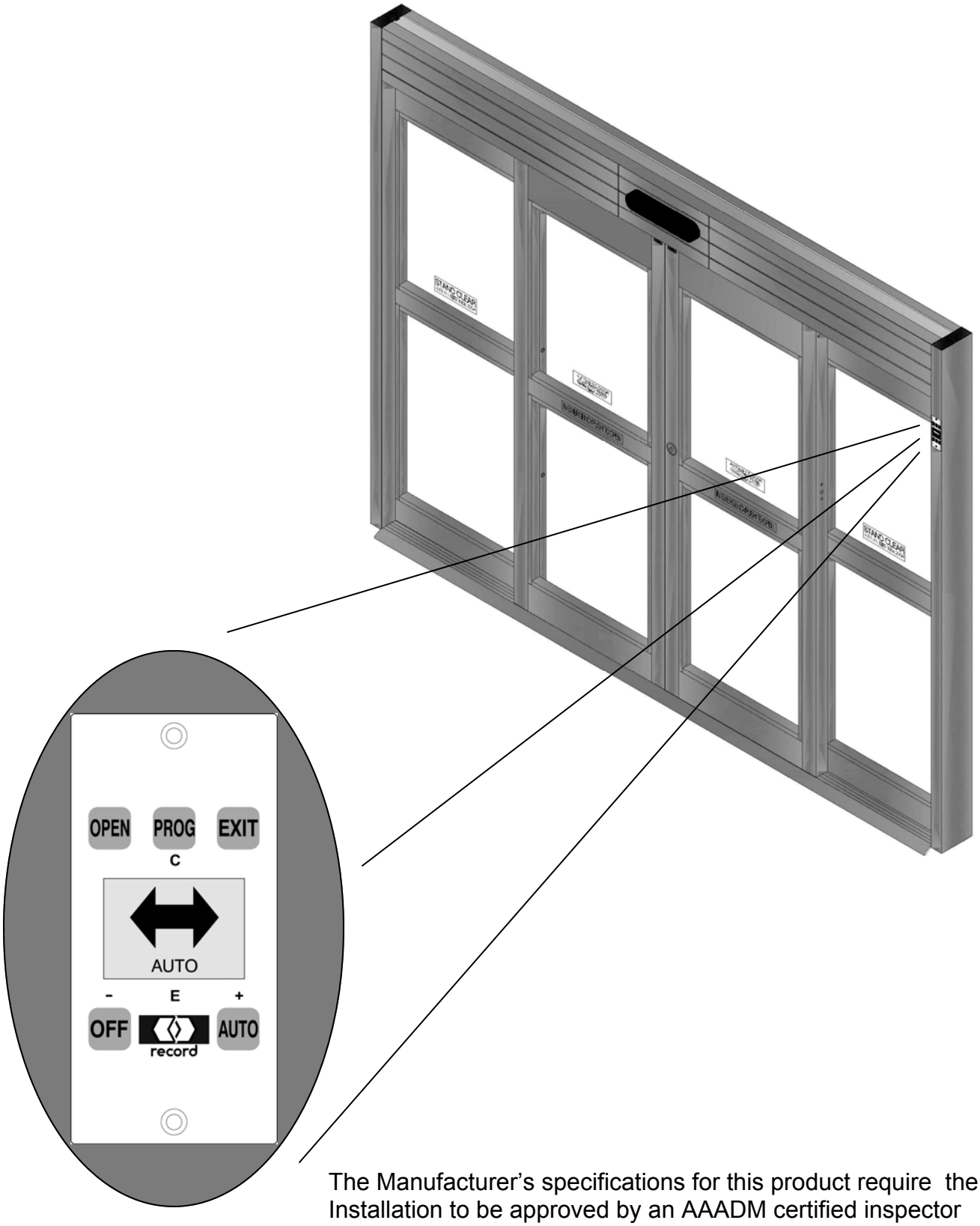
5100 Series Sliding Door
Installation Instructions



The Manufacturer's specifications for this product require the Installation to be approved by an AAADM certified inspector

5100 Series Sliding Door
Installation Instructions

The record-usa 5100 sliding door has been designed, built, and tested to provide years of service.

The life of the door package is directly related to how carefully the installation is accomplished and how accurately the instructions are followed. Installation of this door package is to be performed by properly trained and experienced installers knowledgeable with local code requirements and all requirements of ANSI A156.10 Standards for Power Operated Pedestrian Doors. The authorized service / installation dealer must perform all measurements for forces, speeds, and times to insure proper and safe operation.

record-usa is not responsible for improperly adjusted or maintained automatic doors or activation / safety systems and assumes no responsibility for damages caused by automatic door systems that have not been properly installed, tested, and adjusted.
Verify the door may be opened without power applied to the unit.
Verify the force required to open the door with power disconnected will not exceed 50 pounds.
Verify the door does not develop kinetic energy in excess of 7 foot-pounds force.
Verify the door does not require a force greater than 30 pounds to prevent the door from closing.

OWNER INFORMATION TO BE PROVIDED BY THE DISTRIBUTOR / INSTALLER

* After the installation instruct the owner on the safe operation of the door.
* Location and proper use of the user control panel.
* Location of the main cutoff breaker.
* Necessary warnings not covered in general instructions.
* Owners Manual and Daily Safety Checklist.
* Phone number(s) for the local servicing dealer.
* What to do in the event that a dangerous situation should occur, and how to turn off the doors and call for service.

NOTE: GLASS AND GLAZING ARE NOT INCLUDED IN THE STANDARD PACKAGE. The glazing Materials in all panels shall comply with the requirements of the American National Standard Performance Specifications & Methods of Test for Safety Glazing Materials used in Buildings, Z97.1.2009.

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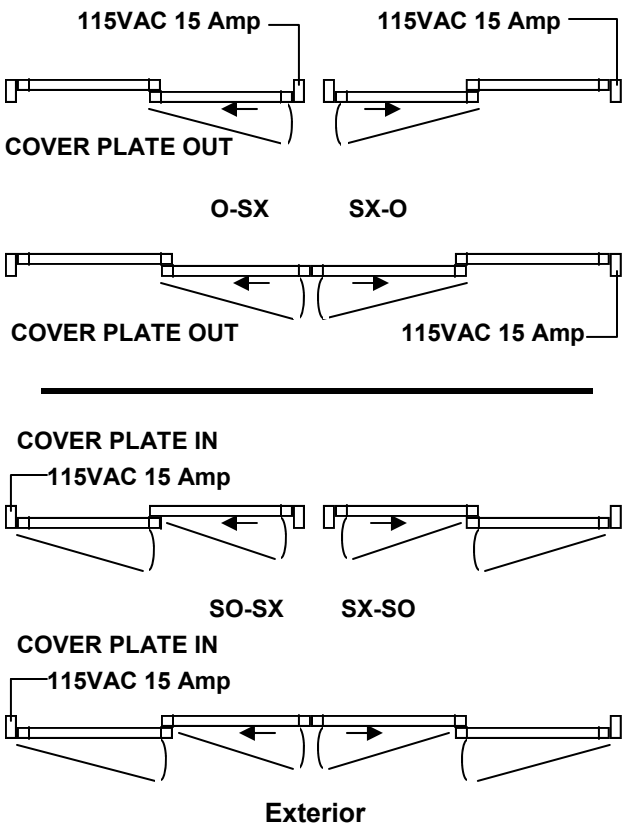
TOOL LIST

· Knife	· Hammer Drill	· Shim Material (shingles)
· 4' Level	· Tape Measure	· Flat & Rat tail files
· Hammer	· Electrical Tape	· Combination wrench set (standard & metric)
· Chalk Line	· Extension Cord	· Screwdrivers (#2 & #3 Philips, Sm. & Med.)
· Wire Ties	· 3/8" Cordless Drill	· Allen Hex wrench set (standard & metric)
· Wire Cutter	· Vise Grip Pliers	· Ratchet & Socket set (standard & metric)
· Multi-Meter	· Channel Lock Pliers	· Drill bit set up to 3/8" & 1/4"& 5/16"masonry bits
· 4'or 6' Ladder	· Caulking & Gun	

GENERAL REQUIREMENTS

- Power: 120VAC. 60Hz., 15 Amp Service to terminal block in aluminum head section of door. Wiring to be in conformance with local codes and routed away from moving parts.
- Non-North American voltages can be 240VAC, if so be sure the operator has a 240VAC power supply.
- Power may be brought in through the top of the jamb on perimeter mount units or in through the back of surface mount units.
- For remote switch locations, routing of low voltage wiring to operator and sensor controls will be required and their location should be predetermined and wired before installation begins.
- Door Panels may be glazed before or after installation.

POWER INPUT LOCATIONS



PRODUCT INVENTORY AND PREPARATION

There are several different type packages built. Make sure the package you are installing meets the needs of the opening intended. (Inside slide, outside slide, or surface mount)

1. Once the material has been received inspect all cartons for completeness of order.

   There should be at least six cartons for a standard bi-part package.

   The following items should be present.

   A. Header Assembly (also contains sensors and accessories box)

   B. Side Jambs (contains side jambs and transom)

   C. Door panels (contains vinyl)

2. Check the door opening for plumb and level. The floor must be checked for any high spots. The header can be used for the straight edge to detect any variation in the floor surface. Fill the low areas to make the floor level. See the **Figure 1** below for additional information.

3. Do not allow over 8' of unsupported header. The fixed panel is considered as suitable support for the header. If the unit is equipped with a transom, and the unit length is greater than 8', the frame of the existing structure must support the weight of the transom, glass, and an additional 130 lbs. for unit lengths up to 12', and 260lbs. for units up to 16'.

Lay out the frame components and transom (if equipped) on the floor along side the door opening. Be careful not to scratch the finish. Position the header to allow for lifting into the opening once all the components have been assembled.

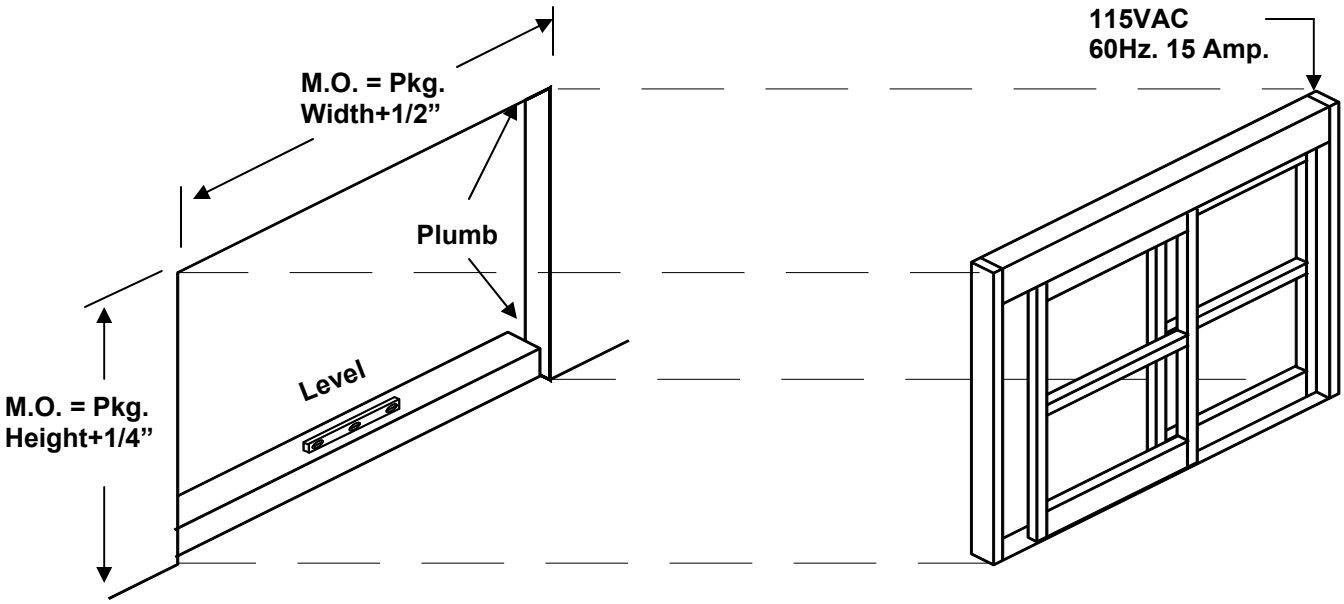


Figure 1

FRAME TO HEADER ASSEMBLY

Located in the header carton is the accessories box, which will contain a small parts bag, including the 1/4-20 x 1" Hex Head Bolts with 1/4" flat and 1/4" lock washers to attach side jambs to header through the end bracket as shown in Figure2.

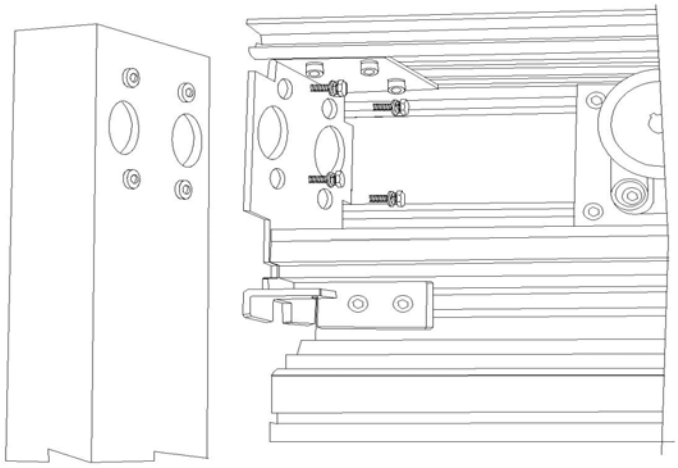


Figure 2

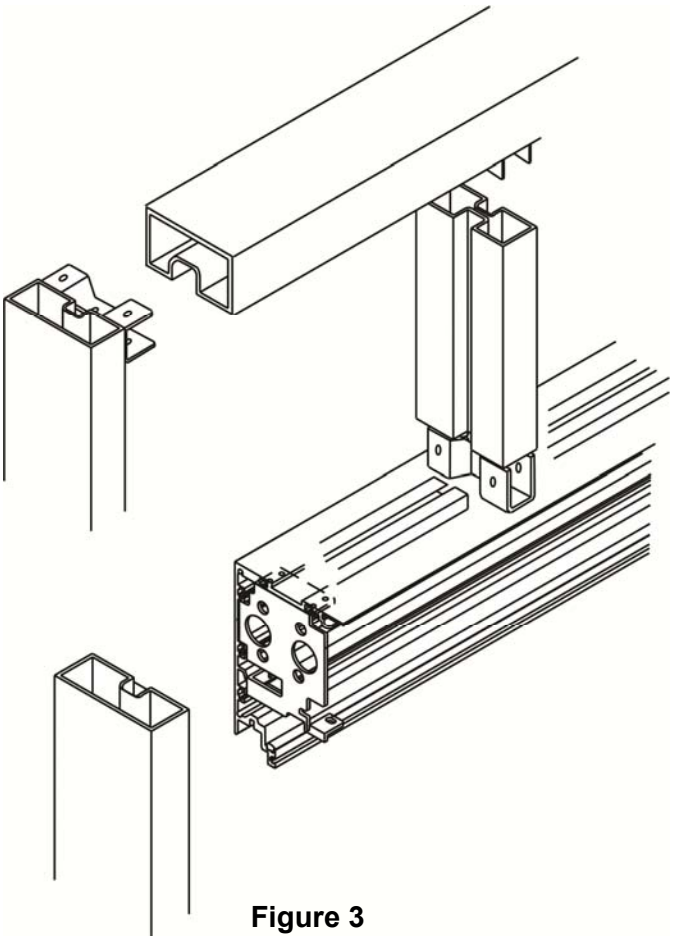
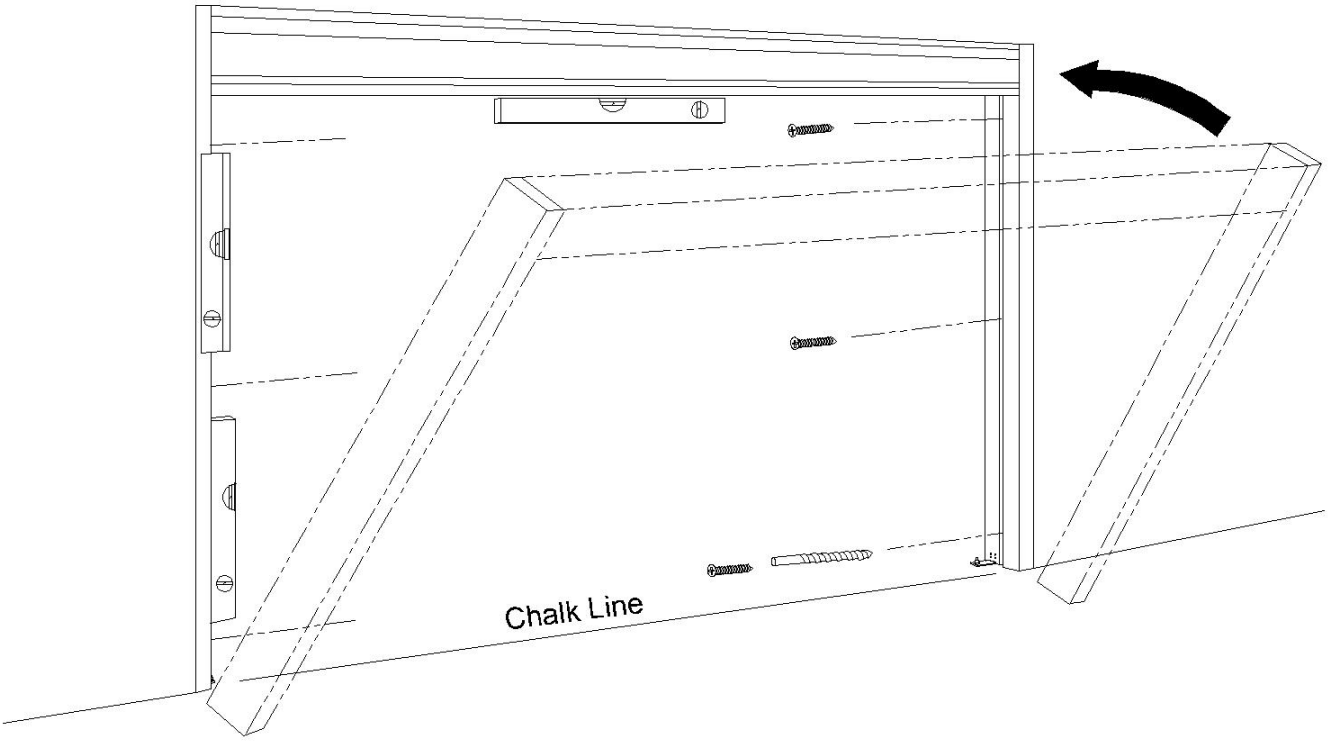


Figure 3

TRANSOM ASSEMBLY

If the unit is supplied with transom, see Figure 3 for view of assembly. It is suggested that the frame members be prepped for attachment and attached with a screw; suggested size #10 x1/2" flat head machine or sheet metal thread.



SETTING FRAME

Once the door frame has been assembled, place the frame in front of the opening on the floor so that the bottom of the jambs are at the base of the opening. Snap a chalk line across the opening where the jamb line is going to be. This line will also locate the bottom guide system.

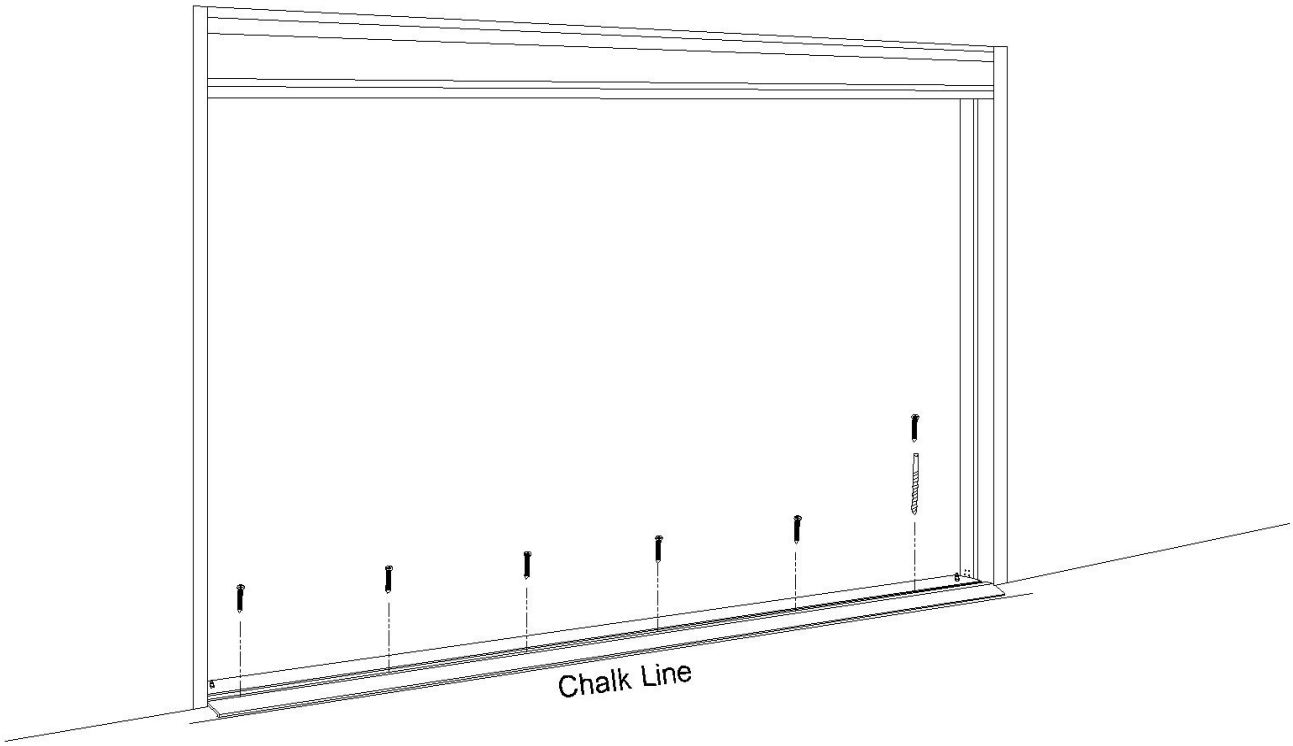
Before lifting the frame into place, check to make sure the cover side of the header will end up on the correct side of the opening. Typically, if the unit has sidelites that breakout, the cover will be interior; if the sidelites are fixed or the unit is surface mounted, the cover will be exterior.

Lift door frame into the opening and set the frame plumb and square to the highest spot on the floor and position the frame within the 4-1/2" dimension as needed. If the high spot or swell in the floor forces the frame to go higher than the rough opening will allow, do not install the frame. Door height adjustment will be reduced if the frame is installed with this condition present. Have the contractor rework the floor so the doors can be properly installed.

If there is room to raise the frame up even with the high spot in the floor, shim the bottom of the jambs to the high spot.

FRAME ATTACHMENT

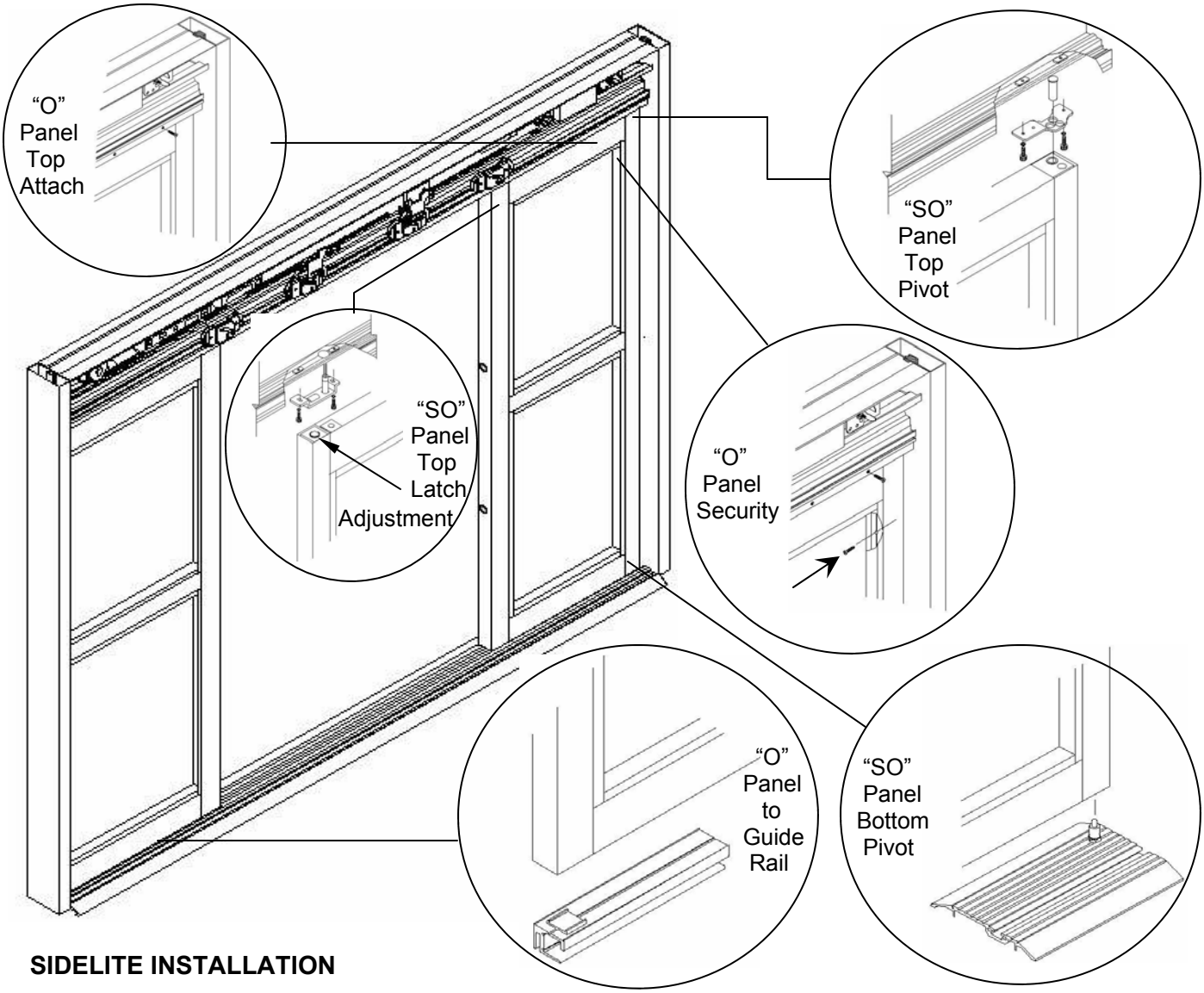
Shim as required for the header and jambs to be plumb and square in the opening. Fasten the door frame in the rough opening with the appropriate type and number of fasteners for the size of the door package being installed. Fasten the header overhead every 36" or less.



BOTTOM GUIDE INSTALLATION

The bottom guide rails or track must be installed level and in line with the frame for the door package to properly function. If the high spots referred to on page 6 were not corrected as indicated, proper location of the guide rails will be extremely difficult. Correct high spots and continue.

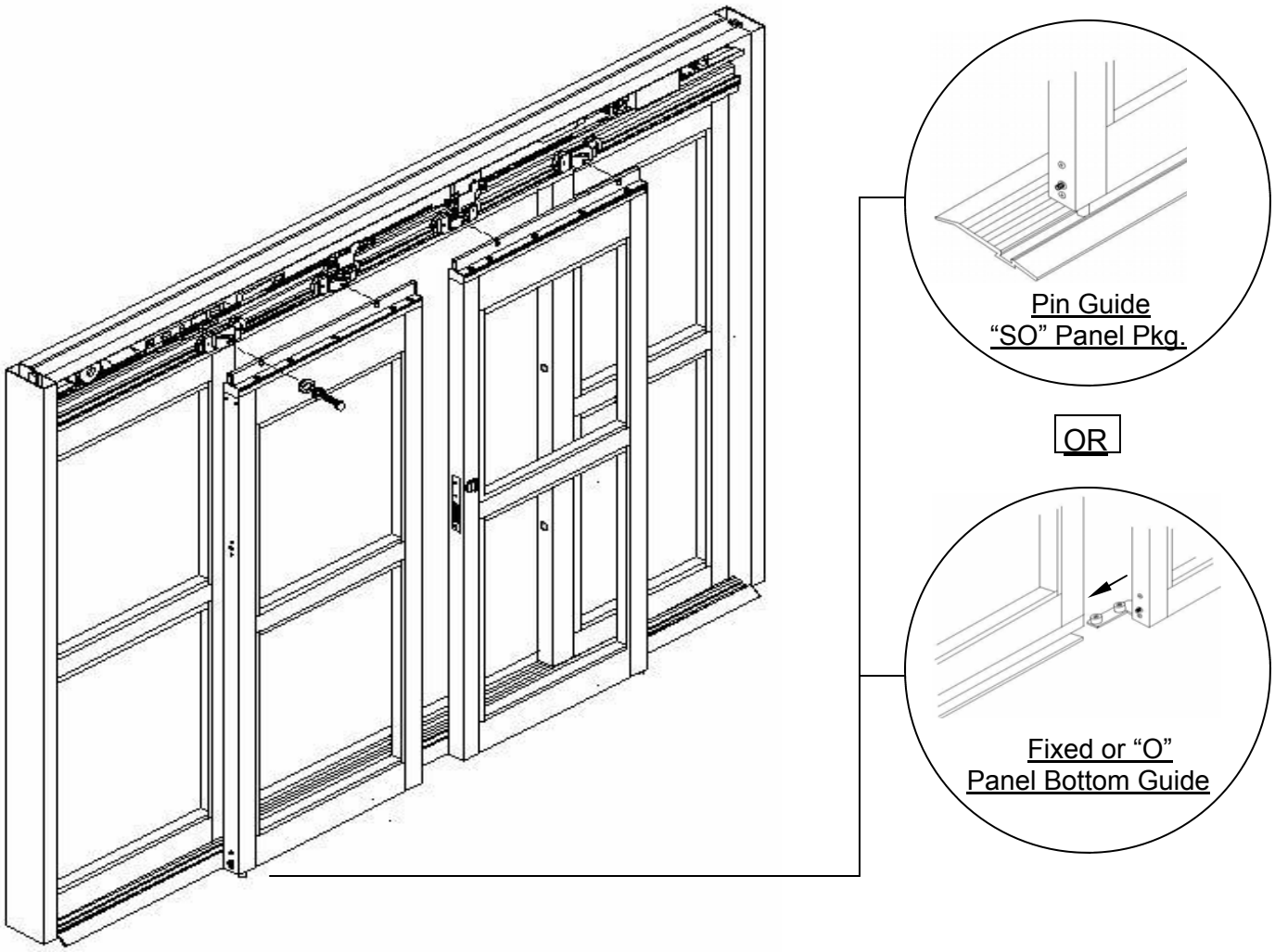
Identify the type of guide system being used with the door package. The standard guide for a fixed panel unit (O-SX-SX-O) is a guide rail with or without threshold; for full breakout units (SO-SX-SX-SO), the standard bottom guide is a pin guide track, with or without threshold.



SIDELITE INSTALLATION

To install a full breakout sidelite that has a jamb or floor mounted bottom pivot, remove the top pivot bracket with clevis pin and install it in the top pivot angle of the sidelite. Proceed by feeding the safety beam wires through the third hole in the pivot bracket. Install the sidelite on the bottom pivot first, rotate the sidelite into the 90º open position and tilt the top toward the center of the header, aligning the pivot bracket with it's original position on the underside of the header and reinstall the screws while continuing to feed the wires inside the header. Push the sidelite into a vertical position with the top pivot bracket against the jamb. Tighten the allen head screws, securing the top pivot in place. After the safety beam wires are completely routed into the header, connect to the matching cable connectors. Note the safety beams are prewired in the door panels, jambs, and header, with small connectors provided between each assembly. No additional wiring should be required.

To install a fixed sidelite to the header, insure the bottom guide rail is set properly to the floor. Install the sidelite onto the top of the guide rail. Route the safety beam cables into the header and secure the sidelite to the header with the #10 screws. Connect the safety beam cables to the matching cables in the header. Additional screws can be installed through the vertical stile and into the jamb before the sidelite is glazed for full security on a fixed panel unit as shown above.



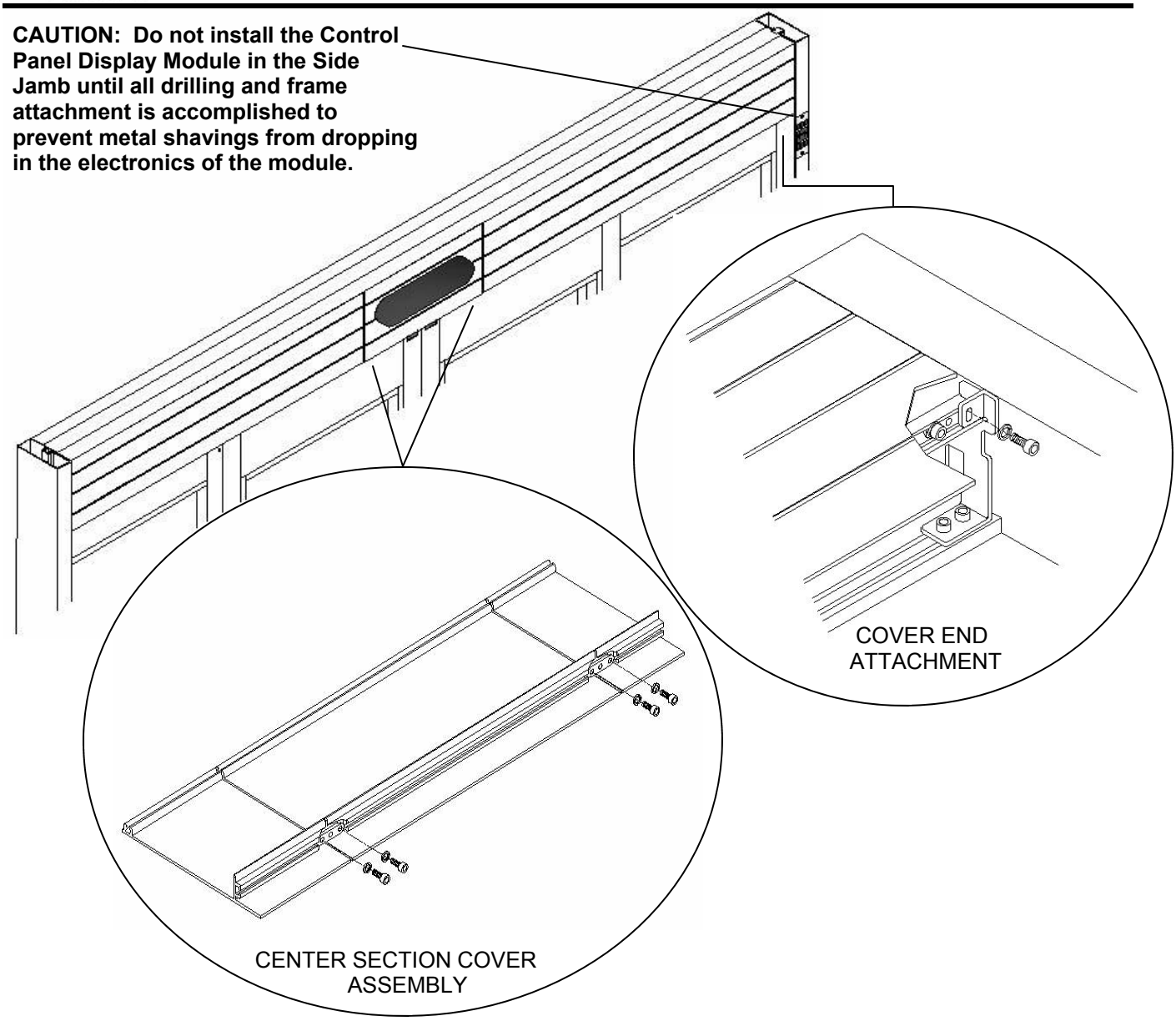
SLIDING DOOR INSTALLATION

Position the door so that it will panic to the exterior of the building when broken out.
Install the door portion of the bottom guide in the pivot stile of the door using four 10-32 screws provided, and one ¼-20 set screw to lock the pivot-shaft at the proper height.

Position the door portion of the bottom guide into the guide rail or the pin guide track (depending on the type bottom guide used).

Place the door so that the slots in the hanger catch rail are lined up with the 5/16" tapped holes in the door carrier assemblies. Install the two 5/16"-18 x 1-1/4" hardened hex head hanger bolts, with a flat washer and split washer, through the slots into the door carriers. Tighten the hanger bolts until the door does not sag, but do not tighten all the way.

Verify the anti-rise rollers are properly adjusted in each carrier roller assembly (lightly rolling against the anti-rise shelf in the header). Install the 1/4-20 x 3/4" hex head bolts above the slots in the top catch rail and adjust the door height (floor clearance).
Once proper height has been adjusted insure there are no gaps between doors or door and jamb from top to bottom. It may be necessary to readjust height adjustment screws.
Complete by tightening the hanger bolts.



ACCESS COVER ATTACHMENT

If the unit is a bi-part, there will be a short center section that will be held in alignment to the RH and LH covers with two nut plates and four 10-32 Allen cap screws with washers. To remove RH or LH cover, loosen the screws and slide the nut plates with screws to the center section, allowing removal. At each end of the header, please find a 10-32 Allen cap screw with washer and remove completely to open the adjacent header cover. (See views above)

WIRING THE DOOR

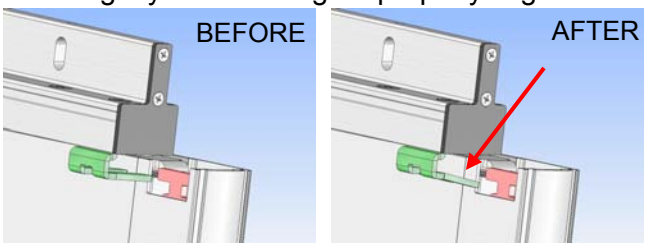
This product is intended for permanent connection to the electrical supply system. Proper grounding must be provided and wiring must conform to applicable codes. 24VDC, 1 Amp power is available for external devices (sensors). Refer to the instructions provided with the sensors and the enclosed wiring diagram. Connections are shown on the wiring diagram. Safety beam cable routing is covered in the sidelite installation section. The Display Control Panel wiring is covered on Page 12.

COMMISSIONING THE DOOR

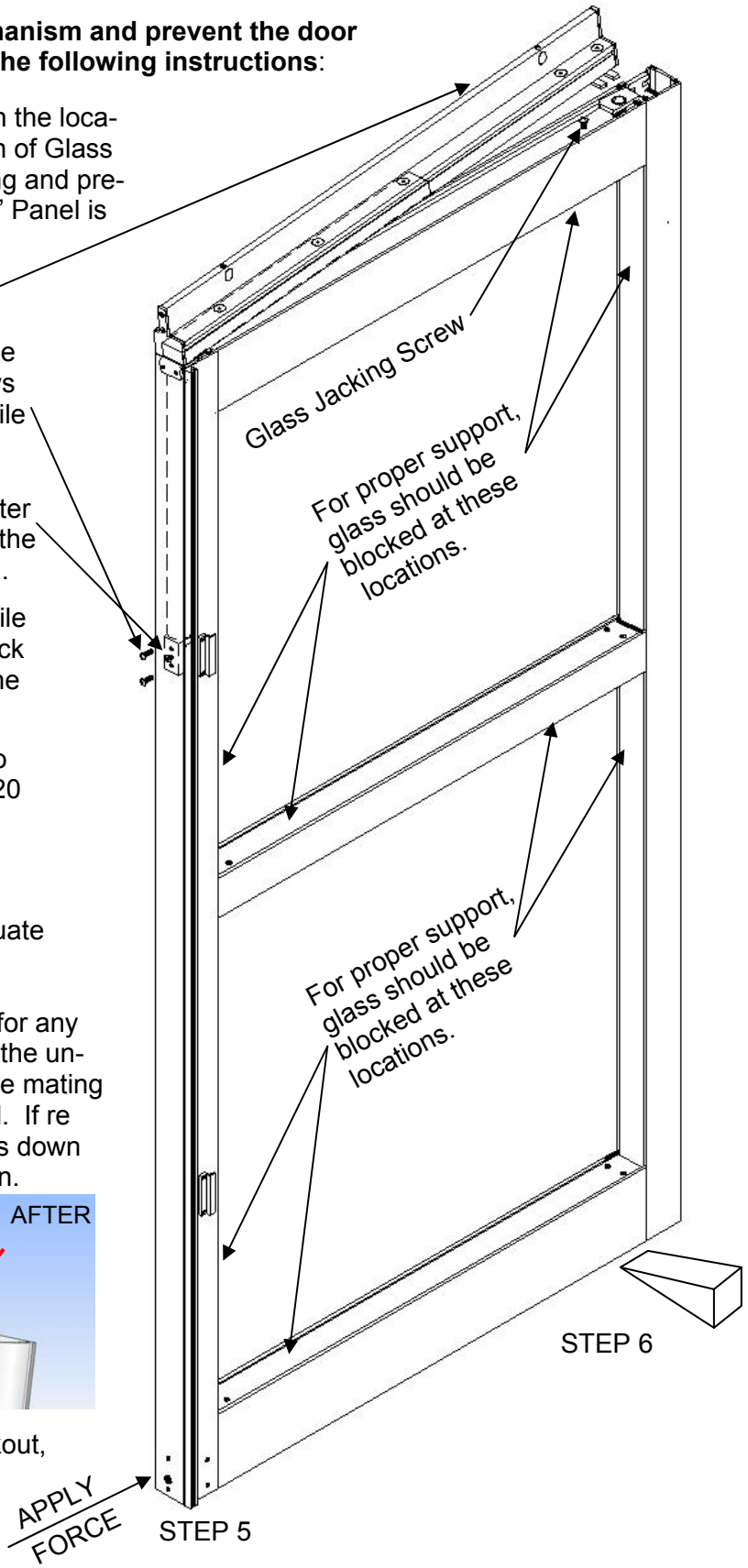
Refer to the enclosed instructions for commissioning.

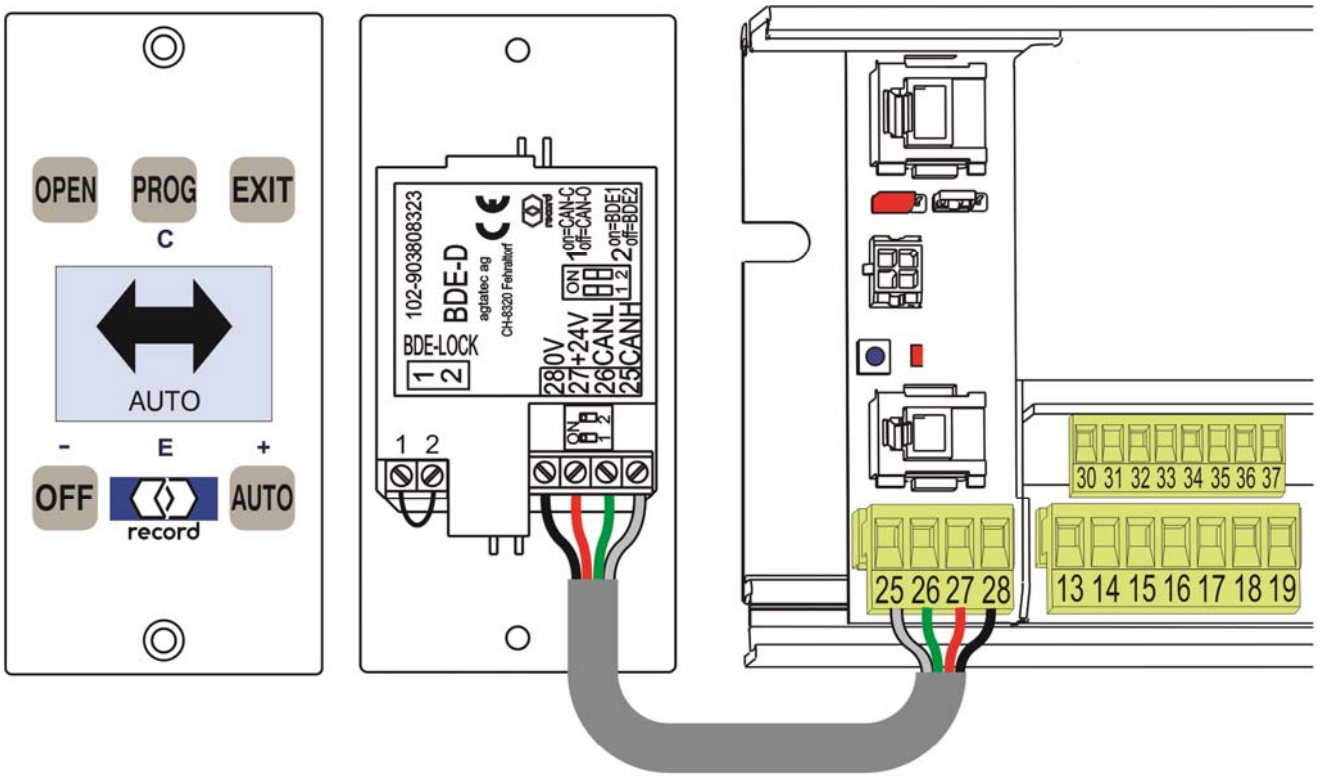
To increase the "lift" of the breakout mechanism and prevent the door from dropping when broken out, perform the following instructions:

1. Insure the glass is blocked properly and in the locations shown at right. Please see location of Glass Jacking Screw to adjust and aid in blocking and preventing the door from dropping when "SX" Panel is in breakout.
2. Breakout the "SX" Panel 6"-8" as shown.
3. Using a 5/32" Allen hex wrench, loosen the two 1/4-20 Button Head socket cap screws located on the back of the vertical pivot stile 18" from the top.
4. Insert a 3/16" Allen hex wrench in the center hole between the two screws and tighten the concealed cap screw clockwise until snug.
5. Using your foot, apply force to the pivot stile below the screws in the direction of the lock stile, lifting the lock stile and the front of the panel.
6. Place a shim/wedge under the lock stile to remain elevated & re-tighten the two 1/4-20 Button Head screws. **Note:** Do not over tighten as this may cause distortion in the aluminum stile.
7. Remove shim/wedge and check for adequate lift support.
8. With the door slightly broken out, inspect for any misalignment between the two fingers on the underside of the top carrier assembly and the mating stamping in the top of the vertical lead rail. If required, bend the outside end of the fingers downward slightly until the fingers properly align.



To adjust the force required to initiate a breakout, locate the ball catch at the top of the vertical lock stile and rotate it counterclockwise to increase the force required.

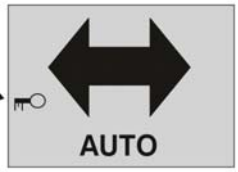




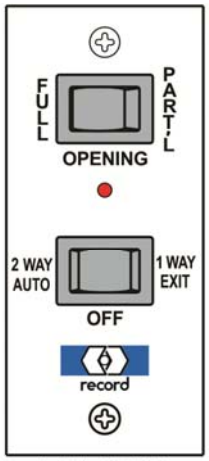
The Display Control Panel is connected to the Operator Control as shown and is typically mounted in or on one of the door jambs. The unit may be remotely mounted as desired, and should always be in a location where the user can view the door. A non-metallic white enclosure, mounting hardware, and 12 feet (3.6m) of wiring cable are included to mount the control panel as desired.

The keypad on the display can be disabled by removing the jumper located between screw terminals 1 and 2 on the back of the display (see above). A switch (SPST) can be wired in place of the jumper and provide remote enable/disable of the keypad.

When the keypad is disabled, a small key is displayed on the left of the screen. The unit will continue to display the current operating mode of the door and will exhibit any alarm condition as it occurs, but the keypad will not function.



Two Display Control Panels can be connected to a Door Control for mode control from two separate locations. The panels are wired in parallel, and Dipswitch #2 (above wire terminals 26 & 27) on one panel should be set to "OFF". In addition to the Display Control Panel, two mechanical switch assemblies (shown at right) are available for connection to the door control. The mounting template is identical to the display panel. One of these panels can be used in place of the display on the door. Note: With both connected, the mechanical panel will have priority over the display panel when selecting operating modes. The display will indicate the mode selected by the mechanical panel.



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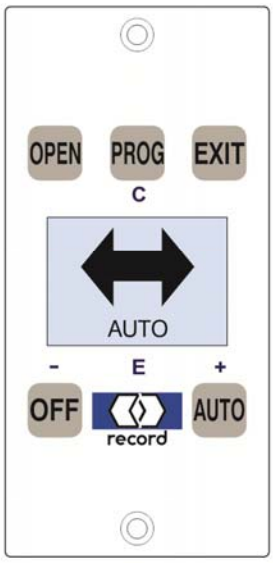
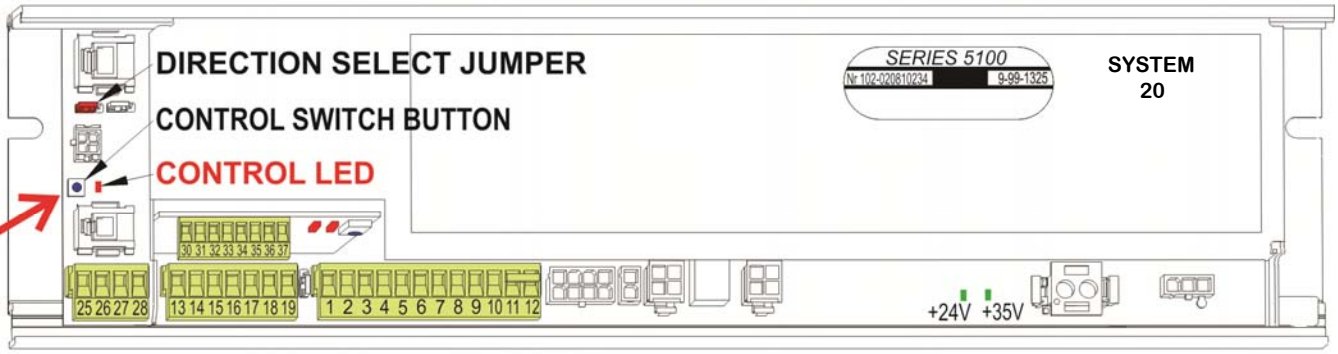
4-51-0106

The Display Control Panel provides efficient I/O access for the user to control the door system, and for the technician to program the operational parameters of all record-usa door operators.
Logically arranged pushbuttons permit an intuitive operation of the door and navigation through the drive-specific menu structure. The backlit LCD display provides data and information regarding the status of the door using symbols and plain text messages.
The connection to the door control is via the 4-wire CAN bus built into the record products.



The technical specifications of the control panel are:
Supply voltage:24 VDC from CAN bus
Connected load:< 2 W
Dimensions:1.74" X 3.63"
Temperature range: 0°C to +50°C
LCD display:112 x 64 pixels (0.84" X 1.18"), with white backlight

In addition to providing the owner a method for selecting the door operating modes, the control panel can be used to access and adjust the door parameters. To enable this feature, first gain access to the door operator in the header, and locate the microprocessor door control. On the left side of the control is a small blue pushbutton (Control Switch Button), and a red LED. The pushbutton performs multiple functions depending upon how long it is pressed, as indicated by the number of flashes (1 second intervals) of the adjacent red LED.

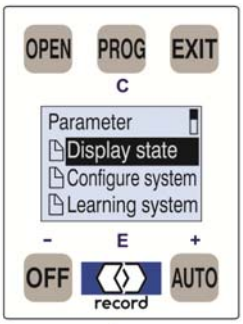


Pressing and holding the button causes the adjacent red Control LED to pulse "on" approximately once per second. The number of pulses determines the resulting effect:

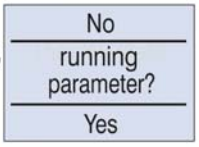
1 pulse simulates the actuation of the interior sensor and initiates a door cycle.
2 pulses initiates an automatic acquisition of safety beam characteristics.
3 pulses initiates a door learn mode where the door weight and friction are learned.
4 pulses initiates a configuration mode where the Display Control Panel has access to the microprocessor control parameters.
8 pulses resets the parameters to the default parameters for door type selected.
9 pulses, combined with actuation of the breakout stop, will reset to factory settings.
14+ pulses performs a hardware reset (no parameter values are changed).

Typically, during a new installation, the microprocessor will have already been set at the factory for the door opening, **but the completed installation will require a calibration mode initiated by holding the Control Switch Button down for three pulses of the Control LED. Calibration will occur during the next two door cycles, which should be initiated immediately.**

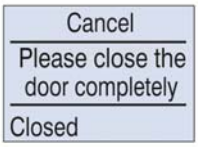
ALTERNATIVE CALIBRATION METHOD:



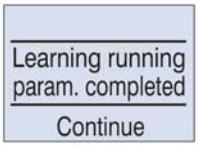
A convenient second method for calibration has been implemented using either the Display Control Panel or the FPC 902 Programmer. If using the FPC 902, select Service STG, select Yes to accept all parameters, press OK to Continue, then select Learning system. The next screens closely follow the screens described below.
If using the Display Panel, press and hold the blue Control Switch Button for four flashes of the red Control LED, the release the button. The Display Control Panel should appear as shown at right. Use the AUTO button to scroll down and highlight "Learning system", then press the blue "record" logo.



The screen at right will appear, press the "record" logo again, the door will open, with a screen indicating to wait until the door is completely open.



After the door fully opens, this screen will then display - Press and hold the "OFF" button until the door fully closes. Once closed, the door will re-open and this screen will appear again.



Press the "OFF" button until the door closes, and the screen at right will appear. Press the "record" logo to continue.

In response to the screen displaying "Learning sensors?", press the "PROG" button to decline.
In response to the screen displaying "Learning suppression SIO?", press the "PROG" button again to decline. The calibration cycle will then be completed.

PARAMETER ADJUSTMENTS:

The parameters that define the door performance can be accessed using either the FPC 902 Hand-Held Programmer or the Display Control Panel.

For access to all the parameters with the FPC 902, Version 2.71 or later software is required.

To access the control parameters using the Display Control Panel, on the door control press and hold the Control Switch for 4 flashes of the adjacent red Control LED.

In this mode, the top center "PROG" switch and bottom three switches are used to select and modify the door parameters.
Note the small blue legends next to each switch indicates its use in the configuration mode -
- Use the "+" (AUTO) switch to scroll down menus, or increase individual parameter values.
- Use the "-" (OFF) switch to scroll up menus, or decrease parameter values.
- Use the "E" (record) switch to select the currently selected parameter or parameter value.
- Use the "C" (PROG) switch to revert to the previous screen.

Included in the header should be a two-sided sheet identifying the Control Parameters and the factory settings for that header. Any field changes should be noted as they are implements.

A complete listing of the parameters with descriptions is included with the Installation Instructions.

To exit the parameter adjust mode, press the "C" (PROG) multiple times until the "Exit Program Mode - Yes/No" screen appears; press the "E" record switch to return to Door Operating Mode screens.
Note: If no button is pressed for 3 minutes, the parameter adjust mode is automatically exited.

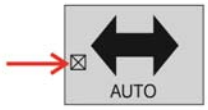
Entering a custom telephone number to be displayed when alarm screens occur can be performed only with the FPC 902 Programmer. Refer to the instructions included with it for further details.

REMOTE CONTROL OF DOOR OPERATING MODE

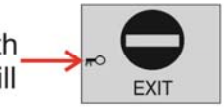
The record drive provides several methods of remotely controlling the door operating mode.

1. For complete remote control, install a second Display Control Panel at the remote control station. Changes to the operating mode will be displayed on both Display Control Panels. Locking the keypad on the panel at the door can be accomplished by two methods -

   A. On the panel to be locked, press the keypad sequence record + PROG + OFF
   A small square with an X will appear on the left of the display, and the keypad will no longer change the door operating mode. The display will update as changes are made remotely. To unlock the keypad, repeat the above keypad sequence.



   B. On the back of the Display Control Panel is a two conductor terminal block with a jumper installed. If the jumper is removed, the keypad will be locked and will be indicated by a small key on the left side of the display. The jumper can be replaced by a remote mounted switch (toggle, key, etc.).



2. To remotely lock the door, one of the three programmable inputs, AUX00_IN (Terminal 4), AUX01_IN (Term. 6), or AUX04_IN (Term. 18), can be programmed to lock the door with the "SURV" parameter. With SURV enabled, applying +24VDC from Terminals 5 or 19 will allow the Display Panel to set the door operating mode. Removing the +24V will change the operating mode to "Locked". If the door is open, it will close and lock, with Safety Beams active during closing. The Remote Switch / Special Activation input (Terminals 11 & 12) will unlock and open the door. After the time delay set by the parameter "Time Delay - Remote Switch", the door will close and re-lock.
Note: The programmable input with this parameter enabled cannot be used for other functions.

3. To remotely change the door operating mode to "1-Way" (Exit) mode, one of the three programmable inputs, AUX00_IN (Terminal 4), AUX01_IN (Term. 6), or AUX04_IN (Term. 18), can be programmed to set the operating mode "EXIT" with the "SURA" parameter. With "SURA" enabled, applying +24VDC from Terminals 5 or 19 will allow the Display Control Panel to set the door operating mode. Removing the +24V will change the operating mode to "EXIT". When the door is closed, the Exterior Sensor will be ignored. When the door is open, the Exterior Sensor will hold the door open, and will recycle a closing door back to the open position.
Note: The programmable input with this parameter enabled cannot be used for other functions.

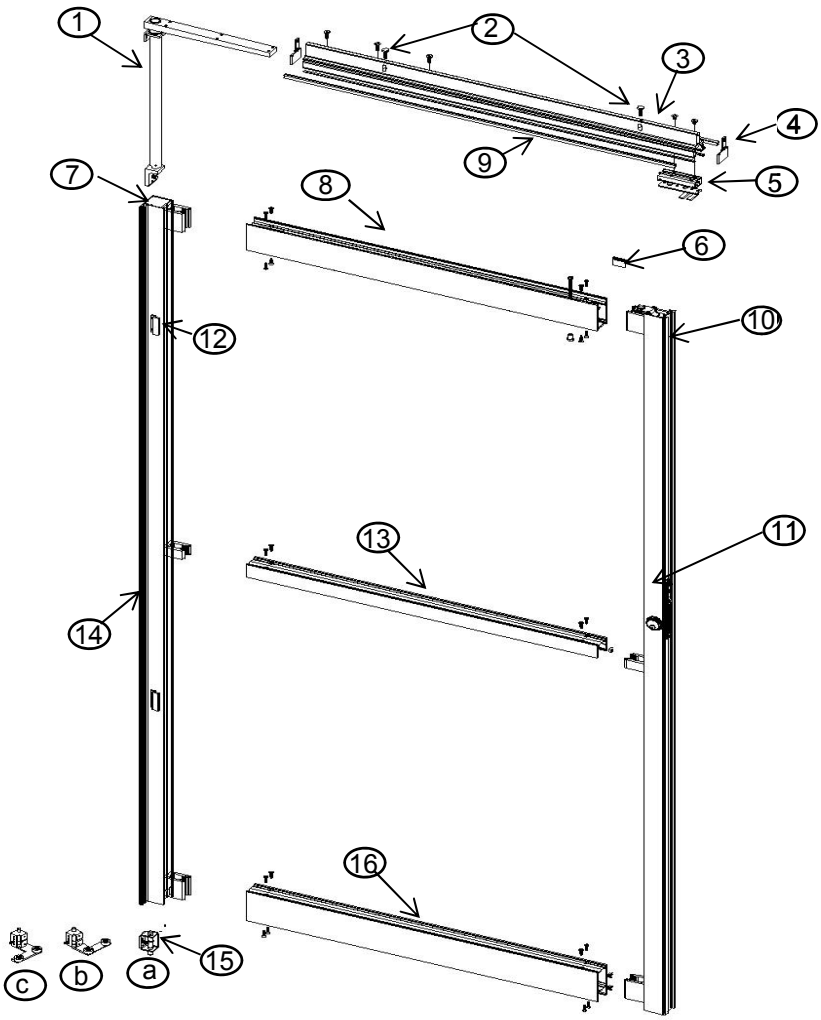
The programmable inputs can also be used to enable other functions as described in the Parameter Explanation Section. For example, one of the programmable inputs can be set to override the Display Control Panel and the pedestrian Sensors, and either open or close the door. This is accomplished by enabling the "SÖK_NSK" parameter (Emergency Override), and setting the "Emergency Open / Close Function" to either open or close the door. If closing is selected, additional options are available to lock the door, and select what inputs are active.

Note: Priority between the above inputs and the Display Control Panel is set by safety / security rules. If either the remote control or the Display Panel is set to "OFF" (or Locked), the door will be off (or locked, depending upon the "Keyboard" parameter for the Display Control Panel), and the mode cannot be changed. If the remote control has set the operating mode to AUTO(matic), the Display Panel will have full functionality. If the remote control has set the operating mode to EXIT (1-Way), only the Display Panel's OFF key will function. If the remote control has set the operating mode to (Continuously) OPEN, only the Display Panel's OFF and EXIT buttons will function.

SAFETY DECAL REQUIREMENTS

FOR “KNOWING ACT” DOORS, REPLACE AUTOMATIC DOOR WITH AUTOMATIC CAUTION DOOR ACTIVATE SWITCH TO OPERATE

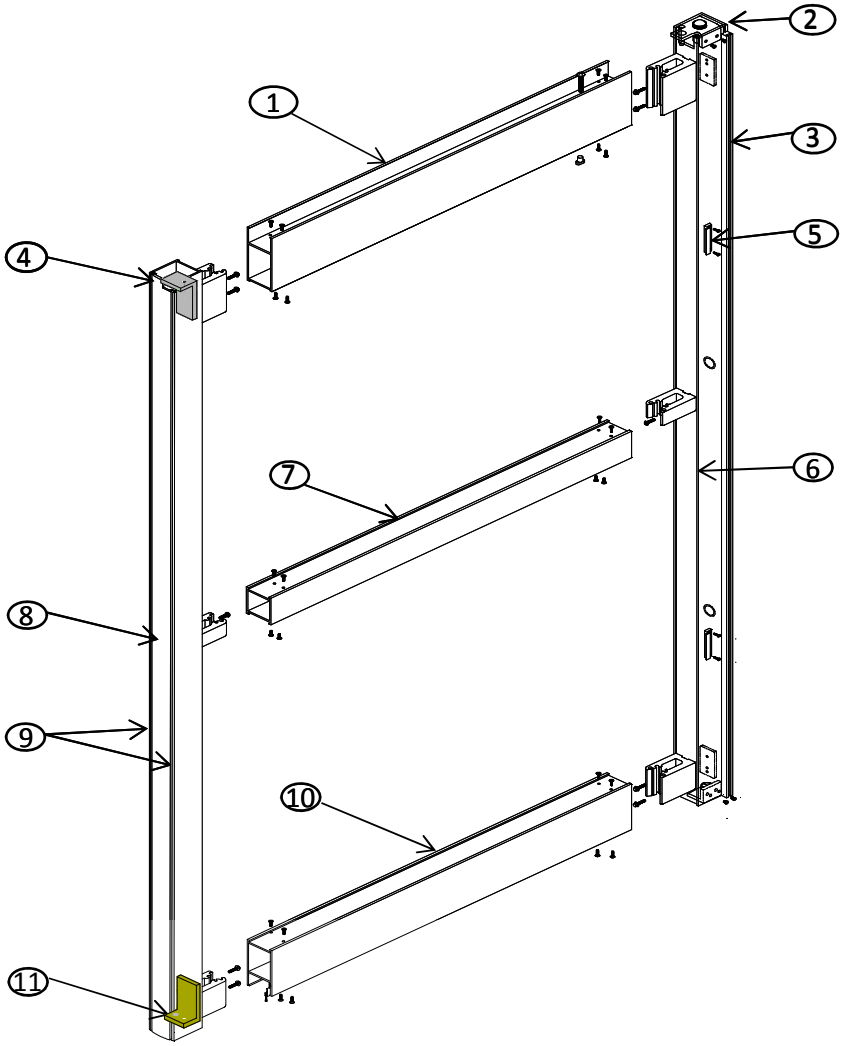
5100 SX PANEL PARTS



Item	Part Number	Desription	Qty.	Item	Part Number	Description	Qty.
1	4-51-0011	Torque Bar Assy.	1	11c	9-99-0071	Deadlock, Hookbolt	1
2	81-0718-3666	Bolt,1/4-20x3/4"HHGr5	2	11d	9-99-0064	Key Cyl. CL-DB,ARCam	1
3	5-51-4006	Door Catch Extr. CL-DB	~	11e	9-99-0069	Cylinder,Thumbturn,CL-DB	1
4	4-51-1049	End Cap, Door Catch	2	12	4-11-4095	Interlock, DB	2
5a	4-51-0013	Door Catch Assy.,LH,shown	1	13	5-11-4031	Muntin Extr.,1 1/2", CL-DB	~
5b	4-51-0014	Door Catch Assy.,RH	1	14a	9-99-7316	Weatherpile, Channel	1
6	4-51-9004	Cover, Door Catch, Plastic	1	14b	6-51-9002	Channel, Weatherpile	1
7a	4-11-4111	Stile,Sliding,RH Pivot,CL-DB	1	15a	4-11-0469	Pin Guide Assy	1
7b	4-11-4113	Stile,Sliding,LH Pivot,CL-DB	1	15b	4-11-0470	Fxd Pnl Bottom Guide Assy-LH	1
8	5-51-4009	Rail Extr., Top,3", CL-DB	~	15c	4-11-0471	Fxd Pnl Bottom Guide Assy-RH	1
9	9-99-7318	Weatherpile, Catch, Black	~	16	5-11-4033	3 1/2" Bottom Rail Extr.	~
10	9-99-7316	Weatherpile, Tandem, Black	~	~	9-99-2834	Door Closer, Concealed	1
11a	4-11-4108	Stile,Lock,Sliding,CL-DB	1	~	4-51-9005	Slide Block, SX,Closer	1
11B	4-11-4125	Stile,Lock Catch, CL-DB	1	~	4-51-1054	Stud, closer	1
				~	9-99-0072	Dummy Cylinder,CL-DB	1

5100 SO Panel Parts

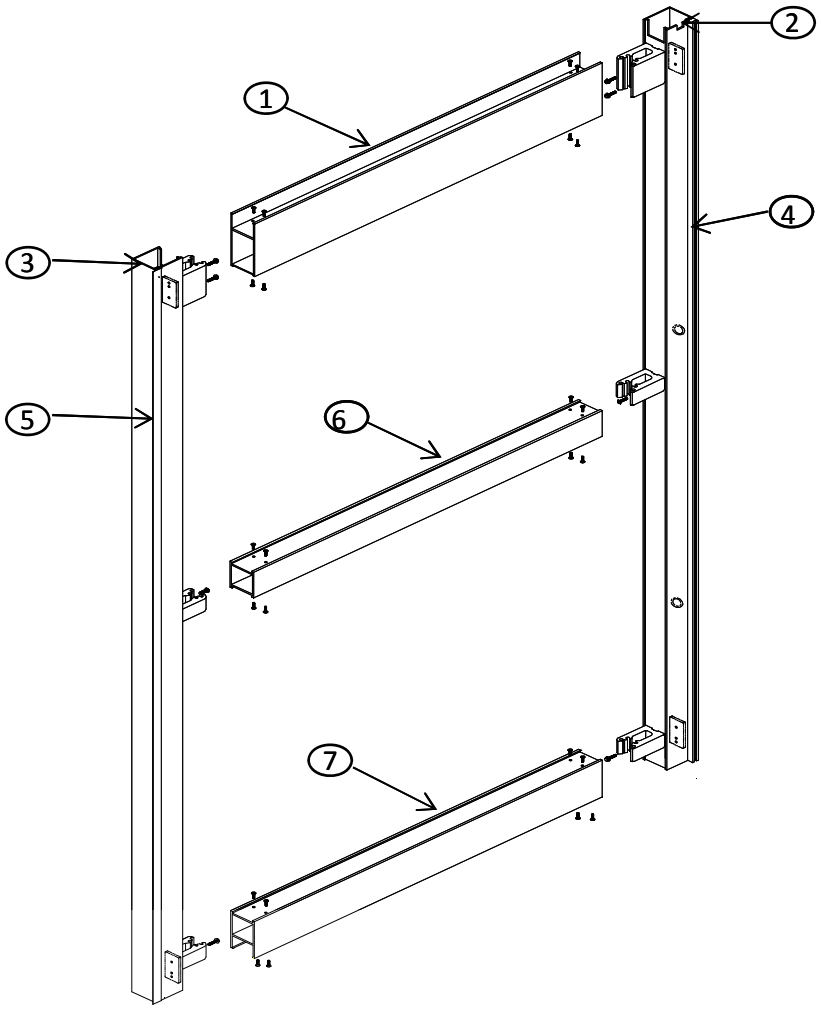
3-12



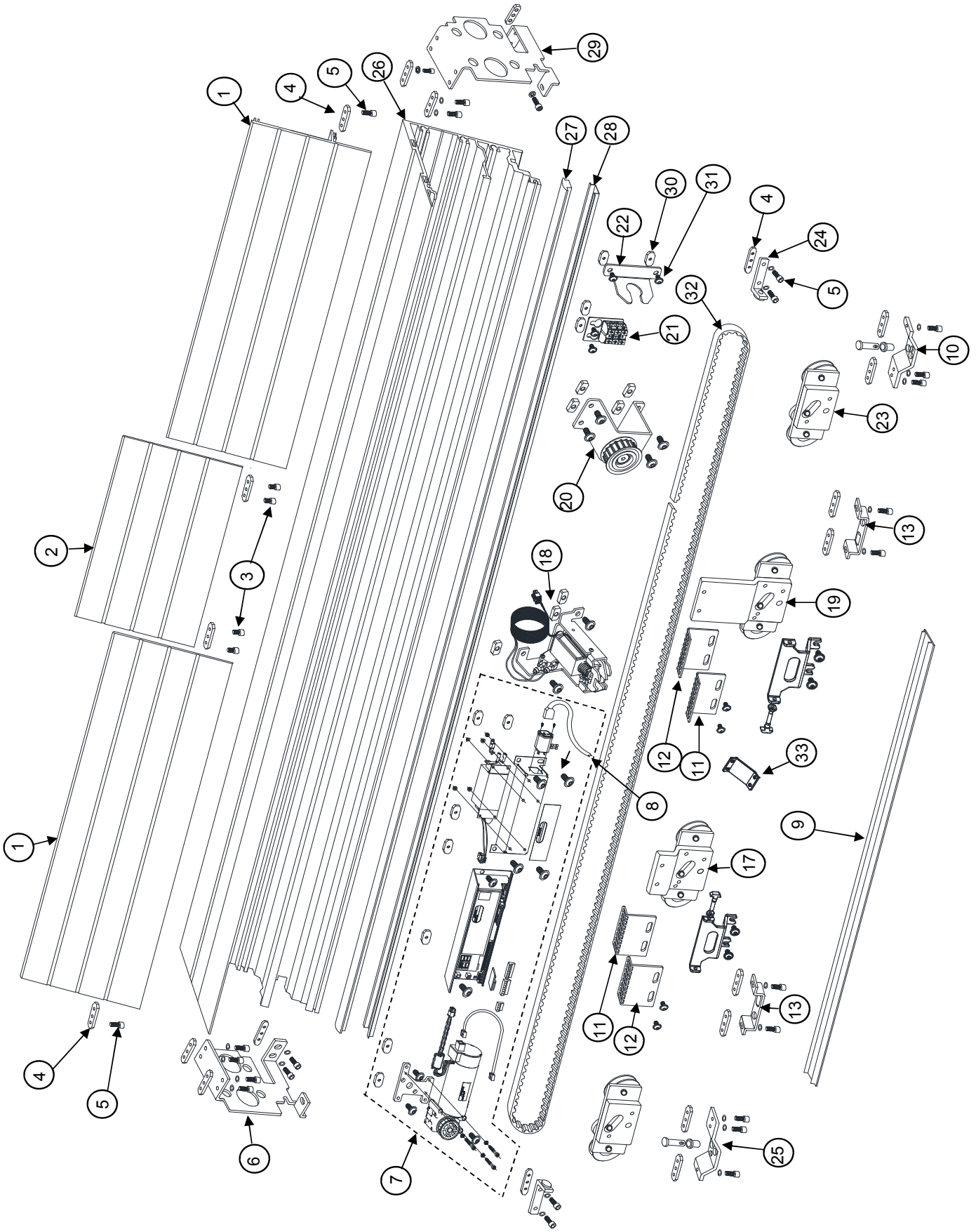
Item	Part Number	Desription	Qty.	Item	Part Number	Description	Qty.
1	5-11-4034	Rail Extr.,4"Upper CL-DB	~	7	5-11-4031	Muntin Extr., CL-DB,1 1/2"	~
2	4-51-0096	Roller Catch&Magnet Assy	2	8a	4-51-4136	Pivot Stile,CL-DB,LH	1
3a	6-51-9002	Channel, Weatherpile	1	8b	4-51-4137	Pivot Stile,CL-DB,RH	1
3b	9-99-7316	Weatherpile, Channel	1	9	9-99-7316	Weatherpile,Mohair, BL	~
4a	4-11-0432	Angle Assy,Top Pvt.-LH	1	10	5-11-4033	Rail, Bottom, 3 1/2"CL-DB	1
4b	4-11-0433	Angle Assy,Top Pvt.-RH	1	11a	4-11-0434	Angle Assy,Bott Pvt-LH	1
5	4-11-4095	Interlock, DB	2	11b	4-11-0435	Angle Assy,Bott Pvt-RH	1
6a	4-51-4138	Beam Stile,CL-DB, LH	1	~	4-11-1031	Pin, Sidelite, Bottom	1
6b	4-51-4139	Beam Stile,CL-DB, RH	1	~	4-51-4008	Block, Sidelite, Bottom	1
~	5-11-4040	Sash,1/4" Square,CL-DB	~	~	9-99-7347	Holder,Sweep(BL)Straight	8ft.
~	5-11-4039	Gutter,1/4"Square,CL-DB	~	~	9-99-7348	Holder,Sweep(BL)Angled	8ft.
~	5-11-4042	Sash,1"Square,CL-DB	~	~	9-99-7358	Brush,Sweep,Short(BL)	8ft.
~	5-11-4041	Gutter,1"Square,CL-DB	~	~	9-99-7362	Brush,Sweep,Air/Smoke	8ft.
				~	5-11-4008	Ramped Pin Guide Track-MF	~
				~	5-51-4013	Ramped Pin Guide Track-MF-Tele	

5100 "O" PANEL PARTS

3-12



ITEM	PART NUMBER	DESCRIPTION	QTY.
1	5-11-4034	Upper Rail, 4", CL-DB	1
2a	4-11-4134	Stile, Beam, RH, CL-DB	1
2b	4-11-4138	Stile, Beam, LH, CL-DB	1
3	4-11-4136	Stile, Jamb Side, CL-DB	1
4a	9-99-7316	Weatherpile, Channel	~
4b	6-51-9002	Channel, Weatherpile	~
5	6-11-9005	Vinyl, Sidelite Seal	~
6	5-11-4031	Muntin, 1 1/2" CL-DB	~
7	5-11-4032	Bottom Rail, 2 1/2" CL-DB	~
~	6-11-9007	Glass Setting Block	~
~	6-11-9002	Insert, Glazing	~
~	5-11-4028	Filler, Stile, CL-DB	~
~	5-51-4011	10" Bottom Rail, CL-DB	~
~	5-51-4010	9" Bottom Rail, CL-DB	~
~	5-51-4016	Bottom Guide Rail, CL-DB	~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SERIES 5100 SYS 20 HEADER ASSEMBLY PARTS

ITEM	PART NUMBER	DESCRIPTION	QTY. REQ'D	LIST PRICE
1	5-51-4002-CL	COVER, CL-DB	*	
2	5-51-4002-CL	COVER, CENTER 15"(bipart) CL-DB	1	
3	81-0016-2554	SCREW,10-32X1/4" ALLEN CS BL OXIDE (cntr.cvr.)	4	
4	4-51-1037	NUT PLATE, 10-32 (3 holes)	20 typ.	
5	81-0016-2562	SCREW,10-32X1/2" ALLEN CS BL OXIDE	12 typ.	
6	4-51-1055	BRACKET, HEADER MOUNTING - LH	1	
7	4-51-0826	**KIT, SYSTEM 20 DRIVE MODULE, SERIES 5100**	1	
*	4-51-0144	**MOTORDRIVE/PLATE ASSY., ATE20**	1	
*	4-51-1084	PLATE, MOUNTING, ATE20	1	
*	9-80-0020	HARNESS, ENCODER, RJ11 CONN.	1	
**	9-99-1325	**CONTROL ASSEMBLY, STG20**	1	
**	9-991326	MODULE,ZLP-ELS,SAFETY BEAM PCB SYS.20	1	
**	9-99-6597	(J1) - CANbus, 25-28	1	
**	9-99-6598	(J2) - INT. & EXT. Sensors, AUX04IN, BDE, 13-19	1	
**	9-99-6600	(J3) - E-STOP,AUX00IN,AUX01IN,AUX0OUT,SSK,1-12	1	
***	4-51-0142	**POWER SUPPLY ASSY., NET20**		
***	102-019808221	TRANSFORMER, 115 Volt Primary, 35-38 Sec.	1	
***	9-79-0008	FILTER, Powerline	1	
***	9-99-1940	FUSE,5x20, 2 1/2amp,slow blow	1	
***	4-51-0141	HOUSING ASSY., POWER SUPPLY NET20	1	
8	9-51-0014	CORD, POWER, (9'10") SJT Jacket	1	
9	5-51-4003-CL	SOFFIT FILLER CL-DB	1	
10	4-51-0007	**BRACKET ASSY., UP. SIDELITE PVT. - LH**	1	
*	4-51-1047	BRACKET, UPPER SIDELITE PIVOT	1	
*	9-58-0008	PIN, CLEVIS, 3/8"x1 1/4"	1	
*	9-99-0232	BEARING, FLANGED	1	
11	4-51-1001	BRACKET, BELT BASE	2	
12	4-51-1002	BRACKET, BELT CLASP	2	
13	4-51-0009	**BRACKET ASSY., SIDELITE STRIKE**	2	
*	4-51-1010	BRACKET, SIDELITE STRIKE	2	
*	9-73-0080	PANIC SWITCH, MAGNETIC N/O	2	
*	9-73-0079	MAGNET, PANIC SWITCH, (not shown)	2	
17	4-51-0003	CARRIER ASSY., LOWER BELT	1	
18	4-51-0103	LOCK, ELECTRIC, Kits see pg13	1	
19	4-51-0004	CARRIER ASSY., UPPER BELT	1	
20	4-51-0006	**IDLER PULLEY ASSY.**	1	
*	9-51-0004	PULLEY, IDLER	1	
*	4-51-1009	BRACKET, IDLER PULLEY	1	
21	4-51-0010	PLATE ASSY., TERMINAL BLOCK	1	
22	4-51-1004	BRACKET, CONDUIT ANCHOR	1	
23	4-51-0012	**CARRIER ASSY., SLAVE**	2	
*	4-51-0005	ROLLER ASSY., CARRIER	2	
*	4-51-0021	ROLLER ASSY., ANTI-RISE	1	
*	9-99-1813	SCREW, M6X16, HEX, SER.FLANGED HD.	1	
*	4-51-1021	AXLE, CARRIER ASSY.	2	
*	4-51-1017	SPACER, CARRIER ASSY.	2	
24	4-51-0020	ASSY.,DOOR STOP	2	
25	4-51-0008	**BRACKET ASSY.,UP. SIDELITE PVT. - RH**	1	
26	5-51-4001-CL	HEADER, SERIES 5100 SLIDER CL-DB	1	
27	5-51-4004-CL	ROLLER TRACK, SERIES 5100 SLIDER	1	
28	9-51-0001	DAMPER, ROLLER TRACK	1	
29	4-51-1056	BRACKET, HEADER MOUNTING - RH	1	
30	9-99-3507	NUT PLATE, SQUARE, 1/4-20 (1 Hole)	18 typ.	
31	81-0017-2658	SCREW, 1/4-20X3/8"Allen BH Flanged	18 typ.	
32	9-09-0012	BELT, TIMING, 5100	1	
33	4-51-1070	Bracket, Cover Support	1	
34	9-99-0462	Clip, Cord (not shown)	1	

PARAMETER	Default Setting(X)	Description
DRIVING CYCLE		
Closing speed	0...**20**...40	Speed: 0 = slow (Creep speed), 40 = fast Note: Small doors may not reach the set speed, depending upon acceleration rate.
Opening speed	0...**36**...40	Same as closing speed
Open		
Acceleration	0...**30**...40	Acceleration: 0 = slow, 40 = rapid acceleration
Deceleration	0...**30**...40	Braking momentum during opening cycle Deceleration: 0 = slow, 40 = rapid braking force
Creep section	**0**...40	Adjustable creep section at the end of the opening motion. Note: 0 = no creeping 1 = 2.5% of Door Opening Width (DOW) 40 = 100% of DOW
Close		
Acceleration	0...**30**...40	Acceleration: 0 = slow, 40 = rapid acceleration
Deceleration	0...**30**...40	Braking momentum during closing cycle Deceleration: 0 = slow, 40 = rapid braking force
Creep section	**0**...40	Adjustable creep section at the end of the opening motion. Note: 0 = no creeping 1 = 2.5% of Door Opening Width (DOW) 40 = 100% of DOW
Holding force	0...**20**...40	Holding force in closed position Note: In case of high holding force the motor temperature will increase, and may reduce power available.
Ramp		For doors that drop at full closed (type OP-door 2), a ramp can be configured at the full closed position. The ramp function is only enabled in the opening direction. Before the learning cycle, the door briefly stops after the ramp. Note: In the area of the ramp the obstruction monitoring is reduced!
Section	0...40	Length of the ramp (at horizontal) i.e. with a bipart the total opening of the door leaves is twice as big. Note: 0 = ramp function disabled 1 = 4 cm horizontal length of ramp (increments = 0.2 cm) 40 = 12 cm horizontal length of the ramp
Force	0...40	Applied force in the area of the ramp Note: 0 = light force, produces a minor acceleration 40 = heavy force, produces a major acceleration
Seal	0...40	Width of the seal in the closing area. In the adjusted area the obstruction monitoring is reduced during the closing phase. During a learning cycle, increased force is used to attain the closed position. Note: 0 = no seal 1 = 10 mm seal width (in driving direction) 40 = 30 mm seal width (in driving direction)
TIME DELAY OPEN		
Time delay open	**0**...40 (Plant - 2)	Hold-open time when actuated by Interior / Exterior Sensors. Delay starts when actuating signal is removed 0 to 20 = increment 1 second (0 – 20 seconds) 21 to 40 = increment 2 seconds (22 – 60 seconds)
Time delay - Remote switch	0...**4**...40	Hold-open time when actuated by Remote Switch or SSK. Delay starts when actuating signal is removed 0 to 20 = increment 1 second (0 – 20 seconds) 21 to 40 = increment 2 seconds (22 – 60 seconds)
SSK delay	**0**...40	Delay before opening when actuated by Remote Switch or SSK 0 to 40 = increment in 0.2 sec. (0 = 0 sec.; 40 = 8 sec.)

PARAMETER	Default Setting(X)	Description
Reset with button		
Disabled	X	
Enabled		
DRIVE		
Partial Opening	0...**26**...40	Reduced opening as energy-saving measure 0 = minimum opening = 4 inches per door leaf 40 = full Door Opening Width (DOW)
Close Obstruction	0...**20**...40	Threshold sensitivity to an obstruction during closing. The kinetic energy of the moving door is partially absorbed by the obstacle, until the control detects the increased force. 0 = gentle; 40 = significant
Open Obstruction	0...**20**...40	Threshold sensitivity to an obstruction during opening. The kinetic energy of the moving door is partially absorbed by the obstacle, until the control detects the increased force. 0 = gentle; 40 = significant
Brake		Controls optional internal brake installed in encoder housing
Without	X	Either motor is without brake or brake is not used.
Closed position		Brake energized in closed position, including mode “Locked”.
Open position		Is braked in open position in operating mode “Continuously open” as well as with “Reduced opening” and actuation by SSK.
Closed/One-Way/Locked		Brake energized in closed position when in modes "One-Way / Exit Only" and "Locked".
Closed, Locked		Brake energized in closed position when in mode "Locked".
Motor		Based on the control used, not all motor drives are supported.
Without	X	
ATE 20	(Plant - X)	Motor is automatically identified Designation: ATE STA 20 (size 63x55)
ATE 21		Motor is automatically identified Designation: ATE STA 21 (size 63x25)
ATE 19 small		Designation: ATE STA 19 (size 63x25) NOTE: ATE 19 is not detected automatically.
ATE 19 large		Designation: ATE 19 (size 63x55) NOTE: ATE 19 is not detected automatically
ATE 16 normal		Designation: ATE 16 (102-016029001) NOTE: ATE 16 is not detected automatically
ATE 16 heavy		Designation: ATE 16 (102-016025001) NOTE: ATE 16 is not detected automatically
ATE 17		Designation ATE 17 (size 63x25) NOTE: ATE 17 is not detected automatically
ATE 20 Folding door		ATE 20 with special pulley for folder (ATE 20 will be detected automatically and set for door type Folder)
ATE 16 Folding door		ATE 16 with special pulley for folder NOTE: ATE 16 is not detected automatically
ATE 16 30V		NOTE: ATE 16 is not detected automatically
ATE 20 / 200		Motor is automatically identified
Two motors		
Disabled	X	
Enabled		
Emergency operating BAT		Configured action is carried out with lead-acid battery when either - the unit experiences loss of incoming power; or the battery voltage is low. Note: Once action is completed, the control powers down In the powered down state, the control will respond to a SSK actuation, and the door will open with battery power.
Close, do not lock		Door closes, but does not lock
Unlock and open		Door unlocks and opens
Close and lock		Door closes and locks
Open if not locked	X	Door opens, as long as it is not in mode "Locked"

PARAMETER	Default Setting(X)	Description
Power failure		
Battery operation		Door continues normal functioning until battery capacity is low, then the configured Emergency operating BAT function is executed.
Emergency operation	X	After a power failure, the door immediately performs the operation specified by “Emergency operating BAT”.
Battery		
Without battery	X	
Lead-acid battery		Battery is automatically identified on application of incoming power.
ENTRANCE SYSTEM		
A-dimension	650 … **2000**	Door Opening Width (DOW) - measured in mm: 0 to 59,999
G-dimension		Door Opening Height (DOH) - measured in mm: 0 to 59,999
Door leaf		Supports calculation of door parameters
DST		Bi-parting door D-STA, D-TSA
EST-L/R		Single-leaf door left / right: E-STA, E-TSA
Interlock(with FEM-1)		Requires a FEM-1. Direction detecting sensors are recommended to avoid nuisance open cycles (depending on the operating mode). A SIS-signal during the closing cycle affects only the open door. The reduced opening width is supported.
Disabled	X	
All operating modes		Interlock is active during operating modes: Automatic, One-way, & Locked. The interlock function is ignored if both doors are in the operating mode “Continuously Open”. This operating mode is to be used for the passage of bulky goods. Manual control of the door is not recommended, because it’s only possible to open the opposite door, if the door is pushed closed completely in manual mode. A locked outer door will be unlocked and opened by an interlocked control unit receiving a SSK actuation.
One-way & Locked		Interlock is active during operating modes: One-way and Locked. During the automatic mode both doors open at the same time, as soon as activation has taken place on one side. The operating modes Manual and Continuously open are described under the above “All operating modes”.
Door type		NOTICE: A modification of door type causes a reset of the running parameters and sets certain parameters, such as AUX0-IN, to a predefined function. Some drives only support certain door types.
Basic operator	X	European standard operating mode
CO48 Ventouse		Mechanical power storage, with separate carriage, which is maintained in closed position by a magnet.
TOS		Surveillance of manual locking devices on the door leaves. Inputs must be programmed on FEM-0: TOS_DV1, TOS_DV2. Operating mode “Automatic” or “One-Way”: manual locking device(s) must be open (0V/open on AUX2_IN and AUX3_IN), otherwise door fails to open Operating mode “Locked”: manual locking devices must be closed, otherwise anti-burglar protection is not guaranteed. error 29 on Display Control Panel. SSK function is enabled.
FlipFlow		The bi-parting swing door (DDF) has been successfully integrated. For the FlipFlow the adjustable speed for the safety signals (Emergency Open or Close) has been created. Note: In case of Emergency Open or Close operation, safety inputs are ignored An increase in speed reduces the personal safety, but increases the building security.
CO48 Sandow Direct		Mechanical power storage for door motion during a power failure, or emergency condition.

PARAMETER	Default Setting(X)	Description
Basic escape route		Standard requirement for the UK, always with lead - acid battery Power failure response: Reaction according to "Emergency operating BAT". After return of mains voltage, the previous operating mode is restored. Battery problem response: In case of a defective or insufficiently charged battery, the door opens approximately 12 inches and stops; This can be reset - by momentarily removing power, or using the FPC 902, or momentarily interrupting the Emergency Stop input.
Folding Door, Austria		Operation compliant with regulations in Austria
Breakout USA	(Plant - ✓)	When enabled, the following parameters are modified: Emergency stop with reset cannot be enabled; Sidescreen sensing (SIO) is set to creep.
Ratchet		Function for pulse control (Safety active) AUX00_IN (Terminal 4) is actuated by application of +24VDC Door closed: when actuated, door opens and remains open If actuated when door is closed, door will open and remain open If actuated when door is open, door will close and remain closed If actuated when door is opening, door will stop; a 2nd actuation will cause the door to open If actuated when door is closing, door will return to open and stop A door in Locked Mode will not respond to AUX00_IN To unlock and open the door, the SSK input has to be actuated and remain actuated (dead man OPEN). After reaching the closed position, (AUX00_IN) will lock the door again. The operation mode Continuously open will open the door Emergency Override (Open or Close) cannot be enabled.
Dead man		Dead man - doors actuated by "Knowing Act" devices, and require continuous actuation during door motion. Door will stop if signal is removed, and will resume when signal resumes. AUX00_IN (Term. 4) = Opening Input; +24V will initiate opening AUX01_IN (Term. 6) = Closing Input; +24V will initiate closing If both inputs are actuated simultaneously, door will stop, and both signals must be removed before door will respond to a subsequent signal. A door in Locked Mode will not respond to AUX00_IN To unlock and open the door, the SSK input has to be actuated and remain actuated (dead man OPEN). After reaching the closed position, (AUX01_IN) will re-lock the door.
OP door 1		Preset Parameters: Open and Closed Creep sections are set to 4 Time Delay Open and Time Delay Remote Sw. are increased AUX00_IN = AKA pushbutton AUX01_IN = Continuously open Push to actuate is enabled
OP door 2		Same configuration / pre-settings as OP door 1. In addition, the ramp (value = 20) and the seal (value = 20) are enabled.
Folding door USA		Door size cannot be determined by standard methodology (rotary motion of the drive does not vary with door size). For optimal door operation (including Obstruction detection), the Door Opening Width (DOW) should be keyed into the "A-dimension" above, using either the FPC 902 or the Display Control Panel
Smoke-protection	Not Available	

PARAMETER	Default Setting(X)	Description
3 button		Requires FEM 0 Expansion Module Functions: OPEN – CLOSE – STOP AUX00_IN (Term. 4) = Open Input; +24V will initiate opening AUX01_IN (Term. 6) = Close Input; +24V will initiate closing, signal must be maintained during closing or door will stop. AUX02_IN (FEM 0) = Stop Switch (SIO), both opening & closing A door in Locked Mode will not respond to AUX00_IN To unlock and open the door, the SSK input has to be actuated and remain actuated (dead man OPEN). After reaching the closed position, (AUX01_IN) will lock the door again. The operation mode Continuously open will open the door.
Default		
Folding door, basic		Similar to "Folding door" above; optimized for Europe.
Industry 1		
CONTROL PANEL		
Mechanical Panel		Connect to AUX00_IN and AUX01_IN or with FEM-0
Disabled	X	
3 Pos. (AUTO)		Will require programming of parameters in Input/Output / STG: AUX00_IN = BDEM2 and AUX01_IN = BDEM1
One-way (EXIT)		Will require programming of parameters in Input/Output / STG: AUX00_IN = BDEM2 and AUX01_IN = BDEM1
Rocker & KeySw		Will require programming of parameters in Input/Output / STG: AUX00_IN = BDEM2 and AUX01_IN = BDEM1
Partial Opening		Will require programming of parameters in Input/Output / STG: AUX00_IN = BDEM2 and AUX01_IN = BDEM1
Display Panel		Note: After changing Display Panel settings, it is recommended to initiate a soft reset of the control to insure new settings are saved.
Language	(Plant - Eng. US)	Language is selected when first starting the Display Control Panel (and after resetting factory settings): Deutsch/Francais/English/**English US**, Italiano, Espanol, Nederlands, Danish, Slovenscina, Polski, Magyar, Czech
Keyboard	Locked (Plant - OFF)	Locked-mode: If not closed, when selected, the door will close. If unit has electric lock, it will be engaged; if no lock, the motor will power the door closed when a manual open motion is attempted. OFF-mode: Unit will stop automatic operation and will not resist manual motion of the door.
Contrast BDE 1	0...**20**...40	Display contrast for Primary Display Control Panel Note: 0 = lower contrast (hardly noticeable) 40 = higher contrast (possible streaking on display)
Contrast BDE 2	0...**20**...40	Contrast for Second Display Panel (Similar to Contrast BDE 1)
Brightness BDE1	0...**20**...40	Display brightness (backlight) for BDE 1 Note: 0 = pale backlight for applications with weak ambient light 20 = medium backlight for normal ambient light conditions 40 = intense backlight for applications with bright ambient light
Brightness BDE2	0...**20**...40	Display brightness (backlight) for BDE 2 (similar to BDE 1)
Light time delay	0...**10**...40	Period of time for backlight illumination of display 0 = no lighting 1 - 39 = lighting period in seconds 40 = backlight illumnation constantly on
Default operating mode		This designates the operating mode if no BDE-D or FEM-0 is connected or are interrupted, and if no BDE-M outputs are configured.
Off		
Locked	X	

PARAMETER	Default Setting(X)	Description
Automatic	(Plant -✓)	Note: A locked door may change to "Automatic" operating mode if the Display Control Panel is disconnected or damaged. This mode keeps unit running upon Display Control Panel failure.
Continuous open		
LOCKING		
Locking function		Door is locked through selection of operating modes
Night locked	X	Electric lock is engaged when "Locked" operating mode is selected.
1-Way locked		Electric lock is engaged in 1-Way (EXIT) operating mode.
Always locked		Electric lock is engaged in all operating modes when door is closed.
Locking type		Locking types are not automatically identified & must be programmed
Without	X	No electric lock present
Motor-powered		VRR 20 (motorised, bi-stable)
Bi-stable		VRR 16 (magnetic, bi-stable)
MPV 20		Multipoint locking device, system 20 (motorised)
MPV 16		Multipoint locking device, system 16 (motorised)
Magnet		Magnet locking device (without VAK) unlocked with no voltage
Fail secure		Monostable locking device, locks with no voltage applied
Fail safe		Monostable locking device, unlocks with no voltage applied
Double		Triggering of the additional unit for 2 locks Is used on FBO & PST
Start delay	**0**...40	Delay: max. 8 seconds between unlocking and door to begin opening
Closed VRR error		If enabled, a lock failure at closed will not cause the door to open 6".
Push force	0...40	Increases the closing force for a short time while locking and unlocking, in order to relieve mechanically the locking bolt.
CAN BUS		
Optional Units on CAN bus		Any unit connected is automatically identified & displayed with a "1". Disconnected units are displayed with "?" and must be removed manually with FPC902. Not available units are displayed with a "0".
FEM-0	0	Extended function module 0 - 2 configurable inputs - 1 configurable relay output (contact . 24V) - 2 ELS (Safety Beam) connections (pre-configured) - each 1 AKI-/AKA-connection (pre-configured) - BDE-M connection (pre-configured)
FEM-1	0	Extended function module 1 - 4 configurable inputs - 14 configurable relay outputs potential-free closed-circuit contact or break contact to be chosen Basic setting: closed-circuit contact - selection with jumper All FEM1 outputs can be activated with the available configurations Availability depends on control unit.
AKI 1	0	RAD: motion sensor 1 – interior
SI 1	0	RIC: safety sensor 1 – interior
AKA 1	0	RAD: motion sensor 1 – exterior
SA 1	0	RIC: safety sensor 1 – exterior
SL	0	AIR: safety “sidescreen” – left
SR	0	AIR: safety “sidescreen” – right
AKI 2	0	RAD: motion sensor 2 – interior
SI 2	0	RIC: safety sensor 2 – interior
AKA 2	0	RAD: motion sensor 2 – exterior
SA 2	0	RIC: safety sensor 2 – exterior

SERIES 5100 PARAMETER DESCRIPTIONS

PARAMETER	Default Setting(X)	Description
INPUT/OUTPUT		
STG		
AUX00_IN AUX01_IN AUX04_IN		Terminals 4, 6, & 18 on control module STG 20 UNI Note: With parameters identified as "Safety" require a closed circuit for normal door operation, and when the circuit is opened the signal is enabled. Not all functions are available on each AUX input.
Disabled	X	
SÖK or NSK (Emergency Open or Close)		Safety opening or closing has priority over Actuating and Safety Inputs, and Obstruction Detection is ignored. Connection to +24V enables standard door operation. Interruption of the +24V to the input will initiate the programmed Emergency Open or Close.
SURV (Remote en-gagement of Locked mode)		System response to Input: 0V/open = "Locked" operating mode 24V = Operating mode set by Display Control Panel When used to "Lock", Display Control Panel cannot override Remote Sw (SSK) and safety beams remain functional.
BDE-M (Mechanical Control Panel)		AUX00_IN = BDEM_2 and AUX01_IN = BDEM_1, or connect to FEM-0 (preconfigured connections) Note: Mech. Panel must be enabled in Control Panel parameters Only one Mech. Panel can be connected When set to "Continuous Open", door opens, then changes to Manual mode. If Display Control Panel is also connected, the Mech. Panel has priority, except for "Off/Locked" mode, and Display Panel will indicate mode set by Mech. Panel.
Continuously Open		Safety input (+24V for normal door operation), Momentary signal: 1st pulse = Continuous open, 2nd pulse = previous operating mode Note: A locked door can be unlocked, safety sensors are active
SIS		Safety during closing cycle (Not active when door closed). Door will reopen and remain open when signal is open. 0V = actuated.
SIO		Safety during opening cycle, including inhibiting motion at beginning of open cycle. Not active during closing cycle. Will stop door or continue opening slowly (creep), based on parameter Input/Output / SIO below. Functional on all open actuatons. 0V = actuated.
AKI Button reduced		Momentary actuation for reduced opening. Opening signal from other inputs will override and door will fully open. 24V = actuated. Will not open a door in "Locked" operating mode. Note: A maintained actuation of this input will not hold door open.
Broken rubber cord		
Opening Deadman		Maintained contact. When signal is present, door will open, if signal is removed, door will stop. Functional with Door Type: Dead Man.
Closing Deadman		Maintained contact. When signal is present, door will close, if signal is removed, door will stop. Functional with Door Type: Dead Man.
AKI Button		Momentary actuation for full door opening. 24V = actuated. Note: A maintained actuation of this input will not hold door open.
Closing Button		Momentary contact. When actuated, door will close. SIS is active. If door stopped or re-opened during closing (SIS), a 2nd contact closure will be required. 24V = actuated.
Ratchet		Sequential control (momentary actuation). See Door Type / Ratchet
Emergency Opening		Safety input. Door will open if not on "Locked" operating mode. Door will then revert to current operating mode. 0V = actuated.
SURA (Remote en-gagement of 1-Way mode)		System response to Input: 0V/open = "1-Way"(EXIT) operating mode 24V = Operating mode set by Display Control Panel When used to enable "1-Way / EXIT" mode, Display Control Panel can override only to "Locked / Off" operating mode. Remote Sw (SSK) and safety beams remain functional.

SERIES 5100 PARAMETER DESCRIPTIONS

PARAMETER	Default Setting(X)	Description
AKA Button		Momentary actuation for full door opening. 24V = actuated. Not active when door in "1-Way / EXIT" operating mode. Note: A maintained actuation of this input will not hold door open.
AKA Button Reduced		Momentary actuation for reduced opening. Opening signal from other inputs will override and door will fully open. 24V = actuated. Will not open a door in "1-Way/EXIT" or "Locked" operating modes. Note: A maintained actuation of this input will not hold door open.
VRR manual		Safety input - used with lock monitor switch on mechanical lock not controlled by door controller. When actuated, Display Control Panel will alternately indicate "Manually Locked" and current operating mode. 4 second delay before return to set mode. 0V = actuated.
Reset SÖK_NSK		Reset Emergency Open / Close (Not available on AUX4_IN)
SIA		Safety input - typically used on folding door systems. If actuated when door is closed, door will either not open (stop) or open slowly (creep) based on Input/Output / SIA parameter below. If actuated when door open, door remains open until signal removed. SIA is ignored when door is in motion (open & close). 0V = actuated.
AUX0_OUT		Dry Contacts on STG: Terminals 8 (NO), 9 (COM), & 10 (NC) Rated 1 Amp at 30VDC
Disabled	X	
Test Sensors	Available only on CanBus Sensors	Is needed as functional test for safety sensors, and triggers prior to each “dangerous” door motion (e.g. closing motion)
Alarm output		After the configured time (parameter Miscellaneous / Alarm display) has expired, the error is displayed on the BDE-D and relay is de-energized. In normal mode, relay energized, COM & NO connected.
Gong		No ELS signal (Safety during closing/SIS): Relay is de-energized. Reacts to ELS or presence surveillance signal, when door is open/ activated. In case of a constant signal, every 10 seconds a pulse will be activated for approx. 1 sec. This is applicable as well during the learning phase of a RIC 290.
Locked		When not locked: Relay is de-energized, COM & NC connected.
Closed		Output triggers slightly delayed, as soon as the door is closed (static opening D-STA < 20mm). Functional in Manual mode.
Warning		Pre-warning before the door opens/closes and while the door is in motion
Open		Relay energized when door is at full open (COM & NO connected), and remains energized until door begins closing.
AKI		Output triggers when Interior sensor is actuated.
AKA		Output triggers when Exterior sensor is actuated.
ZLP		
ZLP1		Additional printed circuit board to connect conventional threshold safety beams. Once the ZLP-ELS beams are recognized (automatic recognition), parameter can only be changed with the FPC 902.
Without	X	No additional printed circuit board connected
ELS	(Plant - ✓)	Additional printed circuit board connected for 2 ELS
FEM 0		See additional instructions provided with FEM 0 expansion module
FEM 1		See additional instructions provided with FEM 1 expansion module
Ext. Sw IN		Function of Exterior Sensor (AKA)
Ext. Sw IN		Exterior sensor is active during closing cycle when in operating modes "One-Way" and "Locked" for safety.
Inactive by 1way and locked		Exterior sensor is not active during closing cycle when in operating modes "One-Way" and "Locked".
Disabled		Exterior sensor is not active as a motion sensor; signals from it are ignored by the control unit. Presence detection with RIC 290 is possible.

SERIES 5100 PARAMETER DESCRIPTIONS

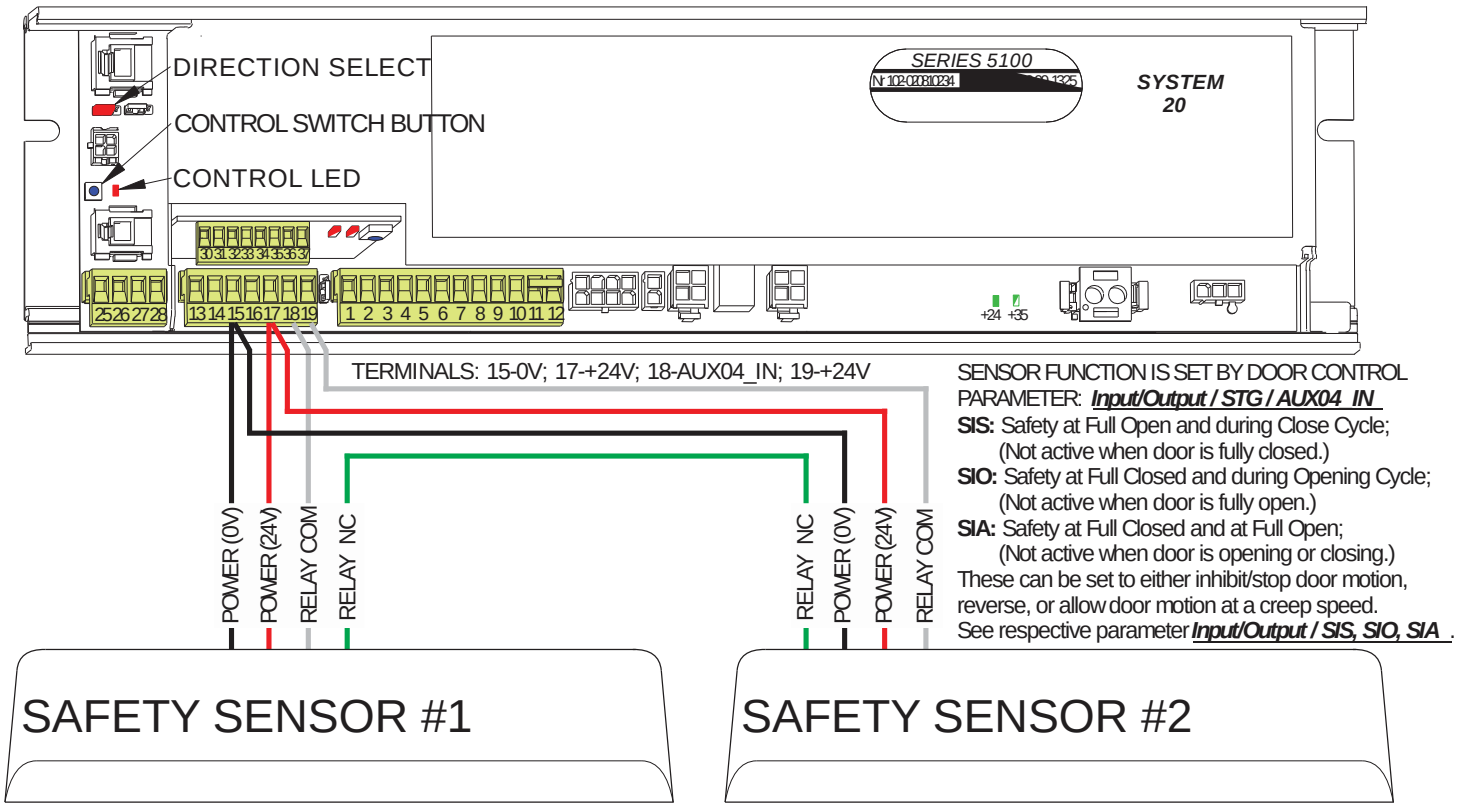
PARAMETER	Default Setting(X)	Description
Emerg. Opn / Cls		Set functions of Emergency Signal Input
Function		Function Options: Disabled Emergency Open Emergency Close; Manual & Remote Switch active Emergency Close & Lock Emergency Close & Lock; Remote Switch active Emergency Close; Manual Override
Speed (Flip-Flow)	**0**…40	Set response time: 0 to 40. Applicable to Door Type Flip Flow only.
Emerg. Stop Reset		Disabled or Enabled
SIO		Function of Sensor covering Side Approach
Function SIO		**Stop** or Creep
Activate SIO	**0**…40	Adjustable 0 to 40
Suppression SIO	0…**40**	Adjustable 0 to 40
SIS		Function of Sensor covering door path: **Stop** Reversing direction Creep (Slow speed)
SIA		Function of Sensor for Folding Door Safety: **Stop** Creep (Slow speed)
MISCELLANEOUS		
TOWA		
Disabled or Enabled	X	If both Interior and Exterior Sensors are simultaneously actuated, or one actuated longer than 20 seconds, a door in "Partial Open" will fully open for that cycle, then revert back to "Partial Open" mode.
Push to act. Open		Note: Adjustment of holding force when closing is ignored
Disabled	X	
Normal		Opening width per current operating mode (Full or Partial Opening)
Reduced		Partial opening width
Push to act. Close		
Disabled Enabled		Note: Open time delay will be ignored if enabled and door is pushed.
Push Holding force	**0**...40	Force required to initiate function: 0 = light; 40 = heavy
Lead Time Open	0...**1**...40	Pre-warning time after the open signal, before the door actually moves, and warning continues while the door is in motion. Note: 0 = No pre-warning and no warning while in motion 1 = 0.2 seconds pre-warning + warning 40 = 8 seconds pre-warning + warning (opening delayed 8 sec.) The push to open function will interrupt the pre-warning delay.
Lead Time Close	0...**1**...40	Pre-warning after the open time expires, before the door begins closing, and warning continues during the door is in motion. Note: 0 = No pre-warning and no warning while in motion 1 = 0.2 seconds pre-warning + warning 40 = 8 seconds pre-warning + warning (closing delayed 8 sec.) The push to close function will interrupt the pre-warning delay.
Alarm display		Display for AKI/AKA/SSK or SIO/SIS/ELS If the alarm output is configured, it will be disabled after the preset time.
Time release	0...**18**...40	Delay time during a permanently “on” signal, until an error message is displayed - 0 = No Alarm Screens will be displayed; 1 to 40 = Delay before Display in 5 sec. increments (5s. min/200s. max)
Time safety	0...**16**...40	Similar to Time release above
Obstruction Alarm		
Disabled	X	The Display Control Panel will not indicate an Obstruction alarm.
Enabled		The Display Control Panel will indicate an Obstruction alarm. If the Alarm Output is configured (Input/Output / STG / AUX0_OUT / Alarm Display), it will also change state to indicate the alarm.

ALARM CODES AND ERROR MESSAGES

No.	Display text	Type	Res	Comments and possible troubleshooting
3	AKI > 60 sec. active			Inside radar longer than 60 sec. active and door remains open. Check that no moving objects are activating the radar.
5	AKA > 60 sec. active			Outside radar longer than 60 sec. active and door remains open. Check that no moving objects are activating the radar.
6	Unlocking error		X	Unlocking error: it is impossible to unlock the door. Repeat unlocking attempt after changing the BDE operating mode.
7	No redundancy test	RED	X	When no „redundancy“ test could happen within the last 24 h or the „redundancy“ test was not correctly performed on a door not locked. Reset. Control settings.
9	Battery fuse open		X	Battery fuse is disconnected or battery is not plugged in.
9	Open. unsuccessful			Door does not open or only slowly. SIO might possibly be active or motion be mechanically hindered (e.g. dirt in floor track).
10	Locking error			Locking error and door remains approx. 10 cm open → depending on parameterising door remains closed. Door might possibly be hindered or locking device might need to be adjusted.
11	Difference AKI	RED	X	Error in the interpretation of the inside radar signal. Check inside radar.
12	Low BAT voltage		X	Battery is missing or is not plugged in. Door works if mains voltage is provided.
12	BAT capacity		X	Battery no longer meets minimum power requirements. Replace Battery.
14	VAK defective		X	Locking device hampered. Adjust door leaves and locking device.
15	EMERG. OPEN.	RED		On RED installations emergency opening switch has been actuated.
17	Timeout open. time	RED	X	80% of escape route opening not reached within 3 sec. Control with FPC, adjust opening speed. Under „Status”, opening time + 400 ms.
18	VAK closed automatic		X	Adjust locking device. Make contact (NOC) of locking device is active with Automatic. Locking is set on „wrong“ position. Change operating mode on BDE-D to Locked and again to Automatic. Actuate manual unlocking, or rather completely reset it.
29	TOS not locked	TOS with DV		TOS not locked (rotary switches) on Locked. Turn rotary switches onto Locked position (above).
30	TOS locked	TOS with DV		Automatic mode, TOS locked, but door stays in manual mode.
31	EMERGENCY STOP			Emergency stop key has been pressed or manual unlocking has been actuated.
33	Error ELS1		X	Light barrier signal is not identified. Inform after-sales service. Calibrate ELS with 2 light pulses.
36	VOK closed l.		X	Locking device does not work properly. On BDE-D change operating mode to Automatic and again to Locked. Wrong locked position or VRR faulty.
37	Motor current		X	Possibly wrong motor type parameterised or motor is overloaded.
38	Motor 1 overheat		X	Motor 1 is too warm. Door works sluggishly.
39	Overload 24V		X	24 volts supply for peripheral units is overloaded. Check wiring.
41	Temp. sensor 1		X	With motor 1: temperature sensor is faulty or motor cable is disconnected.
42	Temp. sensor 2		X	With motor 2: temperature sensor is faulty or motor cable is disconnected.
43	Encoder fault		X	Encoder or cable is faulty or not plugged in. Reset.
44 W	T. motor high			Warning message; Time Delays will be extended. Door might work sluggishly. Check for presence of mechanical hindrance.
46	STG defective		X	Control unit is defective. Reset. If no success, then replace control unit.
47	SIO > 60 sec active		X	Door does not open or slides at reduced speed. Check Safety Sensor SIO.
48	NSK or SOK activated			Remote Alarm has just received. Control safety alarm. Control external signal.
50	Watchdog fault			Replace control unit.
51	VOK op n unl.		X	Repeat locking and unlocking procedures. Connection cable might be missing or is not properly plugged in. Check locking settings.
52	No run param.		X	Door must be calibrated (perform teach-in run).
53	Interrupt. mot. 1		X	Motor is not plugged in. Motor is faulty.
54 W	Calibrating run		X	Warning message: Calibration run is performed.
55	Power failure			No mains supply. Door works in battery service provided that there is a battery and not "Basic escape route" has been configured.
57	Interrupt. mot. 2		X	2nd motor is not plugged in. Motor is faulty.
59	ELS > 60 sec. active			Light barriers interrupted or disconnected and door remains open. Check that safety barriers are not covered or extremely dirty.
59	SIS > 60 sec. active		X	Door does not close. Check Safety Sensor SIS.
60	EEPROM defective		X	Load factory settings. 9 light pulses with MFT and reset within 10 seconds. Afterwards language selection has to be displayed on BDE-D. Attention! All programmings are reset. Reconfigure door. Replace control unit if door still fails to function.
61	SSK > 60 sec. active			Key-operated contact stays active. Door remains open. Check Remote Switch (SSK) wiring, connections, and switch.
62	BDE no priority			BDE is locked e.g. by a clock timer on input SURV/SURA accordingly configured.
92	STG relay defect.		X	Change control unit.
93	Overvoltage 24V		X	Wiring error. Check connections.
96	EEPROM void		X	Load factory settings. See error 60.
97 W	Maintenance time exceeded		X	Warning message: Acknowledge message. Alarm is reset for 13 days. Actual value = 105% of target value of cycles or operating hours. Inform after-sales service and have installation serviced. Set Targets to 0 to avoid alert.
98 W	Maintenance due		X	Warning message: Acknowledge message. Alarm is reset for a short time. Repeats at 100% Actual value = 95% of target value of cycles or operating hours. Inform after-sales service and have installation serviced. Set Targets to 0 to avoid alert
112	Batt. not charged complet.			Battery is not fully charged. Message disappears from display in case of full charge.
2132	FPC Can blocked ********** BDE Can blocked ********** ERROR by saving in the STG			On a locked door the CAN-Bus will be blocked for devices like the BDE-D(Display) or FPC if they were not connected BEFORE the door was locked. When reading either of the 3 messages from the left column, to unblock, the door needs to be unlocked or the emergency switch has to be activated or the multi-function switch on the control has to be pressed for 1 flash.

11 Abbreviations

A	A	Width of passage
	AKA	Actuating contact „outside“
	AKI	Actuating contact „inside“
	AMP	Lamp
	APA	actuating switch for pharmacies
	APD	Pushbutton for pharmacies
	APR	locking bar for pharmacies
	APS	safety device for pharmacies
	AS	Connection or general schematic diagram
	ATE	Drive unit
	ATM	Drive module
B	BAT	Battery-pack
	BDE	Control unit
	BDE-E	Control unit electronic
	BDE-M	Control unit mechanical
	BDE-R	Control unit redundant
	BS	BDE with lock
C	CAN-H	Serial interface
	CAN-L	Serial interface
	CO48	special standard in France
	CPU	microprocessor
D	D-STA	Double sliding door drive
	DUO	heavy door operator
E	EEPROM	parameter storage
	ELS	Light barrier
	EMK	Receiver head
	EPROM	program storage
	ES	Electrical connection diagram
	E-STA	Single sliding door drive
	E-STA-L	Single sliding door drive left
	E-STA-R	Single sliding door drive right
F	F	Length of header
	FEM	Extended functions module
	FIRST	redundant operator
G	G	Height of passage
	GTR	Gearbox
H	HEA	Manual unlocking „from outside“
	HEI	Manual unlocking „from inside“
	HES	Manual unlocking switch
K	KA	Cable exit
L	LED	Light-emitting diode
	LS	Wiring diagram
M	MOT	Motor
	MP	General installation plan
N	NET	Power supply
	NSK	Emergency fail close contact
O	OUT	Output
	OVA	Optical lock indicator
R	RAD-A	Radar „outside“
	RAD-I	Radar „inside“
	RED	Redundant module
S	SAA	interlock control “exit actuation blocked”
	SAG	Control unit
	S-AUS	Interlock control
	SEA	Interlock control “entrance actuation blocked”
	SEK	Transmitter head
	SHE	Safety element, external
	SÖK	Emergency opening contact
	SPS	Stored program control SPC
	SSA	Slidebar operator
	SSK	Key-operated contact
	STA	Sliding door drive
	STD	Socket
	STG	Control unit
	STM	Control module
	STP	Control p.c.b.
	SUR-A	Time switch contact “exit mode”
	SUR-V	Time switch contact “locking mode”
T	THS	Thermostatic switch
	TOS	Break-out system
	TOZ	Door hold-open time
	TSA	Telescopic sliding door operator
	TÜV	Industrial inspectorate
U	UMR	Guide pulley
	µP	Microprocessor
V	VAK	Lock indicating contact
	VAL	Locking alarm
	VL	Wiring list
	VRR	Locking device
Z	ZLP	Supplementary printed circuit board



SENSOR FUNCTION IS SET BY DOOR CONTROL PARAMETER: ***Input/Output / STG / AUX04_IN***

SIS: Safety at Full Open and during Close Cycle; (Not active when door is fully closed.)

SIO: Safety at Full Closed and during Opening Cycle; (Not active when door is fully open.)

SIA: Safety at Full Closed and at Full Open; (Not active when door is opening or closing.)

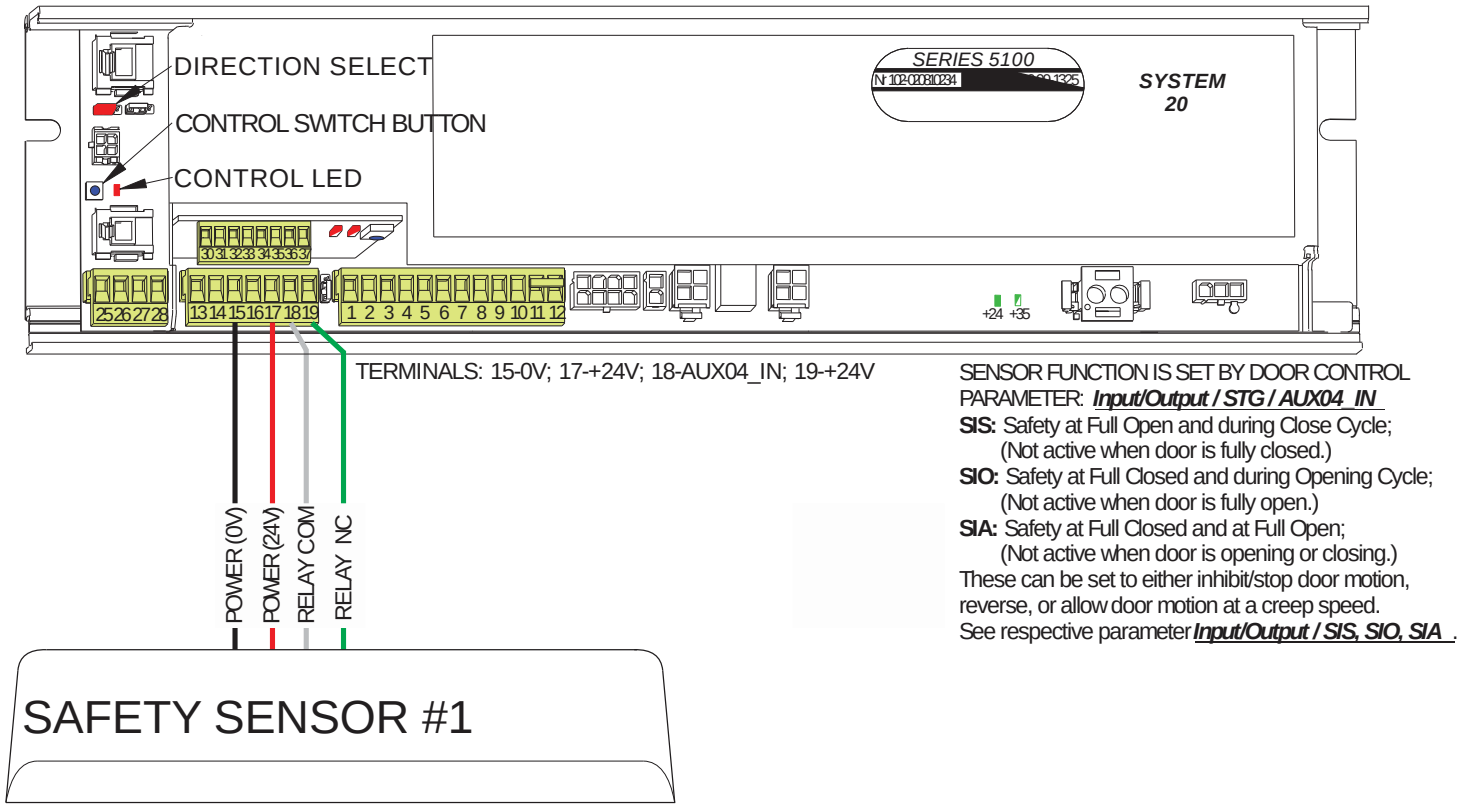
These can be set to either inhibit/stop door motion, reverse, or allow door motion at a creep speed.

See respective parameter ***Input/Output / SIS, SIO, SIA*** .

SETUP AND ADJUST SENSORS PER THE INCLUDED INSTRUCTIONS

S5100Sys20 Slide Door Safety Sensors (2 sensors) Wiring and Parameters

09APR2013 DPH



SENSOR FUNCTION IS SET BY DOOR CONTROL PARAMETER: ***Input/Output / STG / AUX04_IN***

SIS: Safety at Full Open and during Close Cycle; (Not active when door is fully closed.)

SIO: Safety at Full Closed and during Opening Cycle; (Not active when door is fully open.)

SIA: Safety at Full Closed and at Full Open; (Not active when door is opening or closing.)

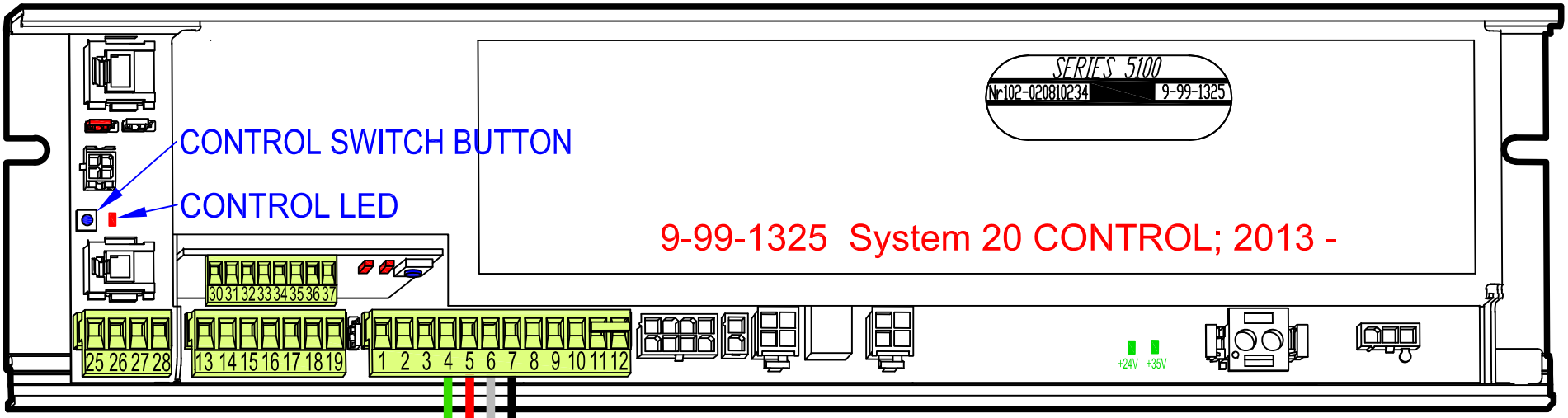
These can be set to either inhibit/stop door motion, reverse, or allow door motion at a creep speed.

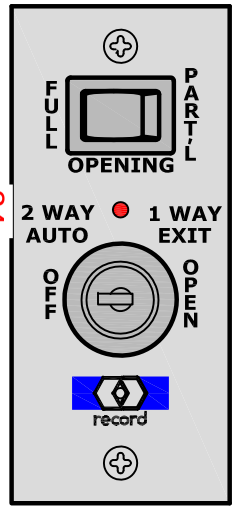
See respective parameter ***Input/Output / SIS, SIO, SIA*** .

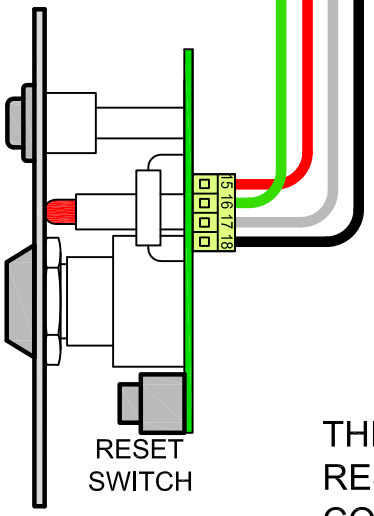
SETUP AND ADJUST SENSORS PER THE INCLUDED INSTRUCTIONS

S5100Sys20 Slide Door Safety Sensor (1 sensor) Wiring and Parameters

09APR2013 DPH







TO CONNECT EITHER THE 4-51-0105 DUAL ROCKER SWITCH OR THE 4-51-0106 ROCKER / KEY SWITCH CONTROL PANEL TO THE 9-99-1325 SYSTEM 20 DOOR CONTROL ASSEMBLY, CONNECT THE TERMINAL AS SHOWN:

ROCKER CONTROL PANEL	DOOR CONTROL
15	5
16	4
17	6
18	7

THE 9-99-1325 DOOR CONTROL ASSEMBLY MUST BE CONFIGURED TO RESPOND TO THE CONTROL PANEL. USING EITHER THE DISPLAY CONTROL PANEL OR THE FPC-902 FLASH PROGRAMMER, CHANGE THE FOLLOWING THREE PARAMETERS AS INDICATED:

PARAMETER: *CONTROL PANEL / MECHANICAL PANEL* - CHANGE FROM "DISABLED" TO "ROCKER & KEYSW"
PARAMETER: *INPUT/OUTPUT / STG / AUX00_IN* - CHANGE FROM "DISABLED" TO "BDEM_2"
PARAMETER: *INPUT/OUTPUT / STG / AUX01_IN* - CHANGE FROM "DISABLED" TO "BDEM_1"

NOTE: WHEN USING BOTH A ROCKER SWITCH PANEL AND A DISPLAY CONTROL PANEL, THE ROCKER SWITH PANEL WILL HAVE PRIORITY OVER THE DISPLAY PANEL IN ALL MODES EXCEPT "OFF".
TO RESET THE DOOR WITH A ROCKER SWITCH PANEL, INSERT A PAPERCLIP IN THE SMALL HOLE IN THE CENTER OF THE LOGO, PRESS UNTIL A CLICK IS FELT AND HOLD FOR 15 SECONDS, THEN RELEASE.

record
record-USA
4324 Phil Hargett Ct.
Monroe, NC 28110
(704) 289 - 9212

INSTALLING A 4-51-0105 / 4-51-0106 ROCKER SWITCH CONTROL PANEL WITH A 9-99-1325 SYSTEM 20 DOOR CONTROL

FEB2013

THE FOLLOWING PARAMETERS MUST BE ENABLED WHEN AN ELECTRIC LOCK IS PRESENT:
CONFIGURE SYSTEM / LOCK TYPE / SELECT: FAIL SECURE or FAIL SAFE (BASED ON LOCK TO BE INSTALLED)
PARAM STG / LOCKING / LOCK FUNCTION / SELECT: NIGHT LOCKED, 1-WAY LOCKED, or ALWAYS LOCKED (BASED ON DESIRED FUNCTION)

WHEN THE BATTERY BACKUP IS PRESENT, AN ADDITIONAL BATTERY MONITOR BOARD (P/N 9-51-0016) IS INSTALLED IN THE DOOR CONTROLLER.
THE FOLLOWING PARAMETER MUST BE CHANGED:
CONFIGURE SYSTEM / BATTERY / SELECT: LEAD

1 EMERGENCY STOP
2 EMERGENCY STOP(+24V)
3 +24V
4 AUX00-IN
5 +24V
6 AUX01-IN

7 0V
8 AUX0 OUT - NO
9 AUX0 OUT - COM
10 AUX0 OUT - NC
11 SPECIAL ACTIVATION
12 SPECIAL ACTIVATION

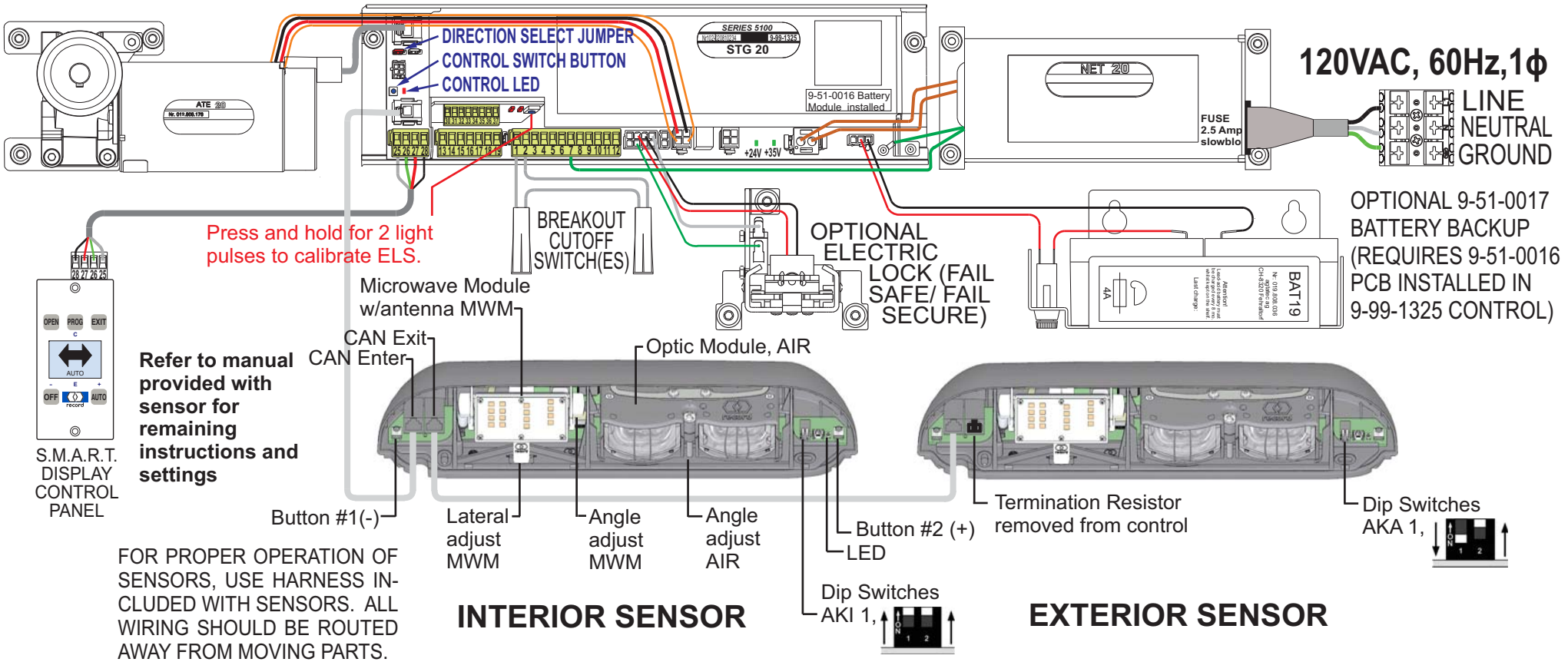
13 +24V (SENSOR POWER)
14 INTERIOR SENSOR
15 0V (SENSOR POWER)
16 EXTERIOR SENSOR
17 +24V (SENSOR POWER)
18 AUX04-IN

19 +24V

25 CANBUS - DATA H
26 CANBUS - DATA L
27 +24V
28 0V

30 SAFETYBEAM - XMTR1 +(WHT)
31 SAFETYBEAM - XMTR1 - (BLK)
32 SAFETYBEAM - RCVR1 +(ORG)
33 SAFETYBEAM - RCVR1 - (BLK)
34 SAFETYBEAM - XMTR2 +(WHT)
35 SAFETYBEAM - XMTR2 - (BLK)
36 SAFETYBEAM - RCVR2 +(ORG)
37 SAFETYBEAM - RCVR2 - (BLK)

NOTE: THIS PRODUCT IS INTENDED FOR PERMANENT CONNECTION TO THE ELECTRICAL SUPPLY SYSTEM.



FOR PROPER OPERATION OF SENSORS, USE HARNESS INCLUDED WITH SENSORS. ALL WIRING SHOULD BE ROUTED AWAY FROM MOVING PARTS.

WIRING DIAGRAM Series 5100 System 20 with RIC290 CANBus Sensors

April 2016 BG

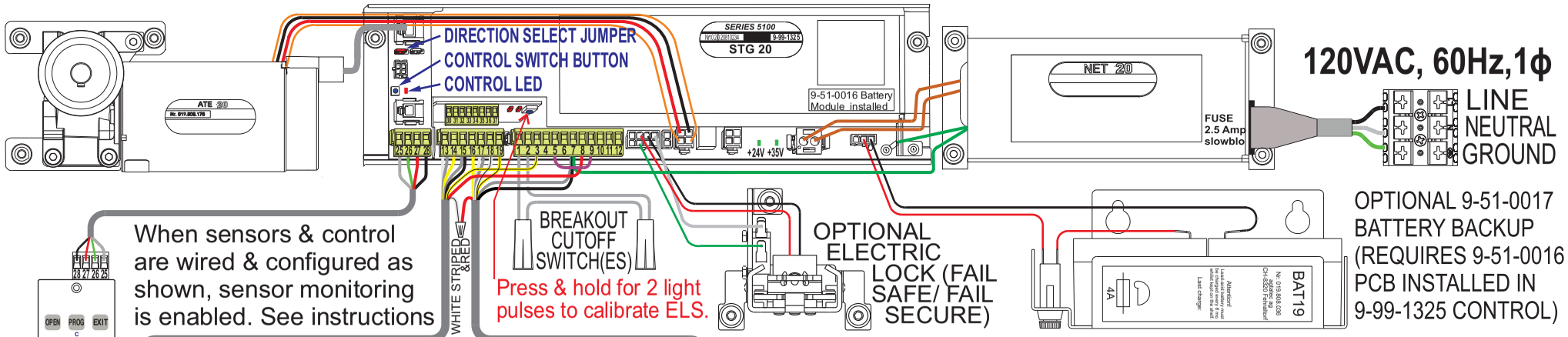
THE FOLLOWING PARAMETERS MUST BE ENABLED WHEN AN ELECTRIC LOCK IS PRESENT:
CONFIGURE SYSTEM / LOCK TYPE / SELECT: FAIL SECURE or FAIL SAFE (BASED ON LOCK TO BE INSTALLED)
PARAM STG / LOCKING / LOCK FUNCTION / SELECT: NIGHT LOCKED, 1-WAY LOCKED, or ALWAYS LOCKED (BASED ON DESIRED FUNCTION)

WHEN THE BATTERY BACKUP IS PRESENT, AN ADDITIONAL BATTERY MONITOR BOARD (P/N 9-51-0016) IS INSTALLED IN THE DOOR CONTROLLER.
THE FOLLOWING PARAMETER MUST BE CHANGED:
CONFIGURE SYSTEM / BATTERY / SELECT: LEAD

CONSULT THE PRODUCT INSTALLATION INSTRUCTIONS FOR PROPER DOOR ADJUSTMENTS.

1 EMERGENCY STOP
2 EMERGENCY STOP(+24V)
3 +24V
4 AUX00-IN
5 +24V
6 AUX01-IN
7 0V
8 AUX0 OUT - NO
9 AUX0 OUT - COM
10 AUX0 OUT - NC
11 SPECIAL ACTIVATION
12 SPECIAL ACTIVATION
13 +24V (SENSOR POWER)
14 INTERIOR SENSOR
15 0V (SENSOR POWER)
16 EXTERIOR SENSOR
17 +24V (SENSOR POWER)
18 AUX04-IN
19 +24V
25 CANBUS - DATA H
26 CANBUS - DATA L
27 +24V
28 0V
30 SAFETYBEAM - XMTR1 +(WHT)
31 SAFETYBEAM - XMTR1 - (BLK)
32 SAFETYBEAM - RCVR1 +(ORG)
33 SAFETYBEAM - RCVR1 - (BLK)
34 SAFETYBEAM - XMTR2 +(WHT)
35 SAFETYBEAM - XMTR2 - (BLK)
36 SAFETYBEAM - RCVR2 +(ORG)
37 SAFETYBEAM - RCVR2 - (BLK)

NOTE: THIS PRODUCT IS INTENDED FOR PERMANENT CONNECTION TO THE ELECTRICAL SUPPLY SYSTEM.



INTERIOR SENSOR

15-POWER: GREY	Dip 1 Middle (Up)
13-POWER: GREY	Dip 12 "NO"(Down)
13-RELAY: WHITE	Dip 14 "ON"(Up)
14-RELAY: YELLOW	
SAFETY: WHITE/STRIPED TO TEST: RED EXT. SENSOR	
3-SAFETY: YELLOW/STRIPED	
8-TEST: RED	Dip 15 "ON"(Up)
15-TEST: BLACK	Recommended

EXTERIOR SENSOR

7-POWER: GREY	Dip 1 Middle (Up)
17-POWER: GREY	Dip 5 Setting 2 (Up)
17-RELAY: WHITE	Dip 12 "NC"(Up)
16-RELAY: YELLOW	Dip 14 "ON"(Up)
18-SAFETY: WHITE/STRIPED	Dip15 "ON"(Up)
19-SAFETY: YELLOW/STRIPED	Recommended
TEST: RED TO SAFETY WHITE/STRIPED INT. SENSOR	
7-TEST: BLACK	

FOR PROPER OPERATION OF SENSORS, USE HARNESS INCLUDED WITH SENSORS. ALL WIRING SHOULD BE ROUTED AWAY FROM MOVING PARTS.

JUMPER = #5 TO #9 on Control
Set Parameter AUX04 IN = SIS
Set Parameter AUX0 OUT = TEST SENSORS

Wiring Diagram Series 5100 System 20 w/OPTEX X-Zone"T" Sensors

Mar 2016 BG

record

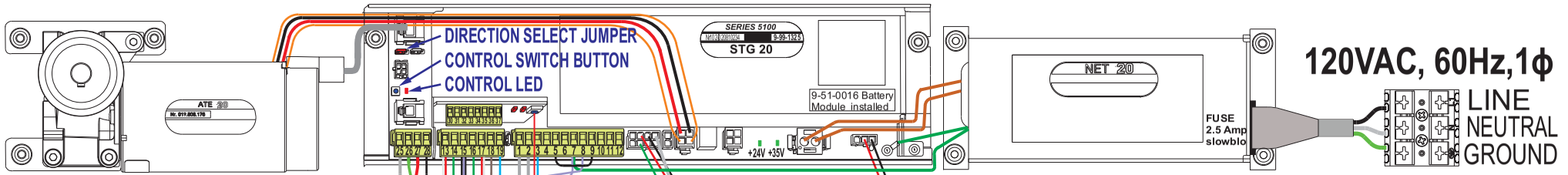
THE FOLLOWING PARAMETERS MUST BE ENABLED WHEN AN ELECTRIC LOCK IS PRESENT:
CONFIGURE SYSTEM / LOCK TYPE / SELECT: FAIL SECURE or FAIL SAFE (BASED ON LOCK TO BE INSTALLED)
PARAM STG / LOCKING / LOCK FUNCTION / SELECT: NIGHT LOCKED, 1-WAY LOCKED, or ALWAYS LOCKED (BASED ON DESIRED FUNCTION)

WHEN THE BATTERY BACKUP IS PRESENT, AN ADDITIONAL BATTERY MONITOR BOARD (P/N 9-51-0016) IS INSTALLED IN THE DOOR CONTROLLER.
THE FOLLOWING PARAMETER MUST BE CHANGED:
CONFIGURE SYSTEM / BATTERY / SELECT: LEAD

CONSULT THE PRODUCT INSTALLATION INSTRUCTIONS FOR PROPER DOOR ADJUSTMENTS.

1 EMERGENCY STOP
2 EMERGENCY STOP(+24V)
3 +24V
4 AUX00-IN
5 +24V
6 AUX01-IN
7 0V
8 AUX0 OUT - NO
9 AUX0 OUT - COM
10 AUX0 OUT - NC
11 SPECIAL ACTIVATION
12 SPECIAL ACTIVATION
13 +24V (SENSOR POWER)
14 INTERIOR SENSOR
15 0V (SENSOR POWER)
16 EXTERIOR SENSOR
17 +24V (SENSOR POWER)
18 AUX04-IN
19 +24V
25 CANBUS - DATA H
26 CANBUS - DATA L
27 +24V
28 0V
30 SAFETYBEAM - XMTR1 +(WHT)
31 SAFETYBEAM - XMTR1 - (BLK)
32 SAFETYBEAM - RCVR1 +(ORG)
33 SAFETYBEAM - RCVR1 - (BLK)
34 SAFETYBEAM - XMTR2 +(WHT)
35 SAFETYBEAM - XMTR2 - (BLK)
36 SAFETYBEAM - RCVR2 +(ORG)
37 SAFETYBEAM - RCVR2 - (BLK)

NOTE: THIS PRODUCT IS INTENDED FOR PERMANENT CONNECTION TO THE ELECTRICAL SUPPLY SYSTEM.

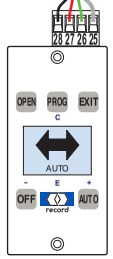


When sensors & control are wired & configured as shown, sensor monitoring is enabled. See instructions

BREAKOUT CUTOFF SWITCH(ES)
Press and hold for 2 light pulses to calibrate ELS.

OPTIONAL ELECTRIC LOCK (FAIL SAFE/ FAIL SECURE)

OPTIONAL 9-51-0017 BATTERY BACKUP (REQUIRES 9-51-0016 PCB INSTALLED IN 9-99-1325 CONTROL)



S.M.A.R.T. DISPLAY CONTROL PANEL

INTERIOR SENSOR

15-POWER: BLACK — Set "Test" to "ON"
13-POWER: RED — Enable Monitoring
13-RELAY: WHITE
14-RELAY: GREEN — Set Air Output to "NO"
xx-RELAY: YELLOW(not used)
SAFETY: BROWN TO TEST: PURPLE EXT SENSOR
3-SAFETY: BLUE
8-TEST: PURPLE
15- TEST: PURPLE

EXTERIOR SENSOR

7-POWER: BLACK — Set "Test" to "ON"
17-POWER: RED — Enable Monitoring
17-RELAY: WHITE
16-RELAY: GREEN — Set Air Output to "NC"
xx-RELAY: YELLOW(not used)
18-SAFETY:BROWN
19-SAFETY:BLUE
TEST: PURPLE TO SAFETY: BROWN INT. SENSOR
7-TEST: PURPLE

FOR PROPER OPERATION OF SENSORS, USE HARNESS INCLUDED WITH SENSORS. ALL WIRING SHOULD BE ROUTED AWAY FROM MOVING PARTS.

JUMPER = #5 TO #9 on Control
Set Parameter AUX04 IN = SIS
Set Parameter AUX0 OUT = TEST SENSORS

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WIRING DIAGRAM SERIES 5100 System 20 w/BEA IXIO T Sensors

Mar2016 BG