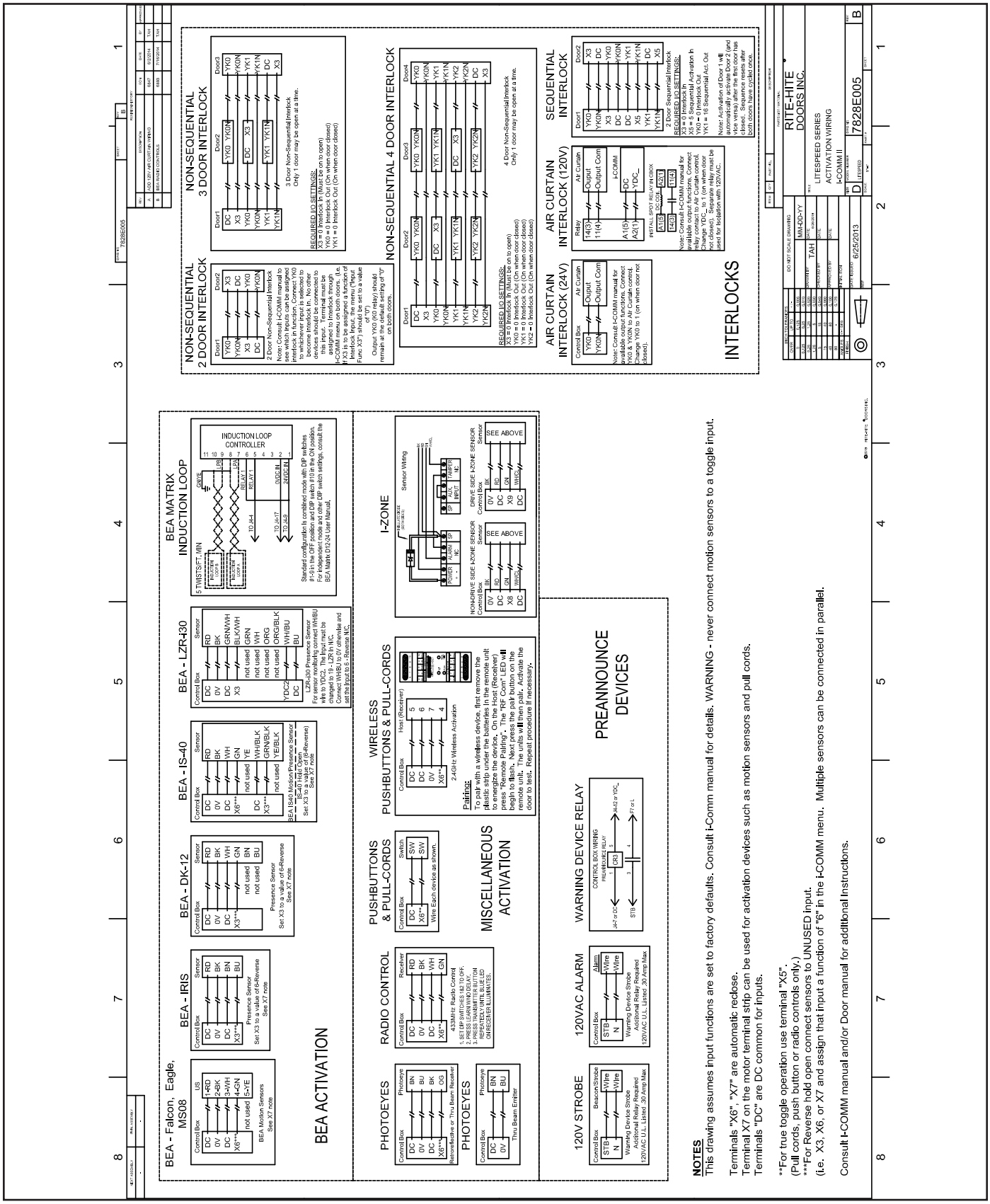


Figure 8–7

MANDATORY FIELD WIRING DIAGRAM



ACTIVATION WIRING DIAGRAM



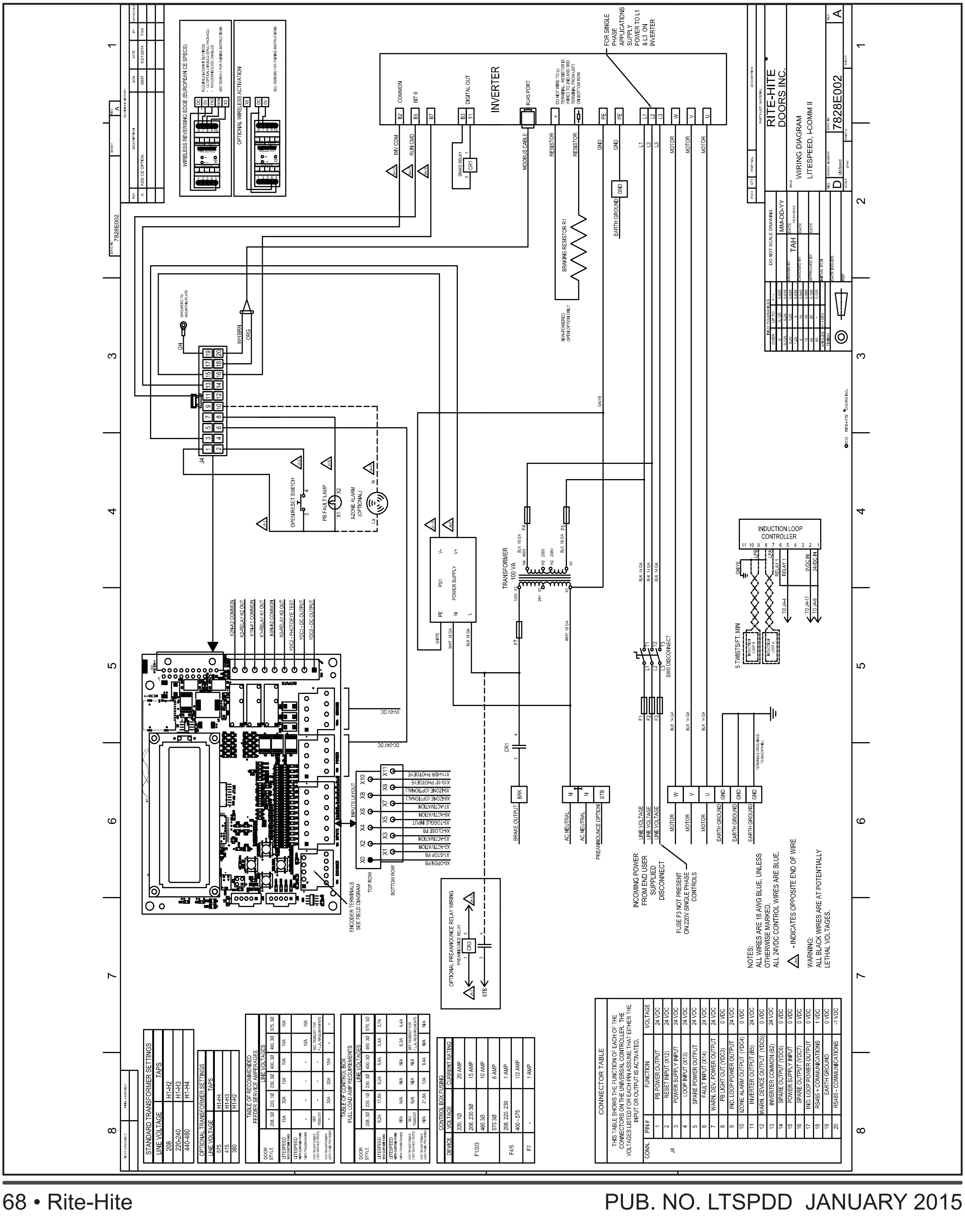
NOTES
This drawing assumes input functions are set to factory defaults. Consult i-Comm manual for details. WARNING - never connect motion sensors to a toggle input.

Terminals "X6", "X7" are automatic reclose.
Terminal X7 on the motor terminal strip can be used for activation devices such as motion sensors and pull cords.
Terminals "DC" are DC common for inputs.

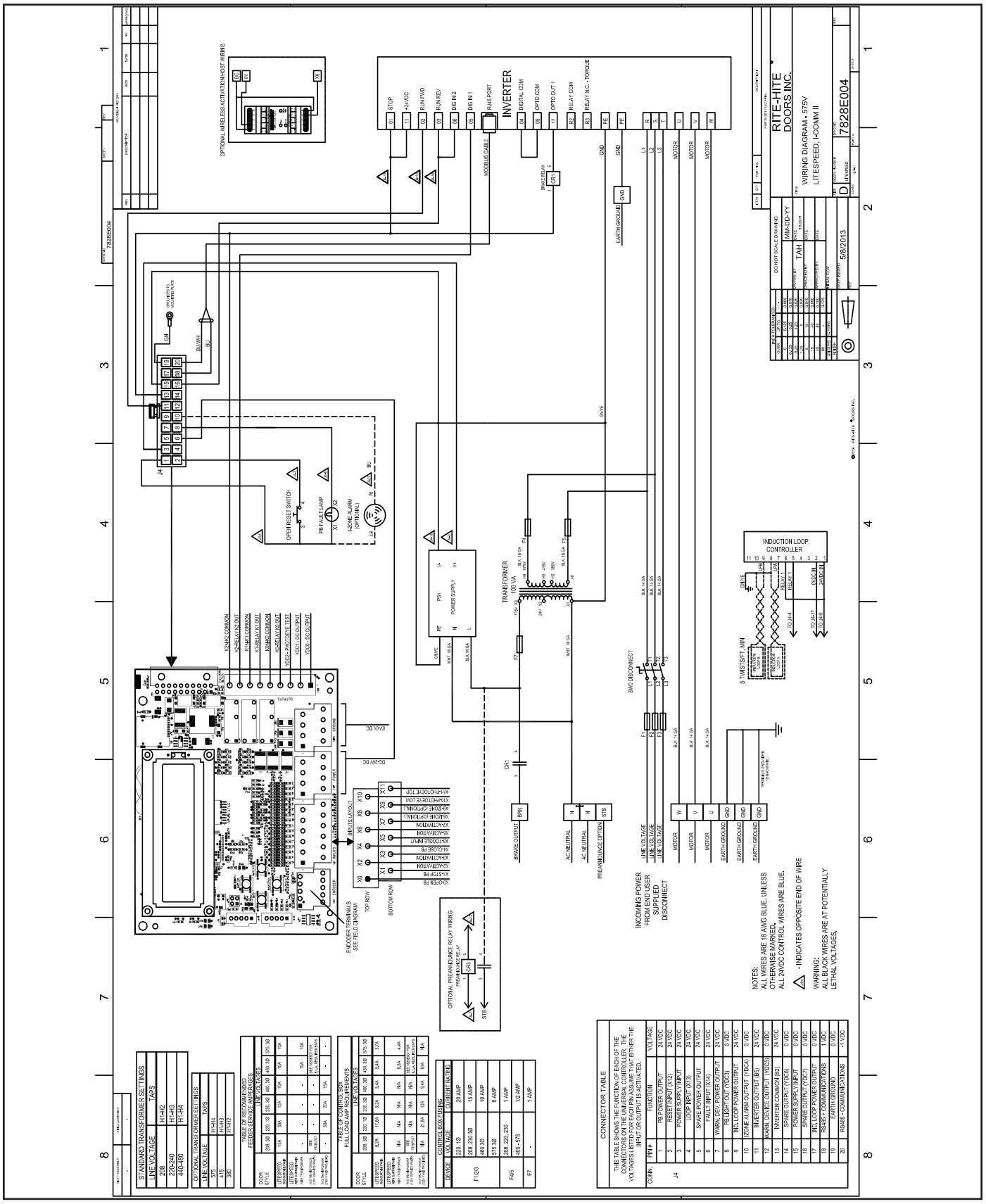
**For true toggle operation use terminal "X5".
(Pull cords, push button or radio controls only.)
***For Reverse hold open connect sensors to UNUSED input.
(i.e. X3, X6, or X7 and assign that input a function of "6" in the i-COMM menu. Multiple sensors can be connected in parallel.

Consult I-COMM manual and/or Door manual for additional Instructions.

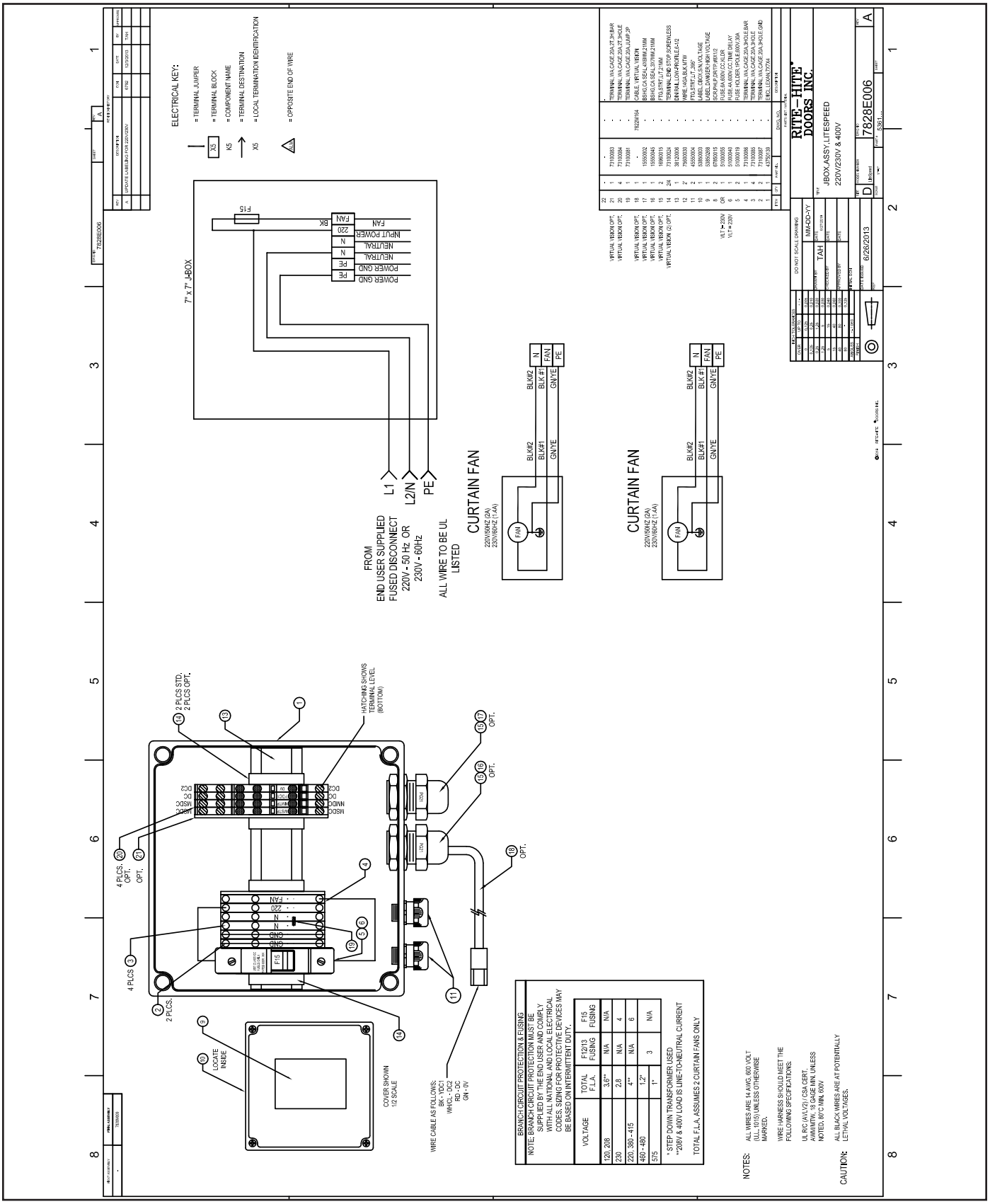
230/460V ELECTRICAL WIRING DIAGRAM



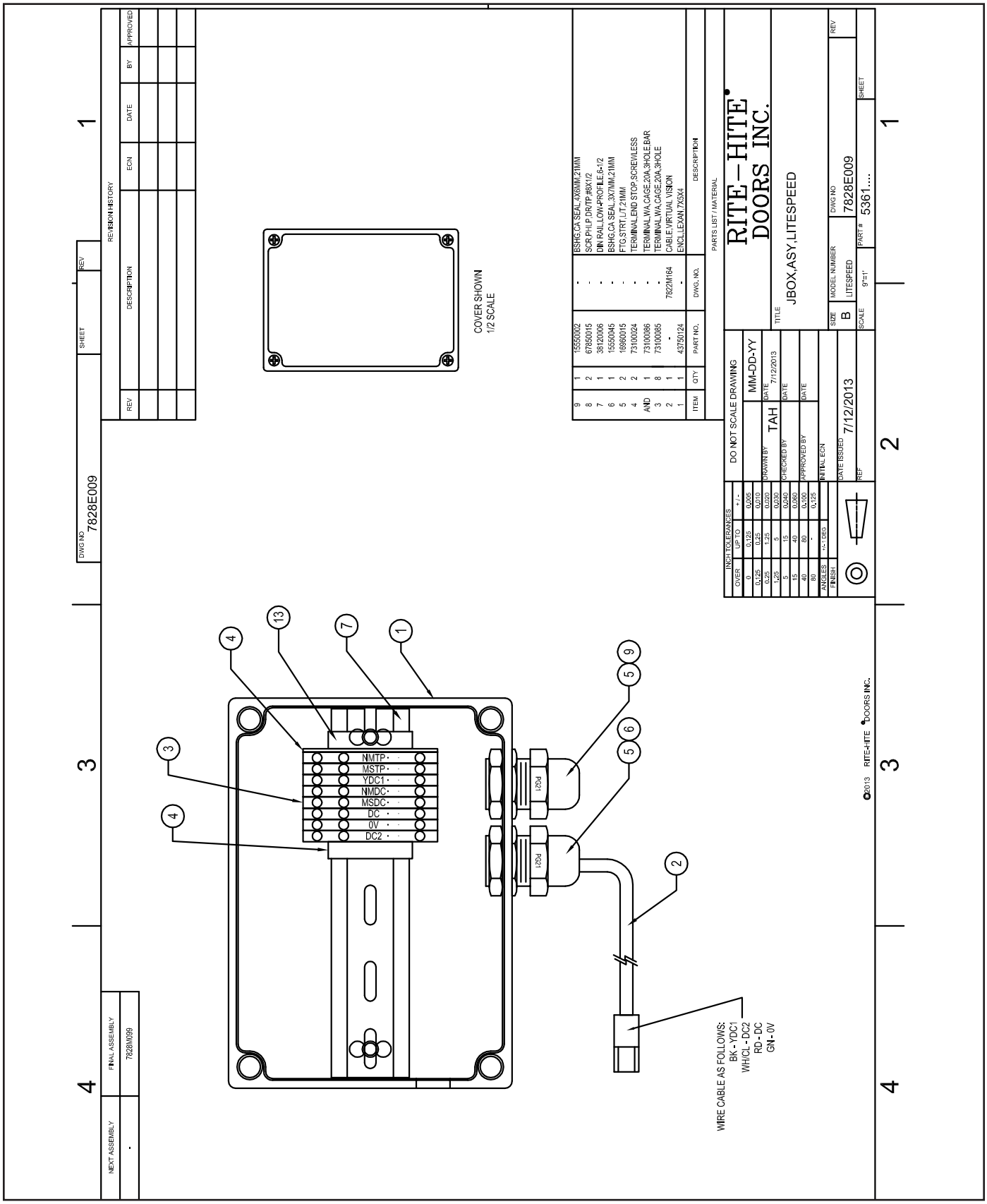
575V ELECTRICAL WIRING DIAGRAM



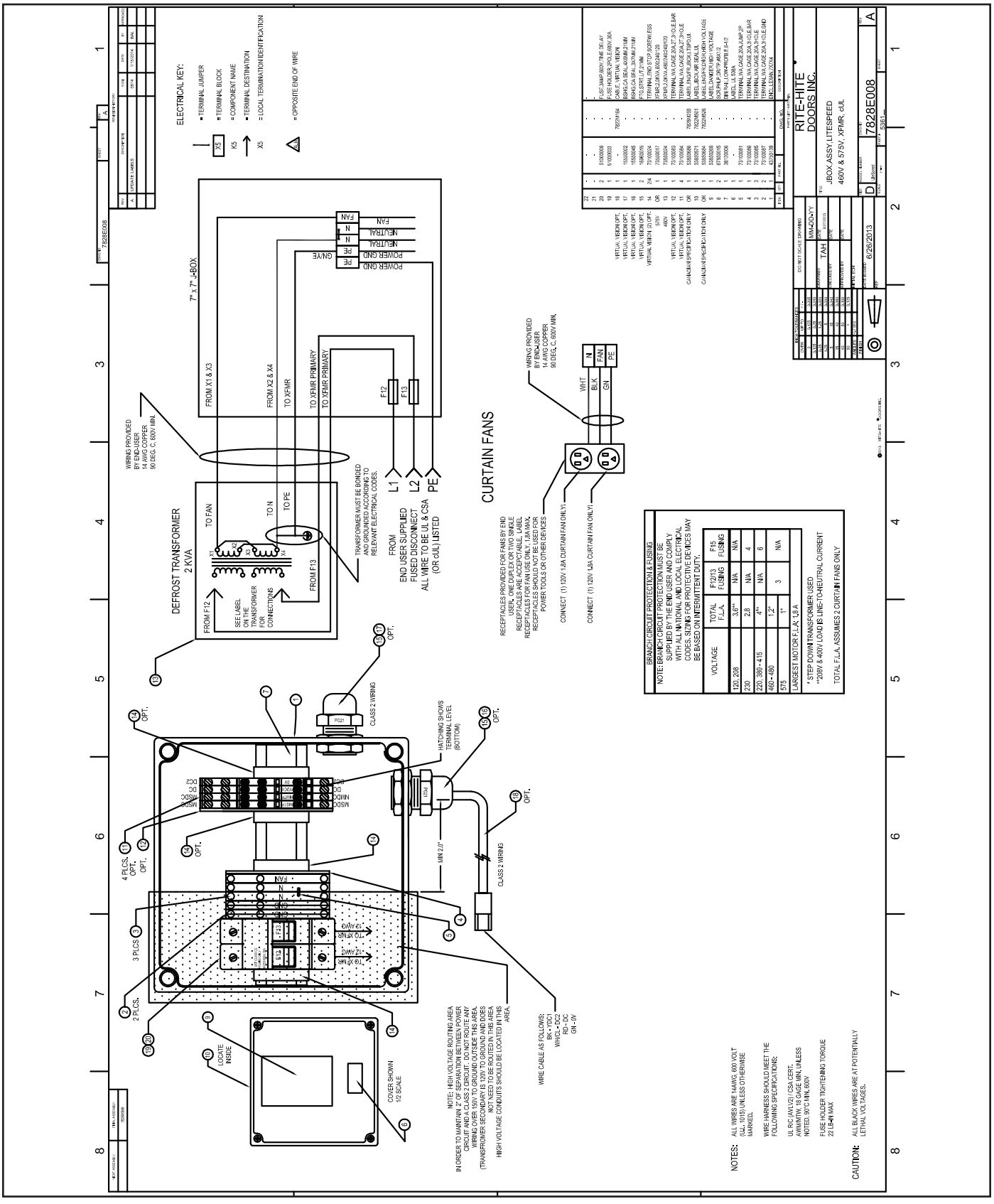
VIRTUAL VISION / CURTAIN FAN JUNCTION BOX



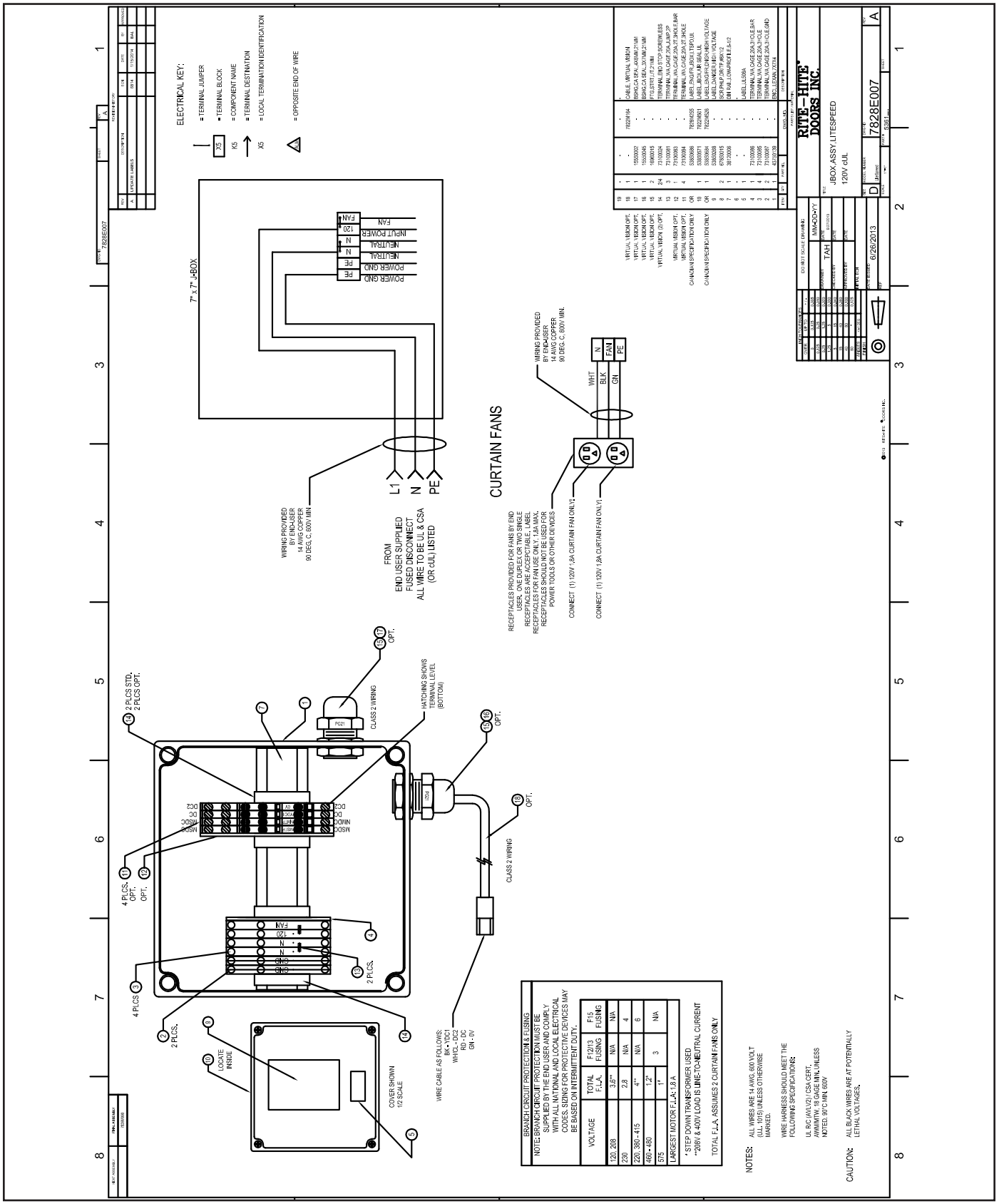
VIRTUAL VISION / CURTAIN FAN JUNCTION BOX



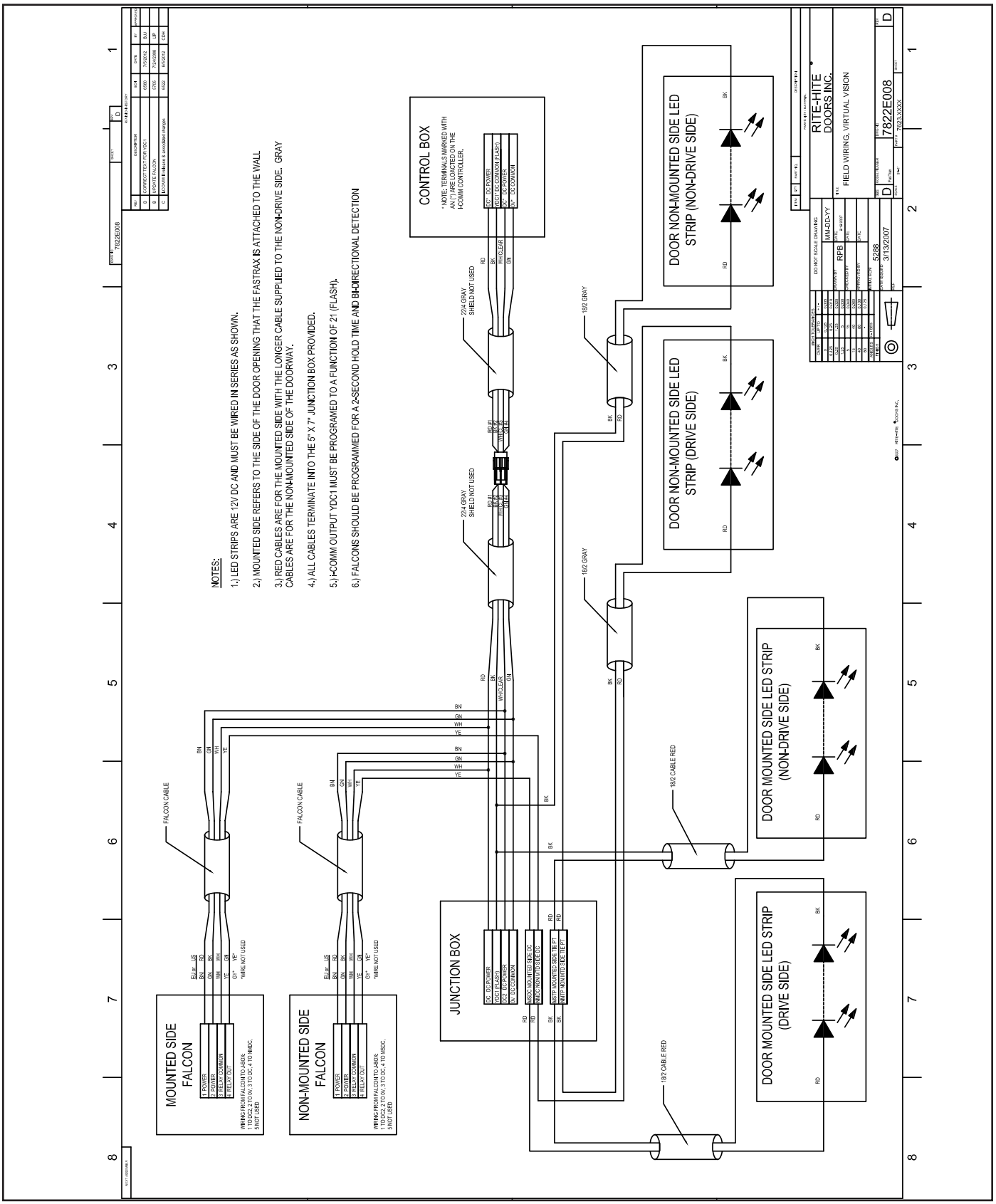
cUL VIRTUAL VISION / CURTAIN FAN JUNCTION BOX



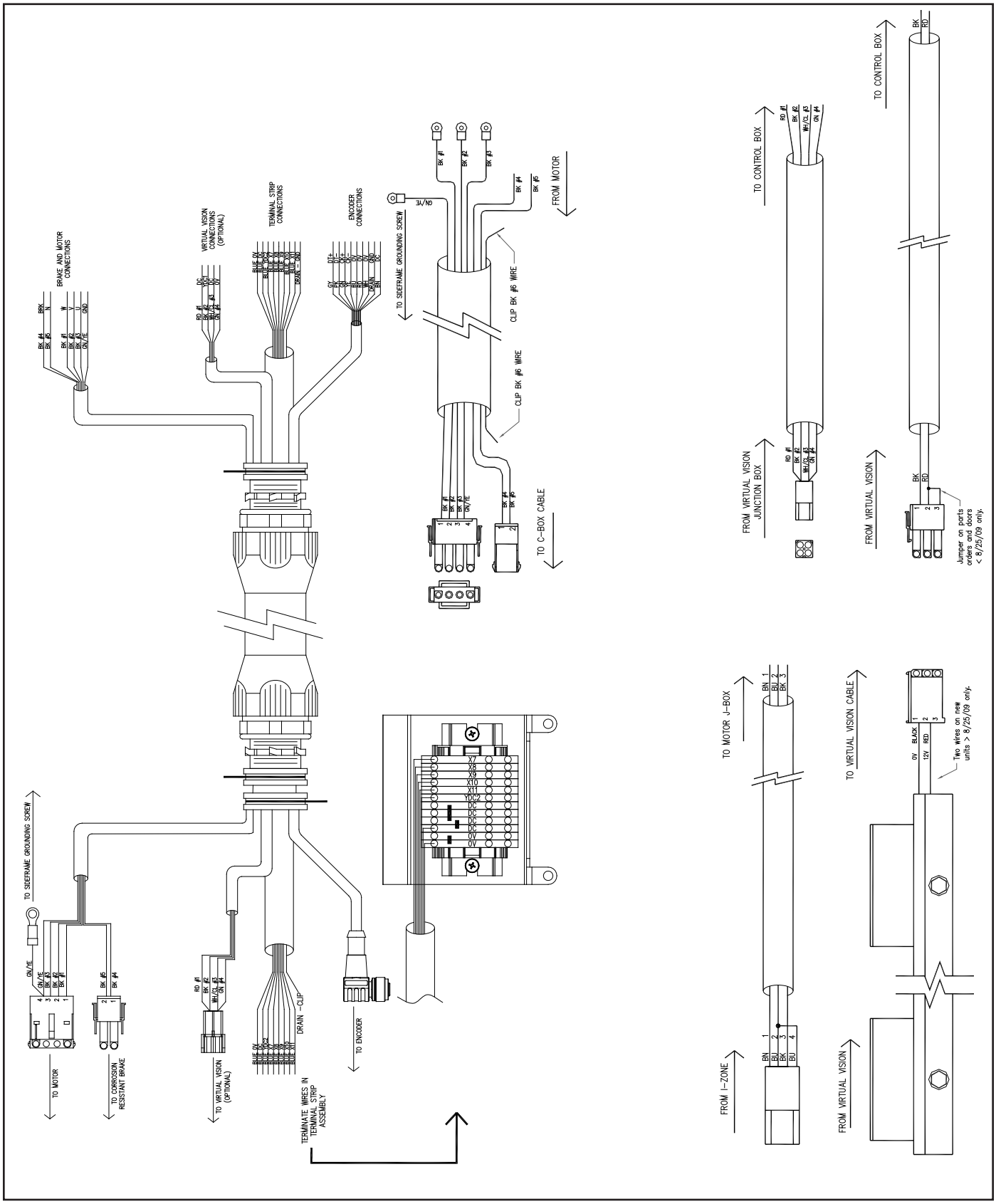
cUL VIRTUAL VISION / CURTAIN FAN JUNCTION BOX



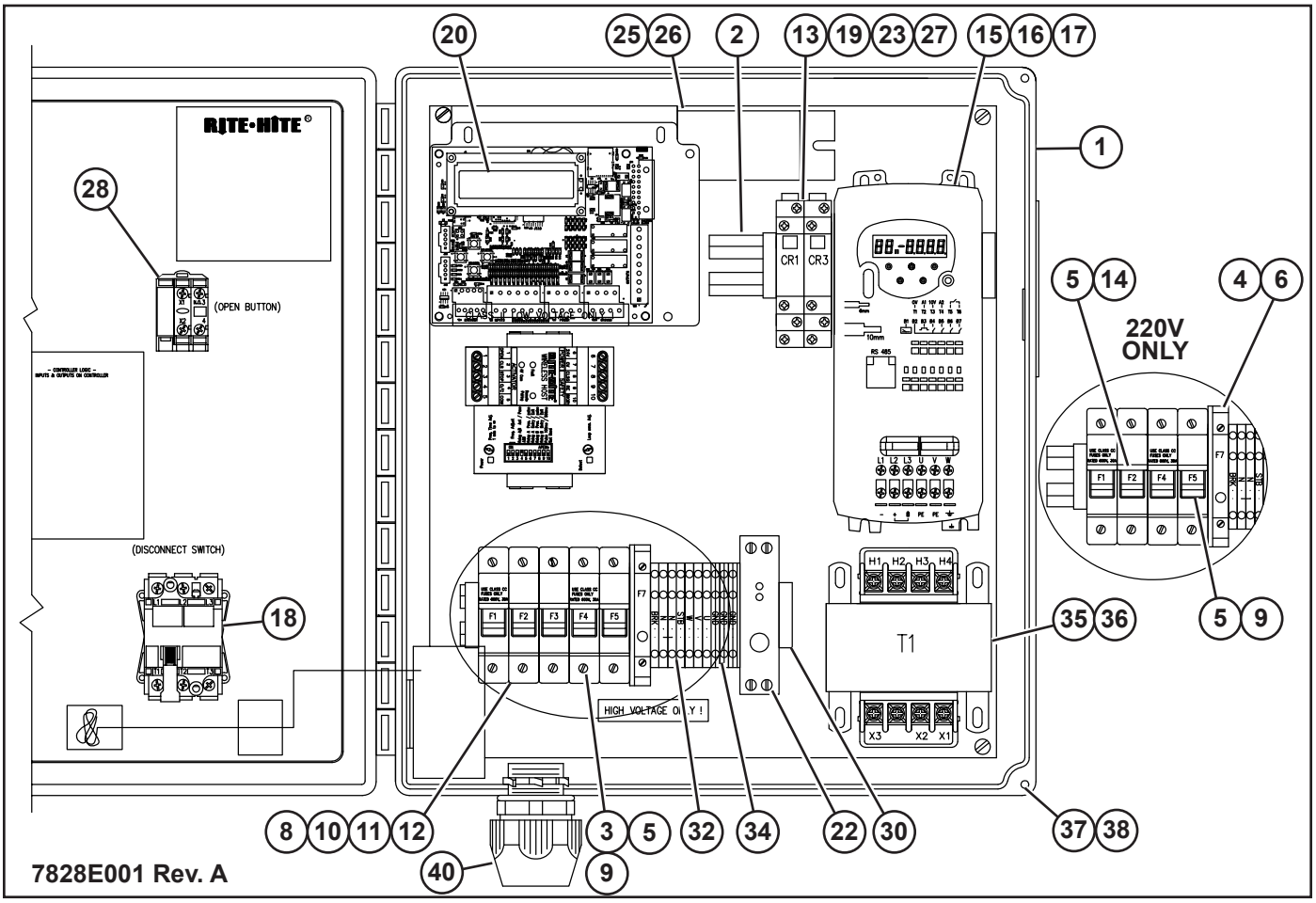
VIRTUAL VISION ELECTRICAL WIRING



ELECTRICAL CABLE IDENTIFICATION



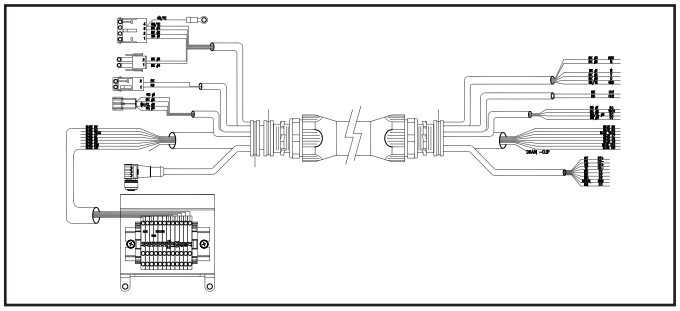
CHAPTER 9
SERVICE PARTS CONTROL BOX



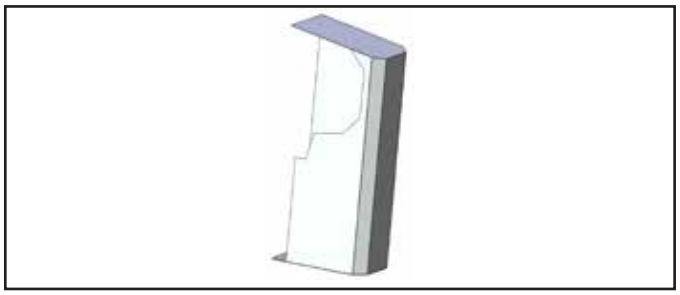
ITEM	QTY	DESCRIPTION	P/N
1	1	Control Box Assembly, LiteSpeed, i-COMM ii	1757....
2	1	Controller, Wireless, Activation, BTR, 12-24V	17500025
3	2	Fuse, 0.5 amp, 600V Time Delay (400-575V)	51000001
4	1	Fuse, 1 amp, 250V Time Delay	51000002
5	1/2	Fuse Holder, 2 Pole, 600V, 30A (3Ø-1; 1Ø-2)	51000003
6	2	Fuse Holder, 1 Pole, 300V, 12A	51000004
7	—	—	—
8	1	Fuse Holder, 3 Pole, 600V, 30A (not 220V 1Ø)	51000013
9	2	Fuse, 1 amp, 600V, CC, Time Delay (208-230V)	51000023
10	3	Fuse, 10 amp, 600V, CC, KLDR (400-460V)	51000033
11	3	Fuse, 15 amp, 600V, KLDR (208-230V)	51000051
12	3	Fuse, 6A, 600V, CC, KLDR (575V)	51000055
13	1	Kit, Warning Device Relay, i-COMM (#23,#27, wire)	53700862
14	2	Fuse, 20 amp, 600V, KLDR (220V 1Ø)	51950077
15	1	Inverter, 2HP, 575V, 3PH, AB-FLEX40 (575V)	53300044
16	1	Inverter, 2HP, 460V, 3PH, CT (460V)	53300047
17	1	Inverter, 2HP, 230V, 1-3PH, CT (208-230V)	53300046
18	1	Kit, Disconnect Switch, w/ Handle	53700567
19	1	Kit, Relay (includes #23, #27 & wire)	53700643
20	1	Kit, i-COMM ii, Replacement	53700860
21	—	—	—

ITEM	QTY	DESCRIPTION	P/N
22	1	Power Supply, DIN, 24VDC, 18W (<=22W)	65700006
22	1	Power Supply, DIN, 24VDC, 30W, CG (>22W)	65700007
23	1/1	Relay, SPDT,24VDC,10AMP (warn device & brake)	66450014
24	—	—	—
25	1	Kit, Resistor, Inverter, 230V, 2HP	53700689
26	1/1	Kit, Resistor, Inverter, 460V, 2HP	53700688
27	1	Socket, Relay,1Pole,250VAC,10AMP (W.D. & Brake)	70350002
28	1	Switch, Push Button, Ext, Green, Illum, 22MM	72700258
29	1	Terminal, End Barrier, Fuse Holder	73100019
30	4/6	Terminal, End Stop, Screwless	73100024
31	1	Terminal, WA, Cage, 20A, Jump, 2P	73100081
32	7/8	Terminal, WA, Cage, 20A, 3 Hole	73100085
33	2	Terminal, WA, Cage, 20A, 3 Hole, Barrier	73100086
34	3	Terminal, WA, Cage, 20A, 3 Hole, GND	73100087
35	1	Transformer, 100VA, 208/230/460V:24/115	73550029
36	1	Transformer, 100VA, 380/415/575V:24/115	73550030
37	2	Control Box Quick Release Latch	51950021
38	4	Control Box Mounting Tab	51950018
39	—	—	—
40	1	Connecter, Conduit, Straight, L/T, 1”	16960001
41	1	Controller, Ind Loop, Dual, 12/24V	17500010

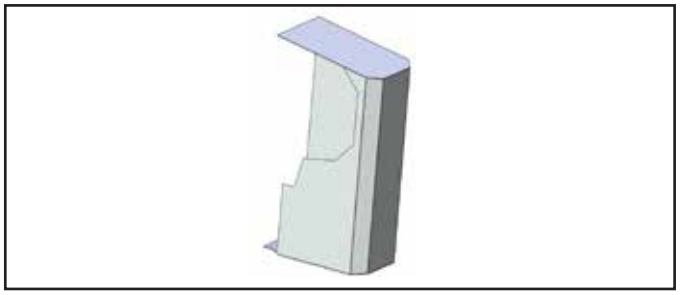
SERVICE PARTS MISC



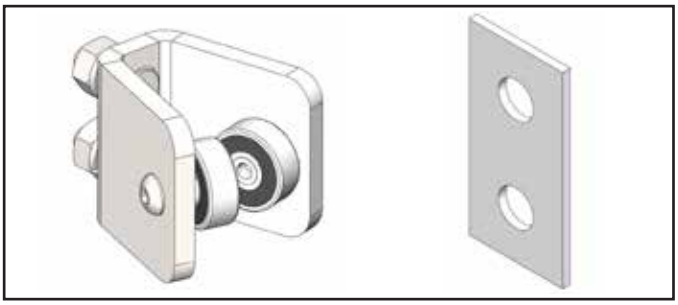
Control Box Cable Assembly	1	1602....



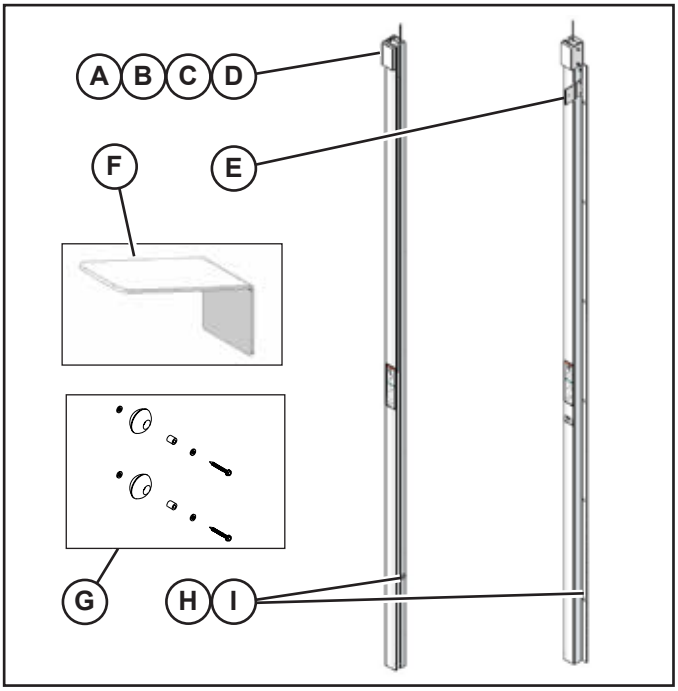
Shroud, Drive, Steel, RH	1	69200142
Shroud, Drive, Steel, LH	1	69200143
Shroud, Drive, Stainless, RH	1	69200144
Shroud, Drive, Stainless, LH	1	69200145
Kit, Shroud, Drive, Steel, RH	1	53700898
Kit, Shroud, Drive, Steel, LH	1	53700899
Kit, Shroud, Drive, Stainless, RH	1	53700900
Kit, Shroud, Drive, Stainless, LH	1	53700901
(Kits contain brackets & hardware)		



Shroud, Drive, Steel, NPO, RH	1	69200146
Shroud, Drive, Steel, NPO, LH	1	69200147
Shroud, Drive, Stainless, NPO, RH	1	69200148
Shroud, Drive, Stainless, NPO, LH	1	69200149
Kit, Shroud, Drive, Steel, NPO, RH	1	53700902
Kit, Shroud, Drive, Steel, NPO, LH	1	53700903
Kit, Shroud, Drive, Stainless, NPO, RH	1	53700904
Kit, Shroud, Drive, Stainless, NPO, LH	1	53700905
(Kits contain brackets & hardware)		



Kit, Guide, Refeed, Assembly	2	53700894
Shim, Retainer Roller, LTSPD	a/r	69000019

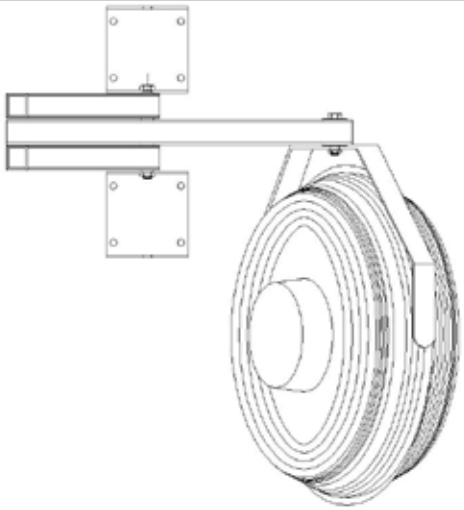


A	Block, Sideframe, Top	1	13000057
B	Spacer, LiteSpeed, Header End	2	70450170
C	Tape, Foam, DBL, .062 x 2”	a/r	72800022
D	Stud, Self-Clinch, 1/4-20 x 3/4, ss	4	72400016
E	Bracket, Shroud, Motor Cover	1	14501301
F	Bracket, Curtain Catch	2	14501305
G	Kit, Curtain, Refeed, Roller	1	53700611
H	Photoeye, Thru beam (1) - 63900064 Includes Receiver & Emitter	1	63900064
I	Plug, Window, 0.734 Ø	1	65300036
—	Sideframe, Assembly, Aluminum (Specify: Right, Left, Set)	1	6826....
—	Sideframe, Assembly, Stainless (Specify: Right, Left, Set)	1	6903....
—	Kit, LTSPD, Guide, Half Round, UHMW	2	53700906

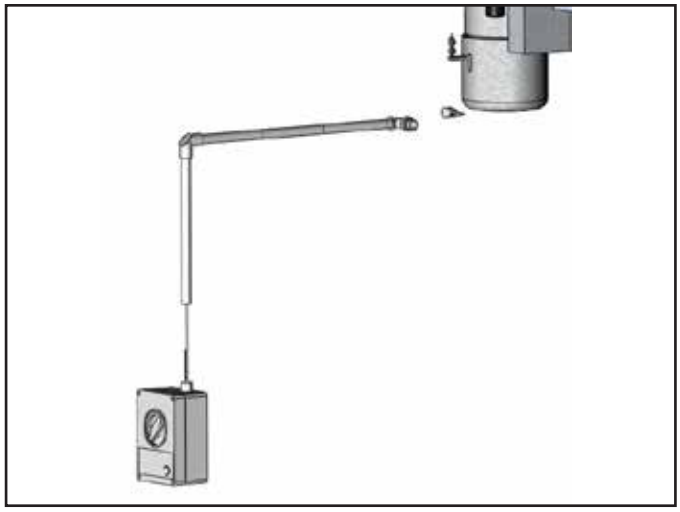
SERVICE PARTS MISC

Label, Warning, Stand Clear, 2” x 9”	2	53850516

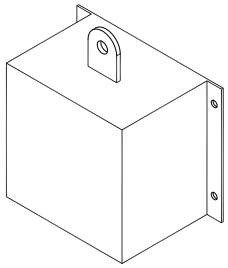
Kit, LTSPD, Stainless Steel Fastener Cap (Contains 14 pcs each)	1	53700908



120V Curtain Fan Kit	2	53700769
120V Fan only	2	13250069
120V Arm only	2	11500046
220V Curtain Fan Kit	2	53700770

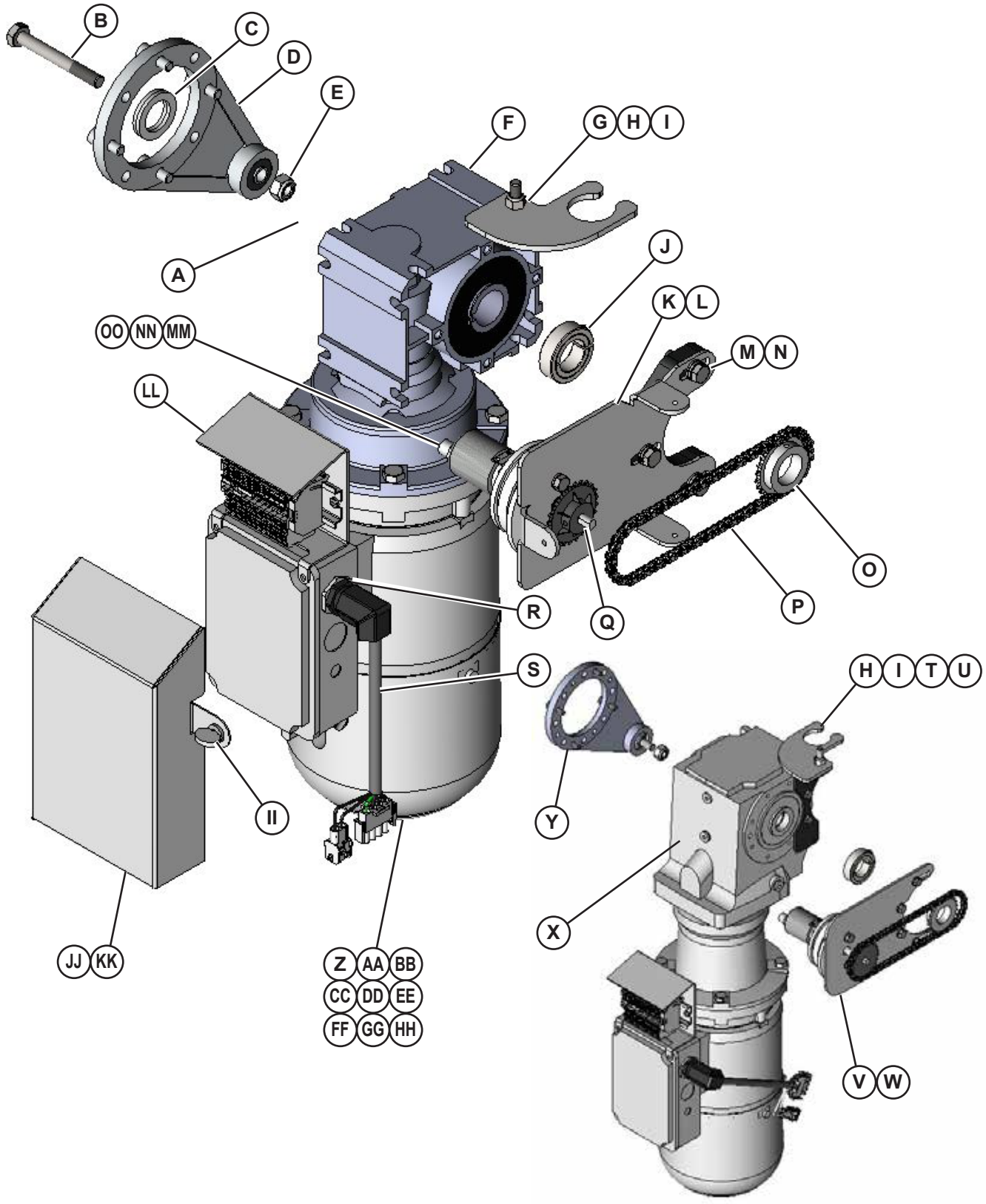


Kit, Bake Release, Thru-wall	1	53700743



Transformer, 2KVA, 600:240/120	1	73550017
Transformer, 2KVA, 480/240:240/120	1	73550024

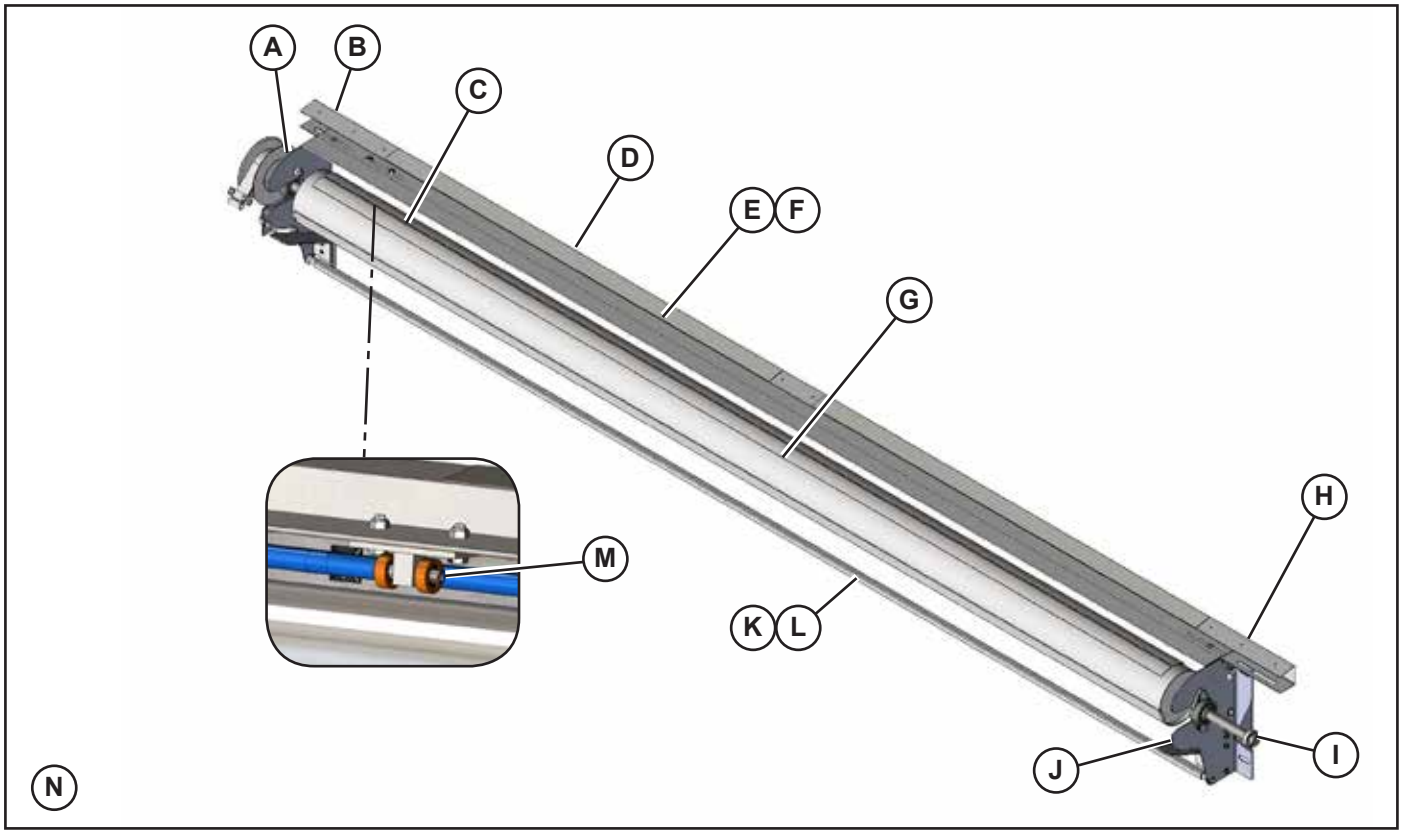
SERVICE PARTS DRIVE SYSTEM



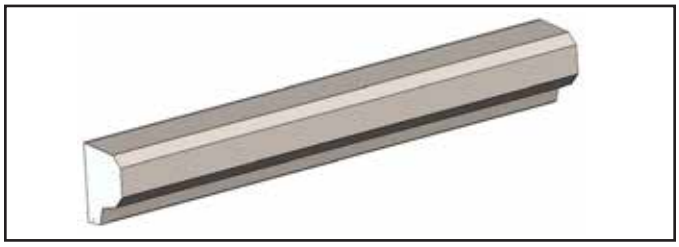
SERVICE PARTS DRIVE SYSTEM

A	Gearbox Key	1	53550010
B	Bolt, HHMS, M10-1.5MM x 80MM, CL10.9	1	67930041
C	Gearbox Spacer	1	74170007
D	Arm, Torque, Gearbox, Nord, Size 50	1	11500049
E	H12	1	—
F	Gearbox, Worm, 10:1, 56C, Size 50, Nord	1	51250028
G	Conduit Bracket	1	14501096
H	H7	1	—
I	H28	1	—
J	Collar, Shaft, Lock, Split, 1” Ø, znc	1	16850018
K	Kit, Encoder, Gearbox, Worm	1	53700842
L	Encoder Bracket, Worm gbx	1	14502070
M	M8-1.25x16MM	3	67930016
N	Lock Washer	3	74120002
O	Sprocket Drive	1	70800047
P	Encoder Chain	1	16600063
Q	Sprocket, #25, 24T, 5/16” Bore, Plastic	1	70800048
R	Adapter, M20 x 1.5 / M25 x 1.5	1	10300014
S	Motor Cable	1	15650306
T	Conduit Bracket	1	14501096
U	Conduit Bracket, NPO	1	14501295
V	Kit, Encoder, Gearbox, Bevel	1	53700888
W	Encoder Bracket, Bevel GBX, NPO	1	14501296
X	Gearbox, Bevel, 10.37:1, 56C, Size 63, Nord, NPO	1	51250035
Y	Arm, Torque, Gearbox, Nord, Size 63, NPO	1	11500085
Z	Motor/Brake/Gearbox Ass’y	1	5541....
AA	Motor/Brake, 1HP, 56C, 230/460V	1	55250172
BB	Motor/Brake, 1HP, 56C, 575V	1	55250173
CC	Motor/Brake, 1HP, 56C, 400V	1	55250174
DD	Motor/Brake, 1HP, 56C, 230/460V, IP66	1	55250217
EE	Motor/Brake, 1HP, 56C, 400V, IP66	1	55250218
FF	Motor/Brake, 1HP, 56C, 575V, IP66	1	55050219
GG	Brake Rectifier 230/460V	1	66270009
HH	Brake Rectifier 575V	1	66270012
II	H25	1	—
JJ	Cover, Terminal Assembly, RH	1	17900217
KK	Cover, Terminal Assembly, LH	1	17900218
LL	Terminal Assembly	1	73100093
MM	Encoder Cable 4M	1	15650256
NN	Encoder Cable 8M	1	15650257
OO	Encoder Cable 17M	1	15650258
—	NOT SHOWN: Aero Lubriplate	1	54650001

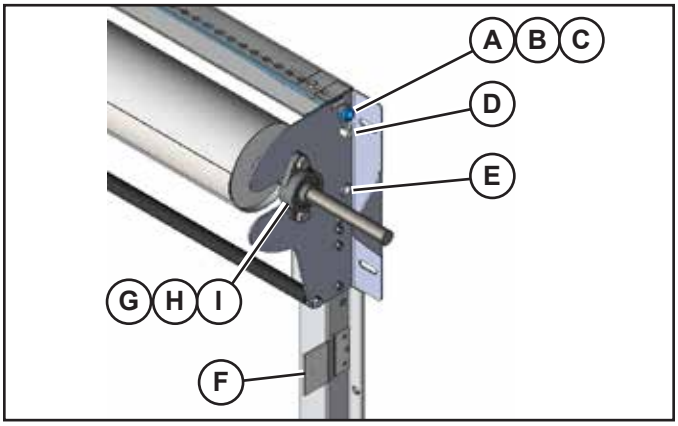
SERVICE PARTS HEADER



A	Bracket, Shroud, Header End, LiteSpeed, LH	1	14502085
B	Bracket, Shroud, Motor, Top, Left, LiteSpeed	1	14501300
C	Seal, Loop, Header, LiteSpeed	1	6899....
D	Bracket, Shroud, Header	1	1469....
E	Steel, Angle, Perforated, 2 x 2 x 12ga	a/r	71500030
F	Loop, PSA, 2”	a/r	74000019
G	Roller Tube Weldment	1	6758....
H	Bracket, Shroud, Motor, Top, Right, LiteSpeed	1	14501299
I	Collar, Shaft, Lock, Split, 1” Ø, znc	1	16850018
J	Bracket, Shroud, Header End, LiteSpeed, RH	1	14502084
K	Tube, Front, Header, Spreader, LiteSpeed	1	7395....
L	Tube, Front, Header, Shroud, LiteSpeed	1	7396....
M	Kit, LTSPD, Ass’y, Curtain Stop	1	53700907
N	Header Assembly, LiteSpeed	1	5229....

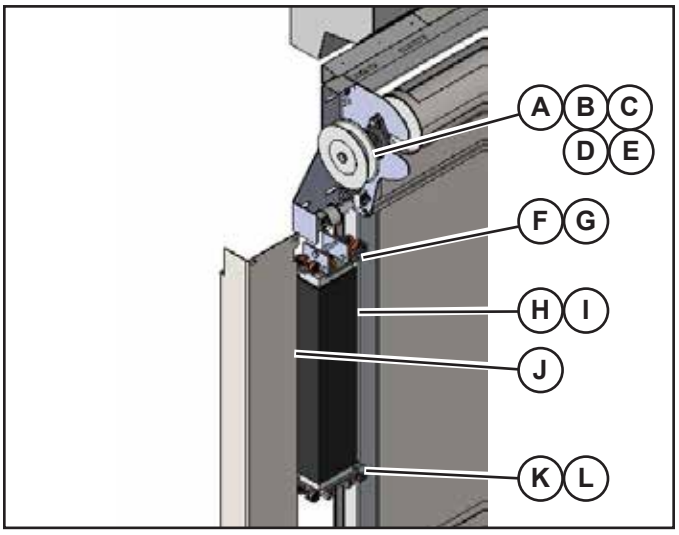


Center Shroud	1	6950....



A	Conduit, 1/2”, ENT, Flex	a/r	16900019
B	Connector, Conduit, Straight, 1/2”, ENT, Thread	2	16950033
C	Connector, Nut, 1/2 KO, 3/8”, Flex	2	16960084
D	Photoeye, Thru-beam, Kit (Receiver & Emitter)	1	63900064
E	Grommet, Rubber, .5 ID x.88OD x.19	2	51280029
F	Bracket, Shroud, Motor Cover	1	14501301
G	Bearing, Flange, 1” Bore	2	12500034
H	Bolt, HHMS, 1/2-13 x 1”, GR5, znc	4	67900003
I	Washer, Lock, Ext, 1/2”, znc	4	74150019

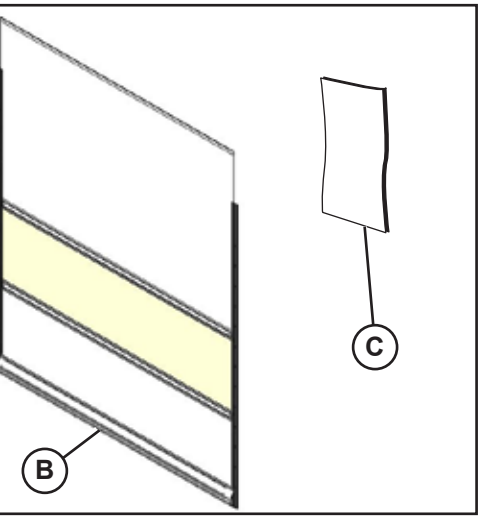
SERVICE PARTS CURTAIN, N.P.O.



A	Pulley, Weldment, NPO, LTSPD	1	65750057
B	Clamp, Flat Belt	2	16700047
C	Clamp, Pressure Belt, 3/4x1, LTSPD	1	16700059
D	Key, 1/4 SQ x 1 1/2”	1	53550019
E	Belt, NPO, LT	1	12550020
F	Kit, LTSPD, Roller Ass’y, NPO, RHD, Top	1	53700889
G	Kit, LTSPD, Roller Ass’y, NPO, LHD, Top	1	53700891
H	Counterweight, NPO, Assembly	1	1766....
I	Counterweight, NPO, Weldment	1	1767....
J	Tube, Counterweight	1	6951....
K	Kit, LTSPD, Roller Ass’y, NPO, RHD, Btm	1	53700890
L	Kit, LTSPD, Roller Ass’y, NPO, LHD, Btm	1	53700892

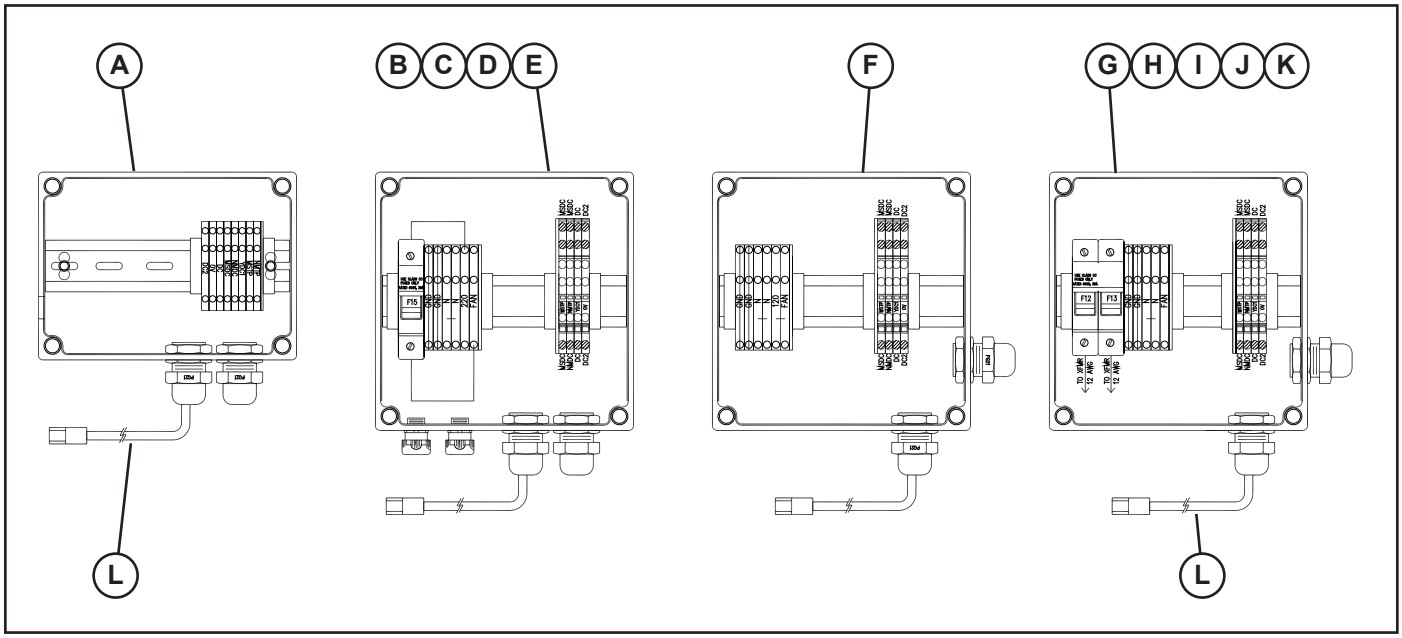
PATCH KIT PARTS LIST		
Kit, Curtain, Patch, PVC, 27 oz, Blue	a/r	53700558
Kit, Curtain, Patch, PVC, 27 oz, Green (a/r)	a/r	53700667
Kit, Curtain, Patch, PVC, 27 oz, Gray (a/r)	a/r	53700668
Kit, Curtain, Patch, PVC, 27 oz, Orange (a/r)	a/r	53700669
Kit, Curtain, Patch, Urethane, 30 oz, Blue	a/r	53700774
Kit, Vision, Patch, Urethane	a/r	53700778
Kit, Vision, Patch, PVC	a/r	53700918
NOTE: *HH66 is required for PVC repair. Call 978.897.8000 for local adhesive supplier.*	—	Not available for sale by Rite-Hite

Kit, Curtain Buttons, Qty 20	a/r	53700893



A	Curtain, LiteSpeed	1	2893....
B	Seal, Loop, Curtain, LiteSpeed	1	6898....
C	Curtain Shim	a/r	53700920

SERVICE PARTS JUNCTION BOX

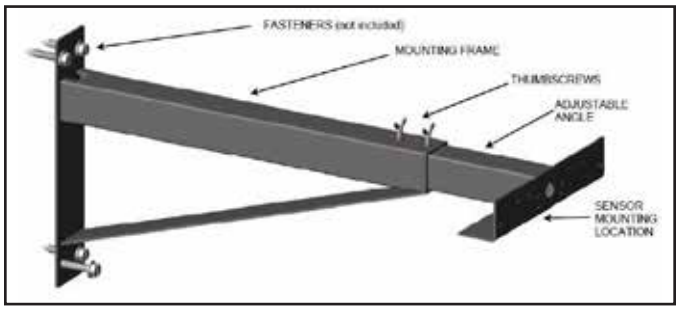


A	Virtual Vision Only Junction Box Assembly LiteSpeed, 120V	1	5361....
B	Junction Box Assembly LiteSpeed, 220V, 230V, 400V	1	5361....
C	Fuse Holder, 1 Pole, 600V, 30A	1	51000019
D	Fuse, 4A, 600V, CC, Time Delay	1	51000040
E	Fuse, 6A, 600V, CC, KLDR	1	51000055
F	Junction Box Assembly LiteSpeed, 120V, cUL	1	5361....
G	Junction Box Assembly LiteSpeed, 460V, 575V, cUL	1	5361....
H	2 Pole Fuse Holder, 600V, 30A	1	51000003
I	Fuse, 3AMP, 600V, Time Delay	2	51000008
J	Transformer, 2KVA, 600:240/120	1	73550017
K	Transformer, 2KVA, 480/240:240/120	1	73550024
L	Cable, Virtual Vision	1	15650233

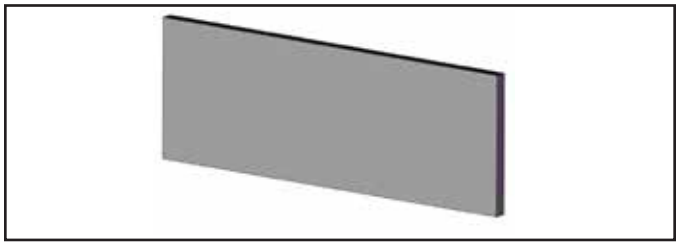
SERVICE PARTS HARDWARE, V.V., I-ZONE

#	Hardware List	Part #
H1	Clamp, Cable, Nylon, 3/16”	16700009
H2	Grommet, Rubber, .5 ID x .88 x .19	51280029
H3	Mount, Cable Tie, 1 x 1, PSA	55290009
H4	Nut, Hex, Nylon, Lock, #10-24, znc	55600004
H5	Nut, Hex, Nylon, Lock, 1/4-20, znc	55610001
H6	Nut, Hex, 1/4-20, znc	55610002
H7	Nut, Hex, Nylon, Lock, 5/16-18, znc	55620010
H8	Nut, Hex, 3/8-16, znc	55630003
H9	Nut, Hex, Nylon, Lock, 3/8-16, znc	55630005
H10	Nut, Hex, 3/8-16, S.S.	55630006
H11	Nut, Hex, Nylon, Lock, 1/2-13, znc	55650004
H12	Nut, Hex, Nylon Lock, M10, znc	55680003
H13	Rivet, Blind, Fablok, 5/16” x 1.807	66840016
H14	Ring, Retaining, External, 5/16” Shaft	67020051
H15	Screw, HWHSMS, #14 x 1 1/4”, znc	67850001
H16	Screw, Self Tap/Drill #12	67850004
H17	Screw, RHMS, Phillips, #10-24 x 1/2”, znc	67850008
H18	Screw, Phlp, Dr/Tap, #8 x 1/2”	67850015
H19	Screw, PHSMS, Phillips, Tap, #8-18 x 3/4”	67850026
H20	Screw, PHSMS, Phillips, #10 x 1”, znc	67850029
H21	Screw, RHMS, Phillips, #10-24 x 3/4”, znc	67850030
H22	Screw, FHWH, #8 x 9/16”, BLK, K-LATH	67850065
H23	Screw, PH,Phillips,Plstite, #8-16 x 3/8”	67850088
H24	Screw, Phillips, Drill/Tap, #8 x 1/2”	67850115
H25	Screw, Thumb, 1/4-20 x 1/2”, GR2 znc	67860019
H26	Screw, FHMS, Allen, 1/4-20 x 3/4	67860042
H27	Screw, HWH, Drill/Tap, #14 x 3/4”, znc	67860094
H28	Screw, HHMS, 5/16-18 x 1 1/4, GR5, znc	67870003
H29	Screw, HHMS, 5/16-18 x 1, GR5, znc	67870065
H30	Screw, HHMS, 5/16-18 x 6”, GR5, znc	67870111
H31	Screw, HHMS, 3/8-16 x 1”, GR5, znc	67880002
H32	Screw, HHMS, 3/8-16 x1 1/4”,GR5, znc	67880004
H33	Screw, HHMS, 3/8-16 x 3 1/2”, znc	67880017
H34	Screw, HHMS, 3/8-16 x 4”, GR5, znc	67880029
H35	Screw, HHMS, 1/2-1 x 1”, GR5, znc	67900003
H36	Screw, HHMS, 1/2-13 x 1 1/2”, znc	67900005
H37	Rod, Threaded, 3/8-16 x 12” S.S.	67900047
H38	Screw, HHMS, M10-1.5MM x 80MM, L10.9	67930041
H39	Screw, Set, Socket, Cup,1/4-20 x 3/4	68760055
H40	Tape, Foam, Double Sided	72800044
H41	Tie, Cable, Nylon, 4”, 18#	73250004
H42	Washer, Lock, Int/Ext, #10, znc	74100004
H43	Washer, Flat, 1/4 x 3/4 x 1/16, znc	74110001
H44	Washer, Lock, Split, 1/4”, znc	74110004
H45	Washer, Flat,1/4 x 9/16” x 3/32”, Neoprene	74110007
H46	Washer, Flat, 3/8 x 1 x .063, znc	74130001
H47	Washer, Lock, Split, 3/8”, znc	74130002

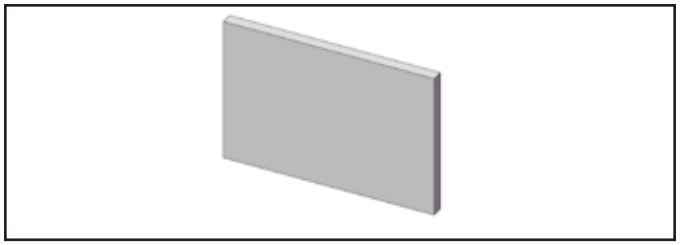
#	Hardware List	Part #
H48	Washer, Flat, .39 x .75 x .062, Nylon	74130003
H49	Washer, Lock, 3/8”, S.S.	74130009
H50	Washer, Flat, 3/8” x 1” x .063, S.S.	74130012
H51	Washer, Lock, Split, 1/2”, znc	74150005
H52	Washer, Flat, 1 x 1 1/2 x 1/8, HDN	74170007



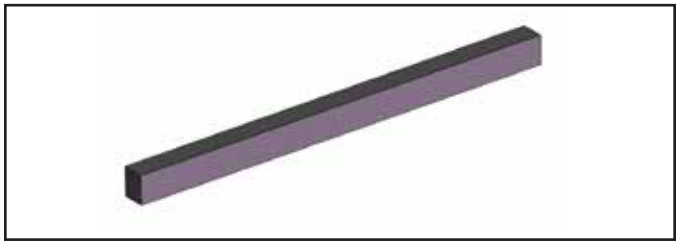
Bracket, BEA Falcon	a/r	14501212



Plate, Weld, Track, Upper	6	65000588

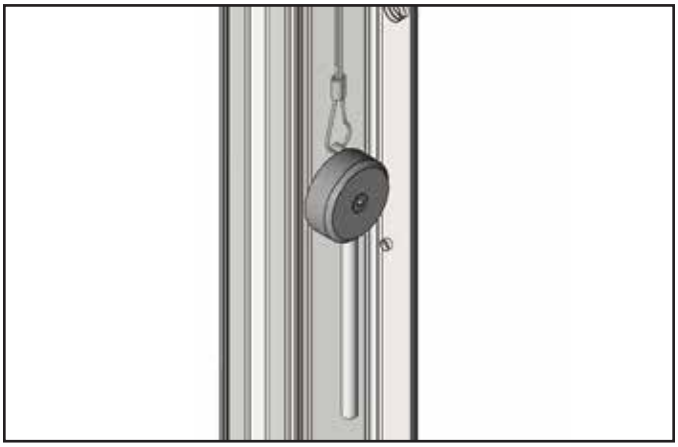


Plate, Weld, Track, Lower	16	65000587

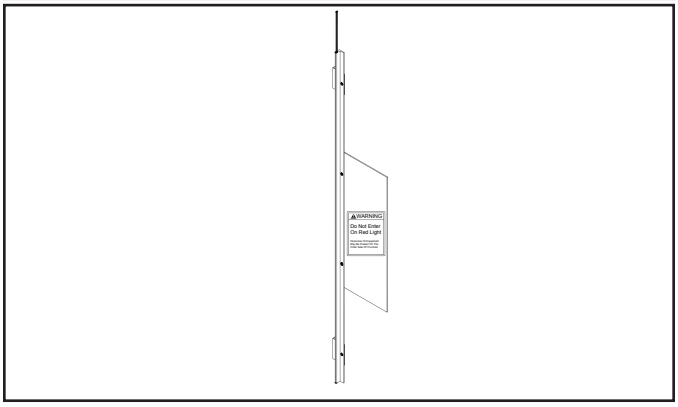


Foam, Adhesive, 7/8” x 1 1/8”	a/r	45800099

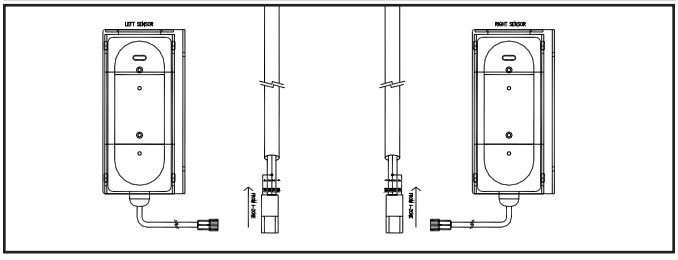
SERVICE PARTS HARDWARE & VIRTUAL VISION & I-ZONE



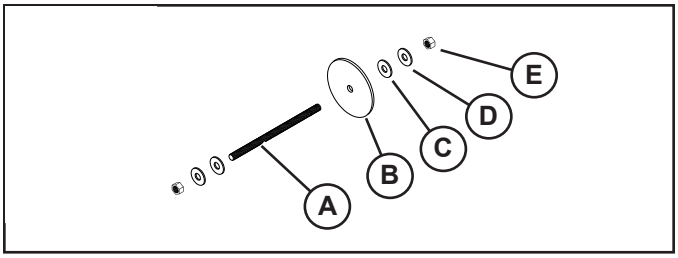
Kit, LTSPD, Handle, Ass'y, NPO, RHD	1	53700909
Kit, LTSPD, Handle, Ass'y, NPO, LHD	1	53700910



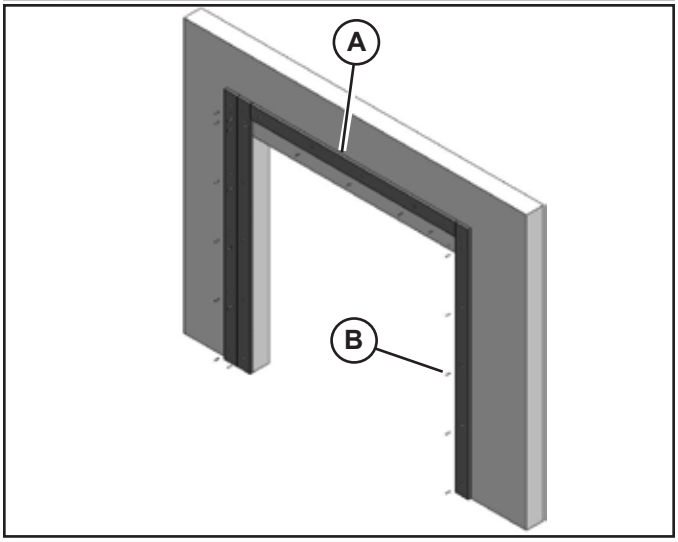
Virtual Vision LED Assembly	4	7623....
Virtual Vision Mounting Bracket	8	14500971
H4	2	
H21	2	
Virtual Vision Warning Plate	4	65000586
H4	2	
H17	2	



I-Zone Detector Assembly	2	7622....
I-Zone Upgrade	a/r	7636....
I-Zone Cable	24"	15650046
I-Zone Cover, Grey	2	17900110
I-Zone Cover, Black	2	17900111



—	Kit, Install, Thru-Wall, S.S Contains 12 plates, 3/8" [10 mm] rods and 24 washers, nuts.	1	53700746
A	H37	a/r	—
B	Plate, 6" Ø, S.S.	a/r	65000714
C	H49	a/r	—
D	H50	a/r	—
E	H10	a/r	—



A	Installation Kit	1	5340....
B	H13	a/r	—
	LiteSpeed Door	a/r	LTSPD
	Kit, LiteSpeed Service Parts	a/r	53700914
	LiteSpeed Sample	a/r	n/a
	Crate	a/r	53700146

ACTIVATION SERVICE PARTS

#	Part #	Description	5700	7100	80/XL	8600	8900	FSTX	FSTXCL	FSTXFR	FSTX FRLD	FSTX XL	LTSPD	Split 2nd
1	11050007	Alarm, Audible, 24AC/DC, 22.5 (I-Zone)	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	N
2	11050010	Alarm, Audible, 120VAC,10-TONE, AB	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
3	17500025	Controller, Wireless, Act, BTR, 12-24V	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y
4	17500001	Induction Loop Board, 24VDC (<5/28/14)	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
5	17500010	Induction Loop Board, 12/24VDC (=>6/20/12)	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
6	52000037	Induction Loop Board Harness (<5/28/14)	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
7	52000056	Induction Loop Board Harness (=>6/20/12)	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	53700552	Induction Loop, Kit, Single (<5/28/14)	N	Y	Y	Y	Y	Y	Y	Y	N	N	N	N
9	53700864	Induction Loop, Kit, Dual	N	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y
10	55150279	i-COMM ii LCD Interface	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y
11	7622	I-Zone Kit	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
12	7636	I-Zone Upgrade Kit, Non FasTrax	N	N	Y	N	Y	N	N	N	Y	Y	Y	N
13	7637	I-Zone Upgrade Kit, FasTrax	N	N	N	N	N	Y	N	Y	Y	Y	N	N
14	14500774	I-Zone Sensor Bracket Black	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
15	14500775	I-Zone Sensor Bracket Gray	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
16	14500783	I-Zone Sensor Bracket Stainless	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
17	17900110	I-Zone Cover Gray	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
18	17900111	I-Zone Cover Black	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
19	17900112	I-Zone Cover Stainless	N	N	Y	N	Y	Y	N	Y	Y	Y	Y	N
20	14501212	Motion Sensor, Mounting Bracket	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
21	55200012	Motion Sensor, Remote Programmer	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
22	55200018	Motion Sensor, FalconXL < 11.5'H	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
23	55200019	Motion Sensor, Falcon >= 11.5'H	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
24	55200021	Motion Sensor, IS40, 12-24V	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
25	55200022	Motion Sensor, LZRI30, 12-35VDC	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
26	55200023	Motion Sensor, MS08,Touchless, 12-24V	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
27	55200024	Motion Sensor, IS40XL, 12-24V	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
28	14500024	Photoeye Mounting Bracket	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
29	53700053	Photoeye, 24V, Kit, Thru-beam	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
30	53700122	Photoeye, 24V, Kit, Retro-reflective	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
31	66400001	Photoeye, Reflector, 2 3/4" x 2"	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
32	63900002	Photoeye, Retro-Reflective 20-40VAC/10-55VDC	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
33	69300004	Photoeye, Thru-beam Source 20-40VAC/10-55VDC	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
34	63900005	Photoeye, Thru-beam Receiver 20-40VAC/10-55VDC	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
35	63900048	Photoeye, Light Curtain, Receiver, (CE)	N	N	N	N	N	Y	N	Y	Y	N	Y	N
36	63900049	Photoeye, Light Curtain, Transmitter, (CE)	N	N	N	N	N	Y	N	Y	Y	N	Y	N
37	72700213	Pull Cord, Assembly, w/Bracket, Standard	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
38	72700214	Pull Cord, Assembly, w/Bracket, Heated	N	Y	Y	Y	N	N	Y	Y	Y	N	Y	N
39	72700270	Pull Cord, Wireless	N	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y
40	72700030	Push Button Station Single Green	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
41	72700102	Push Button Station, Open/E-Stop/Close, Nema 4X	N	N	N	N	N	N	N	Y	Y	Y	Y	Y
42	72700269	Push Button, Single, Wireless	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y

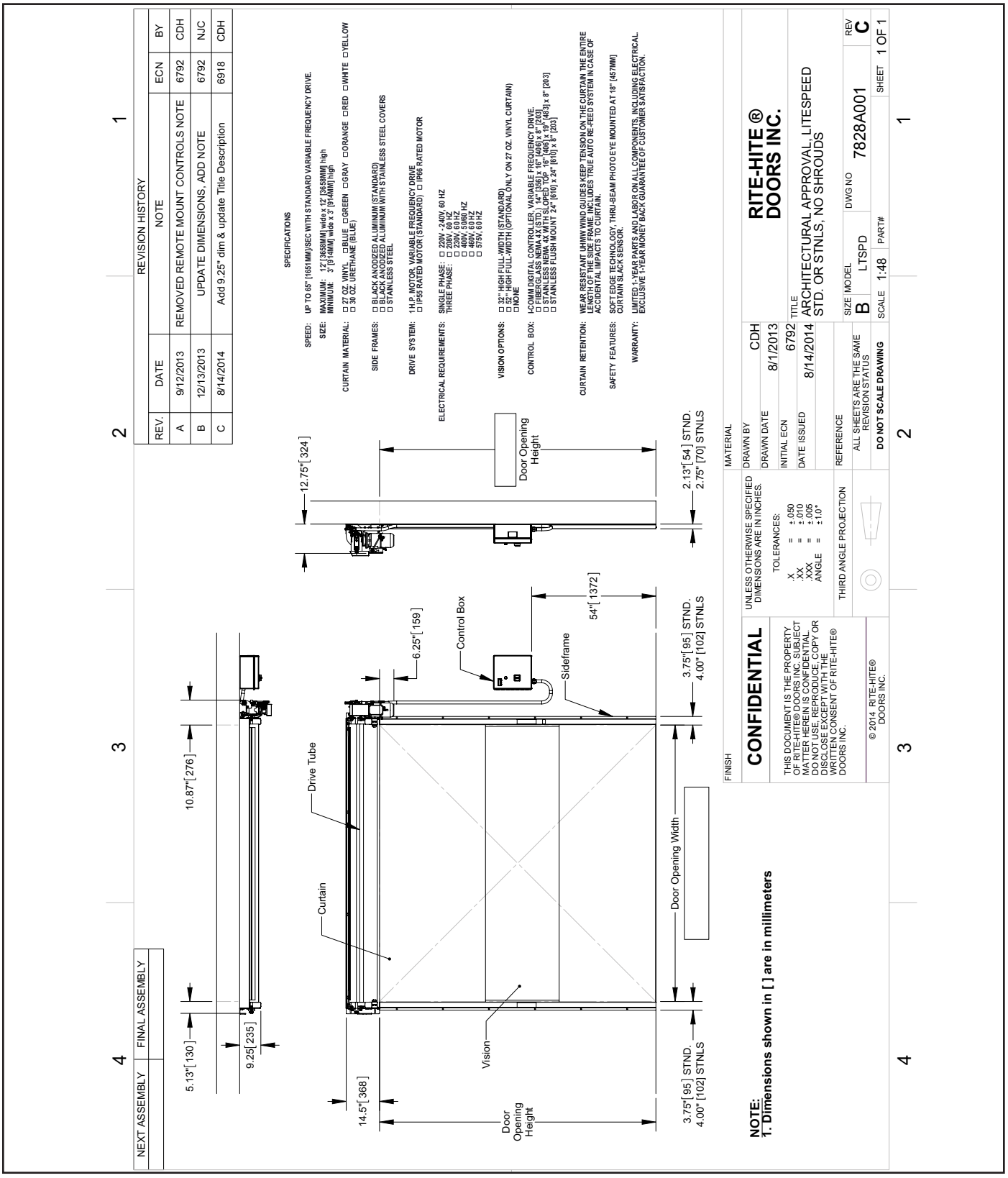
Continued on the next page

ACTIVATION SERVICE PARTS

#	Part #	Description	5700	7100	80/XL	8600	8900	FSTX	FSTXCL	FSTXFR	FSTX FRLD	FSTX XL	LTSPD	Split 2nd
43	66250020	Radio Control, RCVR, BEA, 433, 12-24V, 1 FN (=>8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
44	73750078	Radio Control, Trans, BEA, 433, 1 BTN (=>8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
45	73750079	Radio Control, Trans, BEA, 433, 2 BTN (=>8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
46	73750080	Radio Control, Trans, BEA, 433, 3 BTN (=>8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
47	11280002	Radio Control Ant w/15' Cable, 318 MHZ (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
48	53700068	Radio Control, 24V, Kit, 318 MHZ (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
49	66250016	Radio RCVR, 24V 318 MHZ (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
50	66250017	Radio RCVR, 24V 300 MHZ (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
51	73750002	Radio TRANS, 300 MHZ, BTN, 4 (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
52	73750015	Radio TRANS, 318 MHZ, BTN, 1 (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
53	73750018	Radio TRANS, 318 MHZ, BTN, 3 (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
54	73750019	Radio TRANS, 318 MHZ, BTN, 2 (<8/26/14)	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
55	54270030	Strobe 120VAC Amber	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
56	54270031	Strobe 120VAC Red	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
57	53700567	Switch, Disconnect w/Handle	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
58	72700011	Switch, Selector, 2 Pos, Key	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
59	72700072	Switch, Selector, 2 Pos (Socket p/n: 17200012)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
60	72700144	Switch, Selector, 3 Pos, 3 Pole, 12A	Y	N	N	N	N	N	N	N	N	N	N	N
61	VRTLV	Virtual Vision, Kit, Stand Alone	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
62	7623	Virtual Vision, Kit, FSTX/FR/LTSPD	N	N	N	N	Y	Y	N	Y	Y	N	Y	Y
63	7624	Virtual Vision, Kit, FSTXCL	N	N	N	N	N	N	Y	N	N	N	N	N
64	7638	Virtual Vision, Kit, FSTX XL	N	N	N	N	N	N	N	N	N	Y	N	N
65	53700862	Warning Device Kit, Relay, i-COMM	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
66	53700863	Warning Device Kit, Relay, PLC	N	N	Y	Y	N	N	N	N	N	N	N	N
67	53700306	Kit, Activation Service Parts (loop, pe, pull, push)	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Rev. 10.7.14

ARCHITECTURAL DRAWING W/O SHROUDS



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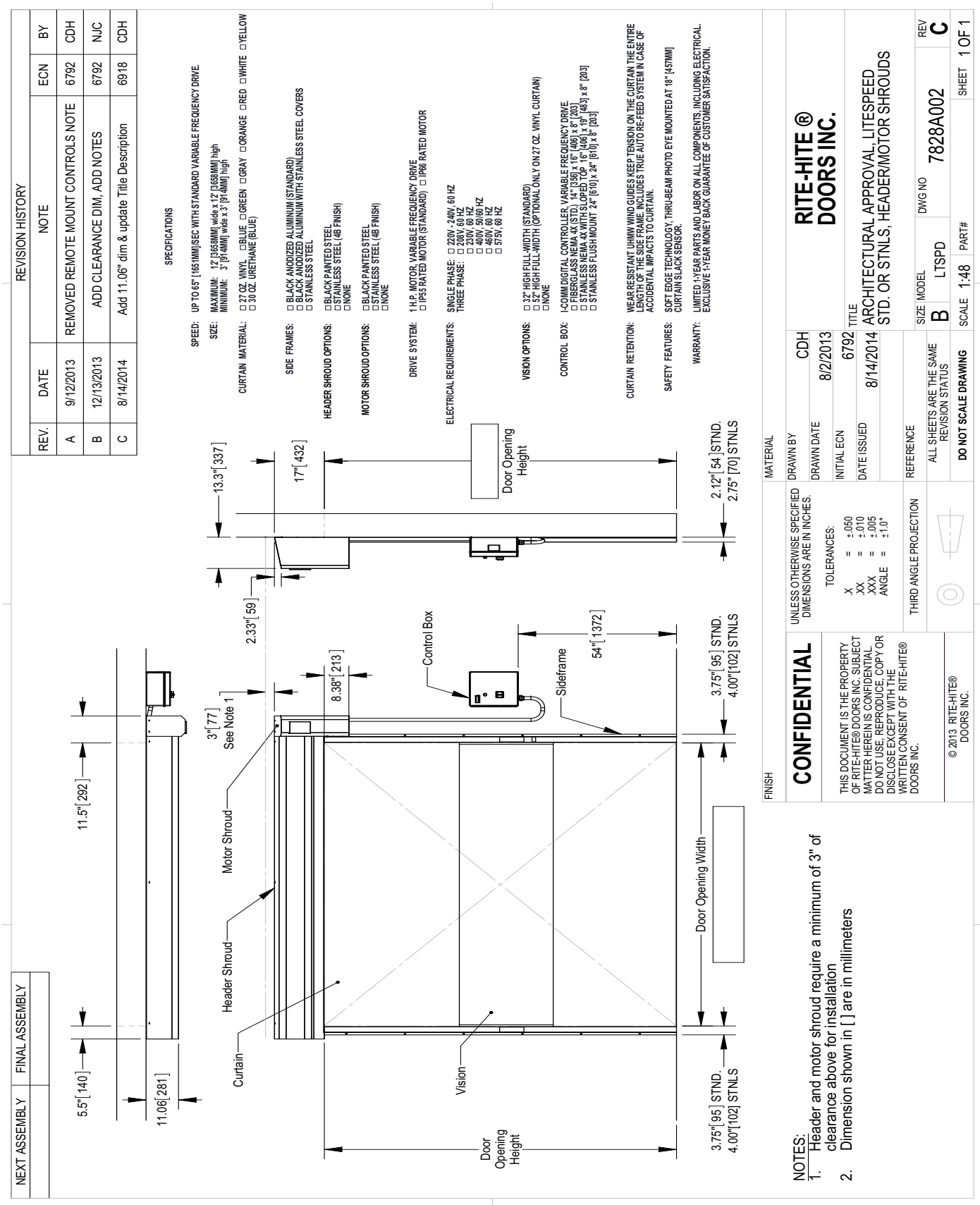

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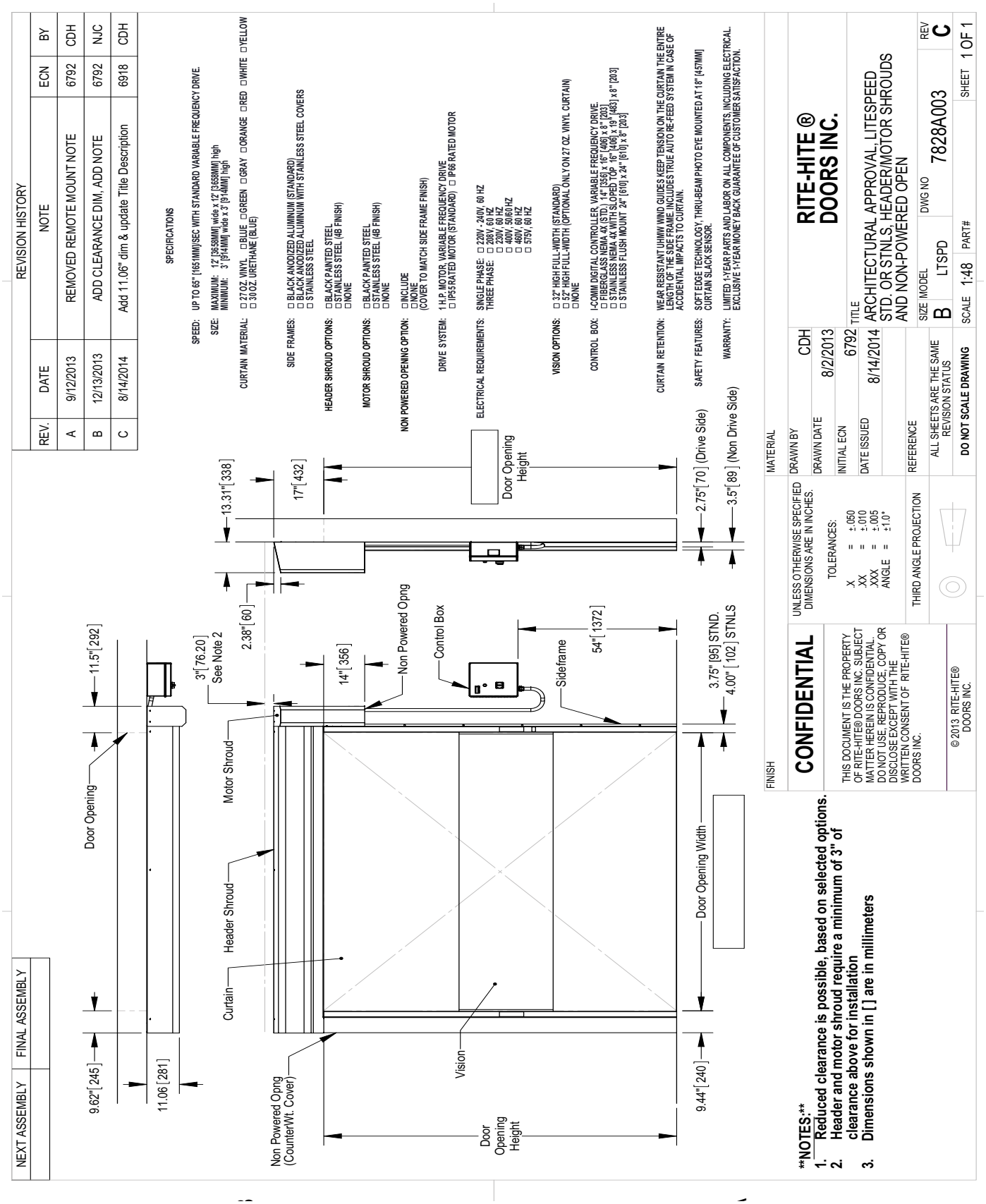

Abbreviation	Description
AB	Allen Bradley
AC	Alternate Current
ACT	Activation
Amp	Amperage
A/R	As Required
Ass'y	Assembly
BL or BLK	Black
BRD/DRN	Braid or Drain wire
BR or BRN	Brown
BRKT	Bracket
BRK	Brake
BTM	Bottom
BU	Blue
CC	Current Limiting
CE	European Commission
CL	Clean Door
CLR	Cooler Door
CR	Control Relay
CSA	Canadian Standards Association
CT	Control Techniques
Cul	Canadian Underwriters Laboratories
C.W.	Counter Weight
DC	Direct Current
D.O.H.	Door Ordered Height
D.O.W.	Door Ordered Width
DR	Drill
E-Stop	Emergency Stop
e.g.	For Example
etc	Etcetera
Ext	Exterior
Ext/Ext	Exterior / Exterior
F1,2,3	Fuse 1,2,3
FCC	Federal Communications Commission
FDA	US Food and Drug Administration
FHMS	Flat Head Machine Screw
FHWH	Flat Head Washer Head
FR / FZR	Freezer Door
FSTX	FasTrax
GBX	Gearbox
GMP	Good Manufacturing Practice
GN or GRN	Green
GND	Ground
GR	Grade
GY	Gray
HDW	Hardware
HF	Hardware Fault
HHCS	Hex Head Cap Screw
HHMS	Hex Head Machine Screw
HWHSMS	Hex Washer head Sheet Metal Screw
H.P.	Horse Power
Hz	Hertz
illum	Illumination
In	Inches
ind	Induction
Int	Interior
Int/Int	Interior / Interior
Int/Ext	Interior / Exterior
I/O	Input / Output
J-Box	Junction Box
KBPS	Kilobytes per second
KLDR	Time Delay Fuse
KVA	Kilo-Volt Ampere
L	Left
lb	Pounds
LCD	Liquid Crystal Display
LED	Light-Emitting Diode
LH	Left Hand
LHD	Left Hand Drive
L1,2,3	Line Voltage 1, 2, 3
LLC	Limited Liability Company
LTSPD	LiteSpeed
LZR	Laser
L/S	Limit Switch
M/D/Y	Month/Day/Year

Abbreviation	Description
Max	Maximum
Mhx	Mega Hertz
Mil / mm	Millimeters
Min	Minimum
Misc	Miscellaneous
MPH	Miles per hour
MSDC	Mounted Side DC
MSTP	Mounted Side Tie Point
N	Neutral
NFPA	Nation Fire Protection Association
NMDC	Non-Mounted Side DC
NMTP	Non-Mounted Side Tie Point
N/A	Not Available
N.C.	Normally Closed
N.E.C.	National Electric Code
N.O.	Normally Open
N.P.O.	Non-Powered Opening
OB	Obstruction
O.D.H.	Ordered Door Height
O.D.W.	Ordered Door Width
Opt	Optional
OR or ORG	Orange
OSHA	Occupational Safety and Health Administration
Oz	Ounce
Pharma	Pharmaceutical
PB	Push Button
PE	Photoeye
PHLP	Phillips Head
PHSMS	Pan Head Sheet Metal Screw
PK	Pink
P.M.P.	Planned Maintenance Program
Pos	Position
PSA	Pressure Sensitive Adhesive
Pub	Publication
PVC	Polyvinyl Chloride
Qty	Quantity
R	Right
RD	Red
RH	Right Hand
RHD	Right Hand Drive
RHMS	Round Head Machine Screw
R/T	Roller Tube
SD	Secure Digital
SEC	Seconds
SF	Square Foot
S/F	Side Frame
SK	Control Techniques VFD
SPDT	Single Pole Double Throw
SPLT	SplitSecond
S.S. / STNLS	Stainless Steel
STND / STD	Standard
SW	Switch (Disconnect)
Term	Terminal
TIG	Tungsten Insert Gas
UHMW	Ultra High Molecular Weight
USDA	U.S. Department of Agriculture
UV	Ultra Violet
V	Voltage
VFD	Variable Frequency Drive
VL	Vertical Lift
V.V.	Virtual Vision
W.D.	Warning Device
w/	With
w/o	Without
WH	White
X	Controller Input
XL	Extra Large Door
Y	Controller Output
YE	Yellow
ZNC	Zinc
0V	Direct Current Common (Zero V)
	Rev. 10.08/14

RITE-HITE DOOR PRODUCT WARRANTY

RITE-HITE
ALWAYS LOOKING AHEAD

LIMITED WARRANTY

RITE-HITE Company, LLC and its affiliates (collectively "RITE-HITE") warrants that the LiteSpeed door sold to the Owner will be free of defects in design, materials and workmanship (ordinary wear and tear excepted) for the periods set forth below ("Limited Warranty").

One (1) Year on all mechanical and electrical parts.

One (1) Year labor, based on approved travel and labor repair times.

REMEDIES

Parts. RITE-HITE's obligations under this Limited Warranty is limited to repairing or replacing, at RITE-HITE's option, any part which is determined by RITE-HITE to be defective during the applicable warranty period. Such repair or replacement shall be RITE-HITE's sole obligation and the Owner's exclusive remedy under this Limited Warranty.

Labor. RITE-HITE will provide warranty service without charge for labor in the first year of the warranty period. Thereafter, a charge will apply to any repair or replacement under this Limited Warranty.

CLAIMS

Claims under this Limited Warranty must be made (i) within 30 (thirty) days after discovery and (ii) prior to expiration of the applicable warranty period. Claims shall be made in writing or by contacting the representative from whom the Product was purchased directly. Owner must allow RITE-HITE or its agent, a reasonable opportunity to inspect any Product claimed to be defective and shall, at RITE-HITE's option, either (x) grant RITE-HITE or its agent access to Owner's premises for the purpose of repairing or replacing the Product or (y) return of the Product to the RITE-HITE, f.o.b. RITE-HITE's factory.

NOT WARRANTED. RITE-HITE does not warrant against and is not responsible for wear items such as fuses, batteries, bulbs, vision and seals. No implied warranty shall be deemed to cover, damages that result directly or indirectly from: (i) the unauthorized modification or repair of the Product, (ii) damage due to misuse, neglect, accident, failure to provide necessary maintenance, or normal wear and tear of the Product, (iii) failure to follow RITE-HITE's instructions for installation, failure to operate the Product within the Product's rated capacities and/or specified design parameters, or failure to properly maintain the Product, (iv) use of the Product in a manner that is inconsistent with RITE-HITE's guidelines or local building codes, (v) movement, settling, distortion, or collapse of the ground, or of improvements to which the Products are affixed, (vi) fire, flood, earthquake, elements of nature or acts of God, riots, civil disorder, war, or any other cause beyond the reasonable control of RITE-HITE, (vii) improper handling, storage, abuse, or neglect of the Product by Owner or by any third party.

DISCLAIMERS. THIS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, AND RITE-HITE EXPRESSLY DISCLAIMS AND EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR PURPOSE. RITE-HITE SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, WITH RESPECT TO THE PRODUCTS SOLD OR SERVICES RENDERED BY RITE-HITE, OR ANY UNDERTAKINGS, ACTS, OR OMISSIONS RELATING THERETO.

LIMITATION OF LIABILITY. IN NO EVENT SHALL RITE-HITE BE RESPONSIBLE FOR, OR LIABLE TO ANYONE FOR, SPECIAL, INDIRECT, COLLATERAL, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RITE-HITE HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Such excluded damages include, but are not limited to, personal injury, damage to property, loss of goodwill, loss of profits, loss of use, cost of cover with any substitute product, interruption of business, or other similar indirect financial loss. Rite-Hite 2.1.14

RITE-HITE DOORS, INC. is covered by one or more of the following U.S. patents, including patents applied for, pending, or issued:

5,579,820, 5,638,883, 5,794,678, 5,887,385, 5,915,448, 5,944,086, 6,089,305, 6,145,571, 6,148,897, 6,192,960, 6,212,826, 6,321,822, 6,325,195, 6,330,763, 6,360,487, 6,481,487, 6,560,927, 6,598,648, 6,612,357, 6,615,898, 6,688,374, 6,698,490, 6,837,296, 6,901,703, 6,942,000, 6,964,289, 7,034,682, 7,045,764, 7,111,661, 7,114,753, 7,151,450, 7,578,097, 7,699,089, 7,748,431, 7,757,437, 8,037,921, 8,167,020, 8113265.

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FCC COMPLIANCE

NOTE: 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.
NOTE: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference
(2) This device must accept any interference received, including interference that may cause undesirable operation.

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