

Z7000

Surface Applied Swing Door Operator

INSTALLATION INSTRUCTIONS



MADE IN THE USA!!!

DC CONTROLS, INC.

15001 Beltwood Pkwy.
Addison, TX 75001

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1. General Requirements

- Power 120 VAC, 60 Hz, 15 AMP
- Actuation wiring (22 AWG)
- Acceptable header support

2. Handicap Code Requirements

Activation switch location must be in view of the door and not on the door or frame. See ANSI 117 for guide lines on activation switches.

Note: Refer to Section 10 for required decals.

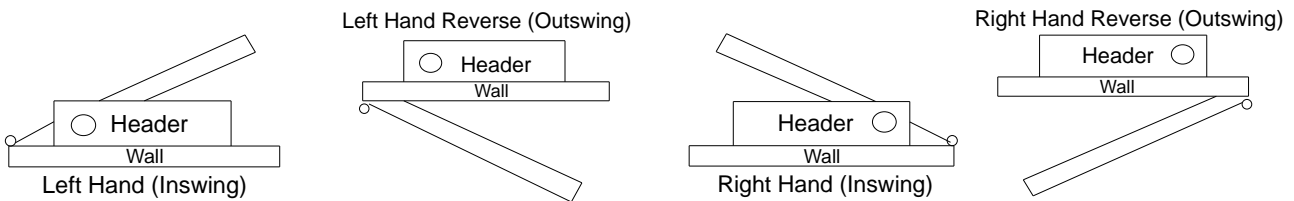
Minimum of 5'x5' clear and level floor is required on both sides of the door way.

Bottom horizontal rail must be at least 7 1/2" on aluminum/glass doors. (Local codes may require more.)



3. Operator Handing

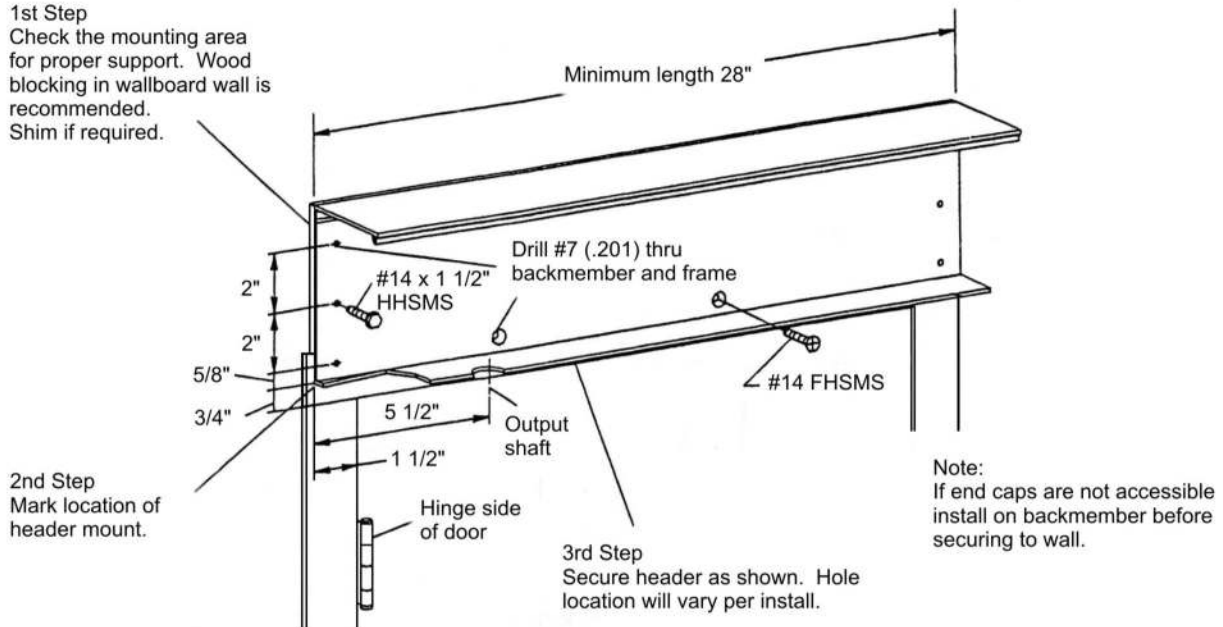
Confirm handing of door before installing the operator.



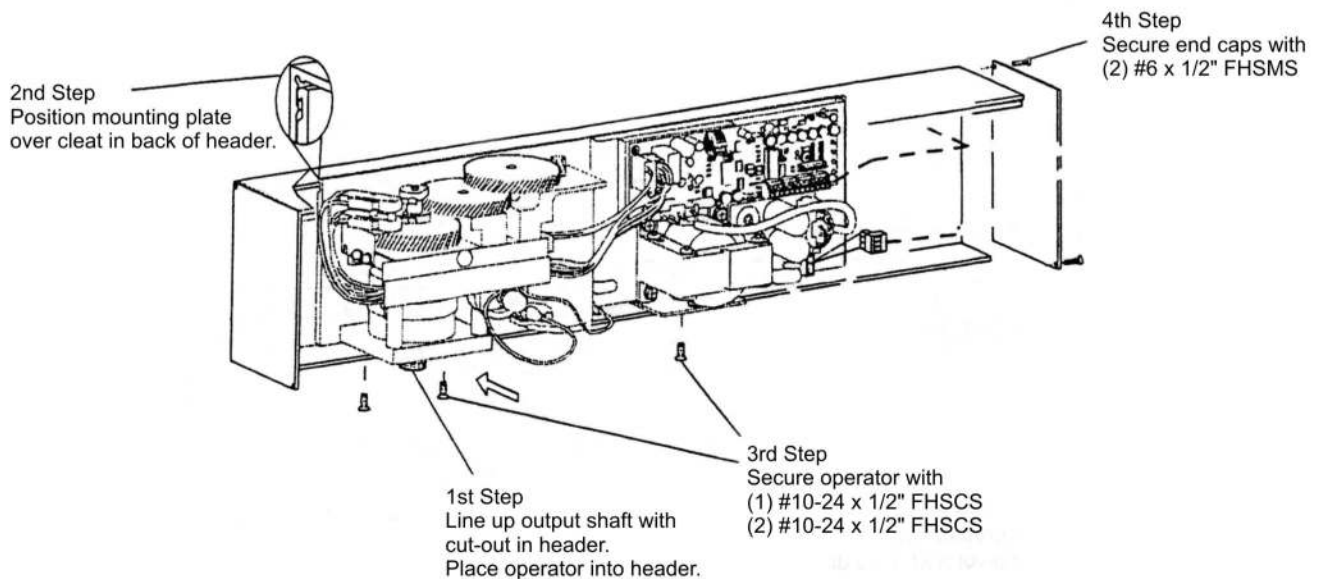
4. Installing the Header and Operator

Note: Make sure the header is secured solid to wall and door frame.

Mounting the Header

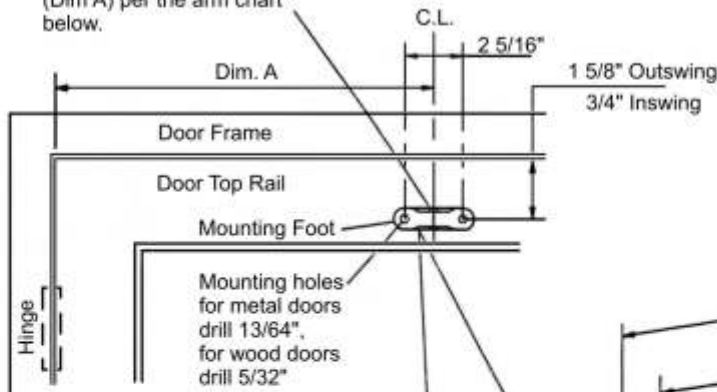


Mounting the Operator



5. Installing the Connecting Arm

1st Step
Locate and mount the foot (Dim A) per the arm chart below.



Mounting Foot Assemblies

A. Metal Doors

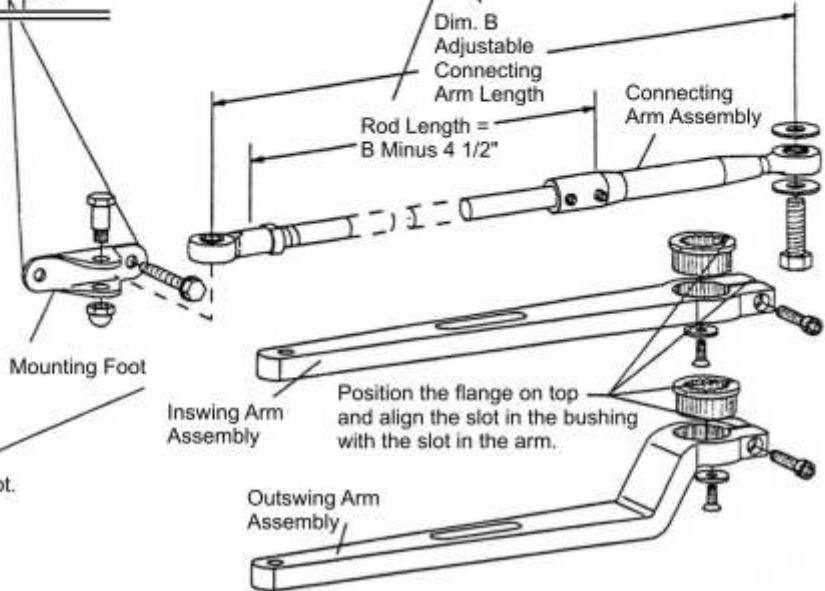
1. Mounting Foot
2. Bolts: 1/4-20 x 2 1/4"
3. Split Ring Lockwashers 1/4"
4. Acorn Hex Nut 1/4-20

B. Wood Doors

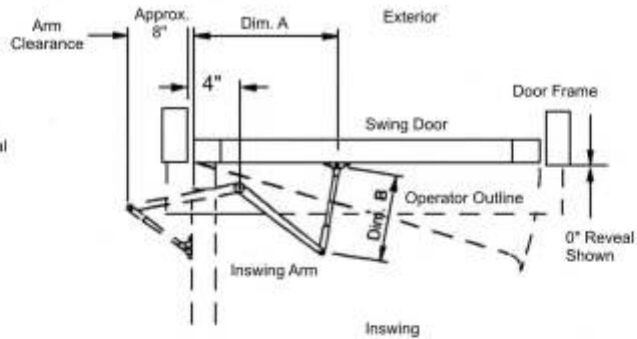
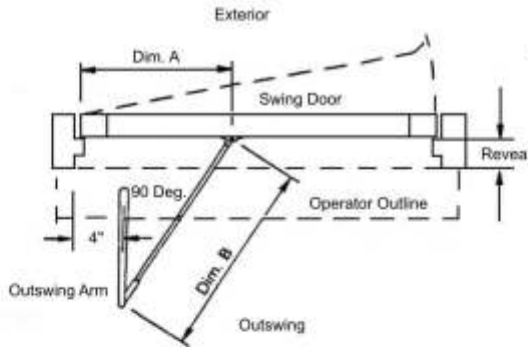
1. Mounting Foot
2. Screws #14 x 1 1/2"

3rd Step
Assemble the connecting arm and attach it to the mounting foot.

2nd Step
Determine the proper length of the adjustable rod (Dim B) and cut as required.



Standard Arm Connections



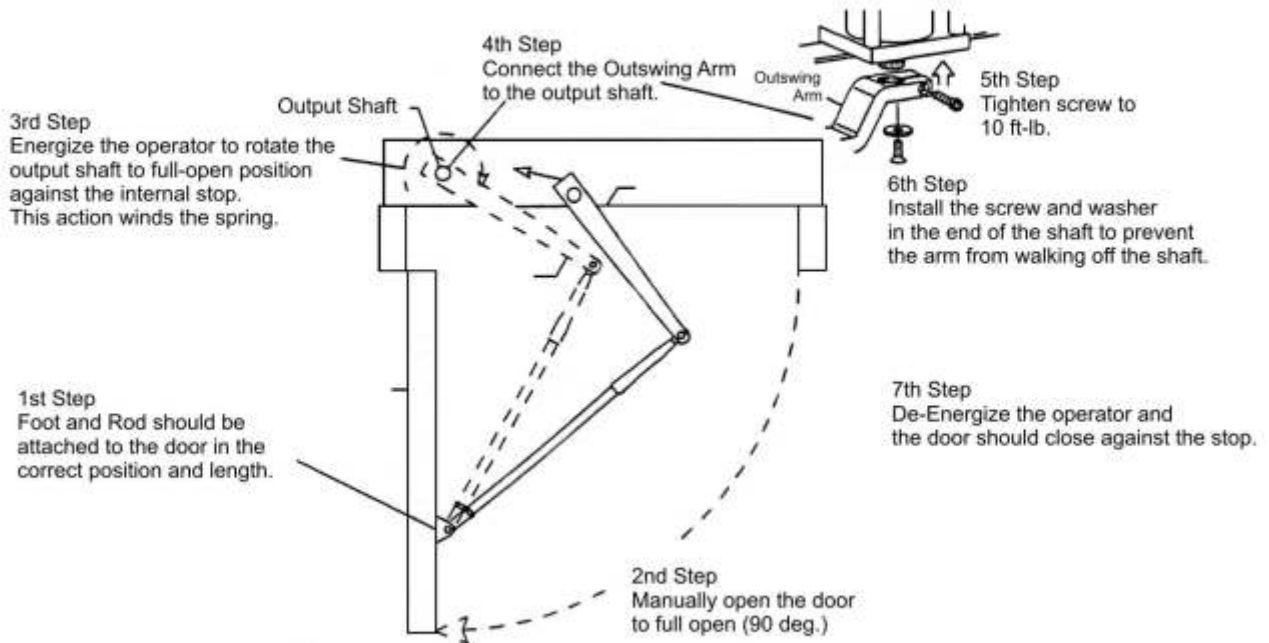
REVEAL	BUTT HINGE OR OFFSET PIVOT				CENTER PIVOT 2 3/4"			
	INSWING		OUTSWING		INSWING		OUTSWING	
	A	B	A	B	A	B	A	B
0	13"	10"	16"	17 1/8"	17"	9"	16"	16 1/2"
1/2"	13"	10"	16"	17 1/2"	17"	9"	16"	16 7/8"
1"	13"	10"	16"	17 3/4"	17 1/2"	9 1/2"	16"	17"
1 1/2"	14"	10"	16"	18 1/4"	17 1/2"	9 1/2"	16"	17 3/4"
2"	14"	10 1/2"	16"	18 1/4"	18"	10"	17"	18 3/4"
2 1/2"	14"	11 1/2"	16 1/2"	19 1/4"	19"	10 1/2"	17"	19"
3"	15"	12 1/2"	16 1/2"	19 3/4"	19"	10 1/2"	18"	20"
3 1/2"	16"	11"	16 1/2"	20 1/8"	19"	10 1/2"	18"	20 1/2"
4"	17"	12"	17"	20 3/4"	25"	17"	19"	21 1/2"

NOTE: If reveal is greater than 4" consult DC Controls, Inc.
For 3 3/4" Center Pivot add 1" to Dim. A

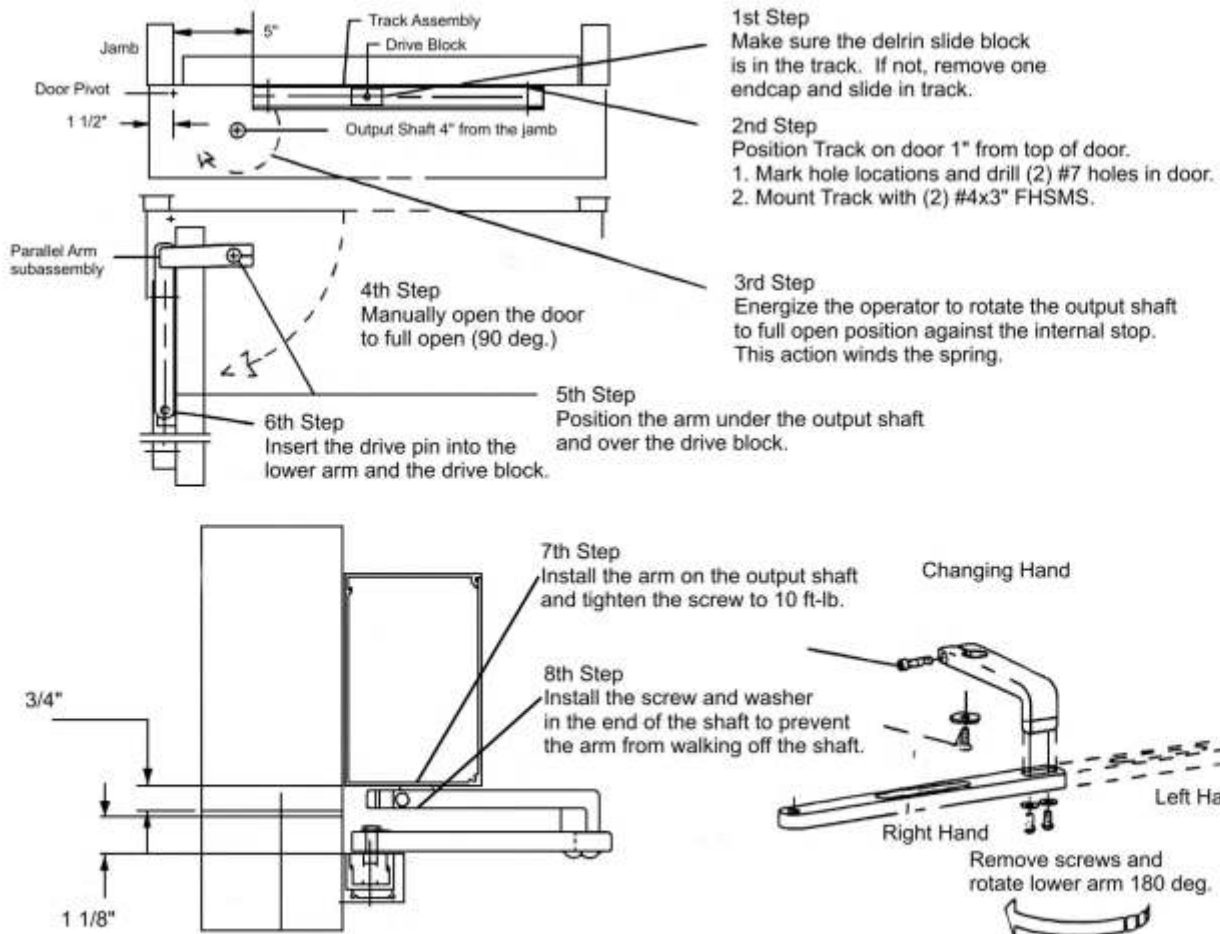
6. Setting the Open Stop and Loading Operator Spring

CAUTION: When installing the Arm or when servicing any swing door operator, be sure to keep your face, hands, and arms clear of the arm's swing path. **SERIOUS INJURY** could result from the moving arm due to the control and spring force.

Note: The arm must be located correctly on the output shaft so that the door is 90 deg. to the frame when at full open position.



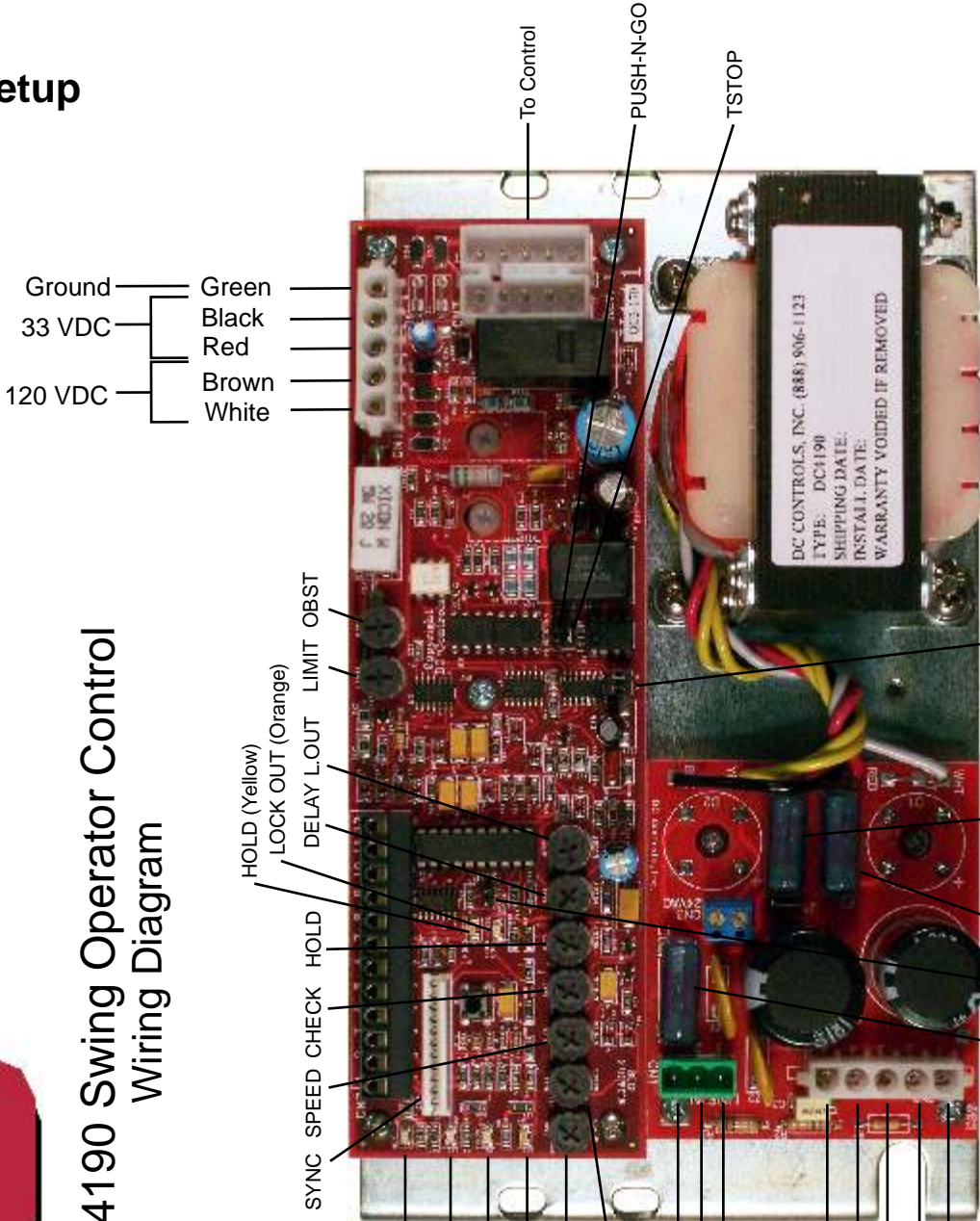
7. Installing Parallel Arm and Track





8. Setup

DC4190 Swing Operator Control Wiring Diagram



Cn2 Pin-Out:

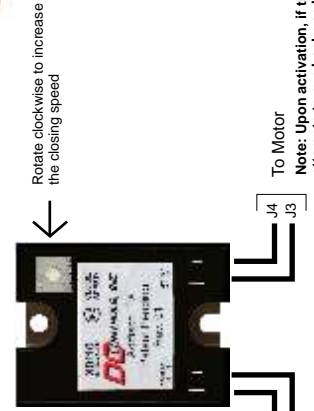
- 1 - 24 VDC
- 2 - Activation
- 3 - Common
- 4 - Safety
- 5 - Toggle Switch
- 6 - Common
- 7 - 24 VDC
- 8 - Common
- 9 - SNR
- 10 - SNS
- 11 - Unlock
- 12 - Open

Pot Adjustments:

Note: These settings are factory default and are sufficient for typical installation startup.

- ACCEL - 1:00
- DACCL - 1:00
- SPEED - 1:00
- CHECK - 1:00
- HOLD - 1:00
- DELAY - 10:00
- L OUT - 4:00
- LIMIT - 12:00
- OBST - 12:00

X0110 Close Speed Control Wiring Diagram



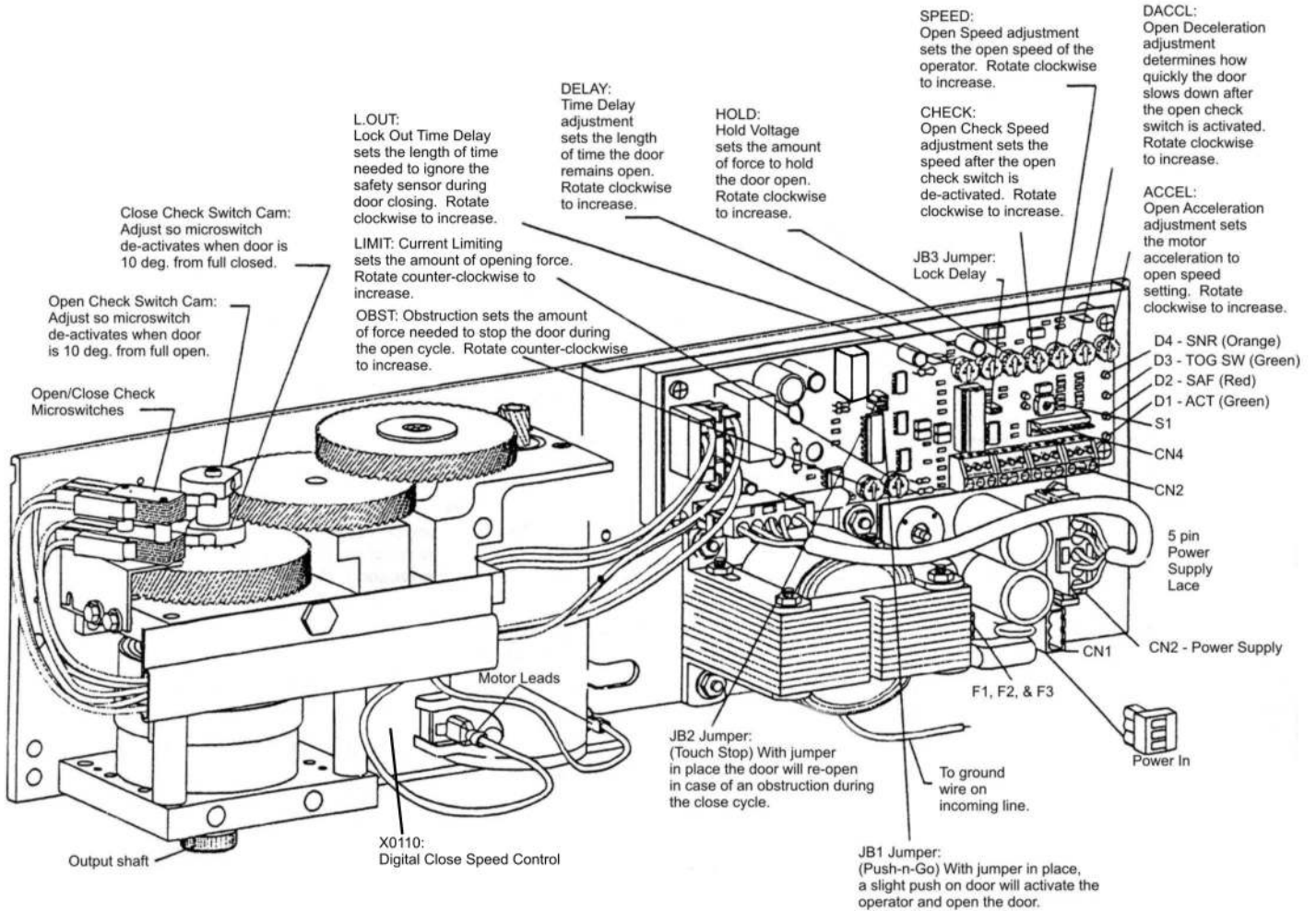
From Control [Positive when closing J1
Positive when opening J2]
To Motor [J3
J4]
Note: Upon activation, if the motor attempts to run backwards; disconnect power and swap the motor leads

Fuses:

- F1 - Main (110 VAC Input)
- F2 - Motor (120 VDC)
- F3 - Control (33 VDC)

9. Adjustments

The following information is provided as a recommendation for safe operating adjustments. It should be adhered to when installing or servicing the Z7000. See ANSI 156.19

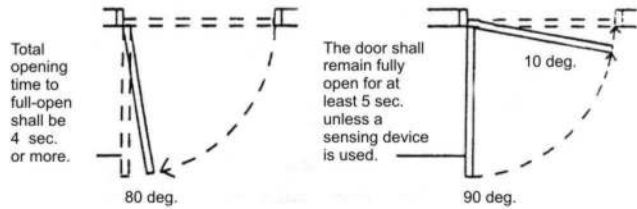


ANSI Chart - Opening and Closing Time in Seconds

Door Panel Width (In Inches)	Door Weight (In Pounds)				
	100	125	150	175	200
30	3.0 sec.	3.0 sec.	3.0 sec.	3.0 sec.	3.5 sec.
36	3.0 sec.	3.5 sec.	3.5 sec.	4.0 sec.	4.0 sec.
42	3.5 sec.	4.0 sec.	4.0 sec.	4.5 sec.	4.5 sec.
48	4.0 sec.	4.5 sec.	4.5 sec.	5.0 sec.	5.0 sec.

The force required to prevent a door from opening or closing shall not exceed 15 ft-lb applied 1" from the latch edge at any point of opening or closing. The kinetic energy of a door in motion shall not exceed 1.25 ft-lb. Note: To be in compliance with the force and energy requirements, set the closing and opening speeds as per the chart above.

Power Failure: Manual pressure not to exceed 15 ft-lb at a point 1" from the latch edge. (This may vary by local code)



Opening Time: Door shall be field adjusted so that opening time to open check or 80 deg. shall be 3 sec. or more.

Closing Time: Door shall be field adjusted to close from 90 deg. to 10 deg. in 3 sec. or longer. Doors shall close from 10 deg. to full closed in 1.5 sec. or more.

10. Safety Decals

Note: Decals should be a minimum of 6" diameter and be visible from both sides of the door. Apply decals as shown.



Required to meet ANSI standards. This decal is included with each operator.



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