



DOR-O-MATIC®

A Member of
AAADM
American Association of Automatic Door Manufacturers

Automatic Sliding Door Owner's Manual

Series 96000 Slide

Distributed by:

DOR - O - MATIC®

7350 W. Wilson Ave.
Harwood Heights, IL 60706

Toll Free: 1-800-543-4635
In Illinois: 708-867-7400
Sales FAX: 708-867-0291
www.doromatic.com



CAUTION

Improperly Adjusted Door can cause injury and equipment damage.

Inspect door operation daily using safety checklist in owner's manual and at door.

Have door adjusted as described in Owner's Manual.

Safety devices should be in place and operational.

Have door inspected at least annually by an *AAADM* certified inspector, and after any adjustment or repair.

DEFINITIONS

Caution indicates that injury or property damage can result from failure to follow instructions.

Note indicates important steps to be followed or important differences in equipment.

TO OUR CUSTOMERS

The purpose of this manual is to familiarize you with your automatic door system. It is essential that you "know your system" and that you recognize the importance of maintaining your door system in compliance with the industry standards for safety.

It is your responsibility, as owner or caretaker of the equipment, to inspect the operation of your door system on a daily basis to ensure that it is safe for use by your invitees, customers, or employees.

This manual will provide you with a description of the operation and maintenance requirements of your door. It also provides the instructions for the *Daily Safety Check*.

Should the door fail to operate as prescribed in the *Daily Safety Check*, or at any other time for any other reason, **do not attempt to repair or adjust the door**. Call a qualified service technician. These technicians are trained to service your door in accordance with applicable industry safety standards.

SERVICE AVAILABILITY

Dor-O-Matic products are distributed through a nationwide network of Dor-O-Matic authorized distributors for sales, installation, and service.

Should you need service on your door system, consult the yellow pages of your telephone directory under "Door-Opening Devices" for your local Dor-O-Matic authorized distributor or call 1-800-543-4635 for a local distributor.

COMPLIANCE WITH SAFETY STANDARDS

Your door system was designed to the latest operating and safety standards. In order to ensure the continued safe operation of your door, it is important that:

1. Your door system be maintained in compliance with the standards of the industry.
2. Proper decals and labels be applied and maintained on your doors. If decals are removed or cannot be read, request labels to be replaced when calling for service.

3. Safety devices for all doors be checked annually by an AAADM certified inspector as well as each time a door is serviced.

AAADM, the American Association of Automatic Door Manufacturers, has established a program to certify automatic door inspectors. Through this program, the inspectors check your door systems for compliance with the appropriate version of the American National Standards Institute standard ANSI A156.10.

WHAT YOU SHOULD KNOW

Be sure that a Dor-O-Matic distributor has provided the following for each door:

1. Instructions to conduct the *Daily Safety Check* (by walk-through example).
2. Shown the location of function switches and instruction in their use.
3. Shown the location of the circuit breaker or power disconnect for each door system.
4. Discussion of problems that could result from door being allowed to operate after a malfunction is observed.
5. Number to call for service or questions about your system if you are uncertain of any condition or situation.

Note: If there are any problems, **discontinue door operation immediately** and secure in a safe manner. Call your local authorized Dor-O-Matic distributor for repair.

6. AAADM compliance certificate signed by an AAADM certified automatic door inspector.
7. Warranty information for each door.

DAILY SAFETY CHECK

Perform these safety checks *daily* on each automatic sliding door to ensure your customers' safety and your own protection. Perform these tests while traffic is restricted from all detection and sensing zones.

Motion Detector Actuation

1. Check electronic sensor by walking towards door opening at a moderate speed. Door should start opening when you are about five feet from the door, should slide open smoothly, and stop without impact. Repeat on other side of opening. Move slowly through the door (6 in. per second). The door should remain open.
Note: If your door is set up for one -way traffic, the detector on the side not intended for use should be active until the door is within 6 inches of fully closed. The sensor should re-open the closing door if an object is detected a minimum of 24 inches from the door.
2. Step out of the sensor zone. After a brief time delay (at least 1_ seconds) the door should close smoothly and fully without impact. Doors should be adjusted so they do not close faster than 1 foot per second.
3. Observe traffic routing to door. Plan traffic routing so persons will approach the door straight on and not from an angle.
4. Walk parallel to the door face to check that the detection pattern is at least as wide as the door opening. This test should be performed about 2_ feet from the door face.
5. Open the door. Cover each doorway holding beam with your hand and stand motionless for several seconds. The door should remain open. Remove your hand and the door should close after the time delay expires. If other safety devices are being used, stand motionless in the door opening for 10 seconds. The door should not close.

Floor Mat Actuation

1. Step on the "opening" mat in several places. Door should slide open smoothly and stop without impact.
2. Step through the doorway onto the mat on the other side. Door should remain fully open without interruption.
Note: If there is more than one mat on each side, each mat should be tested.
3. Check the mat molding and threshold. It should be complete and secured with all screws required.
4. Step off the mat. After a brief time delay (at least 1_ seconds), the door should close slowly and smoothly without impact. Doors should be adjusted so they do not close faster than 1 foot per second.

General Safety

1. Decals:

Door should have decals properly displayed on a centerline of 58 in., ± 5 in. (147 cm, ±13 cm) to each moving leaf. There should also be decals that include the statements: "AUTOMATIC DOOR" (in letters 1/2 in. high, minimum) and "IN EMERGENCY - PUSH TO OPEN" (See Figure 1).



Figure 1: Signage

2. Closing Speed:

Horizontal doors must be adjusted within the following limits to comply with ANSI A156.10. The closing time of the door must not be less than the minimum time as shown in the following table. This closing time is taken from a point one inch from full open to a point two inches from fully closed. Example: If a 3'0" door panel closes in 1.7 seconds it is too fast and must be slowed down. If it closes in 3.0 seconds it is in compliance.

Maximum Closing Speed – 1 Foot Per Second		
Normal Door Opening		Minimum Closing Time
Single Slide	Bi-Part	
	48"	2 Seconds
	60"	2.5 Seconds
36"	72"	3 Seconds
42"	84"	3.5 Seconds
48"	96"	4 Seconds

Force to prevent the door from closing should not exceed 30 pounds. This should be checked at several points in the closing cycle by stopping the door and attaching a spring scale. The scale reading should not exceed 30 pounds, or if operator is equipped with a reversing feature, the door should reverse with a force not to exceed 30 pounds.

3. Emergency Breakout:

Test by manually pushing door at lock area in direction of emergency exit. Release door. The door should either stop operation or spring to closed position. Make sure door panel or panels are properly re-latched.

4. Housekeeping:

Be sure floor guides are kept clean and free of any debris which could prevent proper door slide. Check the door area for tripping or slipping hazards. Check all door panels for broken or cracked glass. There should be no bulletin boards, literature racks, merchandise displays, or other attractions in the door area where people could be hit by the door.

NOTE: IF YOU HAVE ANY PROBLEM YOU CANNOT CORRECT, TURN OFF THE DOOR OPERATING EQUIPMENT AND CALL YOUR SERVICE REPRESENTATIVE.

LIMITED WARRANTY

Dor-O-Matic hereby warrants, subject to the provisions thereof, that the products and parts manufactured by Dor-O-Matic and its affiliates shall be free from defects in material and workmanship for a period of one year from the date of shipment from the Dor-O-Matic factory.

OPERATIONAL FEATURES

Every Dor-O-Matic automatic sliding door package is shipped with either a three or four-position switch. The functions are as follows:

3-Position Switch	4-Position Switch	Function
Off	Off	Operator is disconnected (Door can be locked).
-	1-Way	Only interior activation device is functional.
Auto	2-Way	Both interior and exterior activation devices are functional.
Hold Open	Hold Open	Door(s) will open and remain open indefinitely.

DOOR LOCKING PROCEDURES

Locking

1. Stand clear of all the opening detection areas and allow the door(s) to close completely.
2. Turn the door function switch to the "Off" position (see Operational Features).
3. For interior locking – The door(s) can now be secured with the lock mechanism.
4. For exterior locking – Manually open the door(s), exit, manually close, and lock with key.

Unlocking

1. Unlock door(s).
2. Manually open the door(s) and enter.
3. Turn the door function switch to the desired function (see Operational Features).

Emergency Function

In the event of an emergency, the sliding doors are capable of swinging into a breakout position by exerting force at the lock area of the door. There is a remote possibility that the sliding doors could be accidentally struck by people or carts and be put into this emergency breakout mode. The operator's function is normally shut off whenever the doors are in this mode and will require resetting of all door leaves to their proper position. To reset, grasp the door at the lock end and slide it open slightly. Next, swing the door closed, making sure the pin catches at the top. The operator will automatically turn on after all the doors have been reset to the fully closed position.

TROUBLESHOOTING

Symptom	Possible Cause	Solution
Door fails to open.	No main power.	Check main circuit breaker.
	Switch in "Off" position.	Place switch in "Auto" position.
	Physical obstruction.	Check bottom track for debris.
	Door in breakout position.	Reset door to normal position.
	Activation device defective.	Consult Dor-O-Matic distributor.
Door opens and stays open.	Switch in "Hold Open" position.	Place switch in "Auto" position.
	Activation/Safety device detecting an object or person	Clear doorway of any objects and/or stand clear of the area.
	Activation/Safety device defective.	Consult Dor-O-Matic distributor.
Door does not operate smoothly.	Various causes.	Consult Dor-O-Matic distributor.

Note: Door and detection device functions must comply with applicable safety standards. Repairs should be performed by an authorized Dor-O-Matic distributor. For safety standards information, consult Dor-O-Matic.

DOR-O-MATIC 96K-SLIDING DOOR INSTALLATION TIPS

ATTENTION – READ THIS FIRST!

This document is designed to help with the installation of the Dor-O-Matic 96K Sliding Door System. While there are some similarities to the Astro-Slide System, there are many more differences. Please read these recommendations, along with the Installation Instructions (P/N 96000-984) provided on the parts board, before installing the 96K System.

Wire Cover

- Cut the wire cover into several pieces 6" to 10" long, and install as needed (Figure 1).

Sensor Wiring

- Install a length of 6-conductor cable from the control box to the center of the door opening and a length of 2-conductor cable from the transformer box to the center of the door opening in the front wire channel with the pieces of plastic wire cover (Figure 1). These cables are for the motion detectors (P/N 74600-900) and safety sensor (P/N 87500-900).
- Install the motion detectors and safety sensor at the recommended height locations in the center of the door opening (Figure 1). Note the factory prepped wire chase holes in the header and header extension (Figure 1).
- Slide the safety beam bracket to the center of the door opening. Make all wire connections for the sensor and motion detectors in front of and secured to the safety beam bracket (Figure 1). Refer to the individual sensor manuals and the 96K Control Box Manual (P/N 96010-084) for the proper wiring connections.

Non-Transom Applications

- Use three 1/4-20 screws per jamb. Install additional screws up through the header into the building (Figure 2).

Transom Applications

- Use three 1/4-20 screws per jamb. Center the transom glass stops in the jamb tubes (Figure 2). Drill #26 (.147 dia.) holes through the exterior glass stop and header and install the #8 x 1/2" screws provided.

SO Panel

- When installing the SO panel (inside slide only), be sure to release the top pivot pin into the hole (Figure 3). Take care not to pinch or cut the safety beam wires during installation. Route the safety beam wires in the rear channel.

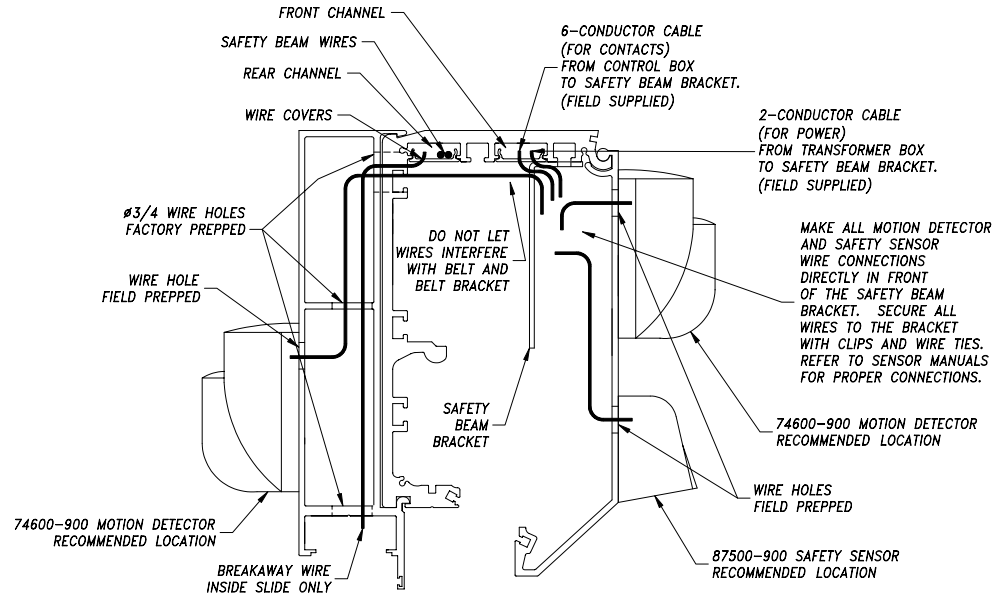


FIGURE 1: Header Cross Section

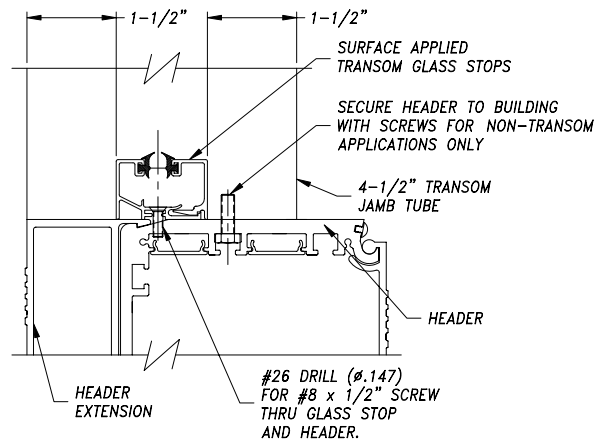


FIGURE 2: Transom Cross Section

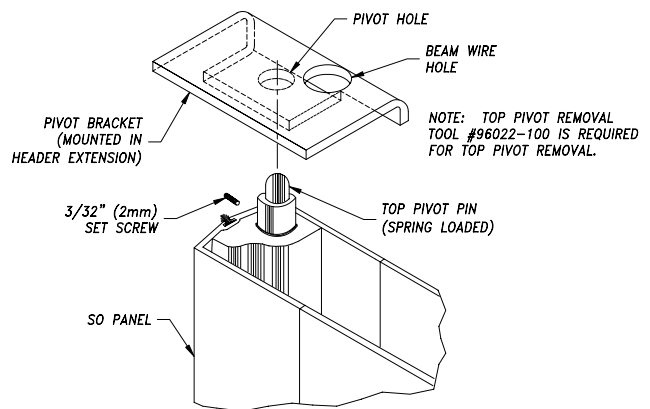


FIGURE 3: SO Pivot Detail



96K TROUBLE-SHOOTING CHART

PROBLEM	TEST	CAUSE	SOLUTION
Door will not open or close.	1) Check on-off-hold open switch and on-off switch.	Switch is in off position.	Place switch in "on" position.
	2) Check circuit breaker and fuse.	Circuit breaker tripped. Fuse blown.	Push circuit breaker into on position and replace fuse.
	3) Set VOM to 120 volts AC scale. Place meter probes on transformer panel. If meter does not read 117 volts....	Power supply has been interrupted. Circuit breaker at main panel tripped.	Reset main panel breaker.
	4) Turn off power. Disconnect breakout switch leads from terminal 14 & 15 at control box. With VOM check continuity across leads. If meter reads infinite OHMS..., (Note: Make sure that S.O. panels are closed when checking continuity.	Breakout switches and/or leads are open.	Replace switches and/or leads.
	5) Shut power off. Remove both fuses from control box and transformer panel. If fuse reads infinite OHMS....	Fuses open.	Replace fuse.
	6) Place jumper across terminals 1 & 2 of control box. If door opens....	Activation Device is inoperative.	Replace activation device.
	7) If after performing the above tests and the control box does not open when sensor is activated.....	Control box is faulty.	Replace control box.
	8) Turn off power. Remove fuse from control box. Check for continuity with VOM meter. If meter reads infinite OHMS....	Open fuse holder.	Replace control box.
	9) Activate sensor and check voltage @ terminals m- and m+. No voltage.	Control box failure.	Replace control box.
	10) Turn off power. Disconnect plug connector from m- and m+. Check each wire to ground. If OHMS reading is detected....	Motor shorted to ground.	Replace motor gearbox.
Door does not open, but motor runs.	1) Disconnect belt from pulley. Turn pulley if no resistance.	Pulley stripped from motor.	Replace motor gearbox.
Door opens, starts to close and then recycles.	1) Move doors manually and if doors don't open freely....	Doors binding or debris in track.	Adjust doors and remove debris from track.
Door holding open.	1) Disconnect activation sensor. If door closes...	Faulty activation sensor.	Replace activation device.



96K TROUBLE-SHOOTING CHART (Cont'd)

PROBLEM	TEST	CAUSE	SOLUTION
Door holding open.	2) Disconnect threshold sensor. If door closes....	Faulty threshold sensor.	Replace threshold sensor.
	3) Disconnect doorway holding beams. If door closes...	Holding beam failure.	Replace complete holding beam system.
Door does not close completely.	1) Pull door closed and check hook locks and if dragging...	Door catching on panel.	Adjust hooks and recheck.
Door slams on opening cycle.	1) Turn off power. Turn power on. Door will not program.	Motor encoder faulty.	Replace motor gearbox.
Door slams on closing cycle.	1) Turn off power. Turn power on. Door will not program.	Motor encoder faulty.	Replace motor gearbox.
Door closing speed excessively slow.	1) Turn power off. Turn power on. Door does not size correctly....	Motor encoder faulty.	Replace motor gearbox.
Circuit breaker continues to trip.	1) Check motor continuity with VOM from motor leads to ground. If other than 0 OHMS found...	Motor shorting to ground.	Replace motor gearbox.
	2) Check wires shorting to metal.	Bare wires exposed.	Repair or service wires.



COMMENTS ON DOOR BINDING

Approximately half of all field problems are related to some type of sliding door binding which in many cases causes premature failure of other parts in the system or improper door operation (sluggish, slow, erratic, or "just not quite right").

Service personnel **must** take the **time necessary** to check for and correct any binding conditions that exist, or the door problems will continue. With automatic doors, there is no such thing as "that is someone else's problem". The automatic door manufacturer and the service personnel are the responsible parties.

Common causes of binding:

1. Additional sweeps or weather stripping added to door.
2. Rocks, glass or dirt build-up in guide track.
3. Door partially broken away and sagging down on floor.
4. Door rubbing on panel or sidelite.
5. Door dragging on threshold due to:
 - Metal expansion due to heat.
 - Heaving floor due to freezing and thawing.
 - Installing doors over building expansion joints.
6. Loose screws in guide track.
7. Anti-riser screw adjusted too tight.
8. Belt drive adjusted too tight.
9. Bottom lock rods dragging on floor.
10. Uneven floor conditions.
11. Extra floor mats getting caught under door.
12. Ice or snow build-up along bottom guide.
13. Carrier rollers not turning due to:
 - Frozen bearing.
 - Chips or dirt embedded in roller.
 - Bracket screw too long.
14. Belt roller binding.
15. Motor or gearbox damaged and binding up.



Series 96000 Slide Control

Installation Instructions

DOR - O - MATIC®

7350 W. Wilson Ave.
Harwood Heights, IL 60706

Toll Free:	1-800-543-4635
In Illinois:	708-867-7400
Sales FAX:	708-867-0291
Technical Support	1-888-942-9945
www.doromatic.com	

INSTALLATION

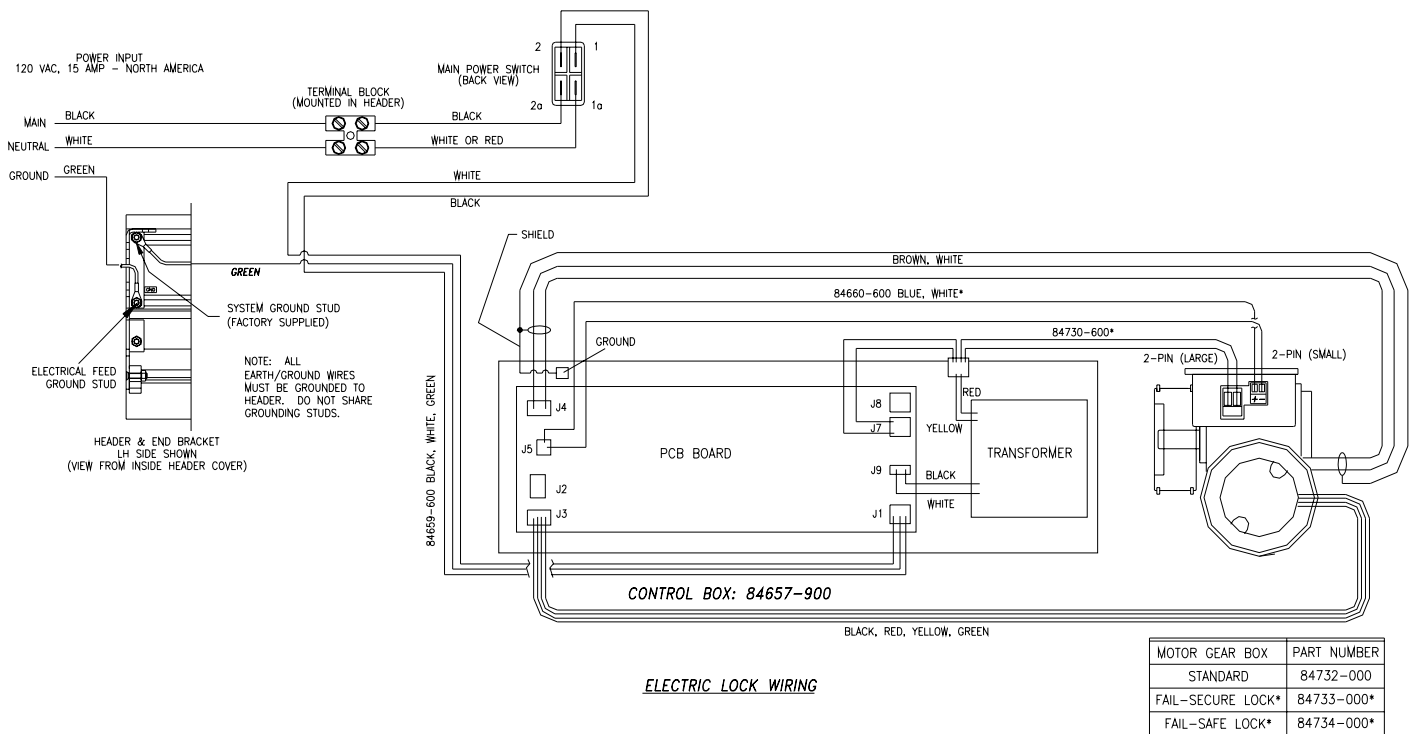
1. Preparation: Refer to Series 96000 Slide Installation Manual (DOM #96000-984) for header preparation instructions.

NOTE: Always disconnect main power to operator prior to servicing or cleaning.

2. Final Wiring Connections:

The Series 96000 header comes from the factory “pre-wired” to minimize installation time at the job site. Connect main power to the terminal block at the end of the header (Figure 1). Connect accessories to the terminal block on the safety beam bracket or control box as needed (Figure 2). Refer to the instruction manual of the accessory for complete wiring details.

- A. Use a 115 volt, 60Hz, fused, 15 amp, 3-wire power supply.
- B. Externally route the main power to the side of the header with the terminal block.
Do not run the main power in the wire channel the length of the header.
- C. When wiring the header, place the main power in one wire channel and the accessory wiring in the other.
- D. Secure all conductors and connections against physical damage.
- E. Route all wiring away from moving parts, sharp edges and heat sources. Manually and slowly push doors open and closed and observe that parts do not interfere with the wiring.
- F. Use copper conductors only.



* = USED ONLY WITH FAIL-SECURE AND FAIL-SAFE LOCKS

FIGURE 1: POWER WIRING DIAGRAM

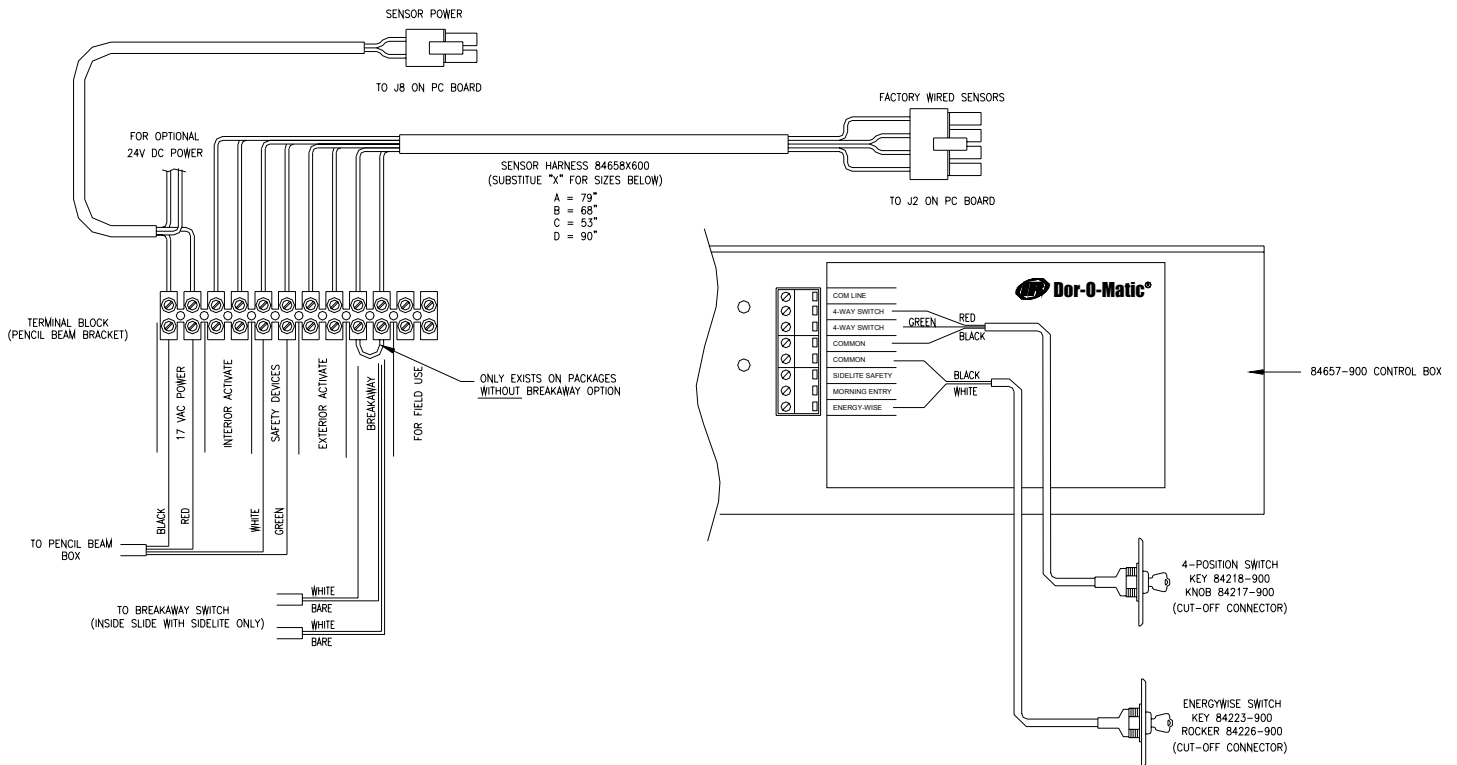


FIGURE 2: ACCESSORY WIRING DIAGRAM

3. Operational Check and Adjustments:

NOTE:

- Refer to the latest revision of ANSI/BHMA A156.10-1999 Standard for Power Operated Pedestrian Doors for all settings and adjustments.
- A flashing keypad indicates that keypad changes were not accepted. Changes will be accepted once the door is fully open or closed.
- Upon power-up, the display remains blank. Also, the display will go blank after (5) minutes of inactivity. If the display is blank, depressing any two (2) keys for three (3) seconds will enable the display. Once enabled, the display will show OS setting and its corresponding value.
- For all keypad values, the lower number represents slower or minimum values while the higher number represents faster or maximum values.
- **Keypad adjustments will not be accepted until the sizing mode is completed.**

Setting - Up or Down pushbuttons:

Scrolls through the available settings.

Value - Up or Down pushbuttons:

Scrolls through the available values for each setting.

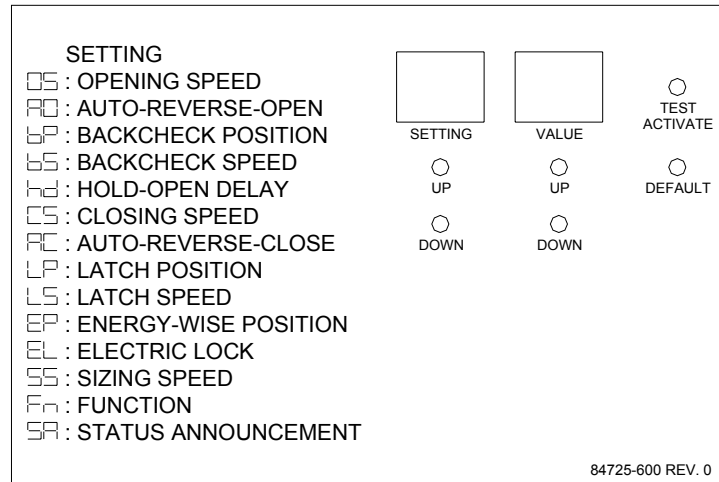
Test Activate pushbutton:

When pressed, this button will provide an activation signal to the door.

Default pushbutton:

To revert back to factory settings, press and hold the default button for 5 seconds.

1. Close doors.
2. If the 4-position switch is used, be sure it is in the "2-way" position before proceeding.
3. Apply power to the system using the main power switch on the header/cover.
4. Apply an activation signal (activate inside or outside motion sensor, press keypad "test activate" or momentarily move the 4-way to the hold position).
5. Observe sizing cycle. If door slams open or closed, reduce sizing speed (SS) setting. Remove power and repeat steps 3 to 5.
Note: Allow the door to remain at the fully closed position for a minimum of one (1) second to complete the sizing mode.
Caution: If the door sizing speed is set too fast, blown fuses and/or a tripped circuit breaker may occur if the doors are activated when manually locked.
6. After sizing is complete, make adjustments to other settings as needed.

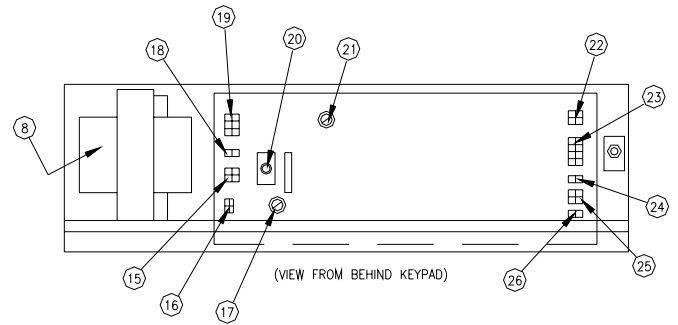
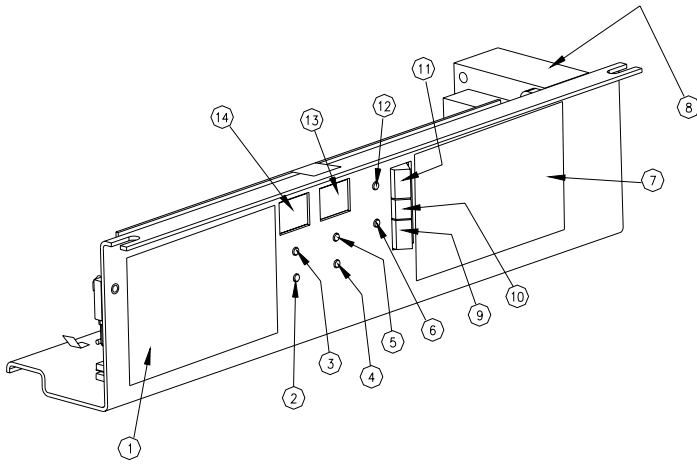


KEYPAD LABEL DRAWING

Setting	Setting Display	Value Ranges	Factory Default Settings	Description
Opening speed	OS	1 to 99	85	Controls the opening speed of the door. It is recommended that the door be operated as slowly as practical for the traffic conditions.
Auto-reverse opening	AO	1 to 99	75	Controls the amount of force required to reverse the door when opening (see FEATURES).
Backcheck position	bP	1 to 32	08	Controls where backcheck position starts.
Backcheck speed	bS	50 to 99	80	Controls the door speed during backcheck.
Hold Open Delay	hd	1 to 32	01	Controls the amount of time the door stays open. If a presence sensor is not installed, the time delay must be at least 4 seconds.
Closing speed	CS	1 to 99	75	Controls the closing speed of the door. It must not exceed 1 ft/sec.
Auto-reverse closing	AC	1 to 99	50	Controls the amount of force required to reverse the door when closing (see FEATURES).
Latch position	LP	1 to 32	07	Controls where latch position starts. It must be at least 2 inches from the fully closed position.
Latch speed	LS	50 to 99	85	Controls the door speed during latch.
Energy-wise	EP	50 to 75	50	Adjusts the open position of the door from 50% to 75% of full open when energy-wise switch is set to narrow.
Electric Lock	EL	ON or OF	OF	Enables (ON) or disables (OF) the electric lock delay. If EL is set to OF, the door opens immediately upon reception of the activation signal. If EL is set to ON, when the door is fully closed, there is a 1 second delay between reception of the activation signal and the actual opening of the door. This delay allows most electric or magnetic locks time to unlock before the door opens.
Sizing speed	SS	50 to 99	85	Controls the speed of door during sizing.
Function	Fn	00	00	This setting not used at this time.
Status Announcement	SA	00	00	This setting not used at this time.

Reset Power:

If main power needs to be reset for any reason, power must remain off for a minimum of ten (10) seconds to allow proper discharge of internal circuitry.



1. Keypad Label	10. J10C	19. J1 (AC In)
2. Setting Down	11. J10A	20. CB1
3. Setting Up	12. Test Activate Push Button	21. F1 (Main Fuse)
4. Value Down	13. Value Display	22. J3 (Hall Effect Sensor)
5. Value Up	14. Setting Display	23. J2 (Factory Wired Sensors)
6. Default Setting Push Button	15. J7 (Transformer Secondary)	24. J5 (Electric Lock Circuit)
7. Description Label	16. J8 (Sensor Power)	25. J6 (Not Used)
8. Transformer	17. F2 (Sensor Fuse)	26. J4 (Motor Drive)
9. J10B	18. J9 (Transformer Primary)	

FIGURE 3: CONTROL BOX FEATURES
CB1 (MOTOR/CONTROL CIRCUIT BREAKER)

4. Operational Walk-Through Test:

NOTE: It is assumed that during the installation process, any problems would have been found and corrected before this point. However, it is recommended that a complete walk-through test now be performed.

- A. Give the system an activation signal. The door should open smoothly and silently to the back check point, where it should slow down rapidly and drift into the fully open position without slamming.
- B. Maintain the activation signal to verify that the door does **NOT** time out and **close** while being activated.
- C. If a door safety device is used, step into the door opening. Remain in the door opening making sure that the door does **NOT** close.
- D. Step out of the door opening. After both the activating area and door opening are clear, the door should time out at the pre-set time delay and begin to close. The door should close quietly and smoothly to the latch point, where it rapidly slows down and drifts into the fully closed position without slamming.

5. Release of the System for Use:

- A. Remove all tools and installation equipment, and clean any debris from the vicinity of the door.
- B. Install all safety, traffic control, and instruction decals to the door as required. **THIS IS VERY IMPORTANT!** Failure to do this leaves the installer **LIABLE** for any accident that might occur. **THIS MUST BE DONE!**
- C. Verbally explain the proper operation of the door system to the owner or to the person in charge.

6. For Doors that are manually/mechanically secured:

- A. Locking:
 - 1) Place switch in "OFF"
 - 2) Allow door to close completely
 - 3) Secure door
- B. Unlocking inside:
 - 1) Unsecure door
 - 2) Place switch in "1-WAY" or "2-WAY"
 - 3) Activate door once
- C. Unlocking outside:
 - 1) Unsecure door
 - 2) Activate morning entry or manually open door
 - 3) Place switch in "1-WAY" or "2-WAY"

FEATURES

1. Easy Open: When the door is fully closed and manually opened a few inches, it will automatically open the rest of the way.
2. Adjustable Automatic Reversing: If the door is stalled during the closing cycle, it will automatically stop and reverse to the fully open position. Then the door will close to the point of obstruction and drop to slow speed, looking for the obstruction. This cycle will occur 5 times until the obstruction is removed. After the fifth cycle, the door will stop, requiring an activation signal or manual opening to re-start the system. If the door is stalled during the opening cycle, it will automatically stop and reverse to the fully closed position. The door will remain closed until the next activation signal, at which point it will open normally. **Reversing forces should be adjusted in accordance with all applicable safety codes.**
3. Energy-wise (Optional): The energy-wise feature allows the customer to reduce the opening size. When the weatherwise switch is set to "NARROW", the door will only open from 50% - 75% of the normal door opening.
(If energy-wise not used, door opens to 100% of opening)
4. Beam Shut-Off: So the door is fully closed, the beam signal is disregarded so that it cannot be used to open the door. Once the door is activated, the beam signal is allowed to re-open the door if either safety beam is interrupted during the closing cycle.
5. 4-Way Switch Operation:
When the 4-Position Switch is set to:
"OFF", easy open, interior and exterior activation will not open the door. The morning entry switch will open the door.
"1-WAY", only interior activation will open the door. Exterior activation will not open a closed door but will re-open a door in the closing cycle.
"2-WAY", interior and exterior activation will open the door.
"HOLD OPEN", the door will remain open.

If the 4-Position Switch is not used, Default = "1-WAY".
6. Morning Entry (Optional): The morning entry feature allows outside entry using a keyswitch when the 4-way switch is in the OFF position. The morning entry switch connects to the controller terminal block between COMMON and MORNING ENTRY (see Figure 2).
7. Sidelite Safety (Optional): The sidelite safety feature slows the opening speed of the door when an obstruction is sensed in the sidelite area. The sidelite safety sensor contacts connect to the controller terminal block between COMMON and SIDELITE SAFETY (see Figure 2).

DO'S AND DON'TS

1. Do **NOT** try to use this operator on large, heavy doors without checking with the factory first.
2. Do **NOT** connect any remote activating device to the door unless it is located within the "line of sight" of the door.
3. Do **NOT** attempt to use a fuse larger than specified.
4. Do **NOT** attempt to modify the factory wiring or connect any wiring into an existing electrical circuit or any other electrical device.
5. Do make certain that the operator is connected to a dedicated 115 volt circuit from the main circuit breaker panel.
6. Do make certain that the operator is properly grounded with a separate green wire.
7. Do make certain that all connections are proper and secure before turning the power on.
8. Do make certain that all wires are properly dressed and secured to prevent any interference.
9. Do make certain that all safety labels and instruction decals relating to door operation are properly applied to the door before leaving the job.
10. Do verbally instruct the owner or person in charge of the proper operation of the door.
11. Do disconnect main power to the operator prior to servicing or cleaning.
12. Do instruct the owner or person in charge of his responsibility of inspecting the door for the following:
 - A. Occasional damage
 - B. Developing problems
 - C. Minor preventative maintenance
 - D. Who and where to call for service when required.



Series 96000 Sliding Door

Installation Instructions

DOR-O-MATIC®

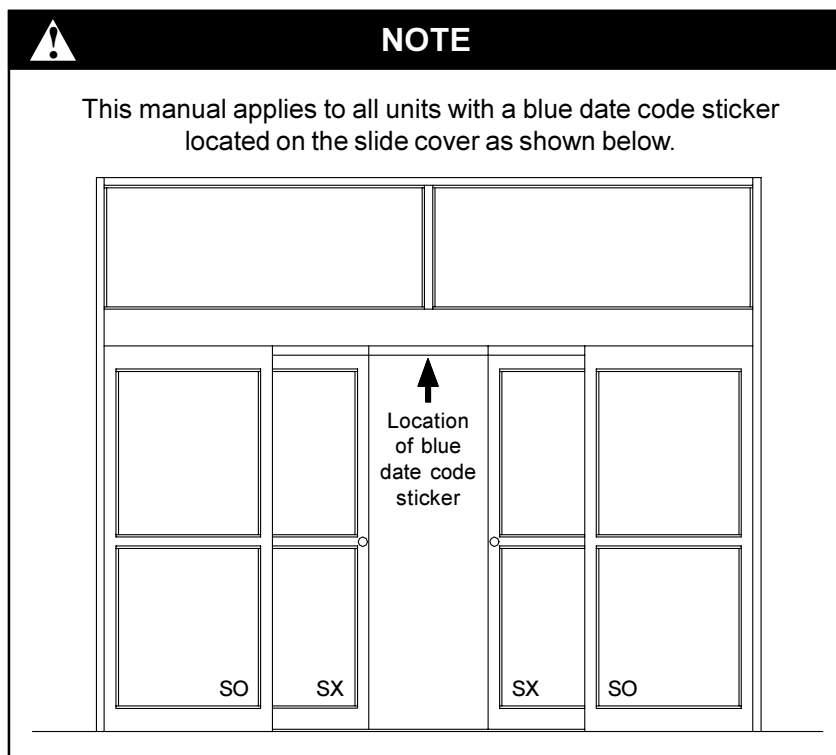
7350 W. Wilson Ave.
Harwood Heights, IL 60706

Toll Free: 1-800-543-4635
In Illinois: 708-867-7400
Sales FAX: 708-867-0291
Technical Support: 1-888-942-9945
www.doromatic.com

Copyright © 2003 Ingersoll-Rand.
All rights reserved.

INDEX

Inspection	3
Header and Jamb Mounting	4
Threshold Installation – Full Breakout Application	6
Threshold Installation – Fixed Panel Application	7
Package Components	8
Panel Installation – Full Breakout Application	9
Panel Installation – Fixed Panel Application	10
Door (SX) Installation	11
Limit Arm and Bumper Bar Installation	14
Wiring Diagram	15
Glazing	15
Release for Service	16



INSPECTION

1. Verify that the shipped order is complete and correct. Check model number, color, and package width and height.
2. Verify at the **job site** that **all conditions** are correct and in accordance with **final approved shop drawings**.
 - 2.1. Check that the opening is the correct size. Correct size is package width plus 1/2" (13 mm) and package height plus 1/4" (6 mm) for shimming and caulking (**Figure 1**).

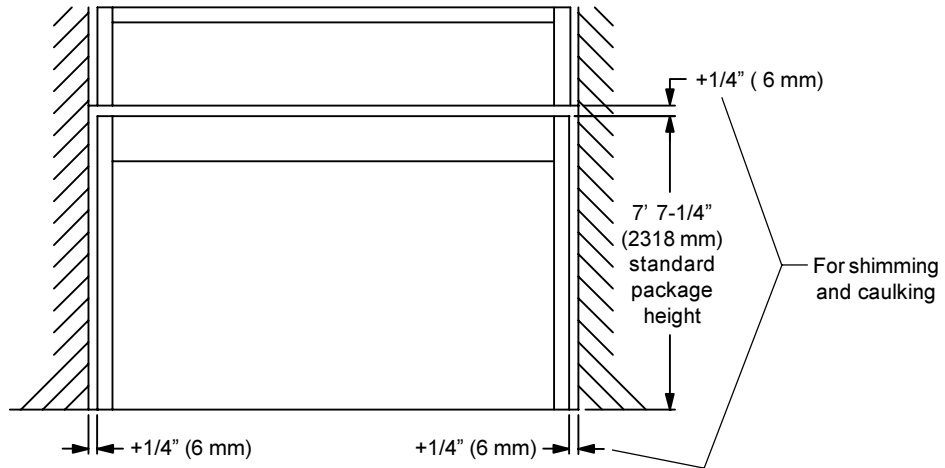


Figure 1. Clearance Required at Rough Opening

- 2.2. Check that the floor is level. Use a level of 6' 0" (1829 mm) minimum length (**Figure 2**).
- 2.3. Use a plumb bob to check that the rough opening where the jambs will be mounted is vertical (**Figure 3**).
- 2.4. Check diagonal measurements to insure that opening is a true rectangle, not just a parallelogram (**Figure 4**).

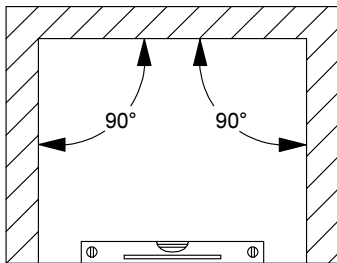


Figure 2. Floor Must Be Level

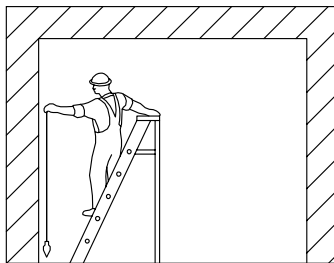


Figure 3. Jamb Mounting Surface Must Be Vertical

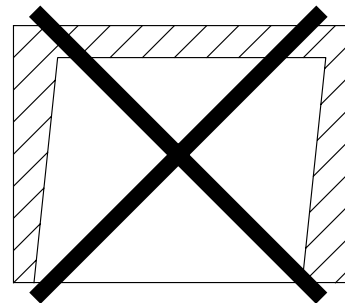


Figure 4. Opening Must Be Rectangular, Not a Parallelogram

- 2.5. Check that the electrical feed (115 V, 15 A single phase for North America, 220/240 V, 5 A single phase for Europe, Asia, etc.), conduits, and electrical junction boxes for push plates or other activation devices (if required) are correctly located in accordance with final approved shop drawings.



NOTE

If any of the above items are not correct, **do not attempt to install the Series 96000 Slide package!** Report any incorrect items to the general contractor **immediately**. Do not proceed until all conditions are correct.

HEADER AND JAMB MOUNTING

1. Open the carton marked "HEADER." Remove the header and set it on a piece of cardboard with the swing cover facing up. Remove the cover bumpers near the cover hinge. Do not lose the cover bumpers, as they must be re-installed to prevent the cover from coming off when opened. Using a screwdriver, press up on the cover lock tab (one on each end) to disengage and open the cover (**Figure 5**).

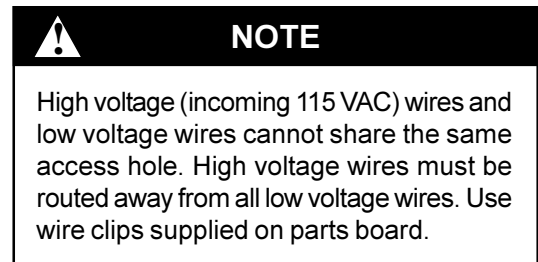
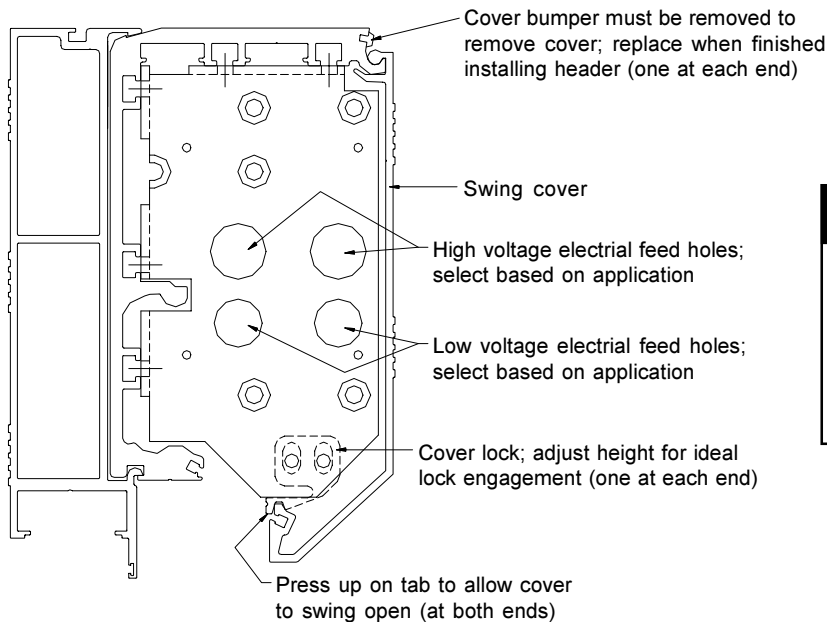


Figure 5. Cover Removal

2. Within the header (factory installed) are the motor/gearbox with drive pulley, drive belt, idler pulley and tensioner assembly, control box, transformer box, holding beam control box, any switches, and the terminal block bracket. Additional items are shipped in a blister pack, and these should be laid out in a convenient location.
3. Align the jamb tubes with the ends of the header, making sure that the bolt holes and electrical feed holes line up. Use three 1/4-20 x 1" long bolts on each side to secure the header end cap to each jamb tube. Then install one dress end cap on each side using the #8-32 screws (**Figure 6**).

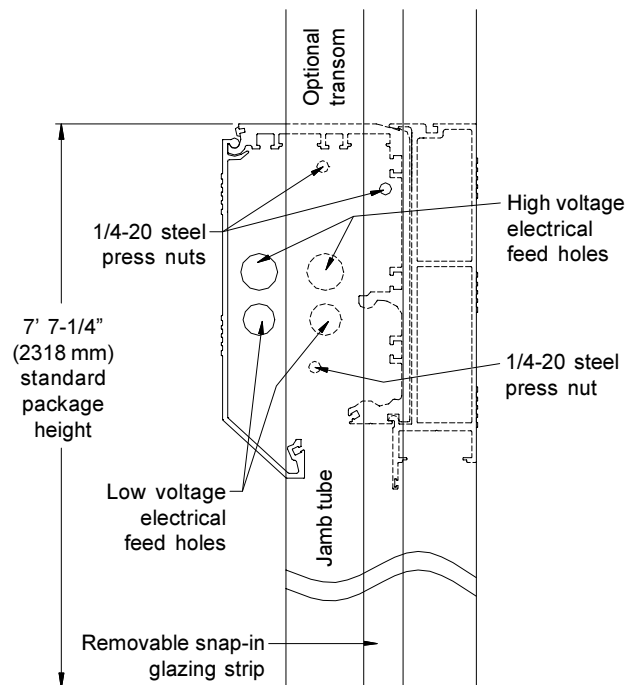


Figure 6. Jamb Tube Attachment to Header

HEADER AND JAMB MOUNTING (continued)

4. For each jamb, insert wood tapered shims to plumb each jamb. Insert 1/4" (6 mm) spacers around the header or horizontal transom tube at anchor locations to keep the tubes from being pulled tight.
5. With a helper, tip up the jamb/header assembly and position it within the rough opening, making sure the swing cover is on the correct side. Verify that the package is located correctly within the rough opening (refer to the final approved shop drawings). The Series 96000 Slide package is **usually** centered within the opening or is mounted flush with the curtain wall, but verify the position with the drawings, contractor, architect, etc.
6. Use appropriate fasteners (four per jamb) to anchor through the glazing recess of the jamb tube to the wall or adjacent framing. Check the jamb tubes with a level to be sure that the tubes have not been pulled in by the anchors. Finally, install the snap-in glazing strips in the jamb tubes (**Figure 7**).
7. The standard package height is 7' 7-1/4" (2318 mm). On occasion, the approved shop drawings require a package height of 7' 6-3/4" (2305 mm). If this is the case, cut off 1/2" (13 mm) from the bottom of each jamb tube in the field. This generally is performed for a recessed threshold application.



NOTE

If the package being installed is over 10' 0" (3048 mm) wide and has a transom, a vertical transom tube must be anchored securely to the top transom tube in order to prevent deflection in the header.

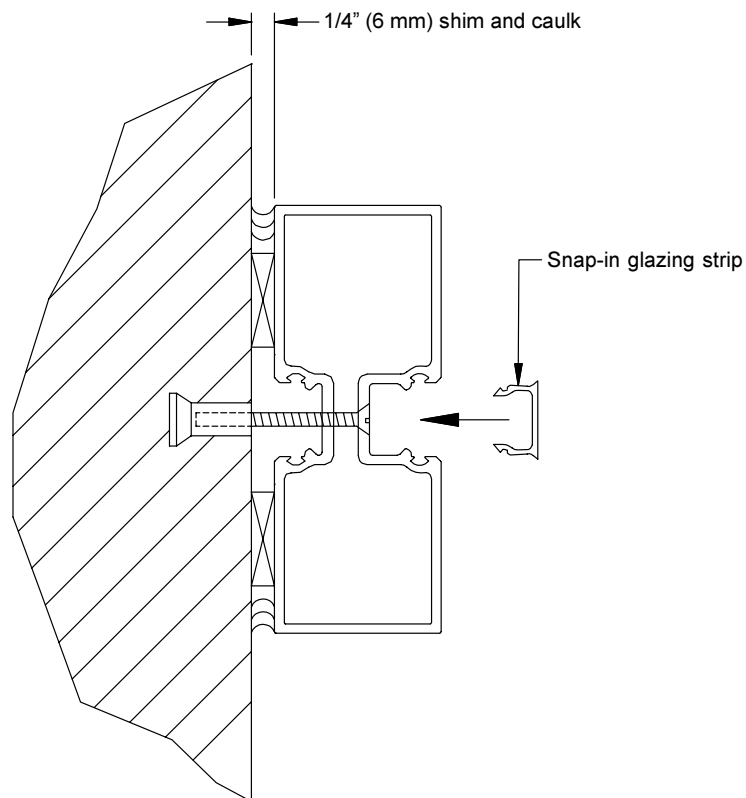


Figure 7. Anchoring the Jamb Tube

THRESHOLD INSTALLATION – FULL BREAKOUT APPLICATION

1. After verifying that the floor is level, snap a chalk line 1-1/2" from the face of each jamb on both sides. Place the threshold between the jamb tubes within the chalk lines.
2. Verify that the panel pivot in the threshold is on the EXTERIOR side of the opening. Keep the threshold within the chalk lines, and use it as a guide to drill through holes into the floor. Place plastic concrete inserts into the drilled holes. Use the stainless steel screws from the blister pack to fasten the threshold to the floor (**Figure 8 and Figure 9**).

NOTE

A different extrusion is provided for a Full Breakout Package with a recessed threshold option.

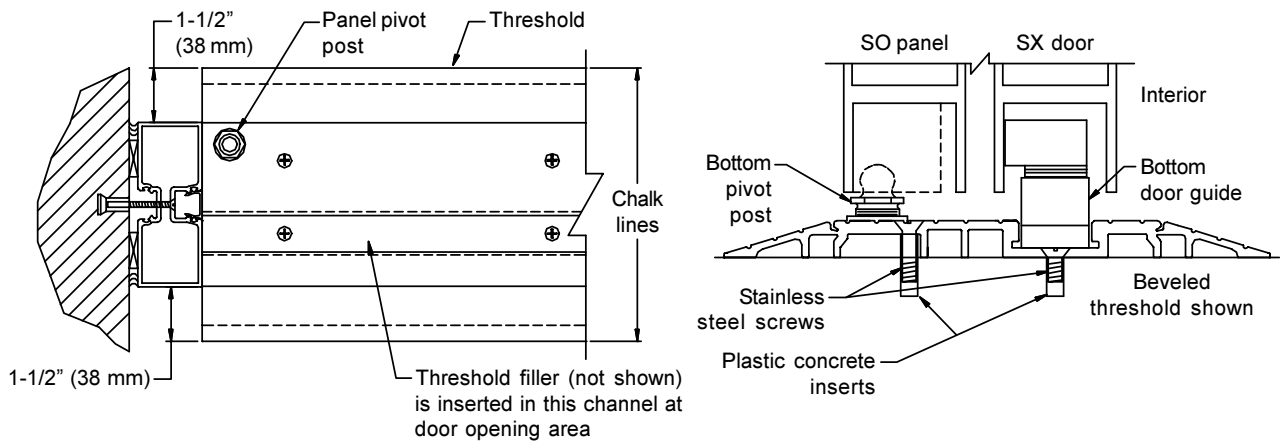


Figure 8. Installation of Threshold

3. Thread bottom pivot post (from blister pack) into pivot receiver in threshold and adjust to correct height (**Figure 9**). Install the threshold filler at the door opening area with a rubber mallet.

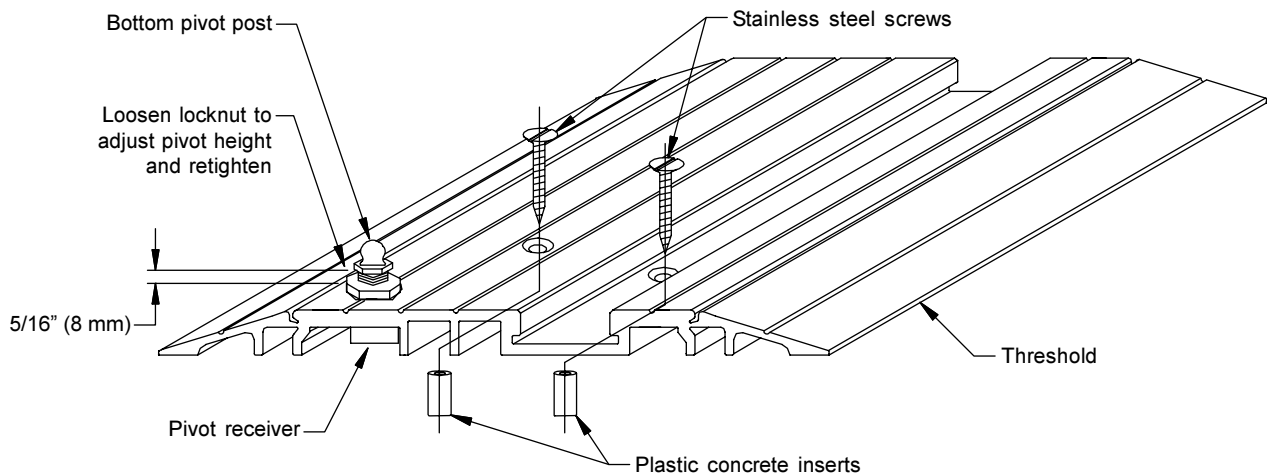


Figure 9. Bottom Pivot Post Attachment

THRESHOLD INSTALLATION – FIXED PANEL APPLICATION

1. After verifying that the floor is level, snap a chalk line 1-1/2" from the face of each jamb on both sides. Place the threshold between the jamb tubes within the chalk lines (**Figure 10**).
2. Verify that the track portion in the threshold (where the filler is to be located) is on the EXTERIOR side of the opening. Keep the threshold within the chalk lines and use it as a guide to drill through holes into the floor. Place plastic concrete inserts into the drilled holes. Use the stainless steel screws from the blister pack to fasten the threshold to the floor (**Figure 10 and Figure 11**).
3. Install the threshold filler at the door opening area with a rubber mallet.

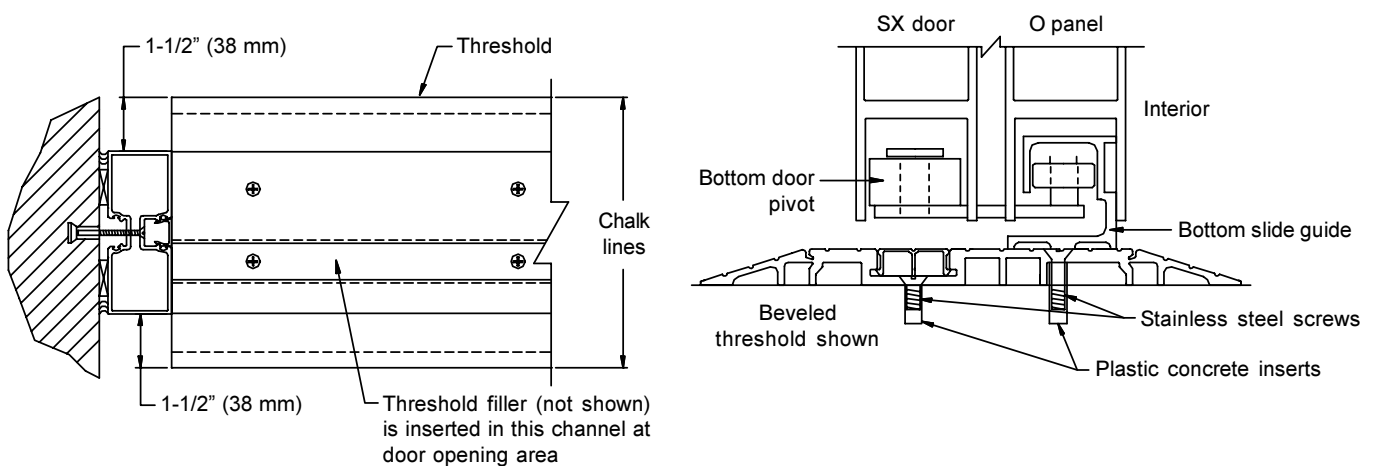


Figure 10. Installation of Threshold

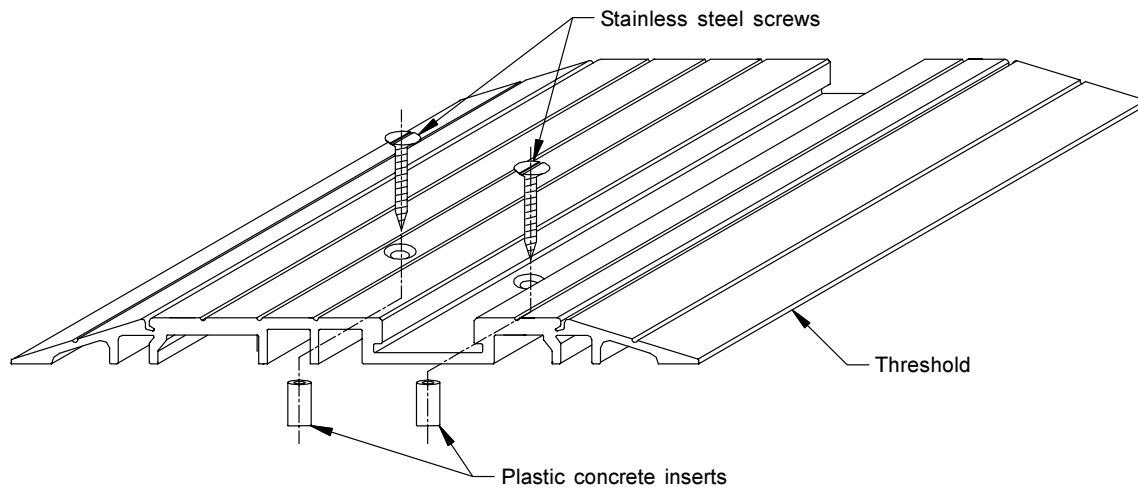


Figure 11. Isometric of Threshold

PACKAGE COMPONENTS

1. Refer to **Figure 12** for a detailed breakdown of internal drive components.

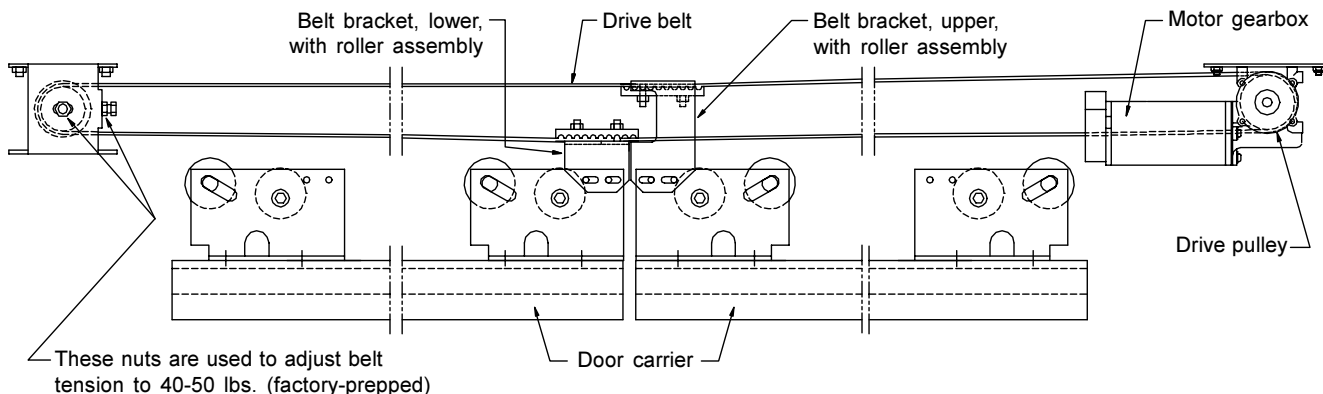


Figure 12. Belt Drive Assembly

2. Refer to **Figure 13** for a detailed section view of a typical Series 96000 Slide Full Breakout or Fixed Panel application.

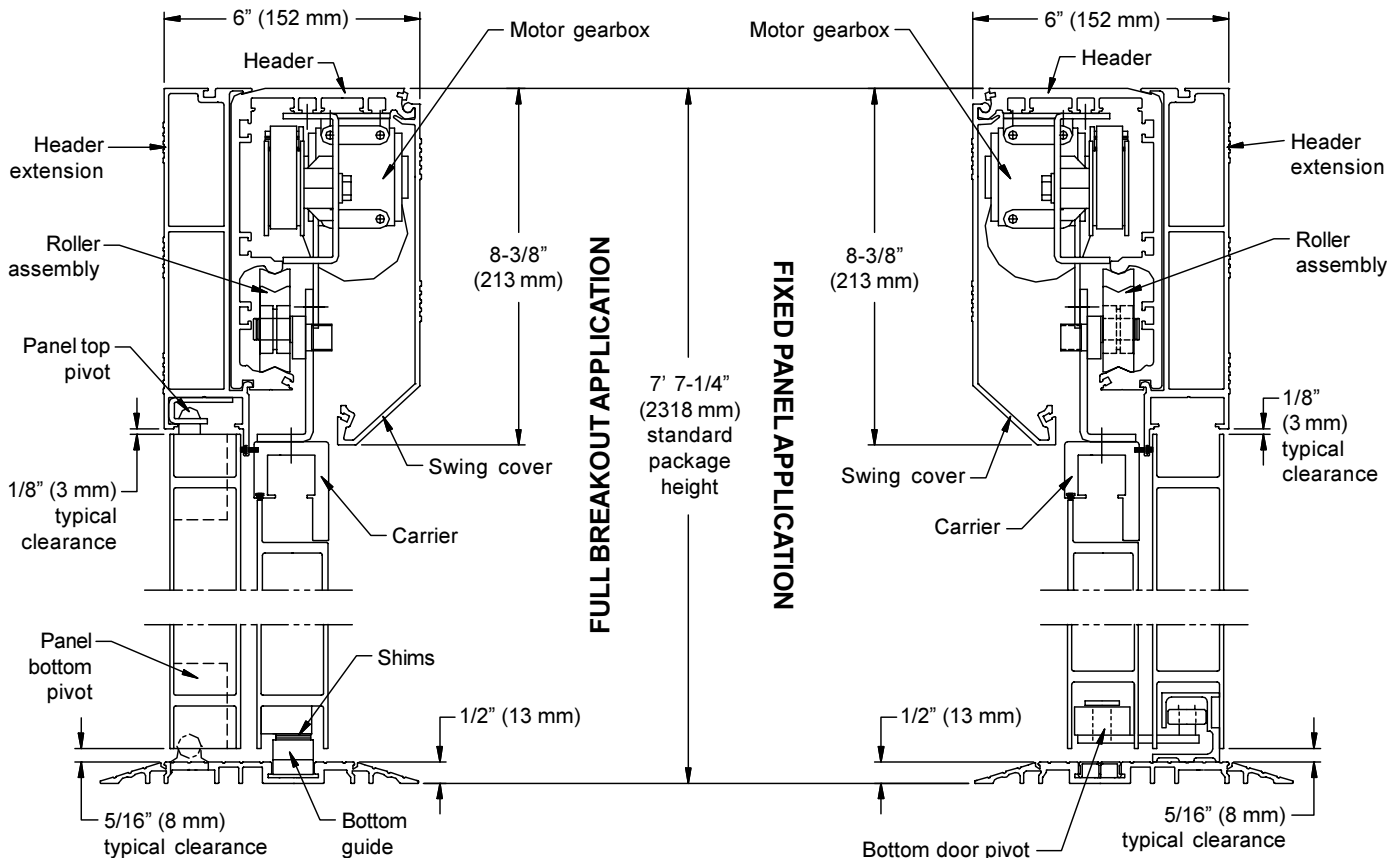


Figure 13. Section View through Header, Door, and Panel

PANEL INSTALLATION – FULL BREAKOUT APPLICATION

1. Remove panels from carton. Lift panel and place bottom pivot block (factory-prepped and installed in bottom panel stile) onto bottom pivot post. Check clearance at top of panel for 1/8" gap.
2. If necessary, remove panel and adjust bottom pivot post to give the required 1/8" clearance at the top of the panel (**Figure 14**).
3. Top pivot pin is shipped in retracted position. Loosen set screw and release top pivot pin into the hole in the bracket (**Figure 15**). Tighten set screw when top pivot pin is set.
4. If necessary, use top pivot removal tool #96022-100 to remove panel. Loosen set screw and push pin down with the tool (**Figure 16**).

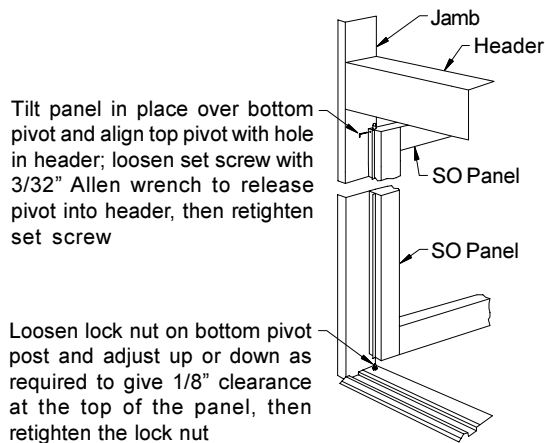


Figure 14. Panel Installation Detail

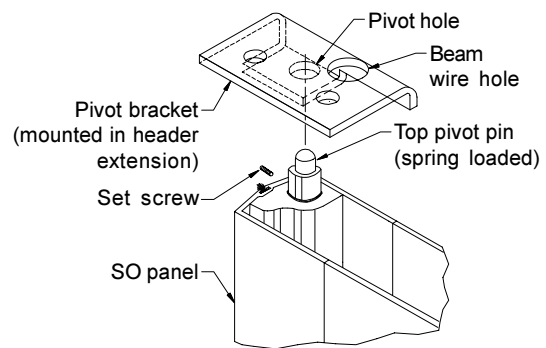


Figure 15. Panel Top Pivot Detail

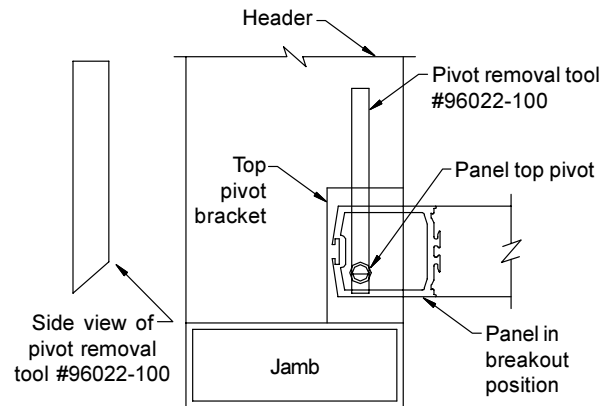


Figure 16. Panel Removal Detail

PANEL INSTALLATION – FIXED PANEL APPLICATION

1. Remove the slide guide from its packaging. Use the factory-prepped holes on the slide guide as a template to drill the same number of holes into the threshold.
2. Remove the fixed panel from its carton. Lift panel and place bottom rail (factory-prepped stile and rail) onto bottom slide guide with four (4) drilled holes at bottom of panel facing interior side of opening. Swing upright, clearing the lock stile fastener bracket with the slot machined in the lock stile of the panel (**Figure 17**). Slide panel towards jamb tube and install 1/4-20 flat head screws from screw bag.

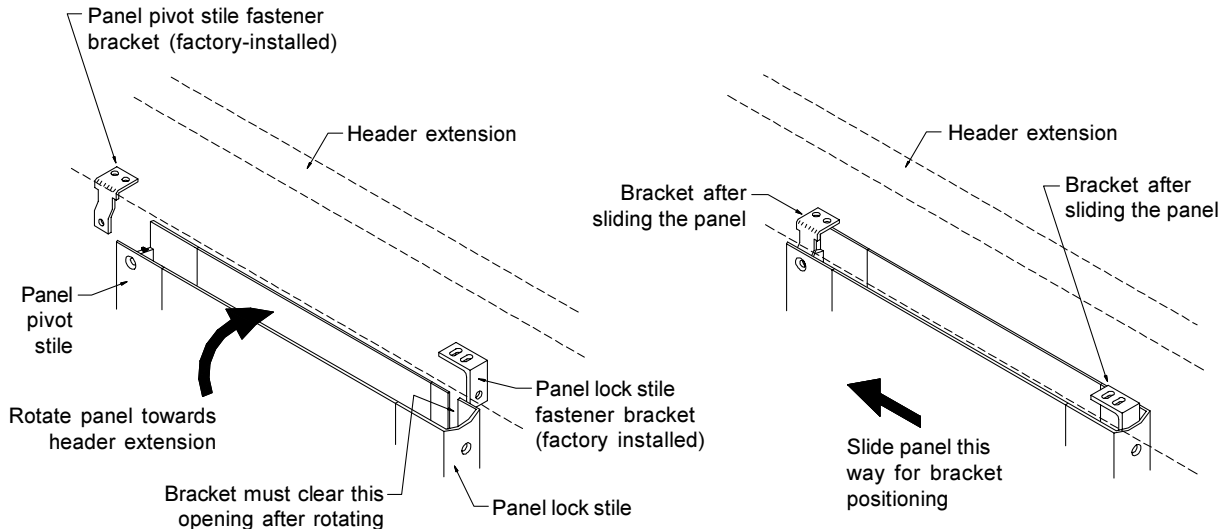


Figure 17. Panel Positioning and Attachment

3. Once the top of the panel is properly fastened, install the #10-32 screws into the holes at the bottom on the interior side of the opening to attach the panel to the slide guide (**Figure 18**).

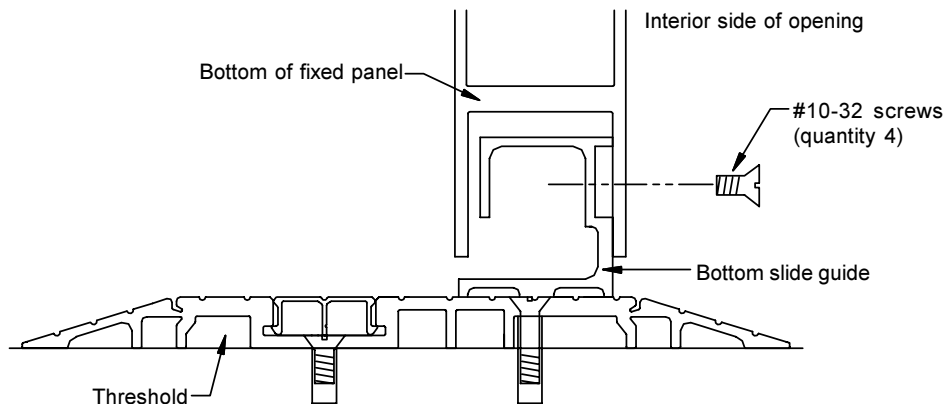


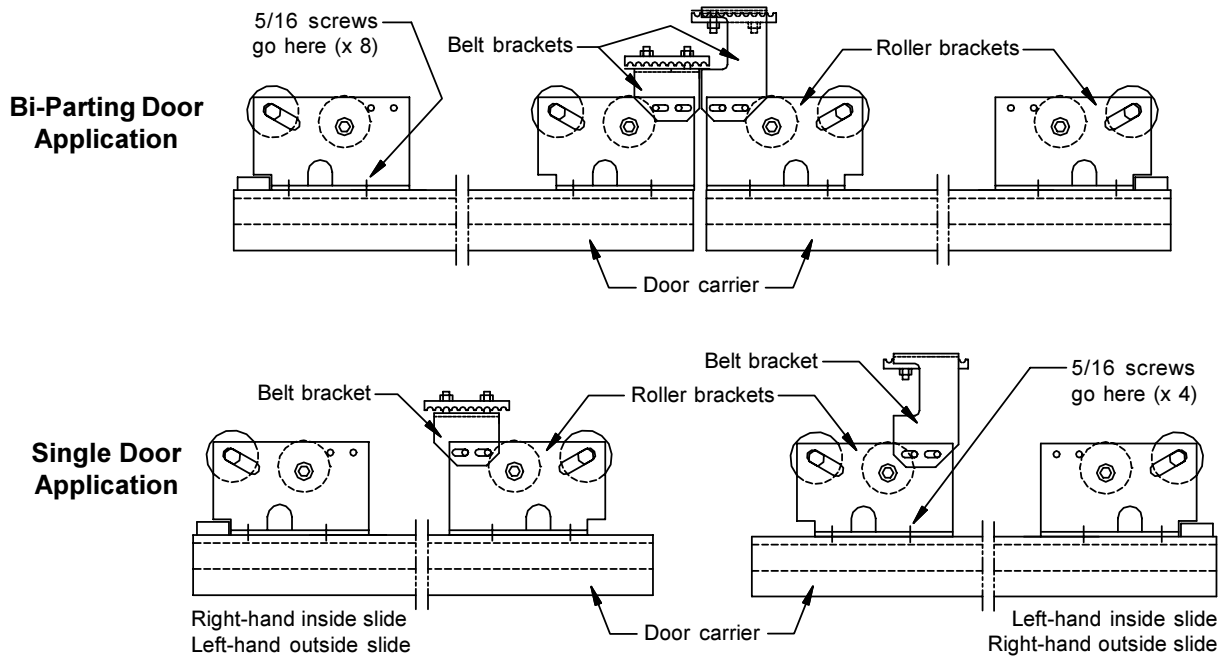
Figure 18. Bottom of Panel Installation

DOOR (SX) INSTALLATION



IMPORTANT

Carefully refer to the following diagram for proper locations of the belt and roller brackets when installing the door portion of your application.



1. Remove the doors from the carton. All mention of M6 nuts and bolts refers to the thread diameter. Use a 10 mm socket or 10 mm open-end wrench when removing or installing these fasteners.
2. Attach the roller assembly to the door carrier using the 5/16-18 x 5/8" socket head screws and lock washers supplied. (Bi-Parting unit has two doors.)
3. Remove the sliding door bottom pivot assembly (which includes the floor guide) from the blister pack. Install the bottom pivot assembly into the bottom of the vertical door stile through the two prepped and countersunk holes with the 1/4-20 x 3/8" long flat head screws provided (**Figure 19**). (**Note:** Full breakout and fixed panel packages have different door bottom pivot components.)

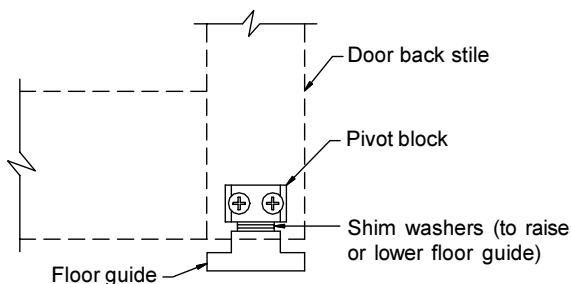


Figure 19a. Installation of Door (SX) Bottom Pivot Assembly for **Full Breakout Application**

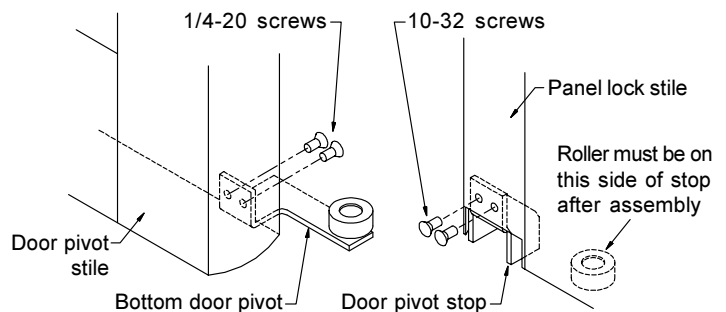


Figure 19b. Installation of Door (SX) Bottom Pivot Assembly for **Fixed Panel Application**

DOOR (SX) INSTALLATION (continued)

4. Use a 15/16" wrench to loosen the anti-riser wheel, then place it in the down position to allow access into the roller track. Hang the door, ensuring that the eccentric wheel contacts the bottom roller track surface (**Figure 20**).

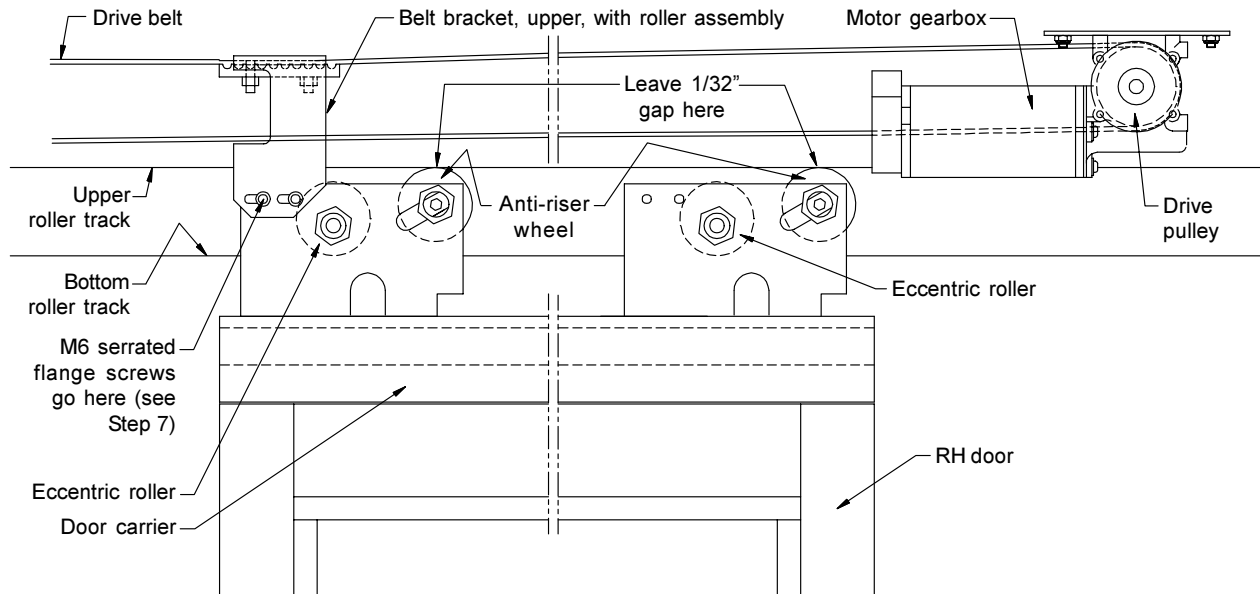


Figure 20. Anti-Riser Adjustment and Door (SX) Attachment Procedure

5. **FOR FULL BREAKOUT APPLICATIONS:** Verify that the bottom guide is in the threshold track and slowly slide the door back and forth to assure smooth operation. Check to see if the floor guide is deep enough in the track. It may be necessary to add or remove shim washers as required (**Figure 21**).

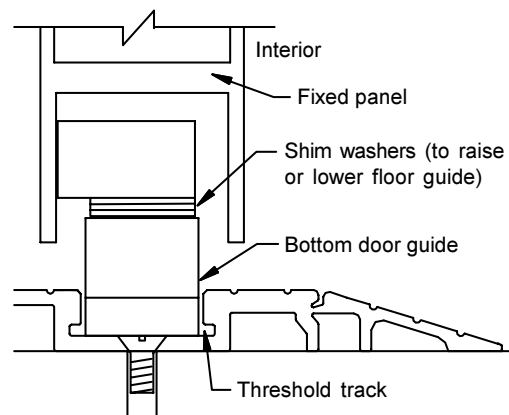


Figure 21. Floor Guide Check

DOOR (SX) INSTALLATION (continued)

6. Adjust door height:

- 6.1. Use a 15/16" wrench to loosen the jam nuts on the eccentrics (**Figure 22**).
- 6.2. Use a 5/16" Allen wrench to rotate eccentrics for a 5/16" (8 mm) gap between bottom of door and threshold. Snug the jam nut to finger tight, then rotate 30 degrees further with a 15/16" wrench for final tightening.
- 6.3. Slide anti-riser wheel up for 1/32" clearance between top of anti-riser wheel and top track. Snug anti-riser wheel jam nuts to finger tight, then rotate 30 degrees further with a 15/16" wrench for final tightening.

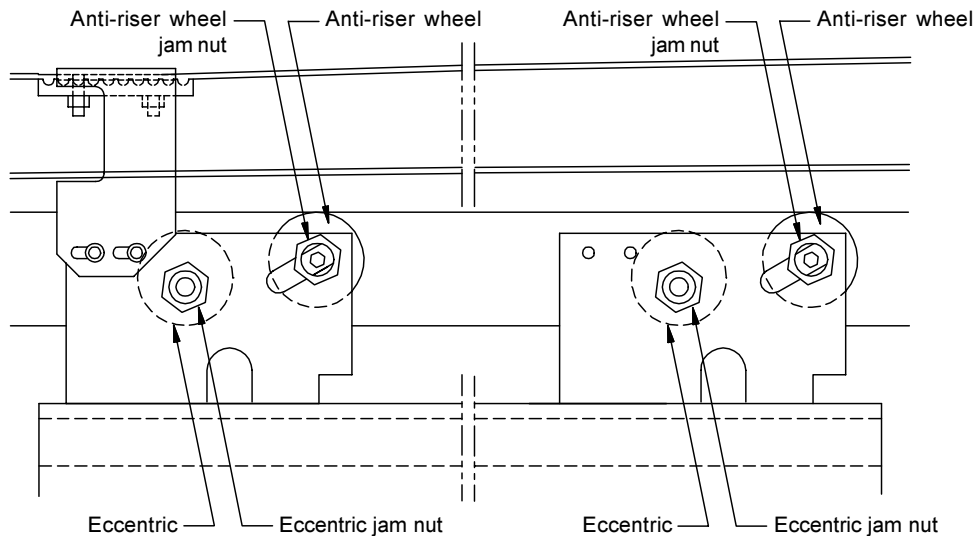


Figure 22. Adjust Anti-Riser Wheel Clearance

7. Attach the belt bracket to the roller assembly on the lock stile of the door using two (2) M6 serrated flange screws.
8. Next, break open the door and panel. Slowly close the door and check the clearance between the top of the door and the bottom of the carrier. If the clearance is not 1/8" (3 mm), loosen the 1/4" (6 mm) Allen head set screw at the bottom of the carrier. Adjust the clearances as required by turning the large Allen head bolt. After setting the correct clearance, retighten the 1/4" (6 mm) Allen head set screw (**Figure 23**).

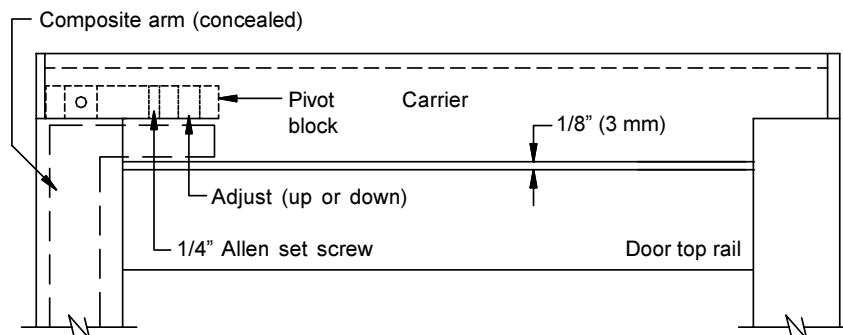


Figure 23. Door/Carrier Adjustment

LIMIT ARM AND BUMPER BAR INSTALLATION

1. Depending on the specific package ordered, Dor-O-Matic provides one of three limit arm types: hydraulic closer arm, limit arm, and spring limit arm (**Figure 24**).
 - 1.1. If the package has a hydraulic closer in the panel, the arm is shipped installed on the closer. Remove the arm by removing the horseshoe-shaped retaining clip from the closer shaft. Install the roller end of the arm into the header extension through the access slot provided. Turn the closer speed adjusting screws to the fully closed position. With a wrench, turn the closer pinion shaft so the slot in the arm will easily slip over the shaft when the door is set in the opening. Re-install the horseshoe-shaped clip through the closer shaft.
 - 1.2. For all other packages, remove the shoulder screw from the limit arm, insert the roller up into the header extension through the circular cutout, and re-install the shoulder screw.

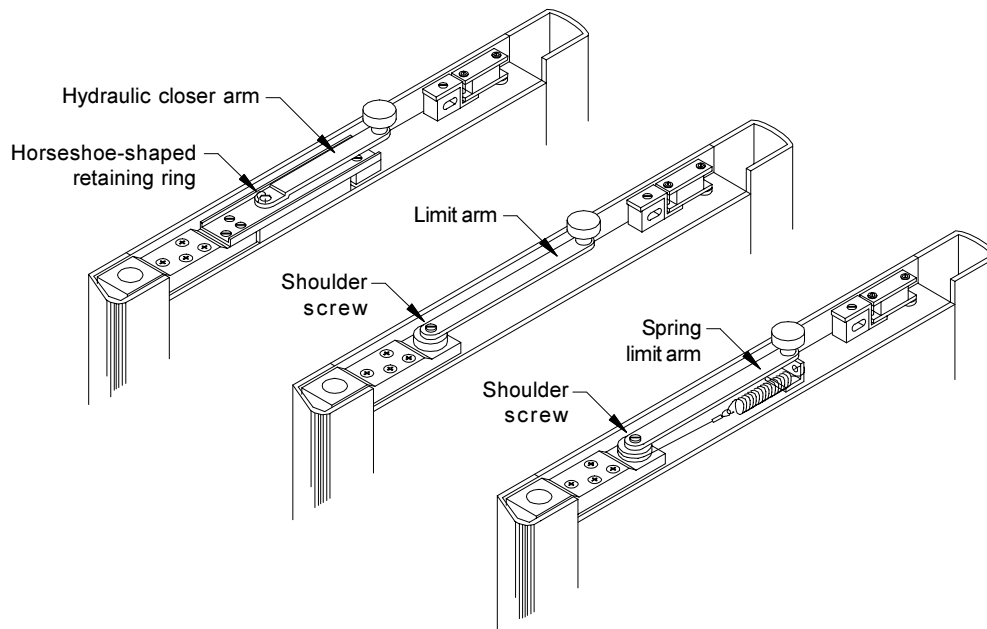


Figure 24. Limit Arm Details

2. Refer to **Figure 25** for optional Dor-O-Matic bumper bar installation.

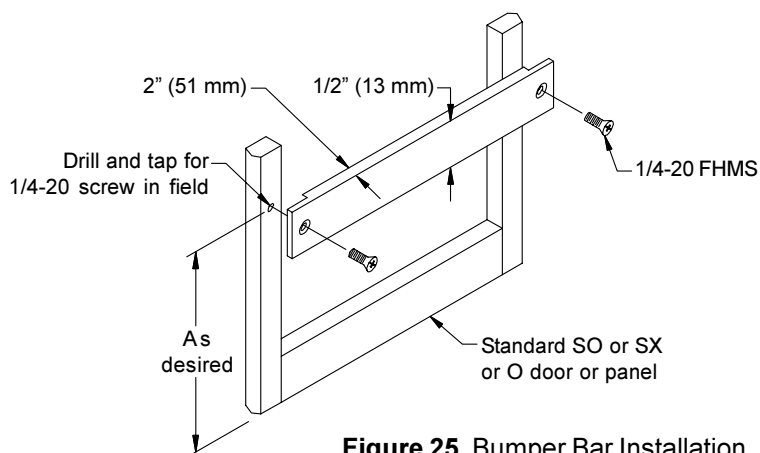


Figure 25. Bumper Bar Installation

NOTES

1. One bar per door.
2. 1/2" (13 mm) max. glass thickness.

WIRING DIAGRAM

Refer to **Figure 26** for Series 96000 Slide power connection requirements.



NOTES

1. Field prepped wire access holes cannot be larger than 1/2" diameter.
2. The ground wire for incoming 115 VAC and the system ground wire cannot share the same grounding stud.
3. All earth/ground wires must be grounded to header. Ground wires cannot share the same grounding stud.

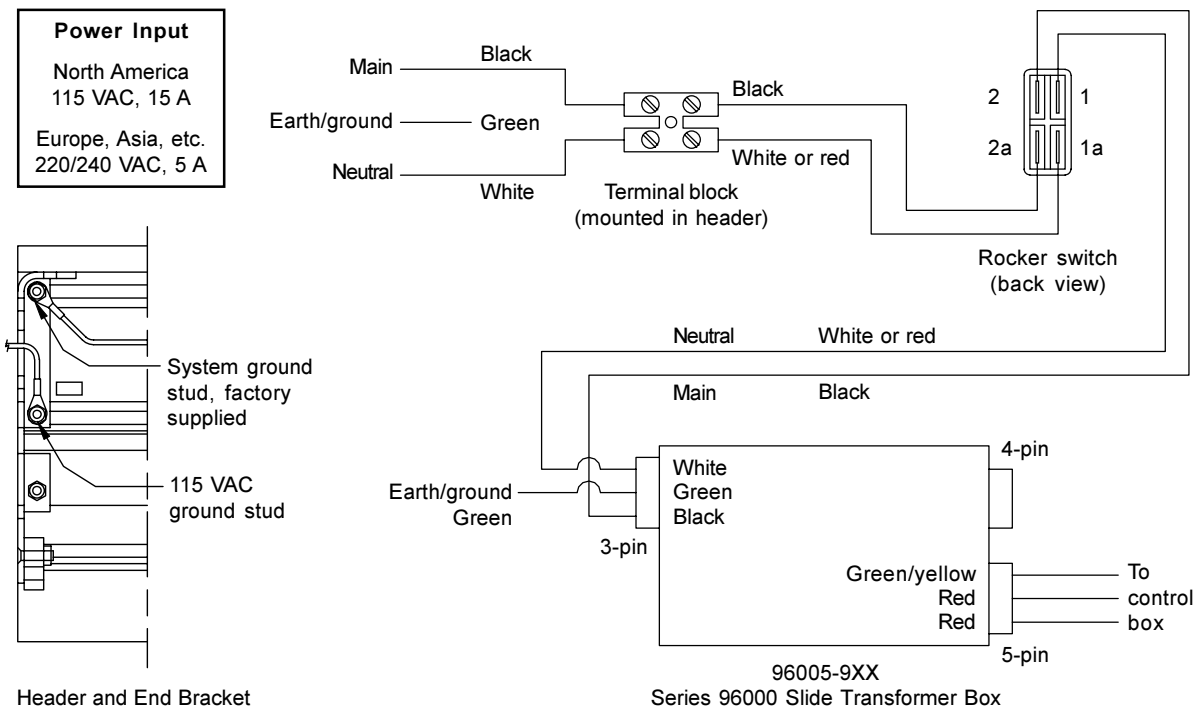


Figure 26. Power Connection Requirements

GLAZING

1. Refer to the following chart for maximum weight of door, maximum weight of glass, and maximum glass thickness.

Door/Panel	Max. Weight of Door and Glass*	Max. Glass Thickness
SX Door Inside Slide	150 lbs. (68 kg)	1" (25 mm)
SX Door Outside Slide	150 lbs. (68 kg)	1" (25 mm)
SO Swing Out Panel	200 lbs. (90 kg)	5/8" (16 mm)
O Fixed Panel	200 lbs. (90 kg)	1" (25 mm)
X Sliding Door	200 lbs. (90 kg)	1" (25 mm)
Transom	Varies	1/4" to 1" (6 mm to 25 mm)

* The average weight of a 42" (1067 mm) door or panel without glass is 40 lbs. (18 kg).

GLAZING (continued)

- Tempered or laminated glass is required in doors and panels per ANSI Z97.1-1972.
- If the installation is a “standard package,” the glass sizes both with and without 2” (51 mm) muntins are called out in the Dor-O-Matic details and specifications book, along with the model number of the package.
- If the installation is **not** a standard package, measure the width and height between the stile extrusions and **subtract 1/2” (13 mm) (Figure 27)**. This is the glass size to order.
- Order the correct glass stops for the thickness of glass in the application.
- All final opening and closing speed adjustments should be made after the glass is installed.
- Transom glass is measured in the field and can be 1/4” (6 mm) to 1” (25 mm) thick non-tempered glass. Use one or two transom hanger tubes for packages over 10’ 0” (3048 mm) wide to prevent header deflection.

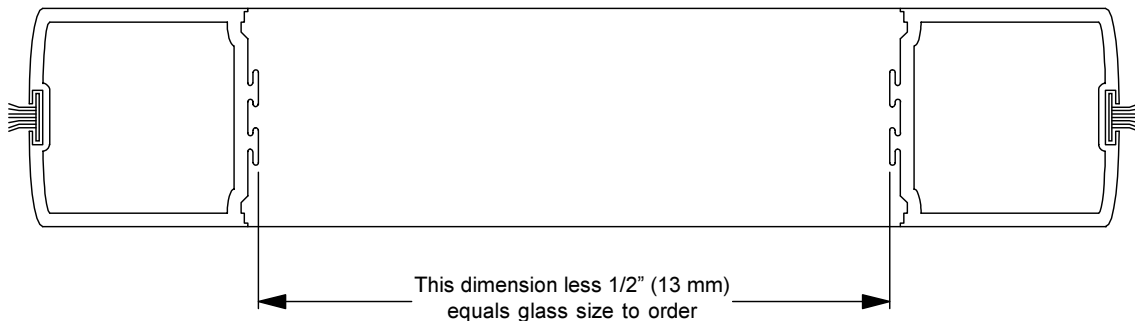


Figure 27. Glass Measurement

2. A feature unique to Dor-O-Matic is the “Security Glazing System.” When glazing the doors and panels, snap in two horizontal and two vertical exterior glazing stops. Be sure the stops are securely snapped into the rails and stiles. Place the bottom of the glass onto the nylon glazing blocks and tilt up into vertical position. Have a helper hold the glass in place, and proceed to snap-in the interior glazing stops. This design makes the glass non-removable from the exterior. Finally, check that the rubber trim of the glazing stops is not pinched or tucked against the glass. Run a pocketknife or small scraper around the perimeter of the glass to correct any such problems.

RELEASE FOR SERVICE

Clean the glass. Install all safety, traffic control, and instruction decals on the door as required. **This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!** Present the keys to the owner or general contractor. Demonstrate the unit; review all safety features as well as the safety check that is to be performed by the owner each morning.



IMPORTANT

Install all safety, traffic control, and instruction decals on the door as required.

DOR-O-MATIC®
AUTOMATIC DOOR SYSTEMS

BBU250

Installation Instructions And Service Manual 94015-900 Battery Back-Up



DOR-O-MATIC®
AUTOMATIC DOOR SYSTEMS
7350 West Wilson Avenue
Harwood Heights, IL 60706-4708
1-800-543-4635
708-867-7400
Engineering Fax: 708-867-1177
www.doromatic.com

INDEX

BBU250 94015-900 Battery Back-Up

<u>TITLE</u>	<u>PAGE</u>
COVER PAGE	1
INDEX	2
GENERAL IMPORTANT INFORMATION	3
PART IDENTIFICATION INSTALLATION	4
WIRING SET-UP	5
WIRING DIAGRAMS	6-7
WALK-THROUGH TEST SERVICE	8

GENERAL

The BBU250 Battery Back-Up 94015-900 provides reliable and uninterrupted power to the 96K Sliding Door System in the event of main AC power loss. The included batteries are automatically fast and/or trickle charged by the BBU250 when connected to the 96K Controller 84657-900. Audible and visual indicators report the status of the unit.

The BBU250 may be field-wired in one of three ways to achieve the following functionality:

1. Door and sensors continue to operate normally (dependent on battery charge and door usage). A fully charged BBU250 should operate a standard bi-parting package and all 24V accessories for approximately 250 cycles.
2. Door opens and remains in the open position.
3. Door closes **after all safety sensors** are clear and remains in the closed position.

IMPORTANT INFORMATION

- CAUTION: To reduce the risk of fire, connect only to a circuit provided with overcurrent protection in accordance with the National Electrical Code ANSI/NFPA. Equipment must be connected to ground.
- If the equipment has an internal energy source (the battery), the output may be energized when the unit is not connected to the 96K Controller.
- To de-energize: place the remote switch in the "OFF" position and/or place the battery power lever in the "DOWN-OFF" position. Next, disconnect the unit from the 96K Controller. Finally, disconnect the battery.
- Do not attempt to disassemble the unit; the unit has no user serviceable parts.
- Used batteries must be recycled. Deliver used batteries to an appropriate recycling facility.
- The connectors on the BBU250 are designed to mate with the 96K II Controller 84657-900. To use the BBU250 with the 96K Controller 96010-900, adapter harness 84775-600 is required.

PART IDENTIFICATION

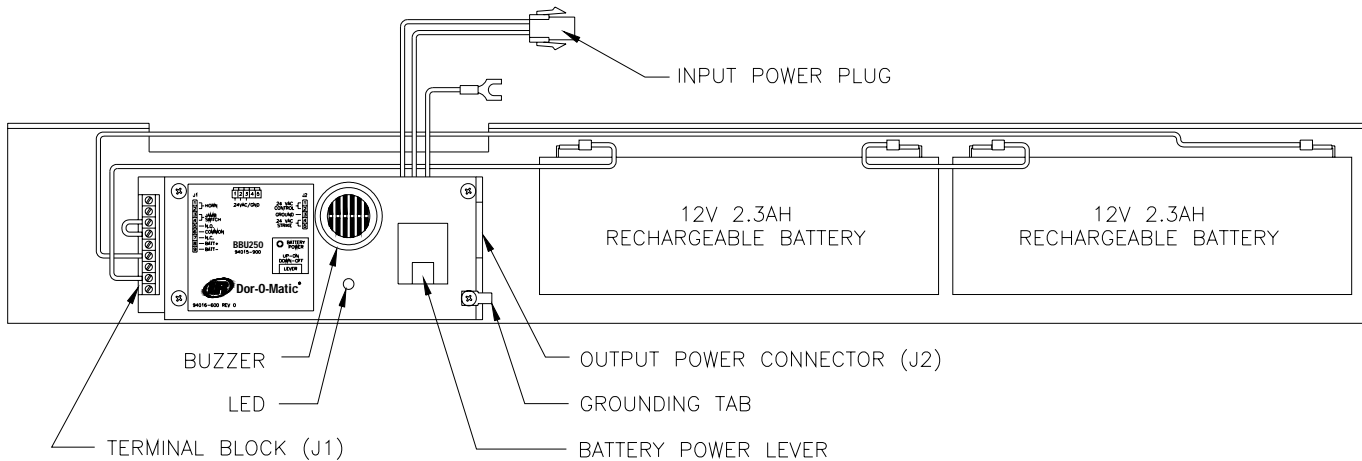


Figure 1: BBU250 Battery Back-Up

INSTALLATION

Important: Verify that main AC power to the 96K Sliding Door System is shut off to prevent unintended door movement.

1. Locate a convenient place in the header to mount the BBU250. It is recommended to locate the unit close to the 96K Controller.
2. Using a drill or chisel, create an entry point in the header extrusion channel (Figure 2) for the attaching bolts.
3. Insert the M6 bolts (included) into the channel and slide to the desired location.
4. Attach the BBU250 to the header with the M6 nuts (included).

OPTIONAL STEPS

5. Locate a convenient place on the jamb to mount the OFF-ON key switch (84222-900). It is recommended to locate the key switch on the jamb closest to the BBU250.
6. Prepare the jamb using the template provided with the key switch, route the cable into the header, and mount the key switch to the jamb with the included hardware.

NOTE: When wiring the header, place the main power in one wire channel and the accessory wiring in the other.

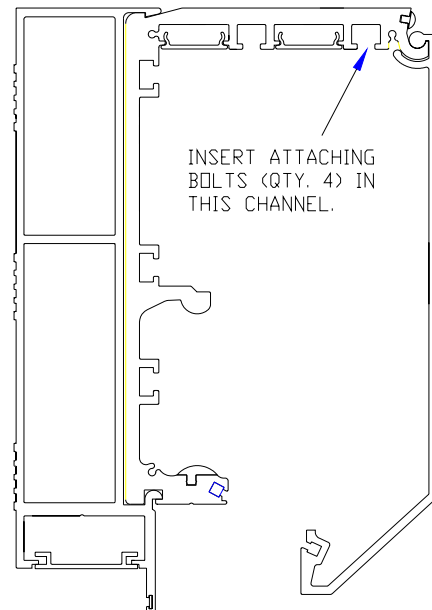


Figure 2: Header Extrusion Channel

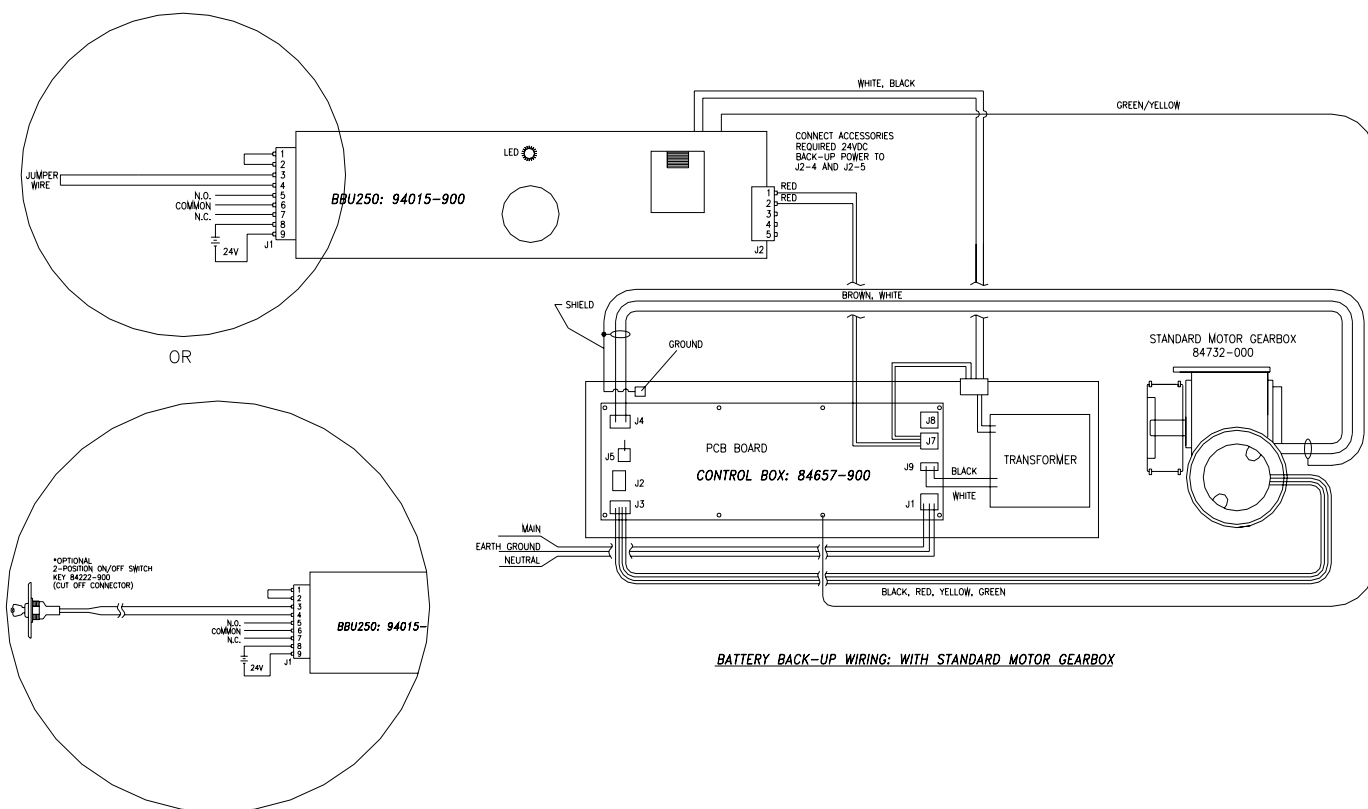
WIRING SET-UP

CAUTION: Do NOT attach plug to output power connector J2 on the BBU250 until after wiring set-up is complete.

Note: Refer to the appropriate wiring diagram for complete wiring details.

1. Ensure that power has been removed from the 96K Controller.
2. Verify red (+) battery lead is connected to terminal J1-8 and black (-) battery lead is temporarily connected to terminal J1-6 on the BBU250.
3. Remove jumper wire from J1-1 & J1-2 on the BBU250 to temporarily disable audible (buzzer) alert.
4. If optional OFF-ON key switch (84222-900) is used, cut off connector plug from OFF-ON key switch cable, strip wire ends, and connect to J1-3 & J1-4 on the BBU250. Verify key switch is in OFF position.
5. Disconnect the 4-pin transformer secondary plug from connector J7 on the 96K Controller PCB.
6. Connect the input power plug of the BBU250 to the 4-pin transformer secondary plug on the 96K Controller.
7. Connect the earth ground wire to the designated mounting screw on the 96K Controller PCB.
8. Connect the output power plug from J2 of BBU250 to connector J7 on the 96K Controller PCB.
9. Determine which accessories are to be powered by the BBU250 and which accessories are to be powered by the 96K Controller. *Note: Only accessories rated for 24VDC should be connected to the BBU250 at J2-4 & J2-5 as required.*
 - a. For continuous, uninterrupted operation of the door and accessories, connect input power for all accessories to the BBU250 at J2-4 & J2-5.
 - b. To open the door and keep it open, connect input power for all activation devices to the BBU250 at J2-4 & J2-5. Connect input power for all safety devices to the Pencil Beam Bracket Terminal Block. *Note: safety devices must be set for normally closed output.*
 - c. To close the door (after all safety sensors are clear) and keep it closed, connect input power for all activation devices to the Pencil Beam Bracket Terminal Block. Connect input power for all safety devices to the BBU250 at J2-4 & J2-5.
10. Carefully remove black (-) battery lead from J1-6 and connect to J1-9 on the BBU250.
11. Re-install the 96K Controller.
12. Connect jumper wire to J1-1 & J1-2 if audible (buzzer) alert is required.
13. Dress all wires and cables to allow proper door movement.
14. Perform walk-through test.

WIRING DIAGRAMS



BATTERY BACK-UP WIRING: WITH STANDARD MOTOR GEARBOX

Figure 3: Wiring Diagram Without Electric Lock

Note: Only accessories rated for 24VDC should be connected to the BBU250 at J2-4 & J2-5 as required.

For **continuous, uninterrupted operation** of the door and accessories, connect input power for all accessories to the BBU250 at J2-4 & J2-5.

To **open the door and keep it open**, connect input power for all activation devices to the BBU250 at J2-4 & J2-5. Connect input power for all safety devices to the Pencil Beam Bracket Terminal Block.

Note: safety devices must be set for normally closed output.

To **close the door (after all safety sensors are clear) and keep it closed**, connect input power for all activation devices to the Pencil Beam Bracket Terminal Block. Connect input power for all safety devices to the BBU250 at J2-4 & J2-5.

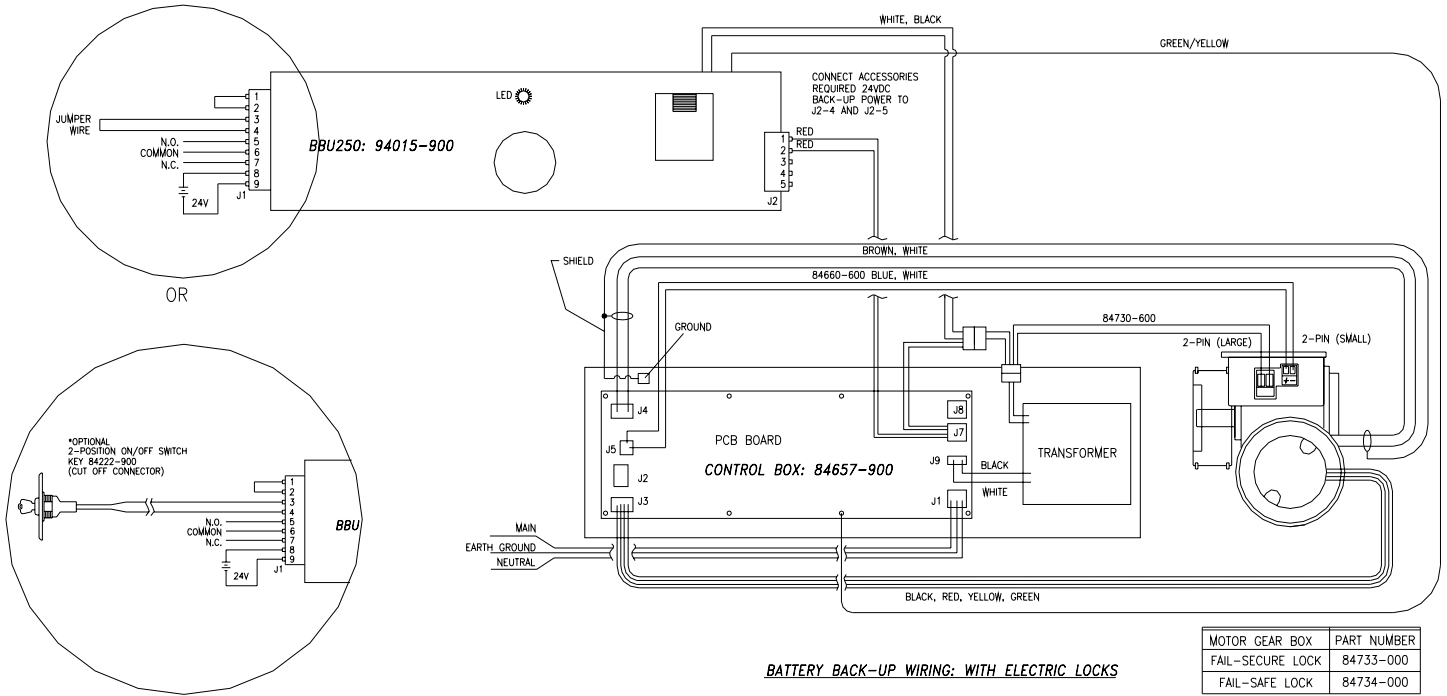


Figure 4: Wiring Diagram With Electric Lock

Note: Only accessories rated for 24VDC should be connected to the BBU250 at J2-4 & J2-5 as required.

For **continuous, uninterrupted operation** of the door and accessories, connect input power for all accessories to the BBU250 at J2-4 & J2-5.

To **open the door and keep it open**, connect input power for all activation devices to the BBU250 at J2-4 & J2-5. Connect input power for all safety devices to the Pencil Beam Bracket Terminal Block.

Note: safety devices must be set for normally closed output.

To **close the door (after all safety sensors are clear) and keep it closed**, connect input power for all activation devices to the Pencil Beam Bracket Terminal Block. Connect input power for all safety devices to the BBU250 at J2-4 & J2-5.

WALK-THROUGH TEST

1. Turn on main AC power to the 96K Sliding Door System.
2. Verify that the sliding door system is operating properly. Perform all necessary adjustments and tests. Refer to the 96K instruction manuals for more details.
3. Once the 96K Control Box is operating properly, place the optional OFF-ON key switch in the ON position or insert a jumper wire across J1-3 & J1-4 on the BBU250. The BBU250 should now be ready for operation.
4. While sliding door is in normal operation, abruptly turn off main AC power to the sliding door system. All door operation should remain unaffected.
5. Verify that the audible (buzzer) alert and red LED indicator is functioning. Buzzer will sound continuously and LED indicator will illuminate continuously when AC power failure occurs. Check buzzer volume with header access cover completely closed. Note: If audible alert is not required, remove jumper wire from J1-1 & J1-2.
6. Continue to operate sliding door system and verify proper BBU250 operation. If door shows sluggish movement, halts, or loses control, battery may be undercharged.
7. Reapply main AC power to the sliding door system. Audible (buzzer) alert and red LED indicator should shut off.

SERVICE

- When servicing the 96K Sliding Door System, verify that main AC power is shut off and that the OFF-ON key switch for the BBU250 is in the OFF position. This will prevent any unintended door movement.
- The battery power lever may also be used to disable the BBU250. Pull lever down to disconnect battery power at BBU250 terminal J2. **Lever should only be used when main AC power is shut off.**
- Battery level should be 23-27 VDC to properly operate door system during AC power failure. Allow 24 hours for charging when battery level reaches 21 VDC or lower.
- Do not attempt to disassemble the unit; the unit has no user serviceable parts.

If, after troubleshooting a problem, a satisfactory solution cannot be achieved, please call Dor-O-Matic Technical Support at 1-888-942-9945 for further assistance.

DO NOT leave any problem unresolved. If you must wait for the following workday to call, leave the door inoperable until satisfactory repairs can be made. **NEVER** sacrifice the safe operation of the automatic door or gate for an incomplete solution.



Series 96000 Slide Control

Installation Instructions

DOR - O - MATIC®

7350 W. Wilson Ave.
Harwood Heights, IL 60706

Toll Free: 1-800-543-4635
In Illinois: 708-867-7400
Sales FAX: 708-867-0291
www.doromatic.com

INSTALLATION

1. Preparation: Refer to Series 96000 Slide Installation Manual (DOM #96000-984) for header preparation instructions.

2. Final Wiring Connections:

The Series 96000 header comes from the factory "pre-wired" to minimize installation time at the job site. Connect main power to the terminal block at the end of the header (Figure 1). Connect accessories to the terminal block on the safety beam bracket or the appropriate harnesses as needed (Figure 2). Refer to the instruction manual of the accessory for complete wiring details.

- A. Use a 115 volt, 60Hz, fused, 15 amp, 3-wire power supply.
- B. Secure all conductors and connections against physical damage.
- C. Route all wiring away from moving parts, sharp edges and heat sources.
- D. Use copper conductors only.

NOTE: Always disconnect main power to operator prior to servicing or cleaning.

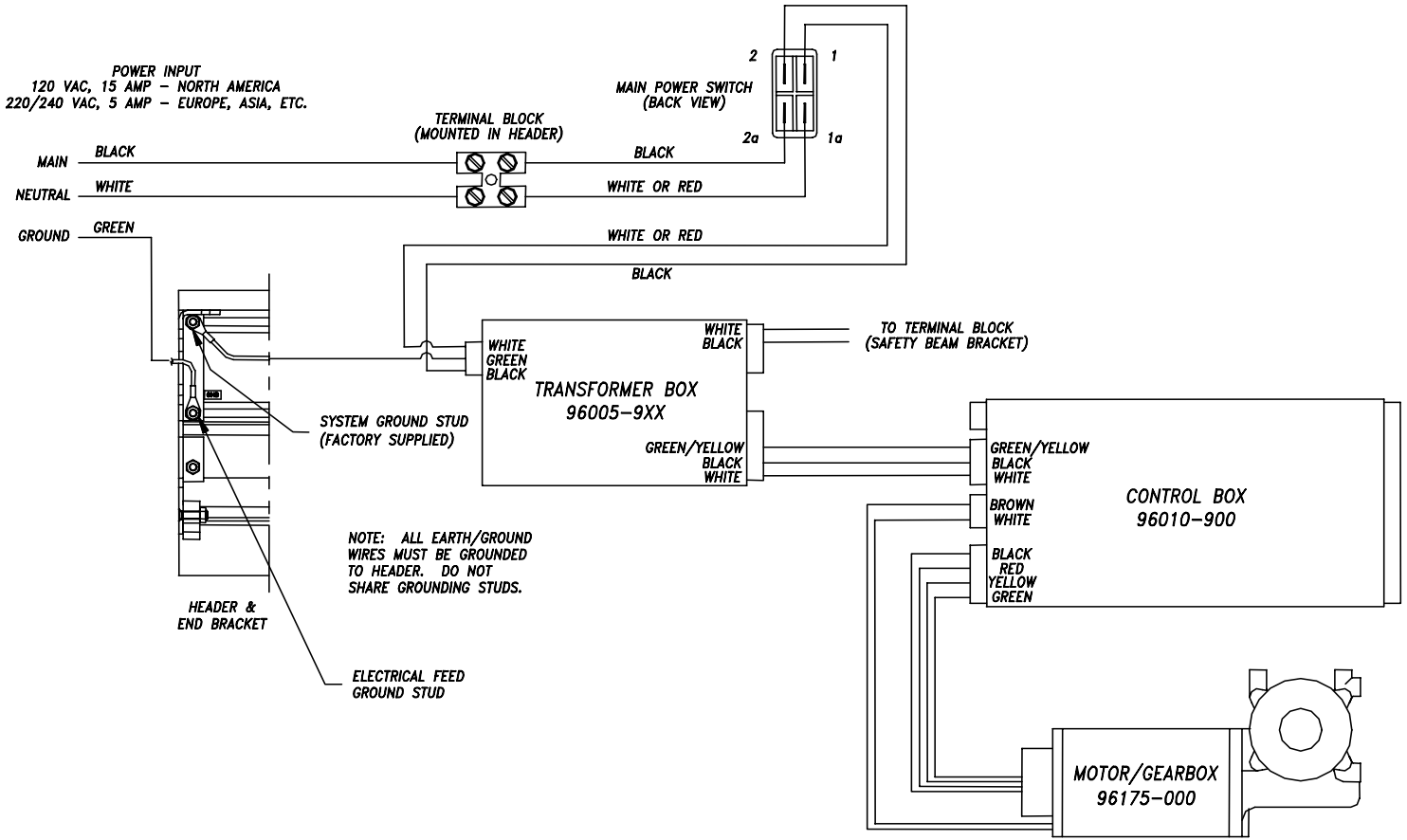


FIGURE 1: POWER WIRING DIAGRAM

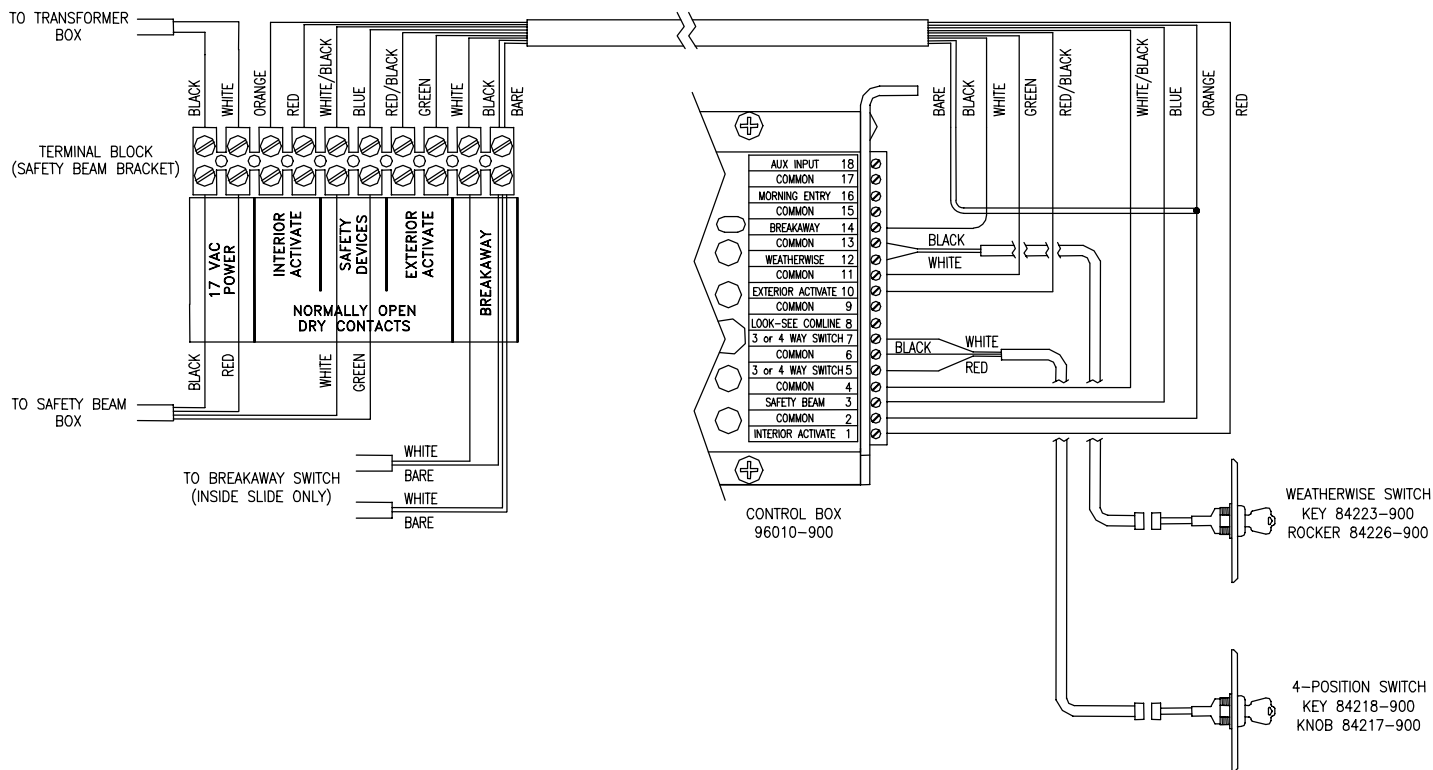


FIGURE 2: ACCESSORY WIRING DIAGRAM

3. Operational Check and Adjustments:

NOTE: Refer to the latest revision of ANSI/BHMA A156.10-1999 Standard for Power Operated Pedestrian Doors for all settings and adjustments.

A. Sizing:

If the 4-Position Switch is used, be sure it is in the "2-WAY" position before proceeding. Apply power to the system using the main power switch on the header/cover. Give the system an activation signal. The door should open and close once, after which it is ready for normal operation. If the door does not size to the fully open position, first check for binds, then increase the sizing speed by rotating **P6** counter-clockwise just enough to overcome the door weight, etc. **Caution: If the door sizing speed is set too fast, blown fuses and/or a tripped circuit breaker may occur if the doors are activated when manually locked.**

B. Opening Speed:

The opening speed is adjusted by rotating **P2** (CW=SLOWER, CCW=FASTER). It is recommended that the door be operated as slow as is practical for the traffic conditions.

C. Closing Speed:

The closing speed of the door is adjusted by rotating **P4** (CW=SLOWER, CCW=FASTER) and must not exceed 1 ft/sec.

NOTE: Reset power to the system after setting the opening and closing speeds. This must be done before making any other adjustments.

D. Back Check Location:

The back check location is selected using **SW2** (0=MINIMUM, F=MAXIMUM).

E. Back Check Speed:

The back check speed is adjusted by rotating **P3** (CW=SLOWER, CCW=FASTER).

F. Latch Location:

The latch location is selected using **SW1** (0=MINIMUM, F=MAXIMUM) and must be at least 2 inches from the fully closed position.

G. Latch Speed:

The latch speed is adjusted by rotating **P5** (CW=SLOWER, CCW=FASTER).

H. Time Delay/Hold Open Time:

The time delay is adjusted by rotating **P1** (CW=LESS DELAY, CCW=MORE DELAY). The adjustment range is 1 to 30 seconds. If a presence sensor is not installed, the time delay must be at least 4 seconds.

I. Normal/Delayed Activation:

The activation is selected with **SW3**. In the normal position, the door opens immediately upon reception of the activation signal. In the delayed position, when the door is fully closed, there is a 1 second delay between reception of the activation signal and the actual opening of the door. This delay allows most electric or magnetic locks time to retract before the door opens.

J. Auto Reverse in Closing:

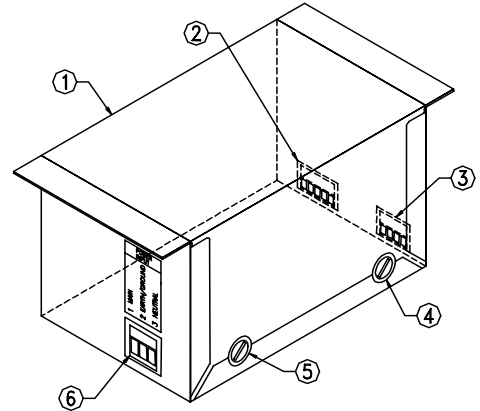
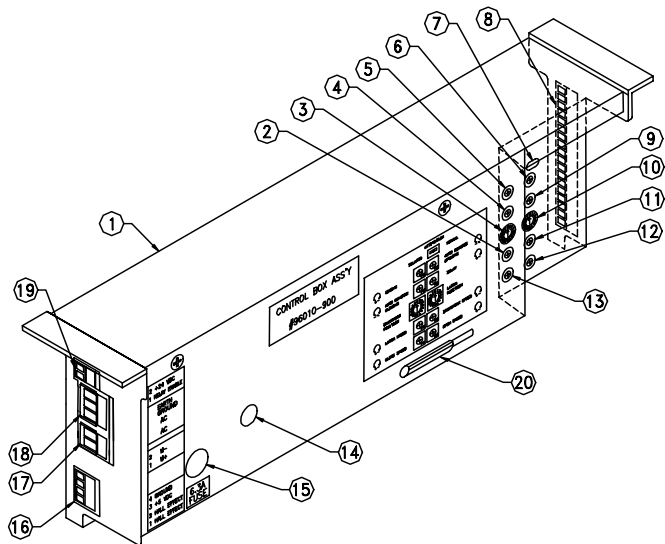
The amount of force required to reverse the door when closing is adjusted by rotating **P7** (CW=MORE FORCE, CCW=LESS FORCE) and must not exceed 30 lbs.

K. Auto Reverse in Opening:

The amount of force required to reverse the door when opening is adjusted by rotating **P8** (CW=MORE FORCE, CCW=LESS FORCE).

L. Reset Power:

After setting all of the adjustments, reset power to the system. Cycle the door to verify all of the settings are correct. If any settings need to be changed, be sure to reset power again. **Power must be reset after any adjustments are made.**



- | | |
|--|---|
| 1. SERIES 96000 SLIDE CONTROL BOX #96010-900 | 11. BACKCHECK SPEED ADJUSTMENT (P3) |
| 2. LATCH SPEED ADJUSTMENT (P5) | 12. OPENING SPEED ADJUSTMENT (P2) |
| 3. BACKCHECK POSITION SELECTOR (SW2) | 13. CLOSING SPEED ADJUSTMENT (P4) |
| 4. AUTO REVERSE IN CLOSING ADJUSTMENT (P7) | 14. CIRCUIT BREAKER |
| 5. SIZING ADJUSTMENT (P6) | 15. FUSE, 6.3 AMP (DOM #87083-600)
(BUSS #GDCT6.3AL250V) |
| 6. AUTO REVERSE IN OPENING ADJUSTMENT (P8) | 16. 4-PIN CONNECTOR, HALL EFFECT |
| 7. ACTIVATION SWITCH - NORMAL/DELAYED (SW3) | 17. 2-PIN CONNECTOR, MOTOR |
| 8. 18-PIN CONNECTOR, ACCESSORIES | 18. 3-PIN CONNECTOR, POWER INPUT |
| 9. TIME DELAY ADJUSTMENT (P1) | 19. 2-PIN CONNECTOR (SMALL), E-LOCK SIGNAL |
| 10. LATCH POSITION SELECTOR (SW1) | 20. ADJUSTMENT TOOL |

- | | |
|--|---|
| 1. SERIES 96000 SLIDE TRANSFORMER BOX # 96005-900 | 4. FUSE, 2.5 AMP (DOM # 96012-600)
(LITTELFUSE # 239 02.5) |
| 2. 5-PIN CONNECTOR, POWER TO CONTROL BOX # 96010-900 | 5. FUSE, 2 AMP (DOM # 96011-600)
(LITTELFUSE # 239 002) |
| 3. 4-PIN CONNECTOR, POWER TO ACCESSORIES | 6. 3-PIN CONNECTOR, POWER INPUT 115V |

FIGURE 3: CONTROL BOX & TRANSFORMER BOX ADJUSTMENTS

4. Operational Walk-Through Test:

NOTE: It is assumed that during the installation process, any problems would have been found and corrected before this point. However, it is recommended that a complete walk-through test now be performed.

- Give the system an activation signal. The door should open smoothly and silently to the back check point, where it should slow down rapidly and drift into the fully open position without slamming.
- Maintain the activation signal to verify that the door does **NOT** time out and close while being activated.
- If a door safety device is used, step into the door opening. Remain in the door opening making sure that the door does **NOT** close.
- Step out of the door opening. After both the activating area and door opening are clear, the door should time out at the pre-set time delay and begin to close. The door should close quietly and smoothly to the latch point, where it rapidly slows down and drifts into the fully closed position without slamming.

5. Release of the System for Use:

- Remove all tools and installation equipment, and clean any debris from the vicinity of the door.
- Install all safety, traffic control, and instruction decals to the door as required. **THIS IS VERY IMPORTANT!** Failure to do this leaves the installer **LIABLE** for any accident that might occur. **THIS MUST BE DONE!**
- Verbally explain the proper operation of the door system to the owner or to the person in charge.

6. For Doors that are manually/mechanically secured:

- | | | | |
|-----------------------|--------------------------|---|---------------------------------------|
| A. Locking: | 1) Place switch in "OFF" | 2) Allow door to close completely | 3) Secure door |
| B. Unlocking inside: | 1) Unsecure door | 2) Place switch in "1-WAY" or "2-WAY" | 3) Activate door once |
| C. Unlocking outside: | 1) Unsecure door | 2) Activate morning entry or manually open door | 3) Place switch in "1-WAY" or "2-WAY" |

FEATURES

1. Easy Open: When the door is fully closed and manually opened a few inches, it will automatically open the rest of the way.
2. Adjustable Automatic Reversing: If the door is stalled during the closing cycle, it will automatically stop and reverse to the fully open position. Then the door will close to the point of obstruction and drop to slow speed, looking for the obstruction. This cycle will occur 5 times until the obstruction is removed. After the fifth cycle, the door will stop, requiring an activation signal or manual opening to re-start the system. If the door is stalled during the opening cycle, it will automatically stop and reverse to the fully closed position. The door will remain closed until the next activation signal, at which point it will open normally. **Reversing forces should be adjusted in accordance with all applicable safety codes.**
3. Weatherwise: The weatherwise feature allows the customer to reduce the opening size. When the weatherwise switch is set to "NARROW", the door will only open to about 75% of the normal door opening. (Default = "WIDE" or 100% opening)
4. Safety Beam Shut-Off: When the door is fully closed, the safety beam signal is disregarded so that it cannot be used to open the door. Once the door is activated, the safety beam signal is allowed to re-open the door if either safety beam is interrupted during the closing cycle.
5. 4-Way Operation:
When the 4-Position Switch is set to:
"OFF", interior and exterior activation will not open the door. The morning entry switch will open the door.
"1-WAY", only interior activation will open the door. Exterior activation will not open a closed door but will re-open a door in the closing cycle.
"2-WAY", interior and exterior activation will open the door.
"HOLD OPEN", the door will remain open.

If the 4-Position Switch is not used, Default = "1-WAY".

DO'S AND DON'TS

1. Do **NOT** try to use this operator on large, heavy doors without checking with the factory first.
2. Do **NOT** connect any remote activating device to the door unless it is located within the "line of sight" of the door.
3. Do **NOT** attempt to use a fuse larger than specified.
4. Do **NOT** attempt to modify the factory wiring or connect any wiring into an existing electrical circuit or any other electrical device.
5. Do make certain that the operator is connected to a dedicated 115 volt circuit from the main circuit breaker panel.
6. Do make certain that the operator is properly grounded with a separate green wire.
7. Do make certain that all connections are proper and secure before turning the power on.
8. Do make certain that all wires are properly dressed and secured to prevent any interference.
9. Do make certain that all safety labels and instruction decals relating to door operation are properly applied to the door before leaving the job.
10. Do verbally instruct the owner or person in charge of the proper operation of the door.
11. Do disconnect main power to the operator prior to servicing or cleaning.
12. Do instruct the owner or person in charge of his responsibility of inspecting the door for the following:
 - A. Occasional damage
 - B. Developing problems
 - C. Minor preventative maintenance
 - D. Who and where to call for service when required

If the door package operates improperly, turn off main power. Re-adjust all potentiometers to the middle of their range and turn main power on. Activate the operator to allow the door to re-size. Repeat adjustment procedure as required.



Series 96000 Sliding Door

Installation Instructions

DOR-O-MATIC®

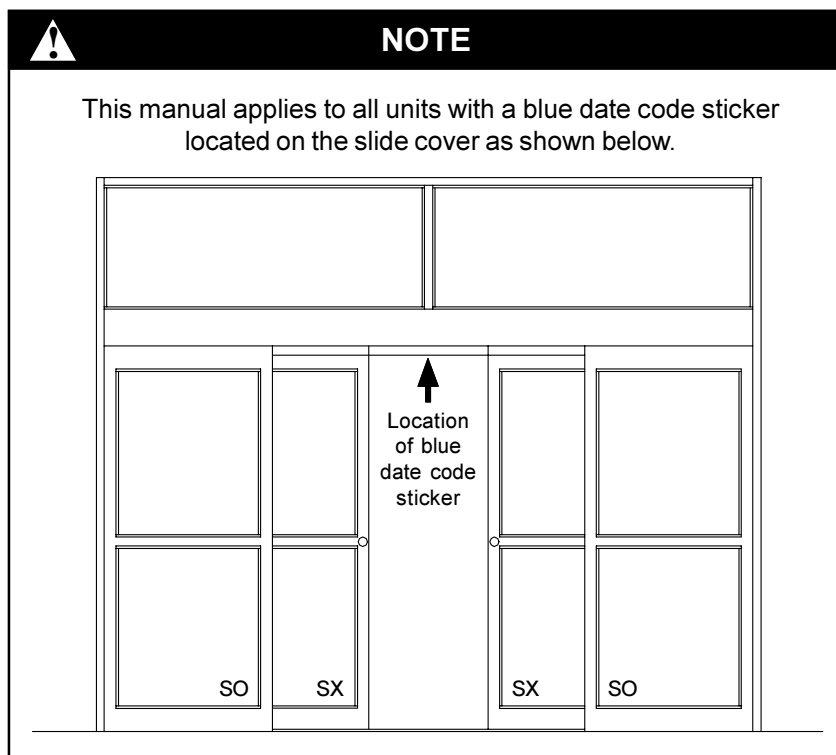
7350 W. Wilson Ave.
Harwood Heights, IL 60706

Toll Free: 1-800-543-4635
In Illinois: 708-867-7400
Sales FAX: 708-867-0291
Technical Support: 1-888-942-9945
www.doromatic.com

Copyright © 2003 Ingersoll-Rand.
All rights reserved.

INDEX

Inspection	3
Header and Jamb Mounting	4
Package Components	6
Threshold Installation – Full Breakout Application	7
Threshold Installation – Fixed Panel Application	8
Panel Installation – Full Breakout Application	9
Panel Installation – Fixed Panel Application	10
Door (SX) Installation	11
Limit Arm and Bumper Bar Installation	14
Wiring Diagram	15
Glazing	15
Release for Service	16



INSPECTION

1. Verify that the shipped order is complete and correct. Check model number, color, and package width and height.
2. Verify at the **job site** that **all conditions** are correct and in accordance with **final approved shop drawings**.
 - 2.1. Check that the opening is the correct size. Correct size is package width plus 1/2" (13 mm) and package height plus 1/4" (6 mm) for shimming and caulking (**Figure 1**).

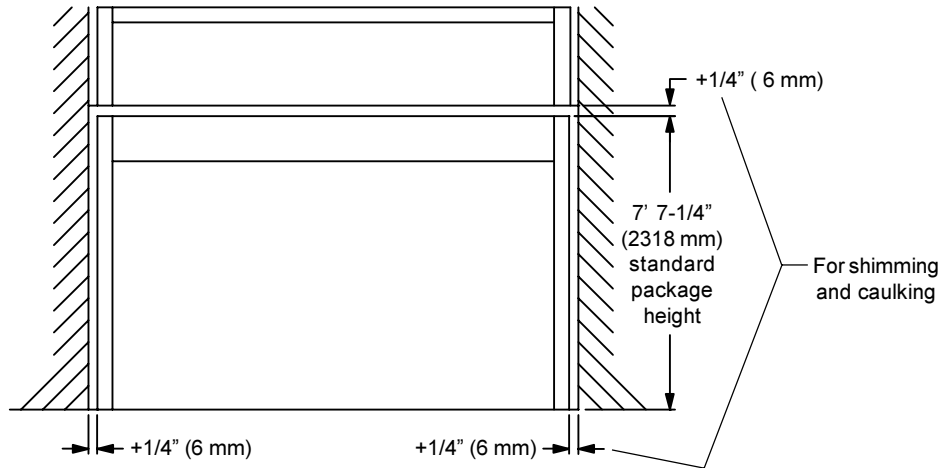


Figure 1. Clearance Required at Rough Opening

- 2.2. Check that the floor is level. Use a level of 6' 0" (1829 mm) minimum length (**Figure 2**).
- 2.3. Use a plumb bob to check that the rough opening where the jambs will be mounted is vertical (**Figure 3**).
- 2.4. Check diagonal measurements to insure that opening is a true rectangle, not just a parallelogram (**Figure 4**).

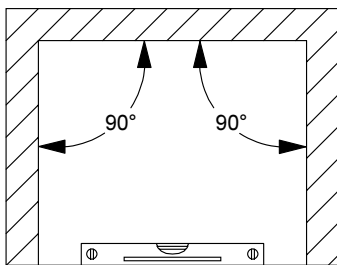


Figure 2. Floor Must Be Level

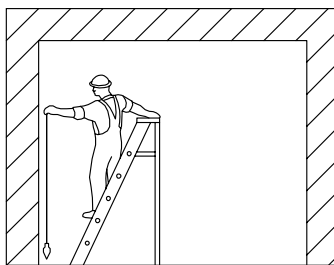


Figure 3. Jamb Mounting Surface Must Be Vertical

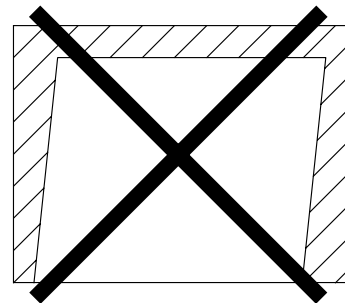


Figure 4. Opening Must Be Rectangular, Not a Parallelogram

- 2.5. Check that the electrical feed (115 V, 15 A single phase for North America, 220/240 V, 5 A single phase for Europe, Asia, etc.), conduits, and electrical junction boxes for push plates or other activation devices (if required) are correctly located in accordance with final approved shop drawings.

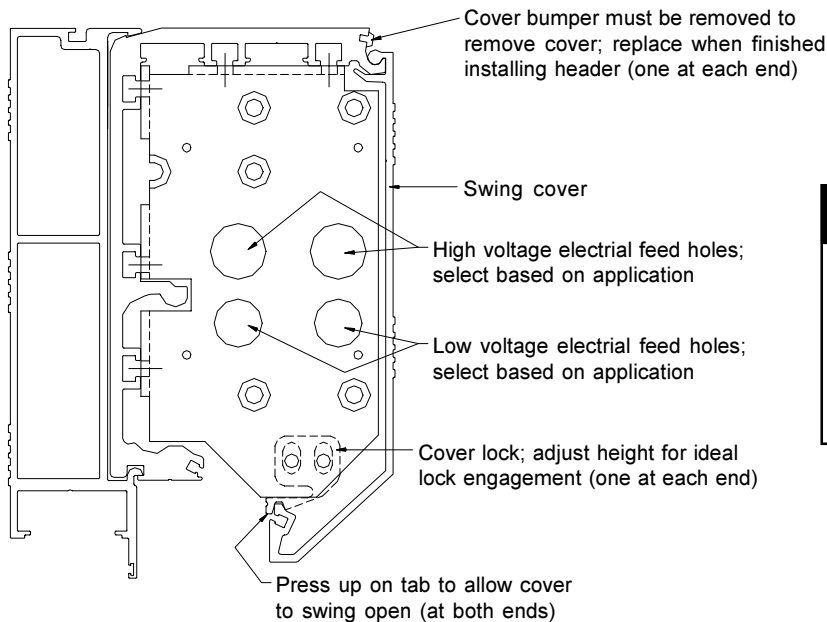


NOTE

If any of the above items are not correct, **do not attempt to install the Series 96000 Slide package!** Report any incorrect items to the general contractor **immediately**. Do not proceed until all conditions are correct.

HEADER AND JAMB MOUNTING

1. Open the carton marked "HEADER." Remove the header and set it on a piece of cardboard with the swing cover facing up. Remove the cover bumpers near the cover hinge. Do not lose the cover bumpers, as they must be re-installed to prevent the cover from coming off when opened. Using a screwdriver, press up on the cover lock tab (one on each end) to disengage and open the cover (**Figure 5**).



NOTE

High voltage (incoming 115 VAC) wires and low voltage wires cannot share the same access hole. High voltage wires must be routed away from all low voltage wires. Use wire clips supplied on parts board.

Figure 5. Cover Removal

2. Within the header (factory installed) are the motor/gearbox with drive pulley, drive belt, idler pulley and tensioner assembly, control box, transformer box, holding beam control box, any switches, and the terminal block bracket. Additional items are shipped in a blister pack, and these should be laid out in a convenient location.
3. Align the jamb tubes with the ends of the header, making sure that the bolt holes and electrical feed holes line up. Use three 1/4-20 x 1" long bolts on each side to secure the header end cap to each jamb tube. Then install one dress end cap on each side using the #8-32 screws (**Figure 6**).

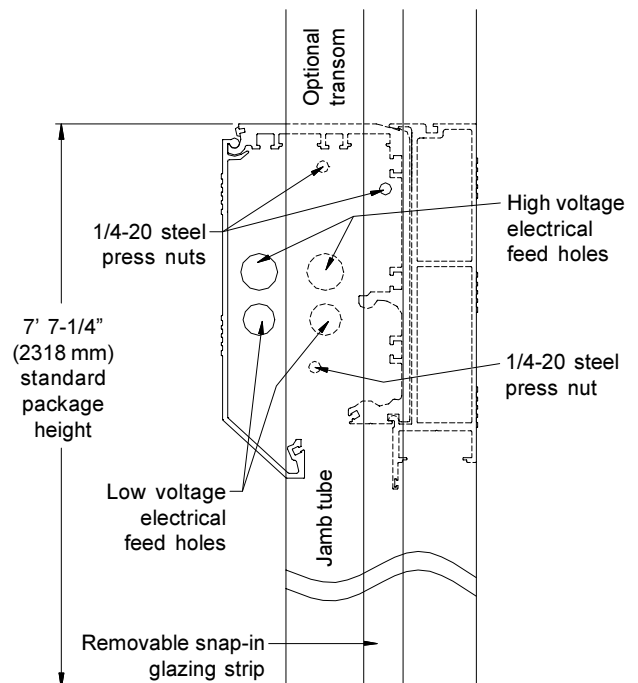


Figure 6. Jamb Tube Attachment to Header

HEADER AND JAMB MOUNTING (continued)

4. For each jamb, insert wood tapered shims to plumb each jamb. Insert 1/4" (6 mm) spacers around the header or horizontal transom tube at anchor locations to keep the tubes from being pulled tight.
5. With a helper, tip up the jamb/header assembly and position it within the rough opening, making sure the swing cover is on the correct side. Verify that the package is located correctly within the rough opening (refer to the final approved shop drawings). The Series 96000 Slide package is **usually** centered within the opening or is mounted flush with the curtain wall, but verify the position with the drawings, contractor, architect, etc.
6. Use appropriate fasteners (four per jamb) to anchor through the glazing recess of the jamb tube to the wall or adjacent framing. Check the jamb tubes with a level to be sure that the tubes have not been pulled in by the anchors. Finally, install the snap-in glazing strips in the jamb tubes (**Figure 7**).
7. The standard package height is 7' 7-1/4" (2318 mm). On occasion, the approved shop drawings require a package height of 7' 6-3/4" (2305 mm). If this is the case, cut off 1/2" (13 mm) from the bottom of each jamb tube in the field. This generally is performed for a recessed threshold application.

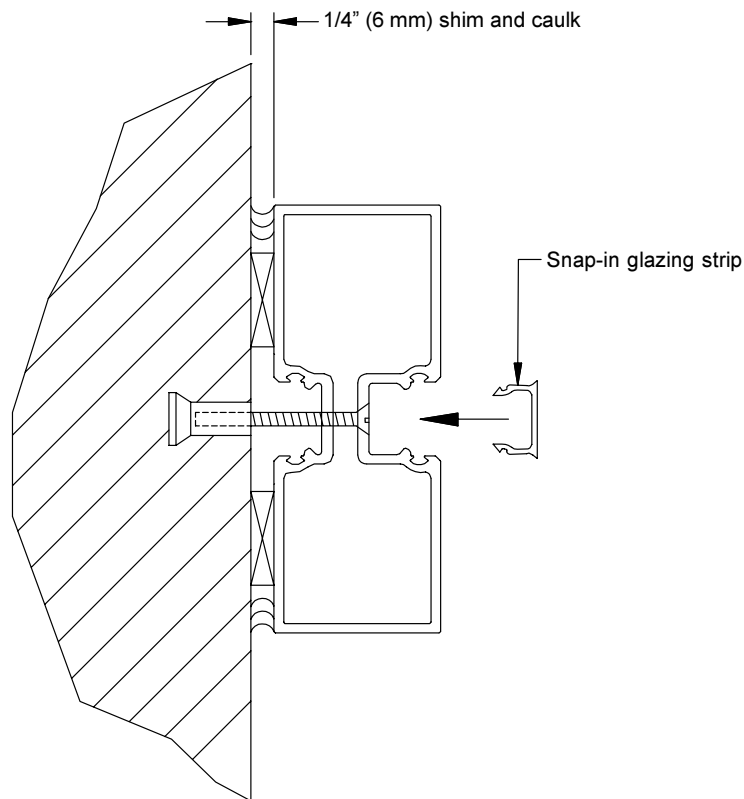


Figure 7. Anchoring the Jamb Tube

PACKAGE COMPONENTS

1. Refer to **Figure 8** for a detailed breakdown of internal drive components.

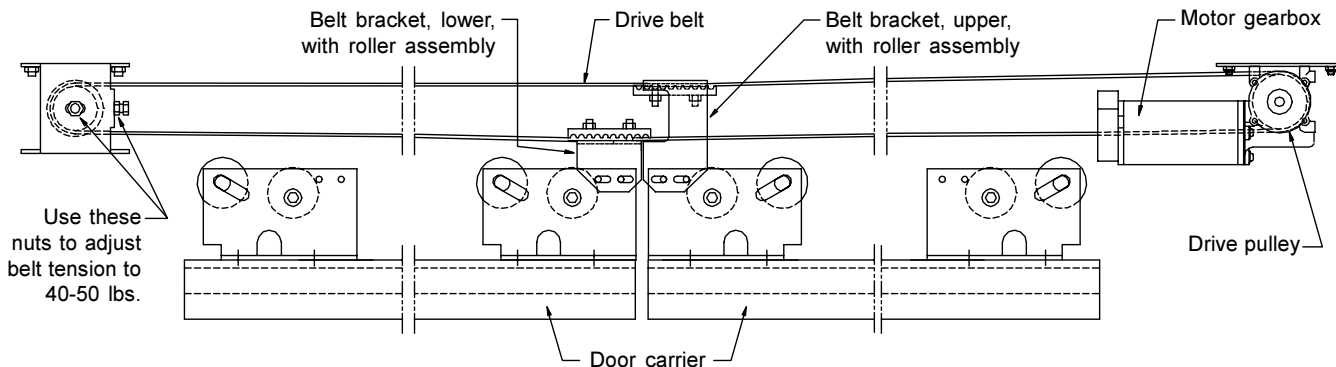


Figure 8. Belt Drive Assembly

2. Refer to **Figure 9** for a detailed section view of a typical Series 96000 Slide Full Breakout or Fixed Panel application.

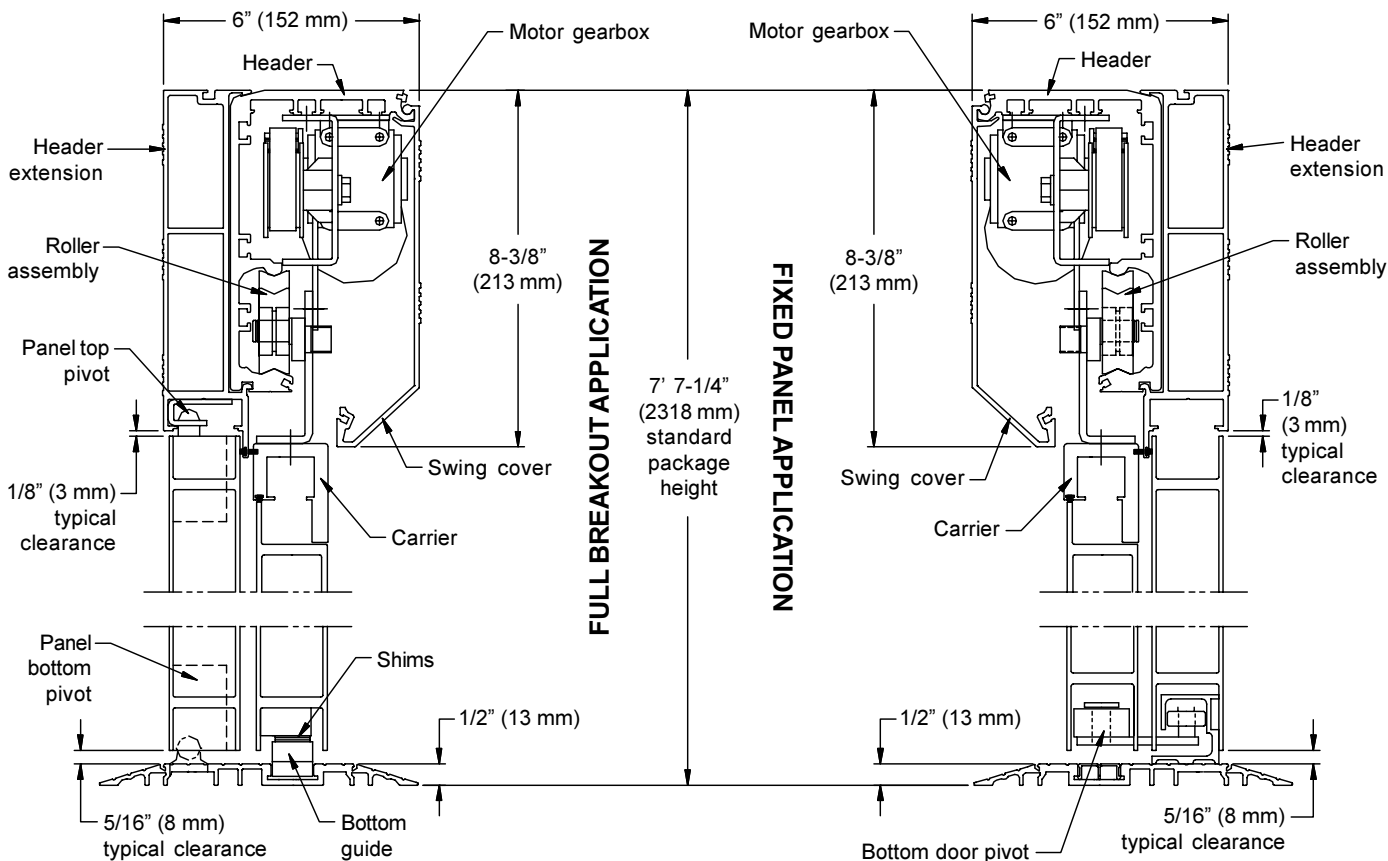


Figure 9. Section View through Header, Door, and Panel

NOTE

If the package being installed is over 10' 0" (3048 mm) wide and has a transom, a vertical transom tube must be anchored securely to the top transom tube in order to prevent deflection in the header.

THRESHOLD INSTALLATION – FULL BREAKOUT APPLICATION

1. After verifying that the floor is level, snap a chalk line 1-1/2" from the face of each jamb on both sides. Place the threshold between the jamb tubes within the chalk lines.
2. Verify that the panel pivot in the threshold is on the EXTERIOR side of the opening. Keep the threshold within the chalk lines, and use it as a guide to drill through holes into the floor. Slide the filler extrusion to the right side when drilling the left side and then repeat for the right side. Place plastic concrete inserts into the drilled holes. Use the stainless steel screws from the blister pack to fasten the threshold to the floor (**Figure 10**).

NOTE

A different extrusion is provided for a Full Breakout Package with a recessed threshold option.

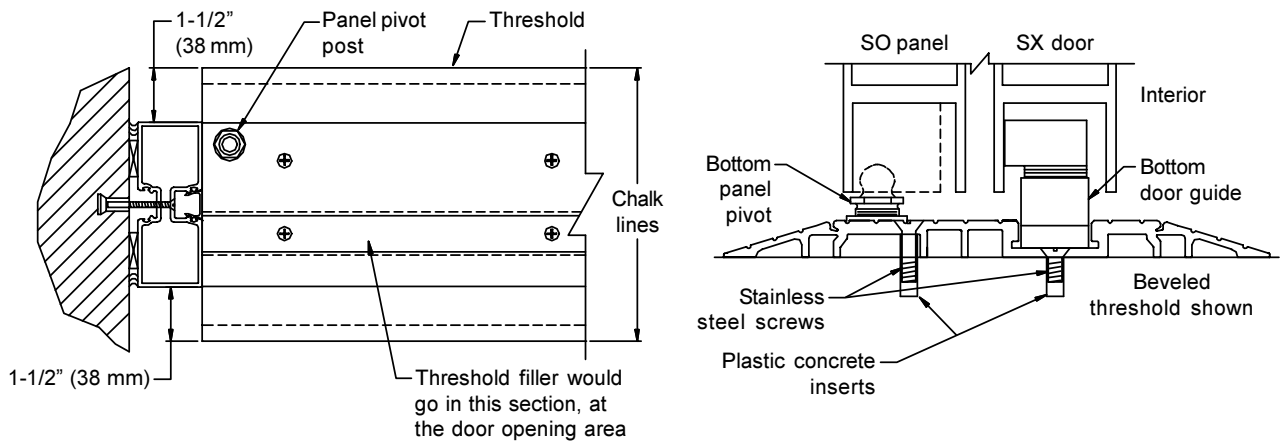


Figure 10. Installation of Threshold

3. Thread panel pivot post (from blister pack) into pivot receiver in threshold and adjust to correct height (**Figure 11**). If threshold filler is not installed, it can be force fit using a one-foot wood block and rubber mallet.

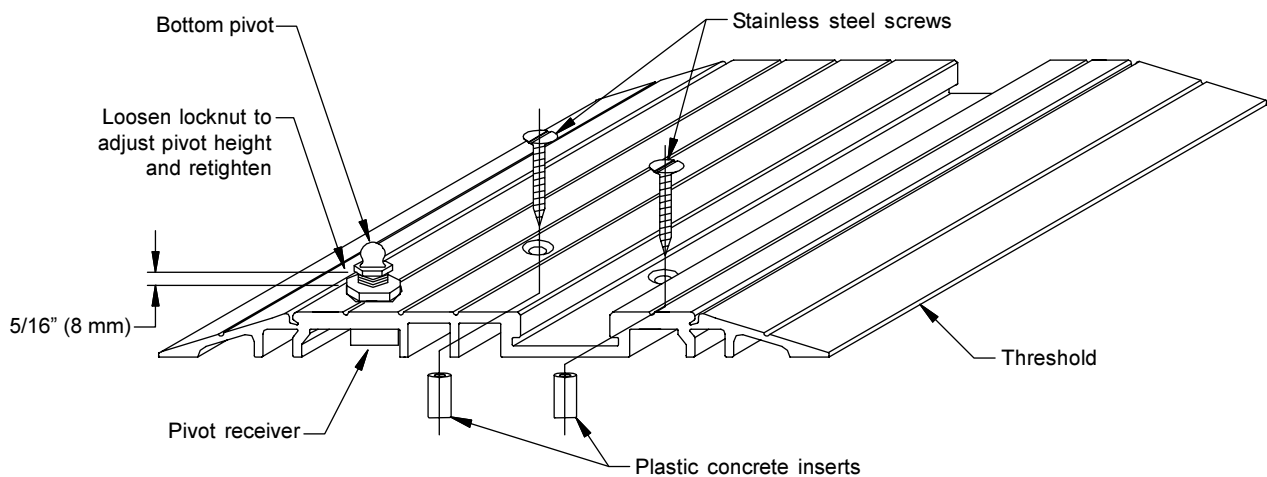


Figure 11. Bottom Panel Pivot Attachment

THRESHOLD INSTALLATION – FIXED PANEL APPLICATION

1. After verifying that the floor is level, snap a chalk line 1-1/2" from the face of each jamb on both sides. Place the threshold between the jamb tubes within the chalk lines (**Figure 12**).
2. Verify that the track portion in the threshold (where the filler is to be located) is on the EXTERIOR side of the opening. Keep the threshold within the chalk lines and use it as a guide to drill through holes into the floor. Slide the filler extrusion to the right side when drilling the left side and then repeat for the right side. Place plastic concrete inserts into the drilled holes. Use the stainless steel screws from the blister pack to fasten the threshold to the floor (**Figure 13**).

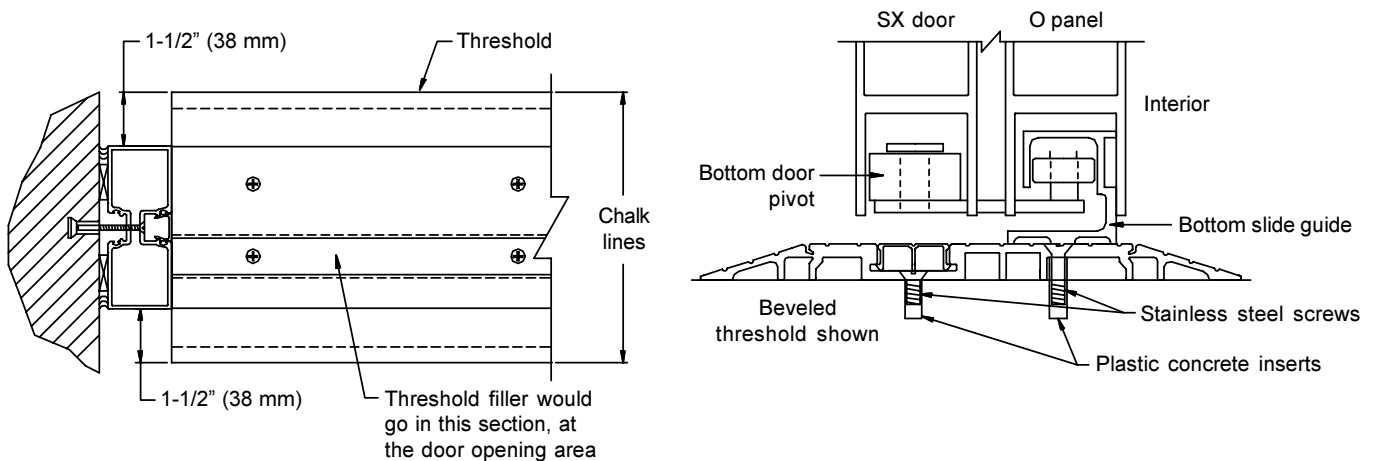


Figure 12. Installation of Threshold

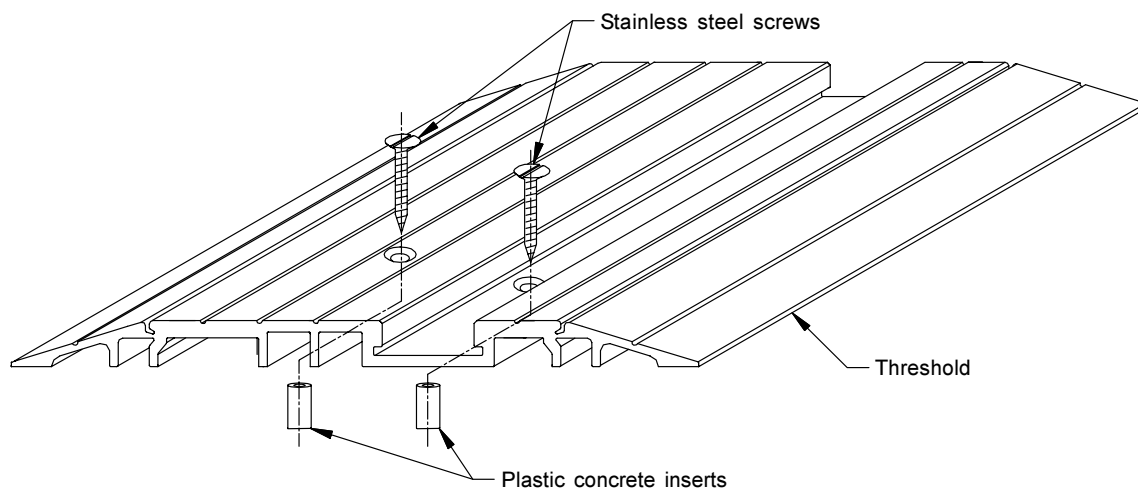
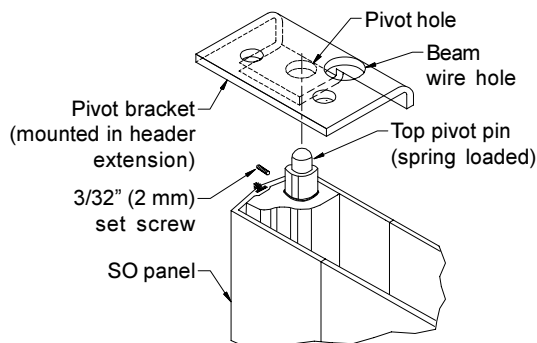


Figure 13. Isometric of Threshold

PANEL INSTALLATION – FULL BREAKOUT APPLICATION

1. Remove panels from carton. Lift panel and place bottom pivot block (factory prepped and installed in bottom panel stile) onto bottom pivot. Swing and proceed to install top pivot pin into pivot bracket mounted in header extension (**Figure 14**).
2. Top pivot pin is shipped in retracted position. Loosen set screw and release top pivot pin into the hole in the bracket (**Figure 14**). Tighten set screw when top pivot pin is set.
3. Adjust lock nut on bottom pivot to give the required 1/8" (3 mm) clearance at the top of the panel (**Figure 15**).
4. Top pivot removal tool #96022-100 is required to remove panel. Loosen set screw and push pin down with the tool (**Figure 16**).
5. Slowly close the panel after securing the pivots in position. The clearance between the top of the panel and the bottom of the header should be 1/8" (3 mm) (**Figure 17**). If the clearance is greater than 1/8" (3 mm), the magnet in the top rail of the panel may not be close enough to the reed switch in the header to complete the circuit for door activation. To correct the clearance, refer to the previous illustrations to remove the panel and adjust the height.



NOTE

Top pivot removal tool #96022-100 is required for top pivot removal

Figure 14. Panel Top Pivot Detail

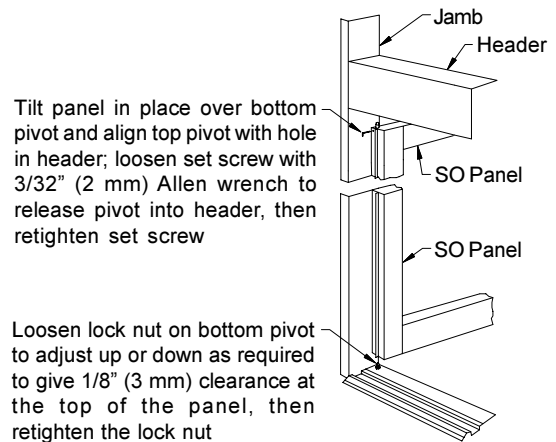
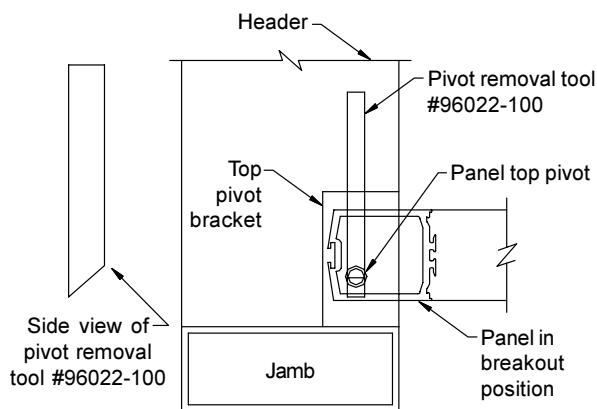


Figure 15. Panel Installation Detail



NOTE

Be careful not to damage or cut the pencil beam cables that run through the top pivot bracket when removing the panel

Figure 16. Panel Removal Detail

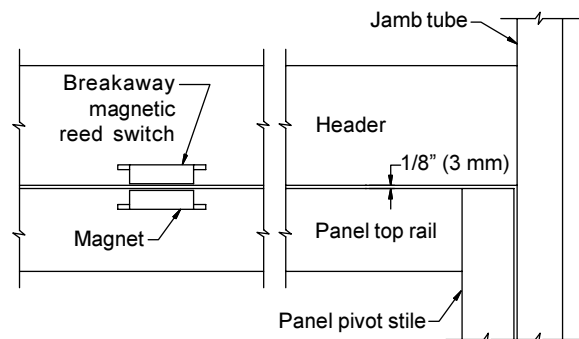
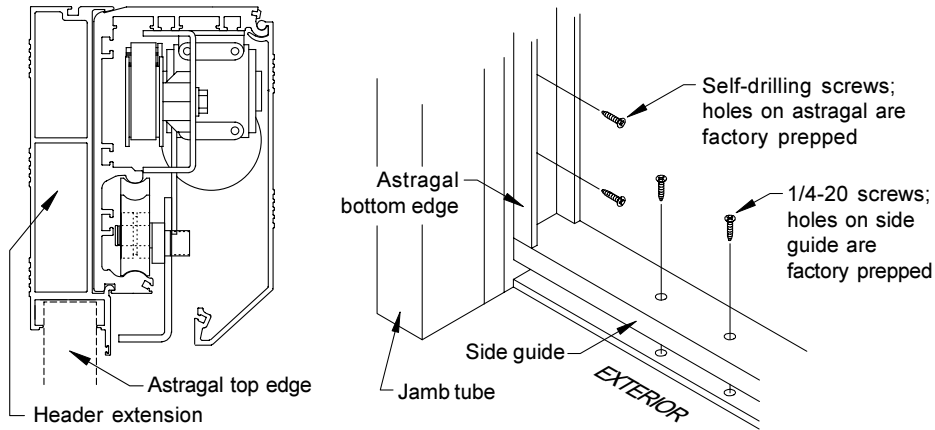


Figure 17. Panel (SO) Clearance for Reed Switch and Magnet

PANEL INSTALLATION – FIXED PANEL APPLICATION

1. Remove side guide and astragal from their packaging. Place astragal against jamb tube surface and into groove under header extension. Place side guide under astragal as shown in **Figure 18**. Mark all holes on target surfaces and remove both pieces for drilling. Remove screws from their packaging for assembly.



NOTE

For side guide, drill depth on threshold or floor surface should be approximately 3/8" deep. For astragal, the holes should just clear one surface with the self-drilling screws from the screw bag.

Figure 18. Astragal and Side Guide Positioning

2. Remove fixed panel from its carton. Lift panel and place bottom rail (factory prepped stile and rail) onto bottom side guide with four (4) drilled holes at bottom of panel facing interior side of opening. Swing upright, clearing lock stile fastener bracket with slot machined in lock stile of panel (**Figure 19**). Slide panel towards jamb tube and install screws from screw bag.

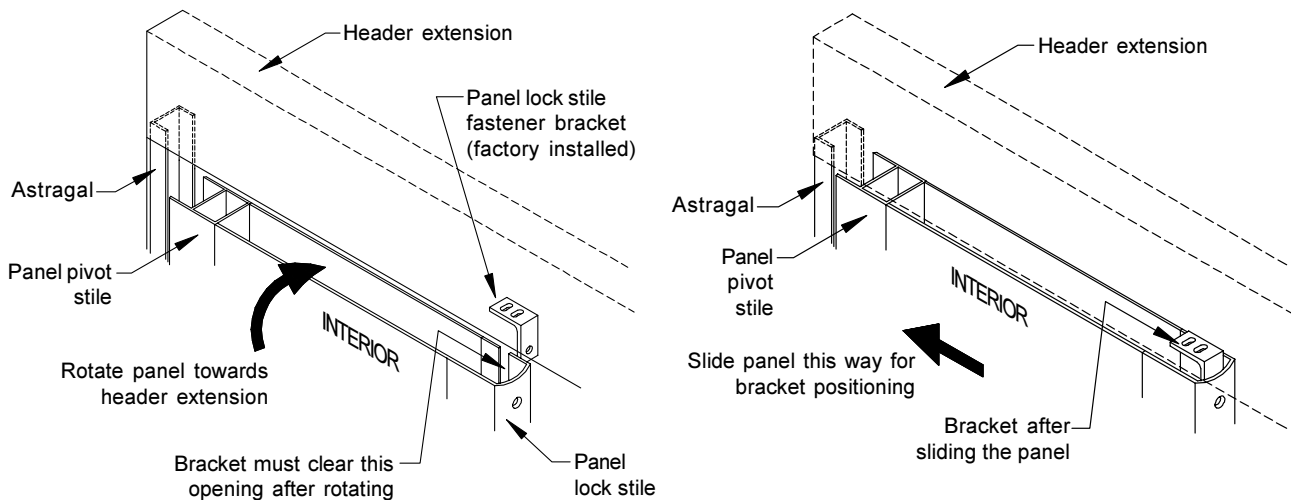


Figure 19. Panel Positioning and Attachment

3. Once the top of the panel is properly stabilized, install the 10-32 screws into the holes at the bottom on the interior side of the opening to attach the panel to the slide guide (**Figure 20**).

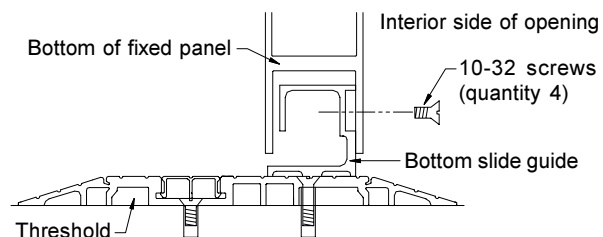
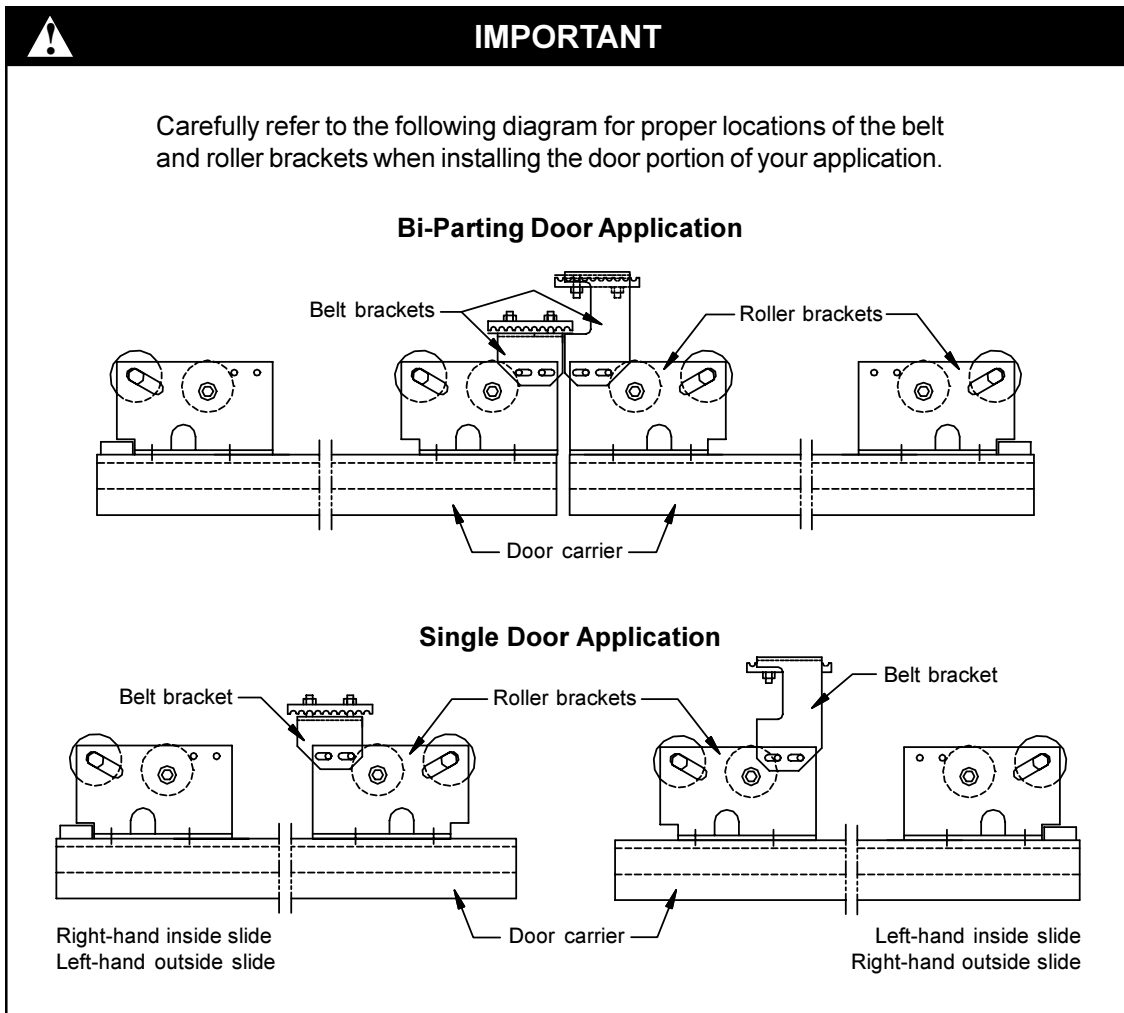


Figure 20. Bottom of Panel Installation

DOOR (SX) INSTALLATION



1. Remove the doors from the carton. All mention of M6 nuts and bolts refers to the thread diameter. Use a 10 mm socket or 10 mm open-end wrench when removing or installing these fasteners.
2. Attach the roller assembly to the door carrier using the 5/16-18 socket head screws and lock washers supplied. (Bi-Parting unit has two doors.)
3. Make sure the anti-riser wheel is loosened and in the down position to allow access into the roller track. Afterwards, verify that the anti-riser wheel is NOT engaged with the top track of the header on all roller assemblies, leaving approximately a 1/32" gap in between both the top track and the wheel (**Figure 21**).
4. Attach the belt bracket to the roller assembly on the lock stile of the door using two (2) M6 screws, washers, and lock washers as shown (**Figure 21** and **Figure 21 Detail**).
5. Remove the sliding door bottom pivot assembly (which includes the floor guide) from the blister pack. Install the bottom pivot assembly into the bottom of the vertical door stile through the two prepped and countersunk holes with the 1/4-20 x 3/8" long flat head screws provided (**Figure 22**).

DOOR (SX) INSTALLATION (continued)

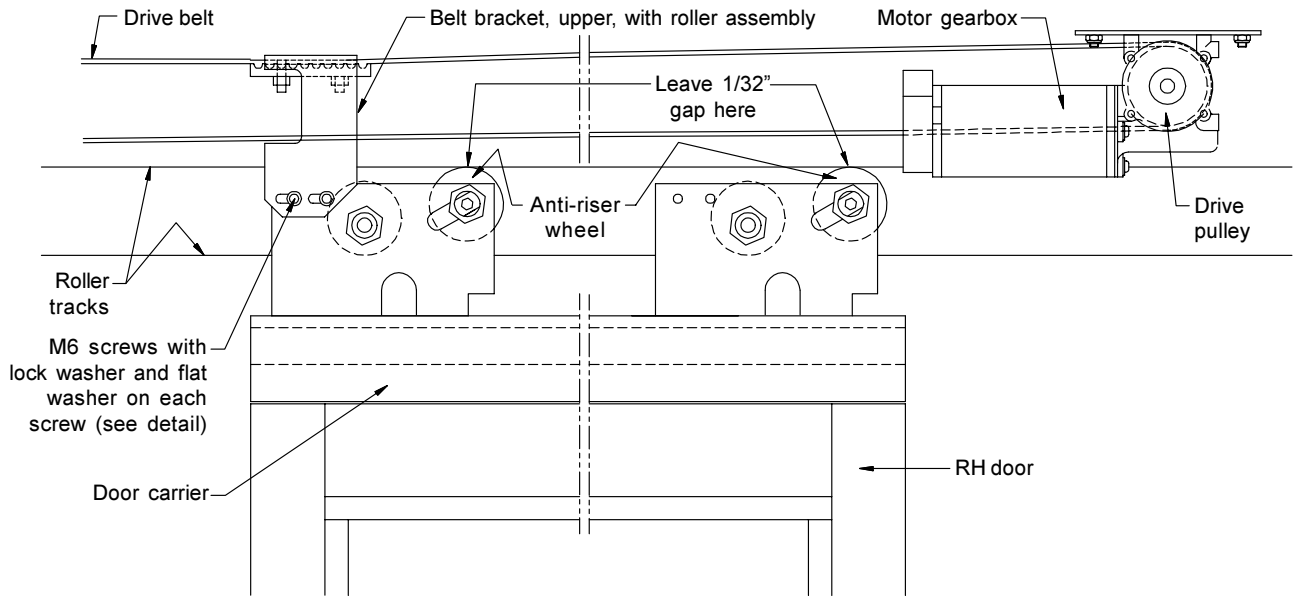


Figure 21. Anti-Riser Adjustment and Door (SX) Attachment Procedure

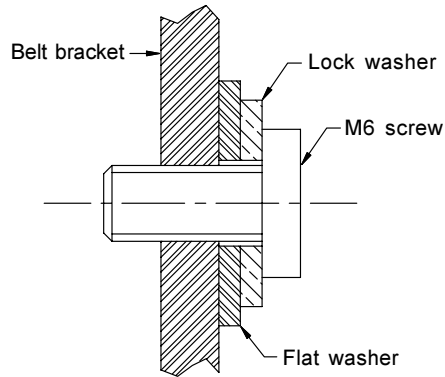


Figure 21 Detail. M6 Screw with Lock Washer and Flat Washer

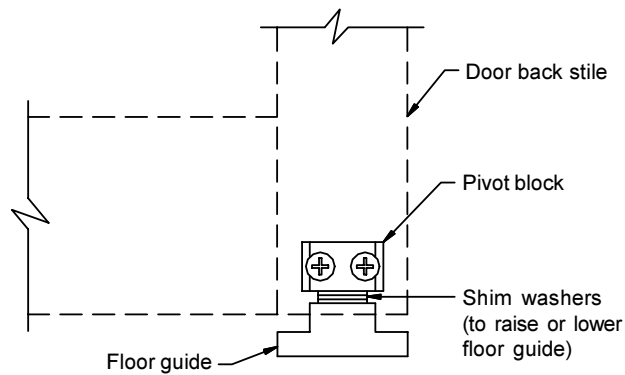


Figure 22. Installation of Door (SX) Bottom Pivot Assembly

DOOR (SX) INSTALLATION (continued)

6. Verify that the bottom guide is in the threshold track and slowly slide the door back and forth to assure smooth operation. Check to see if the floor guide is deep enough in the track. It may be necessary to add or remove shim washers as required (**Figure 23**).
7. Next, break open the door and panel. Slowly close the door and check the clearance between the top of the door and the bottom of the carrier. If the clearance is not 1/8" (3 mm), loosen the 1/4" (6 mm) Allen head set screw at the bottom of the carrier. Adjust the clearances as required by turning the large Allen head bolt. After setting the correct clearance, retighten the 1/4" (6 mm) Allen head set screw (**Figure 24**).

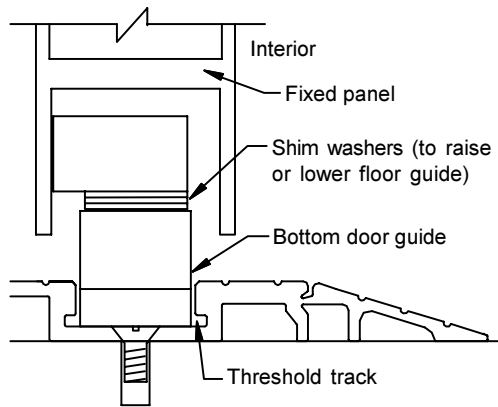


Figure 23. Floor Guide Check

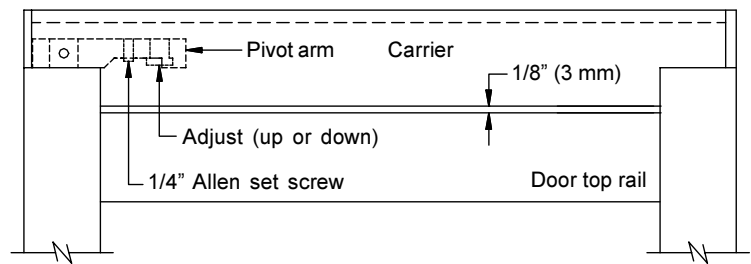


Figure 24. Door/Carrier Adjustment

8. Adjust anti-riser wheel:
 - 8.1. Use a 15/16" wrench to loosen jam nuts on eccentrics and anti-riser wheels (**Figure 25**).
 - 8.2. Use a 5/16" Allen wrench to rotate eccentrics for a 5/16" (8 mm) gap between bottom of door and threshold. Snug the jam nut to finger tight, then rotate 30 degrees further with a 15/16" wrench for final tightening.
 - 8.3. Slide anti-riser wheel up for 1/32" clearance between top of anti-riser wheel and top track. Snug anti-riser wheel jam nuts to finger tight, then rotate 30 degrees further with a 15/16" wrench for final tightening.

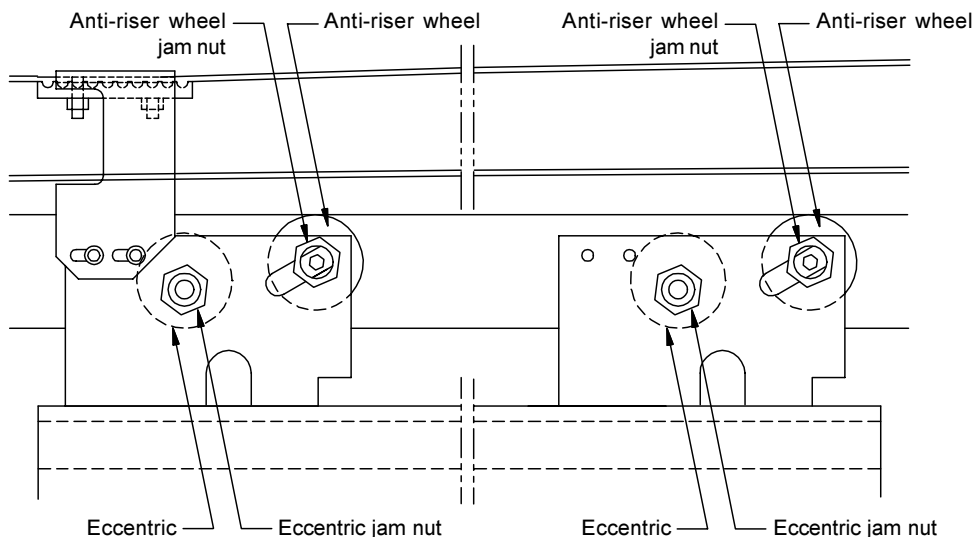


Figure 25. Adjust Anti-Riser Wheel Clearance

LIMIT ARM AND BUMPER BAR INSTALLATION

1. Depending on the specific package ordered, Dor-O-Matic provides one of three limit arm types: hydraulic closer arm, limit arm, and spring limit arm (**Figure 26**).
 - 1.1. If the package has a hydraulic closer in the panel, the arm is shipped installed on the closer. Remove the arm by removing the horseshoe-shaped retaining clip from the closer shaft. Install the roller end of the arm into the header extension through the access slot provided. Turn the closer speed adjusting screws to the fully closed position. With a wrench, turn the closer pinion shaft so the slot in the arm will easily slip over the shaft when the door is set in the opening. Re-install the horseshoe-shaped clip through the closer shaft.
 - 1.2. For all other packages, remove the shoulder screw from the limit arm, insert the roller up into the header extension, and re-install the shoulder screw.

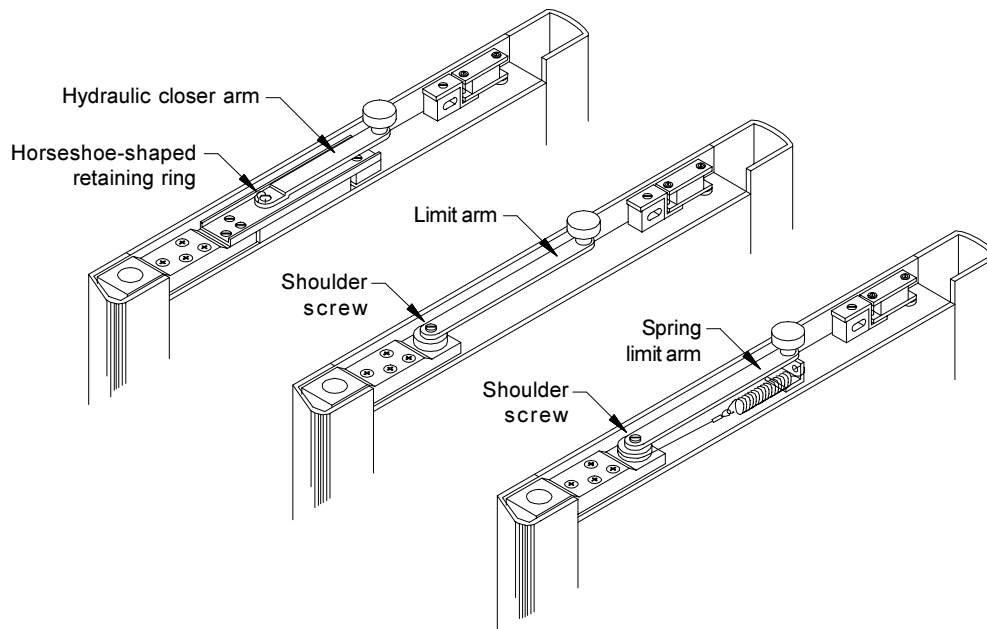


Figure 26. Limit Arm Details

2. Refer to **Figure 27** for optional Dor-O-Matic bumper bar installation.

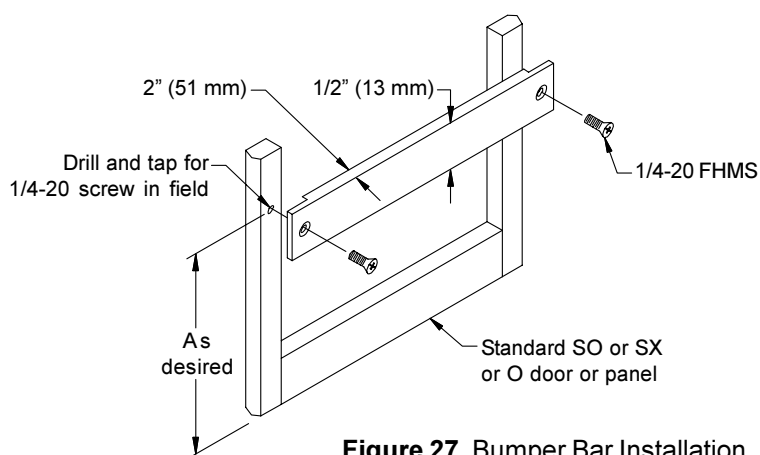


Figure 27. Bumper Bar Installation

NOTES	
1.	One bar per door.
2.	1/2" (13 mm) max. glass thickness.

WIRING DIAGRAM

Refer to **Figure 28** for Series 96000 Slide power connection requirements.



NOTES

1. Field prepped wire access holes cannot be larger than 1/2" diameter.
2. The ground wire for incoming 115 VAC and the system ground wire cannot share the same grounding stud.
3. All earth/ground wires must be grounded to header. Ground wires cannot share the same grounding stud.

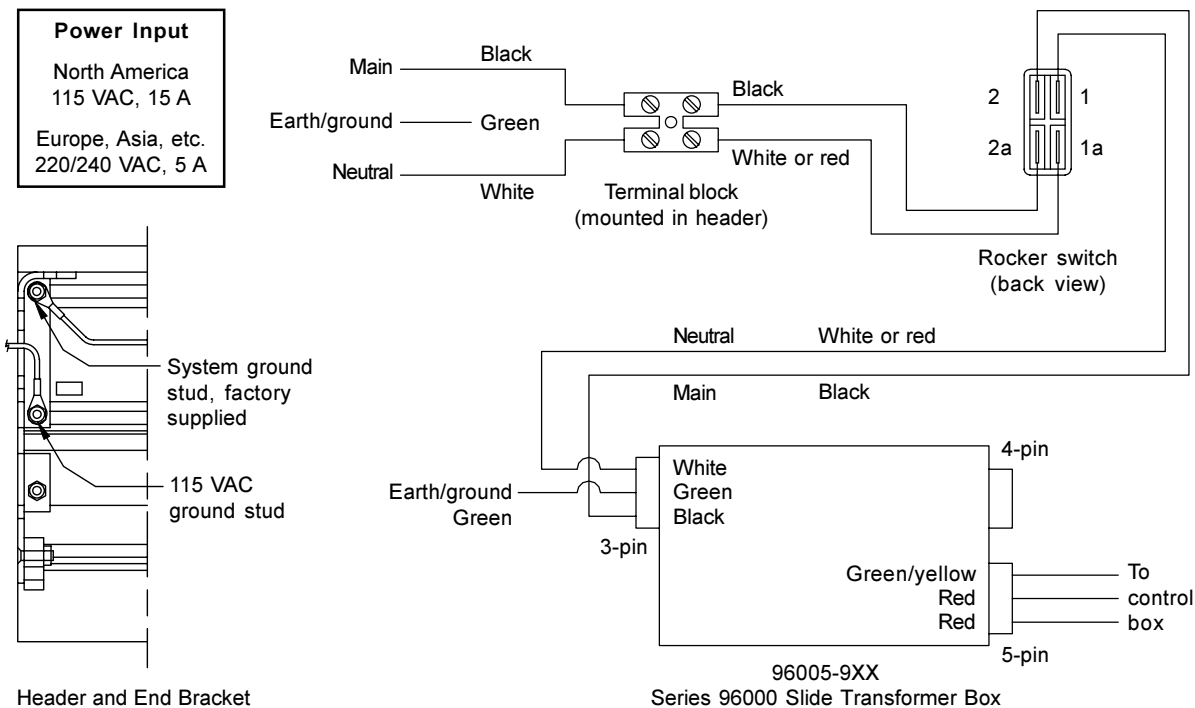


Figure 28. Power Connection Requirements

GLAZING

1. Refer to the following chart for maximum weight of door, maximum weight of glass, and maximum glass thickness.

Door/Panel	Max. Weight of Door and Glass*	Max. Glass Thickness
SX Door Inside Slide	150 lbs. (68 kg)	1" (25 mm)
SX Door Outside Slide	150 lbs. (68 kg)	1" (25 mm)
SO Swing Out Panel	200 lbs. (90 kg)	5/8" (16 mm)
O Fixed Panel	200 lbs. (90 kg)	1" (25 mm)
X Sliding Door	200 lbs. (90 kg)	1" (25 mm)
Transom	Varies	1/4" to 1" (6 mm to 25 mm)

* The average weight of a 42" (1067 mm) door or panel with glass is 40 lbs. (18 kg).

GLAZING (continued)

- Tempered or laminated glass is required in doors and panels per ANSI Z97.1-1972.
- If the installation is a “standard package,” the glass sizes both with and without 2” (51 mm) muntins are called out in the Dor-O-Matic details and specifications book, along with the model number of the package.
- If the installation is **not** a standard package, measure the width and height between the stile extrusions and **subtract 1/2” (13 mm) (Figure 29)**. This is the glass size to order.
- Order the correct glass stops for the thickness of glass in the application.
- All final opening and closing speed adjustments should be made after the glass is installed.
- Transom glass is measured in the field and can be 1/4” (6 mm) to 1” (25 mm) thick non-tempered glass. Use one or two transom hanger tubes for packages over 10’ 0” (3048 mm) wide to prevent header deflection.

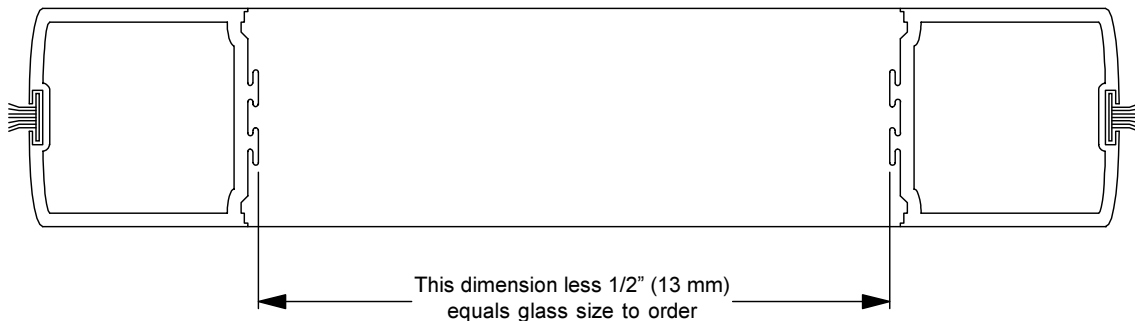


Figure 29. Glass Measurement

2. A feature unique to Dor-O-Matic is the “Security Glazing System.” When glazing the doors and panels, snap in two horizontal and two vertical exterior glazing stops. Be sure the stops are securely snapped into the rails and stiles. Place the bottom of the glass onto the nylon glazing blocks and tilt up into vertical position. Have a helper hold the glass in place, and proceed to snap-in the interior glazing stops. This design makes the glass non-removable from the exterior. Finally, check that the rubber trim of the glazing stops is not pinched or tucked against the glass. Run a pocketknife or small scraper around the perimeter of the glass to correct any such problems.

RELEASE FOR SERVICE

Clean the glass. Install all safety, traffic control, and instruction decals on the door as required. **This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!** Present the keys to the owner or general contractor. Demonstrate the unit; review all safety features as well as the safety check that is to be performed by the owner each morning.



IMPORTANT

Install all safety, traffic control, and instruction decals on the door as required.



BBU250

Instruction Manual 94015-900 Battery Back-Up



DOR-O-MATIC®

7350 W. Wilson Ave.
Harwood Heights, IL 60706

Toll Free: 1-800-543-4635
In Illinois: 1-708-867-7400
Technical Support: 1-888-942-9945
Engineering FAX: 1-708-867-1177

www.doromatic.com

DA - 342

INDEX

BBU250

94015-900 Battery Back-Up

<u>TITLE</u>	<u>PAGE</u>
COVER PAGE	1
INDEX	2
GENERAL IMPORTANT INFORMATION	3
PART IDENTIFICATION INSTALLATION	4
WIRING SET-UP	5
WIRING DIAGRAMS	6-7
WALK-THROUGH TEST SERVICE	8

GENERAL

The BBU250 Battery Back-Up 94015-900 provides reliable and uninterrupted power to the 96K Sliding Door System in the event of main AC power loss. The included batteries recharge automatically when the unit is connected to the 96K Transformer Box 96005-900/-991. Audible and visual indicators report the status of the unit.

The BBU250 may be field-wired in one of three ways to achieve the following functionality:

1. Door and sensors continue to operate normally (dependent on battery charge and door usage). A fully charged BBU250 should operate a standard bi-parting package and all 24V accessories for approximately 250 cycles.
2. Door opens and remains in the open position.
3. Door closes **after all sensors** are clear and remains in the closed position.

IMPORTANT INFORMATION

- **CAUTION:** To reduce the risk of fire, connect only to a circuit provided with overcurrent protection in accordance with the National Electrical Code ANSI/NFPA. Equipment must be connected to ground.
- If the equipment has an internal energy source (the battery), the output may be energized when the unit is not connected to the 96K Transformer Box.
- To de-energize: place the remote switch in the "OFF" position and/or place the battery power lever in the "DOWN-OFF" position. Next, disconnect the unit from the 96K Transformer Box. Finally, disconnect the battery.
- Do not attempt to disassemble the unit. Other than the fuse (F2), the unit has no user serviceable parts.
- Used batteries must be recycled. Deliver used batteries to an appropriate recycling facility.

PART IDENTIFICATION

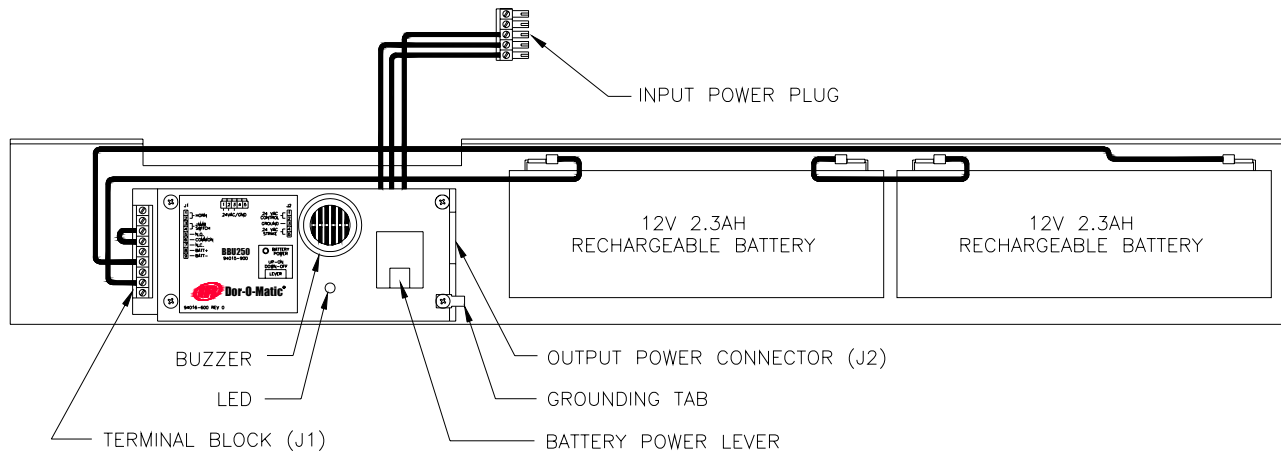


Figure 1: BBU250 Battery Back-Up

INSTALLATION

Important: Verify that main AC power to the 96K Sliding Door System is shut off to prevent unintended door movement.

1. Locate a convenient place in the header to mount the BBU250. It is recommended to locate the unit close to the 96K Transformer Box.
2. Using a drill or chisel, create an entry point in the header extrusion channel (Figure 2) for the attaching bolts.
3. Insert the M6 bolts (included) into the channel and slide to the desired location.
4. Attach the BBU250 to the header with the M6 nuts (included).
5. Locate a convenient place on the jamb to mount the OFF-ON Key Switch (84222-900). It is recommended to locate the key switch on the jamb closest to the BBU250.
6. Prepare the jamb using the template provided with the key switch, route the cable into the header, and mount the key switch to the jamb with the included hardware.

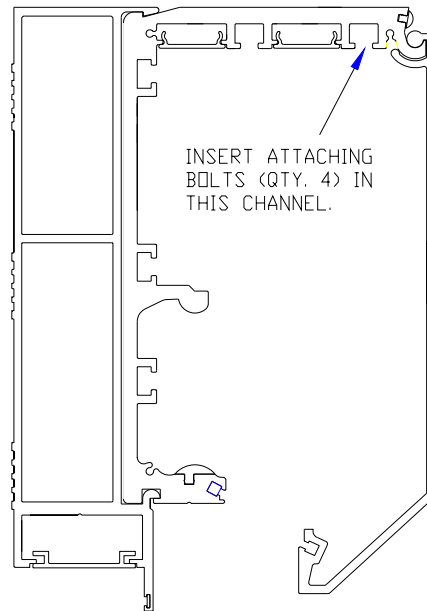


Figure 2: Header Extrusion Channel

WIRING SET-UP

CAUTION: Do NOT attach plug to output power connector J2 on BBU250 until after wiring set-up is complete.

Note: Refer to the appropriate wiring diagram (Figure 3 – without electric lock or Figure 4 – with electric lock) for complete wiring details. For ease of wiring, it is recommended to remove the 96K Transformer Box from the header.

1. Verify red (+) battery lead is connected to terminal J1-8 and black (-) battery lead is temporarily connected to terminal J1-6 on BBU250.
2. Remove jumper wire from J1-1 & J1-2 on BBU250 to temporarily disable audible (buzzer) alert.
3. Cut off connector plug from OFF-ON key switch cable, strip wire ends, and connect to J1-3 & J1-4 on BBU250. Verify key switch is in OFF position.
4. Disconnect 5-Pin output power plug & grounding plug on 96K Transformer Box and carefully route cable to BBU250. Do NOT connect to BBU250 at this time.
5. Connect input power plug of BBU250 to output power connector on 96K Transformer Box.
6. Determine which accessories are to be powered by the BBU250 and which accessories are to be powered by the 96K Transformer Box. Any accessory rated for 27VDC can be connected to the BBU250 at J2-4 & J2-5.
7. Connect 5-Pin output power plug to output power connector J2 and connect ground plug to grounding tab on BBU250.
8. Carefully remove black (-) battery lead from J1-6 and connect to J1-9 on the BBU250.
9. Re-install 96K Transformer Box if necessary.
10. Connect jumper wire to J1-1 & J1-2 if audible (buzzer) alert is required.
11. Dress all wires and cables to allow proper door movement.
12. Perform walk-through test.

WIRING DIAGRAMS

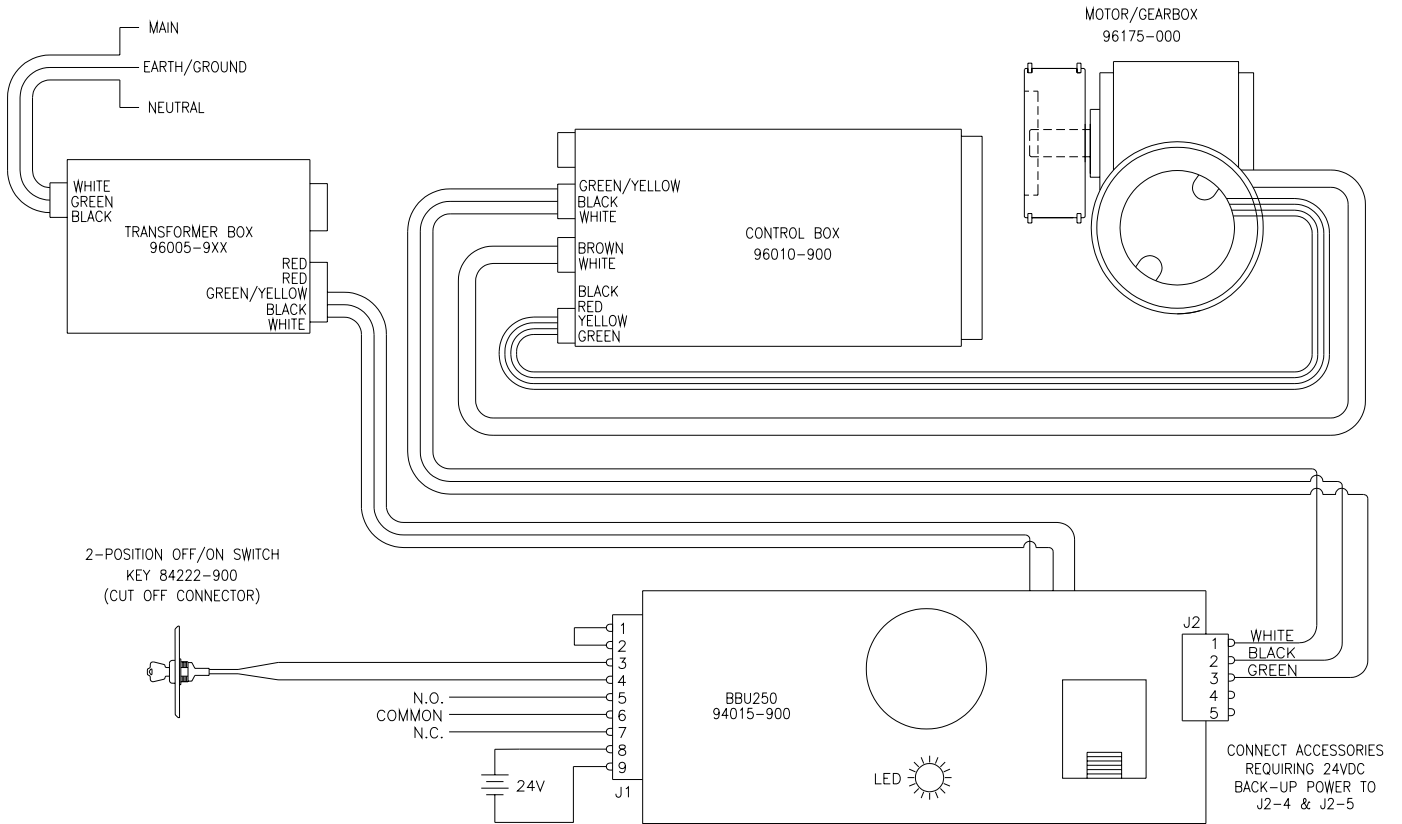


Figure 3: Wiring Diagram Without Electric Lock

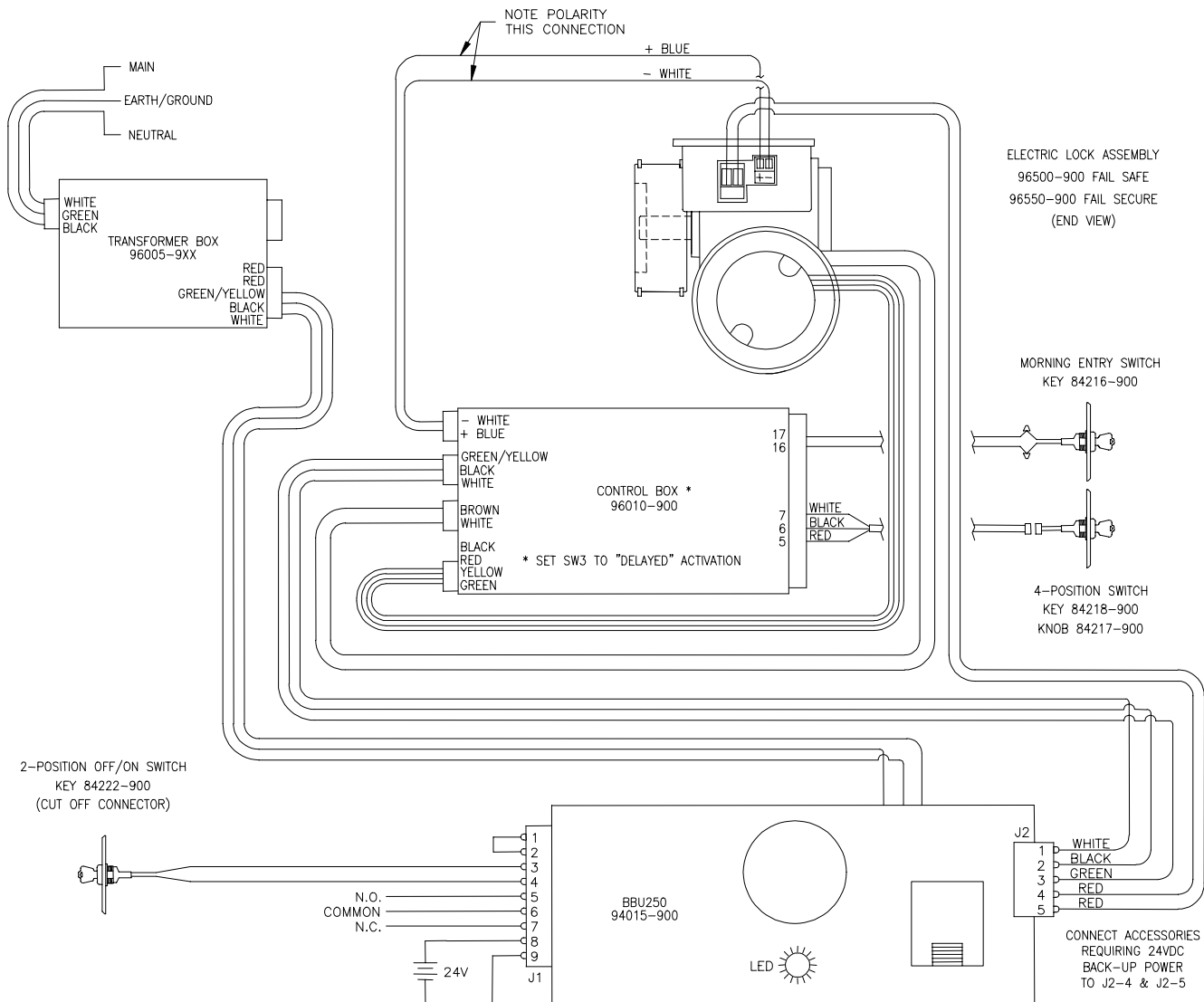


Figure 4: Wiring Diagram With Electric Lock

WALK-THROUGH TEST

1. Turn on main AC power to the 96K Sliding Door System.
2. Verify that the sliding door system is operating properly. Perform all necessary adjustments and tests. Refer to the 96K instruction manuals for more details.
3. Once the 96K Control Box is operating properly, place the OFF-ON key switch in the ON position. The BBU250 should now be ready for operation.
4. While sliding door is in normal operation, abruptly turn off main AC power to the sliding door system. All door operation should remain unaffected.
5. Verify that the audible (buzzer) alert and red LED indicator is functioning. Buzzer will sound continuously and LED indicator will illuminate continuously when AC power failure occurs. Check buzzer volume with header access cover completely closed. Note: If audible alert is not required, remove jumper wire from J1-1 & J1-2.
6. Continue to operate sliding door system and verify proper BBU250 operation. If door shows sluggish movement, halts, or loses control, battery may be undercharged.
7. Reapply main AC power to the sliding door system. Audible (buzzer) alert and red LED indicator should shut off.

SERVICE

- When servicing the 96K Sliding Door System, verify that main AC power is shut off and that the OFF-ON key switch for the BBU250 is in the OFF position. This will prevent any unintended door movement.
- The battery power lever may also be used to disable the BBU250. Pull lever down to disconnect battery power. **Lever should only be used when main AC power is shut off.**
- Battery level should be 22-27 VDC to operate door system during AC power failure. Allow 24 hours for charging when battery level reaches 21 VDC or lower.
- Do not attempt to disassemble the unit. Other than the fuse (F2), the unit has no user serviceable parts.

If, after troubleshooting a problem, a satisfactory solution cannot be achieved, please call Dor-O-Matic Technical Support at 1-888-942-9945 for further assistance.

DO NOT leave any problem unresolved. If you must wait for the following workday to call, leave the door inoperable until satisfactory repairs can be made. **NEVER** sacrifice the safe operation of the automatic door or gate for an incomplete solution.