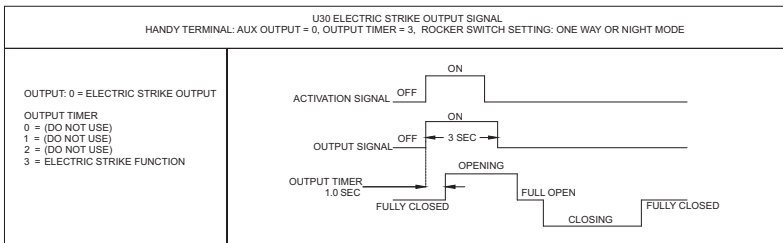
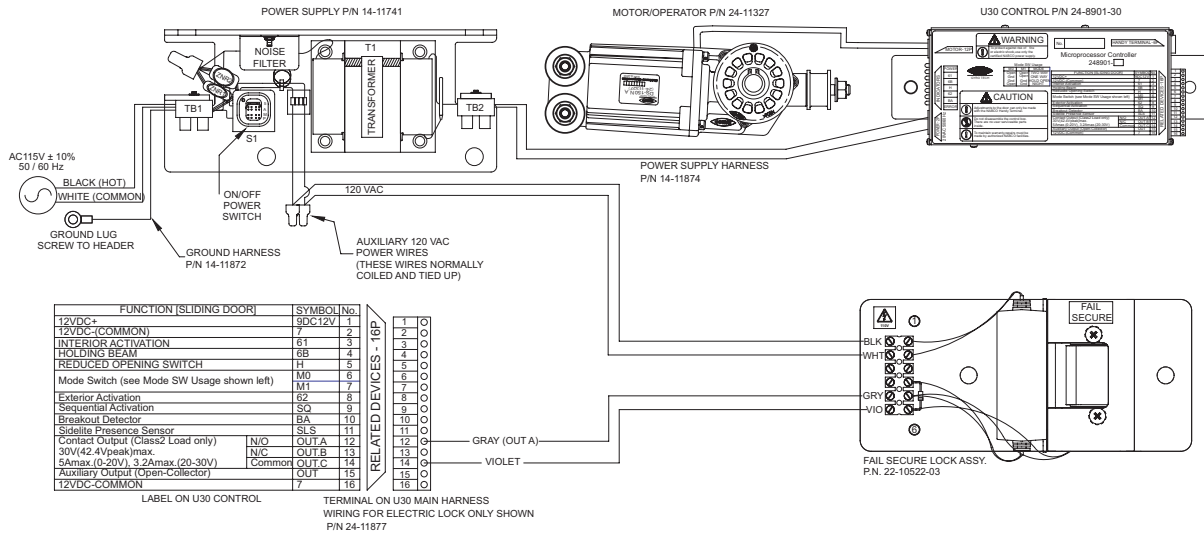




S82 W18717 Gemini Drive
 Muskego, Wisconsin 53150
 Phone: (877) 622-2694
 Fax: (888) 679-3319
 www.nabcoentrances.com
 Technical Support: (866) 622-8325

Model GT 1175 Electrical Installation Manual **with U30 Microprocessor Controller** (with Revision D Software)



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.

Table of Contents

Warning Labels iii

General Safety Recommendations iv

CHAPTER 1: SCOPE **1-5**

 Section 1a: To the Installer 1-5

 Section 1b: Objective 1-5

CHAPTER 2: GETTING STARTED **2-6**

 Section 2a: About the U30 Microprocessor Control 2-6

 Section 2b: Electrical Specifications 2-6

 Section 2c: Output Power Guidelines 2-7

 Section 2d: Header Layout 2-7

CHAPTER 3: CONNECT INCOMING 120 VAC WIRES **3-9**

CHAPTER 4: IDENTIFY OPERATING WIRES **4-10**

 Section 4a: 16 Pin Controller Terminal Block Assignments 4-10

 Section 4b: Sensor Wire Connections 4-11

 Section 4c: Rocker Switch Settings 4-12

CHAPTER 5: WIRING DIAGRAMS **5-14**

 Section 5a: (2) Acusensors and (1) Holding Beam 5-14

 Section 5b: (2) Optex i-One Sensors and (1) Holding Beam 5-15

 Section 5c: (2) Acusensors, (1) Holding Beam and (1) Breakout Beam 5-16

 Section 5d: (2) Optex i-One Sensors, (1) Holding Beam and (1) Breakout Beam 5-17

 Section 5e: (2) IXIO, and (1) Holding Beam 5-18

 Section 5f: (2) IXIO (1) Holding Beam and (1) Breakout Beam 5-19

CHAPTER 6: INFRARED BEAM WIRING **6-20**

 Section 6a: Wiring (1) Holding Beam 6-20

 Section 6b: Wiring (2) Holding Beams 6-21

 Section 6c: Wiring Holding Beam for Breakout 6-22

CHAPTER 7: ELECTRIC LOCK WIRING 7-23

- Section 7a: Adjust the Strike.7-23
- Section 7b: U30 with Fail Safe Electric Lock.7-24
- Section 7c: U30 with Fail Secure Electric Lock.7-25
- Section 7d: U30 with Magnetic Lock7-26

CHAPTER 8: CUSTOM WIRING 8-27

- Section 8a: U30 Configured for Remote Control of Modes8-27
- Section 8b: Sidelite Sensors8-28
- Section 8c: U30 Using Card Readers or other Secure Activation Devices8-29
- Section 8d: 12 VDC Relay Assembly8-30

CHAPTER 9: TROUBLESHOOTING 9-31

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.

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

Do not install, operate or service this product unless you have read and understand the General Safety Recommendations, Warning Labels, contained in this manual. Failure to do so may result in bodily injury, or property damage.

WARNING

Read, study and understand the 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.

Notice: This manual and the owner's manual must be given to and retained by the purchasing facility or end user.

DANGER

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.

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

Notice: All electrical troubleshooting or service must be performed by qualified electrical technicians and must 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 Magnum IV 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

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: Do Not take shortcuts.

CHAPTER 1: SCOPE

Section 1a: To the Installer

The purpose of this manual is to familiarize the installer and purchaser 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.

Instruct the building owners and operator on the essentials of the operation of the U30 Microprocessor Controller. The owner should follow these instructions to determine whether 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 U30 Microprocessor Controller is designed to be installed within the Header of the GT-1175 Slide Door systems.

This manual offers step by step instructions.

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.**

CHAPTER 2: GETTING STARTED

Section 2a: About the U30 Microprocessor Control

The U30 Microprocessor Control is utilized on all GT-1175 Slide Door systems to control numerous operating characteristics that include (but not limited to): speed, recycling sensitivity and reduced opening width.

Note: The U30 Microprocessor Control will need to be programmed after installation is complete.

The U30 Microprocessor Control is also utilized to output power to accessories and/or auxiliary equipment such as:

- ▶ Sensors
- ▶ Modules

There are times when the U30 Microprocessor Control is not utilized to output power because some accessories and/or auxiliary equipment are shipped with it's own dedicated power supply.

Section 2b: Electrical Specifications

All Wiring Diagrams included within this manual, reflect typical primary and secondary circuits that are installed at the NABCO Factory. The low voltage Reed Switch (12 VDC) and Sensor(s) are also installed complete with connector housings at the NABCO Factory.

Note: NABCO factory utilizes Underwriters Laboratories (UL) recognized component wire, terminals and connector housings to manufacture GT-1175 Slide Door systems.

Table 2-1 Sensors

Sensor	Part Number	Function	Power Source	Current Consumption
Acusensor 3	14-8902-3	Infrared	12 to 24 AC or DC	100mA
IXIO	14-14264	Infrared + Microwave	12 to 24 VAC 12 to 35 VDC +/-10%	100mA
Optex i-one	14-13036	Infrared	12 to 24 VAC or 12 to 30 VDC	130mA

(ea.unit) at 12VDC

Table 2-2 Modules

Module	Part Number	Function	Power Source	Current Consumption
Optex Beam	14-9710-01	Beam & Control	12 to 24 AC or DC	160mA
CP/RX Radio Control Receiver	24-11467	RF Signal Transmission	12 to 24 AC or DC	50mA

(ea.unit) at 12VDC

Section 2c: Output Power Guidelines

TOTAL current draw from the U30 Microprocessor Control must not exceed 350 mA (0.35 amps) when outputting power to:

- ▶ Sensors
- ▶ Modules
- ▶ Accessories
- ▶ Auxiliary Equipment

If *TOTAL* current draw exceeds 350mA (0.35 amps) the installer must utilize an auxiliary power supply such as a 24 VAC Transformer (P/N 14-2101).

CAUTION

The U30 Microprocessor Control and/or the NABCO Power Supply Module Must Not be used to output power to Magnetic Locks or Electric Strikes.

To determine if an auxiliary power supply must be used, add together each current draw for each device. Please refer to the formula shown below:

Example: A GT-1175 Slide Door is to be fitted with the following devices:

$$\begin{aligned} 2 \text{ x Optex i-one Sensors @ } 130 \text{ mA} &= 260 \text{ mA} \\ 1 \text{ x Optex Beam Module @ } 160 \text{ mA} &= \underline{160 \text{ mA}} \\ \text{Total} &= 420 \text{ mA} \end{aligned}$$

420mA exceeds 350mA. An Auxiliary Power Supply must be used to supply power to the Optex Beam Module.

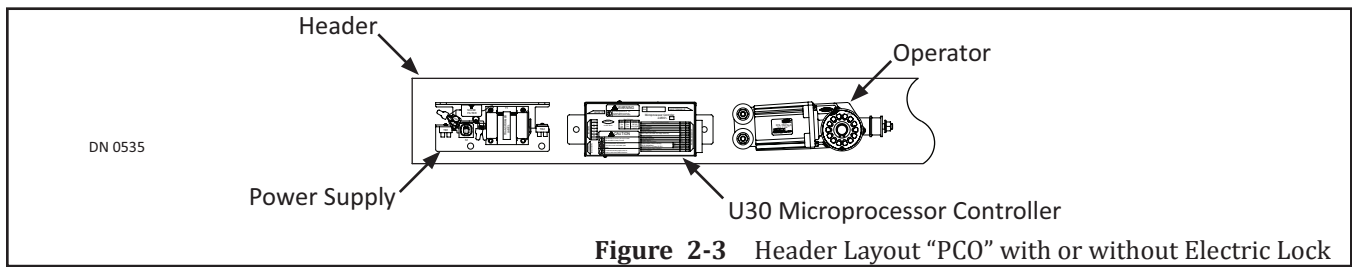
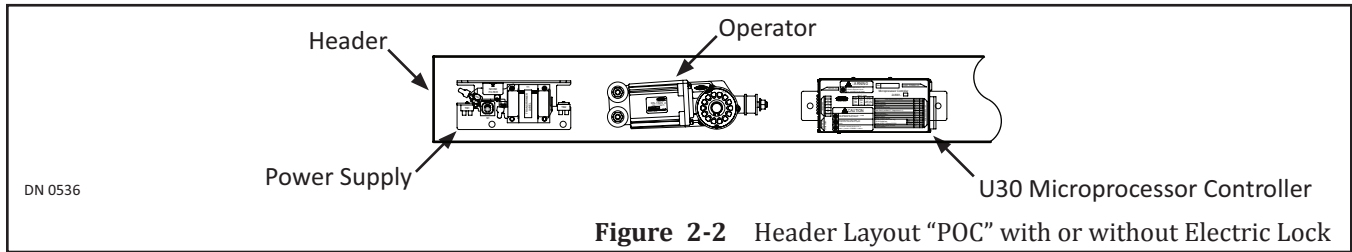
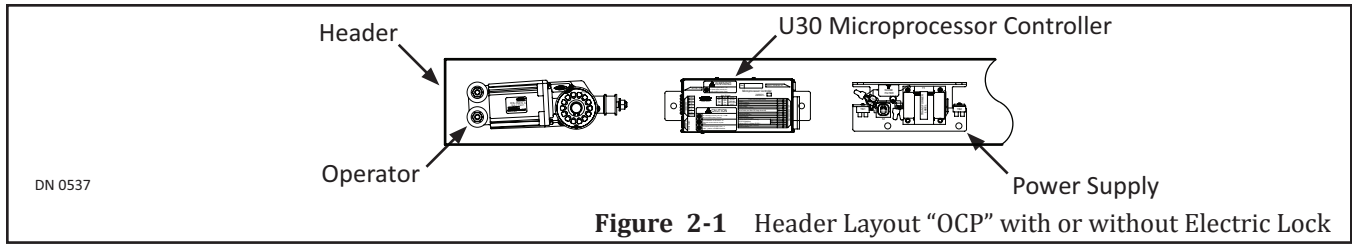
Section 2d: Header Layout

Nabco GT-1175 Sliding Door systems come in many sizes and configurations. Because of this components within the Header are layed out in (1 of 3) different configurations to ensure proper operation of the Drive Belt. Please see configuration details listed below:

- ▶ Operator/Control/Power
 - Header Width is not wide. Operator needs to be installed to the left of the U30 Microprocessor Control. Please see Figure 2-1.
- ▶ Power/Operator/Control
 - Header Width is wide, but Operator still needs to be installed between the Power Supply and the U30 Microprocessor Control. Please see Figure 2-2.
- ▶ Power/Control/Operator
 - Header Width is wider. Operator can be installed to the right of the Power Supply and the U30 Microprocessor Control. Please see Figure 2-3.

Note: The Power Supply must never be installed between the U30 Microprocessor Control and the Operator.

Note: No matter the location, electrical wiring for all (3) components stays the same.



CHAPTER 3: CONNECT INCOMING 120 VAC WIRES

DANGER

Disconnect 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.

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

1. Ensure all power is disconnected at the Junction box.
2. Ensure all power to the GT-1175 Slide Door is Off.
3. Inspect the location and grade of all Incoming 120 VAC power cables.
4. Insert all Incoming 120 VAC, single phase, 5 amp (minimum) power wires into the pre drilled Electric Service Access Hole located at the left or right side of Jamb Tube and Header End Cap.
 - a. It is recommended for the Installer to house all Incoming 120 VAC wires within an Electrical Conduit.

CAUTION

Keep all Incoming 120 VAC wiring separate from low voltage wiring within Header.

CAUTION

Do Not route 120 VAC wires near the U30 Microprocessor Controller and Operator.

5. Please see Figure 3-1, to follow steps on how to connect Incoming 120 VAC wires to Power Supply.
6. Go to the TB1 Port located on the Left side of the Power Supply Module.
7. Insert the Incoming 120 VAC Black (HOT) wire into the Circuit marked "L".
8. Insert the Incoming 120 VAC White (Neutral) wire into the Circuit marked "N".
9. Insert Green (Grounding) wire into the Circuit marked "PE".

DANGER

Read and understand the "U30 Controller Setup and Programming Manual" P/N 15-9000 before attempting to power-up the GT-1175 Slide Door. Failure to do so may result in damage to the Slide door and/or injury to the installer and will nullify all warranties.

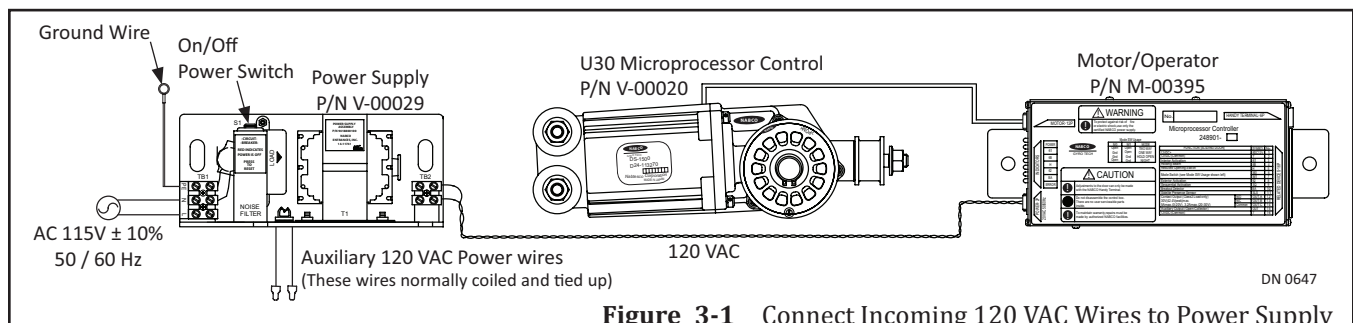


Figure 3-1 Connect Incoming 120 VAC Wires to Power Supply

CHAPTER 4: IDENTIFY OPERATING WIRES

Section 4a: 16 Pin Controller Terminal Block Assignments

Note: All wires are identified by color. All references to signals are made in connection with Common (Red).

Note: Use a flat-blade screwdriver to remove the Terminal Connector from the U30 Microprocessor Controller. Ensure that all wires are matched to each appropriate Terminal. Each Terminal is numbered with corresponding information on the Face Plate of the U30 Microprocessor Controller.

Note: Common Terminal indicates terminal can be Output or Input.

* Color1/Color2 denotes a base wiring Color 1 with a stripe Color 2. For example: Black/Red indicates a Black wire with a Red Stripe.

Terminal #	Symbol	Color	Description
1	9DC12V	Brown	▶ Output terminal <ul style="list-style-type: none"> • Sensor power source. • Output is 12VDC with a maximum capacity of 350mA (.35 amp).
2	7	Red	▶ Common terminal <ul style="list-style-type: none"> • Provides common ground for the 12 VDC power and signal source.
3	61	Black	▶ Input terminal <ul style="list-style-type: none"> • Interior Activation signal. • Opens the door in two-way and one-way modes only.
4	6B	White	▶ Input terminal <ul style="list-style-type: none"> • Holding Beam signal. • Opens or re-opens a Sliding door.
5	H	Green	▶ Input terminal <ul style="list-style-type: none"> • Reduced Opening Switch signal. • Reduces Slide door opening when switched to Red (7).
6	M0	Orange	▶ Input terminal <ul style="list-style-type: none"> • Mode Switch One (SW1). • Used to achieve special functions. Please refer to "Switch Settings" section within this chapter.
7	M1	Orange/White*	▶ Input terminal <ul style="list-style-type: none"> • Mode Switch Two (SW2). • Used to achieve special functions. Please refer to "Switch Settings" section within this chapter.
8	62	Black/Red*	▶ Input terminal <ul style="list-style-type: none"> • Exterior Activation signal. • Opens the door in two-way mode only.
9	SQ	Yellow	▶ Input terminal <ul style="list-style-type: none"> • Sequential Activation signal. • Allows a sequence of signals to open and close Slide door.

Terminal #	Symbol	Color	Description
10	BA	Blue	<ul style="list-style-type: none"> ▶ Input terminal • Breakout Detector signal. • Connected to Red (7) during normal operation. • Disconnected from Red (7) during 'stop door' operation. Will happen if: <ul style="list-style-type: none"> • Switch is turned OFF • Slide door is panicked open
11	SLS	Green/White*	<ul style="list-style-type: none"> ▶ Input terminal • Sidelite Presence Sensor. • At fully closed position, input will prevent Slide door from opening.
12	OUT A	Gray	<ul style="list-style-type: none"> ▶ Auxiliary Output terminal • Connected to Normally Open contact on an internal relay. • Referred to as 'Auxiliary Relay Output' throughout manual. • Used as a Switch to: <ul style="list-style-type: none"> • Sequence an Electric Strike. • Control other Slide doors in an air lock situation. • Signal a remote computer on the Slide door operation.
13	OUT B	Gray	<ul style="list-style-type: none"> ▶ Auxiliary Output terminal • Connected to Normally Closed contact on an internal relay.
14	OUT C	Violet	<ul style="list-style-type: none"> ▶ Auxiliary Output terminal • Common for output wire "OUT A" or "OUT B"
15	OUT	Brown/Yellow*	<ul style="list-style-type: none"> ▶ Auxiliary Output 2 terminal • Connected to an Internal Transistor with Open Collector in the U30 Microprocessor Controller. • Installer must provide wire for this terminal (not normally utilized).
16	7	Red	<ul style="list-style-type: none"> ▶ Common terminal • Provides common ground for the 12 VDC power and signal source.

Section 4b: Sensor Wire Connections

* Color1/Color2 denotes a base wiring Color 1 with a stripe Color 2. For example: Black/Red indicates a Black wire with a Red Stripe.

** Denotes wiring that has been crimped together at NABCO factory.

Table 4-1 Acusensor

U30 Harness		Extension Harness	Acusensor Harness
Red	Common	Red	**White and Red
Black	Signal, Interior	Yellow	Green
*Black/Red	Signal Exterior		
Brown	+12 VDC	Gray	Black

Table 4-2 Optex i-one

U30 Harness		Extension Harness	Optex i-one Harness
Red	Common	Red	**Gray and White
Black	Interior Signal	Yellow	Yellow
*Black/Red	Exterior Signal		
Brown	+12 VDC	Gray	Gray

Table 4-3 IXIO

U30 Harness		Extension Harness	IXIO Harness
Red	Common	Red	**Red and White and Brown
Black	Interior Signal	Yellow	Green and Blue
*Black/Red	Exterior Signal		
Brown	+12 VDC	Gray	Black

Section 4c: Rocker Switch Settings

OFF = Not switched to COMMON

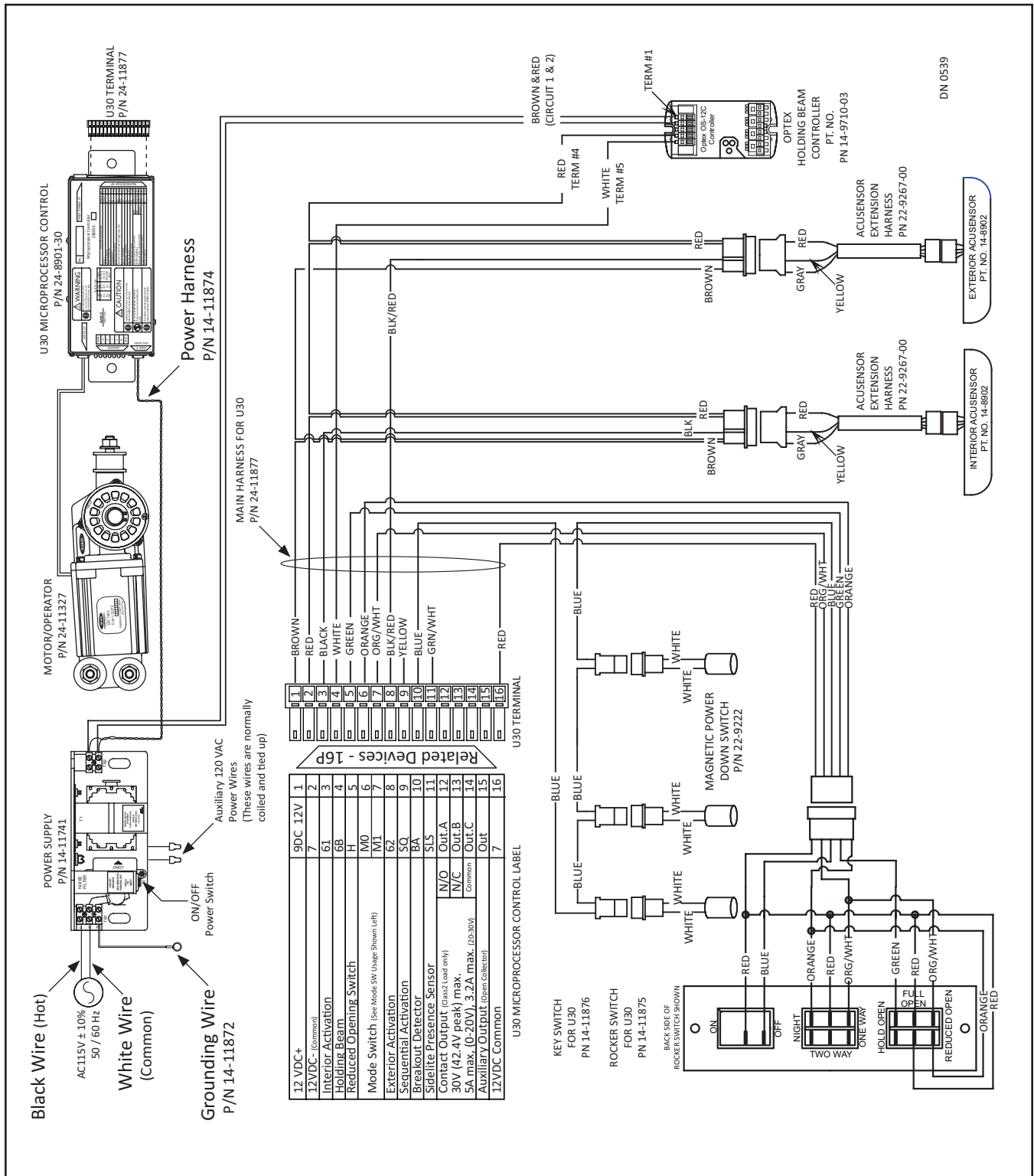
ON = Switched to COMMON (RED 7)

Rocker Switch Mode	Key Switch Mode	Wire M0	Wire M1	Wire H	Description
Night	Night	OFF	ON	-	<ul style="list-style-type: none"> ▶ Sensors on Terminal (3) and (8) can not open the door while door is closed. ▶ Sensors on Terminal (3) and (8) will provide threshold safety when door is in any position other than closed. ▶ Electric Lock remains locked unless an activation signal is given from a device (such as card reader, key switch, wall plate, etc.): connected in one of two ways: <ol style="list-style-type: none"> 1. Between Common and M0 (7) <ol style="list-style-type: none"> a. This only works when door is in "Night" mode 2. Between Common and SLS (11) <ol style="list-style-type: none"> a. This only works if the SLS is programmed for activation devices. <p><i>Note: Consult the U30 Programming Manual for details; (P/N 15-9000-30).</i></p>
Hold Open	H.O.	ON	ON	-	<ul style="list-style-type: none"> ▶ No activation needed when "Hold Open" is selected. Slide door is held open. ▶ Electric Lock is always unlocked.
Two Way	Auto	OFF	OFF	-	<ul style="list-style-type: none"> ▶ Sensors on Terminal (3) and (8) can both open the door. ▶ Electric Lock is always unlocked.

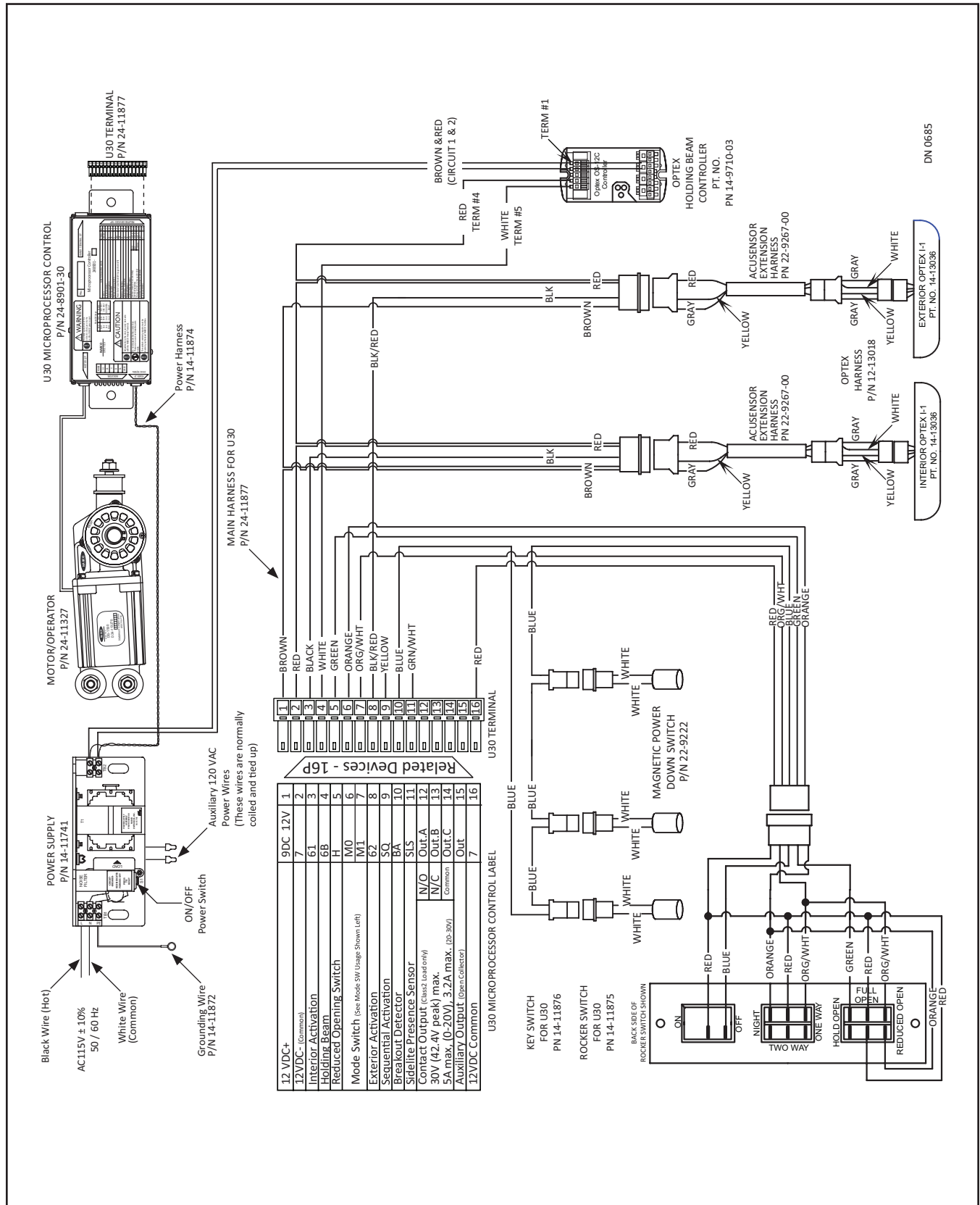
Rocker Switch Mode	Key Switch Mode	Wire M0	Wire M1	Wire H	Description
One Way	Exit	ON	OFF	-	<ul style="list-style-type: none"> ▶ Sensor on Terminal (3) can open the door. <ul style="list-style-type: none"> • Sensor is normally Interior and used to activate door for one-way traffic. ▶ Sensor on Terminal (8) can not open the door from the closed position. <ul style="list-style-type: none"> • Sensor is normally Exterior and used to provide threshold safety only. • Electric Lock remains locked unless an activation occurs from the interior sensor or by a device (such as a card reader, key switch, wall plate, etc.) that is connected in one of two ways: <ol style="list-style-type: none"> 1. Between Common and M1 (6) <ol style="list-style-type: none"> a. This only works when door is in "One Way" or "Exit" mode. 2. Between Common and SLS (11) <ol style="list-style-type: none"> a. This only works if the SLS is programmed for activation devices. <p><i>Note: Consult the U30 Programming Manual for details; (P/N 15-9000-30).</i></p>
Full Open	Full	-	-	OFF	▶ Upon activation or in Hold Open mode, Slide door will open to the full position.
Reduced Open	Reduced	-	-	ON	▶ Upon activation, Slide door will open to the Reduced Open position.

CHAPTER 5: WIRING DIAGRAMS

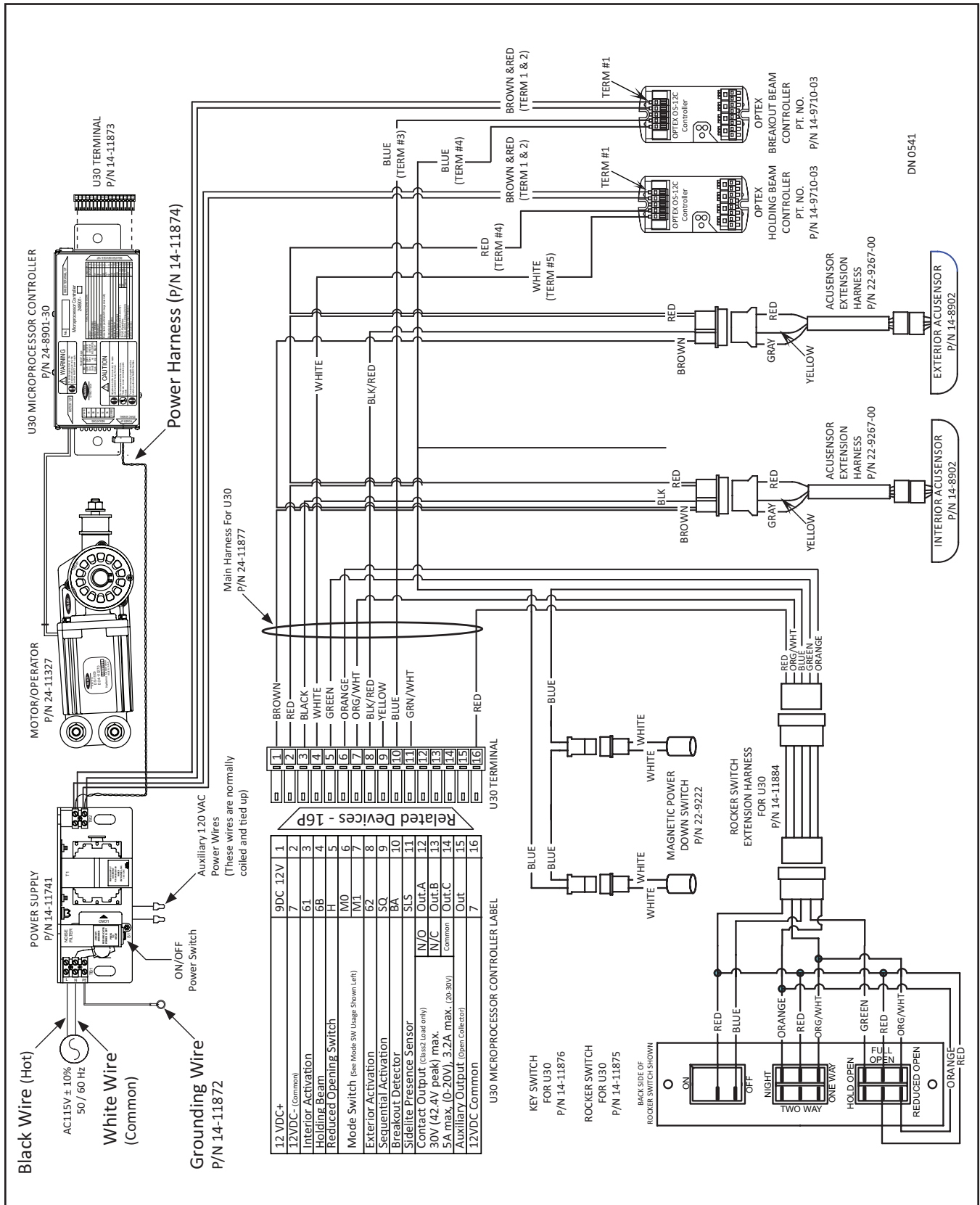
Section 5a: (2) Acusensors and (1) Holding Beam



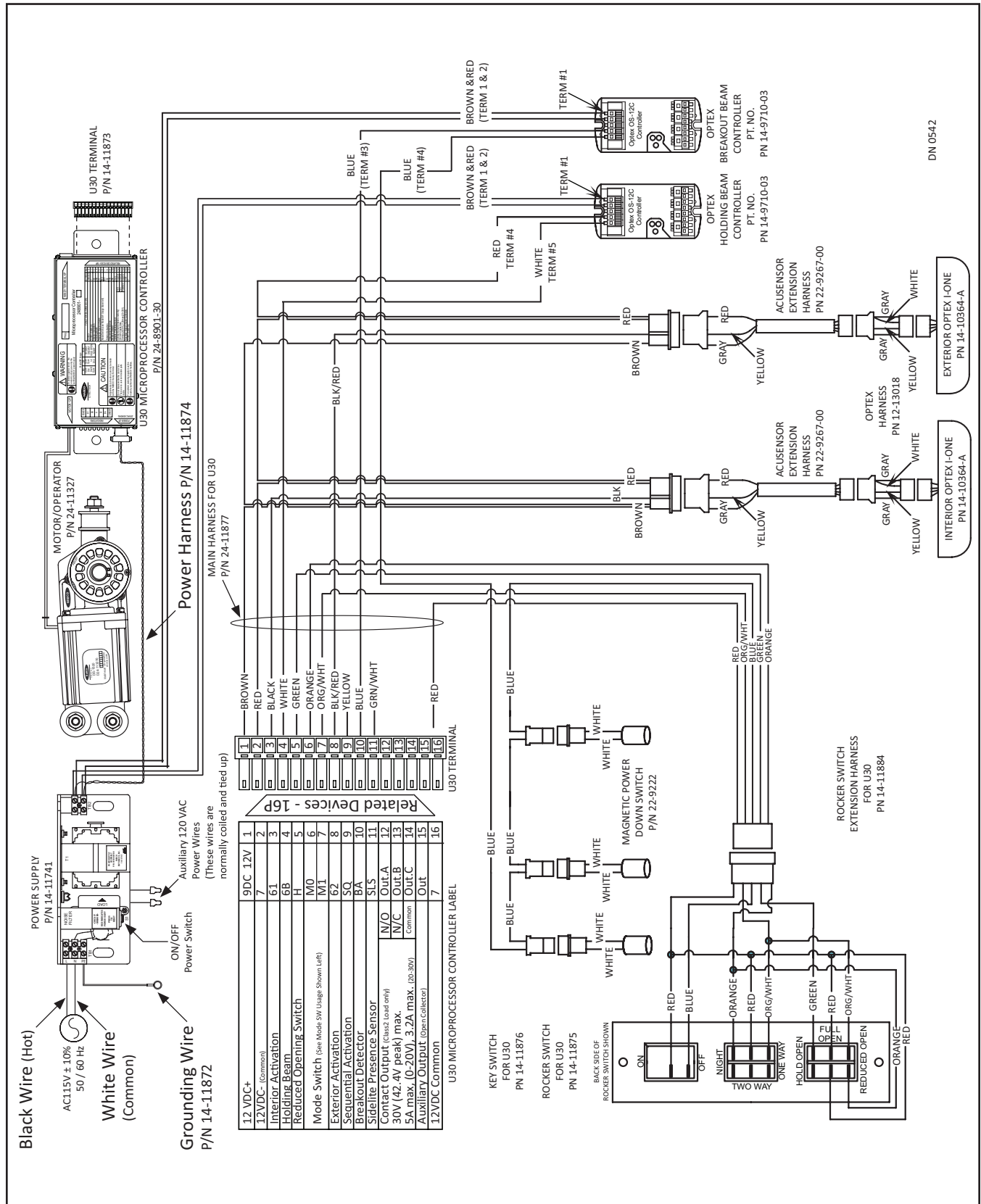
Section 5b: (2) Optex i-One Sensors and (1) Holding Beam



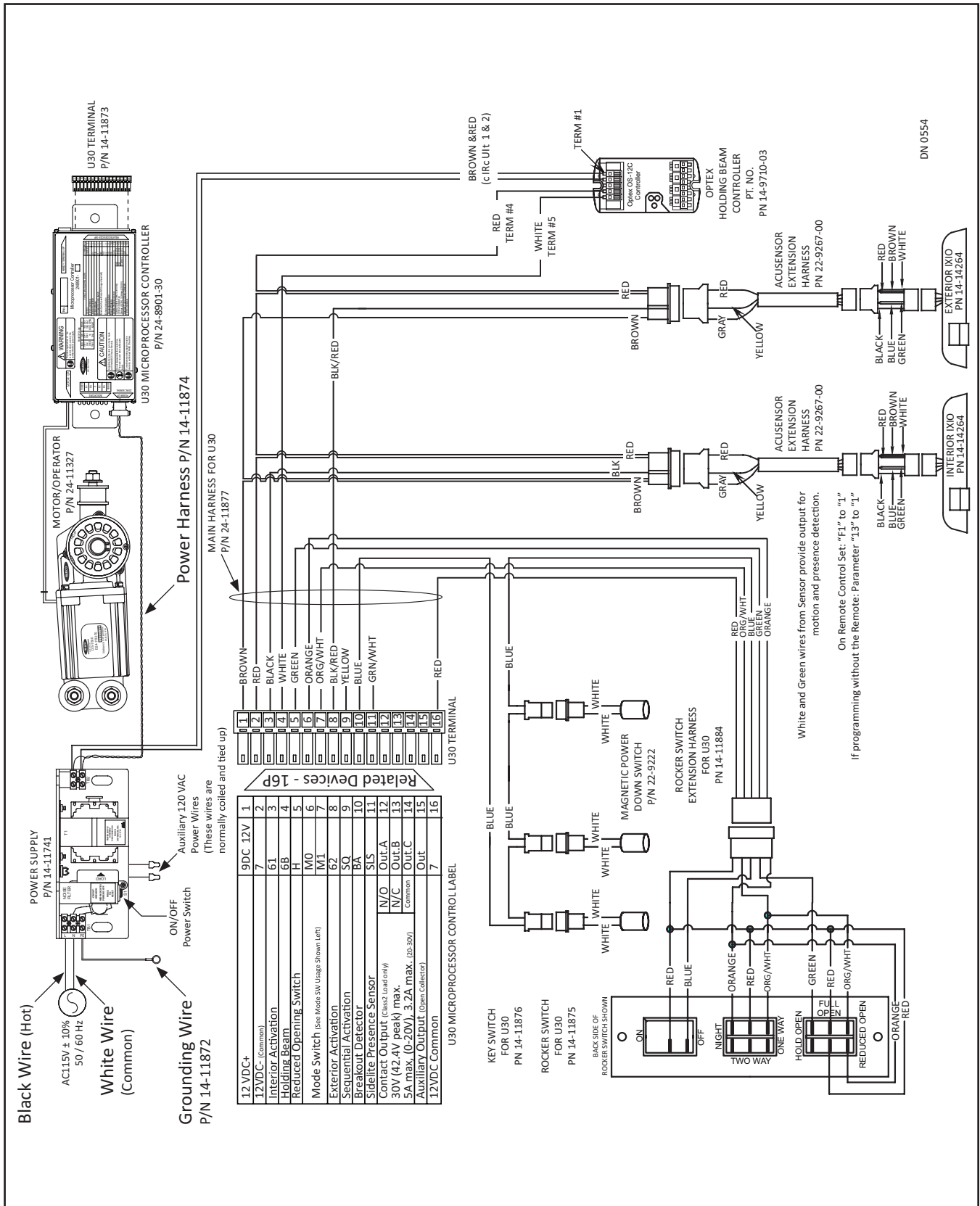
Section 5c: (2) Acusensors, (1) Holding Beam and (1) Breakout Beam



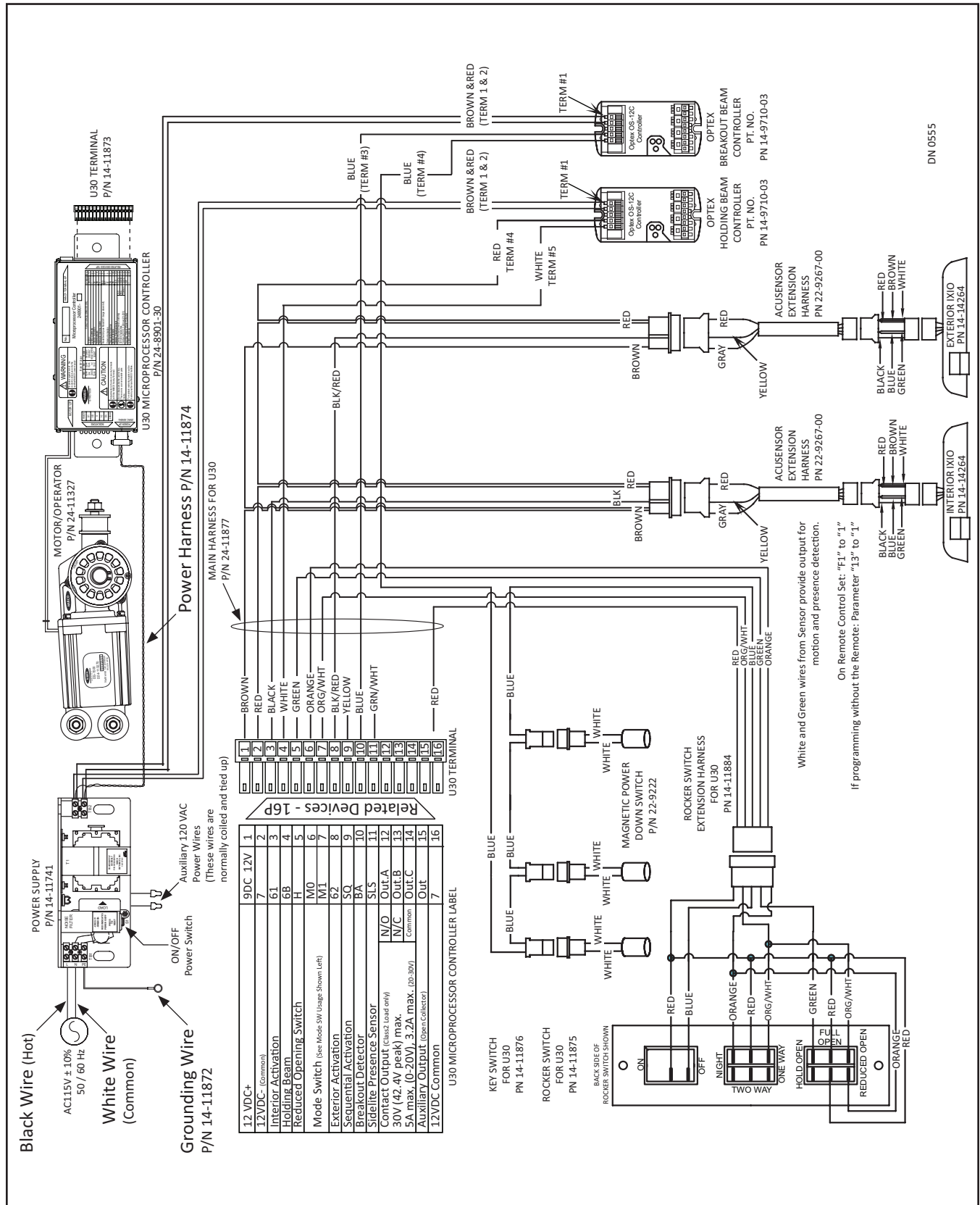
Section 5d: (2) Optex i-One Sensors, (1) Holding Beam and (1) Breakout Beam



Section 5e: (2) IXIO, and (1) Holding Beam



Section 5f: (2) IXIO (1) Holding Beam and (1) Breakout Beam



CHAPTER 6: INFRARED BEAM WIRING

Section 6a: Wiring (1) Holding Beam

On GT-1175 Slide doors, the Optex OS-12C Module Infrared Beam is installed and wired at the NABCO factory. This unit is shipped complete with the following:

- ▶ Emitter
- ▶ Receiver
- ▶ Control Box

Both the Emitter and Receiver are flush mounted on both sides of the Slide door Frame or each Jamb tube, directly across from each other. A pulsed, infrared light beam is used to continuously transmit across the Slide door opening. Interruption of the infrared light beam will switch the White holding beam input wire to Red (Common). Thus causing the system to re-activate and Hold Open until the interruption is cleared. Please Figure 6-1.

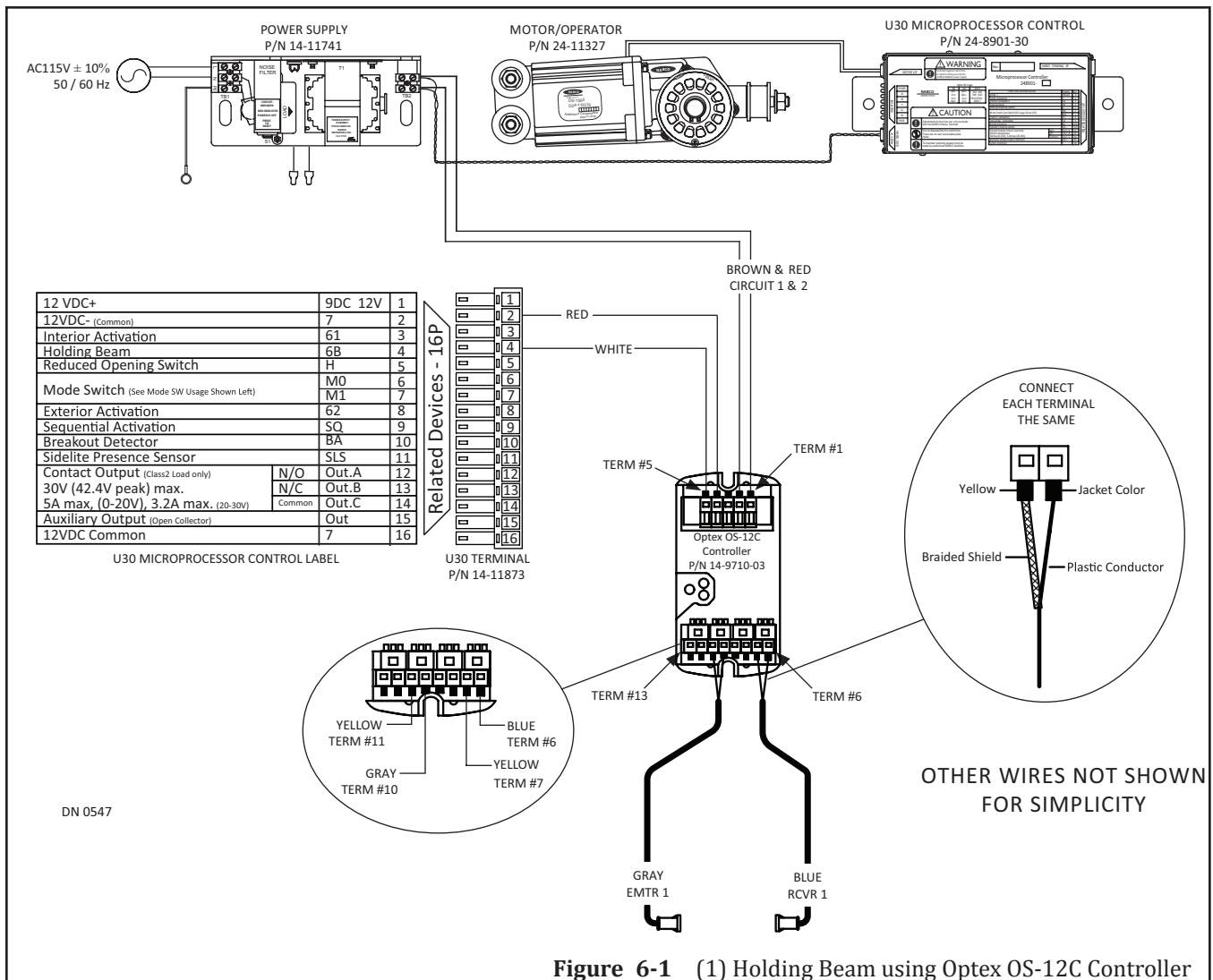


Figure 6-1 (1) Holding Beam using Optex OS-12C Controller

Section 6b: Wiring (2) Holding Beams

On GT-1175 Slide doors, the Optex OS-12C Module Infrared Beam is installed and wired at the NABCO factory. This unit is shipped complete with the following:

- ▶ Emitter
- ▶ Receiver
- ▶ Control Box

Both the Emitters and Receivers are flush mounted on both sides of the Slide door Frame or each Jamb tube, directly across from each other (in pairs). Please see Figure 6-2 and Figure 6-3.

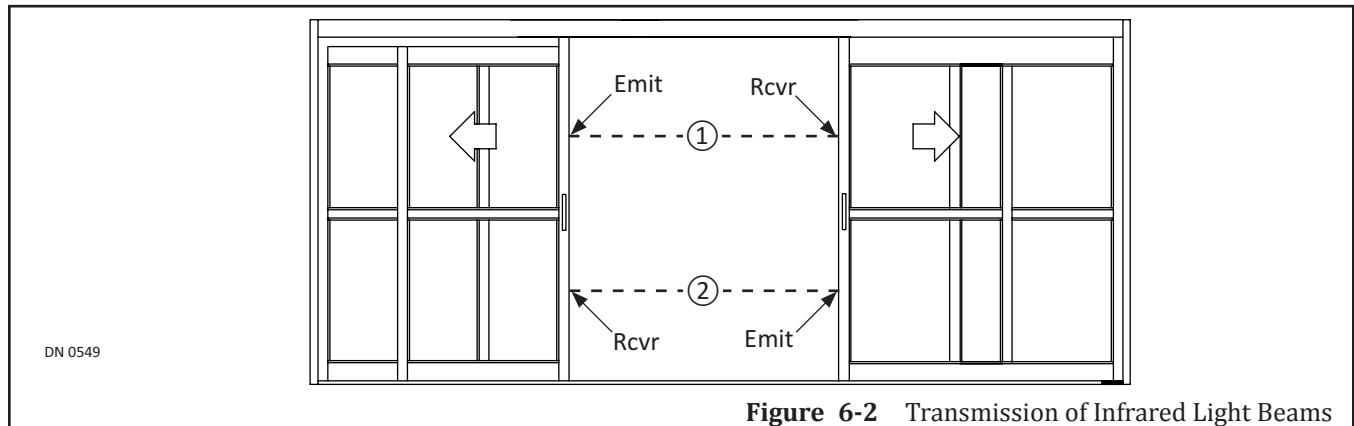


Figure 6-2 Transmission of Infrared Light Beams

A pulsed, infrared light beam is used to continuously transmit across the Slide door opening. Interruption of the infrared light beam will switch the White holding beam input wire to Red (Common). Thus causing the system to re-activate and Hold Open until the interruption is cleared.

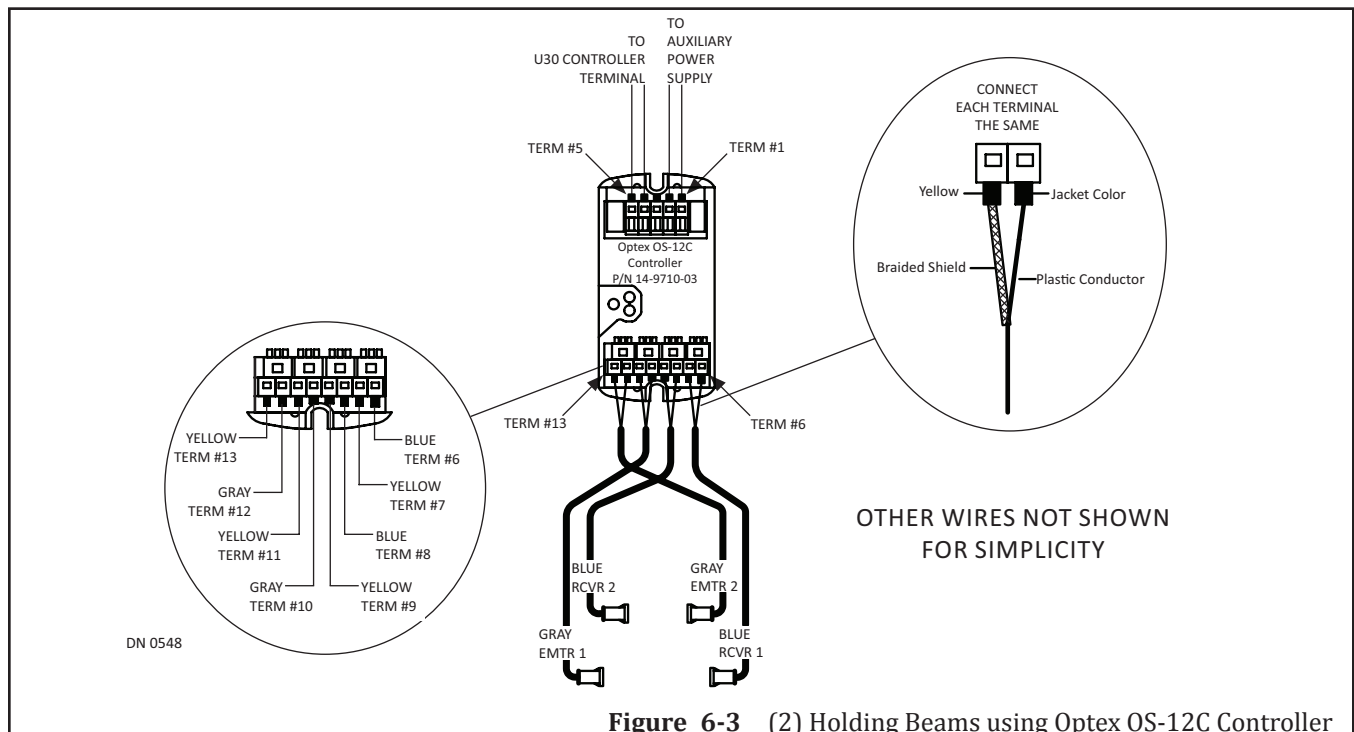


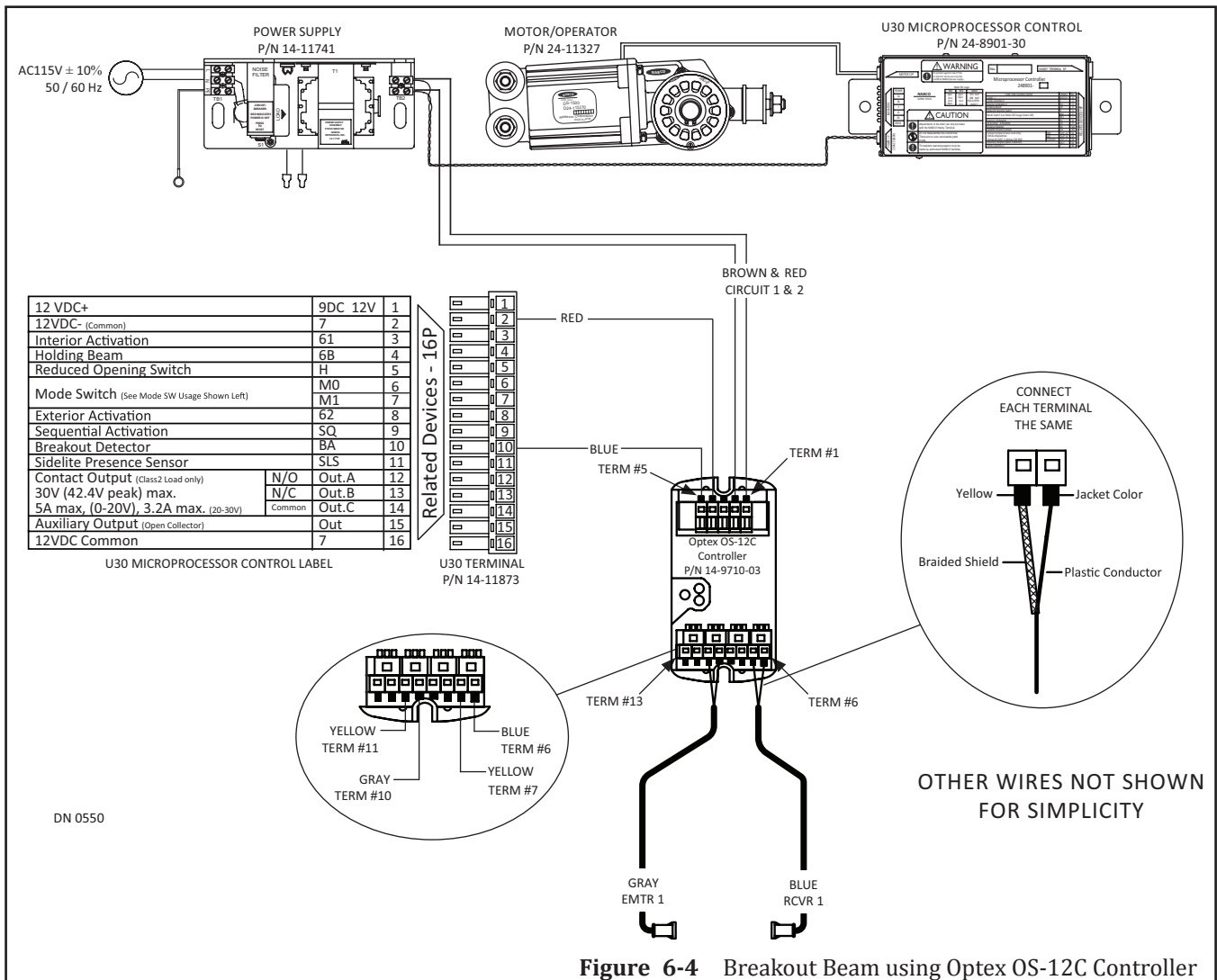
Figure 6-3 (2) Holding Beams using Optex OS-12C Controller

Section 6c: Wiring Holding Beam for Breakout

On GT-1175 Slide doors, the Optex OS-12C Module Infrared Beam is installed and wired at the NABCO factory. This unit is shipped complete with the following:

- ▶ Emitter
- ▶ Receiver
- ▶ Control Box

Both the Emitter and Receiver are flush mounted on both sides of the Slide door Frame or each Jamb tube, directly across from each other. A pulsed, infrared light beam is used to continuously transmit across the Slide door opening. Interruption of the infrared light beam. By Breaking Out a Slide door panel the Blue (BA) wire power down loop will be interrupted. Thus causing the system to stop operating until the Slide door is repositioned and latched. Please see Figure 6-4.



CHAPTER 7: ELECTRIC LOCK WIRING

Note: Electric Locks can not prevent Breakout. If preventing Breakout is deemed necessary, panic hardware must be fitted to the Door Panels.

The Electric Lock is optional and can come in (1 of 2) configurations:

- ▶ Fail Safe
 - Allows the Door Panel to be manually opened if power is turned Off.
- ▶ Fail Secure
 - Will not allow the Door Panel to be manually opened if power is turned Off.

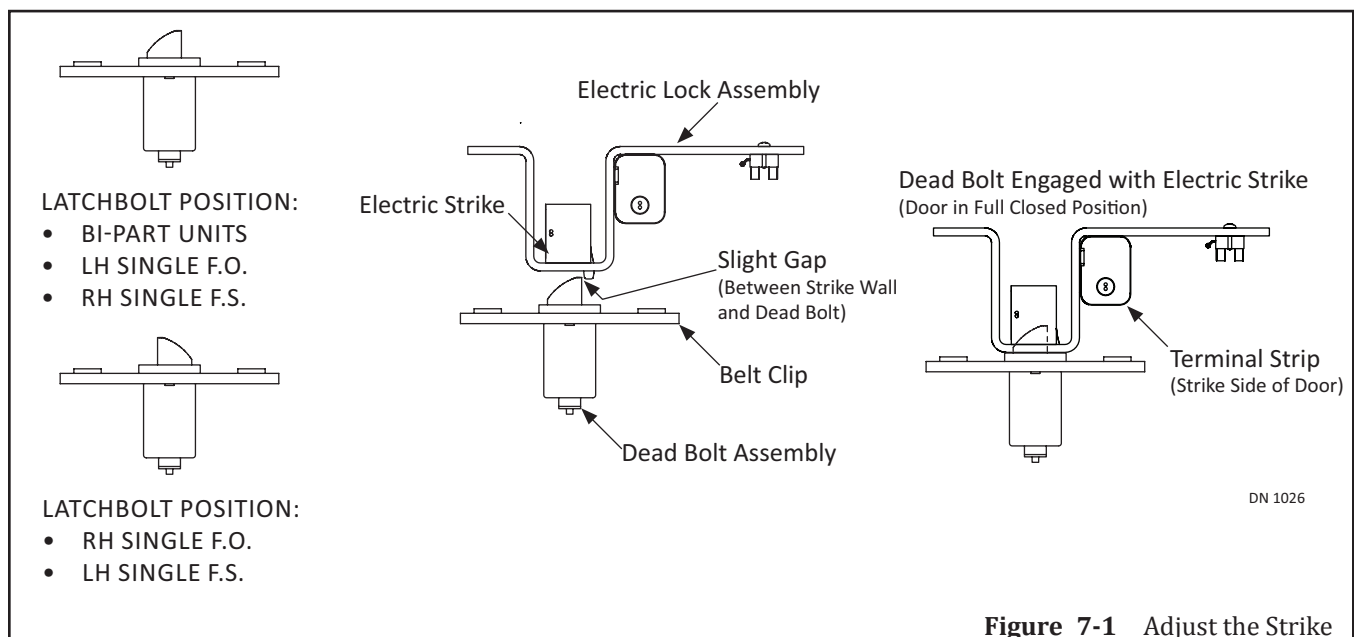
Electric Locks are used to prevent Door Panels from opening until they are activated by the U30 Microprocessor Control when it receives a signal from a:

- ▶ Remote Switch
- ▶ Transmitter
- ▶ Activation Device on the face of the Door

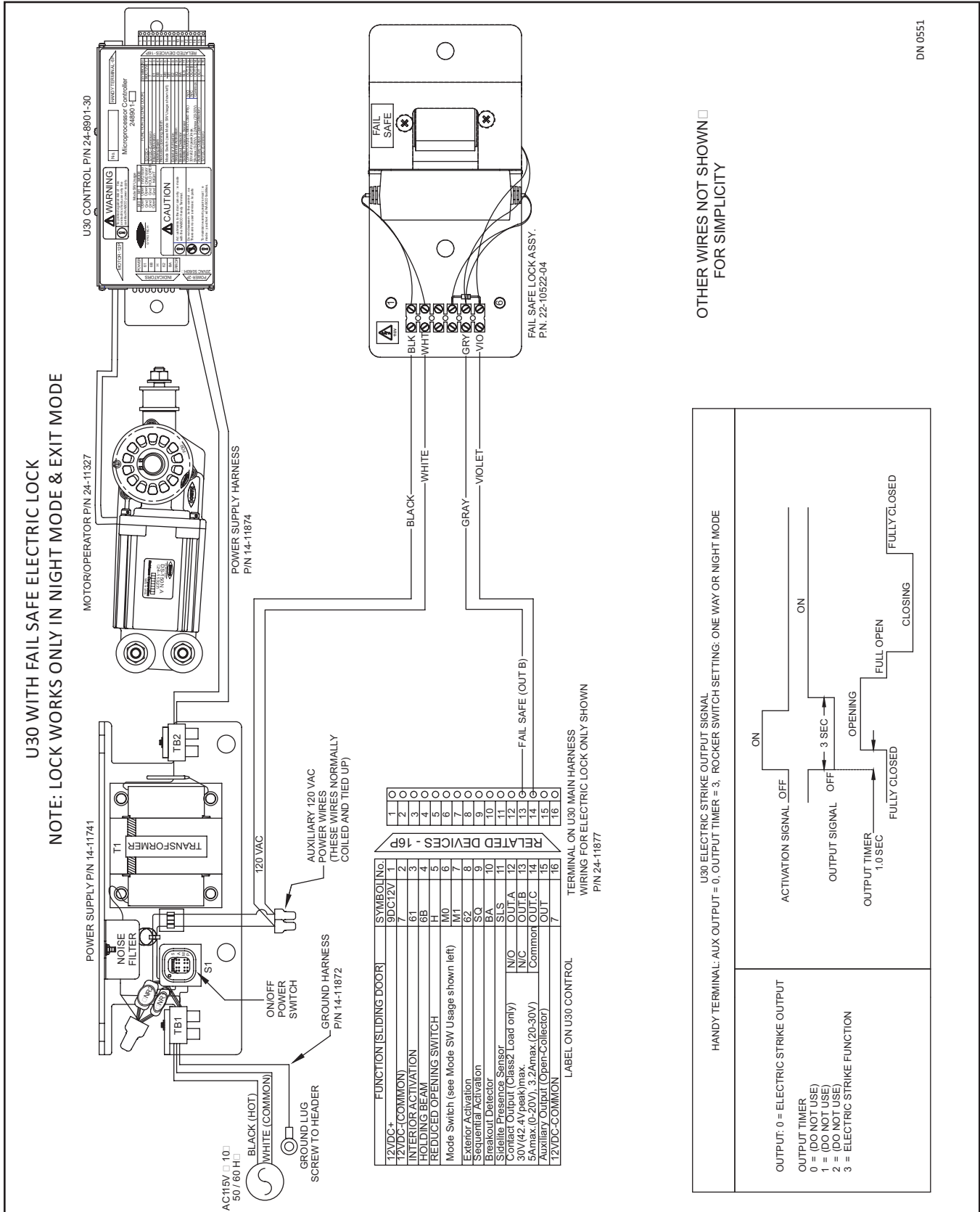
Electric Locks are pre-installed at the NABCO Factory. Only the Strike mounted on the Header may need to be adjusted.

Section 7a: Adjust the Strike.

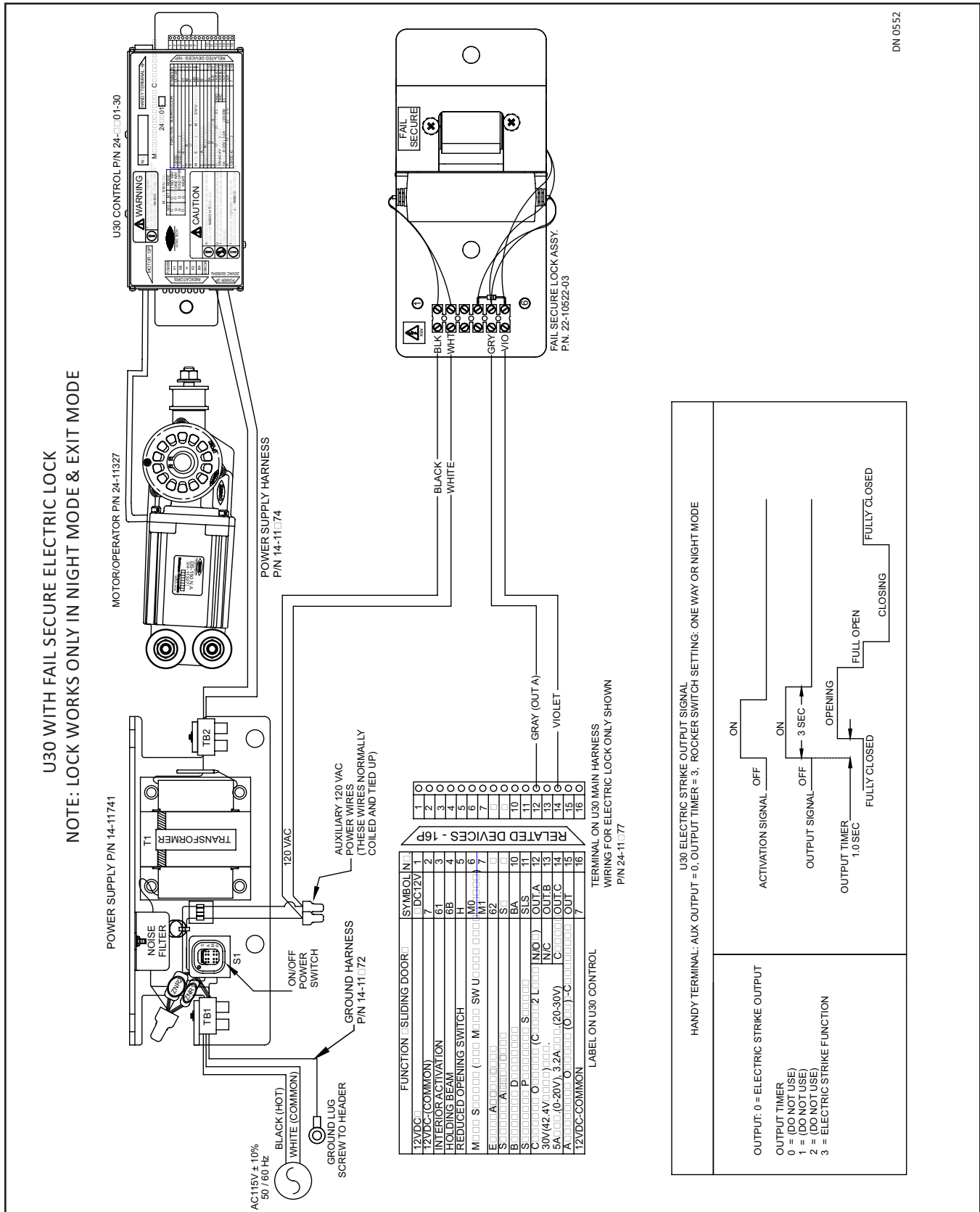
1. Close Door Panel(s).
2. Go inside the Header. Loosen the Strike Mounting Bolts that is holding the Strike Bracket secure to the Header.
3. Slide the Strike to align with the Latch Bolt in the fully closed position.
4. Tighten the Strike Mounting Bolts.
 - a. Do not overtighten.



Section 7b: U30 with Fail Safe Electric Lock

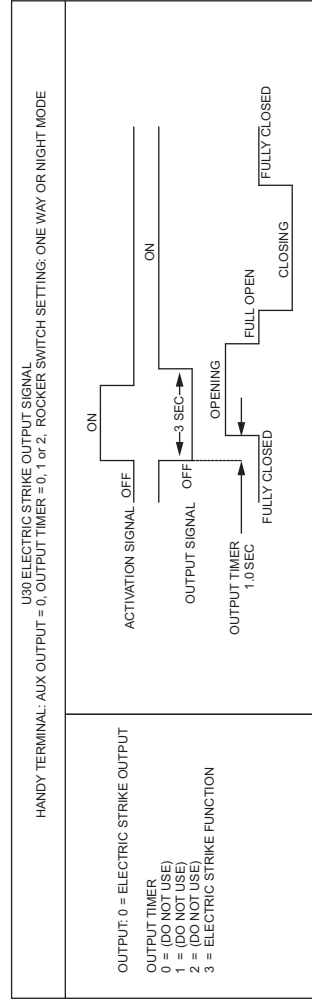
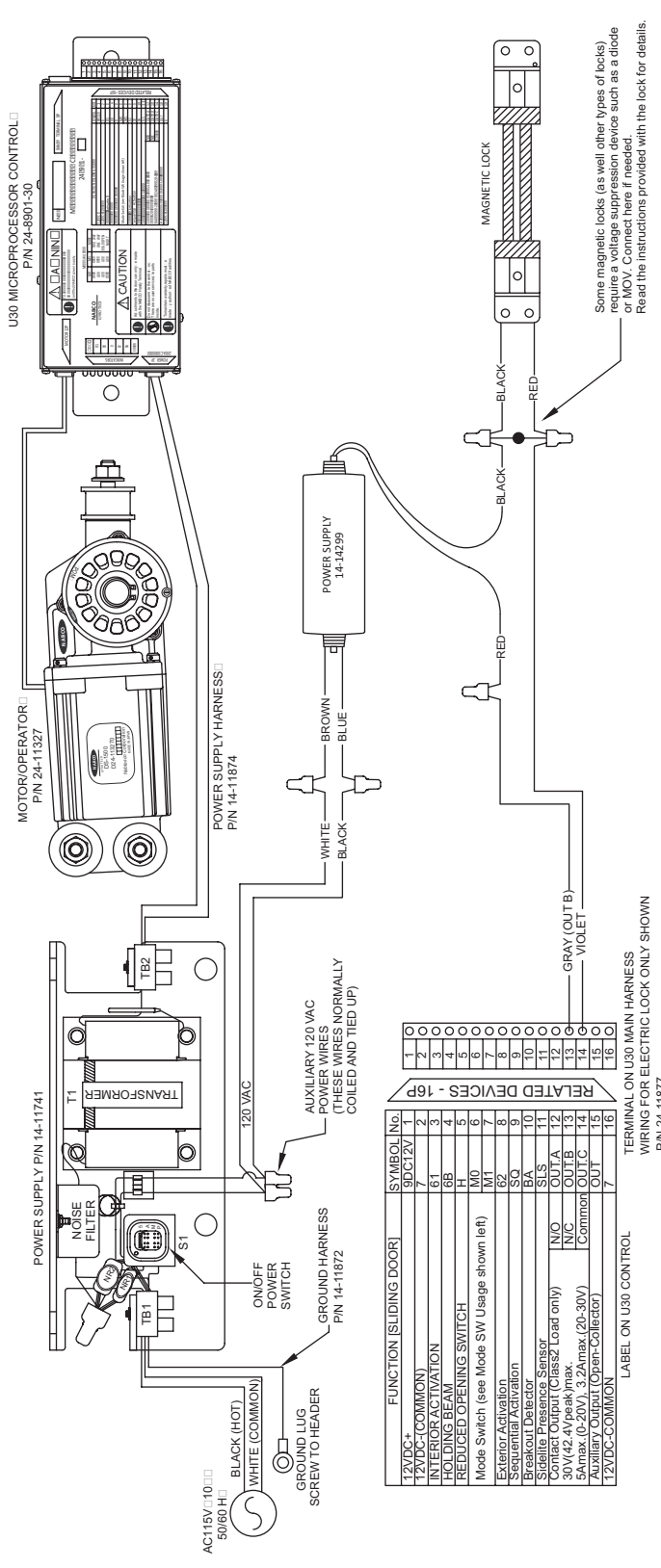


Section 7c: U30 with Fail Secure Electric Lock



Section 7d: U30 with Magnetic Lock

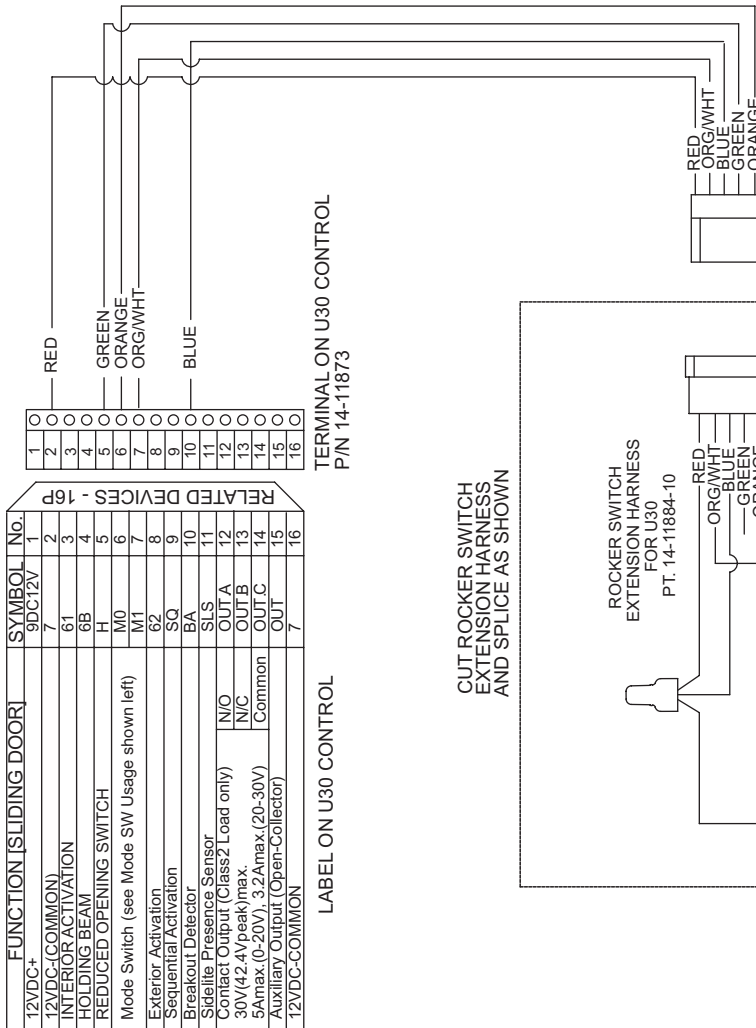
U30 WITH MAGNETIC LOCK
NOTE: LOCK WORKS ONLY IN NIGHT MODE



CHAPTER 8: CUSTOM WIRING

Section 8a: U30 Configured for Remote Control of Modes

- NOTES:
1. BLUE WIRE MUST BE CONNECTED TO RED FOR DOOR TO OPERATE.
 2. IT IS RECOMMENDED THAT PART NUMBER 14-11884-10 BE USED FOR THESE MODIFICATIONS; THIS WOULD ALLOW CHANGES TO, OR REVERSAL OF, OTHER WIRES NOT SHOWN FOR SIMPLICITY.
 3. REMOTE SWITCH MUST BE DRY CONTACTS (NO VOLTAGE).
 4. CAP OFF ALL UNUSED WIRES.
 5. CAP OFF ALL UNUSED WIRES.



Mode	Contact 1	Contact 2
Two Way (Auto)	Open	Open
One Way Mode (Exit Only)	Open	Closed
Night Mode	Closed	Open
Hold Open	Closed	Closed

FUNCTION [SLIDING DOOR]	SYMBOL	No.
12VDC+	9DC12V	1
12VDC-(COMMON)	7	2
INTERIOR ACTIVATION	61	3
HOLDING BEAM	6B	4
REDUCED OPENING SWITCH	H	5
Mode Switch (see Mode SW Usage shown left)	M0	6
	M1	7
Exterior Activation	62	8
Sequential Activation	SQ	9
Breakout Detector	BA	10
Sidelite Presence Sensor	SLS	11
Contact Output (Class 2 Load only)	OUT A	12
30V/42.4V peak/max.	OUT B	13
5A max. (0-20V), 3.2A max. (20-30V)	OUT C	14
Auxiliary Output (Open-Collector)	OUT	15
12VDC-COMMON	7	16

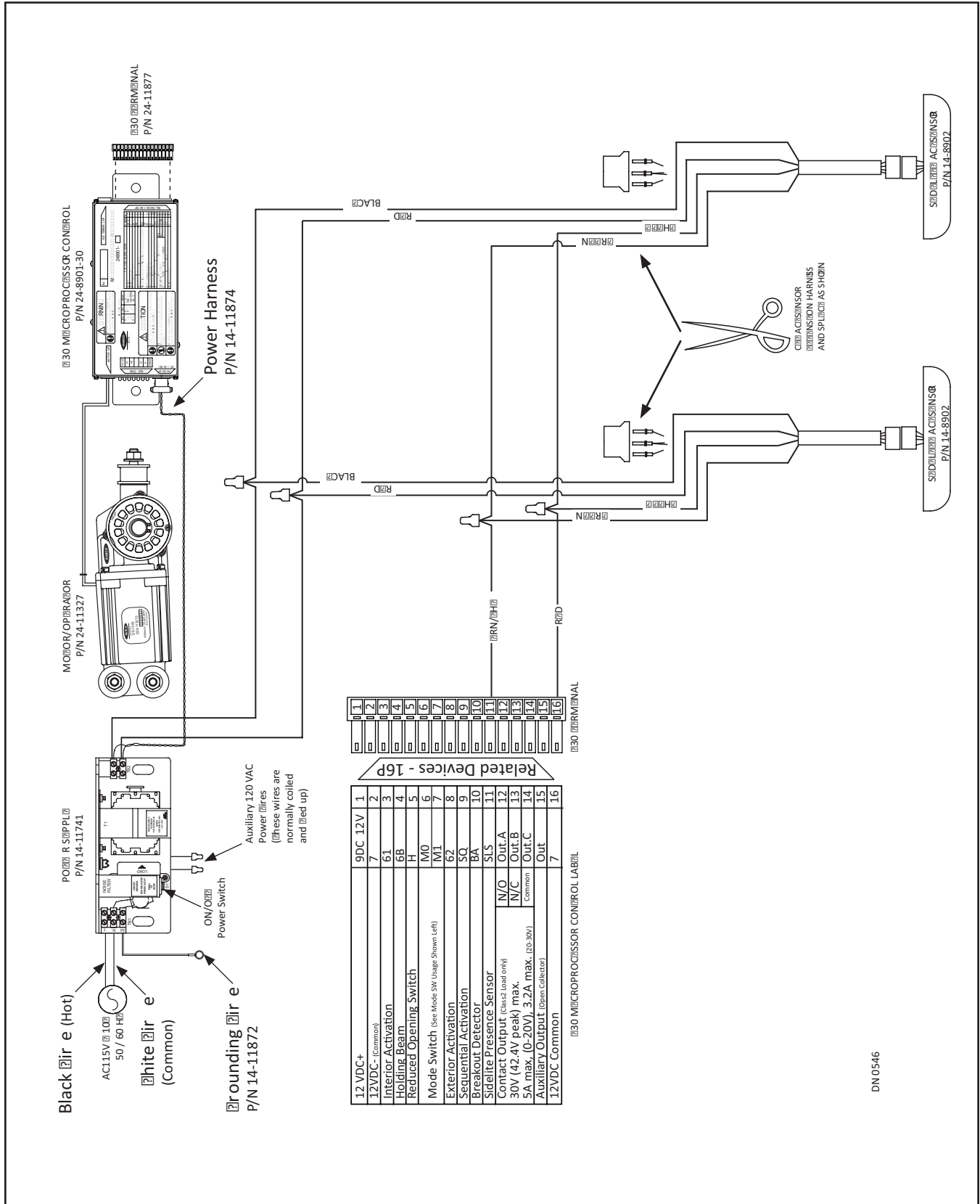
TERMINAL ON U30 CONTROL
P/N 14-11873

LABEL ON U30 CONTROL

CUT ROCKER SWITCH
EXTENSION HARNESS
AND SPLICE AS SHOWN

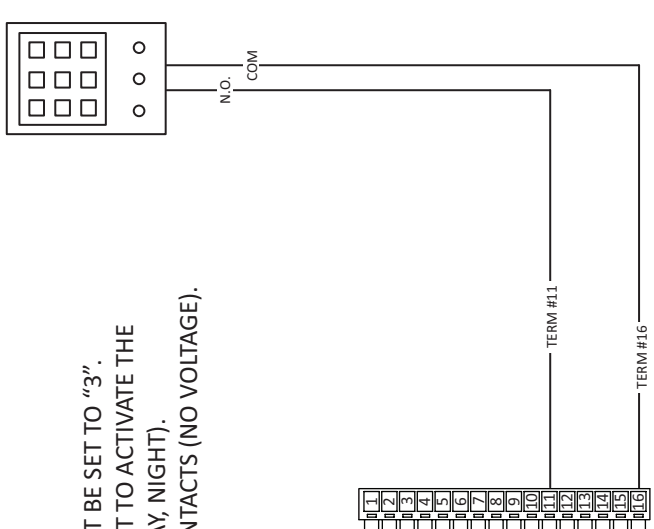
DN 0553
From DN 0291

Section 8b: Sidelite Sensors



Section 8c: U30 Using Card Readers or other Secure Activation Devices

KEY PAD OR CARD READER ON
SECURE SIDE OF DOOR
(N.O. - DRY CONTACTS)



1. "FUNCTION 13" UNDER "EXTRA FUNCTIONS" MUST BE SET TO "3".
2. "FUNCTION 13" SET TO 3 ENABLES THE "SLS" INPUT TO ACTIVATE THE DOOR REGARDLESS OF THE MODE (AUTO, ONE WAY, NIGHT).
3. DEVICE MUST PROVIDE NORMALLY OPEN, DRY CONTACTS (NO VOLTAGE).
4. OTHER WIRES NOT SHOWN FOR SIMPLICITY.

12 VDC+	9DC 12V	1
12VDC- (Common)	7	2
Interior Activation	61	3
Holding Beam	6B	4
Reduced Opening Switch	PH	5
Mode Switch (See Mode SW label shown left)	IM0	6
	IM1	7
Exterior Activation	62	8
Sequential Activation	SQ	9
Breakout Detector	BA	10
Sidelite Presence Sensor	SLS	11
Contact Output (Class2 Load only)	N/O Out.A	12
30V (42.4V peak) max.	N/C Out.B	13
5A max. (0-20V), 3.2A max. (20-30V)	Out.C	14
Auxiliary Output (Open Collector)	Out	15
12VDC Common	7	16

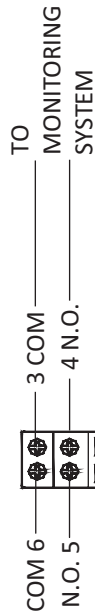


NON-SECURE ACTIVATION DEVICES SUCH AS PUSH PLATES CAN ALSO BE CONNECTED TO THE INTERIOR (TERMINAL 3 AND COMMON) OR EXTERIOR (TERMINAL 8 AND COMMON) ACTIVATION INPUTS. THIS WILL ALLOW THEM TO BE TURNED OFF OR ON BY USING THE MODE SWITCHES (TWO WAY, ONE WAY, NIGHT)

DN 0545

Section 8d: 12 VDC Relay Assembly

12 VDC RELAY ASSEMBLY PART NUMBER 14-12439 (INCLUDES RELAY AND MOUNTING SOCKET)



TERMINAL BLOCK ON U30 CONTROL

12VDC-COMMON	7	16
Auxiliary Output (Open-Collector)	OUT	15
5A max. (0-20V), 3.2A max. (20-30V)	OUTC	14
30V (42.4V peak max.)	OUTB	13
Contact Output (Class 2 Load only)	OUTA	12
Sidelite Presence Sensor	SLS	11
Sidelite Detector	BA	10
Breakout Activation	SQ	9
Sequential Activation	62	8
Exterior Activation	MI	7
Mode Switch (see Mode SW Usage shown left)	MO	6
REDUCED OPENING SWITCH	H	5
HOLDING BEAM	6B	4
INTERIOR ACTIVATION	61	3
12VDC-(COMMON)	7	2
12VDC+	9DC/2V	1
FUNCTION (SLIDING DOOR)		SYMBOL No.

RELATED DEVICES - 16P

16	○
15	○
14	○
13	○
12	○
11	○
10	○
9	○
8	○
7	○
6	○
5	○
4	○
3	○
2	○
1	○

USING THE HANDY TERMINAL, SET "EXTRA FUNCTION ADJUSTMENTS/AUXILIARY OUTPUT 2" AS SHOWN BELOW

Auxiliary Output 2 - Message will read FUNCTION(23) 3
Determines when the relay connected to Terminal 15 (BRN/YEL) and Terminal 1 (BRN) turns on.

The following (7) options are available:

- Zero = Signal at Full Open - relay will turn ON at the full open position.
- One = Air Lock Option
In a passageway situation, Option (1) instructs the relay to turn ON to prevent a second Slide door from opening before the first Slide door reaches the fully closed position. Note: if second door is another Nabco sliding door then relay is not required.
- Two = Sequential Door Operation
Instructs the relay to turn ON thereby sequentially activating a second Slide door for a set time period. This requires adjusting "Output Timer 2" to select the time delay between the first and second door operations. Note: if second door is another Nabco sliding door then relay is not required.

Relay Specifications:
 Relay & Socket Assembly: P/N 1412439
 Contact arrangement: Double Pole Double Throw (DPDT) - Form C
 Coil Voltage: 12 VDC
 Coil Current Draw: 47 mA
 Max. switching current: 5 A
 Max. switching voltage: 250V AC, 30V DC
 Max. switching power: 1,250 VA, 150W
 Coil Nominal operating power: 0.53W 0.9VA

COM - Common
 N.O. - Normally Open
 N.C. - Normally Closed
 (as defined when relay is un-powered)

NOTE:
 1. OTHER WIRES NOT SHOWN FOR SIMPLICITY

Six = Error Detection
 Relay will turn ON if the U30 Microprocessor Control detects any error except Error 5.
 DN 1371

Seven= No Output

CHAPTER 9: TROUBLESHOOTING

Trouble	Action
Slide door panicked open. System fails to shut down.	Check wiring on the magnetic power down switches. Blue (BA) circuit must open for system to shut down.
Slide door does not open when power is applied. Do Not manually shut door.	<ul style="list-style-type: none"> ▶ Confirm the Breakout Panel(s) is closed completely. ▶ Confirm Blue (BA) circuit is not open. <ul style="list-style-type: none"> • Verification can be done by observing Green (BA) status LED on U30 Controller. If LED in ON, the circuit is Open, and the unit will not operate. ▶ Check that the power down magnet in the top rail of the Breakout panel is installed and aligned with the magnetic power down switch in the bottom of the Header. ▶ Confirm Rocker Switch is set to ON not OFF.
Handy Terminal screen does not change.	<ul style="list-style-type: none"> ▶ Confirm the Breakout Panel(s) is closed completely. ▶ Confirm Blue (BA) circuit is not open. <ul style="list-style-type: none"> • Verification can be done by observing Green (BA) status LED on U30 Controller. If LED in ON, the circuit is Open, and the unit will not operate. ▶ Check that the power down magnet in the top rail of the Breakout panel is installed and aligned with the magnetic power down switch in the bottom of the Header. ▶ Confirm Rocker Switch is set to ON not OFF.
Door opens and closes very slowly.	<ul style="list-style-type: none"> ▶ Check and clear error codes with Handy Terminal. ▶ If Handy Terminal is not available, cycling the power will make the control resume normal operation.
Slide doors do not Open completely.	<ul style="list-style-type: none"> ▶ Look for obstructions in the track as well as inside the Header. <ul style="list-style-type: none"> • Check to ensure that Belt Clips are not hitting something. ▶ Check that the Mode Switch on the panel is not in "Reduced Opening" mode. Also verify that the Green (H) status LED on the U30 Controller is not lit. If this LED is ON, it indicates that there is a signal on the "Reduced Opening" circuit (Green "H" is being shorted to Red 7) ▶ Use the Handy Terminal and reinitialize the system.
Reset the system back to NABCO Factory settings	<ul style="list-style-type: none"> ▶ Plug in Handy Terminal and wait for the Slide door to Close. <ol style="list-style-type: none"> 1. At "Swing/Slide Stroke?" enter YES. 2. At "Swing Door Y or N?" enter YES (even though you have a slide door). <ol style="list-style-type: none"> a. "Swing Door Y or N?" enter NO. b. System will now initialize as a Slide door to NABCO Factory settings. 3. Set Slide door Stroke according to prompts the Handy Terminal displays.