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**Astro-Fold™**  
**Universal Control Box**  
Instruction Manual  
85435-900 Universal Control Box

**DOR - O - MATIC®**

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## INSTALLATION

1. **Preparation:** Refer to 65000-9XX Astro-Fold Installation Manual (DOM #65000-984) for header preparation instructions.
2. **Final Wiring Connections:**  
Connect main power to the standard switch assembly in the header. *Refer to the appropriate wiring diagram at the end of this manual 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.**

## FUNCTION & LATCH LABEL

A representation of the control box function and latch label can be seen in Figure 1. This label shows how to set up the box to work with different devices (see explanations below). Remember to disconnect the 115 VAC input to the control box before changing the function or latch dials to ensure proper operation. Also note that at power-up, the control box will not begin its sizing mode until receiving an activation signal.

SETTING	FUNCTION SELECTOR DIAL		SETTING	LATCH SELECTOR DIAL
*0	SWING-12 or 77700-900 without Magnetic Lock		0	Zero Latch
1	SWING-12 of 77700-900 with Magnetic Lock		*1	Standard Latch (3°) Preferred for Astro-Fold
2	Look-See without Magnetic Lock		2	7° Latch
3	Look-See with Magnetic Lock		3	10° Latch
4	Unassigned		4	13° Latch
5	Unassigned		5	17° Latch
6	Unassigned		6	20° Latch
7	Unassigned		7	23° Latch
8-9, A-F	Unassigned		8-9, A-F	Unassigned

**Figure 1:** Astro-Fold Universal Control Box Label

## FUNCTION & DEVICE DESCRIPTION

**SWING-12 or 77700-900 Safety Sensor:** An overhead-mounted infrared sensing device. This device is mounted on the cover/header (fold-side of the door).

**Look-See Safety Sensor:** An overhead-mounted infrared sensing device. This device is mounted to the underside of the cover/header.

**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: interior activation will open the door. Exterior activation will not open a closed door but will re-open a door in the closing cycle.

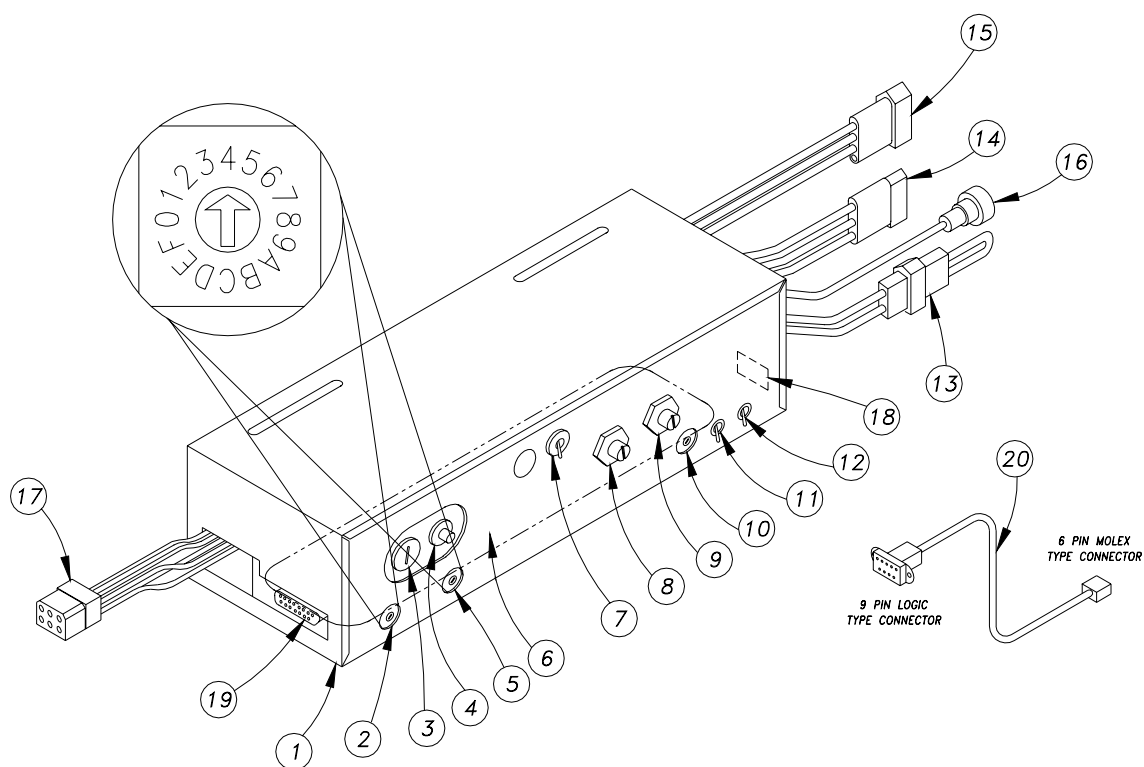
2-WAY: interior and exterior activation will open the door.

HOLD OPEN: the door will remain open.

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

***In order to meet safety requirements, this switch must be mounted in a location from which the operation of the door can be observed by the person operating the switch.***

## PART IDENTIFICATION



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|---|--|
| <p>① CONTROL BOX #85435-900/-400 115 VOLT<br/>CONTROL BOX #85435-991/-491 230 VOLT</p> <p>② FUNCTION SELECTOR DIAL</p> <p>③ FUSE, 6 AMP I.B. FOR 115 VOLT<br/>FUSE, 3 AMP I.B. FOR 230 VOLT</p> <p>④ CIRCUIT BREAKER, 2 AMP FOR 115 VOLT<br/>CIRCUIT BREAKER, .7 AMP FOR 230 VOLT</p> <p>⑤ LATCH SELECTOR DIAL</p> <p>⑥ FUNCTION &amp; LATCH LABEL</p> <p>⑦ POWER BOOST ON/OFF SWITCH</p> <p>⑧ CLOSING SPEED ADJUSTMENT (MASTER OPERATOR)</p> <p>⑨ CLOSING SPEED ADJUSTMENT (SLAVE OPERATOR)</p> <p>⑩ TIME DELAY ADJUSTMENT (1-1/2 sec. TO 30 sec.)</p> | <p>⑪ OPENING SPEED ADJUSTMENT<br/>(1=FAST, 2=MEDIUM, 3=SLOW)</p> <p>⑫ BACKCHECK SPEED ADJUSTMENT<br/>(1=ONE DOOR, 2=TWO DOORS)</p> <p>⑬ 2-PIN FEMALE - BREAKAWAY SWITCH</p> <p>⑭ 3-PIN FEMALE - ACTIVATION &amp; RAIL BEAM</p> <p>⑮ 4-PIN MALE - POWER INPUT</p> <p>⑯ 1-PIN MALE - JAMB BEAM</p> <p>⑰ 6-PIN FEMALE - MASTER OPERATOR</p> <p>⑱ 9-PIN FEMALE - SLAVE OPERATOR</p> <p>⑲ 15-PIN FEMALE - ACCESSORIES</p> <p>⑳ SLAVE CABLE - #85398-600</p> |
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**Figure 2: Astro-Fold Universal Control Box**

## SETTINGS AND ADJUSTMENTS

### 1. 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. Function:

The function is selected with the FUNCTION rotary switch. Refer to the function label for the proper setting.

#### B. 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 in the header. Give the system an activation signal. The door should open and close once, after which it is ready for normal operation.

#### C. Opening Speed:

The opening speed is selected with the OPEN SPEED switch (1=FAST, 2=MEDIUM, 3=SLOW). It is recommended that the door be operated as slow as is practical for the traffic conditions.

#### D. Backcheck Speed:

The backcheck speed is selected with the BACKCHECK SPEED switch (1=ONE DOOR, 2=TWO DOORS).

#### E. Time Delay/Hold Open Time:

The hold open time is adjusted with the TIME DELAY potentiometer (CCW=LESS DELAY, CW=MORE DELAY). The adjustment range is 1½ to 30 seconds.

#### F. Closing Speed:

The closing speed is adjusted with the MASTER and SLAVE CLOSE SPEED potentiometers (CCW=SLOWER, CW=FASTER).

#### G. Latch Location:

The latch location is selected with the LATCH rotary switch (0=0°, 7=23°).

#### H. Power Boost:

The power boost feature is turned off/on using the POWER BOOST switch. When the power boost feature is turned on, the closing force is increased approximately 7 seconds after the door has reached the latch position. This increase in closing force will assist the door to close when high winds or high stack pressures are present.

### 2. 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.

### 3. 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.

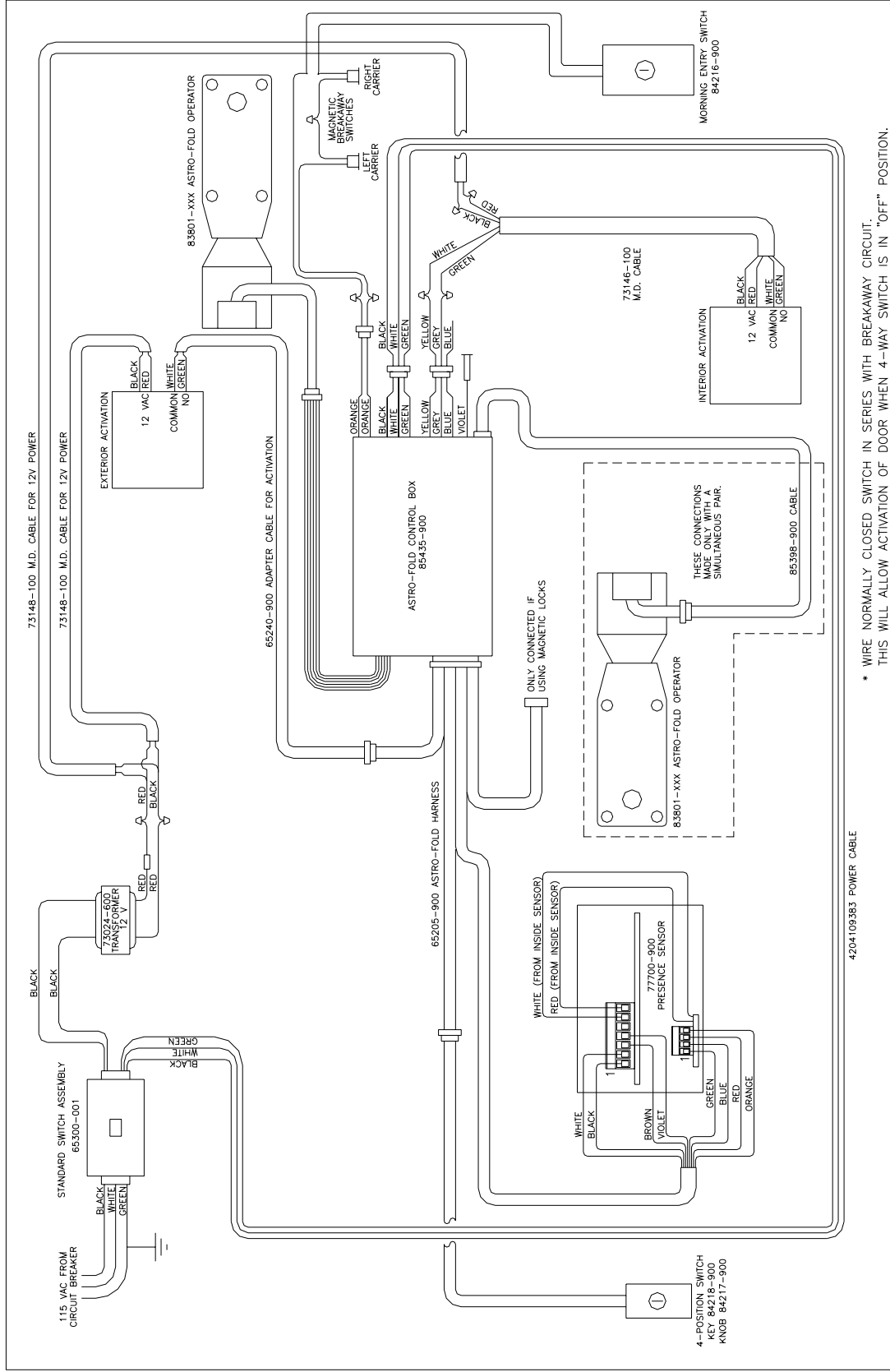
### 4. For Doors that are manually/mechanically secured:

A. Locking: Place switch in OFF, allow door to close completely, secure door.

B. Unlocking inside: Unsecure door, place switch in 1-WAY or 2-WAY, activate door once.

C. Unlocking outside: Unsecure door, activate morning entry or manually open door, place switch in 1-WAY or 2-WAY.

# WIRING DIAGRAM: ASTRO-FOLD WITH 77700-900



4204109383 POWER CABLE

\* WIRE NORMALLY CLOSED SWITCH IN SERIES WITH BREAKAWAY CIRCUIT.  
THIS WILL ALLOW ACTIVATION OF DOOR WHEN 4-WAY SWITCH IS IN "OFF" POSITION.

# WIRING DIAGRAM: ASTRO-FOLD WITH 77700-900 & MAGNETIC LOCK

