



GT1175 and ICU 2400A
Slide Door Opus Control
Wiring and Programming Manual
P/N C-00391 Rev 7-25-25

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- 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.

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CHAPTER 1: SAFETY FLAGS

SECTION 1.1: Warning Labels

Warning labels are universal and used to alert others of a potential hazard based on the type of label. The following warning labels are listed in a hierarchy order that defines the most hazardous: **DANGER** to the least hazardous **SAFETY**.

Please refer to this page if a warning label is displayed within this manual and requires further definition.



Indicates an immediate hazard; a hazard capable of producing irreversible damage, injury, or death. It should not be considered for property damage unless personal injury risk is present.



Indicates a potentially hazardous situation which, if not avoided could result in death or serious injury. It should not be considered for property damage unless personal injury risk is present.



Indicates a potentially hazardous situation; a hazard capable of resulting in severe but not irreversible injury or damage. The CAUTION label should not be used when there is a possibility of death or serious irreversible injury.



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



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

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

SECTION 1.2: General Safety Recommendations



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



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



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



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.



This manual, the owner's manual and all other associated manuals must be given to and retained by the purchasing facility or end user.

CHAPTER 2: SCOPE

SECTION 2.1: 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.

If after troubleshooting a problem, a satisfactory solution cannot be achieved, please call NABCO Entrances, Technical Support at 1-877-622-2694, option #3, between 7 am – 5:30 pm Central time for additional assistance. This manual offers step-by-step instructions. Do Not take shortcuts.

SECTION 2.2: Objective

The Opus Control is designed to be installed within new Swing, Sliding, and Folding Door Units, plus:

- ▶ Existing swing, sliding, and folding doors using Analog, Magnum, or U01-U19 controls (works with encoders or non-encoder microswitches)
- ▶ Existing sliding doors using U30 controls.
- ▶ Contact Customer Service at 1-888-679-3319 to purchase Retrofit kits.

SECTION 2.3: Gaining access into the “myNABCO” portal and access to other documentation

2.3.1 Assigned Email and Password

To gain access into the “myNABCO” portal, the User must first have an assigned Email and Password. To request an Email and Password, the following must be done:

- ▶ Open the NABCO Website: www.nabcoentrances.com
- ▶ Enter the “myNABCO” portal → Request Access → Fill out the Request Access Form → Click on Register
- ▶ An Email and Password will be emailed back to the requestor.

2.3.2 Accessing Installation, Wiring and Programming Manuals

For User convenience there are now (2) ways to obtain associated Installation, Wiring and Programming Manuals:

- ▶ All Associated Manuals are packed within Decal Packets that are placed inside the Header.
- ▶ For Electronic copies please log onto: www.nabcoentrances.com → myNABCO portal.

2.3.3 Obtaining Associated Manuals, Cut Sheets and Shop Drawings

- ▶ Secure Cut Sheets, Pick Lists and Shop Drawings from your Project Coordinator or General Contractor and review them.

CHAPTER 3: GETTING STARTED

SECTION 3.1: General Specifications

Specification	Description	
Power Input	100VAC - 130 VAC, AC 50-60 Hz; 3A (NABCO recommends min. 5A service)	
Power for accessories	12VDC; Rev D <u>or before</u> : 750mA Rev F: 900mA	
Motor Type	High voltage, Brushless Motor with Encoder, 115V	
Number of Signal Inputs	▶ 1 x Activation ▶ 4 x Programmable ▶ 1 x Safety	▶ 2 x Door Mode ▶ 1 x Breakout (stop)
Number of Outputs	▶ 2 x Programmable Transistor Outputs	▶ 1 x Electric Lock Form C Relay
Output Rating	Transistor Output; 100mA @ 12VDC	
Relay Output Rating	Mechanical Relay Output; 3A at 110VAC	
F1 Fuse	Cooper Bussmann LLC Model S505-5-R, 250Vac, 5.0A	
Temperature Range	-13 degrees to 140 degrees Fahrenheit	
Back Check Range Adjustment	▶ 1" to 13-3/4" from Fully Opened position	▶ Used with Encoder Motor only.
Latch Check Range Adjustment	▶ 1" to 13-3/4" from Fully Closed position	▶ Used with Encoder Motor only.
Built In Sequencer	Can activate Electric Locks	▶ Electric Strikes ▶ Electric Latch Retracted Panic Devices

3.1.1 Output Power Guidelines



The Opus Control Must Not be used to power: Magnetic Locks nor Electric Locks. A separate power supply must be purchased (if not factory equipped).

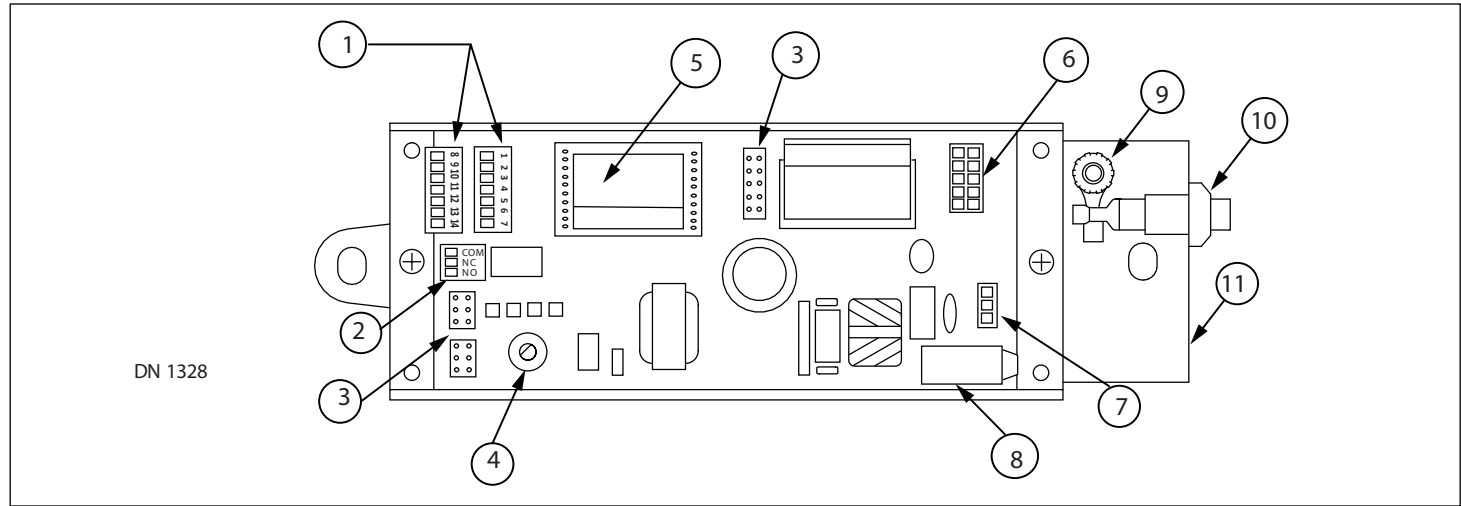
Total current draw from the Opus Control must not exceed limit (750mA) for Rev D or before.

Total current draw from the Opus Control must not exceed limit (900mA) for Rev F.

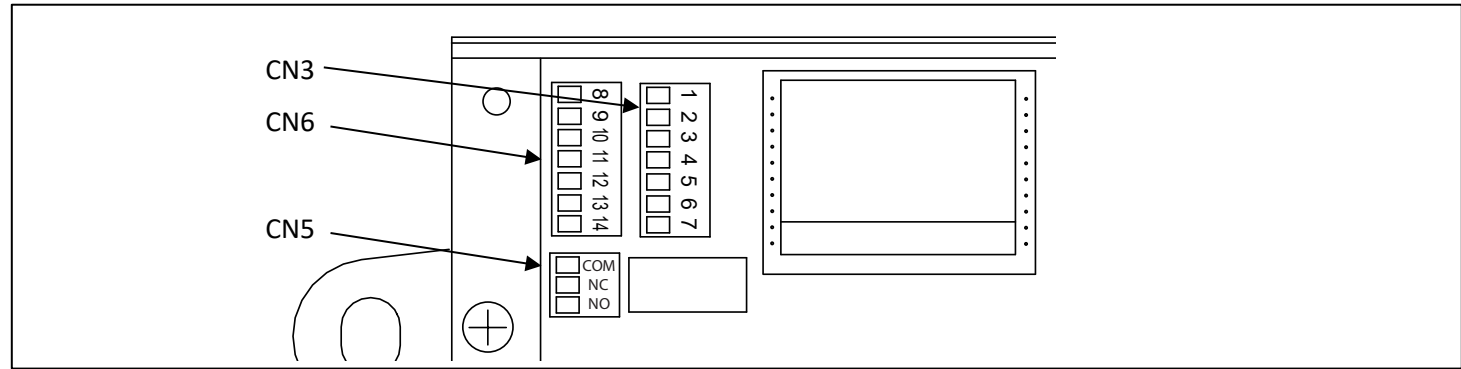
An auxiliary power supply, (e.g. NABCO Transformer 24 VDC Power Supply, P/N V-00022) must be utilized if TOTAL current draw exceeds the limit listed above. Refer to the values table below for calculations.

Sensor	Part Number	Current Consumption	
BEA ULTIMO	V-00998	267mA	(ea. unit) at 12VDC
BEA IXIO-DT1	V-00057	200mA	
Acusensor M	A-01306	150mA	
Optex i-OneX T	V-00746	208mA	
Acuzone T	V-00745	208mA	
Optex OS-12C T	A-00129	160mA	
Radio Control Receiver	V-00232	50mA	
CX33 Logic Relay	V-00734	320mA	

SECTION 3.2: Overview of The Opus Control



No.	Description	No.	Description	No.	Description
1	I/O Terminal Strips (CN3/CN6)	5	LCD Screen	9	Ground Screw (Slide Door Only)
2	Relay Output Terminal Strip (CN5)	6	Motor Connection (CN2)	10	Power Switch (Slide Door Only)
3	CAN Bus Communication (CN4)	7	Power Connection (CN1)	11	Bracket (Slide Door Only)
4	Rotary Dial	8	Fuse	-	-



3.2.1 IO Terminal strips (CN3/CN6)

I/O Terminal Strips						
1	12VDC	+12VDC	8	BA	Breakout	
2	GND	Common for 12V and signals	9	SQ*	Sequential activation (signal to open, signal to close) (Programmable)	
3	61	Interior Activation	10	H*	Reduced Opening (Programmable)	
4	62*	Exterior Activation (Programmable)	11	M0	One-way when connected to Common	Hold Open when both M0 and M1 connected to Common
5	6B	Holding Beam				
6	SWL *	Sidelite Safety (Open Slow) (Programmable, Rev.27 or later)	12	M1	Night when connected to Common	
7	Out1	Sensor Monitoring N.O. (Programmable) Closes to GND	13	Out 2	Fully Closed Position (Programmable), Closes to GND	
			14	GND	Common for all above signals	

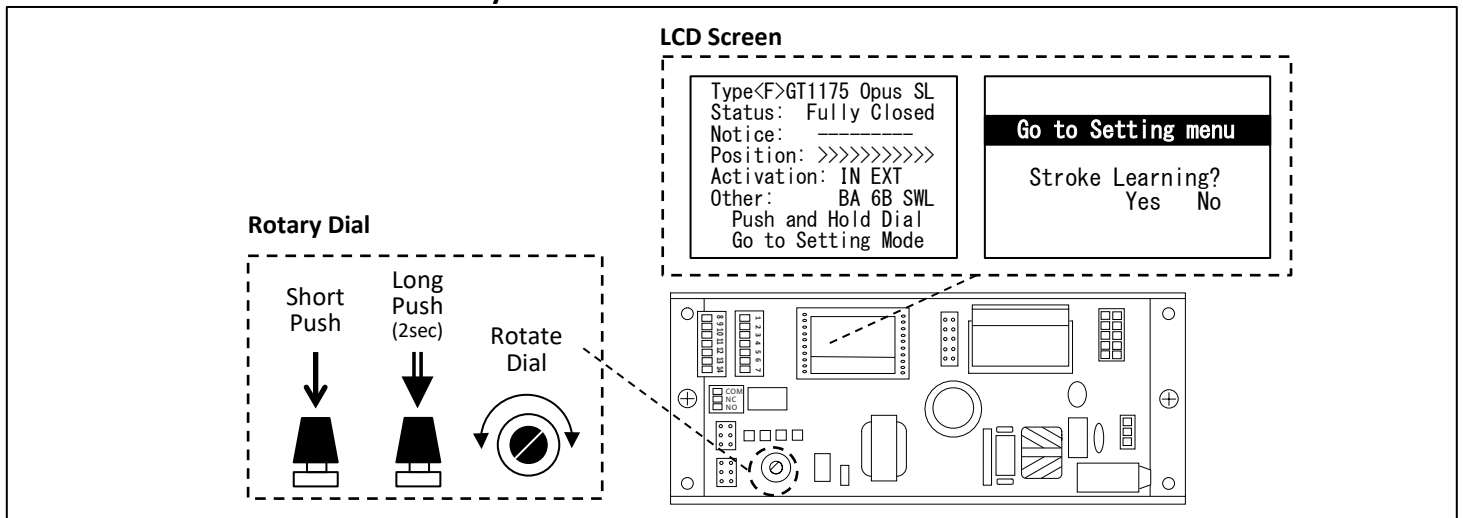
* Parameters on the LCD Screen will differ between revisions. For details refer to “4.2.1.2”.

3.2.2 Relay Output Terminal Strip (CN5)

Relay Output 3					
COM	Common	N.C.	Normally Closed Contact	N.O.	Normally Open contact for Electrical Lock

CHAPTER 4: HOW TO NAVIGATE OPUS

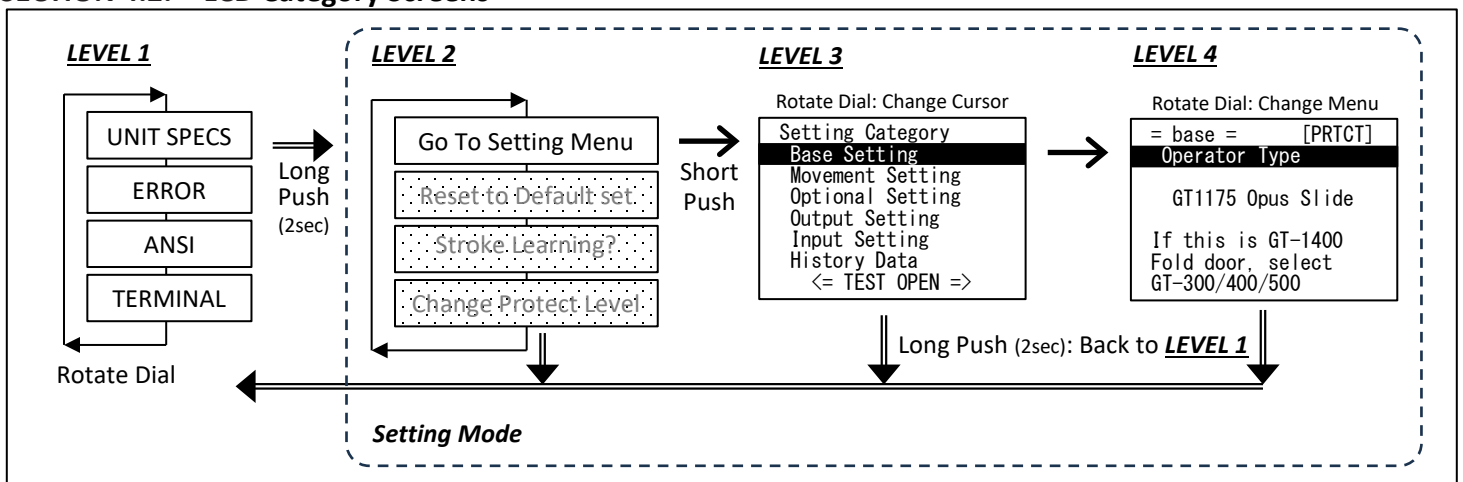
SECTION 4.1: LCD Screen and Rotary Dial



The Opus can be used to check conditions like “Status”, “Door Position”, “Input” and “Error” on the **LCD Screen**. Manipulate the **ROTARY DIAL** as shown below:

Operation	Symbolized by:	Used for
Short Push	→	Going to Next Parameter Selecting Value
Long Push (Push & hold for 2 seconds)	⇒	Going to Setting Mode Back to Previous Screen
Rotate Dial (Clockwise / Counterclockwise)	↻	Changing Value Scroll to the Next page

SECTION 4.2: LCD Category Screens

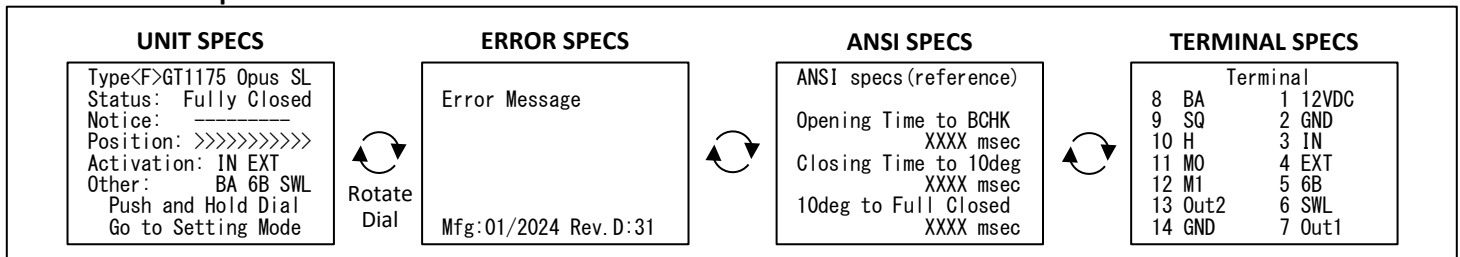


The LCD Screen has four levels.

- ▶ **LEVEL 1** is used for checking the condition of the door.
- ▶ **LEVELS 2 - 4** are the “Setting Mode” and used for Programming.
 - During Setting Mode, the door will be inactive for safety purposes (except during Stroke Learning and Test Open).
 - When Power is turned ON for the first time*, the screen will display LEVEL4 until the settings are updated.
 - After 40 seconds of inactivity on the Rotary Dial, the LCD turns off and the Setting Mode is deactivated.

*When Opus is purchased separately as a maintenance part, etc.

4.2.1 LEVEL 1: Specification Screens



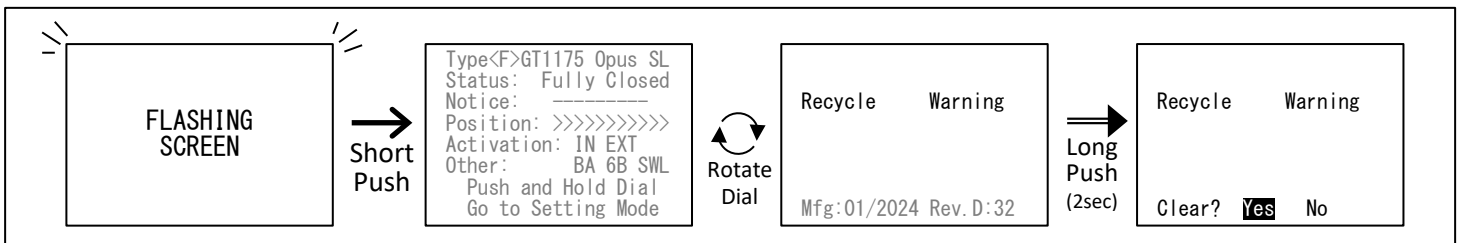
LEVEL 1 screens display the condition of the door (door position, error, input state ...etc.).

There are four LEVEL 1 screens:

- ▶ **UNIT SPECS** : Displays the type of door, status of the unit, door position (only Encoder Model), activation.
- ▶ **ERROR SPECS** : Display Error Codes when an error is occurring or has occurred. If there are no errors, this screen only displays Production Date (MM/20YY) and the software revision version.
- ▶ **ANSI SPECS** : Displays time of opening and closing for ANSI compliance (only for Swinger).
This time is just for reference.
After complete adjustment, measure time with Stopwatch.
- ▶ **TERMINAL SPECS** : Displays the meaning of each terminal. And displays status of all Inputs (for details, Refer to “4.2.1.2”).

4.2.1.1 Clear Error Message

When the LCD Screen is blinking, it means an error is occurring or has occurred. Check the ERROR SPECS screen and solve the problem (for details, Refer to “CHAPTER 13:”). After solving the problem, clear error messages like below.



4.2.1.2 Meaning of Abbreviations for Terminal Specs Screen

In **Level 1**, text abbreviations are even shorter on the Unit Specs screen, than the Terminal Specs screen. See [the](#) table below for further explanations.

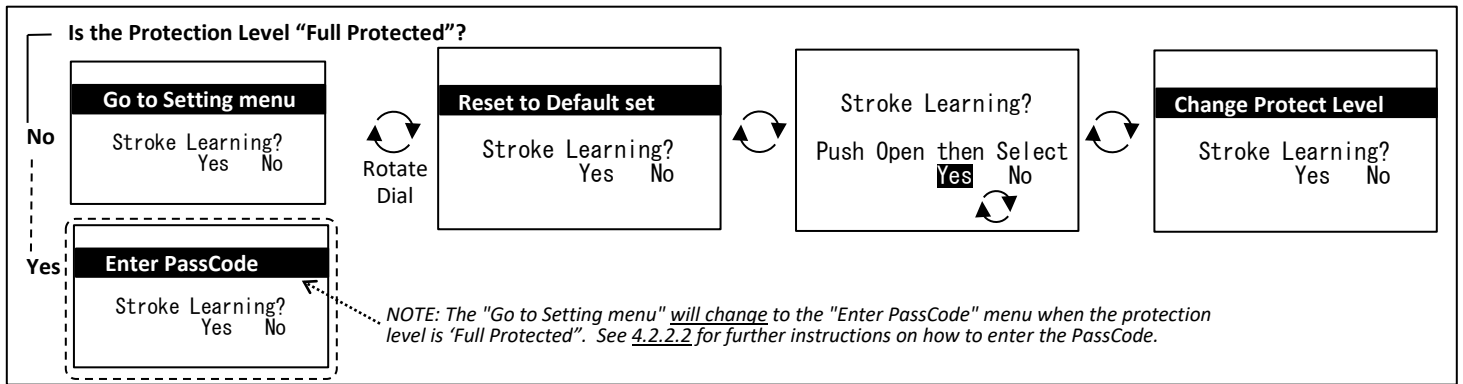
NOTE: Rev.31 (or later) changes in nomenclature are shown in the table below.

UNIT SPECS	TERMINAL SPECS
Type<F>GT1175 Opus SL	Terminal
Status: Fully Closed	8 BA 1 12VDC
Notice: _____	9 — 2 GND
Position: >>>>>>>>>>	10 EmgCL 3 IN
Activation: IN OpS	11 MO 4 OpS low
Other: BA 6B ULF	12 M1 5 6B
Push and Hold Dial	13 Out2 6 UnLcFB
Go to Setting Mode	14 GND 7 Out1

Meaning of Each Text in TERMINAL SPECS								
UNIT SPECS		TERMINAL SPECS	Description		UNIT SPECS		TERMINAL SPECS	Description
		ALL	All Mode Activation		OpS	OpSlow	Open Slow	
		IN	Interior Activation		SWL		Safety with Lockout	
		EXT	Exterior Activation		6B		Continuous Safety	
		6B	Beam Sensor		H		Reduced Opening	
LEa	LEappr	LE Approach Sensor	ECL		EmgCL	Emergency Close		
ULF	UnLcFB	Unlock Feedback	HO		HoldOp	Hold Open Input		
DPC	DPowCL	Disable Power Close	rIN		Reduced Int Act.			
		SQ	Sequential Input		rEX		Reduced Ext Act.	

* Gray cells are for Swinger. No function shows as “---”.

4.2.2 LEVEL 2: Access Screen



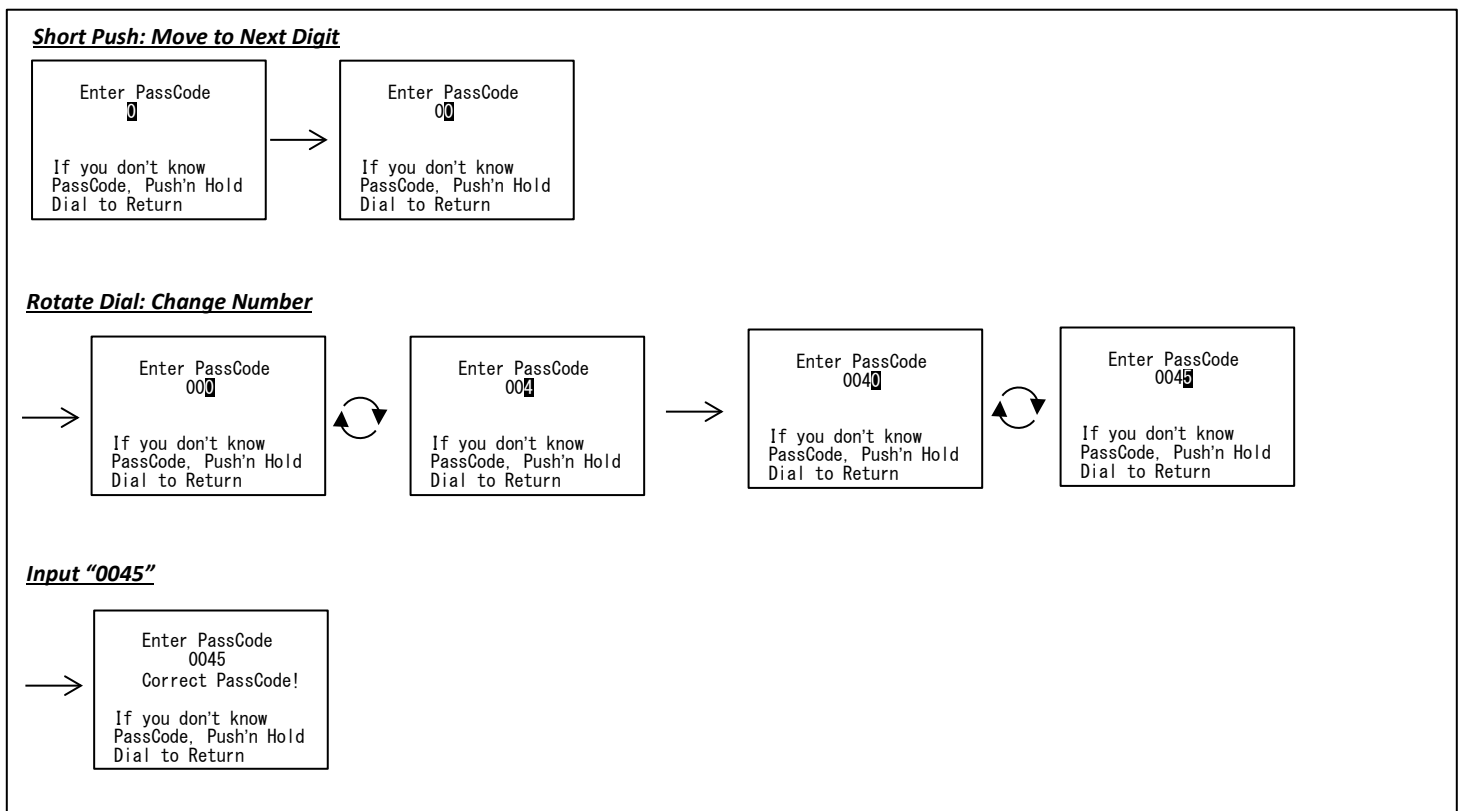
LEVEL 2 screens are the highest level of Setting Mode. Selections are changed depending on the Protection Level.

There are (5) selections:

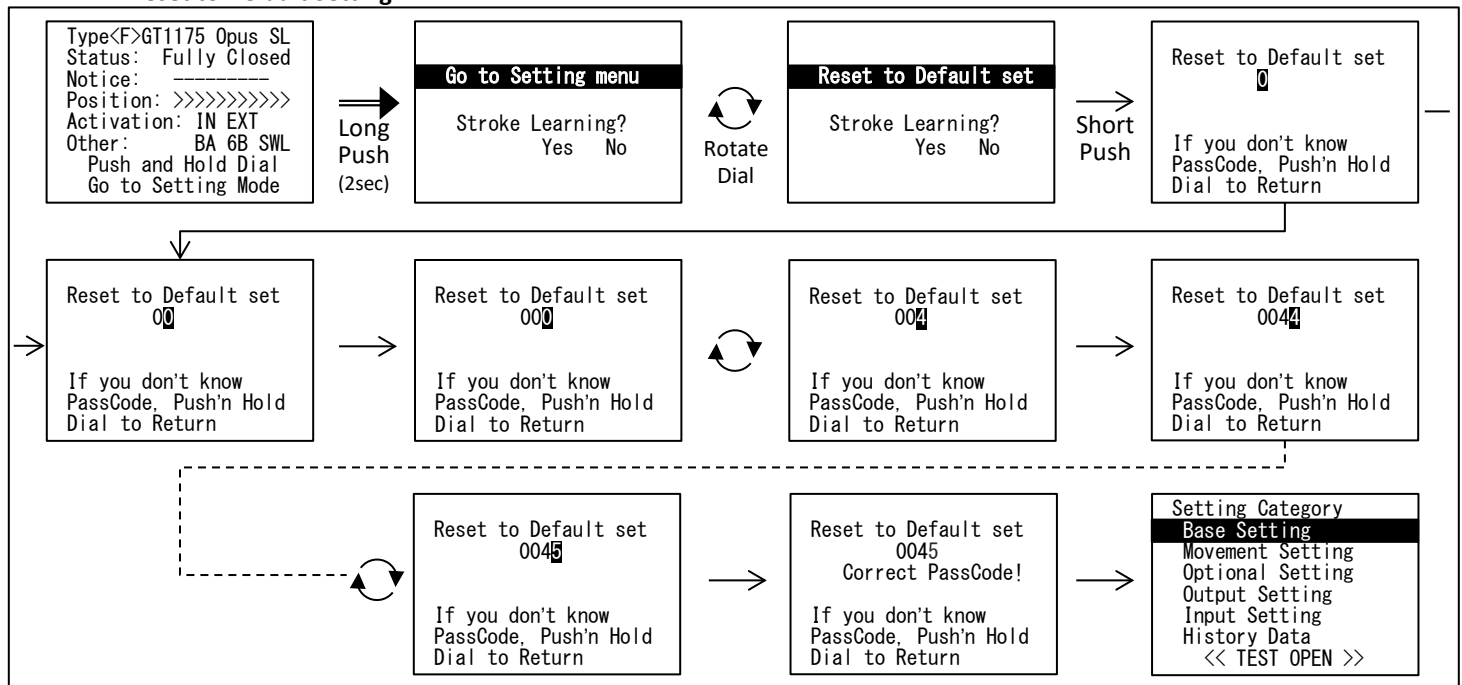
- ▶ **Go to Setting menu** : Move to LEVEL 3.
- ▶ **Enter PassCode** : Setting menu is locked out until the Passcode is entered accurately. This selection will be shown when Protect Level is "Full Protected"
NOTE: Same as "Active Passcode" in Rev.28 or earlier.
- ▶ **Reset to Default set** : After the Passcode is entered ("4.2.2.2"), almost all settings will revert to the default.
NOTE: "Operator Type", "Door hand", "Encoder", "Flip screen" are not changed.
- ▶ **Stroke Learning** : Choose "Yes"; the door starts closing to measure stroke.
NOTE: For details, refer to "CHAPTER 5:"
- ▶ **Change Protect Level** : Change Protect Level prevents users who don't understand the Opus from changing the settings. The default is "Partial Protect".
NOTES:
-This is an added feature since Rev.29.
-For details, refer to CHAPTER 8.

4.2.2.1 Enter PassCode

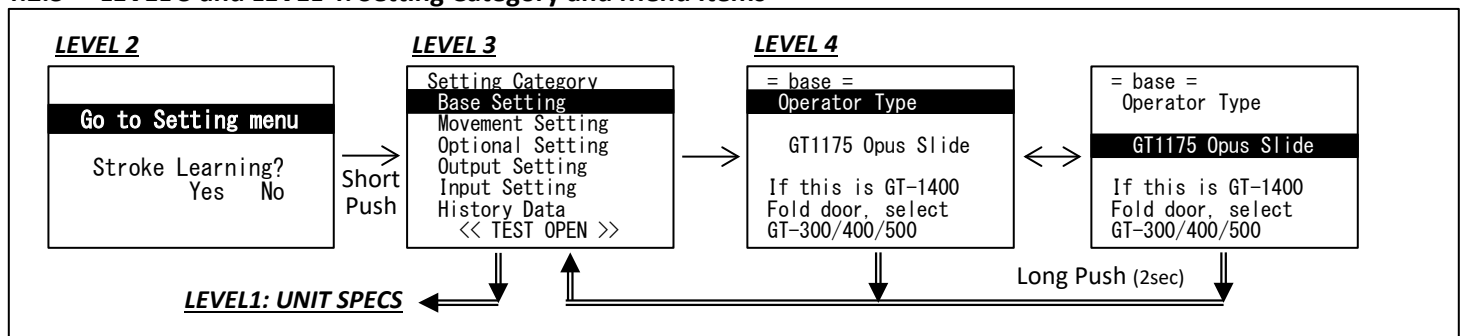
For security and safety purposes, the Opus can require a PassCode. When Opus requests it, enter "0045".



4.2.2.2 Reset to Default Setting



4.2.3 LEVEL 3 and LEVEL 4: Setting Category and Menu Items

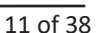


LEVEL 3 - The Setting Category is just a shortcut to go to any setting menu.

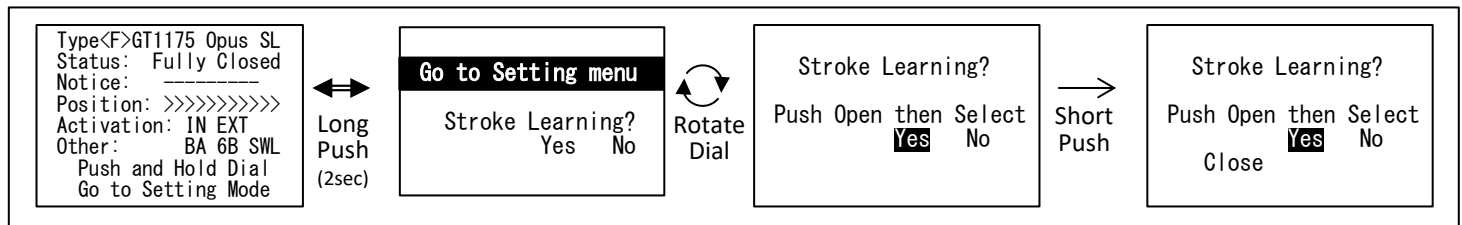
- ▶ After choosing the setting menu, then move to the menu item which requires changing.
For example: Base Setting – Then choose the menu item such as Operator Type/Low Energy or Full/, etc.
- ▶ “<< TEST OPEN >>” (see Level 3) can be used to check door movement.
 - Selecting it makes the door open and close once.
 - Before using this feature, make sure that there are no objects in the path of the moving doors.

NOTE: If LEVEL 4 shows "PRTCT", then the menu is protected. The correct passcode must be entered before editing.

4.2.3.1 Example: How to Change Opening Speed



CHAPTER 5: STROKE LEARNING



No other activation will function during stroke learning.

Please do NOT allow people to pass through the door during stroke learning.



After selecting “Stroke Learning Yes”, the door will start closing.

Be careful not to get your fingers caught in the Arm Assy or pinch points.



Before Stroke Learning, make sure the door can manually open and close smoothly.

NOTES:

- Before learning the stroke, move the door to the fully open position.
- Opus learns the stroke by counting the number of encoder pulses from the motor from fully open to fully closed.

SECTION 5.1: Stroke Learning (YES)

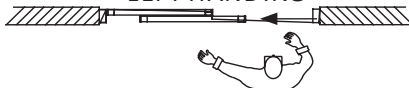
1. Go to the Opus Control. From the Unit Specs Screen, press down on the Rotary Dial until the next Screen is displayed.
2. Manually move the door to a Fully Opened Position.
3. Turn the Rotary Dial to highlight (YES) under (Stroke Learning).
4. Wait until the door moves to Fully Closed Position.
 - ▶ If Screen displays “Wrong Hand! Restroke”, Stroke learning is not complete.
 - ▶ See Trouble shooting (refer to “CHAPTER 13:”) and perform the stroke learn again.

CHAPTER 6: PROGRAMMING MENUS

NOTES:

- ▶ The symbol "■" means the parameter is protected when the function "Partially Protected" is selected.
- ▶ In OPUS, [PRTCT] will display in the upper right corner in place of the symbol "■".
- ▶ Gray Marked Parameters or values are only for Swingers.

SECTION 6.1: Base Settings

Base Setting				
Parameter	Range	Default	Description	
■ Operator Type*	▶ GT-300/400/500 Swing	GT-1175 Opus Slide	▶ N/A	
	▶ GT-1175 RetroU19 Slide		▶ When using U01-U19 type Operator.	
	▶ GT-1175 Opus Slide		▶ When VS-150 Operator is used.	
	▶ 2400 Opus Slide		▶ When VS-150 Operator is used. For Low Energy.	
	▶ GT-710 Swing		▶ N/A	
	▶ Nabco Swing		▶ N/A	
	■ Low or Full Energy		▶ Low	Full
▶ Full		▶ Full Power Operation		
■ Door Hand	▶ CCW (Counterclockwise)	CW	▶ Which Rotation to Open.	
	▶ CW (Clockwise)		ATTENTION: Bi-Parts are set up as counterclockwise.	
LEFT HANDING  RIGHT HANDING  EXTERIOR SIDE OF BUILDING				
■ Reduced Stroke	▶ Yes	No	To measure Stroke for Reduced Door Opening:	
	▶ No		▶ Manually move the door	
			▶ Push YES	
			▶ Then start learning	
* Opus changes some settings automatically when you change the Operator Type or do Short Pushes on this Menu.				

SECTION 6.2: Movement Settings

Movement Setting				
Parameter	Range	Default		Description
		1175	2400	
■ Open Speed	0 - 7	4	2	The higher the number the faster the door opens
■ Back Check Speed	0 - 7	2	2	Sets door speed during Back Check
■ Back Check Range	0 - 7	2	2	Slide Door: 1" to 13-3/4" of Fully Open
■ Close Speed	0 - 7	3	1	The higher the number the faster the door closes
■ Latch Check Speed	0 - 7	2	2	Sets door speed during latch check
■ Latch Check Range	0 - 7	2	2	Slide Door: 1" to 13-3/4" of Fully Closed
■ Open Timer	0-10, 12, 15, 20, 25, 30	2	5	Hold Open time (seconds) after the door reaches Full Open and activation signal is no longer present.
■ Reaction Power	0 - 7	3	3	Determines how fast the door reacts to a reactivation when closing.
■ Open Recycle Sens	0 - 7	3	3	Recycle detection sensitivity. Determines how much force is exerted during the opening or closing cycle. ▶ "0" = most sensitive, "7" = least sensitive
■ Close Recycle Sens				
■ After Open Recycle	▶ Slow Open	Stop	Stop	Determines what happens after a recycle during the Opening cycle. ▶ Slow Open = Door stops then slowly opens. ▶ Stop = Door stops then slowly closes.
	▶ Stop			
■ Close Recycle Reopen	▶ Yes	Yes	Yes	Determines what happens after a recycle during the Closing cycle. ▶ Yes = Door re-opens ▶ No = Door stops then slowly closes
	▶ No			

SECTION 6.3: Optional Settings

Optional Settings			
Parameter	Range	Default	Description
■ Hold Close Force	0 - 3	1	▶ 0 = OFF ▶ 3 = Strongest Hold Close Force
■ Manual Open Function	▶ No Action	No Action	Does nothing
	▶ Push and Go		Door will Open to Fully Opened Position when door is pushed.
	▶ Stop and Close		Door pauses at opened position then closes
	▶ Open Assist		Motor power assists in manually opening the door. NOTE: Assist Power depends on how strongly the door is pushed at first.
■ Manual Open Sens	0 - 3	1	Angle to activate Push and Go ▶ 1-3 recommended ▶ Do Not use 0
■ Manual Open Timer	0-10, 12, 15, 20, 25, 30 Same as Open Timer	3	Hold open time for Manual Open Function.
■ Sim Pair Setting	▶ Single Door	Single Door	-
	▶ Normal Sim Pair		Two Opus operate each door simultaneously. NOTE: Refer to CHAPTER 6 for detail.
	▶ Double Egress		The Activation signal (only) is shared between doors. All other signals are independent.
	▶ Overlap Sim Pair		▶ Overlap Sim Pair is for an Astragal Application. ▶ Opus Control is connected to the door that must open first: • Have activation signals connected to the door that must open first. ▶ The delayed control will be set to "Normal Sim Pair". ▶ Latch Check range is wider than the normal setting.
Oneway Secure	▶ Yes ▶ No	No	Ignore "Interior Activation" when "Exterior Activation" is ON during Oneway mode at Fully Closed Position.
Flip Screen	▶ Yes ▶ No	No	▶ Choose Yes if Opus is installed upside down. ▶ The LCD will flip upside down.

SECTION 6.4: Output Settings

Output Settings				
Parameter	Terminal	Default	Range	Description
Output 1	Term 7	Monitoring Norm.Open	► — —	► No Output
Output 2	Term 13	Fully Closed Position	► Fully Closed Position	► Output closes when fully closed
Relay Output 3	Relay Output Terminals	— —	► Closing Status	► Output closes when door is closing
			► Opening Status	► Output closes when door is opening
			► Fully Opened Position	► Output closes when door is fully opened.
			► Error State Output	► Output closes when error is detected
			► Recycle happened	► Output closes when recycle occurs
			► Electric Strike Lock* ¹	► Set for electric strike functionality. Output closes just before door opening.
			► Electric Magnetic Lock* ¹	► Set for Mag lock functionality. Output closes except in the fully closed position.
			► Air lock	► Set for Air lock functionality. Output closes when door is not fully closed.
			► Breakout Pass through	► Output closes when breakout occurs
			► TrmnL H PassThrough	► Output closes when Terminal H was closed.
			► Door Sequencing	► Set for door sequencing. After activation, wait for "Sequence Delay Timer" seconds, then Output close.
			► ■ Monitoring Norm. Open* ²	► Normally open Monitoring circuit (high logic)
			► ■ Monitoring Norm. Close* ²	► Normally closed Monitoring circuit (low logic)
			► Bodyguard Output	► Outputs data for bodyguard sensors and other sensors that use the same data to share the Door State.
			► BAorNot-FC Norm.Open	► Output Close when Breakout or Not in Fully Closed Position (N.O.)
			► BAorNot-FC Norm.Close	► Output Open when Breakout or Not in Fully Closed Position (N.C.)
Open Delay Timer	N/A	0.5	0.5, 1.0, 1.5 sec After Unlock Feed Back	A delay in time after activation to allow the lock to unlock before the door starts moving. NOTE: Only functional if Electric Lock is selected or Lock Release Force is not 0.
Lock Release Force	N/A	0	0-3	Can change the force to help unlock the electric lock. Only when the lock is locked, the door is pushed toward the closed side before it is activated to open.
Lock Condition	N/A	Oneway/Night Only	► Every Fully Closed ► Oneway/Night Only	Determines when the electric lock engages.
Sequence Delay Timer	N/A	0	0-10, 12, 15, 20, 25 Same as Open Timer	When an output is being used for Door Sequencing, delay the time for a set number of seconds before the second Door opens.
Only Act. Sequenced	N/A	No	► Yes ► No	Change output timing for Door Sequencing. If you choose Yes, Door Sequencing will be on only when activated (Not output Beam, LE Approach).
*1 To make it easier to unlock an electric lock, the Opus applies closing force preceding the door opening. NOTE: When the Output is related to an electric lock, Hold Close will be 0 as the lock is locked (Rev.28 or later). *2 If Monitoring is selected, either 61/62/6B/SWL Monitoring must be "Active".				

SECTION 6.5: Input Settings

Input Settings				
Parameter	Terminal	Default	Range	Description
Input 62 Setting	Term 4	Ext Activation	► — —	► No input
Input SWL Setting	Term 6	Open Slow	► All Mode Activation	► Activates in all modes but OFF (Works in one-way and night)
Input SQ Setting (Rev. 28 or later)	Term 9	Sequential Input	► Interior Activation	► Interior Activation (Works in one-way)
			► Exterior Activation	► Activation on exterior
Input H Setting	Term 10	(1175) Reduced Open (2400) All Mode Activation	► Beam Sensor (for Slider)	► Threshold sensor. If turned on when the door is not fully closed, the door will re-open.
			► LE Approach Sensor (for Swinger)	► Door-mounted Sensor (Approach Side) If turned on, disable hold close at Fully Closed, Re-open at Closing* ¹ .
			► Unlock Feed Back	► When you choose “Open Delay Timer” as “After Unlock Feed Back”, the door will not open until this input is on.
			► Disable Power Close (for Swinger)	► Turns off power close and hold close
			► Sequential Input	► Takes one activation to open door and another to close door
			► Open Slow	► Causes slow opening of the door
			► Safety with Lockout (for Swinger)	► Swing side header mounted Sensor If turned on, keep close at Fully Closed, hold open at Fully Opened
			► Continuous Safety (for Swinger)	► Door-mounted Sensor (Pull Side) If turned on, doesn't open at Fully Closed, stop and close or slow open at Opening, do nothing or stop at Closing* ² .
			► Reduced Opening (for Slider)	► Change activation as a Reduced Act. When activated with this input, the door will open with a Reduced Door Opening which is measured by “[Base Settings]-[Reduced Stroke]”.
			► Emergency Close and Lock	► Forces the door to close* ³ and lock (if equipped).
			► Hold Open Mode	► Holds door in open position
			► Reduced Int Act	► Reduced Opening and Interior Activation
			► Reduced Ext Act	► Reduced Opening and Exterior Activation
			► AsiaSpec_IntActSwgSd	<u>DO NOT USE.</u>
			► AsiaSpec_ExtActSwgSd	

*¹ Only if the door was Fully Opened automatically (ex. Opened by Activation or Push & Go).

*² This behavior changes depending on how “6B Stop Closing” and “After 6B Open?” is set.

*³ The door will close slowly if any Activations are present

Input Settings, continued				
Parameter	Terminal	Default	Range	Description
Input 62 Timer	Term 4	Same as Open Timer	0-10, 12, 15, 20, 25 Same as Open Timer	Hold open time for Input 62
Input SWL Timer	Term 6	Same as Open Timer		Hold open time for Input SWL
Input SQ Timer	Term 9	Same as Open Timer		Hold open time for Input SQ
Input H Timer	Term 10	Same as Open Timer		Hold open time for Input H
Holding Input H Timer	Term 10	0 sec	0, 0.5, 1, 3, 5, 10, 15, 30 sec.	Hold ON signal for seconds from OFF trigger.
Input 61 Circuit	Term 3	Normally Open	► Normally Open ► Normally Close	Circuit logic for Input 61
Input 62 Circuit	Term 4	Normally Open		Circuit logic for Input 62
Input 6B Circuit	Term 5	Normally Open		Circuit logic for Input 6B
Input SWL Circuit	Term 6	Normally Open		Circuit logic for Input SWL
Input BA Circuit	Term 8	Normally Close		Circuit logic for Input BA
■ 61 Monitoring	Term 3	Active = FP	► Active	Sensor monitoring function  If monitoring is enabled for any input, a sensor must be connected to the input that is capable of monitoring. That sensor's input must then be connected to an Opus Output programmed for monitoring. If this is not done, errors will occur resulting in the door not operating until the problem is fixed.
		Not Active = LE	► Not Active	
■ 62 Monitoring	Term 4	Active = FP	► Active	
		Not Active = LE	► Not Active	
■ 6B Monitoring	Term 5	Active = FP	► Active	
		Not Active = LE	► Not Active	
■ SWL Monitoring	Term 6	Not Active	► Active	
			► Not Active	

SECTION 6.6: History Setting

History Data	
Parameter	Description
Operation Cnt	► Indicates number of door open cycles. ► Updated every 100 door cycles.
Open Recycle Cnt	Indicates number of times the Door reversed direction during Opening cycle after sensing: ► A struck object. ► 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: ► A struck object. ► The amount of friction that surpassed the Recycle Sensitivity Setting.
Latest Recycle Position	► Indicates the last recycle position during opening and closing. ► For swing doors, it displays the approximate angle from closed at recycle. ► For slide doors it displays the position in inches from closed.

*Inspection (*Located under History Data)	
Parameter	Description
Encoder	The motor's encoder can be checked ON or OFF. (refer to SECTION 9.2:)
Manufacturing Date	Display the Manufacturing date in MM/YYYY format. (MM: Month, YYYY: Year)
Revision	Display the Hardware Revision with an alpha letter (A-Z) and the Software Revision with numerals.

SECTION 6.7: Test Open

<= Test Open =>	
Tests Open/Close door cycle while ignoring Safety Signals.	

CHAPTER 7: SIMULTANEOUS PAIR

NOTICE

DO NOT copy data from the Slave Control (Type 1). If data is copied from a Slave Control (Type 1):

- ▶ The Slave Control (Type 1) will change itself into a Master Control (Type 2).
- ▶ Controls of the same Type cannot communicate between each other.

NOTICE

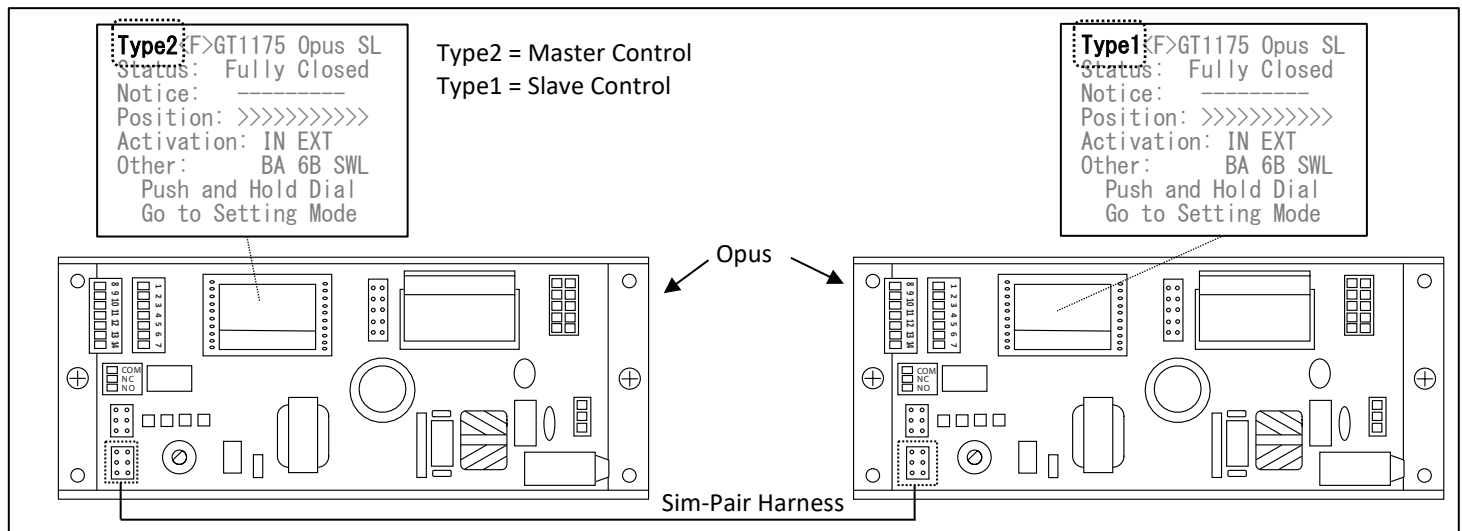
Stroke Learning must be performed on each Opus Control.

NOTE:

- ▶ Bi-Part Units installed with panels larger and/or heavier than standard panels, require (2) Drivetrains.
- ▶ (2) Drivetrains require (2) Opus Controls.
- ▶ (2) Opus Controls installed inside (1) Header must be programmed as a Sim-Pair (same as a swing door).
- ▶ (2) Opus Controls are installed inside the Header and programmed as a Sim-Pair at the NABCO Factory.

NOTE:

Opus Controls installed inside Bi-Part Headers are programmed to operate as a pair at the NABCO Factory.



Within the Status Screen (main screen) located at the top, Opus Controls are labeled Type 1 or Type 2. Type 1 should be considered the Slave Control; Type 2 should be considered the Master Control:

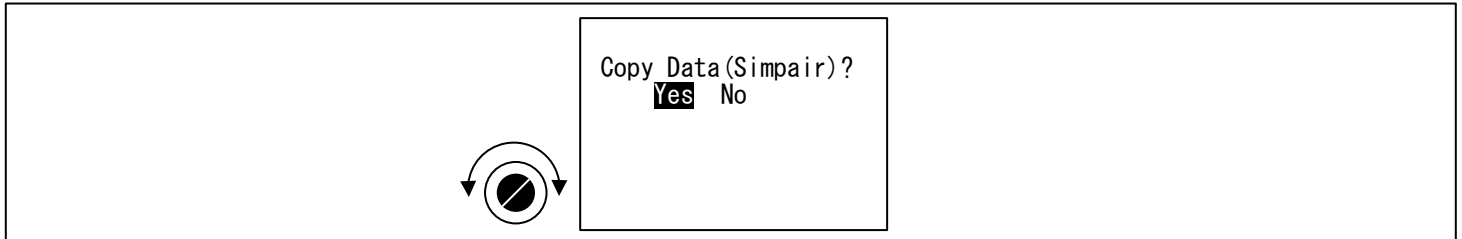
- ▶ All Activation Devices and main harness are connected to the Master Control (Type 2).
- ▶ Programming/Settings that need to apply to both Controls, must be done from the Master Control (Type 2).
- ▶ To ensure programming/settings made to the Master Control (Type 2) are copied to the Type 1 (Slave Control), select YES when prompted to COPY DATA. This is done when backing out of programming.

SECTION 7.1: Sensors with Monitoring

- ▶ It is better to set up the controls and have the doors operating as desired before connecting safety sensors. This way settings that typically need to be copied are already established.
- ▶ When monitored sensor wiring is different between controls, avoid monitoring settings from being copied to the other control. Select "no" to "copy data" when exiting programming.

SECTION 7.2: Copy Data from Type 2 (Master Control) to Type 1 (Slave Control)

1. Go to the Type 2 (Master Control). Push the Rotary Dial in for 2 seconds, release.
2. Push and Release the Rotary Dial then Enter to "Go To Setting".
3. Push the Rotary Dial again 2 seconds for (Copy Data (YES or NO)).
4. Upon exiting the Copy Data (Sim Pair) screen will display.
 1. Turn the Rotary Dial to highlight (YES)
NOTE: If Rev.29 (or later) Opus is the slave of a Sim-pair. It will ignore "Operator Type", "Door Hand", "Flip Screen", "Output1/2", "All Monitoring" if copy-data is performed by any master Opus.
 2. Briefly press down on the Rotary Dial to select.
 3. Programming/Settings made to the Type 2 Control will automatically copy to the Type 1 Control.

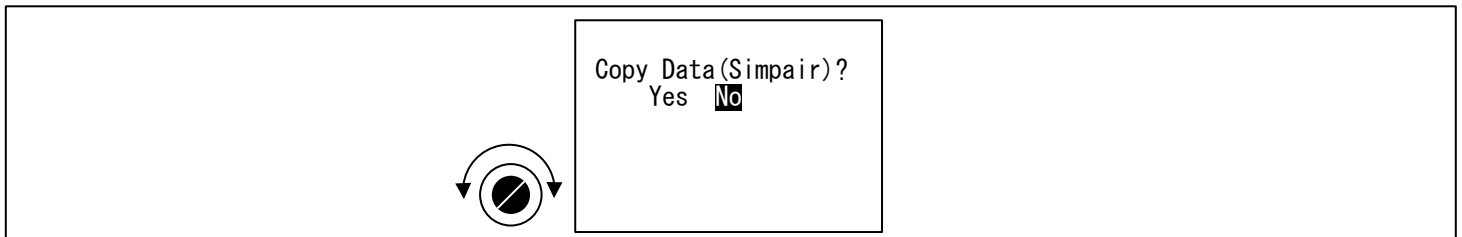


SECTION 7.3: Customized Programming/Setting for (1) Control Only

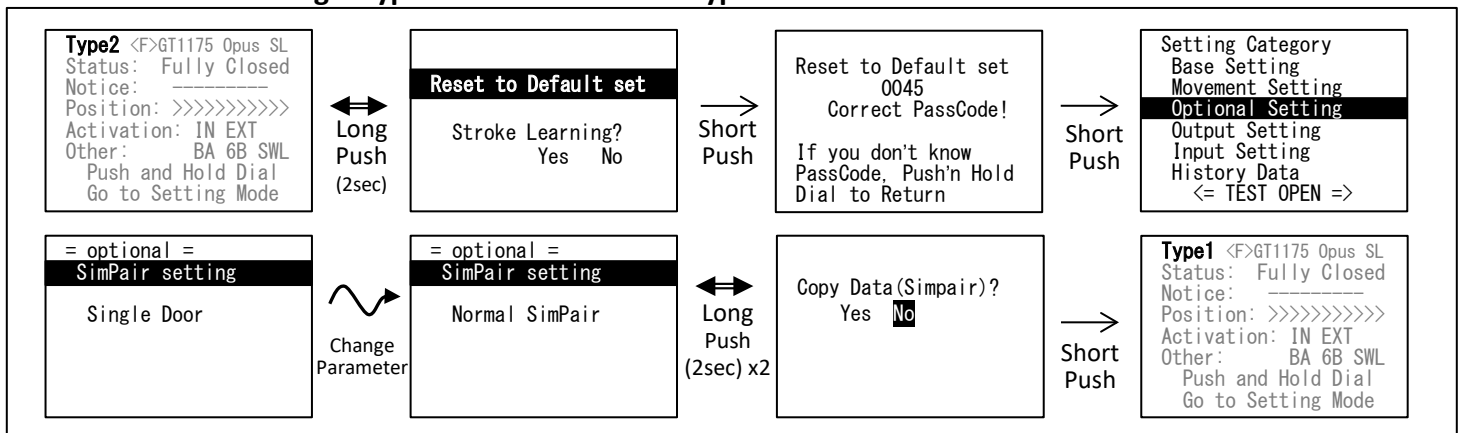
NOTE: Customized Programming/Settings can be done for (1) Control without losing data previously saved for (2) Controls.

Sometimes Programming/Settings need to change for (1) Control only. For example, Door (1) needs to open faster than Door (2).

1. Go to Type 1 (Slave Control) or Type 2 (Master Control).
2. Program any/all new settings.
3. Press and hold the Rotary Dial until the (Copy data) Screen is displayed.
4. Turn the Rotary Dial to select (NO). Customized Programming/Settings will only be saved to (1) Control.



SECTION 7.4: Resetting a Type 2 Control back to a Type 1 Control



NOTES:  This symbol indicates several steps are involved to get to the next screen.
See 4.2.2.1 for instructions on entering the PassCode.

There can never be (2) Master Controls, or (2) Slave Controls. There must always be (1) Master Control, and (1) Slave Control.

1. Go to the Control without activation devices connected to it. This will be Slave Control (Type 1). Perform a Factory Reset.

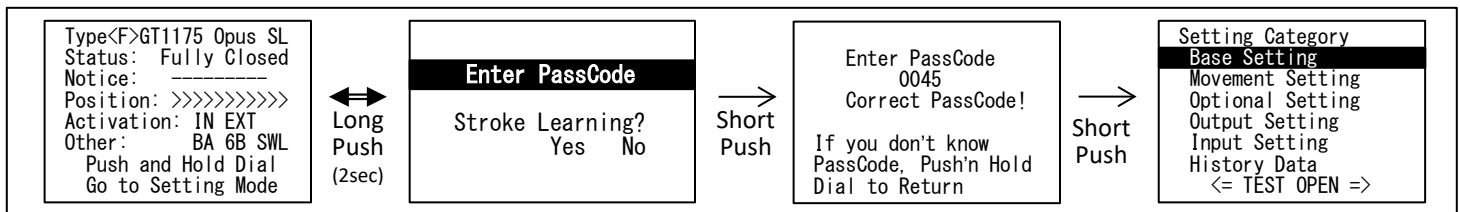
NOTE: When resetting to default the control BA is N.C. and sim pair setting is Single door.

1. Press down on the Rotary Dial until the next screen is displayed.
 2. Turn the Rotary Dial clockwise to highlight (Reset to Default Set).
 3. Briefly press down on the Rotary Dial. Enter the passcode: 0045.
 - a. Turn the Rotary Dial clockwise to highlight a preferred number, then briefly press down.
 - b. Repeat until the passcode is complete.
 4. Briefly press down on the Rotary Dial to display the (Setting Category) Screen.
2. Turn the Rotary Dial to highlight (Optional Setting).
 3. Briefly press down on the Rotary Dial.
 4. Turn the Rotary Dial to highlight (Sim pair Setting).
 5. Briefly press down on the Rotary Dial to select.
 6. Turn the Rotary Dial to highlight the desired Paired Setting.
 7. Briefly press down on the Rotary Dial to select.
 8. Press and hold the Rotary Dial until the (Setting Category) screen is displayed.
 9. Press and hold the Rotary Dial until the (Copy Data) Screen is displayed.
 10. Turn the Rotary Dial to select (NO).
 11. Briefly press down on the Rotary Dial. The Type 2 (Master Control) will automatically reset to the Type 1 (Slave Control).

SECTION 8.3: Fully Protected

All Setting Categories are protected. Passcode must be entered before entering any Setting Category.

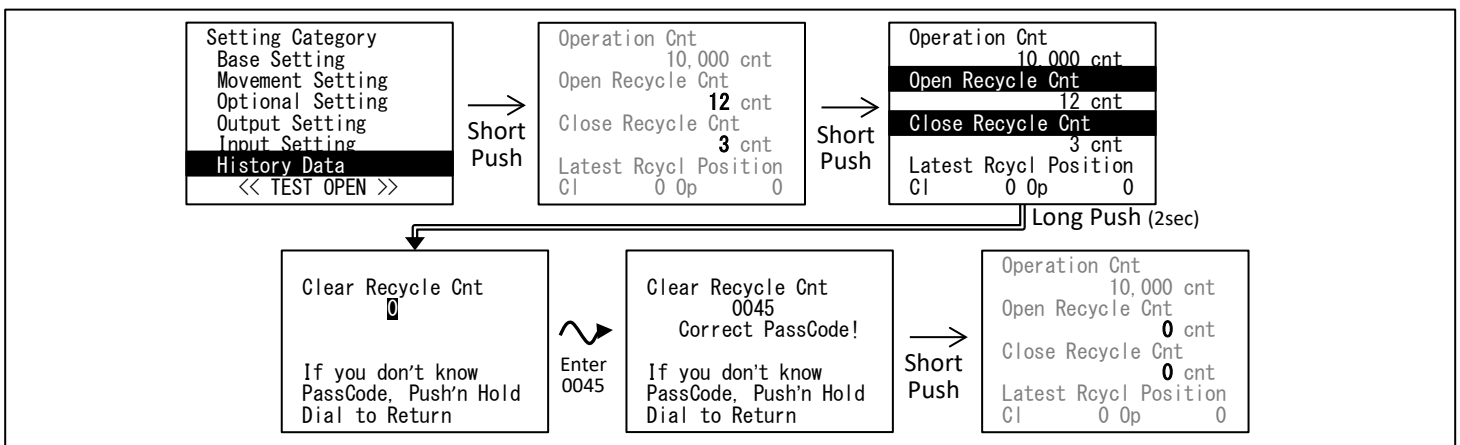
NOTE: This is the same as “Active Passcode” in Revision 28 or earlier.



CHAPTER 9: THE OTHER FUNCTIONS

SECTION 9.1: Reset the number of Recycles:

NOTE: This symbol  indicates several steps are involved to get to the next screen.

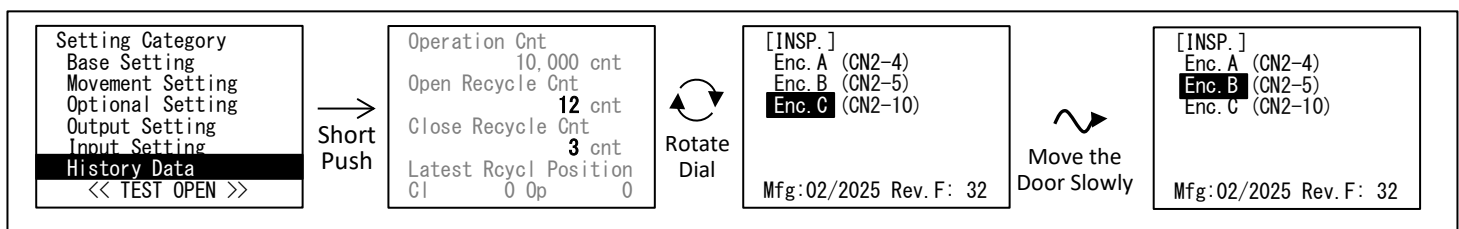


SECTION 9.2: Check Encoder Status

NOTE: This symbol  indicates several steps are involved in getting to the next screen.



When moving the door, do so slowly and be careful not to get your fingers caught in the belt.



NOTES:

- ▶ Depending on the angle of the motor, each Encoder will be highlighted or non-highlighted.
- ▶ When moving the door, Encoders will be blinking.
- ▶ If any of the encoders remain constantly highlighted or unhighlighted, check the wiring from the motor to the OPUS.
- ▶ Encoder C appears, depending on the Operator Type.

CHAPTER 10: BEFORE WIRING

**DANGER**

Do not place fingers or uninsulated tools inside the electrical controller. Touching wires or other parts inside the enclosure may cause electrical shock, serious injury or death. Do Not touch other parts of the Control board with a screwdriver or anything else metal. Damage to electrical circuitry may occur.

**WARNING**

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

**CAUTION**

Permanent wiring shall be installed as required by all local, state, federal or other governing agency codes.

**CAUTION**

The electrical circuit to the Nabco operator must not be shared with other equipment such as lighting, cash registers, or any device that might cause electrical interference on the circuit.

**CAUTION**

Ensure that the incoming electrical ground is properly secured to the grounding screw or grounding wire, whichever is provided.

**CAUTION**

Keep all incoming 120 VAC wiring separate from low voltage wiring within the Header. Do not route 120 VAC wires near the Opus Control or Motor/Operator.

NOTICE

Insert all incoming 120 VAC Power wires into the pre-drilled Electric Service Access Hole located to the left or right side of Header End Cap. It is recommended to house all wires into an Electrical Conduit.

NOTICE

Any non-factory low voltage wiring added inside the Header must be Type CL2 wire or the equivalent in accordance with Article 725 of the NEC. Determine correct supply voltage is 115 VAC $\pm$ 10%.

SAFETY

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

SAFETY

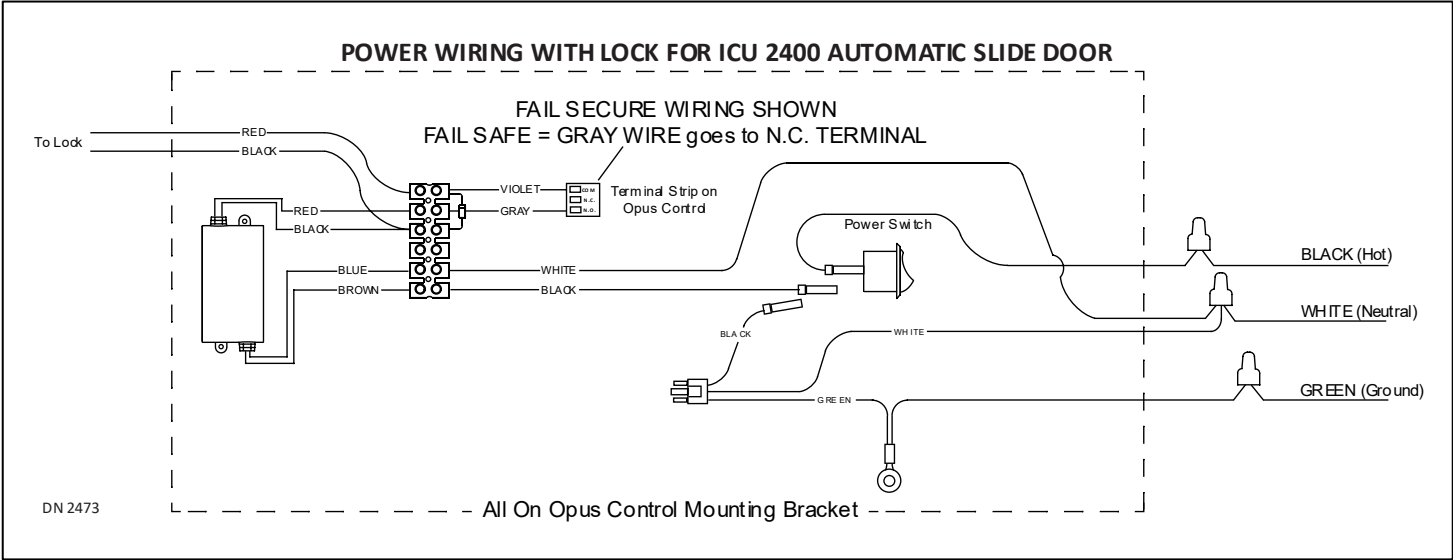
NABCO factory utilizes Underwriters Laboratories (UL) recognized component wires, terminals, and connector housings to manufacture all Automatic Door systems.

CHAPTER 11: WIRING DIAGRAM FOR 2400A ICU SLIDE DOOR

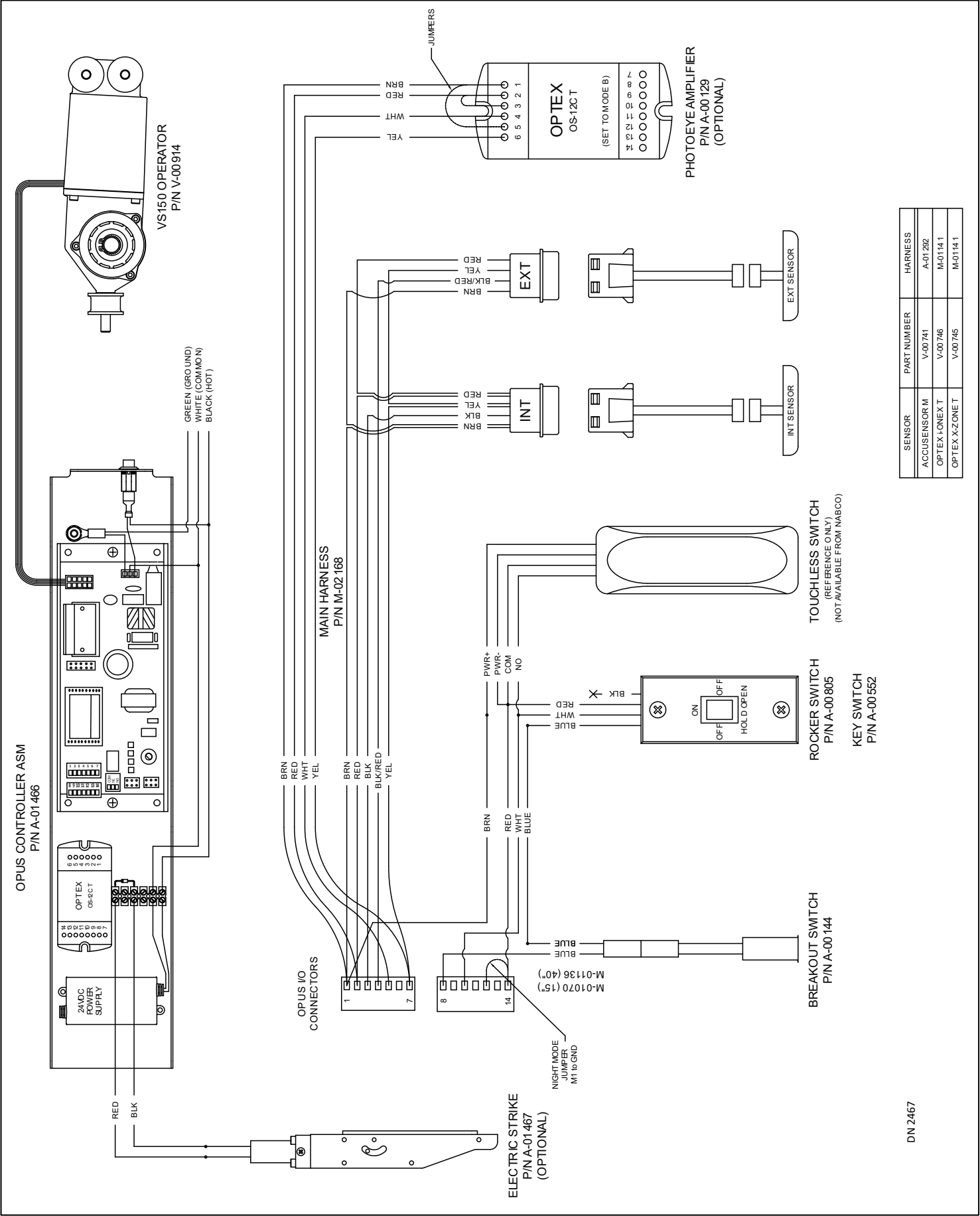
NOTICE

- Overhead sensors provided with the 2400A prevent the door from closing while a person or object is within the path of the door, or even very close to the door.
- NABCO recommends the detection area be set 1 to 2 feet from the door. Be sure to check with the end user to determine how far from the door the detection area should be.
- The detection area should be wide enough to cover the entire width of the door opening.
- To learn how to make awareness and/or safety adjustments, please refer to the appropriate Sensor Manual.

SECTION 11.1: 2400 Power Wiring with Lock



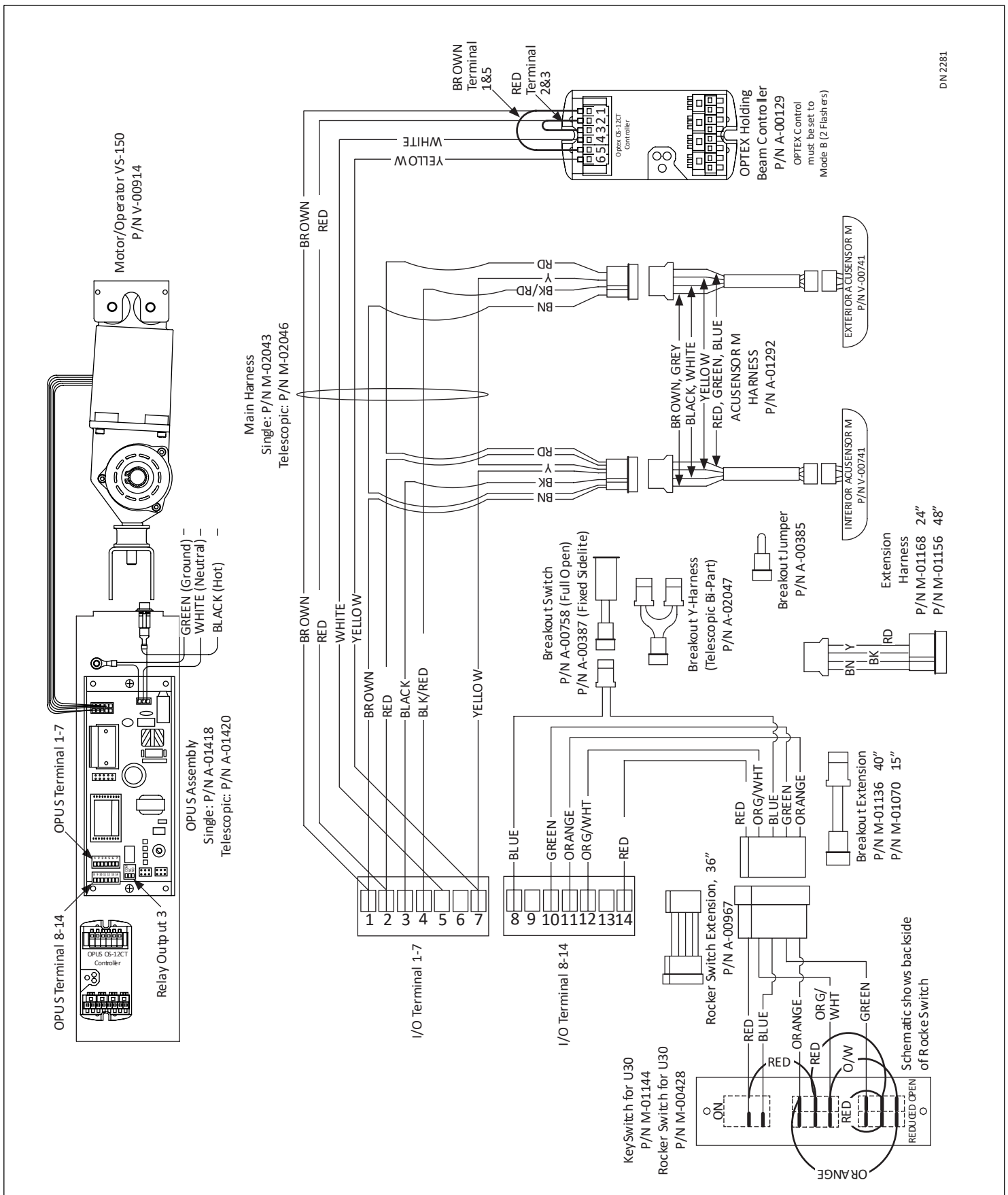
SECTION 11.2: 2400 General Wiring



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CHAPTER 12: WIRING DIAGRAM FOR GT1175 SLIDE DOOR

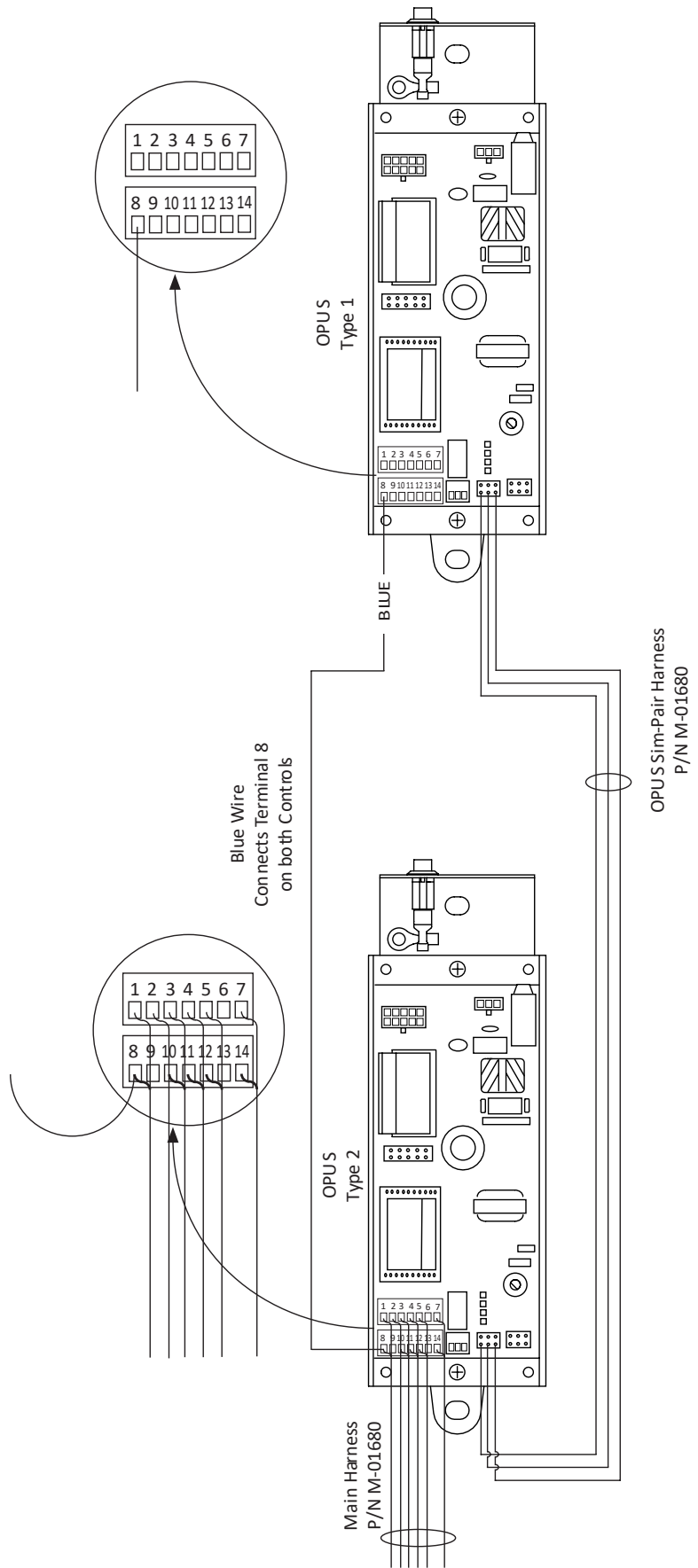
SECTION 12.1: GT1175 Single/Telescopic Slide Door with Acusensor M and Holding Beam (w/monitoring)



SECTION 12.2: GT1175 Bi-Part Slide Doors with Two Opus Controls

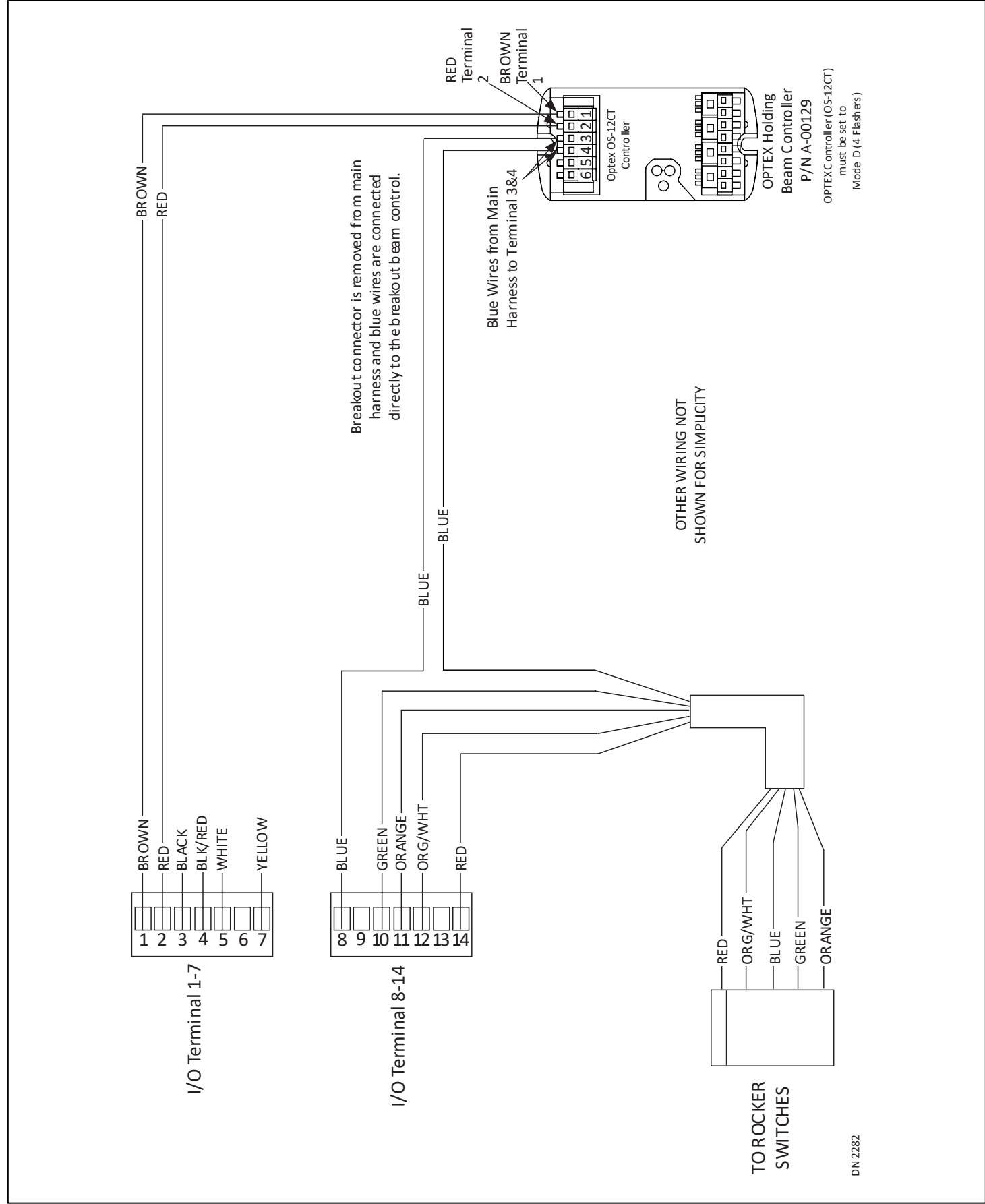
NOTES:

1. OPUS Controls are installed and programmed as a Sim-Pair at the NABCO Factory.
 2. Check to ensure both Opus Controls are programmed:
 - Under "Optional Settings"
 - "Sim Pair Setting" is set to "Normal Sim Pair"
 3. For each Opus Control, perform:
 - "Stroke Learn"
 4. Opus Control Types:
 - Type1 Control = Slave Control • Type2 Control = Master Control
- Type1 and 2 shown on Screen Header

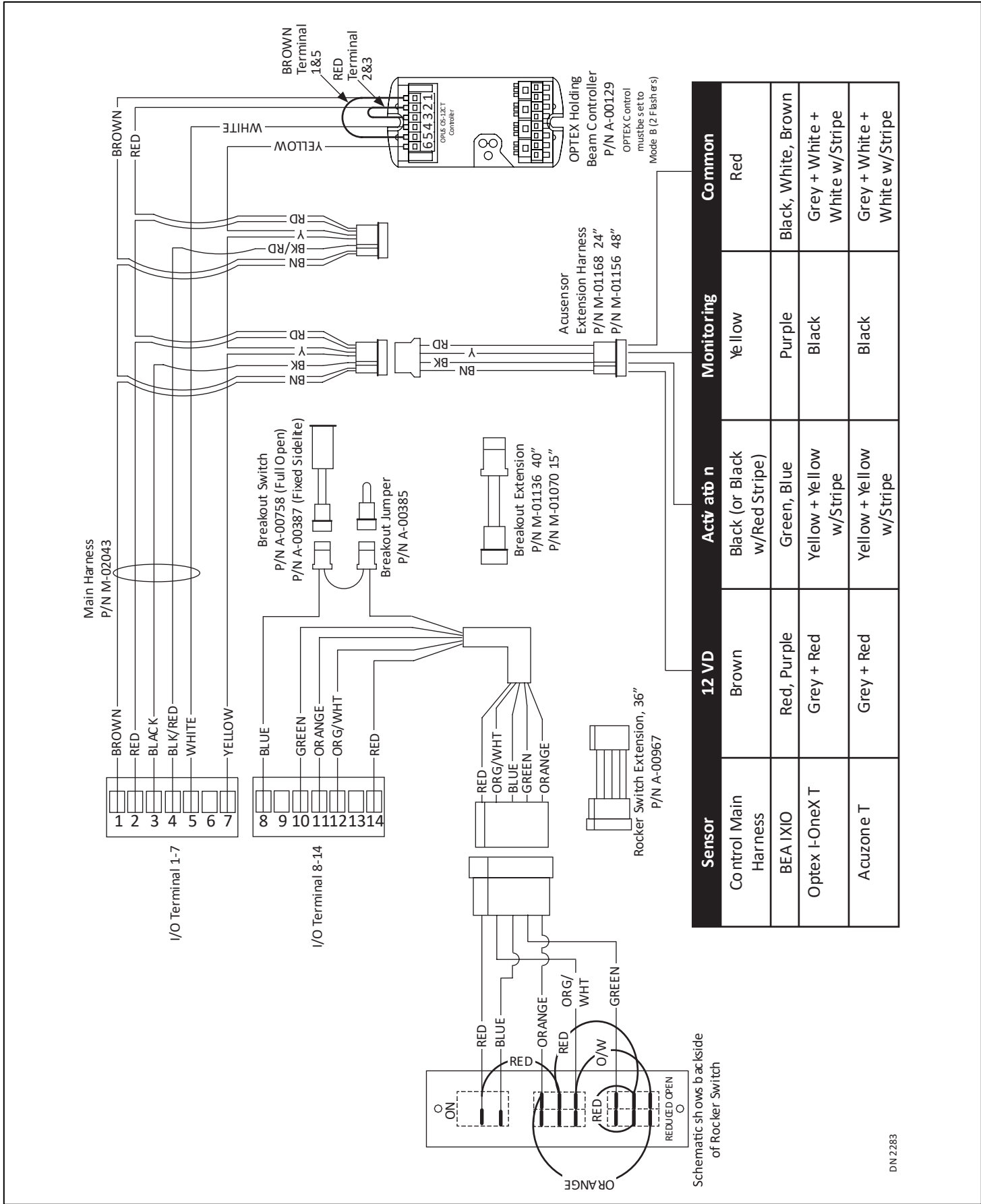


DN2425

SECTION 12.3: GT1175 OPUS, using Holding Beam for Break-Out (Telescopic Only)



SECTION 12.4: GT1175 Matching other Common Sensors to 1175 with OPUS



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SECTION 12.5: Factory Wiring for using Acusensor M for Sidelite Safety

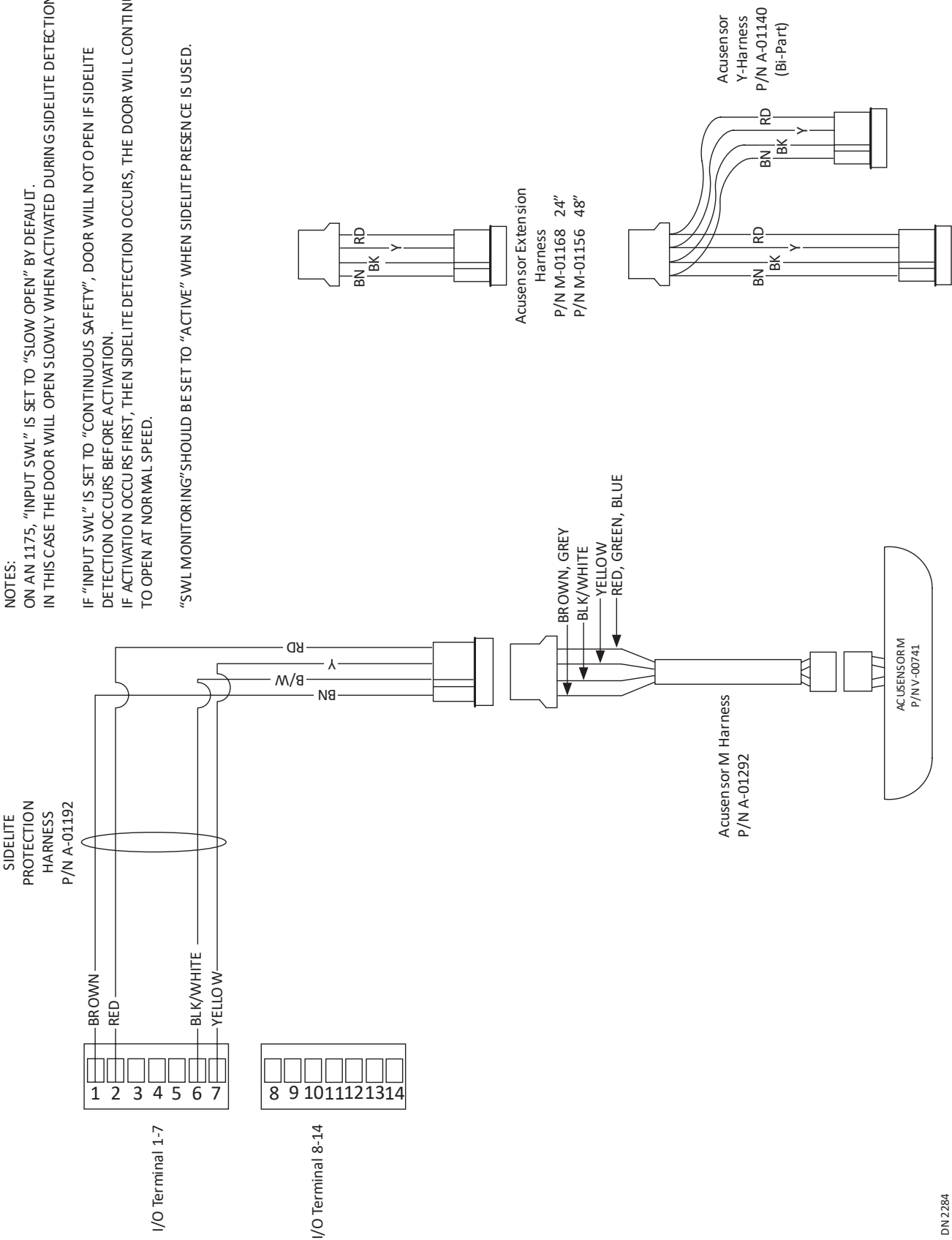
NOTES:

ON AN 1175, "INPUT SWL" IS SET TO "SLOW OPEN" BY DEFAULT. IN THIS CASE THE DOOR WILL OPEN SLOWLY WHEN ACTIVATED DURING SIDELITE DETECTION.

IF "INPUT SWL" IS SET TO "CONTINUOUS SAFETY", DOOR WILL NOT OPEN IF SIDELITE DETECTION OCCURS BEFORE ACTIVATION.

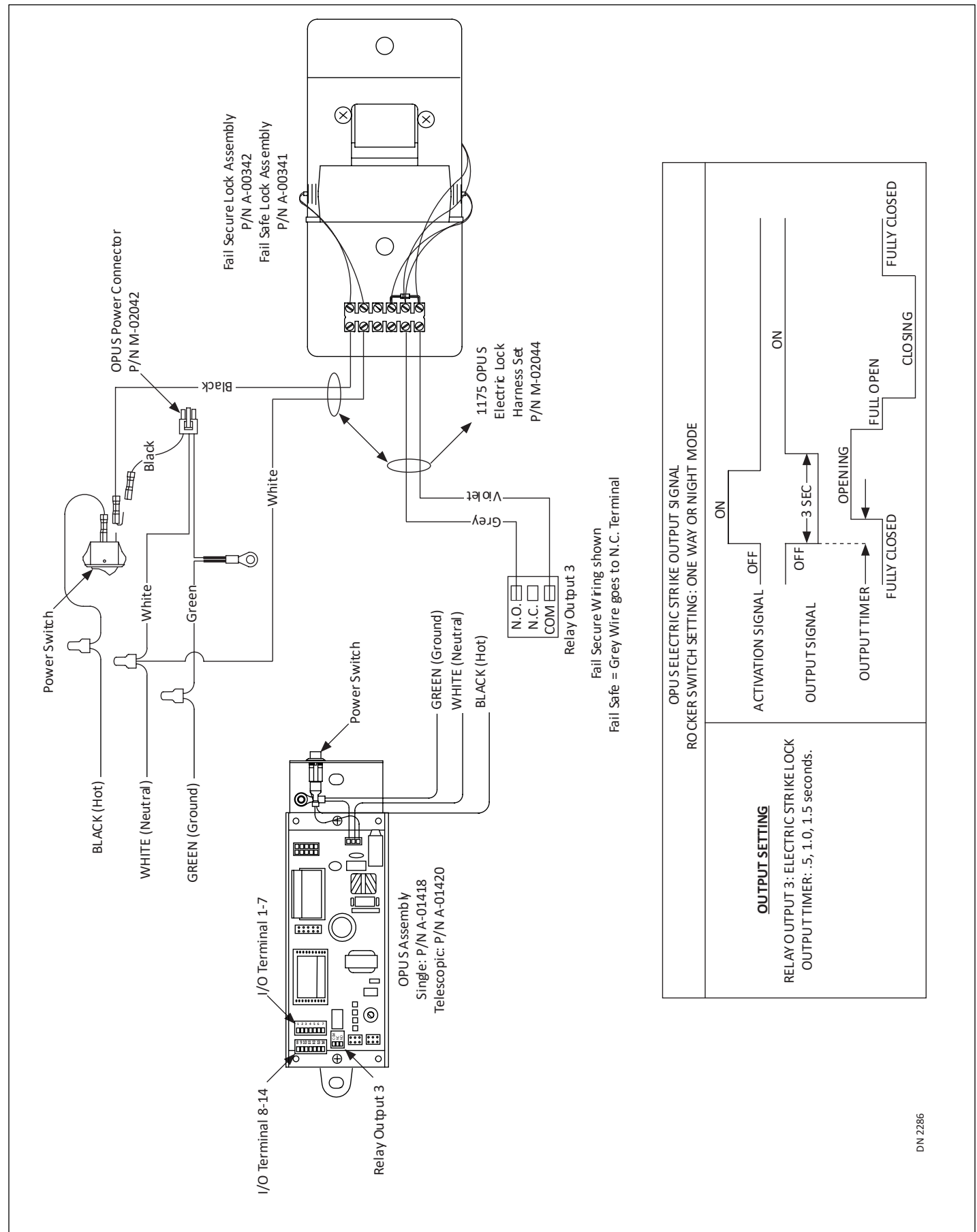
IF ACTIVATION OCCURS FIRST, THEN SIDELITE DETECTION OCCURS, THE DOOR WILL CONTINUE TO OPEN AT NORMAL SPEED.

"SWL MONITORING" SHOULD BE SET TO "ACTIVE" WHEN SIDELITE PRESENCE IS USED.



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SECTION 12.6: Opus with 1175 Electric Lock



Power Switch

I/O Terminal 8-14

OPUS Assembly
Single: P/N A-01418
Telescopic: P/N A-01420

Relay Output

GREEN (Ground)
WHITE (Neutral)
BLACK (Hot)

OPUS Power Connector
M-02042

Power Supply
P/N V-00022

BROWN
BLUE

1175 OPUS Electric Lock
Harness Set P/N M-02044

WHITE
BLACK

GREY
VIOLET

RED
BLACK

Magnetic Lock

Some Magnetic Locks (as well as other types of locks) require a voltage suppression device such as a diode or MOV. Connect here if needed. Read the instructions provided with the lock for details.

OPUS Electric Magnetic Lock Output Signal ROCKER SWITCH SETTING: ONE WAY OR NIGHT MODE	
OUTPUT SETTING RELAY OUTPUT 3: ELECTRIC MAGNETIC LOCK OUTPUT TIMER: .5, 1.0, 1.5 seconds.	ON OFF OFF OUTPUT TIMER OPENING FULL OPEN FULLY CLOSED CLOSING FULLY CLOSED

Relay Output

N.O.
N.C.
COM

DN2287

SECTION 12.8: Change Slide Door Mode with Remote Switch

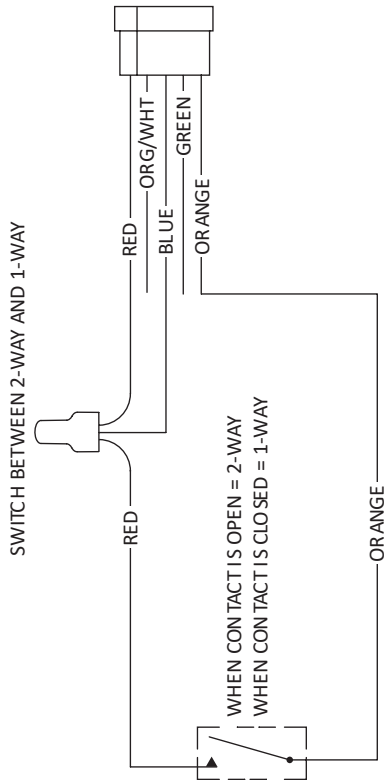
Option 1: Remove Rocker Switches

1. Remove the Rocker Switch.

2. Modify the Rocker Switch extension (P/N A-00967) shown below.

a. Red and Blue wires must be connected for the door to operate.

b. Other wires should be capped off to prevent shorting.



Option 2: Replace Rocker Switches with Key Switches

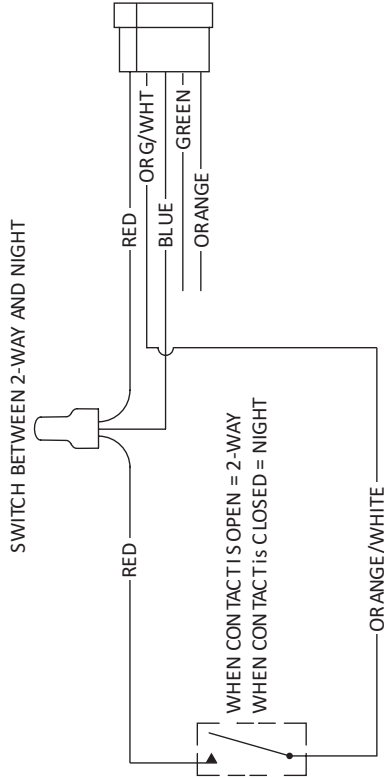
1. Replace the Rocker Switch with the Key Switch.

2. Keep the Key Switch in 2-Way.

3. Connect the Remote Switch to the Opus Control:

• Terminals 11 and 14 for 1-Way.

• Terminals 12 and 14 for Night.

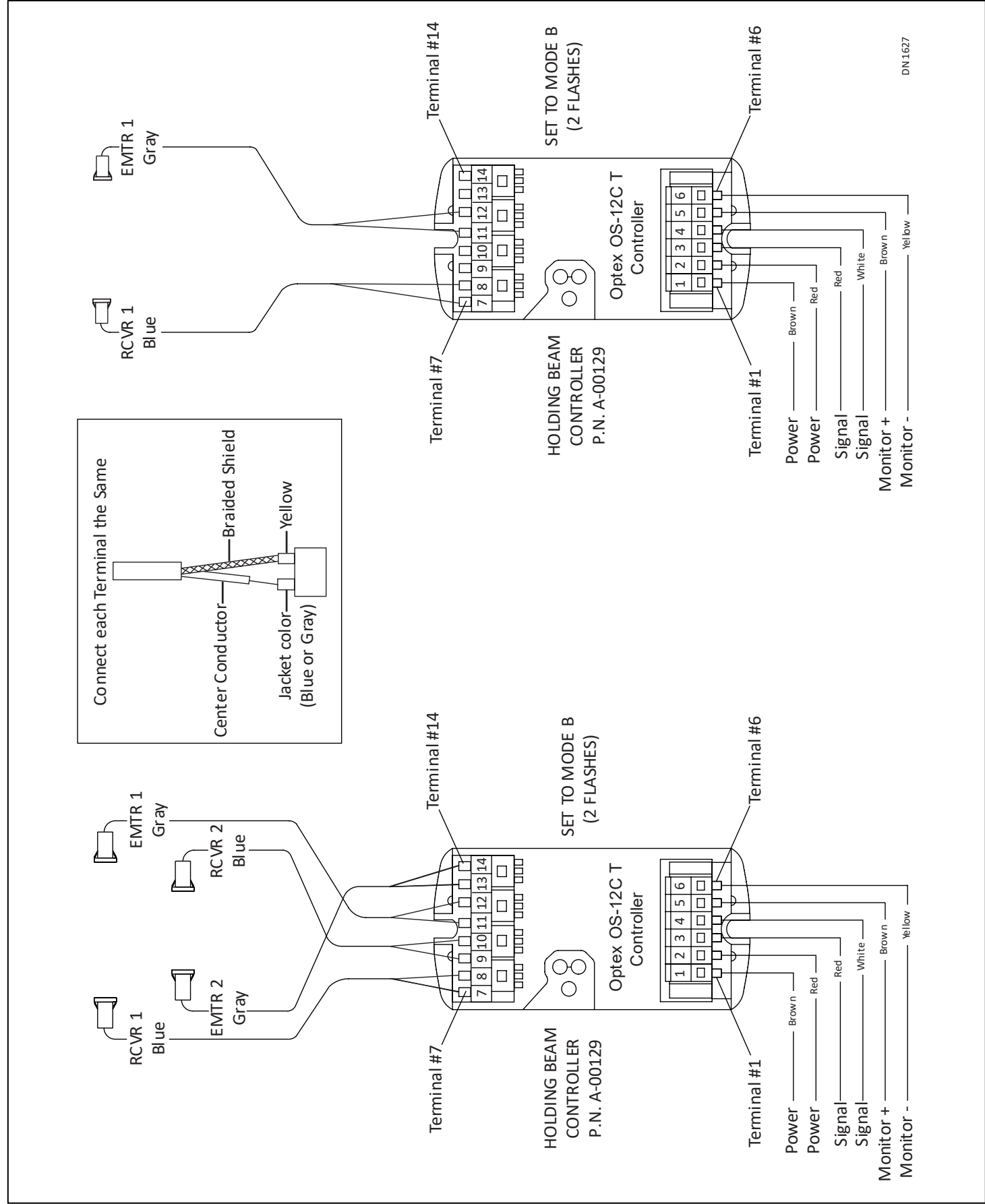


Mode	M0 to Common Orange to Red Terminals 11 thru 14	M1 to Common Orange/White to Red Terminals 12 thru 14
Two Way (Auto)	Open	Open
One Way (Exit Only)	Closed	Open
Night	Open	Closed
Hold	Closed	Closed

REMOTE DEVICE MUST BE A DRY CONTACT

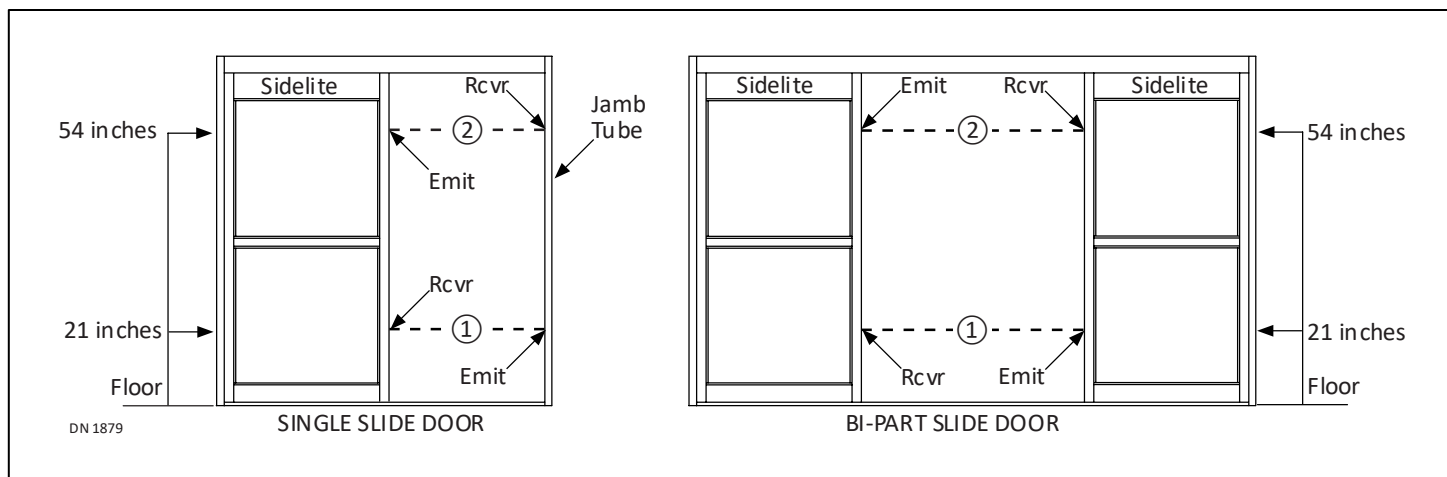
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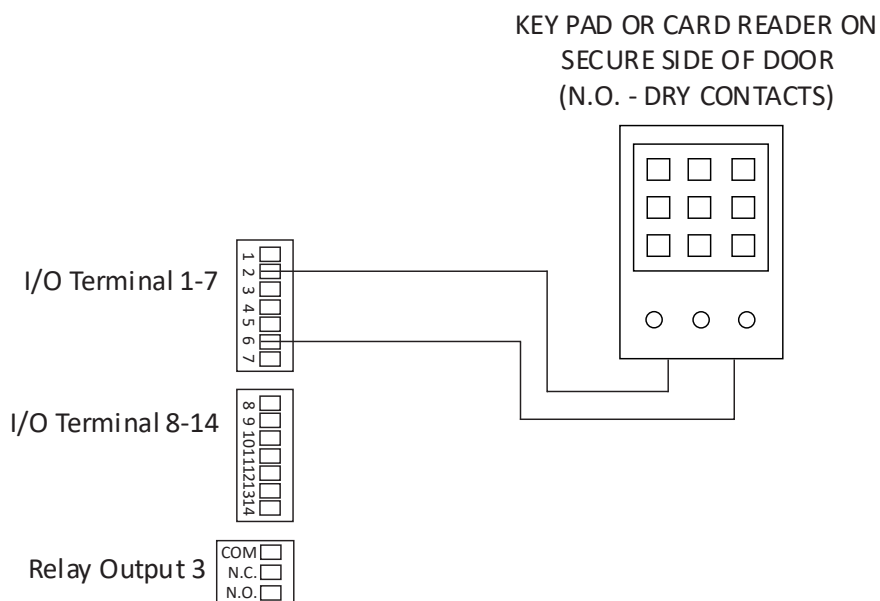
SECTION 12.9: Infrared Holding Beams



On GT1175 Slide doors, the Optex OS-12C Module Infrared Beam is installed and wired at the NABCO factory when ordered.

- ▶ This unit is shipped complete with Emitter(s), Receiver(s) and a Control Box.
- ▶ Both the Emitter and Receiver are flush mounted on the inside-Slide door Jamb Tube and Sidelite Strike Stile, or on both Strike Stiles, directly across from each other.
- ▶ The Rcvr/Emit are installed 21 inches from the floor. If deemed necessary, a second Rcvr/Emit may be installed 54 inches from the floor.
- ▶ In the event a pedestrian or object crosses the threshold, breaking a beam, the beam controller will send a signal to the door control to hold the door open until the threshold is clear and the beam is restored.



SECTION 12.10: Wiring a Card Reader, or secure Activation Device, to 1175

Attention: Device must provide Normally Open, Dry Contacts (No Voltage).

1. Connect the Key Pad, Card reader or Key Switches to Terminals 2 and 6 as shown.
2. Under INPUT SETTINGS, set INPUT SWL to ALL MODE ACTIVATION.
3. The Device will be enabled to activate the door regardless of which Rocker Switch Mode is selected (Auto, One Way, or Night)
 - a. The Device will not activate if the Switch is in the OFF position.

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CHAPTER 13: TROUBLE SHOOTING

NOTE: *If after troubleshooting a problem, and a satisfactory solution cannot be achieved, please call Nabco Entrances at 1-877-622-2694 Option #3 between 7 am – 5:30pm 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 automatic mode until repairs are performed. NEVER leave a door operating without all the safety detection systems operational.

Programming Issues	
Problem	Possible Solution
After Stroke learning, LCD displays “Wrong Hand! Restroke”.	The Opus cannot count encoder pulses from the motor accurately. Typically, this is caused by a wrong setting. 1. Go to the Setting menu and check if “Door Hand” (in Base Setting) is correct. 2. Or move the door to middle of the stroke, then start stroke learning. NOTE: Normally, Stroke learning for a Slider moves the Door toward the Fully Closed position. If the door goes in the opposite direction, it means the handing setting is opposite. ► If the door doesn’t move, check below: – Is the “BA (Breakout)” input turned off? – Is the Motor Connector, and Pin of the Connector firmly place? – Is the Motor Cable cut or pinched? ► If the door moves but stops in a certain position: – Does the door move smoothly when moved manually? – Is “Close Recycle Sensitivity” too sensitive? – Is the Power source 120VAC?
After manually opening door, the door stays open	► Check the Screen of TERMINAL SPECS to see if any inputs are turned ON. If any items are turned ON, check wiring, sensor, and setting for Monitoring related to this input. ► Make sure the Open timer for each input is NOT set for a long time. ► Check to see if anything is physically trapped between the floor and the door.
Door does not always close during Latch Check	Make sure there is no friction caused by objects (like dust, wire, etc.). ► If the door is recycling near the fully closed position, increase the Latch Check Speed or decrease the Close Recycle Sensitivity. ► If there is a gap after the door is fully closed, increase the Hold Close Force value.
Sim Pair behaves oddly	Controls may not be communicating correctly. Please refer to CHAPTER 7: within this manual.
Control does not react to Activation signal	► At the main screen, confirm that “IN” or “EXT” highlights when an activation signal is applied. If not, check the wiring or the activation device. ► At the main screen, determine if “BA” is highlighted. • If a 4-wire on/off/hold-open switch is being used, with a blue wire connected to terminal 8, then “Input BA Circuit” (found under “Input Settings”) must be set to “Normally Closed”. • If a 3-wire switch is being used, or no switch is being used (nothing connected to terminal 8), then “Input BA Circuit” should be set to “Normally Open”. ► At the main screen, if Status shows “Stopped” while the door is closed, and BA is not highlighted, turn off power for at least 4 seconds then turn on again. • With the door still closed, status should now show “Fully Closed”. ► For an activation signal to work, navigate back to the main Status screen.

Error Messages		
Opus Error Msg	NET-HT Error Msg	Resolution
Drive	Drive-Motor error	▶ Check all connections between the Control and Motor. ▶ Check Motor Fuse. ▶ Check Motor for open circuit, short circuit, or short to ground. ▶ It is possible that electrical noise may cause a false error. If the error does not occur repeatedly then it is most likely not an issue.
	Drive-A/D error	
Encoder Error	Encoder Error	▶ Check all connections between the Control and Motor. ▶ It is possible electrical noise may cause a false error. If the error does not occur repeatedly then it's most likely not an issue.
MPU	MPU-RAM error	▶ This could be a random error. • If the error occurs repeatedly, please replace the OPUS Control.
	MPU-ROM error	
	MPU-Clock error	
	MPU-Interrupt error	
	MPU-SW reset error	
	MPU-HW WDT error	
	MPU-EEPROM error	
No Motor	Motor disconnection error	▶ Check all connections between the Control and Motor.
ThrmI Warning	Thermal-on warning	▶ Check all connections between the Control and Motor. ▶ Cool down the motor and adjust the recycle sensitivity and Open/Close speed.
No Load	No load error	▶ Check operator (gear cracked, belt skipped).
Electrical Lock	Electrical lock error	▶ Check lock settings and wiring. ▶ Ensure lock delay is long enough, and not set to (After Lock Input). ▶ Ensure no programmable inputs are set to "Unlock Input" assuming there is no lock feedback.
Communication	NET communication error	▶ Check the CAN-bus Cable between the two OPUS Controls
	NET connection error	
	NET transmission delay error	
	NET receiving buffer error	
61 Sensor	T3:61 sensor error	▶ Check Sensor wiring. ▶ Check Settings on Sensor and/or Control related to Sensor Monitoring. ▶ Try a new Sensor.
62 Sensor	T4:62 sensor error	
6B Sensor	T5:6B sensor error	
SWL Sensor	T6:SWL sensor error	
NT Sensor	NET Sensor Error	▶ Check Net Connector ▶ Change programming with NET-HT ▶ Try "Reset to Default Set"