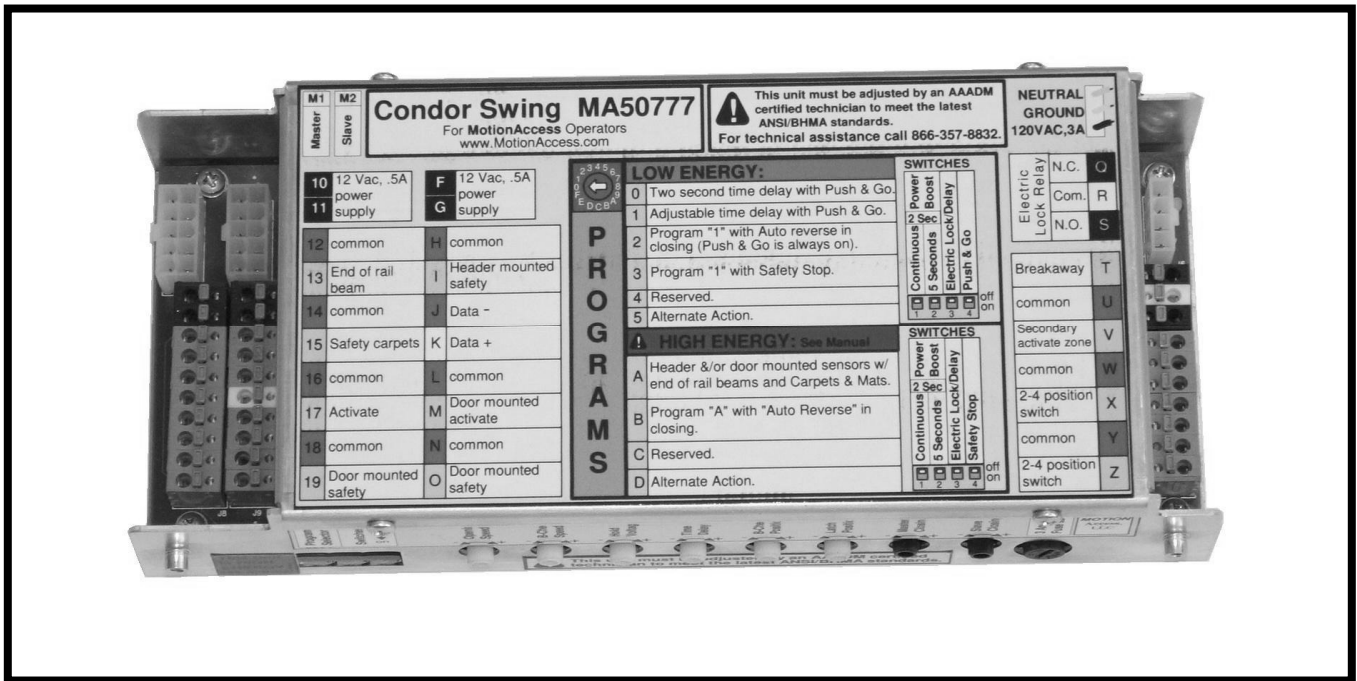


MOTION ACCESS, LLC

automatic entrance solutions

Installation & Operation Manual

CONDOR SWING MA50777 Swing Control



For Motion Access Condor Swing Operators

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MA50777-MNL_revN


IMPORTANT INSTALLATION INSTRUCTIONS


WARNING – To reduce the risk of severe injury or death:

- 1) READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
- 2) Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to pivots, and other hardware before installing the operator.
- 3) Remove all manual closers that are connected to the door before installing the operator.
- 4) Do not connect the door operator to the source of power until instructed to do so.
- 5) If being used, locate the control station: (a) within sight of the door, (b) away from all moving parts of the door.
- 6) Never let children operate or play with door controls. Keep the remote control (where provided) away from children.
- 7) Personnel should keep away from a door in motion and keep the moving door in sight until it is completely closed or opened. **NO ONE SHOULD CROSS THE PATH OF A MOVING DOOR.**
- 8) Test the door's safety features once a day. Have a trained door systems technician make any adjustments to the opening or closing speeds and retest the door operator's safety features. Failure to adjust the operator properly may cause severe injury or death.
- 9) **KEEP DOORS PROPERLY OPERATING AND BALANCED.** See Door Manufacturer's Owner's Manual. An improperly operating or balanced door could cause severe injury or death. Have a trained door systems technician make repairs to pivots, and other hardware.
- 10) This operator is intended for indoor use only.
- 11) Use Copper, Copper-Clad Aluminum, or Aluminum Conductors when making connections to this operator.
- 12) **SAVE THESE INSTRUCTIONS.**


Section A: Installation Instructions

	<u>DANGER:</u>	This controller must be adjusted to ANSI/BHMA A156.10 and A156.19 standards by a qualified person. Unsafe operation may result if standards are not met.
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	<u>DANGER:</u>	Never attempt uses which are not covered in this manual. Serious injury or death may result.
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	<u>WARNING:</u>	Controller may already be set to High Energy if requested at time of order, or if the cover seal is broken. See item 8 for details.
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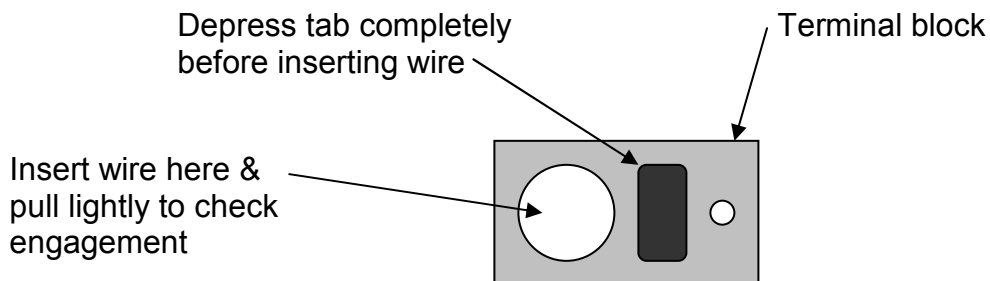
1. Ensure dedicated power (120VAC, 50/60HZ, 10A).
2. Ensure power is not shared with other equipment.
3. Main power into the header must be de-energized before making connections.
4. Incoming power wires should be connected per local codes and then connected to the power harness inside the header (see “**Wiring Diagram**” on last page).
 - a. Black – Line (Hot)
 - b. White – Neutral
 - c. Green – Ground (earth ground)

	<u>WARNING:</u>	Supply earth ground should be connected to the green ground screw inside the operator header. Severe injury or death may result if ground wire is not properly connected.
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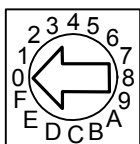
5. Install required equipment into the door opening (safety sensors, activation sensors, beams, switches, electric lock etc.).

	<u>DANGER:</u>	Connections are safety critical. Ensure wires are fastened securely in terminal blocks.
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6. Strip 3/8” off of wire ends and make connections to controller ensuring proper wire engagement. Do not connect the power harness at this time. Make all terminal block connections. Reference the attached table “**Wiring Inputs at Terminal Block**” for description of terminal usage and the attached “**Wiring Diagram**” for wire routing.



7. Connect the motor harness to the controller's M1 connector. If using two operators, connect the slave unit using the slave "extension" harness to the M2 connector.
8. Select appropriate program for the application. See the attached "**Program Selector**" table in the "**Controller Settings & Adjustments**" section for details.



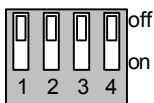
Operation	Program
Low Energy	0 thru 5
High Energy	A thru D

	<u>WARNING:</u>	Controller may already be set to High Energy if requested at time of order, or if the cover seal is broken.
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Internal jumper J2 must be in the correct position to permit High Energy programs. **All units are shipped as Low Energy unless specifically requested to be High Energy.** See the attached section "**Controller Settings & Adjustments**" for details.

	<u>DANGER:</u>	When using High Energy programs, appropriate safety equipment must be in place. See ANSI/BHMA A156.10 and A156.19 standards.
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9. Select DIP switches. See the attached "**DIP Switch Settings**" table in "**Controller Settings & Adjustments**" section for details.

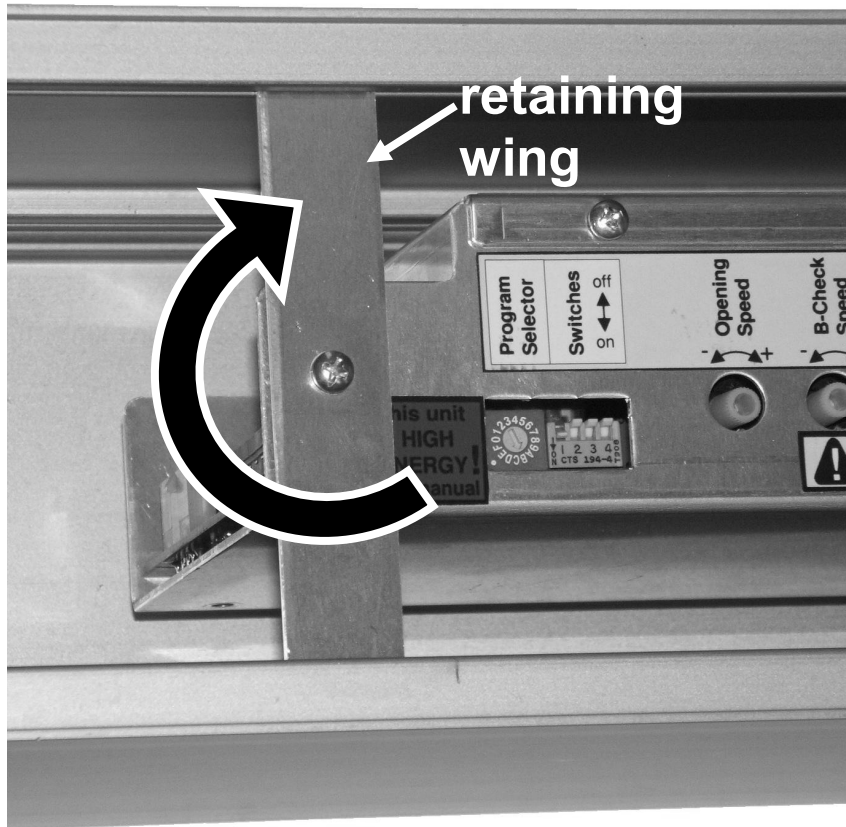


DIP Switches

Option "ON"	DIP Switch	Available		
		Low Energy	Low Energy / Low Force	High Energy
Power Boost	1 & 2	Yes	No	Yes
Electric Lock & Delay	3	Yes	Yes	Yes
Push & Go	4	Yes	Yes	No
Safety Stop (normally Safety Slow)	4	No	No	Yes

	<u>DANGER:</u>	Doors should be set up according to ANSI/BHMA A156.10 and A156.19 standards and any other applicable standards.
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10. Install control box into header ensuring wires are not pinched, rotate retaining wings into the header groove and tighten screws.




	<u>DANGER:</u>	Never modify harnesses. Unsafe operation may result. For technical assistance call MotionAccess 847-357-8832.
	<u>DANGER:</u>	Stay clear of doors and keep fingers and hands way from moving parts. The door may activate unexpectedly when power is restored.
	<u>DANGER:</u>	Route harnesses away from moving parts & sharp edges.

11. Ensure you and others are clear of door(s) and mechanism.
12. Connect power harness to controller and restore main power.
13. Provide a continuous activation signal to the control; or set the jamb/function switch to “Hold Open” if available. The spindle will rotate to the full open position.
14. Attach arm to spindle and door (see instructions provided with arm). Stay clear of the arms closing path as the loss of the activation signal or power will cause the arm to swing quickly towards the closed position.


Section B: Adjustment Instructions

	<u>DANGER:</u>	This controller must be adjusted to ANSI/BHMA A156.10 and A156.19 standards by a qualified person. Unsafe operation may result if standards are not met.
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	<u>DANGER:</u>	Never attempt uses which are not covered in this manual. Serious injury or death may result.
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15. Allow the door to close by removing the activation signal or set the jamb/function switch to "Auto".
16. Reset the controller by momentarily disconnecting power and then restoring power.
17. Activate the system and the door will go through one sizing cycle. The door can be activated by momentarily jumpering the activation terminals 16 and 17 (see "**Wiring Diagram**"). Or, the door can also be activated by pushing the door slightly open.
18. Always wait 5 seconds before reactivating after a sizing cycle.
19. Using the thumb-turn potentiometers, adjust the door operation. See the attached "**Potentiometer Adjustments**" table in the "**Controller Settings & Adjustments**" section for details. Doors should be adjusted to ANSI/BHMA A156.10 and A156.19 standards and any other applicable standards.

	<u>DANGER:</u>	This controller must be adjusted to ANSI/BHMA A156.10 and A156.19 standards by a qualified person.
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	<u>DANGER:</u>	Complete a walk through test. Refer to the latest version of ANSI/BHMA A156.10 and A156.19 for proper door setup. Ensure the door is setup to meet all applicable national & local standards.
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20. **Complete a Walk-Through-Test.** Ensure compliance with ANSI/BHMA A156.10 & A156.19 all applicable national and local standards.
21. Replace header cover/dress plates.

Table: Wiring Inputs at Terminal Block

Terminal	Function	Description (All sensors inputs are dry contacts.)
10, 11	12 Vac Power Supply	Accessory Power: Output terminals for accessory power. Do not exceed 0.5 Amp.
12,14,16,18	Commons	Commons: Commons for all the dry contact inputs.
13	End of Rail Beams	End-of-Rail-Beam: When photo beams are mounted to the end of a rail; the input is wired to this connector. This input is typically used with Header Mounted Sensors.
15	Safety Carpets	Safety Carpets: Safety carpets on the swing side of the door should be connected to this terminal.
17, M	Activate	Activate: Standard activations are routed to this connection such as push plates, header mounted activate, activation carpets and door mounted activation sensors. Not used for secondary activate zone.
19, O	Door Mounted Safety	Door Mounted Safety: The control does not respond to this input at the near-full-open position. This prevents the wall and/or rail from being mistaken as an obstruction; and allows the full capabilities of the sensors to be used.
F,G	12 Vac Power Supply	Accessory Power: Output terminals for accessory power. Do not exceed 0.5 Amp.
H,L,N,U,W,Y	Commons	Commons: Commons for all the dry contact inputs.
I	Header Mounted Safety	Header Mounted Safety: Swing side safety sensor, not active during door motion typically used with end of rail beams.
J	Data -	Output to Bodyguard
K	Data +	Output to Bodyguard
Q,R,S	Electric Lock Relay	Electric Lock Relay: Control for electric lock. Rated to accept 10A at 250Vac or 30 Vdc. Dip Switch “#3” must be “on”. Q - normally closed, R - common, S - normally open.
T	Breakaway	Breakaway: If this circuit is not closed, it will cause the control to shutdown. If a breakaway function is not being used, ensure a jumper is in place.
V	Secondary Activate Zone	Secondary Activate Zone: This input is only active when the door is not fully closed. It is typically used for trailing traffic applications (knowing act).
X	2-3 Position Switch	2-3 Position Switch: Jamb switches are typically routed to this input. The modes are: “On/Off” or “Off,” “Automatic” & “Hold Open.”
Z	2-3 Position Switch	2-3 Position Switch: Jamb switches are typically routed to this input. The modes are: : “On/Off” or “Off,” “Automatic” & “Hold Open.”

Section: Controller Settings & Adjustments

Program Selector Switch:

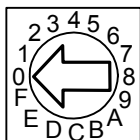


Table: Program Selector - Low Energy

Program	Description
0	Two second hold open time when activated by Push & Go. Adjustable hold open time when activated by a dry-contact.
1	Adjustable hold open time when activated by Push & Go or a dry-contact.
2	Program “1” with Auto reverse in closing (the door will power open slowly if blocked or pushed open during closing).
3	Program “1” with Safety Stop
4	Reserved.
5	Alternate action – activate to open activate to close

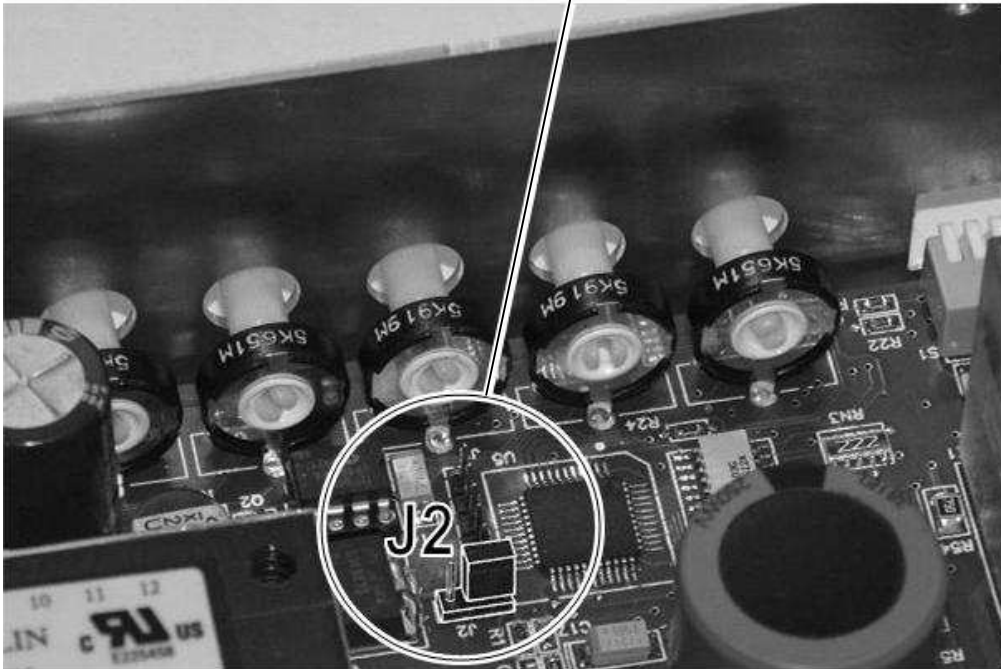
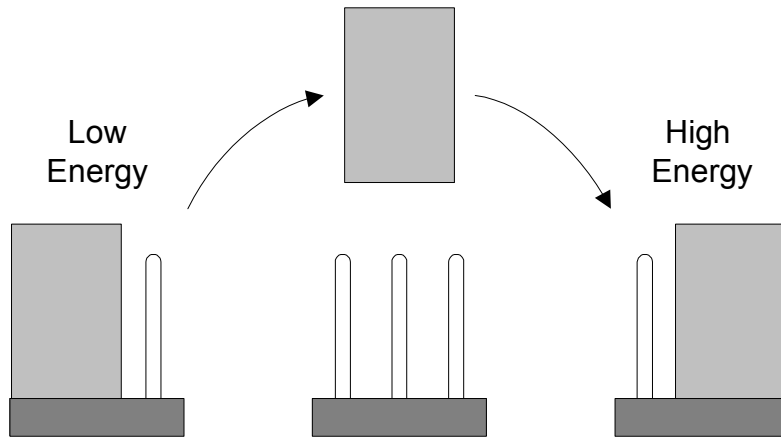
	<u>DANGER:</u> This controller must be adjusted to ANSI standards by a qualified person. Refer to the latest version of ANSI/BHMA A156.10 and A156.19 for proper door setup. Ensure the door is setup to meet all applicable national & local standards.
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Enabling High Energy Programs – the next steps are NOT required if the unit was ordered as High Energy and a “HIGH ENERGY !” warning sticker is displayed next to the “Program Selector” on the control.

Section: Controller Settings & Adjustments (continued)

****Ensure power is disconnected from the control before proceeding****


To enable the High Energy Programs, the control box must be opened and jumper J2 must be moved to the High Energy position. Safety sensors that are configured to meet the latest ANSI/BHMA A156.10 and A156.19 standards are required for High Energy operation.



	<u>DANGER:</u>	When using High Energy Programs appropriate safety equipment must be in place See ANSI standards.
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Section: Controller Settings & Adjustments (continued)

All inputs are dry-contacts.

	<u>DANGER:</u>	When using High Energy Programs appropriate safety equipment must be in place See ANSI standards.
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Program Selector Switch:

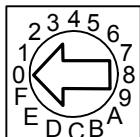



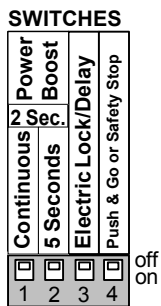
Table: Program Selector - High Energy

Program	Description
A	High Energy applications with safety equipment that meets the latest ANSI/BHMA standards.
B	Program "A" with Auto reverse in closing.
C	Reserved
D	Alternate action – activate to open activate to close

	<u>DANGER:</u>	This controller must be adjusted to ANSI standards by a qualified person. Refer to the latest version of ANSI/BHMA A156.10 and A156.19 for proper door setup. Ensure the door is setup to meet all applicable national & local standards.
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Section: Controller Settings & Adjustments (continued)

Table: DIP Switch Settings



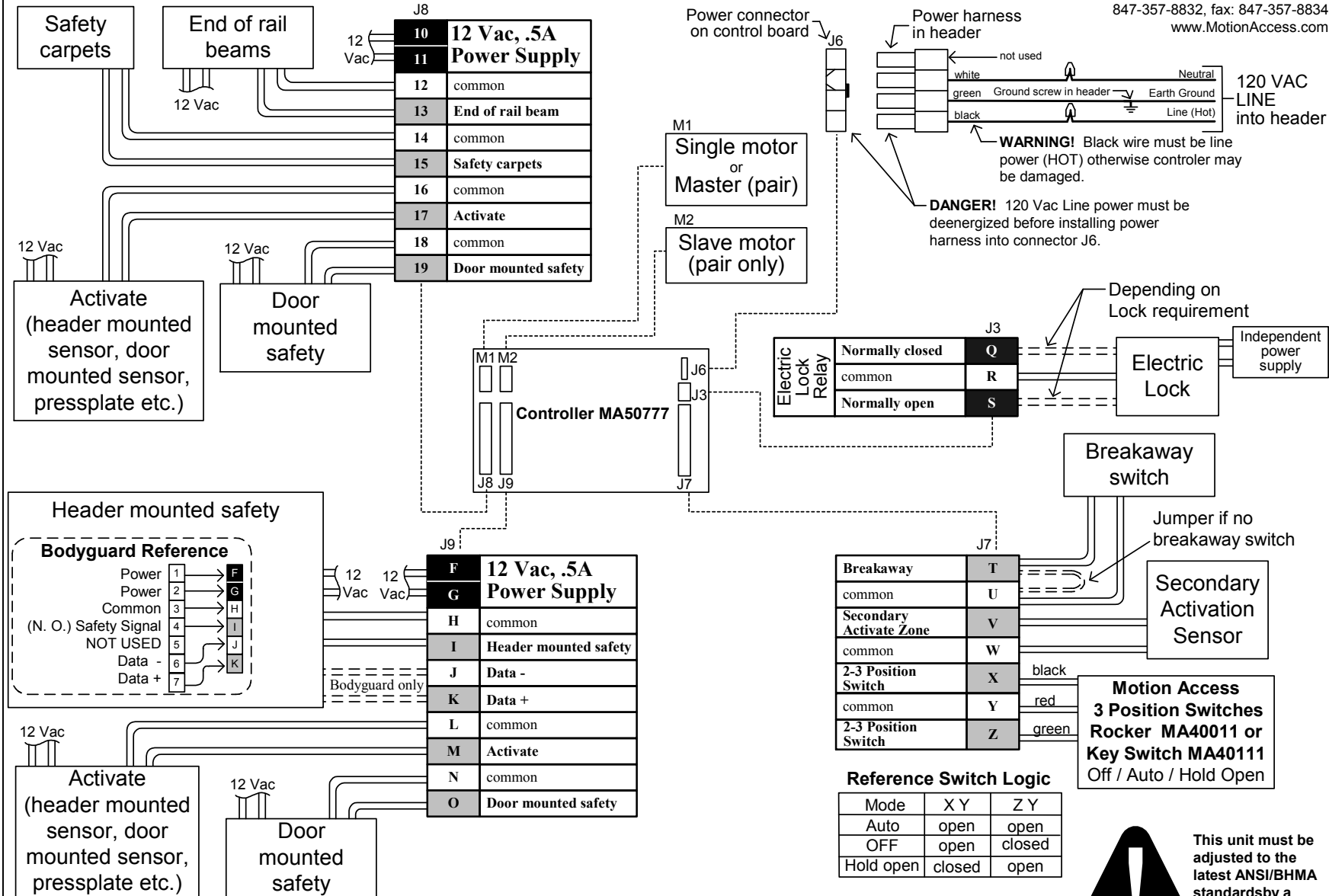
DIP#	Option "ON"	Description
1	Power Boost Continuous or 2 Sec.	While closed, the door remains powered toward the closed position until an activation signal is received. When the "Continuous" and "5 Sec." switches are both "on" the result is "2 Sec." Power Boost. Not available on "Low Force" operators.
2	Power Boost 5 Seconds or 2 Sec	While closed, the door remains powered toward the closed position for 5 seconds or until an activation signal is received. When the "Continuous" and "5 Sec." switches are both "on" the result is "2 Sec." Power Boost. . Not available on "Low Force" operators.
3	Electric Lock Delay	Enables the 10A lock relay wired through "R", "Q" and "S" terminals and sets a delay for door activation after lock is energized.
4 Low Energy	Push & Go	Door will power-open after it is manually pushed. Not available for program 5 (Alternate Action).
4 High Energy	Safety Stop	The door will stop while opening if a safety signal is detected through terminals 18 & 19 or "N" & "O") (normally the doors will slow). Slow speed opening resumes after 2 seconds. Note: If the "Hold Open" voltage is set too high the door may not stop completely.

Table: Potentiometer Adjustments

Function	Description of Function
Opening Speed	Sets the opening speed of the door.
Backcheck Speed	Sets the speed of the door near the full open position.
Hold Voltage	Sets the strength of the door in the open position such as to resist wind load etc. This setting also effects safety stop. If set too high the door will creep open when on safety stop setting.
Time Delay	Sets how long the door stays open after activation (1-45 seconds).
Backcheck Position	Sets position that backcheck speed initiates.
Latch Position	Sets position that latch speed initiates.
Master Closing Speed	Sets the closing speed of the Master door (M1).
Slave Closing Speed	Sets the closing speed of the Slave door (M2).

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Wiring Diagram: Condor Swing Control MA50777



MA50777-WIRE_revA

NOTE: SENSOR OUTPUT DRY CONTACT ONLY



This unit must be adjusted to the latest ANSI/BHMA standards by a qualified person.