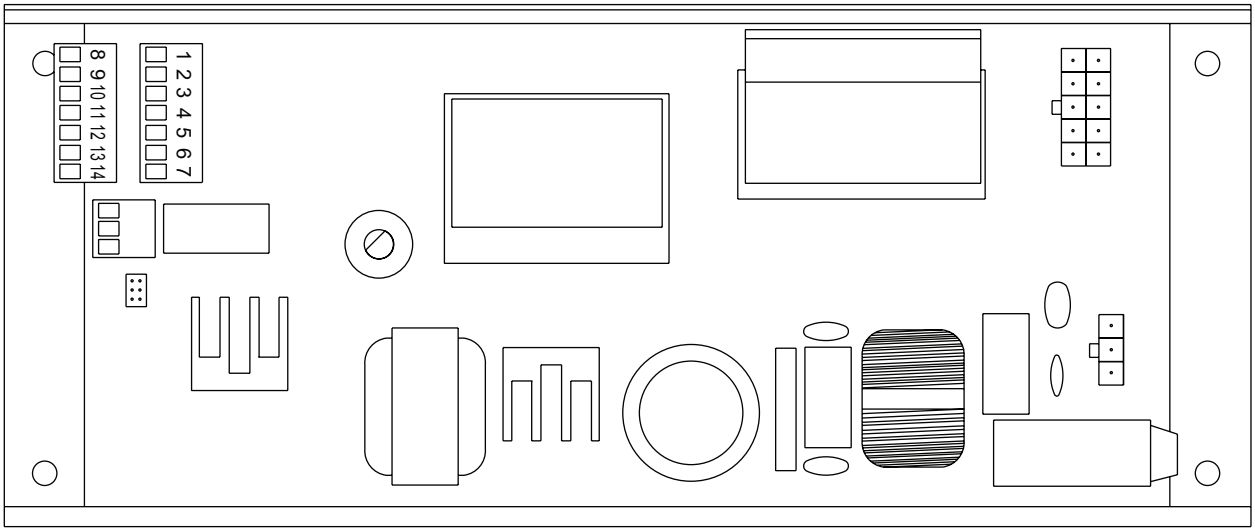
S82 W18717 Gemini Drive
Muskego, Wisconsin 53150
Phone: (877) 622-2694
Fax: (888) 679-3319
www.nabcoentrances.com
Technical Support: (866) 622-8325

Wiring and Programming Manual
** with Opus Control*



DN 1336

WARNING

- Turn OFF all power to the Automatic Door if a Safety System is not working.
- Instruct the Owner to keep all power turned OFF until corrective action can be achieved by a NABCO trained technician. Failure to follow these practices may result in serious consequences.
- NEVER leave a Door operating without all Safety detection systems operational.

Part #15-14973
Rev. 7/16/15

THIS PAGE IS INTENTIONALLY LEFT BLANK

Table of Contents

WARNING LABELS

Warning labels are universal and used to alert an individual of potential harm to one's self or to others. The following warning labels are listed in a hierarchy order that defines the most potential danger first, and the least potential danger last. Please refer to this page in the event that a warning label is displayed within this manual and further definition needs to be explained.

DANGER **Indicates potentially dangerous situations. Danger is used when there is a hazardous situation where there is a *high* probability of severe injury or death. It should not be considered for property damage unless personal injury risk is present.**

WARNING **Indicates a hazardous situation which has *some* probability of severe injury. It should not be considered for property damage unless personal injury risk is present.**

CAUTION **Indicates a hazardous situation which *may result in a minor injury*. Caution should not be used when there is a possibility of serious injury. Caution should not be considered for property damage accidents unless a personal injury risk is present.**

Attention: **A situation where material could be damaged or the function impaired.**

Notice: **Indicates a statement of company policy as the message relates to the personal safety or protection of property. Notice should not be used when there is a hazardous situation or personal risk.**

Note: *Indicates important information that provides further instruction.*

GENERAL SAFETY RECOMMENDATIONS

WARNING **Read, study and understand general safety recommendations, warning labels, installation and operating instructions contained in, or referenced in this manual before operating. If you do not understand the instruction, ask a qualified technician. Failure to do so may result in bodily injury, or property damage and will nullify all warranties.**

DANGER **Disconnect all power to the junction box prior to making any electrical connections. Failure to do so may result in seriouc personal or fatal injury. When uncertain whether power supply is disconnected, always verify using a voltmeter.**

Notice: **Wiring must meet all local, state, federal or other governing agency codes.**

CAUTION **All electrical troublshooting or service must be performed by trained, qualified electrical technicians and comply with all applicable governing agency codes.**

DANGER **Do not place finger or uninsulated tools inside the electrical controller. Touching wires or other parts inside the enclosure may cause electrical shock, serious injury or death.**

CAUTION **The Ground wire from the Opus Control 120 VAC Harness, and the Incoming 120 VAC Ground wire must be connected to the Ground screw located within the Swing door Header.**

CAUTION **Do Not touch other parts of the Opus Control board with a screwdriver or anything else metal. Damage to electrical circuitry may occur.**

CAUTION **If the door appears broken or does not seem to work correctly, it should be immediately removed from service until repairs can be carried out or a qualified service technician is contacted for corrective action.**

Note: All Adjustments must be made with a small screwdriver. Do Not use a pencil.

Note: Final installation must conform to current versions of ANSI 156.19 for Low Energy Swingers or ANSI 156.10 for Full Automatic Swingers.

Note: Study and understand both ANSI Standard Codes A156.10 and A156.19.

Note: Do Not take shortcuts.

CHAPTER 1: Scope

Section 1a. To the Installer

The purpose of this manual is to familiarize the installer with the proper installation and operation of this system. It is essential that this equipment be properly installed and operational before the door is used by the public. It is the installer's responsibility to inspect the operation of the entrance system to be sure it complies with any applicable standards. In the United States, ANSI Standard 156.10 (Used to cover Full Energy doors) and ANSI Standard 156.19 (Used to cover Low Energy doors) apply. Other local standards or codes may apply. Use them in addition to the ANSI standards.

The owner should determine the door is operating properly and should immediately call for service if there is any malfunction. All installation changes and adjustments must be made by qualified, NABCO trained technicians.

Section 1b. Objective

The Opus Control is designed to be installed within the Header of:

- New or Existing Swing Door systems.
- New or Existing Fold Door systems
- Existing Slide Door systems to replace Magnum Controls, Analog Controls, and U-01 to U-19 Controls. Sold as a Retrofit Kit only. Retrofit kits can be purchased by contacting Customer Service at 1-888-679-3319.

This manual offers step by step instructions.

CHAPTER 2: GETTING STARTED

WARNING **All wiring must conform to standard wiring practices and be in accordance with national and local electrical codes.**

Note: It is recommended for the Installer to use an Electrical Conduit to house all incoming 120 VAC wires.

Section 2a: Features

Feature	Description	
LCD Display	► Door Status Indicator ► Error messaging and Codes ► Programming Indicator	
Replaces all U-Series	► Except the U30 Control. ► Works with current U-Series Rocker Switches.	
Replaces all Magnum Controls	Magnum 1 - 4A	
Replaces the Analog Control	Requires (2) Opus Controls for Simultaneous Pairs.	
Simultaneous Pair Synchronization	Pairs are synchronized to ease adjustability and to operate smoothly.	
Works with Encoder Motors	► Adjusts Backcheck and Latchcheck positions. ► Integrated Back Check Lockout for swing side door mounted Sensors.	
Works with Non-Encoder Motors	Non-Encoder Motors with Latch Check and Back Check Switches only.	
Replaces the Handy Terminal	Programming is accomplished with an On Board Rotary Switch.	
Astragal Function	Opens and/or Closes (1) Door Panel slightly ahead of an opposite Door Panel.	
Independent Dual	(2) Independent Doors operated by a (2) Operator Assemblies.	
Low Energy	Utilizes a Knowing Act to open a Door.	
Full Energy	Utilize Sensor(s) to open a Door.	
Digital Parameter Settings	Used for Repeatability.	
Onboard Programming	No Terminal required.	
Door Mounted Sensor Lockout	► Low Energy Swing Doors only. ► No additional modules required to lockout sensor activation from the approach side of door.	
On Board Electric Lock Relay	No need for an additional Sequencer.	
Push & Go or Power Assist Function	Used for all Swing Door Units.	
Programmable Relay Output	Used with Electric Locks or other Exterior Signalling.	
Two Transistor Outputs	With programmable functionality used for Air Curtains or other Devices.	
CANBus Cable	► For Simultaneous Swing Door Units. ► Only need to adjust the Master Opus control. ► The CANBus cable it used to sequence the Slave Opus Control.	
Safety Recycle Feature: Open Cycle	Stops and reverses direction of the door during Opening Cycles.	
Safety Recycle Feature: Close Cycle	► Used with Encoder Motors only. ► Stops and reverses direction of the door during Closing Cycles.	
Programmable Power Close	Feature can be turned OFF or ON with an optional Switch.	
Hold Close	Applies pressure to keep Door closed	
Recycle	► Opening	With all motors, the Door Panel will reverse if an obstacle is detected.
	► Closing	

Section 2b: General Specifications

Specification	Description
Temperature Range	-13 degrees to 140 degrees Fahrenheit
Motor Type	DC Brush Motor
	DC Brush Motor (with Encoder installed on Gear Box)
Motor Voltage	115V
Motor Power Rating	Long Frame (710 only): 55 W
	Short Frame: 70 W
Power Close	Built-in
Motor works with Encoder Motors	In lieu of Microswitches
Motor works with Microswitches	In lieu of Encoder Motors
Back Check Angle Adjustment	► 5 to 35 degrees from Full Open position ► Used with Encoder Motor only.
Latch Check Angle Adjustment	► 10 to 40 degrees from Full Closed position ► Used with Encoder Motor only.
Door Movement Angle	30 degrees to 180 degrees

Table 2-1 Modules

Module	Part Number	Function	Power Source	Current Consumption	
CP/RX Radio Control Receiver	24-11467	RF Signal Transmission	12 to 24 AC or DC	50mA	(ea.unit) at 12VDC
Multi Module	14-12240	Programmable Relay	12 to 24 AC or DC	40mA	

Table 2-2 Input / Output Specifications

Input	Description
Number of Signal Inputs	► 1 x Activation ► 2 x Door Mode ► 2 x Safety ► 1 x Sequential ► 1 x Kill Signal ► 2 x Programmable
Output	**Description**
Number of Outputs	► 1 x Electric Lock Form C Relay ► 1 x Programmable Transistor Outputs

Section 2c: Electrical Specifications

Note: All Wiring Diagrams included within this manual, reflect typical primary and secondary circuits that might be commonly used. Onsite wiring may be different from that shown.

Note: NABCO factory utilizes Underwriters Laboratories (UL) recognized component wire, terminals and connector housings to manufacture Opus Automatic Door systems.

Table 2-3 Wiring

Item	Description	Current Consumption
Power Source	110VAC - 130 VAC, AC 50-60 Hz	3A
Power for accessories	12VDC	750mA
Output Rating	Transistor Output	100mA @ 12VDC
Relay Output Rating	Mechanical Relay Output	3A at 110VAC
F1 Fuse	120VAC Power Circuit of Control	-
Available Wire Size for Incoming Power	14 AWG	-

Table 2-4 Sensors

Sensor	Part Number	Function	Power Source	Current Consumption	
Acuvision	V-00202	Infrared	12 to 24 AC or DC	80mA	(ea.unit) at 12VDC
Acuwave	14-11980-10	Infrared	12 to 24 AC or DC	80mA	
Acusensor 3	A-00684	Infrared	12 to 24 VAC or VDC	250mA	
Optex i-one	V-00055	Infrared	12 to 24 VAC or 12 to 30 VDC	130mA	

Section 2d: Output Power Guidelines

2.d.a: Full Energy Doors

- Utilize Sensor(s) to open a Swing door.
  Sensors activate the Control by detecting motion of pedestrians (or moving objects) coming into range.
- Must be compliant with ANSI Standard Code 156.10 to reduce chance of injury to pedestrians and wheeled traffic.

2.d.b: Low Energy Doors

- Utilize a Knowing Act to open a Door.
  A conscious effort that is carried out in many different ways, including (but not limited to): manually opening a Door; pressing various types of Push Plates; turning a Key switch; utilizing a keypad or card reader, etc.
- Must be compliant with the ANSI Standard Code 156.19 to reduce chance of injury to pedestrians and wheeled traffic.

  TOTAL current draw from the Opus Control must not exceed 0.7A when providing power to:
  - Sensors
  - Modules
  - Accessories
  - Auxiliary Equipment

  If *TOTAL* current draw exceeds 0.7A the installer must utilize an auxiliary power supply such as the NABCO Transformer 24 VAC, P/N 14-2101.

CAUTION

The Opus Control must Not be used to output power to:

- **Magnetic Locks**
- **Electric Strikes**

To determine if an auxiliary power supply must be used, add the total current draw of all devices. Please refer to the formula shown below:

Example: A Gyro Tech Automatic Door is to be fitted with the following devices:

2 x Acusensor 3 @ 110 mA =	200 mA
1 x Cp/RX Radio Control Receiver @ 50 mA =	50 mA
Total =	250 mA

250mA does not exceed total current draw.

An Auxiliary Power Supply does not need to be used.

CHAPTER 3: 120 VAC General Wiring

DANGER **Shut the installation site, branch Circuit Breaker OFF. Failure to do so may result in serious personal or fatal injury. When uncertain whether power supply is disconnected, always verify using a voltmeter.**

WARNING **All high voltage electrical connections must be made by licensed electricians according to National and Local electrical codes/regulations.**

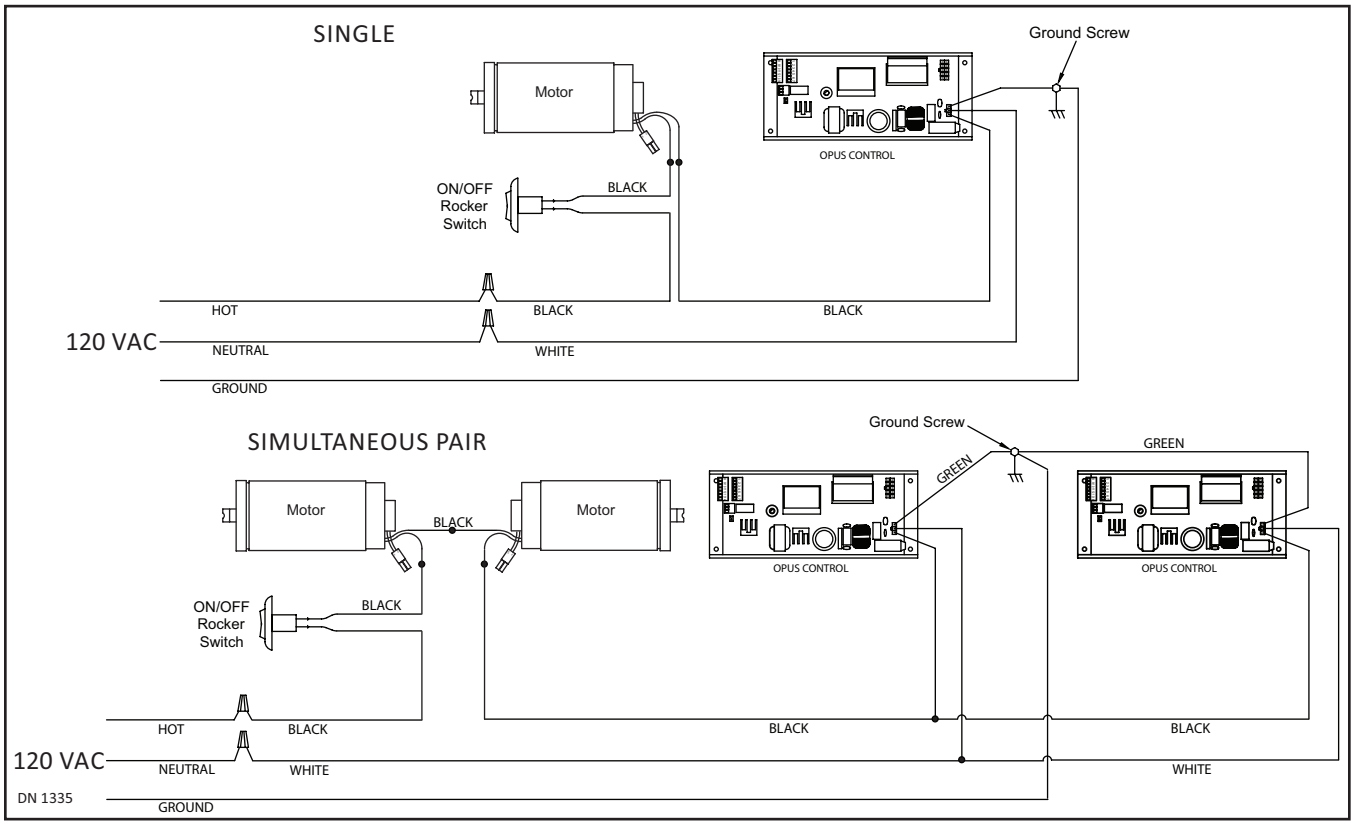
CAUTION **Permanent wiring shall be employed as required by local codes.**

CAUTION **Keep all Incoming 120 VAC wiring separate from low voltage wiring within Header. 120 VAC Power wires must be routed (separate from other wiring) located near the top of inside Header.**

CAUTION **Ensure that the Grounding of the Electric Power Supply is installed/connected in a proper way (especially the PE Cable from the Building Side).**

Attention: Insert all Incoming 120 VAC Power wires into the pre drilled Electric Service Access Hole located at the left or right side of Header End Cap.

Note: *It is recommended for the Installer to house all Incoming 120 VAC wires within an Electrical Conduit.*



CHAPTER 4: The Opus Control

The Opus Control is used to power and control operating characteristics of the door. This is done through the use of Harnesses connected to Terminals located on the Control Board, plus wiring that is connected to other components within the Header.

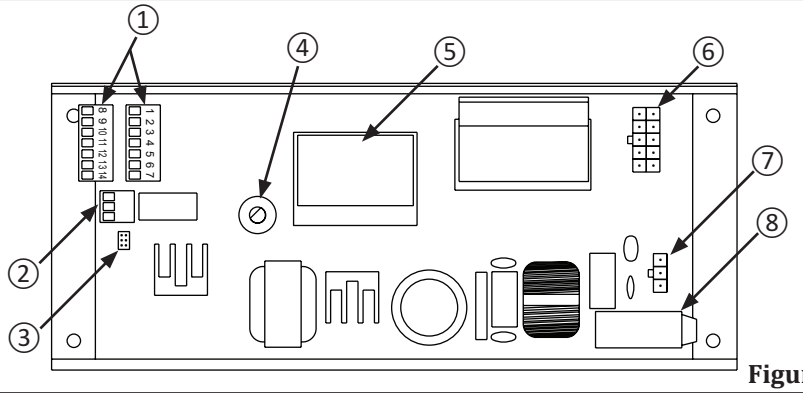


Figure 4-1 Opus Control

1	CN3	I/O Terminal Strip	5	-	LCD Screen
2	CN5	Output Terminal Strip	6	CN2	Motor Connector
3	CN4	CANBus Communication	7	CN1	Power Connector
4	-	Rotary Dial	8	-	Fuse, MC

Section 4a. The Rotary Dial

The Rotary Dial is located at the bottom, left side of the LCD Display and is utilized to scroll through LCD screens by:

- ▶ Turning the Rotary Dial:
  - Clockwise: To scroll forward through screens and programming options.
  - Counterclockwise: To scroll backward through screens and programming options.
- ▶ Pressing down on the Rotary Dial:
  - Gains access to a different screen on another Level.
  - Unlock/locks screen Titles and selected Options.
  - Selects current option.

1. Scroll through screens by turning the Rotary Dial or pressing down on the Rotary Dial.
2. To go back to the beginning, press and hold down for (2) seconds on the Rotary Dial. Release the Rotary Dial once the Level One screen is displayed.

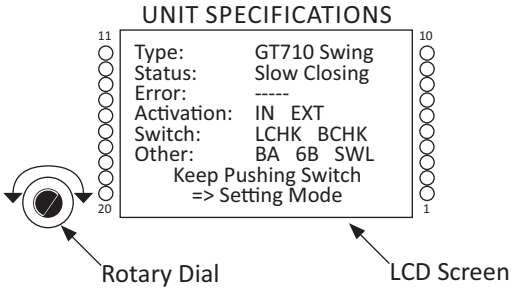


Figure 4-2 The Rotary Dial

Section 4b. LCD Screen Transition

(4) LCD Screens are categorized within the following Hierarchy Levels:

▶ Level One: Specification ▶ Level Two: Access ▶ Level Three: Category ▶ Level Four: Parameter

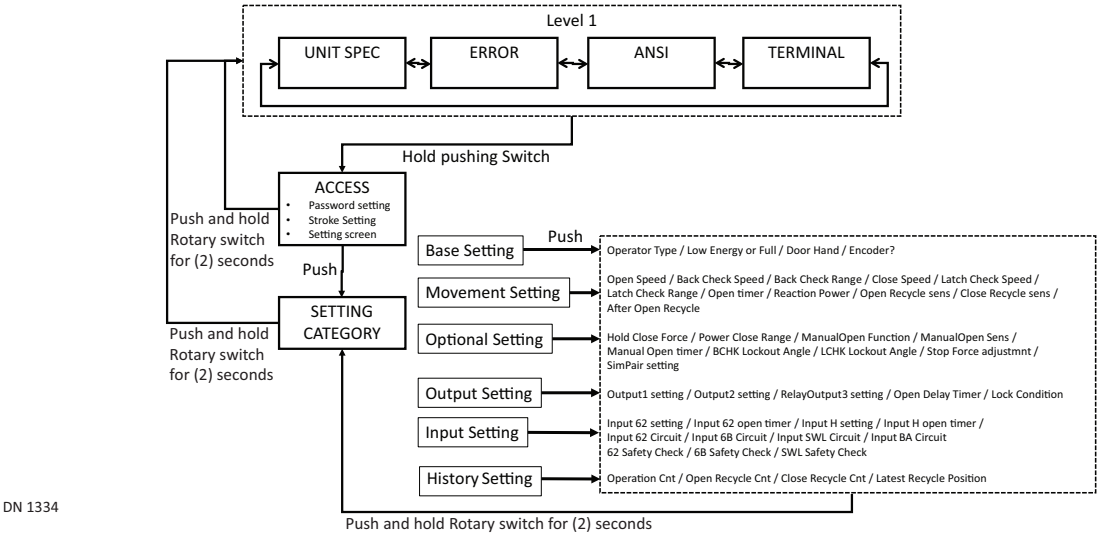


Figure 4-3 LCD Screen Transition

Section 4c. Level One: Specification Screens

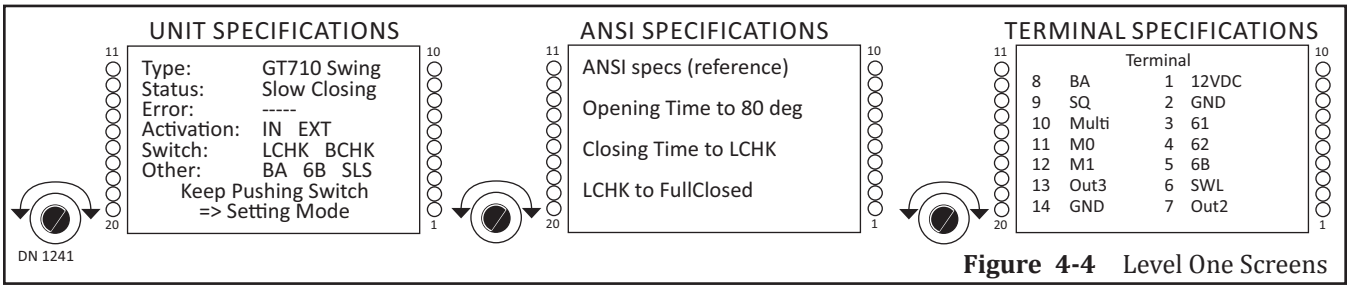


Figure 4-4 Level One Screens

When Power is turned ON for the first time, the Door does not move. Instead, an LCD screen will illuminate to display a Level One:
Unit Specification screen (Default screen). There are (3) Level One screens:

- ▶ Unit Specifications: Displays the type of door and current status of the unit. The type of door (swing, slide or folding) can be changed within the Base Settings Category (Level 3 and Level 4). Please refer to Subsection 6.1 The screen above shows the Opus control installed on a GT710.
- ▶ ANSI Specifications: Displays the actual time of opening and closing of the door to help determine ANSI compliance.(Applies to swing doors only).
- ▶ Terminal Specifications: Displays the current status of all of the Input/Output lines of the terminal strip.

Level One screens are used to inform the User all specifications that have already been programmed into the Opus Control. If a specification needs to be changed, the User must reprogam the Opus Control within the Level Three screen, or Level Four screen.

Section 4d. Level Two: Access Screen

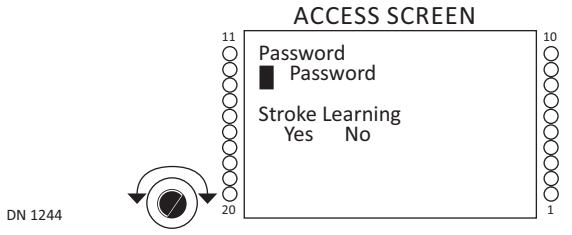


Figure 4-5 Level Two Screen

4.d.a Password

The Default password is (0045) and has been programmed into all Opus Controls. To prevent tampering of the Opus Control, the password cannot be changed.

1. Briefly press down on the Rotary Dial. Turn the Rotary dial until the first number (0) is displayed. Repeat until the Default password (0045) has been entered.
   a. Level Three screen will display.

4.d.b Stroke Learning

- Activates the Door to teach the Opus Control the Full Open and Full Closed positions.
- Measures from Full Closed to Full Open points to determine where Check Points should happen.
- Determines if an existing Operator Type is correct.
- Determines if Handing is correct.

1. Briefly press down on the Rotary Dial to select:
   - Yes
     - Opus will start the Stroke Learning Cycle
     - The door will Close slowly → Open Slowly → Close Again
   - No
     - If the Operator and Door Handing settings are correct, Opus will not have to Learn Stroke. Opus automatically determines the Stroke during a normal door cycle.
     - If the Operator Type or Door Hand are the wrong setting, the following messages after the Stroke Learning Cycle will display: “Wrong Motor! Restroke”; or “Wrong Hand! Restroke”. If this event occurs, enter the proper settings within the Base Setting Category screens.

Section 4e. Level Three: Category Screen

4.e.a Within Password

Level Three Setting Category displays Parameter options for Level Four.

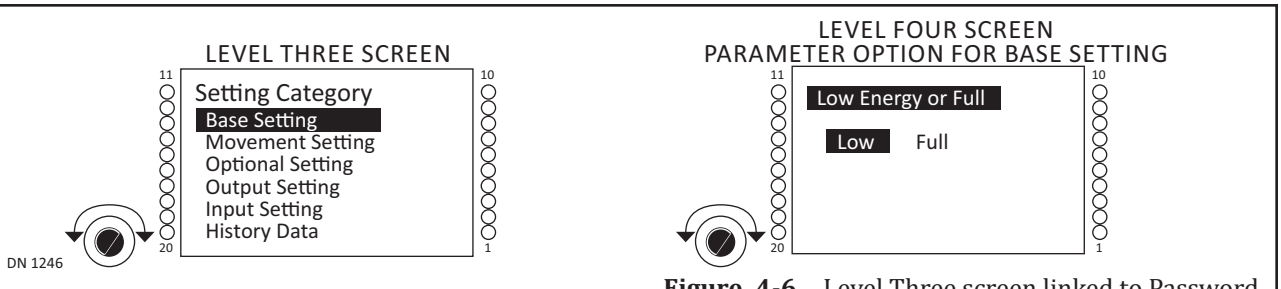


Figure 4-6 Level Three screen linked to Password

4.e.b Within Stroke (only if Yes was selected)

Level Three Setting Category will display Error messages if the Door has been programmed incorrectly.

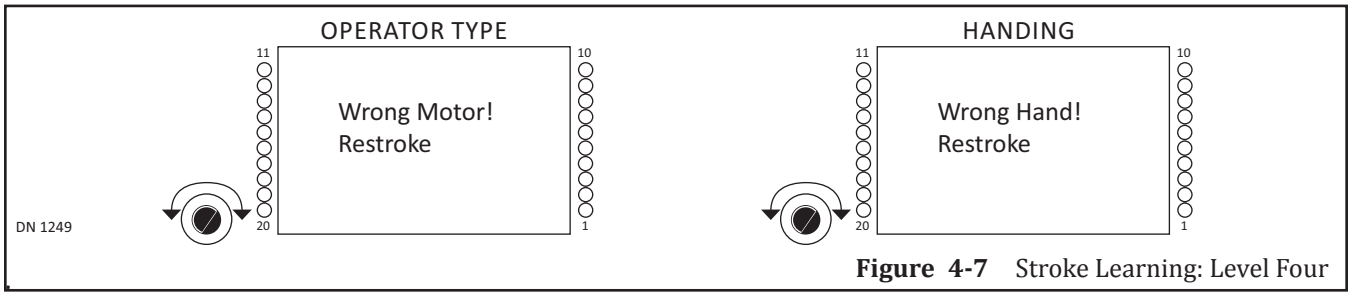


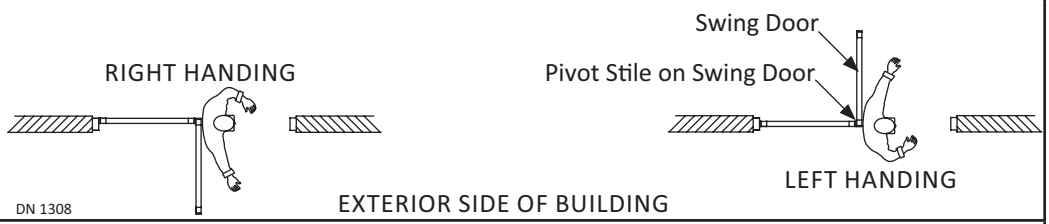
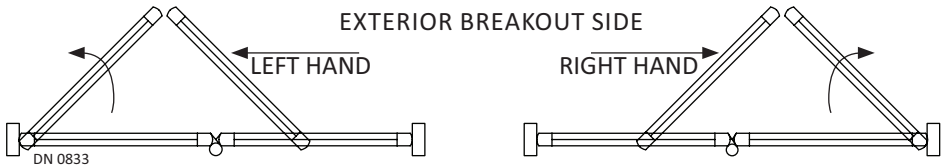
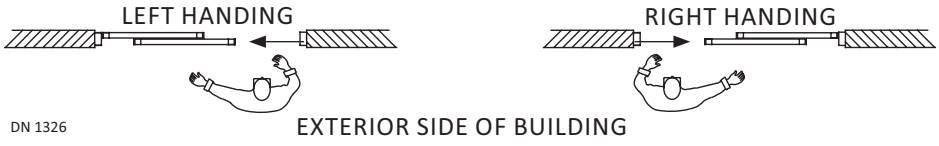
Figure 4-7 Stroke Learning: Level Four

Section 4f. Level Four: Parameter Setting Screens

Parameter Options are utilized to select appropriate Parameter Settings. Parameter Options are available after entering a Password. Please see Section 4c thru Section 4e for details.

CHAPTER 5: Programming the Opus Control

Section 5a. Base Settings

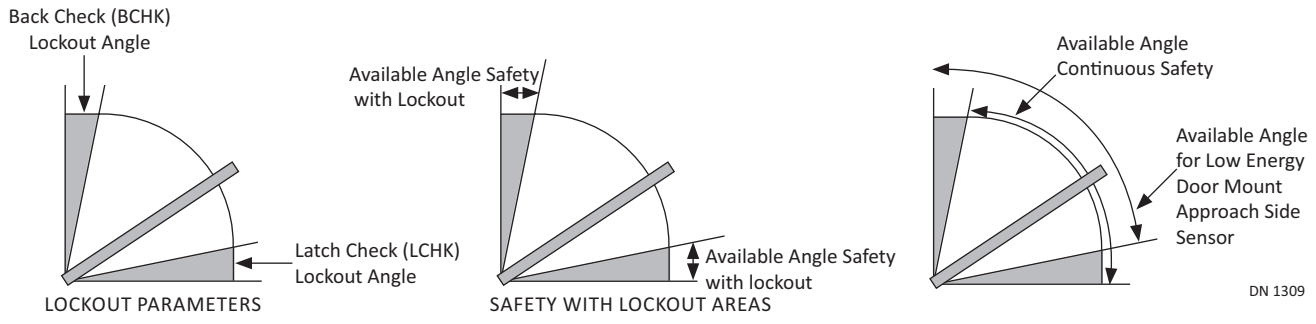
Base Settings	
Parameter	**Description**
Operator Type	▶ GT-300/400/500 Swing • Select this Option if installing a GT-1400 Fold Door ▶ GT-1175 Slide ▶ GT-710 Swing *Note: The Operator Type parameter is also set by stroke learning. The Opus Control will automatically change the value, if the Operator Type is wrong.*
Low Energy or Full	▶ Low Energy Doors • Open with a Knowing Act • Compliant with ANSI Standard Code 156.19 • GT-710/8710, 500/8500 Swing Doors are Low Energy ▶ Full Energy Doors • Open with a Sensor • Compliant with ANSI Standard Code 156.10 • 1400, 300/8300, 400/8400, 600/8600 Swing Doors are Full Energy
Swing Door Handing	From the Exterior Side of Building , determine which Handing to enter: Right or Left 
Fold Door Handing	From the Exterior Side of Building , determine which Handing to enter: Right or Left 
Slide Door Handing	From the Exterior Side of Building , determine which Handing to enter: Right or Left 
Encoder	▶ If the Motor is installed with an Encoder, select YES. ▶ If the Motor is not installed with an Encoder, select NO.

Section 5b. Movement Settings

Movement Settings	
Parameter	**Description**
Open Speed	▶ 1 = Slow 7 = Fast 3=Default Setting ▶ The higher the number the faster the Door opens.
Open Check Speed	▶ 1 = Slow 7 = Fast 3 = Default setting ▶ Back Check Speed Adjustment. ▶ Sets the speed of the Door (10 - 20 degrees) before reaching the Fully Open position. ▶ The higher the number the faster the Door opens.
Open Check Range	▶ 0 = Narrow 7 = Wide 3 = Default setting ▶ Adjustment for Degrees of Back Check ▶ Sets the Angle at which Back Check starts from Fully Open Position (10-20 degrees).
Close Speed	▶ 1 = Slow 7 = Fast 3 = Default setting ▶ The higher the number the faster the Door closes.
Close Check Range	▶ 0 = Narrow 7 = Wide 3 = Default setting ▶ Adjustment for Degrees of Latch Check. ▶ Sets the Angle at which latch Check starts from Fully Closed Position (10-20 degrees).
Close Check Speed	▶ 1 = Slow 7 = Fast 3 = Default setting ▶ The higher the number the faster the Door closes. ▶ Latch Check Speed Adjustment. ▶ Sets the speed of the Door (10 - 20 degrees) before reaching the Fully Closed position.
Open Timer	▶ 0-10, 12, 15, 20, 25, 30 seconds ▶ 2 seconds = Default setting ▶ The Hold Open Timer counts seconds. ▶ The higher the number of seconds, the longer the Door will stay open. *Note: When using an Operator without an encoder (using micro-switches instead) the Timer will start at the Back Check position.*
Reaction Power	▶ 1 = Slow 7 = Fast 4 = Default setting ▶ Determines how quickly the Door reacts to an activation (Door open) while the Door is closing.
Open Recycle Sens	▶ 0 = Sensitive 7 = Less Sensitive 3 = Default setting ▶ Affects force and reaction time in the event the Door makes contact with an obstruction while opening. ▶ After Open Recycle is set, a screen will display (2) settings to select from Slow Open or Stop after Recycle.
Close Recycle Sens	▶ 0 = Sensitive 7 = Less Sensitive 3 = Default setting ▶ Affects force and reaction time in the event the Door makes contact with an obstruction while closing.

Section 5c. Optional Settings

Optional Settings		
Parameter	**Description**	
Hold Close Force	▶ 0 = Off 3 = Strong 1 = Default setting ▶ Used to adjust the force of Hold Closed while Door is in the Fully Closed position. ▶ "0" setting turns OFF the Hold Close Force parameter.	
Power Close Range	No Power Close	Default setting = Power Close is not effective.
	Latch Check Only	Power Close is effective, while Door is in the Latch Check position.
	Whole Close Cycle	Power Close is effective, while Door is in the Closing Cycle.
Power Close Range	Latch and Back	Power Close is effective, while the Door is in the Latch Check position and the Back Check position (not at the same time).
Push Open Sensitivity	Select 0 thru 3.	Push and go sensitivity (Angle or Force)
Push Open Function	No Action	Door stays closed.
	Push and Go	Door opens until it is fully open, then closes (Low Energy Door only)
	Stop and Close	If the Door is manually opened part way then released, the Door will stay at the same position for a moment before closing (Power Assist).
	Try to close	The Door will resist a manual opening and keep constant closing pressure (used to counteract positive stack pressures)
Push Open Timer	▶ Timer is effective after the Door is Manually Pushed Open. ▶ 0-10, 12, 15, 20, 25 seconds. ▶ 2 seconds = Default ▶ The Hold Open Timer counts seconds. ▶ The higher the number of seconds, the longer the Door will stay open.	
BCHK Lockout Angle	▶ Locks out door mounted Sensor on Swing Side and enables header mounted Sensor on Swing Side. ▶ LCD Screen Displays: 0-A ▶ 11 Steps ▶ Only available with Encoder Motors. ▶ Range 0 - 30 degrees	
LCHK Lockout Angle	▶ Locks out door mounted Sensor on approach side for Low Energy units only, also enables header mounted Sensor on swing side. ▶ LCD Screen Displays: 0-A ▶ 11 Steps ▶ Only available with Encoder Motors. ▶ Range 0 - 30 degrees.	



Optional Settings			
Parameter	**Description**		
Stop Force Adjustment	▶ Select 0 thru 7. ▶ Determines how the Door reacts to a continuous safety signal, slowly open, stop, or slowly close. ▶ The Door will move slowly, even if Continuous Safety Input is ON. Please adjust the setting if the Door: • Opens slowly: decreases the value. • Closes slowly: increases the value.		
SimPair Setting	Single Door	Normal	
	Normal SimPair	Synchronize both Doors	
	Overlap SimPair	▶ Opens and/or Closes (1) Door Panel slightly ahead of an opposite Door Panel. ▶ Used for a Simultanuous Pair equipped with an Astragal.	

Section 5d. Output Settings

Output Settings			
Parameter	**Description**		
Output1 Setting & Output2 Setting & Relay Output 3 Setting	Full Open Position	Encoder	Output is active while Door is within 5° of Full Open position.
		Non-Encoder	N/A
	Closing Status	Output is ON while Door is Closing.	
	Opening Status	Output is ON while Door is Opening.	
	Full Closed Position	Encoder	Output is Active while Door is within 5° or Full Closed position.
		Non-Encoder	N/A
	Error State Output	Output is ON if an error exists.	
	Recycle occurred	Output is ON when Recycle occurs until the Door has completed another Full Cycle.	
	Electric Strike Lock	▶ For Electric Strike Lock. ▶ Enables operation of the Electric Lock and set the Time Delay between release of the Lock and Door movement.	
	Airlock	In a passageway situation, Option (1) instructs the Transistor to turn ON to prevent a second Door from opening before the First Door reaches the Fully Closed position.	
	Breakout Status	Output is ON, if BA input is ON.	
	Sensor Health Check Normally Open (NO)	If the Sensor has monitoring input, connect this output, then Sensor Check functionality driven by this output.	
	Sensor Health Check Normally Closed (NC)	Inverted “Sensor Health Check NO” Output.	
	Electric Mag Lock	▶ For Electric Magnetic Lock ▶ Enables operation of the Electric Lock and sets the Time Delay between release of the Electric Lock and Door movement. ▶ Output is continuously ON until the Door is fully closed.	
Open Delay Timer	0.1 sec 0.3 sec 0.9 sec After Unlock Input	If any Output Setting is Electric Strike Lock or Electric Mag Lock, the Door will Open with this Delay Timer.	

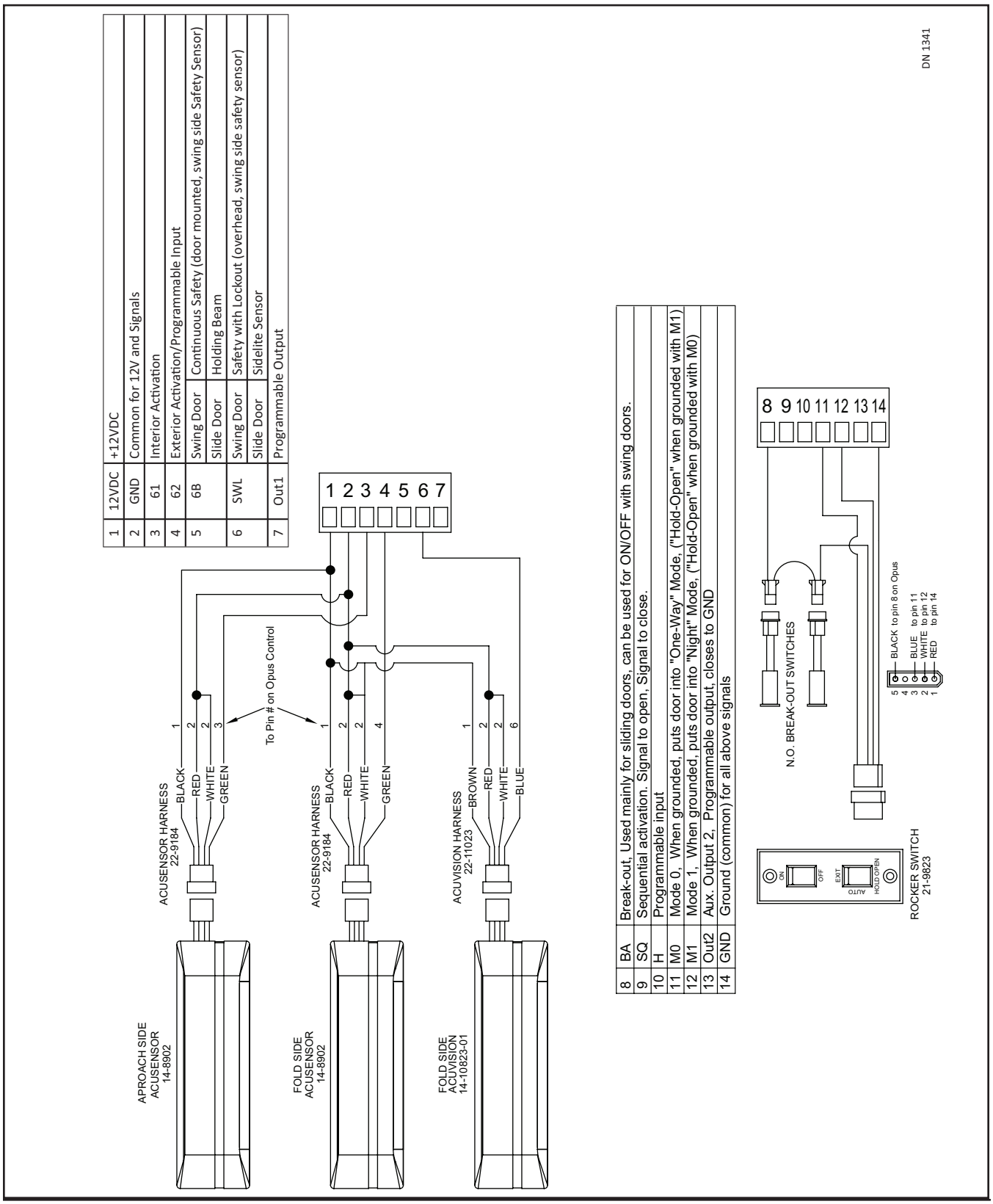
Section 5e. Input Settings

Input Settings			
Parameter	**Description**		
Input 62 Setting & Input H Setting	All Activation Mode	Instructs Control to Open the Door in any Rocker Switch Position; except OFF.	
	Interior Activation	Activation Signal Input: Opens the Door based on a signal from the Sensor that is active in One Way Mode.	
	Exterior Activation	Activation Signal Input: Receives signal from a Sensor that is switched out in One Way Mode.	
	LE Approach Sensor	Swing Door	Utilizes a Low Energy Door mount approach side Sensor.
	Beam Sensor	Slide Door	Utilizes a Beam Sensor
	Unlock Input	Unlock signal from Electric Lock.	
Input 62 Setting & Input H Setting	Spring Close Only	Hold Close is not available at Fully Closed Position, when this input is ON.	
	Sequential Input	▶ Door opens with first activation and stays open. ▶ Door closes with second activation.	
	Emergency Close with Open Signal (Activation or Safety)	Door will Close in Latch Check Speed.	
	Emergency Close	Door will close in Normal Speed	
Input 62 Setting	Open Slow	When signal is ON, Door opens in creep speed.	
	Safety with Lockout	Swing Side, Door Mount Safety Sensor.	
	Continuous Safety	Door Mount Safety Sensor on the swing side.	
	Reduced Opening	▶ Door will open partially when this activation signal is ON. ▶ This Input is available for the Slide Door only.	
62 Safety Check & 6B Safety Check & SWL Safety Check	Not Active	This is not an Indicator.	
	Active	▶ If these parameters are Active, the Safety Sensor must be connected to Output1 or Output 2. ▶ Output1 and/or Output 2 must be programmed to “Sensor Health Check”. ▶ The Opus Control checks the Sensor Status during every door cycle. ▶ If there is an abnormal signal from the Sensor, the Opus Control will stop working until the power is OFF or the error is Cleared. • This option only works with Sensors capable of sending Error Signals to the Opus Control.	
Input 62 Open Timer	0-10, 12, 15, 20, 25 seconds and same as Open Timer	Has an adjustable individual Hold Open Timer.	
Input H Open Timer	0-10, 12, 15, 20, 25 seconds and same as Open Timer	Has an adjustable individual Hold Open Timer.	
Input 61 Circuit & Input 62 Circuit & Input 6B Circuit & Input SWL Circuit & Input BA Circuit	▶ NO/NC • Normally Open ▶ NO/NC • Normally Close		

Section 5f. History Settings

History Settings	
Parameter	**Description**
Operation Cnt	▶ Indicates number of Door openings. ▶ Updated every 100 door cycles.
Open Recycle Cnt	Indicates number of times the Door reversed direction during Opening cycle after sensing: ▶ An object was struck. ▶ The amount of friction that surpassed the recycle sensitivity setting.
Close Recycle Cnt	Indicates number of times the Door reversed direction during Closing cycle after sensing: ▶ An object was struck. ▶ The amount of friction that surpassed the Recycle Sensitivity Setting.
Latest Recycle Position	Indicates latest Recycle position during Opening and Closing.

CHAPTER 6: Fold Door Wiring Diagram (Accessories)

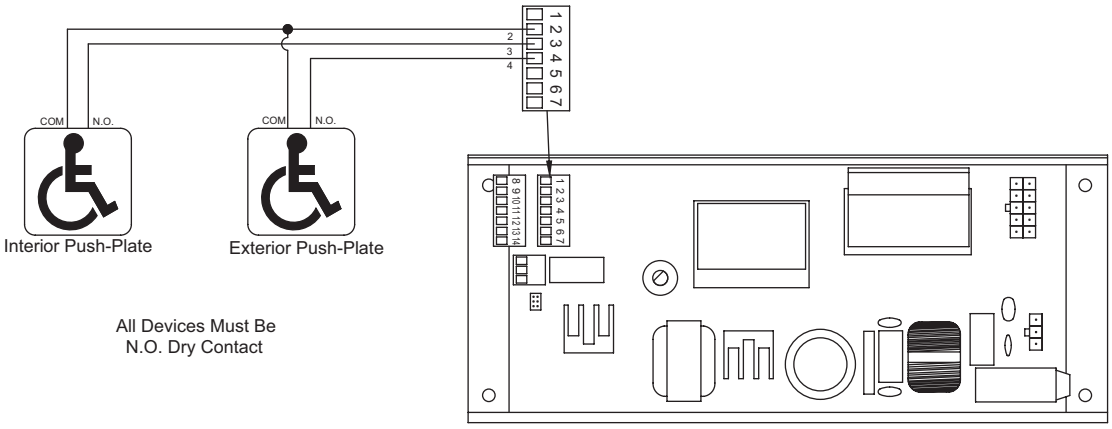


CHAPTER 7: Swing Door Wiring Diagram (Accessories)

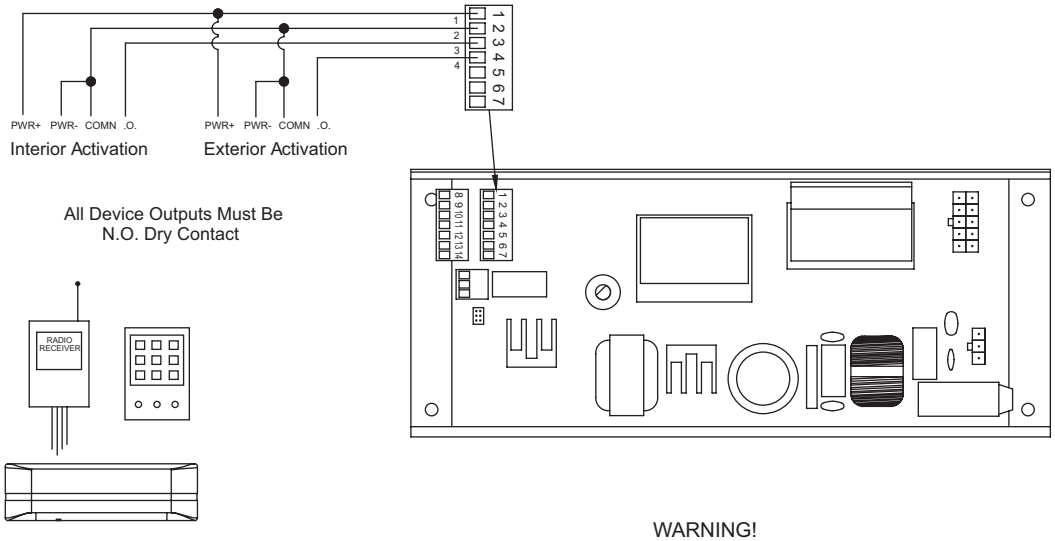
Section 7a. Activation

1	12VDC	+12VDC	
2	GND	Common for 12V and Signals	
3	61	Interior Activation	
4	62	Exterior Activation/Programmable Input	
5	6B	Swing Door	Continuous Safety (door mounted, swing side Safety Sensor)
		Slide Door	Holding Beam
6	SWL	Swing Door	Safety with Lockout (overhead, swing side safety sensor)
		Slide Door	Sidelite Sensor
7	Out1	Programmable Output	

Non-Powered Activation Devices



Powered Activation Devices



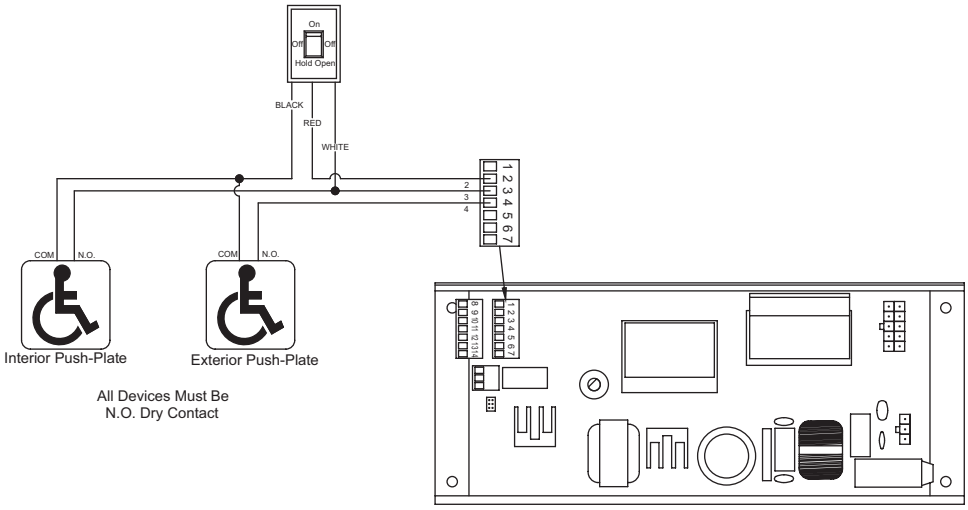
WARNING!
Total Power Consumption Of All Sensors And Powered Activation Devices Must Not Exceed 750 mA

DN 1329

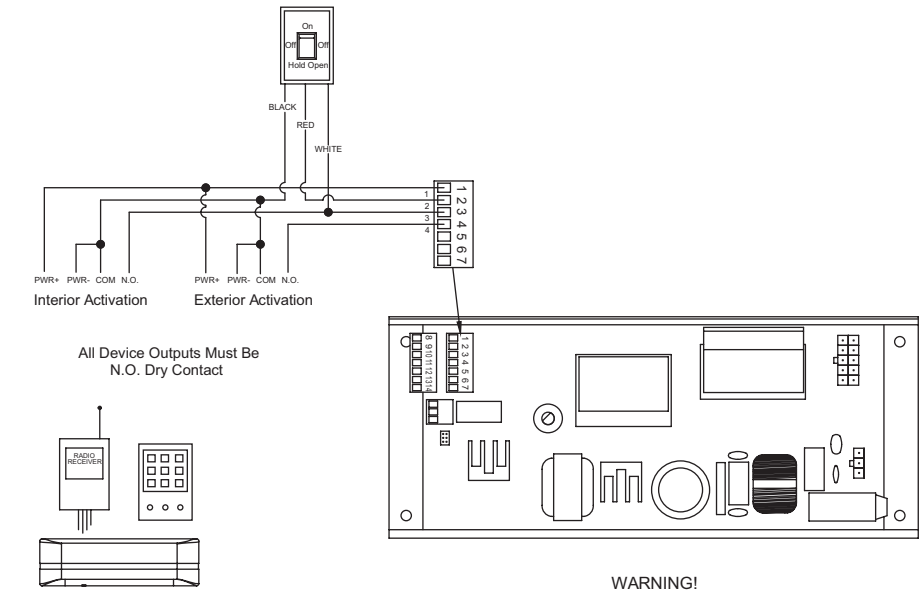
Section 7b. Activation using Old ON/OFF/Hold-Open Switch

1	12VDC	+12VDC	
2	GND	Common for 12V and Signals	
3	61	Interior Activation	
4	62	Exterior Activation/Programmable Input	
5	6B	Swing Door	Continuous Safety (door mounted, swing side Safety Sensor)
		Slide Door	Holding Beam
6	SWL	Swing Door	Safety with Lockout (overhead, swing side safety sensor)
		Slide Door	Sidelite Sensor
7	Out1	Programmable Output	

Non-Powered Activation Devices

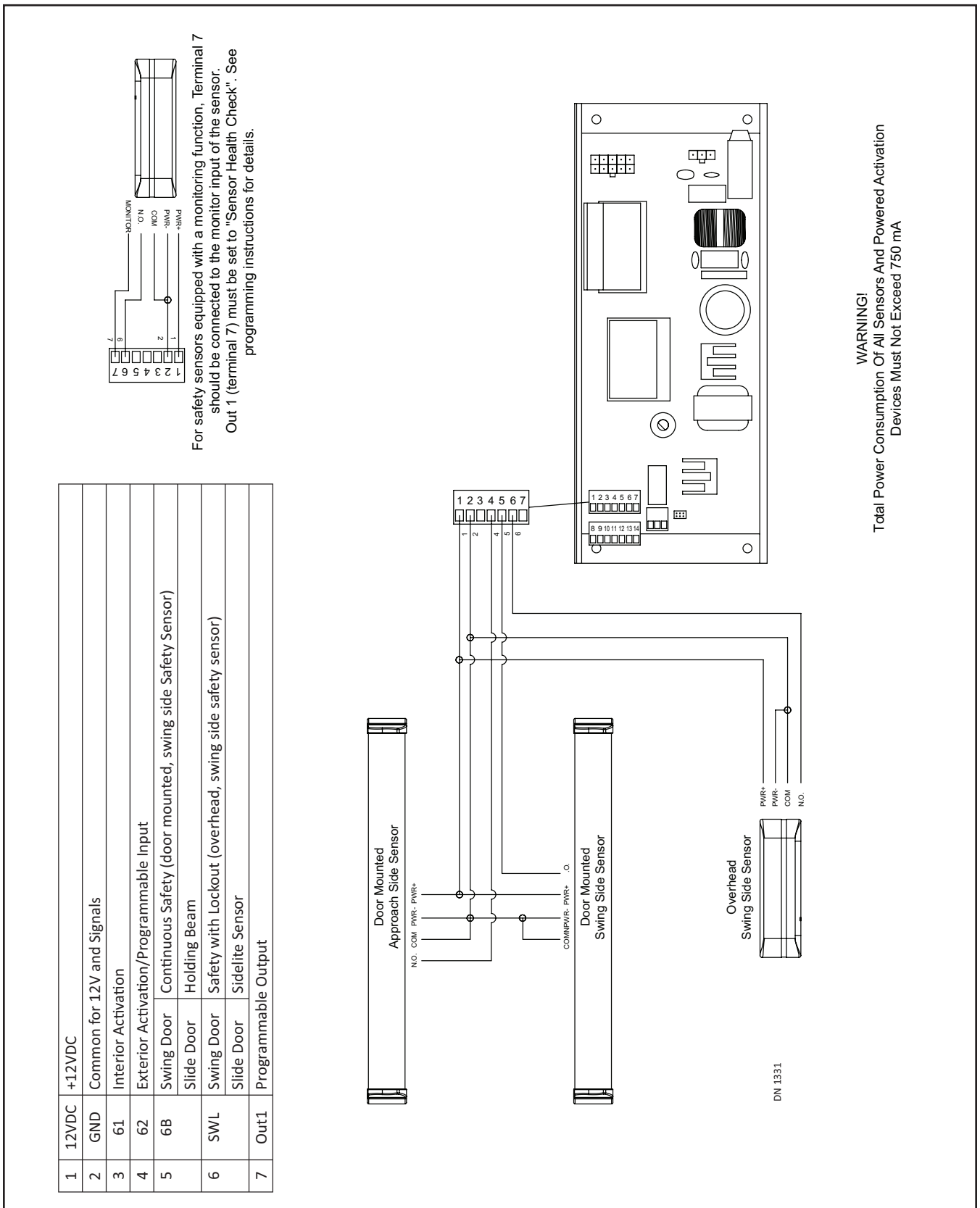


Powered Activation Devices

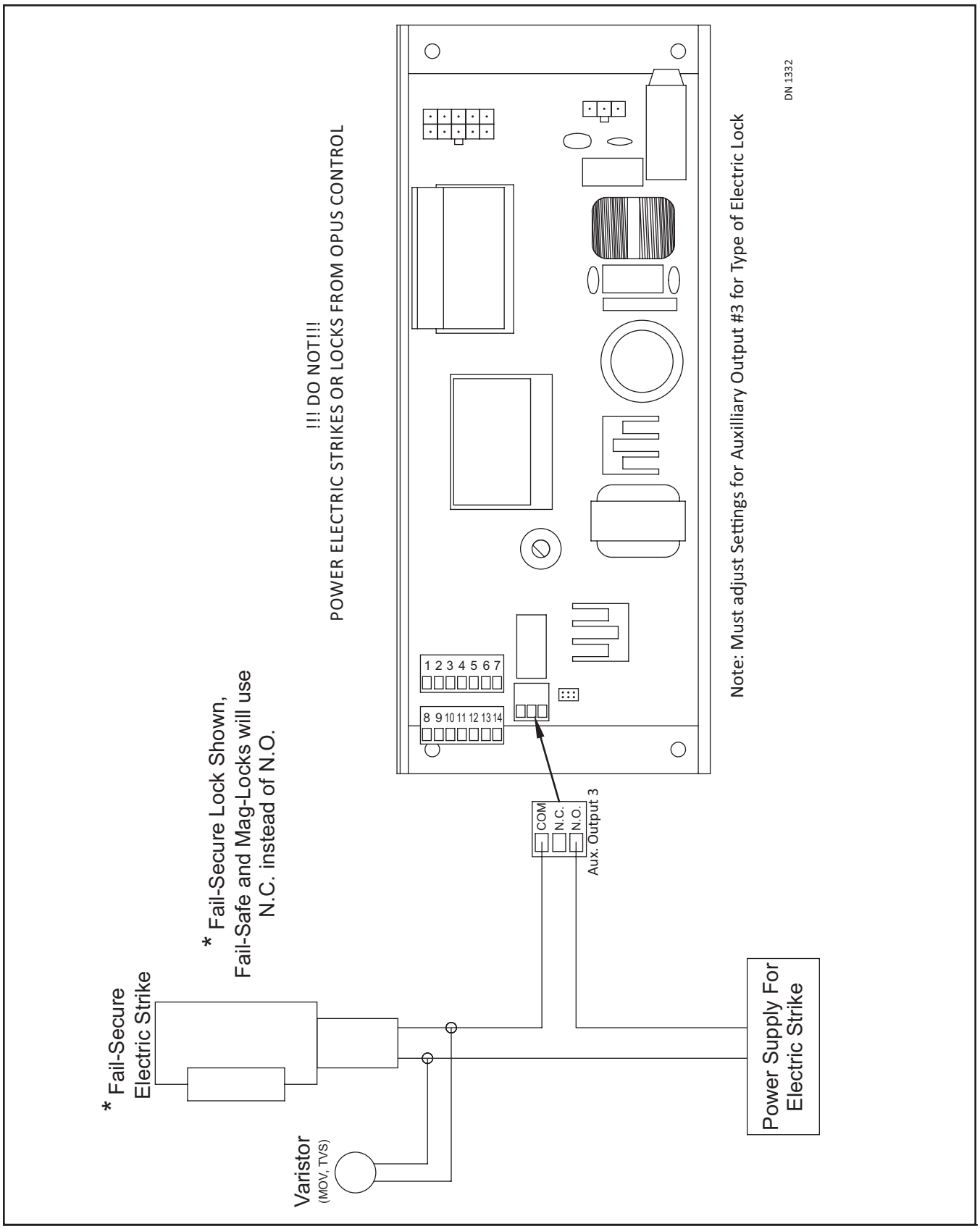


DN 1330

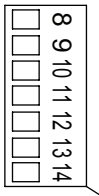
Section 7c. Safety



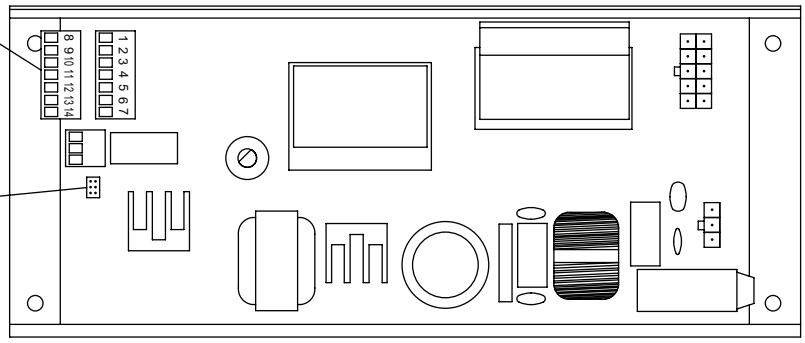
Section 7d. Lock



Section 7e. Other

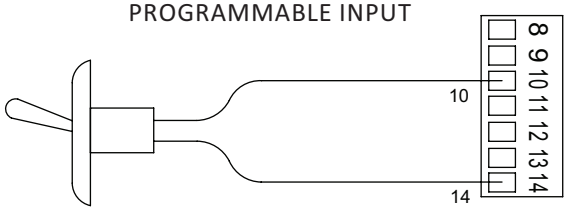


8	BA	Break-out, Used mainly for sliding doors, can be used for ON/OFF with swing doors.
9	SQ	Sequential activation. Signal to open, Signal to close.
10	H	Programmable input
11	M0	Mode 0, When grounded, puts door into "One-Way" Mode, ("Hold-Open" when grounded with M1)
12	M1	Mode 1, When grounded, puts door into "Night" Mode, ("Hold-Open" when grounded with M0)
13	Out2	Aux. Output 2, Programmable output, closes to GND
14	GND	Ground (common) for all above signals



For connecting to a second Opus for Sim-Pair, Astragal, Sequencing

PROGRAMMABLE INPUT



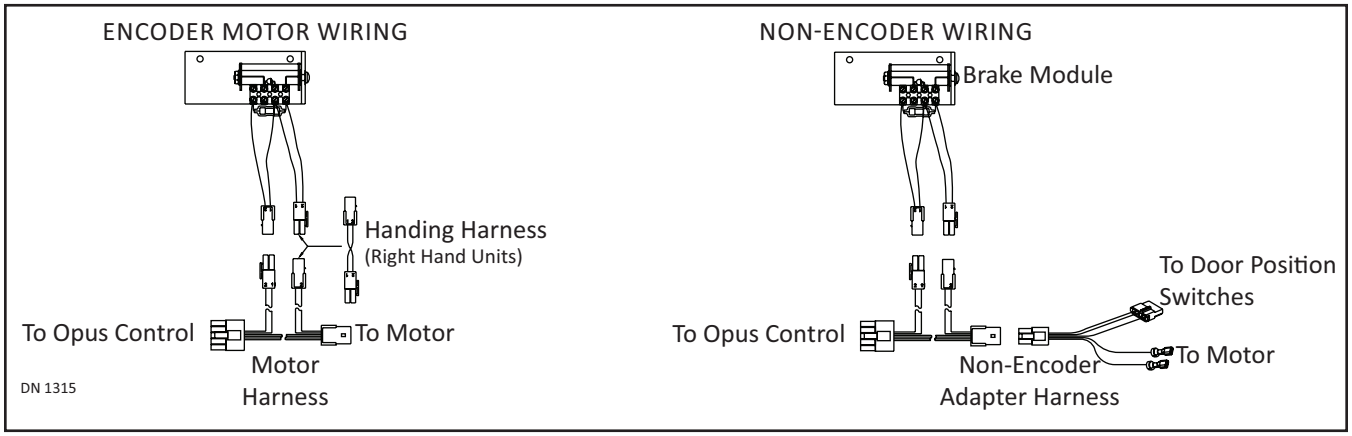
Example of a switch being used to turn on/off Power-Close and Hold Closed. Programmable input "H" (terminal 10) would be set "Spring Close Only".

To see other options for the programmable input, see programming and input settings.

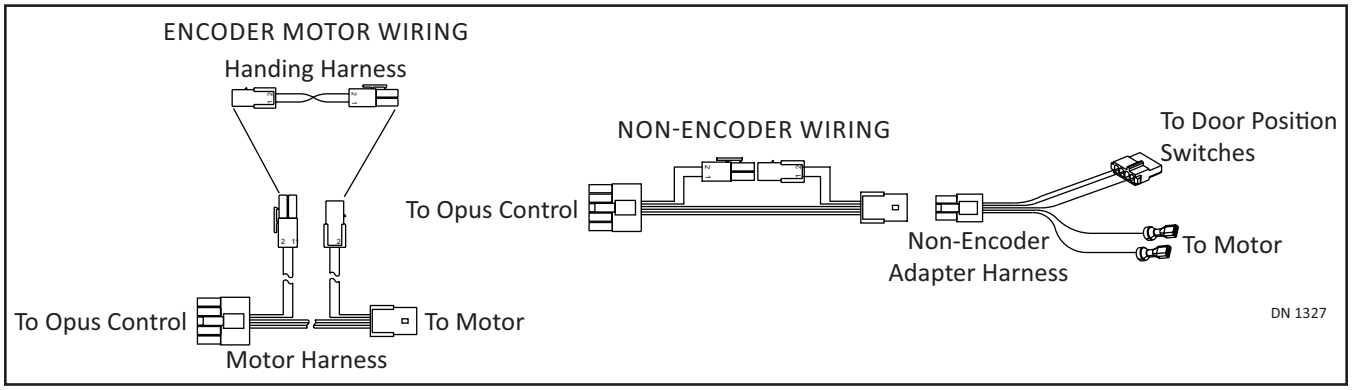
DN 1333

Section 7f. Brake Module

7.f.a GT300/400/500/600 (Single)



7.f.b GT300/400/500/600 (Simultaneous Pair)



CHAPTER 8: Troubleshooting

If the Opus detects an error, the LCD backlight will start flashing and display an Error message within the Error Screen or before the Level Two Screen.

Table 1: Error Message

Error Msg	Description	Resolution
Recycle Warning	Recycle was detected more than (5) times while opening or closing cycle continuously.	▶ Check Door Way and Door resistance. • If both are normal, adjust the opening and closing recycle sensitivity.
MPU Error	Microprocessor detects errors within the Internal or External Circuit.	Please replace the Opus Control if the MPU Error occurs repeatedly.
Drive Circuit Error	If the Drive Circuit detects an unusual state, the Opus will stop door movement. The possible causes are: ▶ Over current at motor ▶ Abnormal voltage at Motor Circuit ▶ Abnormal value from Motor Current detection.	▶ Check the Motor connection. • Opus Control may not be connected to the motor. • Motor wire may be shorted. ▶ If Motor connection is normal; the cause could be electrical noise. ▶ Possible for this Error to occur occasionally without having a problem with the Door.
Communication Error	CAN-bus Communication Error	Please check SimPair Harness.
62 Sensor Error & 6B Sensor Error & SWL Sensor Error	▶ This is the Sensor monitoring functionality. ▶ Hand-shake for Safety Sensor not working properly.	▶ Check Opus: • Input/Output Settings • Harnesses • Sensor Status. ▶ Sensor could be detecting an Internal Error.

Notice: **If after troubleshooting a problem, and a satisfactory solution cannot be achieved, please call Nabco Entrances at 1-877-622-2694 between 8 am – 4:30pm Central time for additional assistance.**

DO NOT leave any problem unresolved. If the door cannot be repaired immediately, turn off the door and leave it inoperable until repairs can be made. Advise the owner NOT to operate the door in the automatic mode until repairs are effected. NEVER leave a door operating without all safety detection systems operational.