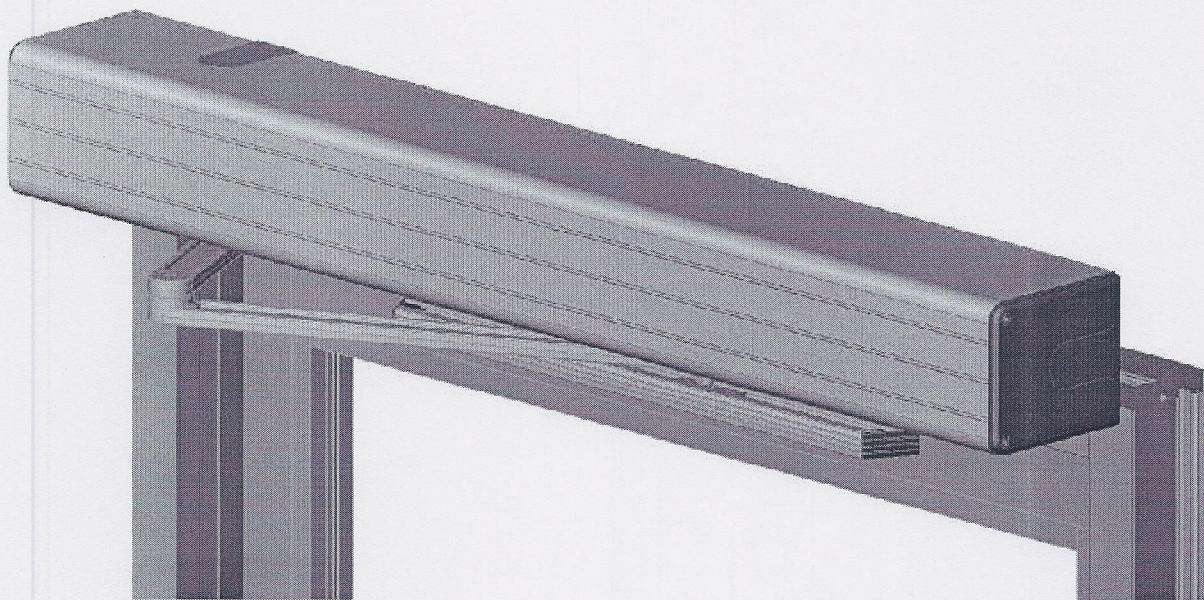
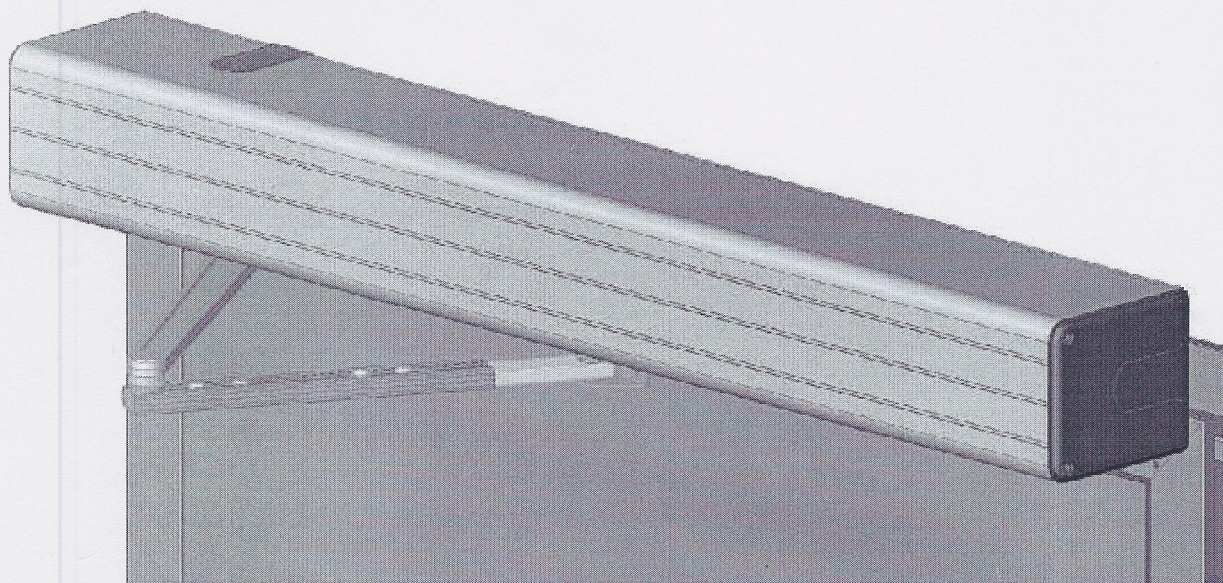




8000/8100 Series Swing Door Operator Installation Instructions





8000/8100 Series Swing Door Operator Installation Instructions

The record-usa 8000/8100 Operator has been carefully designed, built, and tested to provide years of service.

The life of the operator package is directly related to how carefully the installation is accomplished and how accurately the instructions are followed. Installation of this operator package should be done by properly trained and knowledgeable installers with a knowledge of local code requirements and the requirements of ANSI A156.10 Standards for Power Operated Pedestrian Doors and A156.19 Standards for Low Energy and Power Assisted 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.

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 power switches.
- * 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 shut the doors down and call for service.

READ INSTALLATION INSTRUCTIONS BEFORE INSTALLING.

The sequence of installation and adjustment is in order, however some sections will not apply. Review this instruction manual and determine those sections that do apply. Be sure all doors swing freely and clear all objects before attaching arms.

Special attention needs to be given to installations with parallel and slide arms when an adjacent wall is perpendicular to the door frame.

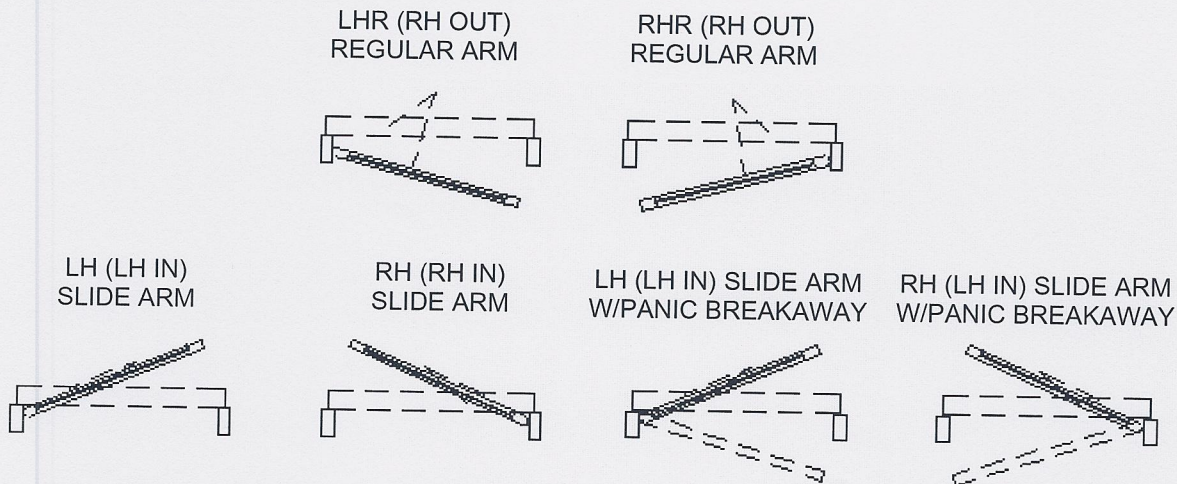
INDEX

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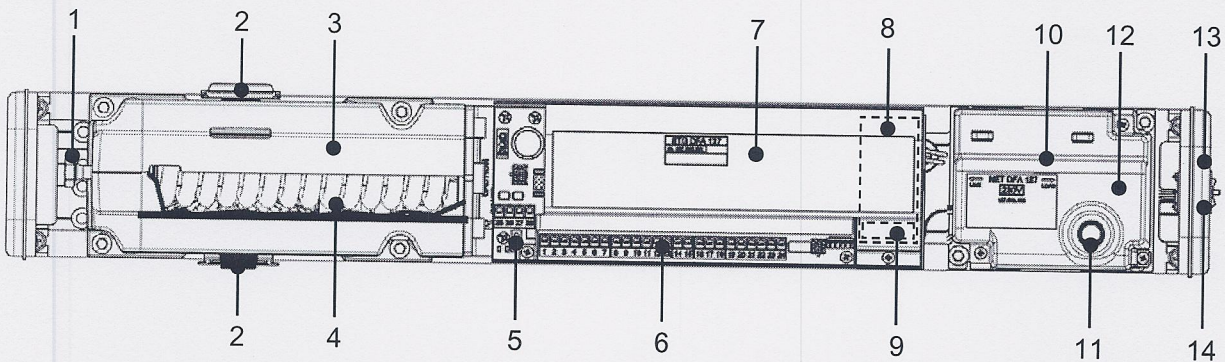
8000/8100 Series Swing Door Operator Installation Instructions

OPERATOR HANDING IDENTIFICATION



Product Description

The record Series 8100 Swing Door Operator is a power-open, spring-close unit providing full functionality conforming to either ANSI A156.10 or ANSI A156.19 requirements. The self-monitoring microprocessor-based control maintains precise regulation throughout the door open / close cycle. Two operators can be connected together in a master/slave configuration providing synchronized operation. Safety is additionally increased by the use of a redundant force limitation.



- | | |
|--------------------------------------|--|
| 1 Adjusting screw for spring tension | 8 Motor Drive Circuit Board |
| 2 Output Shafts for Arms & Stop | 9 Slide switch S1 (rotating direction) |
| 3 Drive Unit | 10 Power Supply |
| 4 Closing Spring | 11 Fuse (2.0A, 5X20mm, Slo-Blo) |
| 5 Multifunction Pushbutton / Control | 12 Power Supply Circuit Board |
| 6 Terminal Blocks for I/O | 13 On / Off / Open Rocker Switch |
| 7 Microprocessor Control | 14 Status LED and Reset Pushbutton |

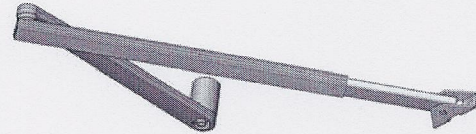


8000/8100 Series Swing Door Operator Installation Instructions

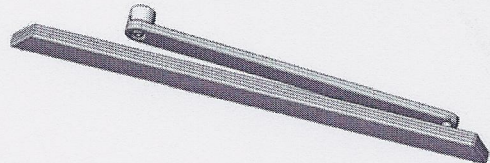
Drive Arms

Three types of drive arms are available:

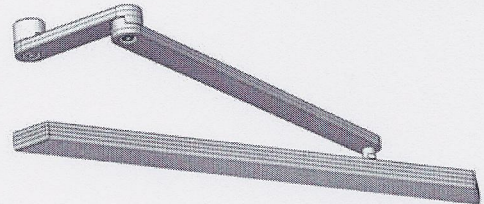
The Standard Arm provides the most flexibility –
Outswing (push) reveals to 12"
Inswing (pull) reveals up to 6"



The Slide Track Arm –
Inswing (pull) reveals to 6"
Outswing (push) reveals to 3"



The Slide Track Arm with Offset Adapter –
Suitable for center-pivoted doors with
breakout capability;
Allow double-egress installations in a



An extension adapter is included with each arm assembly, connecting the drive arm to the operator output shaft. The adapter provided with the Slide Track arm mounts the drive arm approximately 1/2" below the bottom of the header. The adapter supplied with the Standard arm locates the arm approximately 1-3/4" below the bottom of the header. An optional extension adapter is available that locates the arm approximately 3" below the bottom of the header.

Layouts for the different arm / installation configurations are attached.

Instructions to the Installer

This unit is to be installed and commissioned by a trained technician with knowledge of ANSI A156.10 and A156.19 Standards for Power Operated Doors, applicable local codes, and record-usa installation recommendations.

Information to be provided to the owner

The Owners Manual with training and explanation of the daily safety check.
Location of the operator control panel (On / Off / Hold Open).
Specific information pertinent to the proper operation of the installation.

Electrical preparation

Before preparing jambs, determine the method and requirements for the electrical wiring involved and whether mats or other type of activation is used.
Power requirements — 120 VAC, 60 Hz, 15 Amp Service.



8000/8100 Series Swing Door Operator Installation Instructions

Mechanical Installation

The door panel must move freely throughout its entire opening and closing rotation. The door frame must provide a stable base, structurally sufficient to support automatic operation. Typically the operator baseplate will overlap the door jambs by 1-1/2".

Verify the installation conditions and select the arm configuration that most closely matches the installation. As a general rule, the operator output shaft will mount 4" away from the hinge jamb, measured parallel to the closed door. The door mounted foot on a Standard arm assembly will typically mount 18" from the hinge jamb. For Slide Track arm assemblies, the door mounted track will mount with one end located 4" from the hinge jamb. Consult the attached layout drawings for additional details.

Securely attach the unit baseplate to the door frame; #14 X 1-3/4" Hex Head Tek Screws are included with the unit.

Typically, the drive arm is attached to the operator with the unit in the fully closed position. The drive arm is attached to the lower operator output shaft using the extension adapter supplied with the arm assembly. Consult the appropriate arm configuration for proper arm positioning on the shaft (The most common application – an outswing / push configuration using the Standard arm assembly – has the drive arm mounted to the shaft perpendicular to the closed door.) When securing the arm on the shaft, insure the extension adapter has seated properly on the shaft spline. If not seated correctly, slippage of the arm on the shaft may occur. The spline provides incremental adjustment of 6°.

For Track arms, install the arm with the outer end of the arm against the closed door. Do not tighten the bolt; using the arm, pull the operator open and during the slow, controlled closing, insure the splines seat correctly and tighten the 6mm socket head bolt.

Operator Swing Direction

If the operator does not close slowly (with either arm), the handing selection switch should be changed. It is located behind a slot in the sheet metal cover for the operator control –

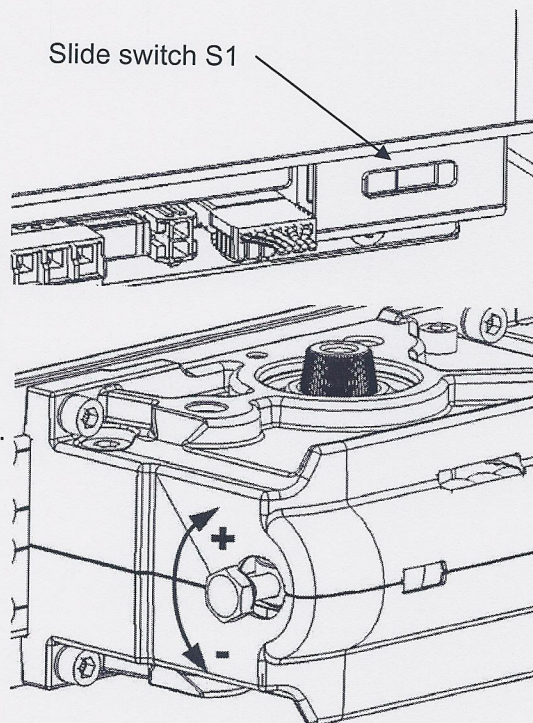
With no power applied, the operator should be capable of being easily pushed open and when released, will close the door at a controlled speed.

Closing Spring Adjustment

The closing force provided by the spring is adjustable.

Do not adjust the force so low that the door will not consistently close under spring power.

On a typical 3'-0" door with a standard arm assembly, the spring closing force can be adjusted from less than 5 pounds force to more than 20 pounds force, measured at the leading edge of the door.



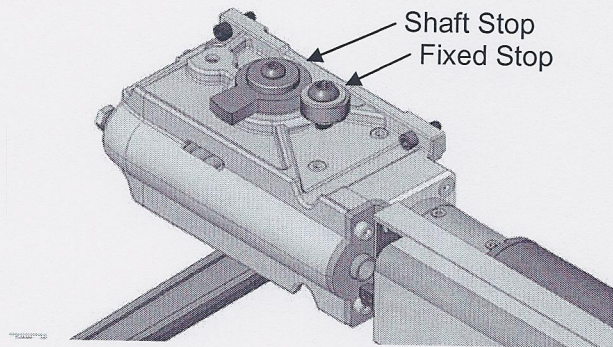


8000/8100 Series Swing Door Operator Installation Instructions

Open Stop

The unit is provided with an adjustable full open stop. Rotate the door to the full open position; mount the Shaft Stop onto the upper output shaft and against the Fixed Stop. The spline of the output shaft allows indexing in 6° increments.

For finer adjustment, the Fixed Stop is slightly eccentric; loosen and rotate until the desired stop location is achieved and re-tighten.



Power Supply Connection

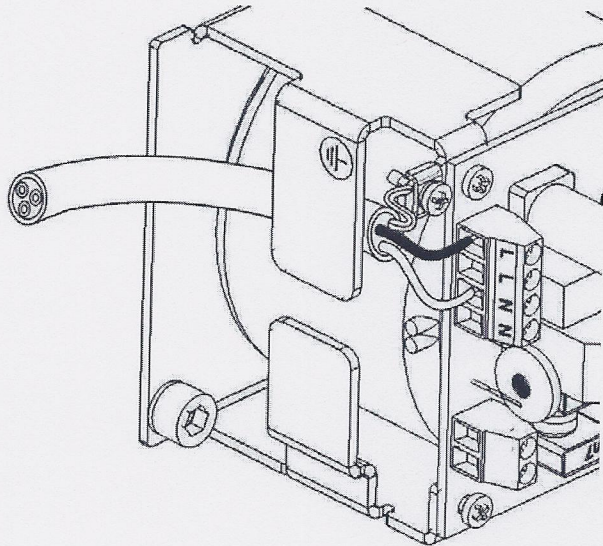
Connect 120VAC, 60 Hz, 10A, to the Power Supply terminal strip –

120VAC "Hot" to "L" terminal;
120VAC "Neutral" to "N" terminal

The second "L" and "N" terminals provide a convenient junction for dual operator systems.

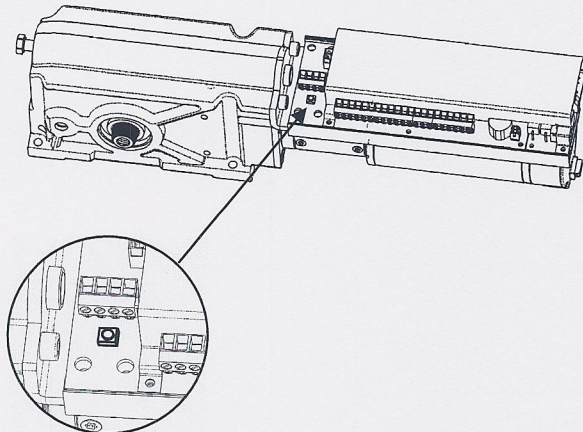
Proper grounding must be provided for the unit. A grounding tab and screw are located adjacent to the Power Supply terminal strip.

The power supply cover must be installed after connecting 120VAC primary service.



The **multifunction pushbutton** can be used for the following functions:

- 1 flash of the red LED will actuate a standard open cycle (if the rocker switch is on)
- 3 flashes of the red LED will initiate a calibration run
- 4 flashes of the red LED will initiate the parameter adjust mode of a Display Control Panel.
- 8 flashes of the red LED will reset the unit the Parameters to factory defaults

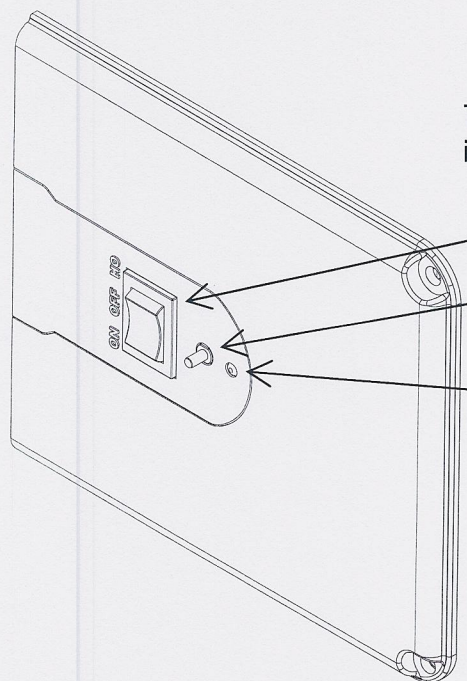
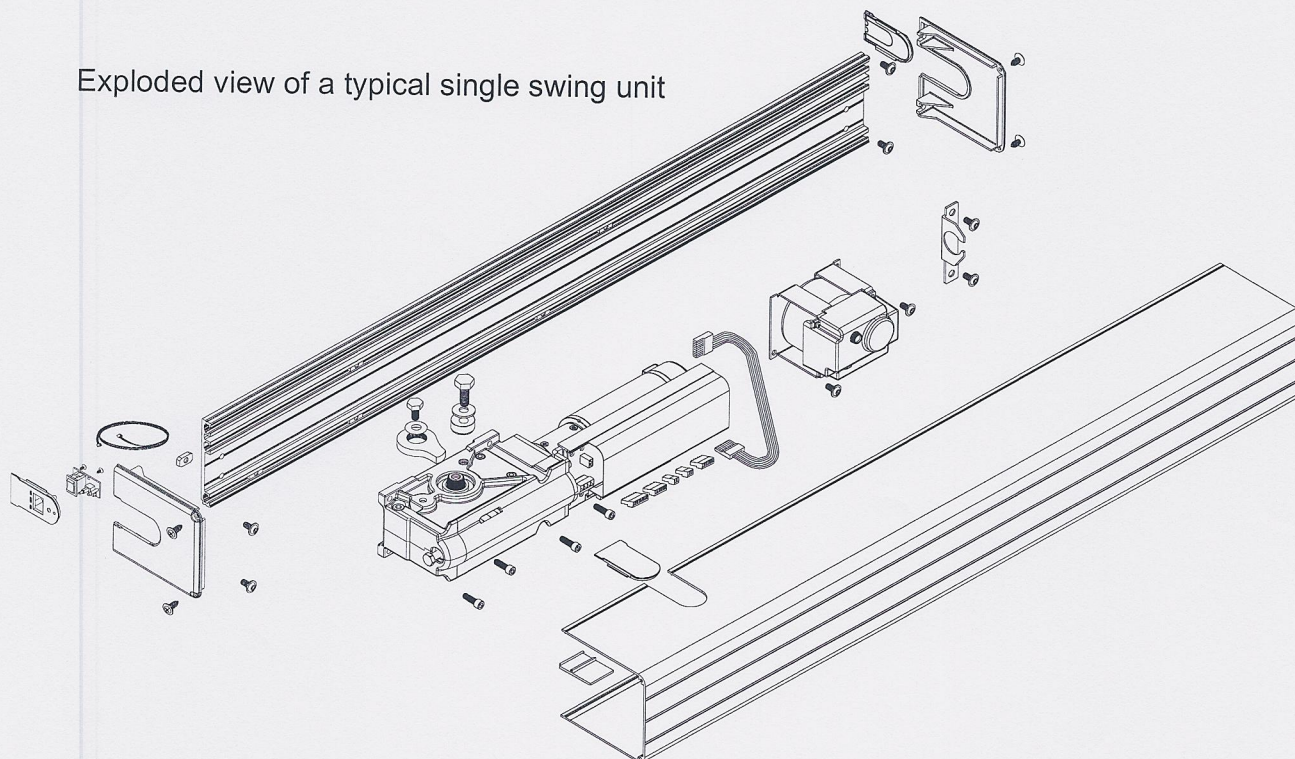


After completion of the mechanical installation and prior to adjusting the parameters, always initiate a calibration run by pressing and holding the pushbutton for 3 flashes of the red LED. This will insure proper door operation by calibrating the unit to the installation conditions.



8000/8100 Series Swing Door Operator Installation Instructions

Exploded view of a typical single swing unit



The Series 8000 Standard Rocker Switch Control Panel includes:

3 Position Rocker Switch - ON / OFF / OPEN

Pushbutton - To reset the operator, press and hold for 8 seconds

LED (red) - Normally off; flashing indicates either the unit is performing a calibration run, or an error has been encountered.

To clear an error, press & hold the pushbutton for 8 seconds, or until the LED turns off.

AKKU	PASS
FLASH	PASS
EEPROM	PASS
RTC	PASS
CAN	PASS

FPC902

Press “OK”, or scroll down to STG Slave and press “OK”

Press "OK"

22

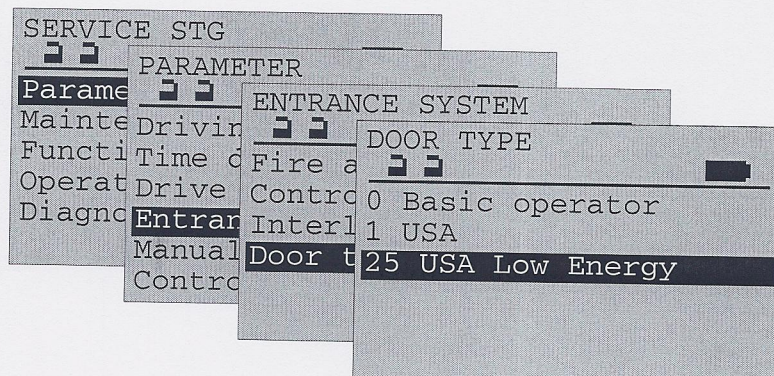
Press "OK"

SERVICE STG

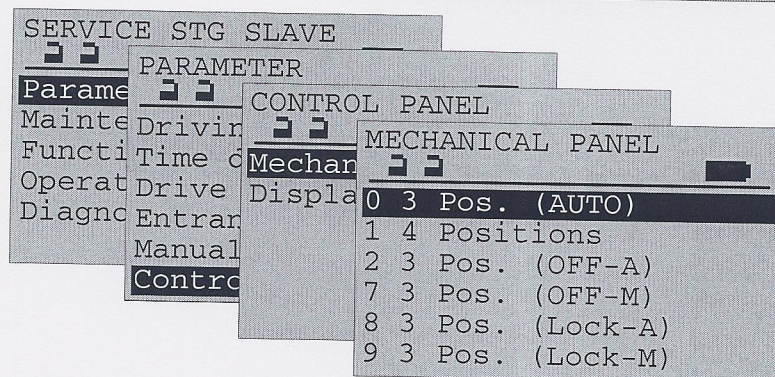
The following page indicates suggested parameter configurations for a typical installation. For a detailed description of all the parameters, consult the instructions with the FPC-902.

The following documents the suggested sequence of programming the operator:

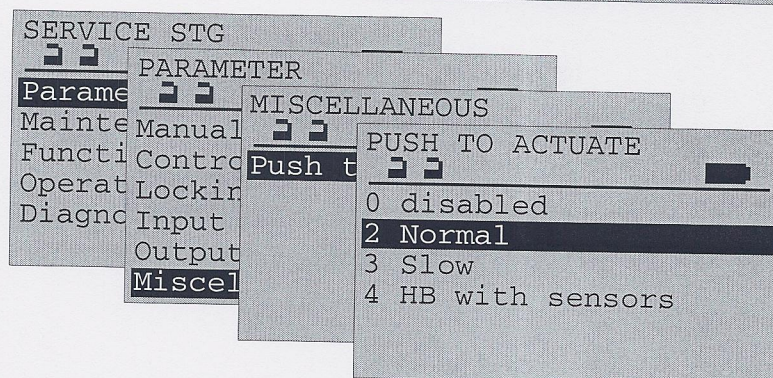
The Series 8000 is shipped configured for a combination operation designated as "USA Low Energy". If manual operation of the door is not desired (with 120VAC power present), this should be changed to "USA", as shown in the sequence at right.



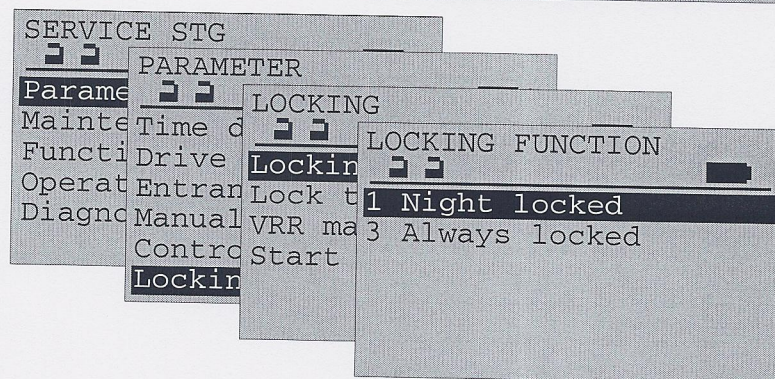
If a pair of operators are to be operated simultaneously, and only one rocker switch is to be used, it should be connected to the master control, and the slave control must be set as shown at right, allowing it to function without a rocker switch.



If automatic operation in response to pushing the door is desired (Push-To-Start), select "Miscellaneous", then "Push to Actuate" and enable by selecting "2 Normal". Note on paired units, this option must be set individually for both operators.

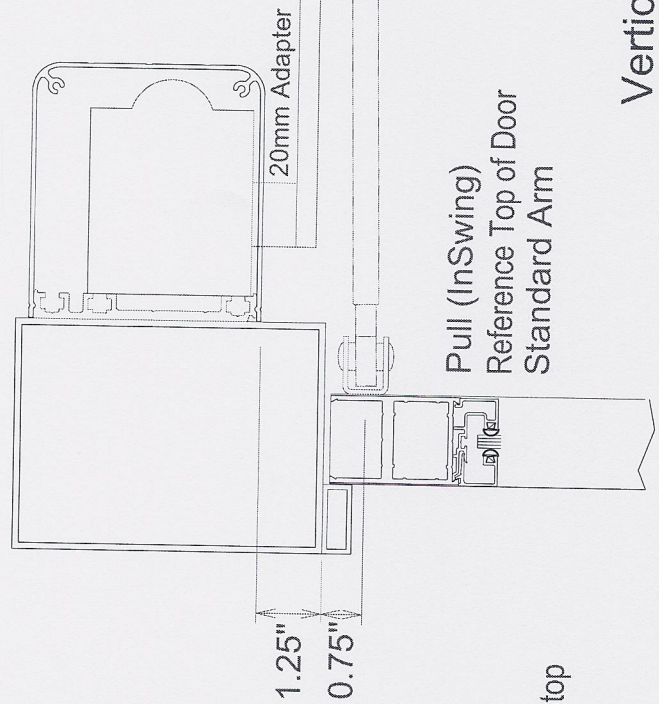
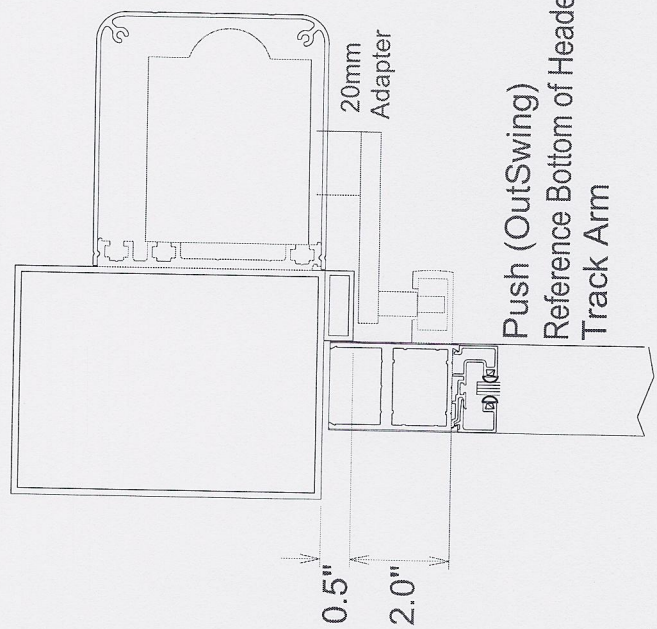
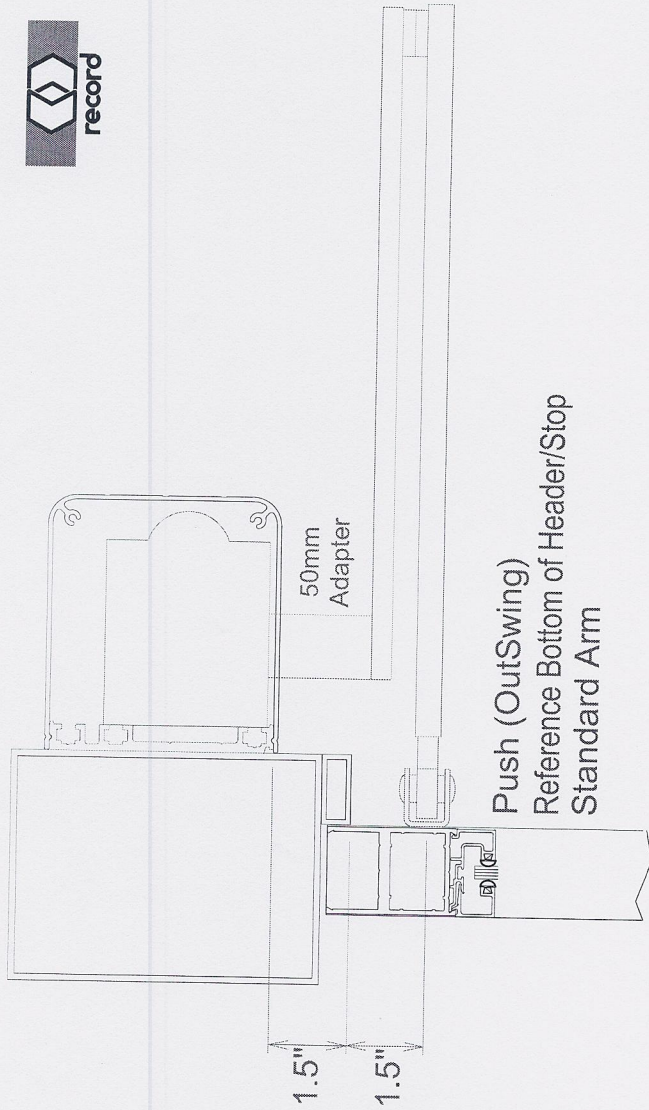
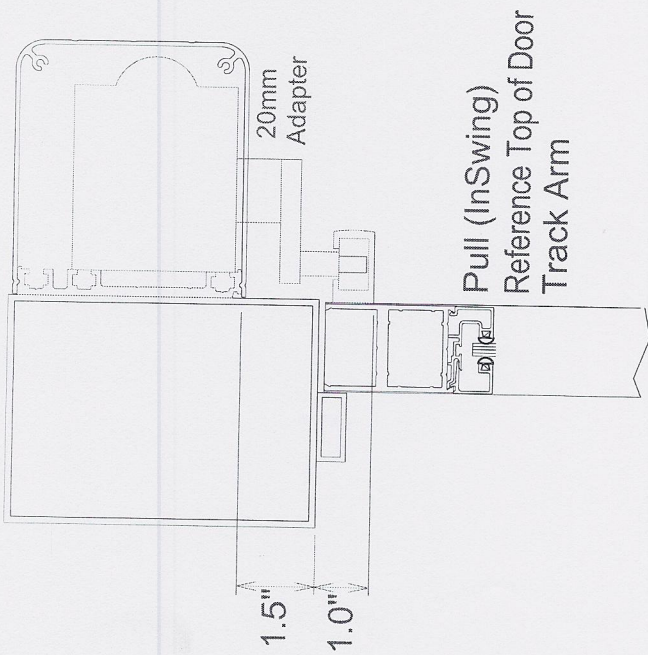


The unit is defaulted to include support for an automatic lock. If one is not provided, select the "Locking" parameter, then "Locking Functions", and change from "3 Always locked" to "1 Night locked" to eliminate the delay before opening.



The unit(s) are now ready to be placed into operation. Turn the control panel "on", press and hold the Control Button on the door control for 3 blinks of the adjacent LED. This will initiate a calibration cycle of the operator. After a few seconds the operator should open slowly, with a short pulse during mid-opening. It should be allowed to complete this cycle without interruption. Note: Calibration must be performed individually on both operators of a pair.

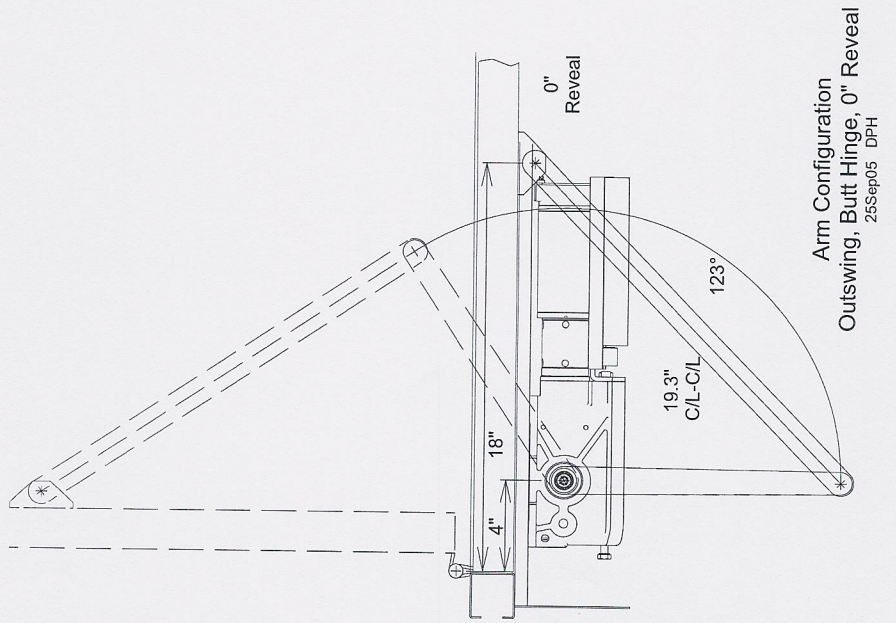
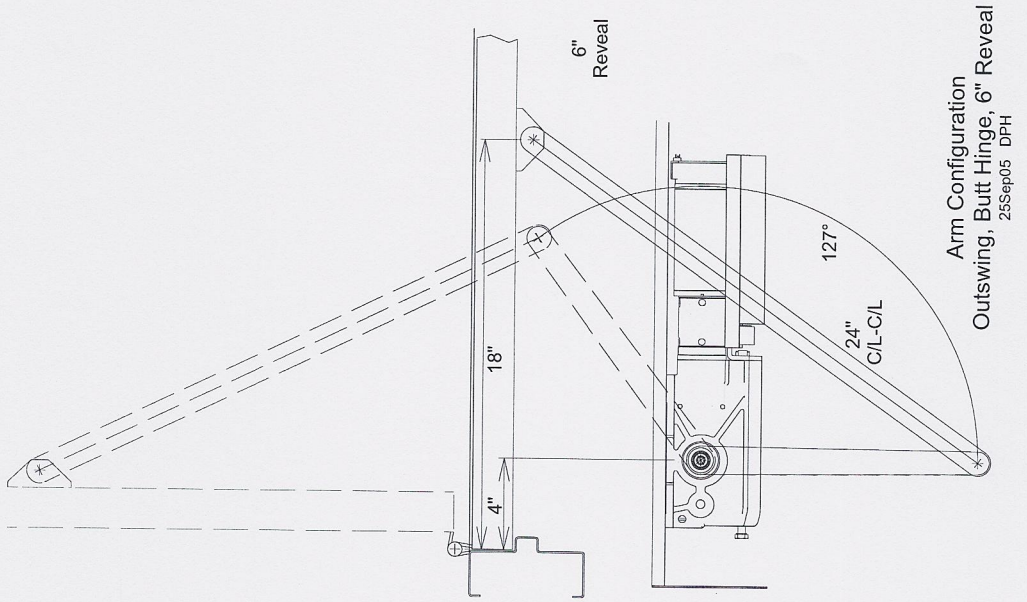
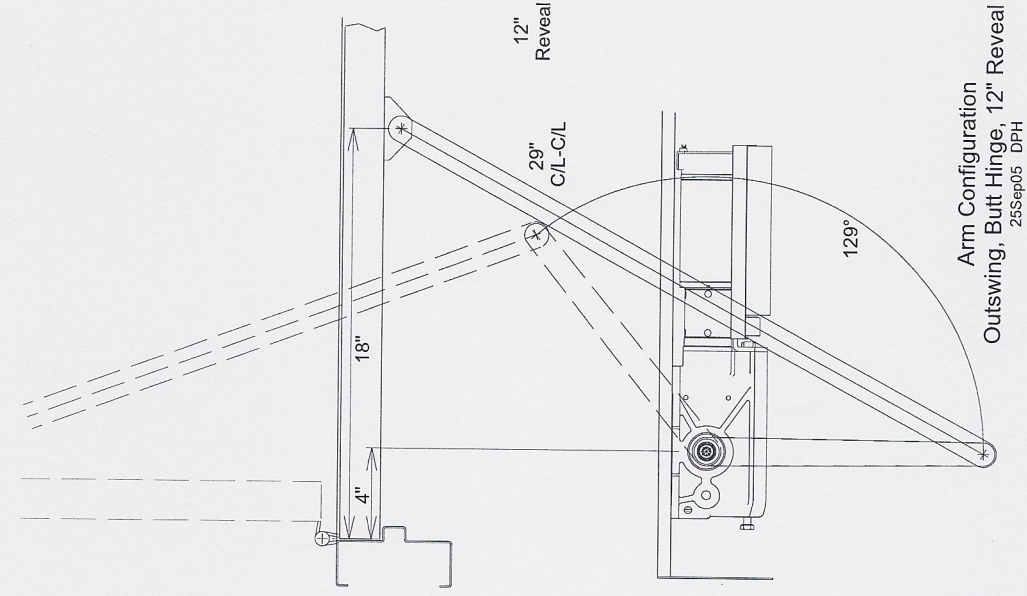
The Series 8000 Instructions included with the FPC-902 Terminal will have a complete listing of the screens, options, and adjustments available for this operator.

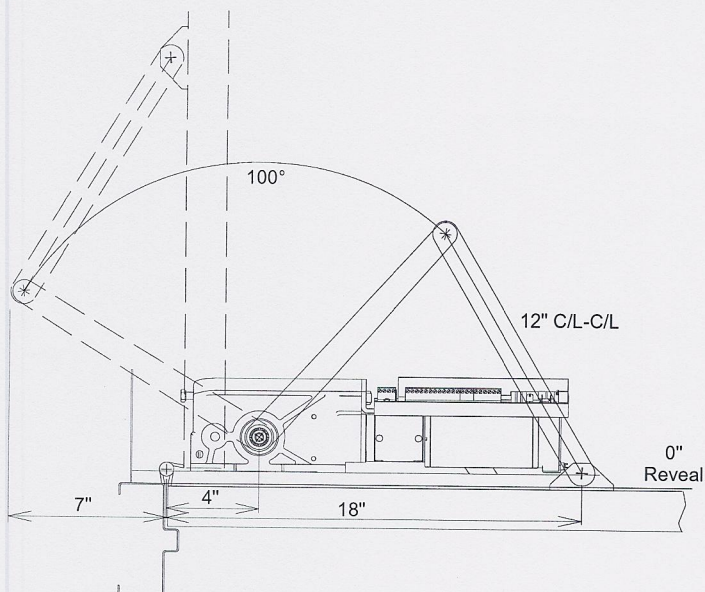


Series 8000

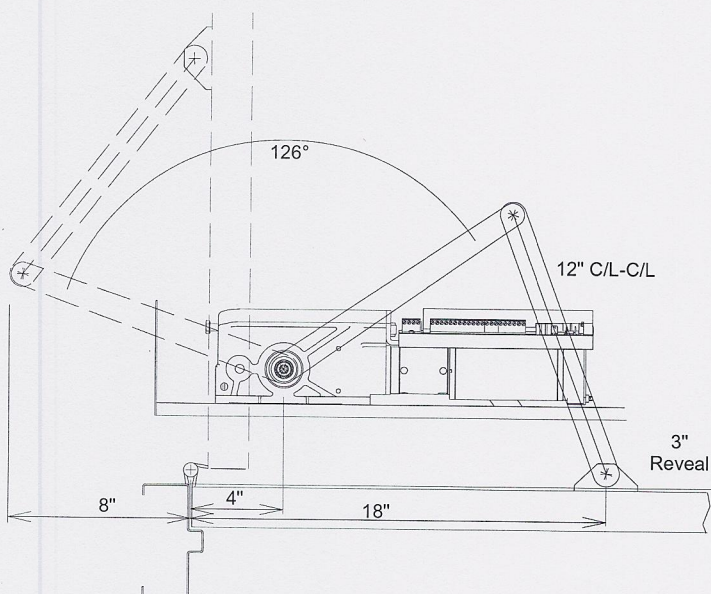
Vertical Section Dimensions

01Mar06 DPH

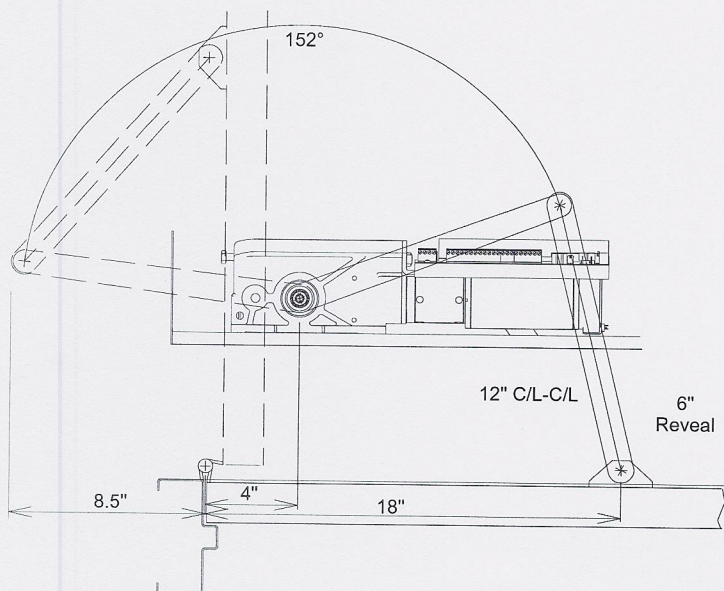




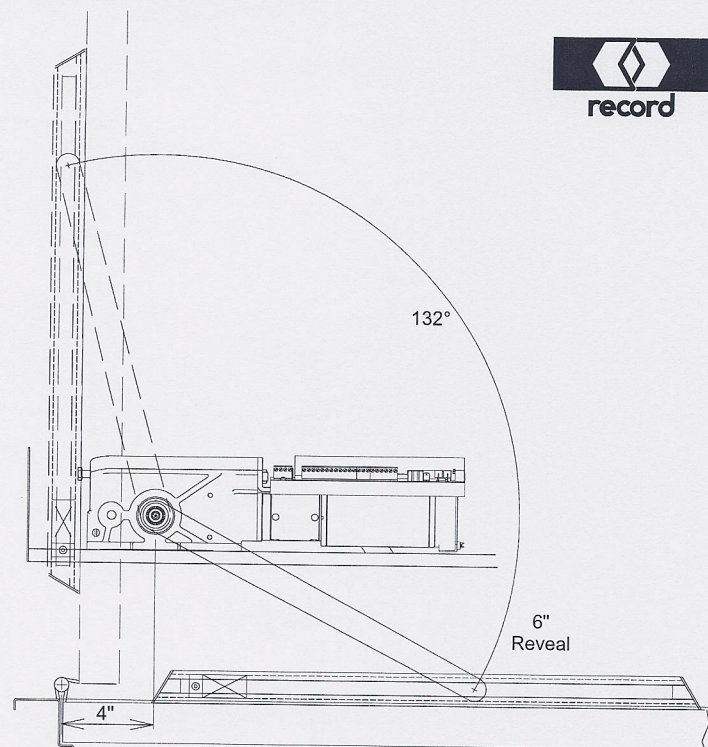
Arm Configuration
Inswing, Butt Hinge, 0" Reveal
25Sep05 DPH



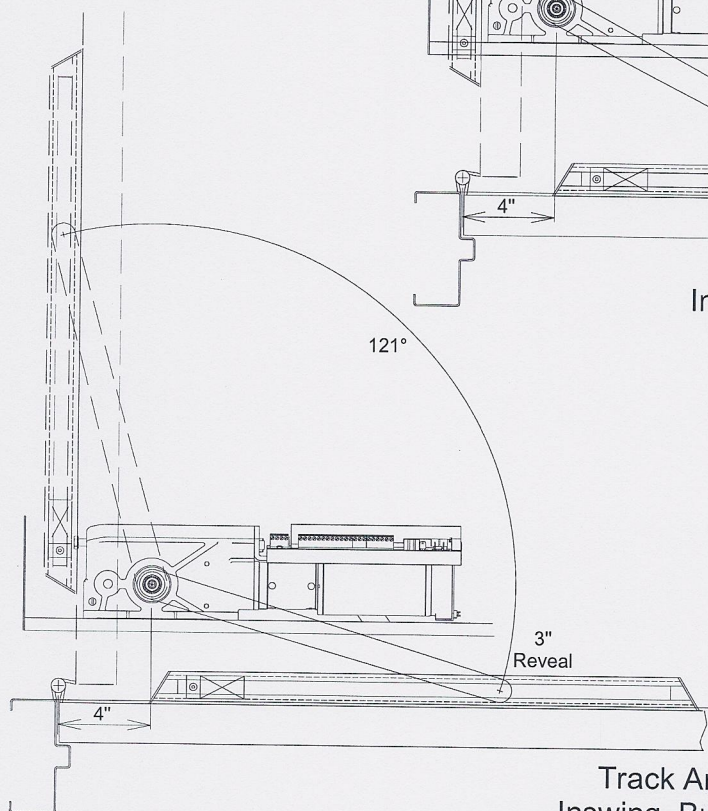
Arm Configuration
Inswing, Butt Hinge, 3" Reveal
25Sep05 DPH



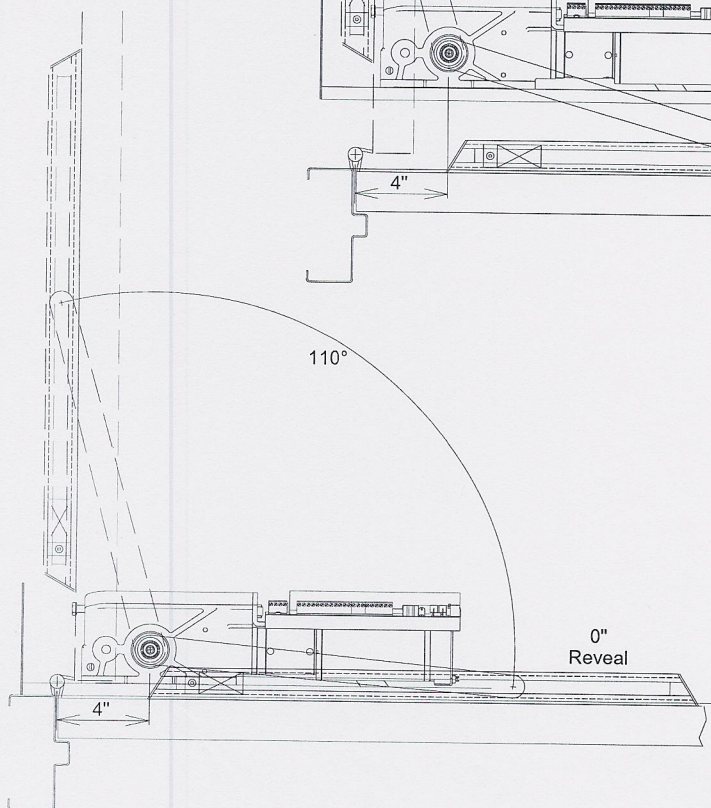
Arm Configuration
Inswing, Butt Hinge, 6" Reveal
25Sep05 DPH



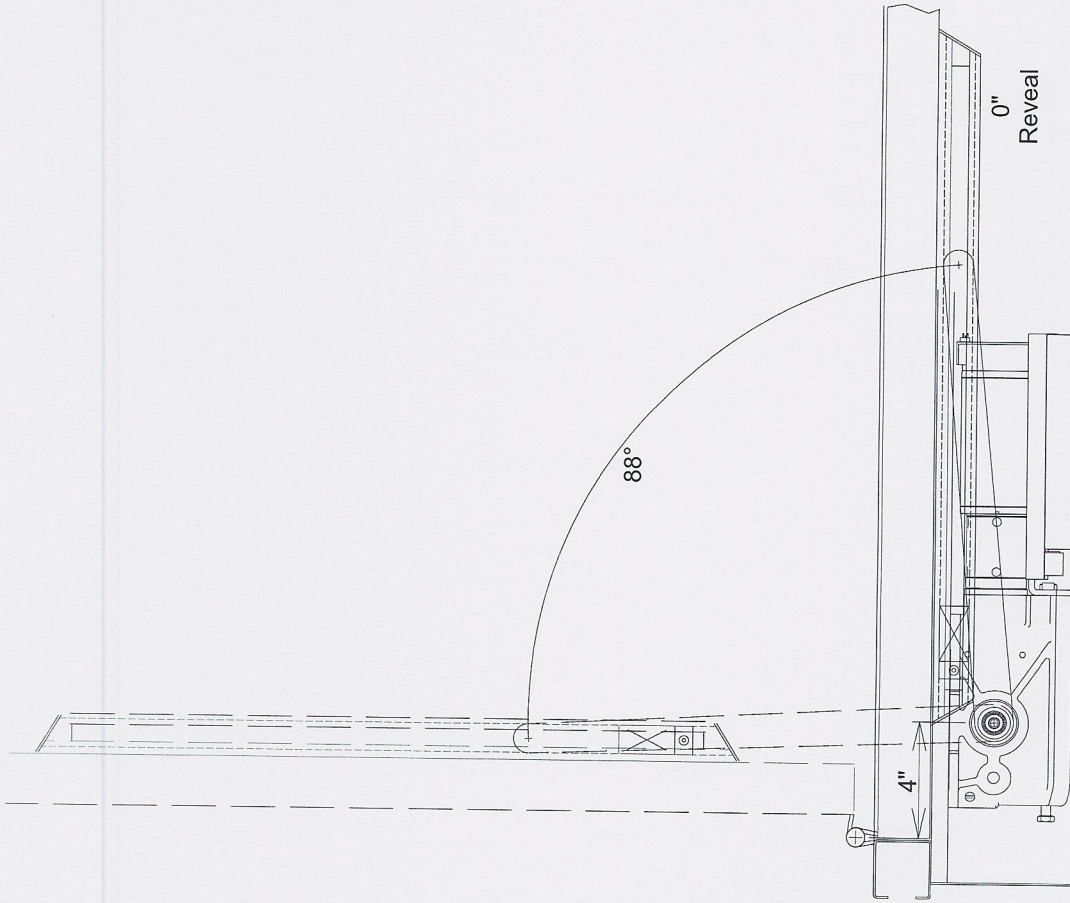
Track Arm Configuration
Inswing, Butt Hinge, 6" Reveal
25Sep05 DPH



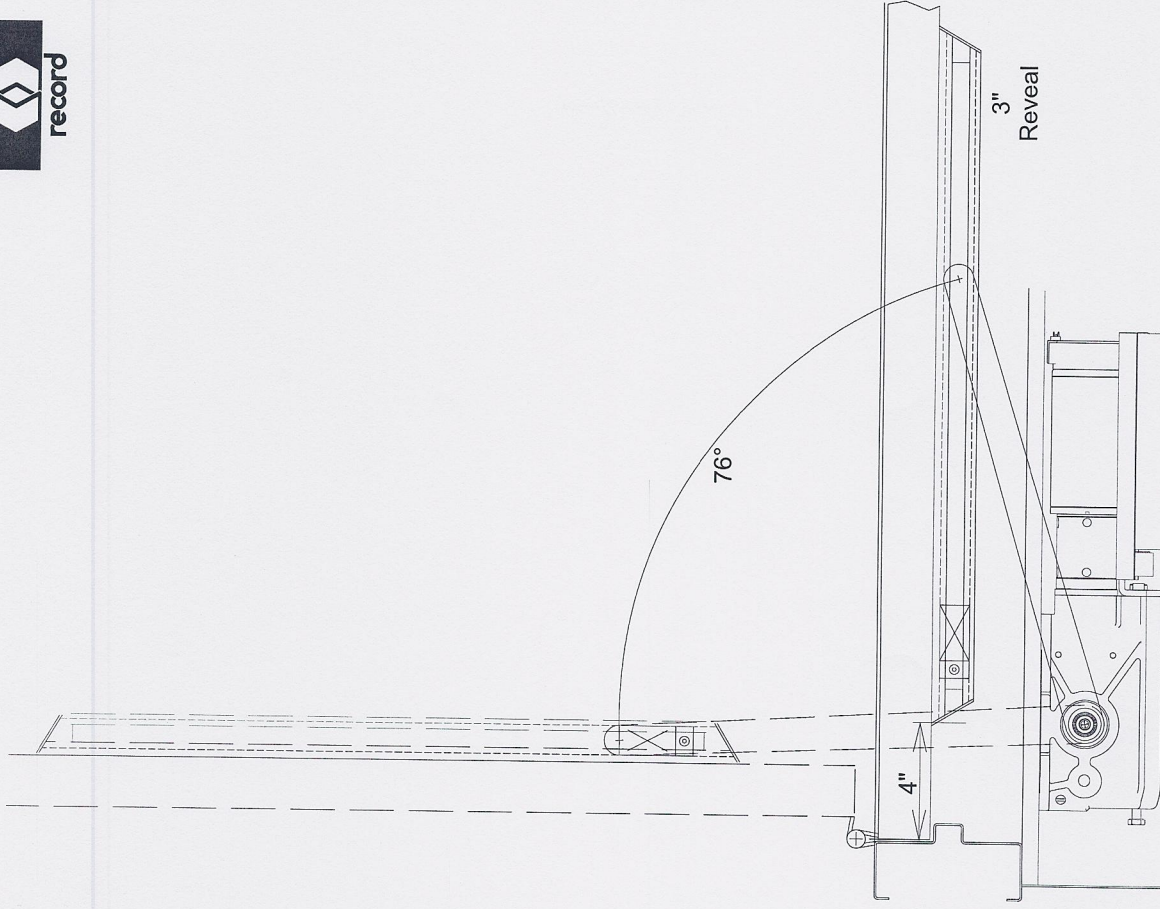
Track Arm Configuration
Inswing, Butt Hinge, 3" Reveal
25Sep05 DPH



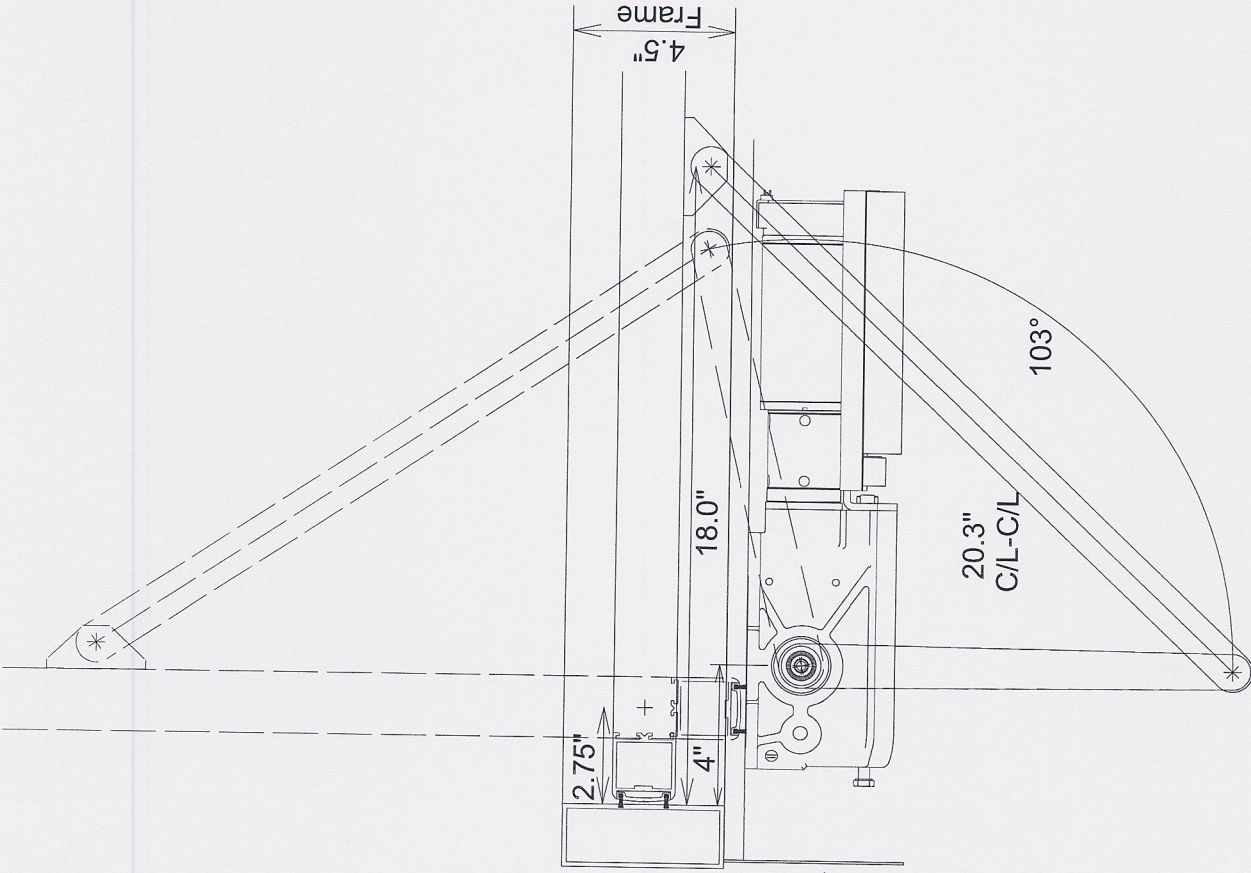
Track Arm Configuration
Inswing, Butt Hinge, 0" Reveal
25Sep05 DPH



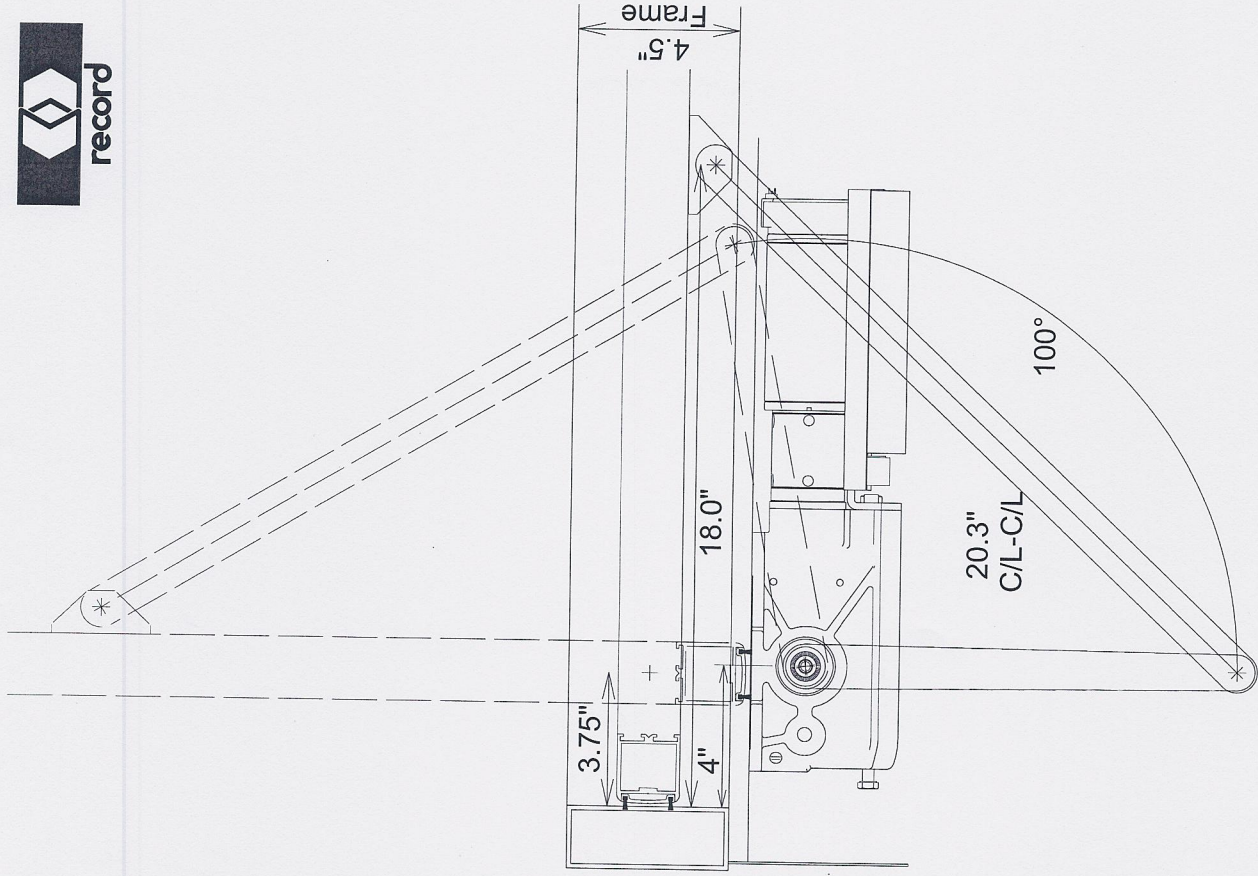
Track Arm Configuration
Outswing, Butt Hinge, 0" Reveal
25Sep05 DPH



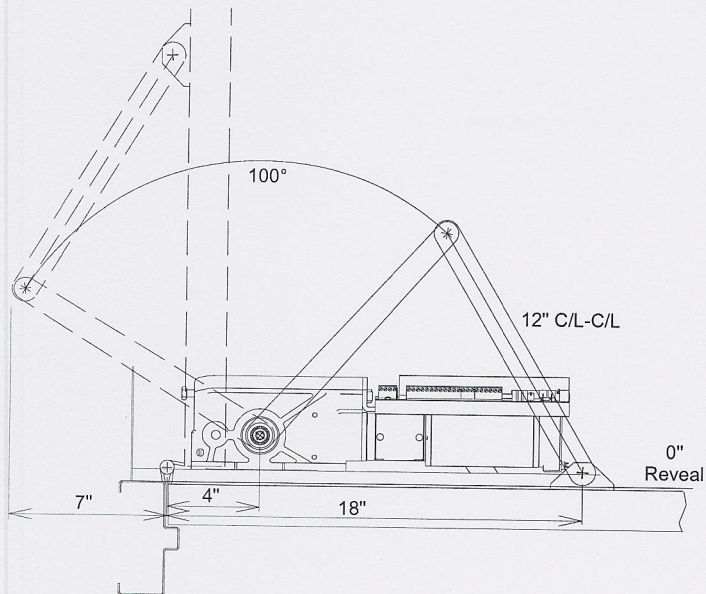
Track Arm Configuration
Outswing, Butt Hinge, 3" Reveal
25Sep05 DPH



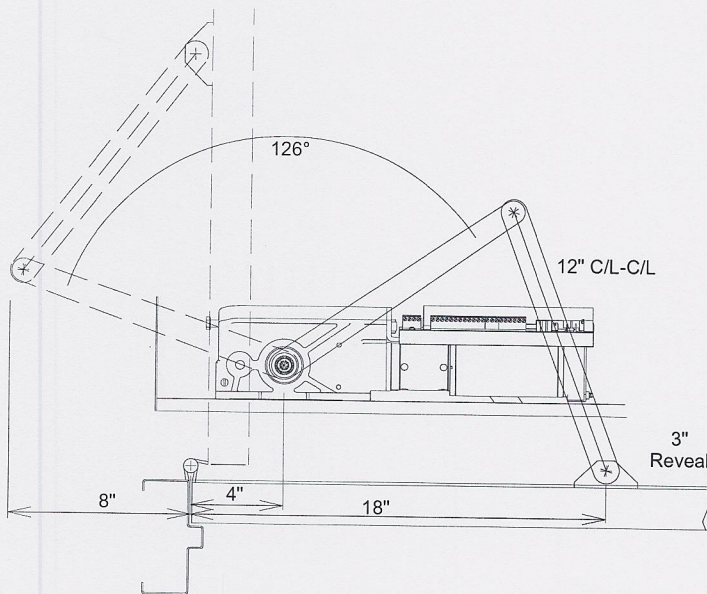
Arm Configuration
Outswing, 2.75"CenterPivot, 4.5"Frame
25Sep05 DPH



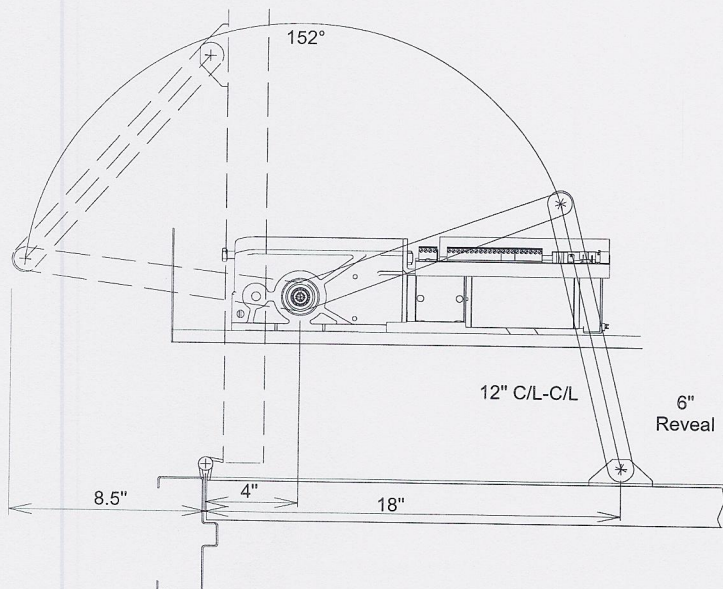
Arm Configuration
Outswing, 3.75"CenterPivot, 4.5"Frame
25Sep05 DPH



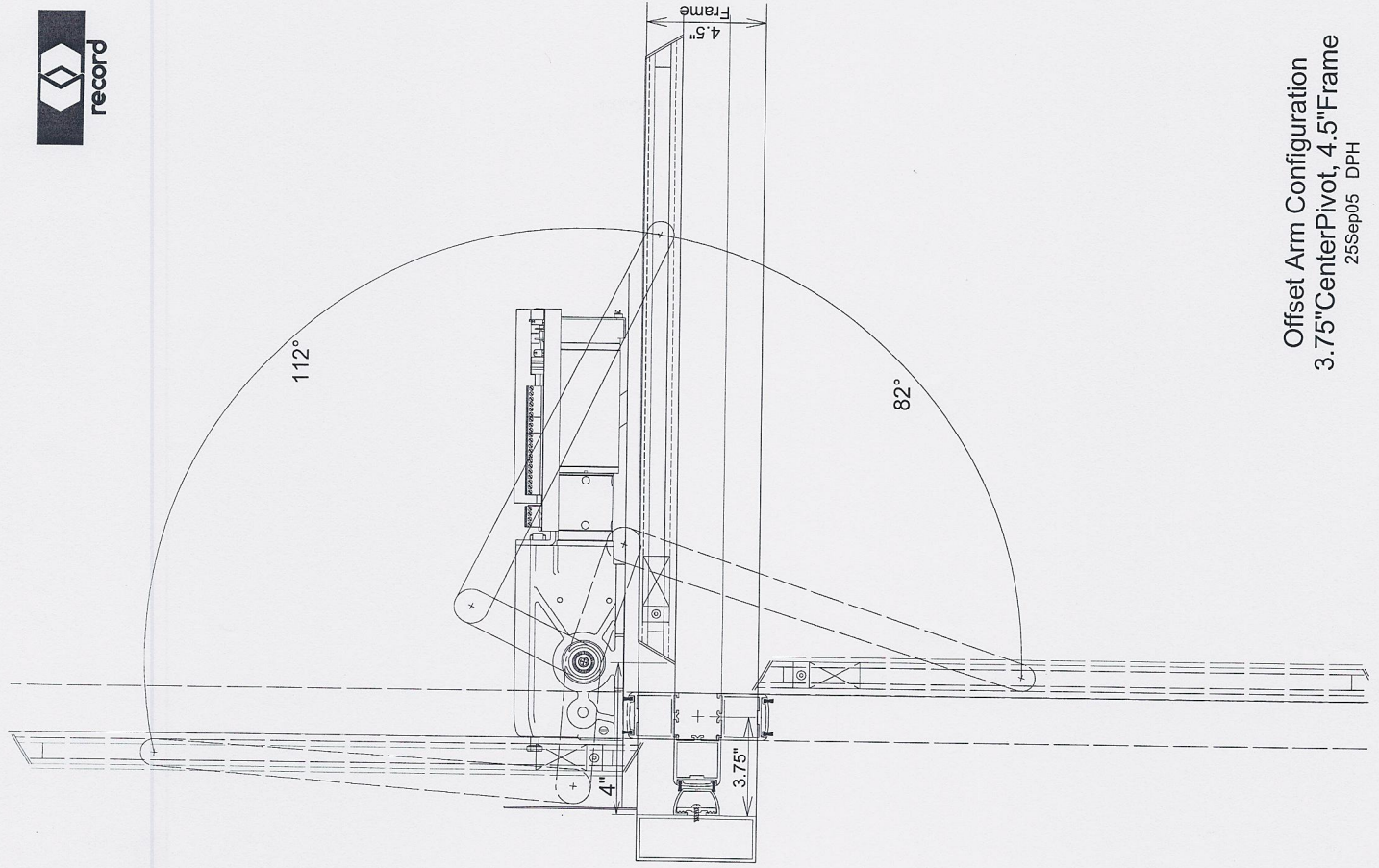
Arm Configuration
Inswing, Butt Hinge, 0" Reveal
25Sep05 DPH



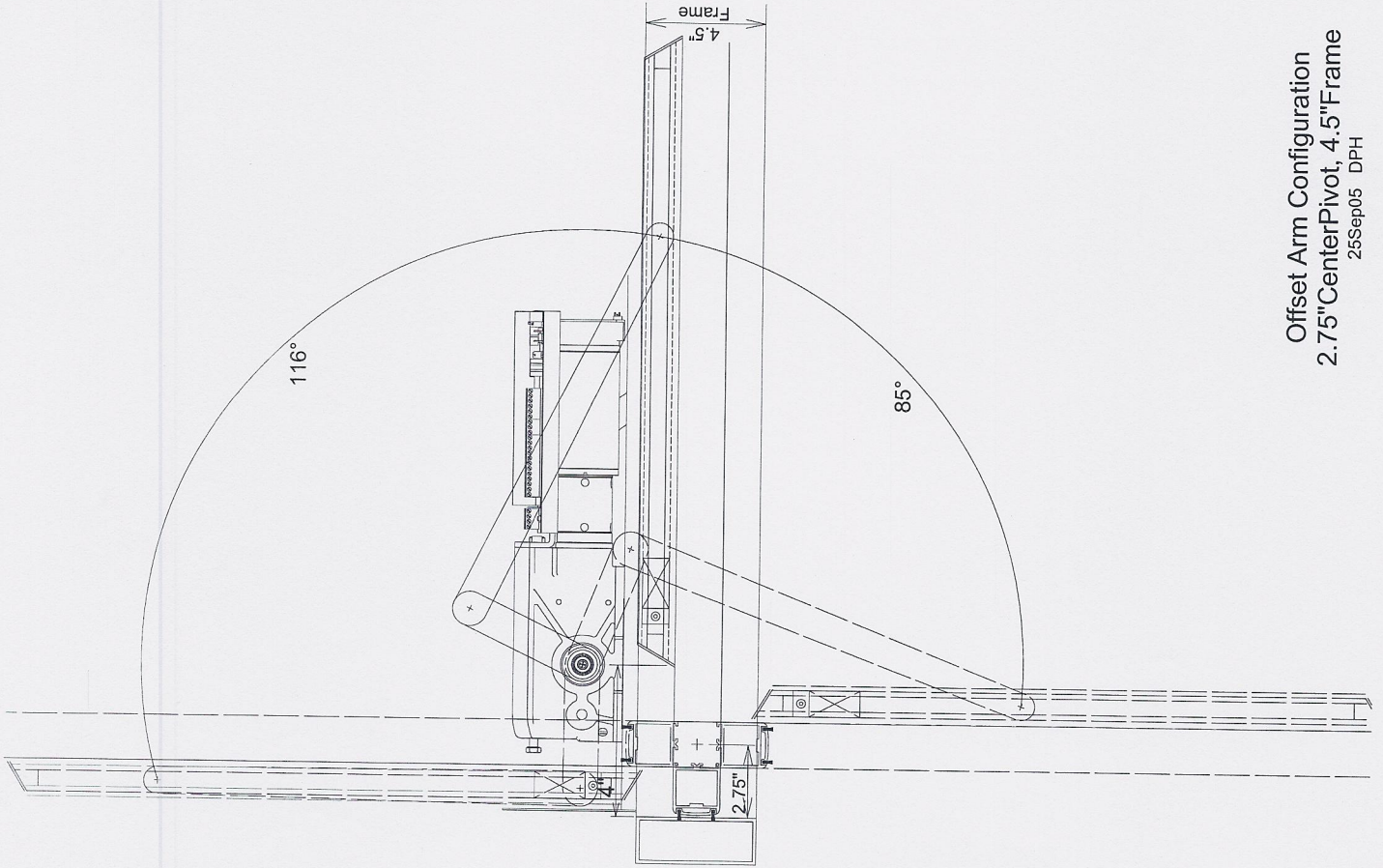
Arm Configuration
Inswing, Butt Hinge, 3" Reveal
25Sep05 DPH



Arm Configuration
Inswing, Butt Hinge, 6" Reveal
25Sep05 DPH



Offset Arm Configuration
3.75"CenterPivot, 4.5"Frame
25Sep05 DPH

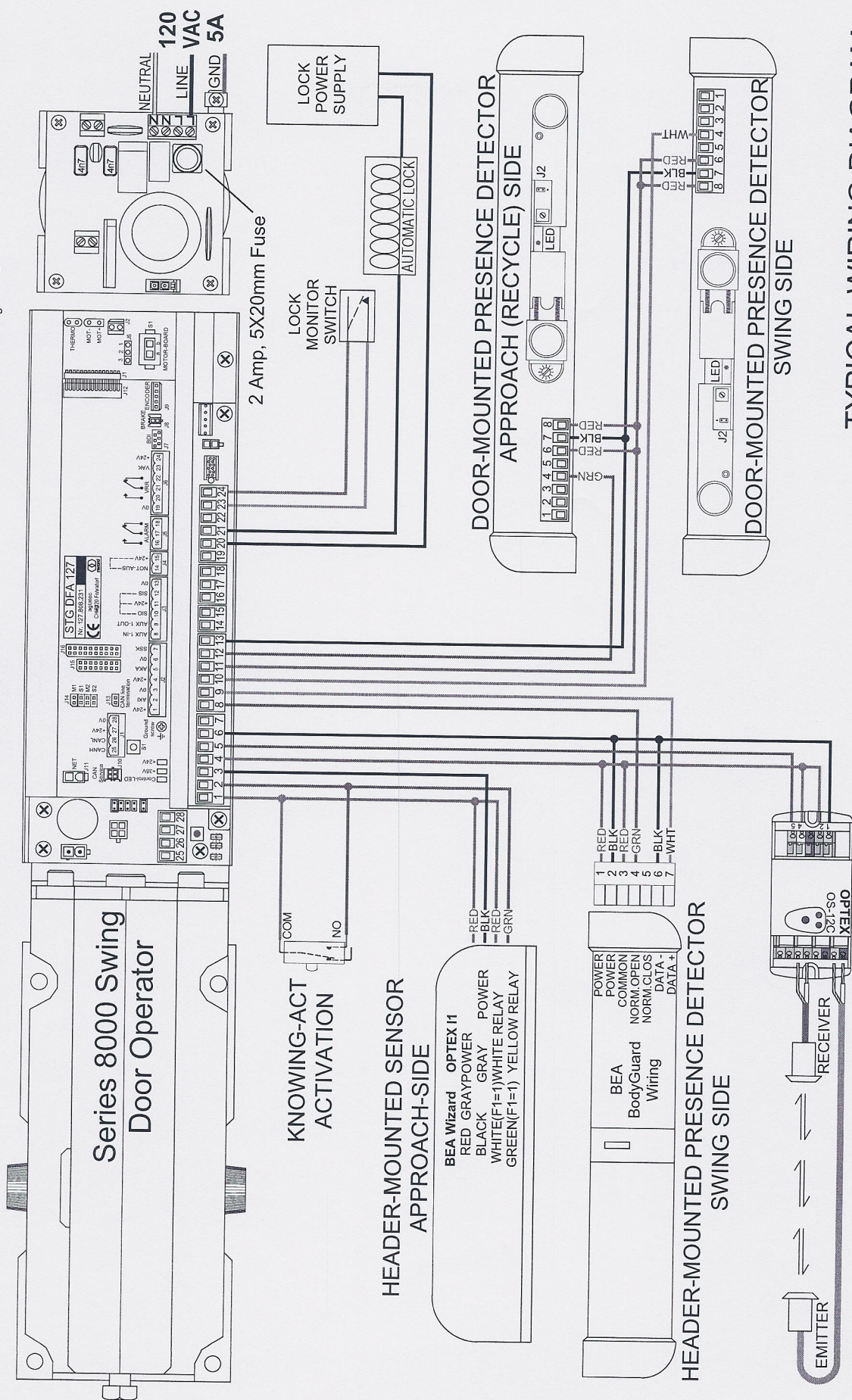


Offset Arm Configuration
2.75"CenterPivot, 4.5"Frame
25Sep05 DPH



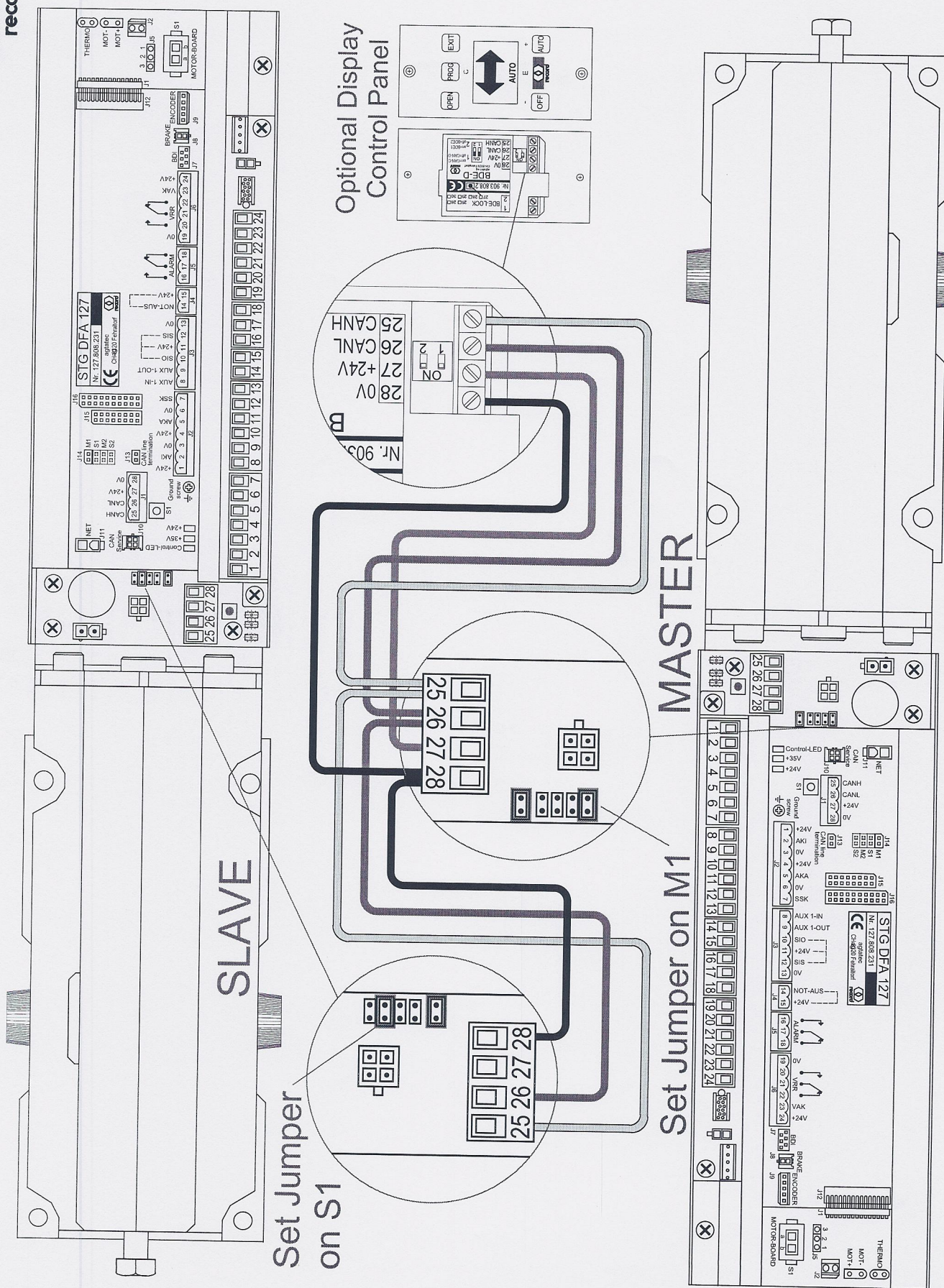
CONTROL TERMINAL BLOCK CONNECTIONS

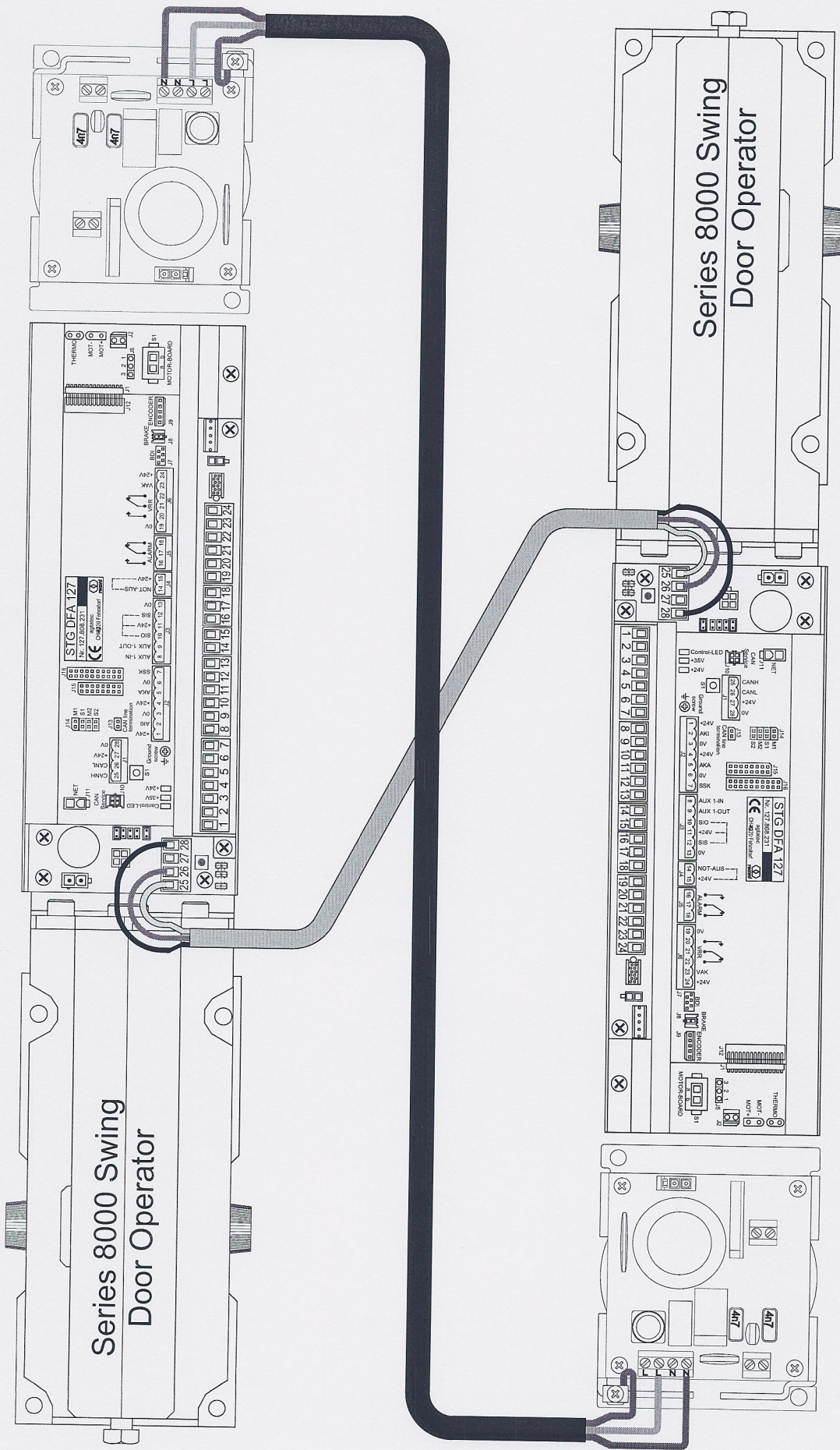
- | | | |
|---|---|--|
| 1 - Approach Sensor - Power/Signal - +24V | 13 - Door Mounted Sensors - Power - 0V | 19 - Automatic Lock Power - 0V (0.5A Max.) |
| 2 - Approach Sensor - Signal | 14 - Fire Alarm Signal (Jumper to 15 if not used) | 20 - Automatic Lock Control Relay - N.O. |
| 3 - Approach Sensor - Power - 0V | 15 - Fire Alarm - +24V | 21 - Automatic Lock Control Relay - COM |
| 4 - Guide Rail Beam - Power/Signal - +24V | 16 - Door Alarm Relay - N.O. | 22 - Automatic Lock Control Relay - N.C. |
| 5 - Guide Rail Beam - Signal | 17 - Door Alarm Relay - COM | 23 - Automatic Lock Monitor Signal |
| 6 - Guide Rail Beam - Power - 0V | 18 - Door Mounted Approach Side Recycle - Signal | 24 - Automatic Lock Power/Signal - +24V |



TYPICAL WIRING DIAGRAM SERIES 8000 SWING

16JUN06 DPH





PLANT 120VAC WIRING
SERIES 8000 SWING PAIR
01MAR06 DPH

01MAR06 DPH