DG SERIES SLIDE DOORS
WITH MC 521 PRO CONTROL

STANLEY

ACCESS TECHNOLOGIES

TECHNICAL SUPPORT : 800-422-6489

Option 3 = Jeff Bonus

Option 4 = Jim Sargent

Option 5 = Jack Karrick

STANLEY
Security Solutions

2000 Package - Only SX Panels Breakout – exterior cover. STANLEY

- *Doors slide on exterior of building* -
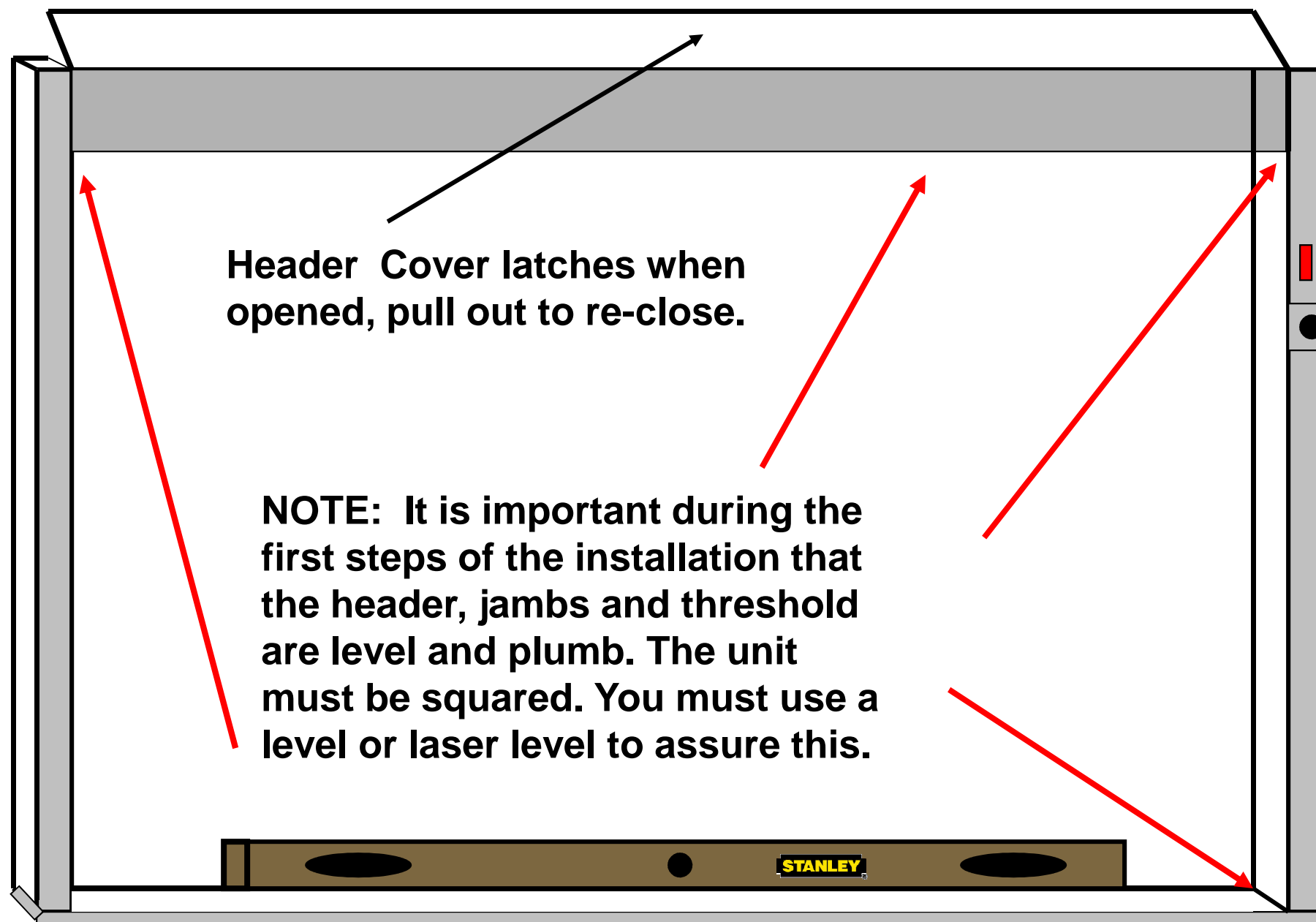- *Only SX panels break out for emergency egress.*

EXTERIOR VIEW

STANLEY

CAUTION STAND BACK

AUTOMATIC CAUTION DOOR

AUTOMATIC CAUTION DOOR

CAUTION STAND BACK

O

SX

SX

O

AUTOMATIC DOOR

AUTOMATIC DOOR

3
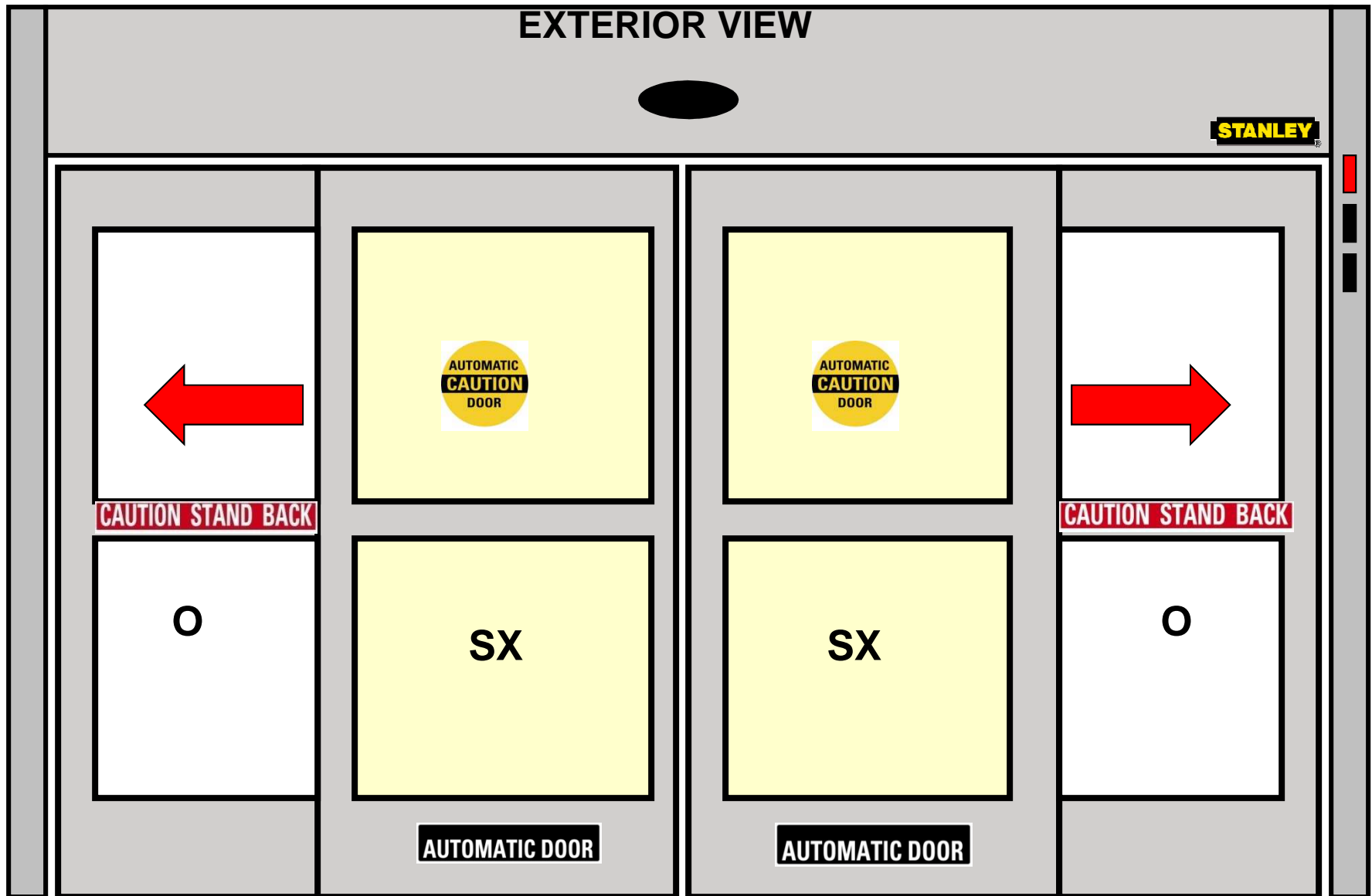
3000 Package Full Breakout – interior cover.
- *All 4 panels break out for emergency egress.*   -
- *SX panels slide on interior of building.*

STANLEY

INTERIOR VIEW

STANLEY

AUTOMATIC **CAUTION** DOOR

AUTOMATIC **CAUTION** DOOR

CAUTION STAND BACK

IN EMERGENCY PUSH TO OPEN

IN EMERGENCY PUSH TO OPEN

CAUTION STAND BACK

SO

SX

SX

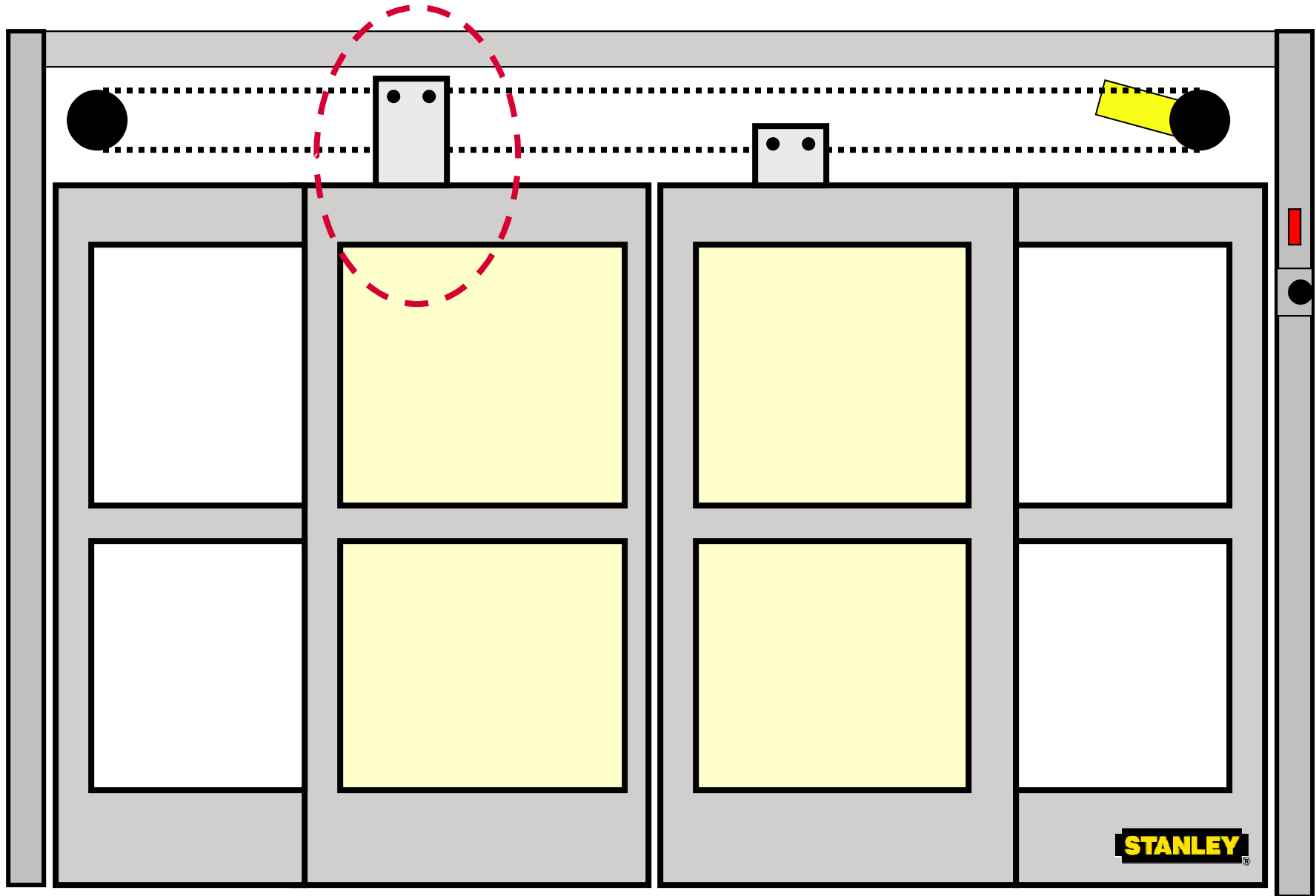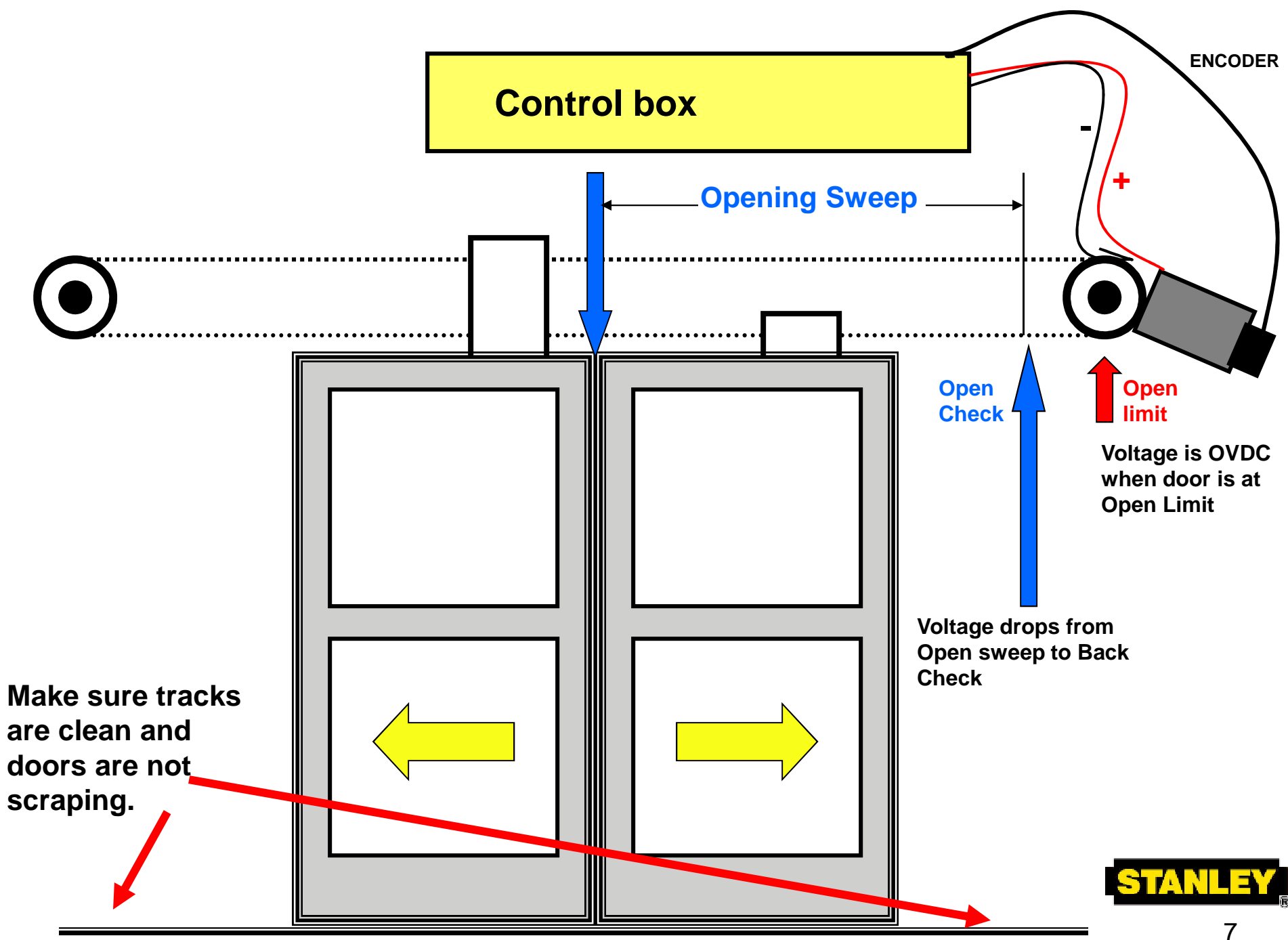SO

AUTOMATIC DOOR

AUTOMATIC DOOR

4
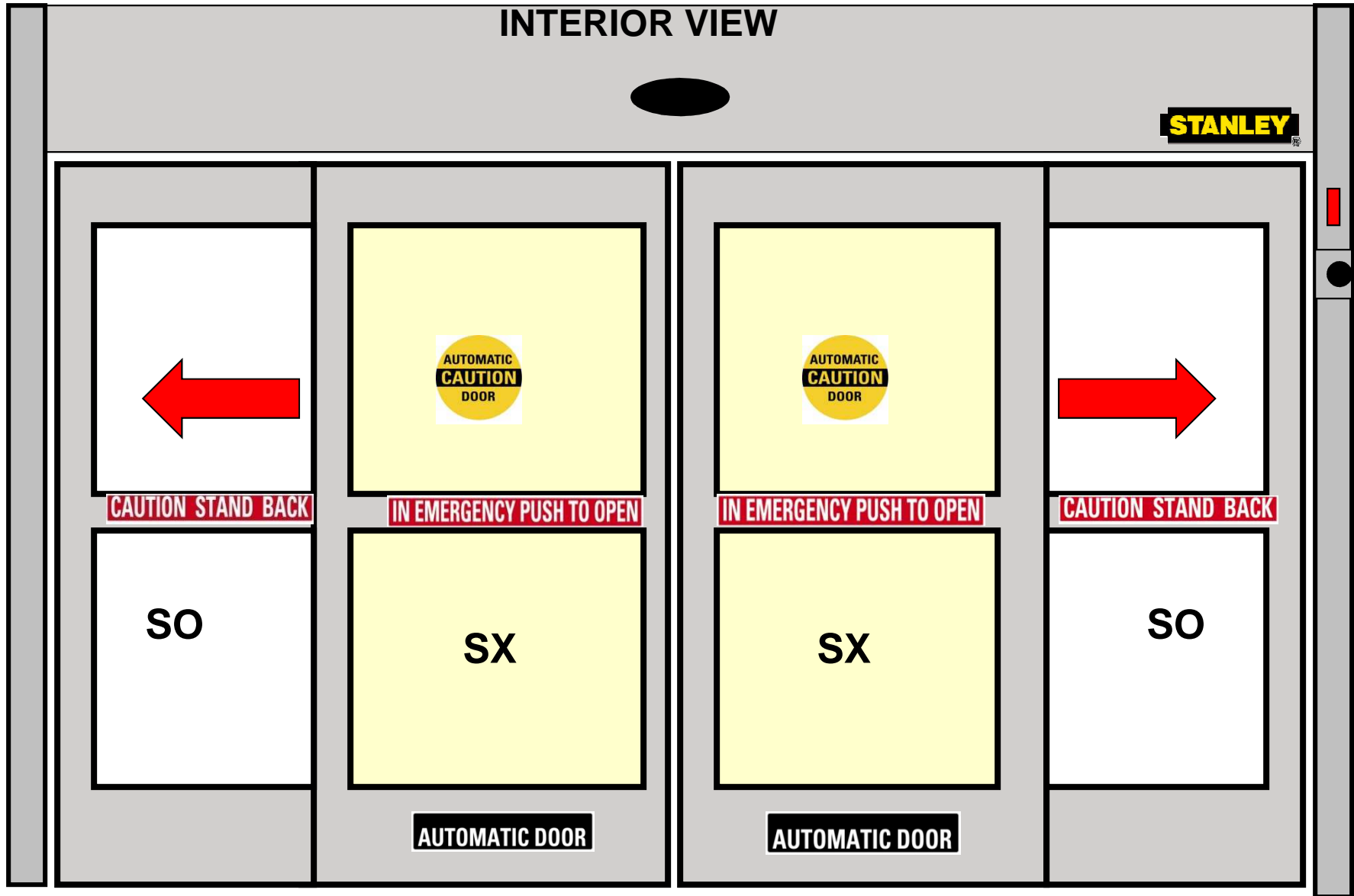
Header Cover latches when opened, pull out to re-close.

NOTE: It is important during the first steps of the installation that the header, jambs and threshold are level and plumb. The unit must be squared. You must use a level or laser level to assure this.

STANLEY

STANLEY

5

When hanging Bi-part sliding panels make sure the tall carrier belt bracket is on the left hand panel *(LH Panel when viewed from opened header cover)*
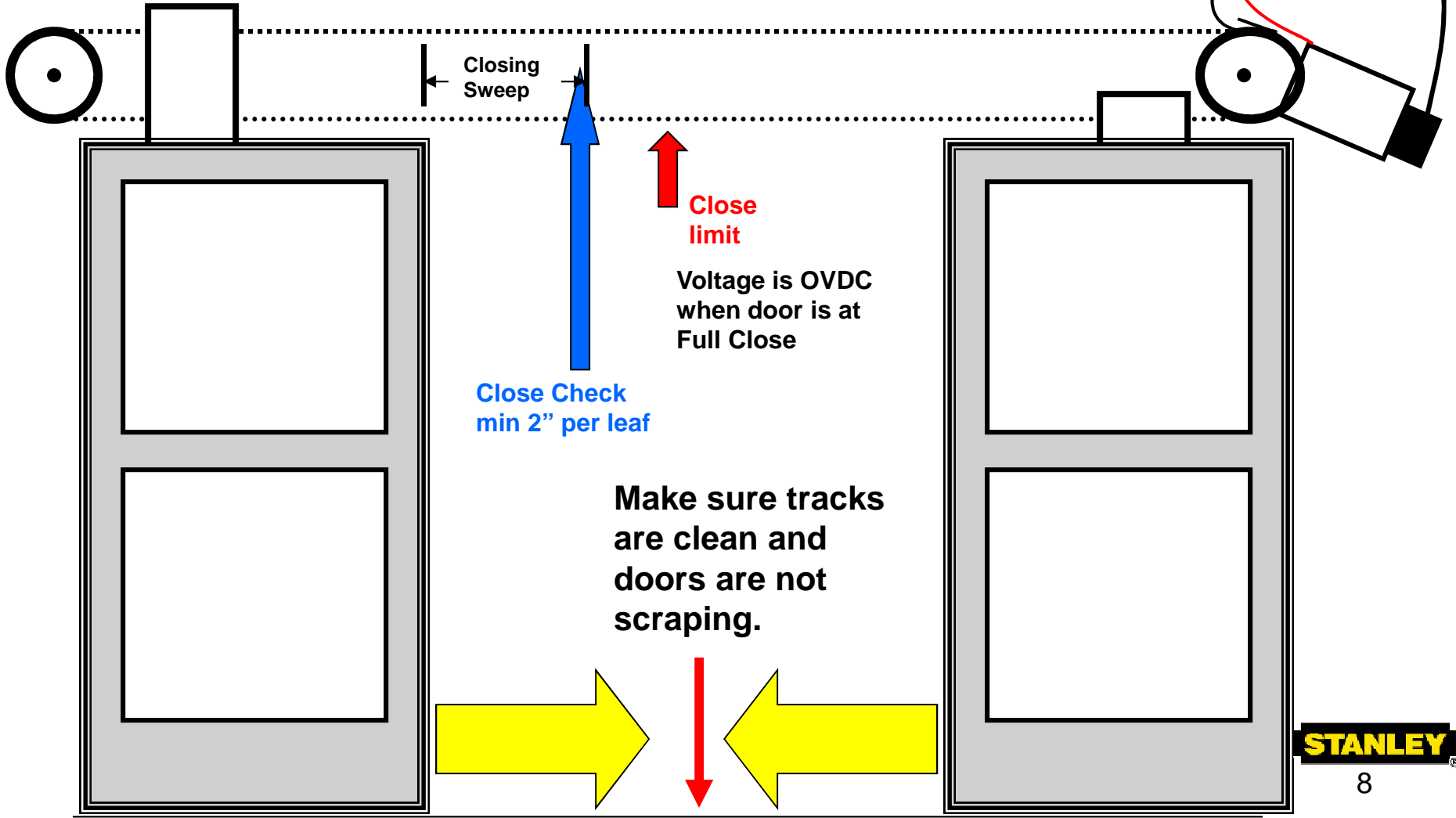
Control box

ENCODER

Opening Sweep

Open Check

Open limit

Voltage is OVDC when door is at Open Limit

Voltage drops from Open sweep to Back Check

Make sure tracks are clean and doors are not scraping.

STANLEY®

7

Tall carrier bracket must be on LH panel in Bi-part applications

ENCODER

Control box

Polarity reverses on motor voltage from closing to opening sweeps.

+   **-**

Closing Sweep

Close limit

Voltage is OVDC when door is at Full Close

Close Check min 2" per leaf

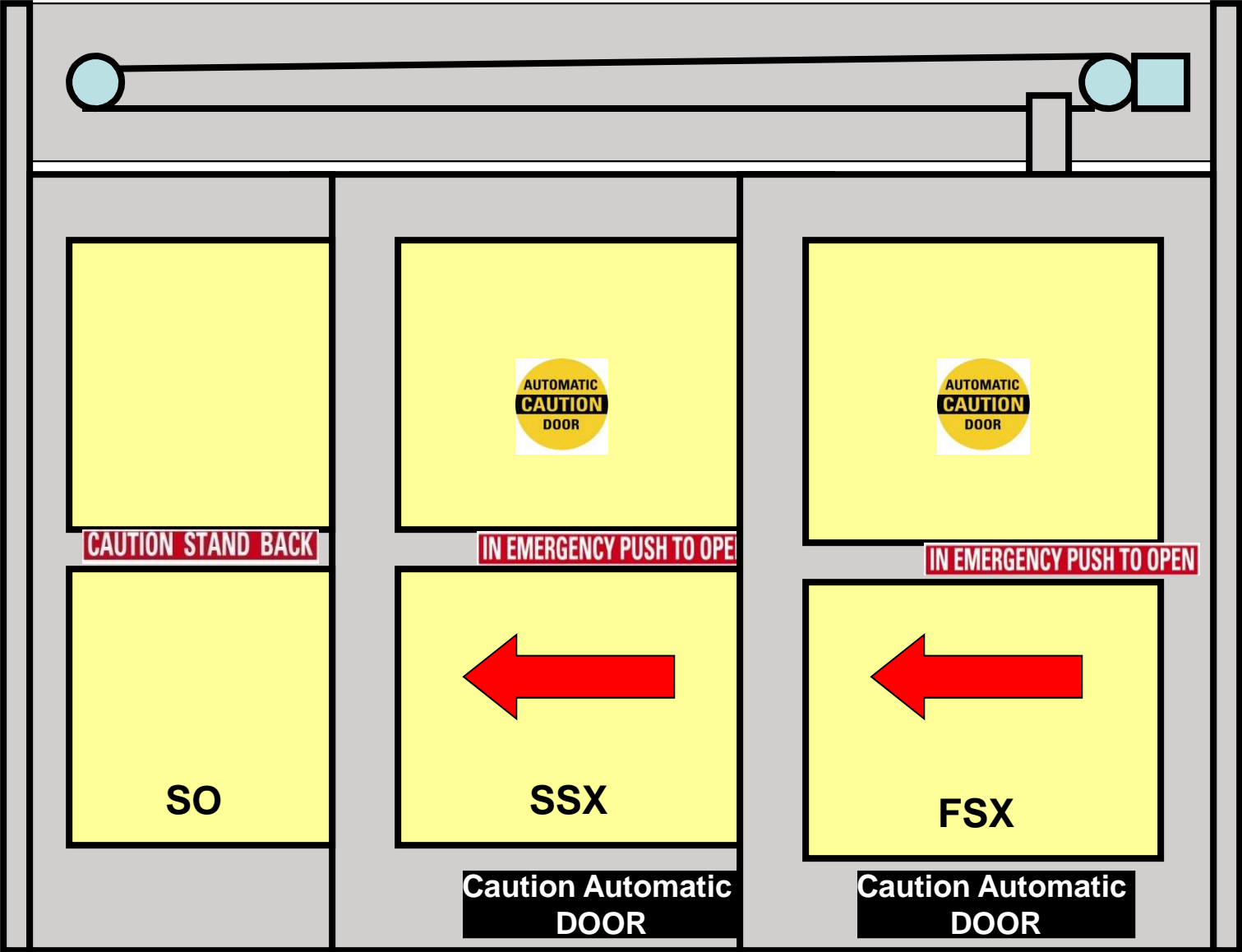**Make sure tracks are clean and doors are not scraping.**

STANLEY

8

Stanley 5200 Telescopic Single Slide Door (*Only SX panels breakout*).

INTERIOR VIEW

IN EMERGENCY PUSH TO OPEN

SX

X

O

Caution Automatic DOOR

Caution Automatic DOOR

STANLEY

9
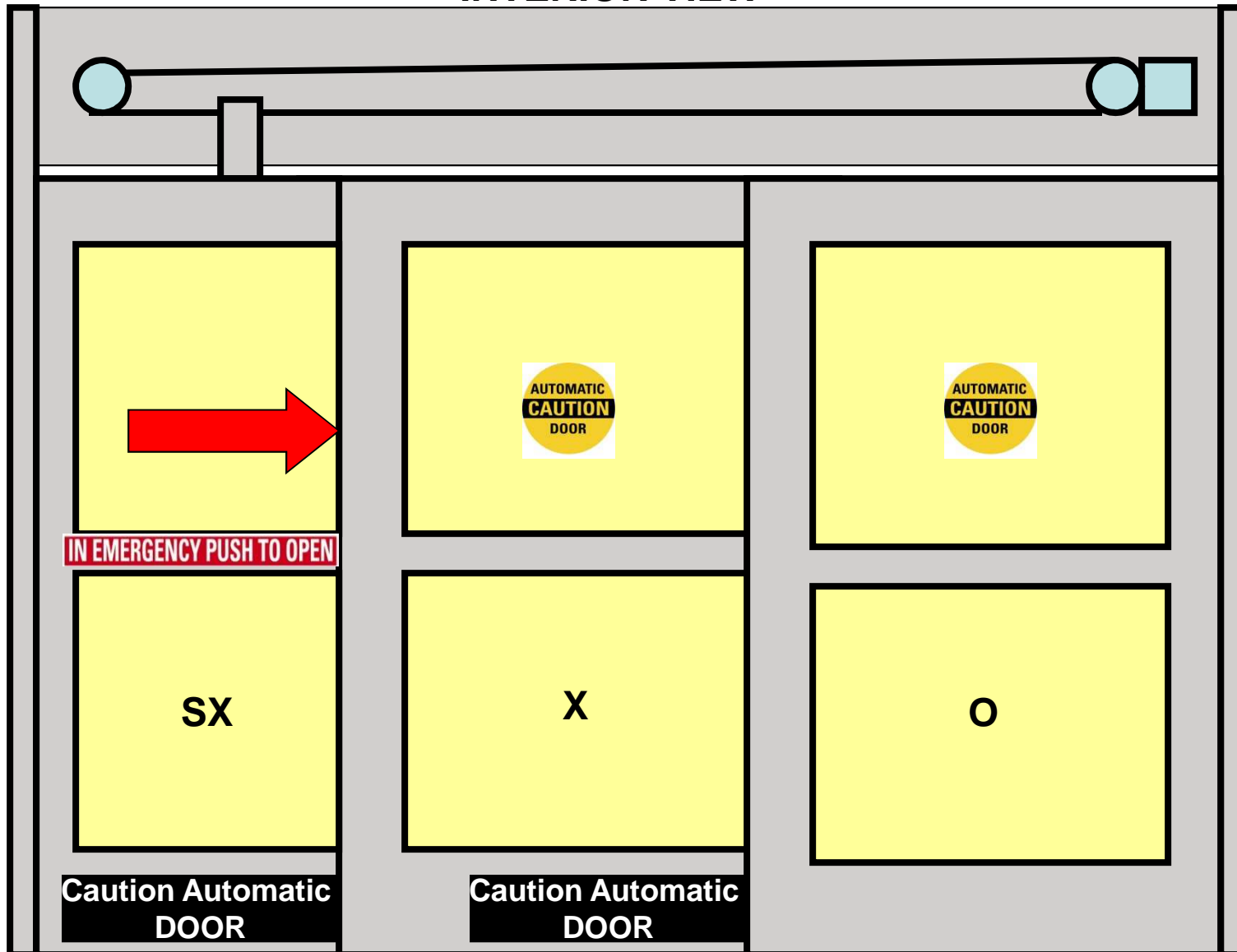
Stanley 5300 Telescopic Single Slide Door, Full Break out.

CAUTION STAND BACK

IN EMERGENCY PUSH TO OPEN

IN EMERGENCY PUSH TO OPEN

AUTOMATIC CAUTION DOOR

AUTOMATIC CAUTION DOOR

SO

SSX

FSX

Caution Automatic DOOR

Caution Automatic DOOR

STANLEY

MC521PRO Control box for Sliding automatic doors
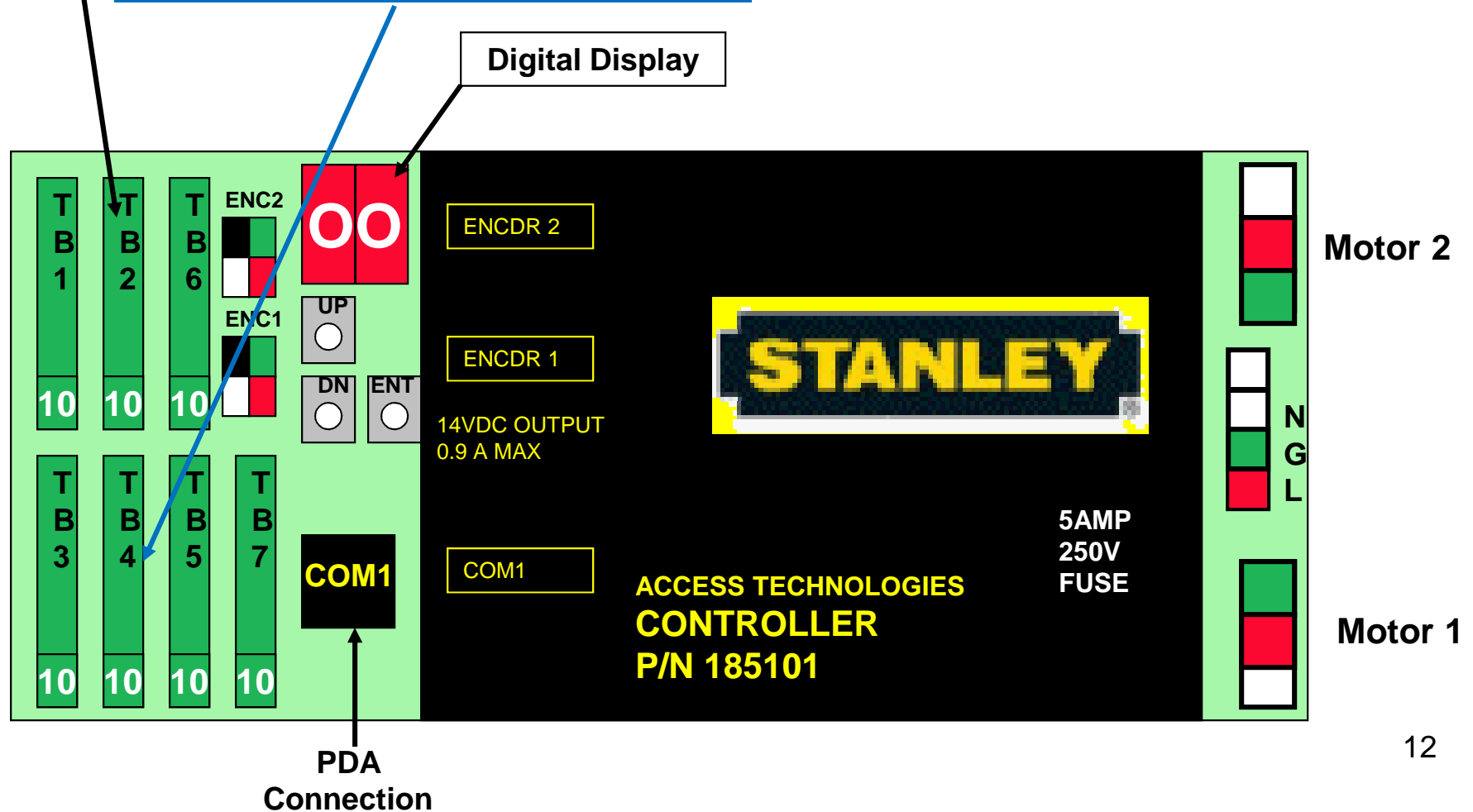
With optional ECO Switch.
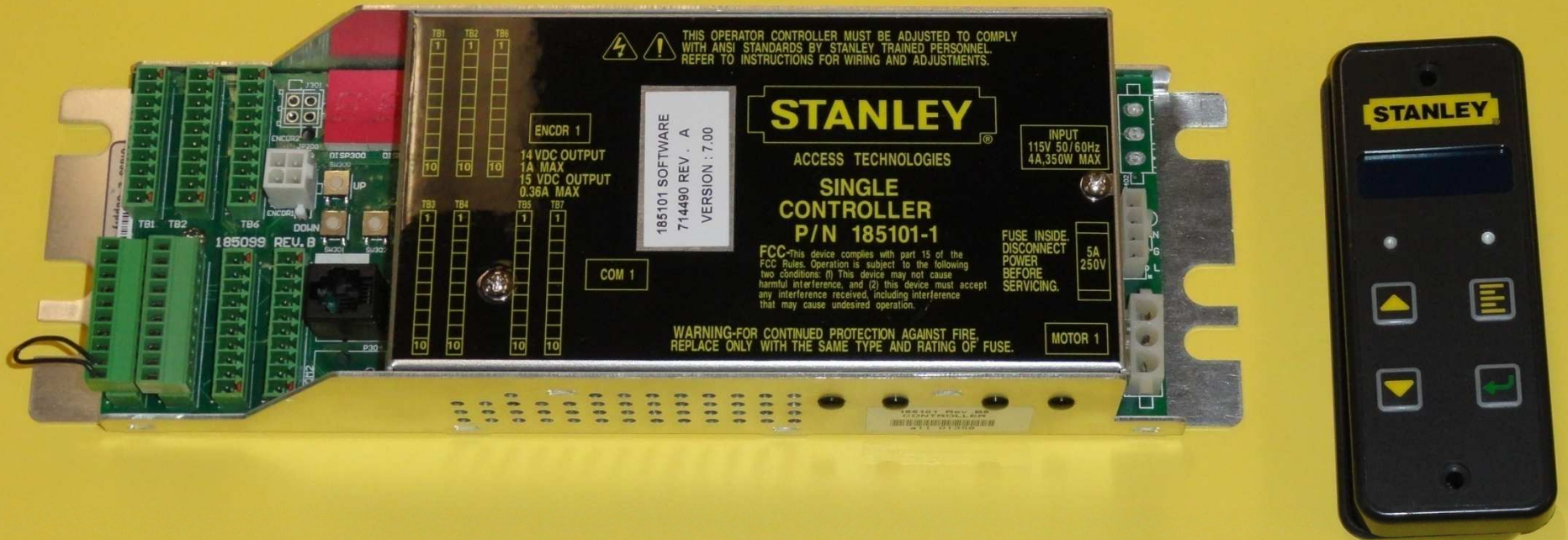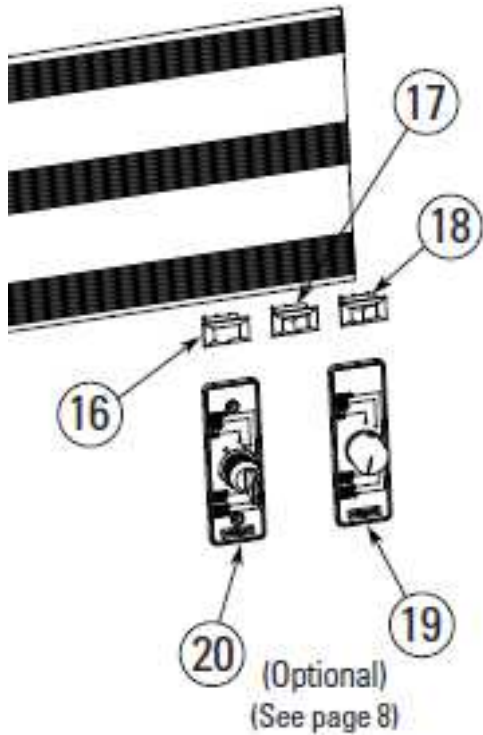
MC-521 PRO P/N 185101

TERMINAL BLOCKS 1 THRU 7

Note: Terminals are not in sequence

One – Two – Six on top row,

Three – Four – Five – Seven on bottom row.

Digital Display

T B 1 — 10	

ENC2

ENC1

UP

DN **ENT**

ENCDR 2

ENCDR 1

14VDC OUTPUT
0.9 A MAX

COM1

COM1

STANLEY

ACCESS TECHNOLOGIES
CONTROLLER
P/N 185101

5AMP
250V
FUSE

Motor 2

N
G
L

Motor 1

TB1 — 10
TB2 — 10
TB6 — 10
TB3 — 10
TB4 — 10
TB5 — 10
TB7 — 10

PDA
Connection

12

16	713080	SWITCH - ROCKER ONEWAY/RED OPEN
17	713081	SWITCH - ROCKER POWER W/LIGHT
18	713082	SWITCH - ROCKER AUTO/CLS/OPEN
19a	313719	6 POSITION KNOB SWITCH ASSY W/ HARNESS
	413550	6 POSITION KNOB SWITCH (Only)
19b	413960	4 POSITION KNOB SWITCH W / HARNESS
20a	313720	6 POSITION KEY SWITCH ASSY W/ HARNESS
	413584	6 POSITION KEY SWITCH (Only)
	714119	KEYS (ONLY) FOR 6 POSITION SWITCH
20b	313720	4 POSITION KEY SWITCH W/ HARNESS

Step down transformer only needed when incoming power exceeds normal 110vac
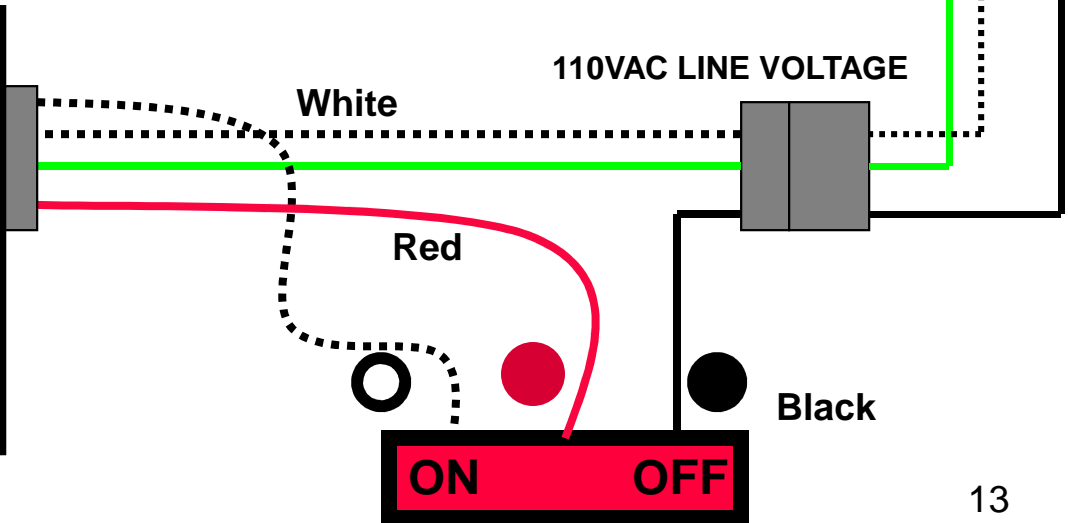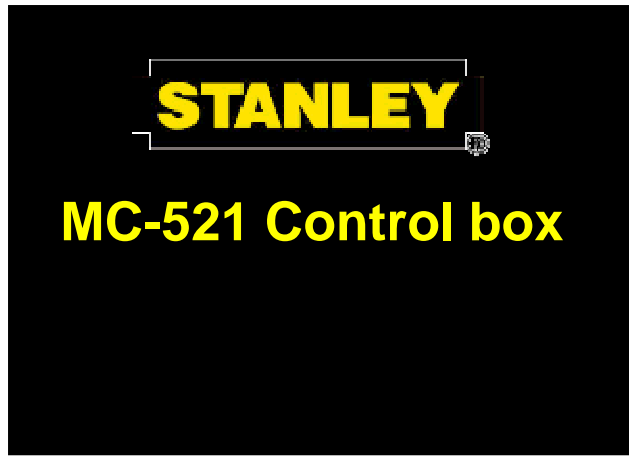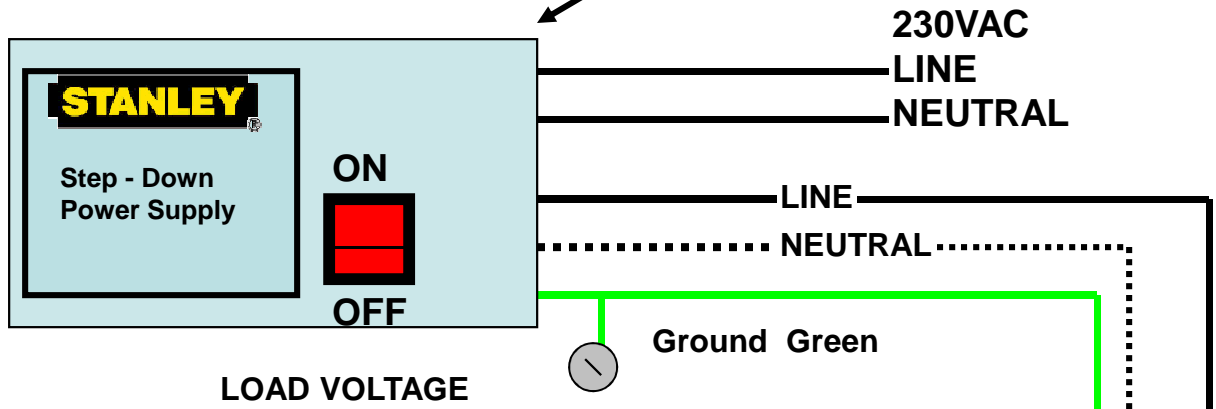
230VAC
LINE
NEUTRAL

STANLEY

Step - Down Power Supply

ON

OFF

LINE
NEUTRAL

Ground Green

LOAD VOLTAGE

110VAC LINE VOLTAGE

MC-521 Control box

STANLEY

White

Red

Black

ON   OFF

13

Rotary switch / Key switch
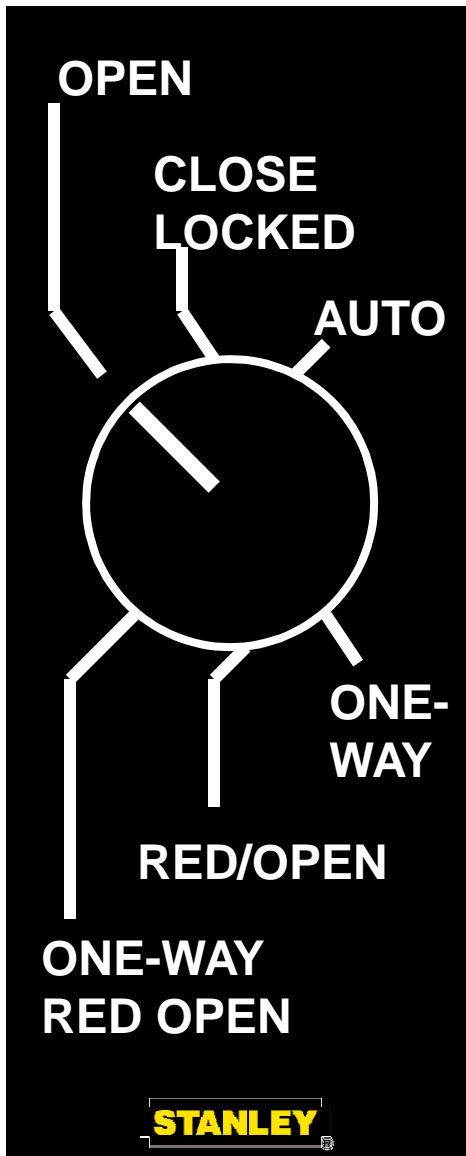
OPEN, the door will open or if open will remain open until the switch function is changed. The troubleshoot screen will show TB-2 #1 BLACK

CLOSE/LOCKED, the door will close and remain closed. If a solenoid lock is installed it will latch the door. The door must be in this position to complete an FIS. The troubleshoot screen will have TB-2 terminals #1, #3, #5 & #7 WHITE.

AUTOMATIC, the door will run normally with sensors or activation/safety devices working. The troubleshoot screen will have TB-2 #3 and #5 BLACK

ONE-WAY, the sensors using TB-4 terminals #7- #8 will be inhibited when the doors are closed. When no lock is installed you must has a DPS installed and the contacts of TB-5 #7 and #8 must be shorted contact when the doors are closed and open contact all other times.
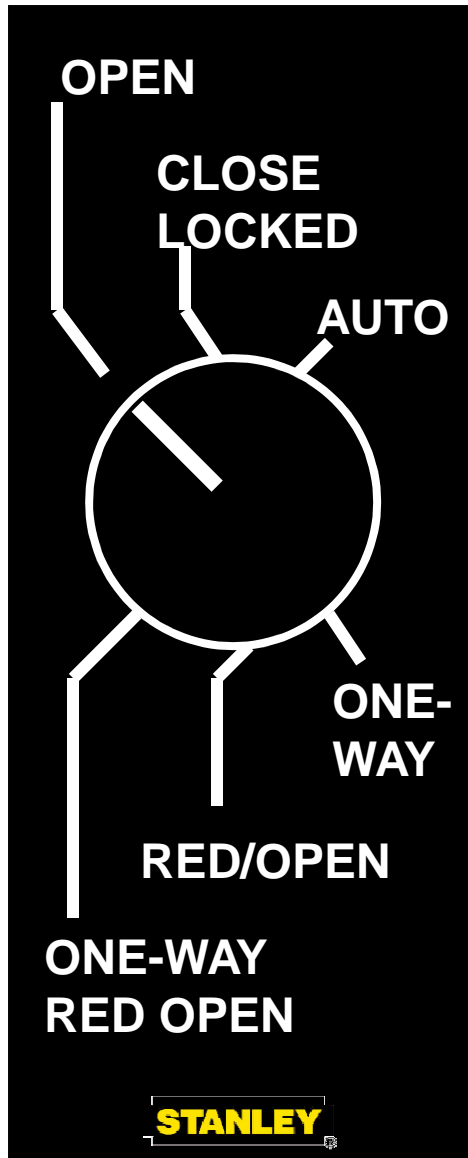
RED/OPEN, the door will only open partially. This is set on your palm or with the Index-Value buttons.

ONE-WAY/RED OPEN, the door will only open partially and will only accept one way traffic.

Rotary Function Switch States for TB2

	Hold Open	Closed/ Locked	Automatic	Oneway	Reduced	Reduced/ Oneway
TB2-1	■					
TB2-3			■		■	
TB2-5			■	■	Don't care	Don't care
TB2-7					■	■

Rotary switch / Key switch

OPEN

CLOSE LOCKED

AUTO

ONE-WAY

RED/OPEN

ONE-WAY RED OPEN

STANLEY

STANLEY

TB-2

Black (HOLD OPEN) — 1

Yellow (COMMON) — 2

Red — AUTOMATIC — 3

Note*

4

Orance (COMMON)

5

Brown (ONE-WAY)

6

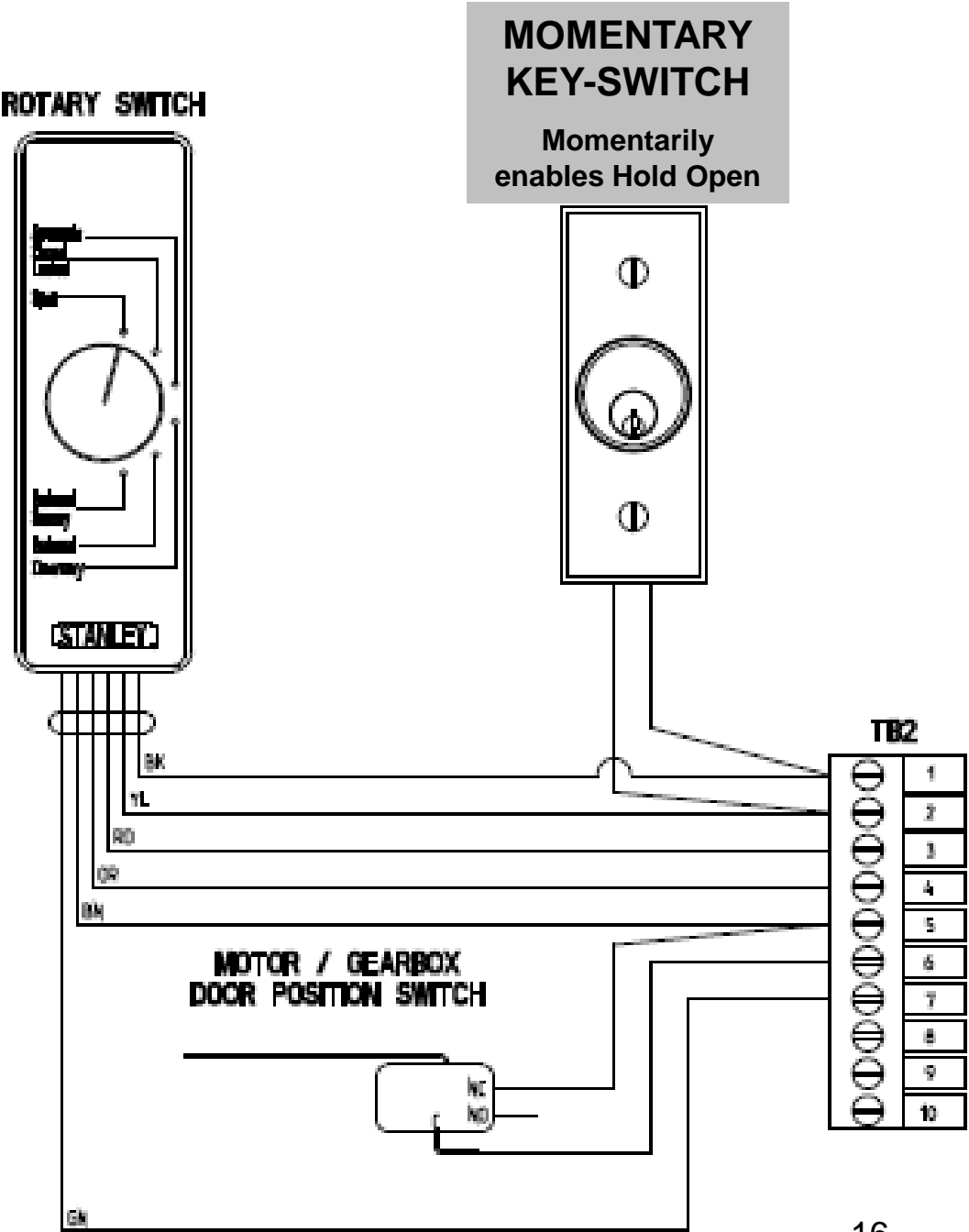Green (REDUCED OPEN) — 7

8

9

10
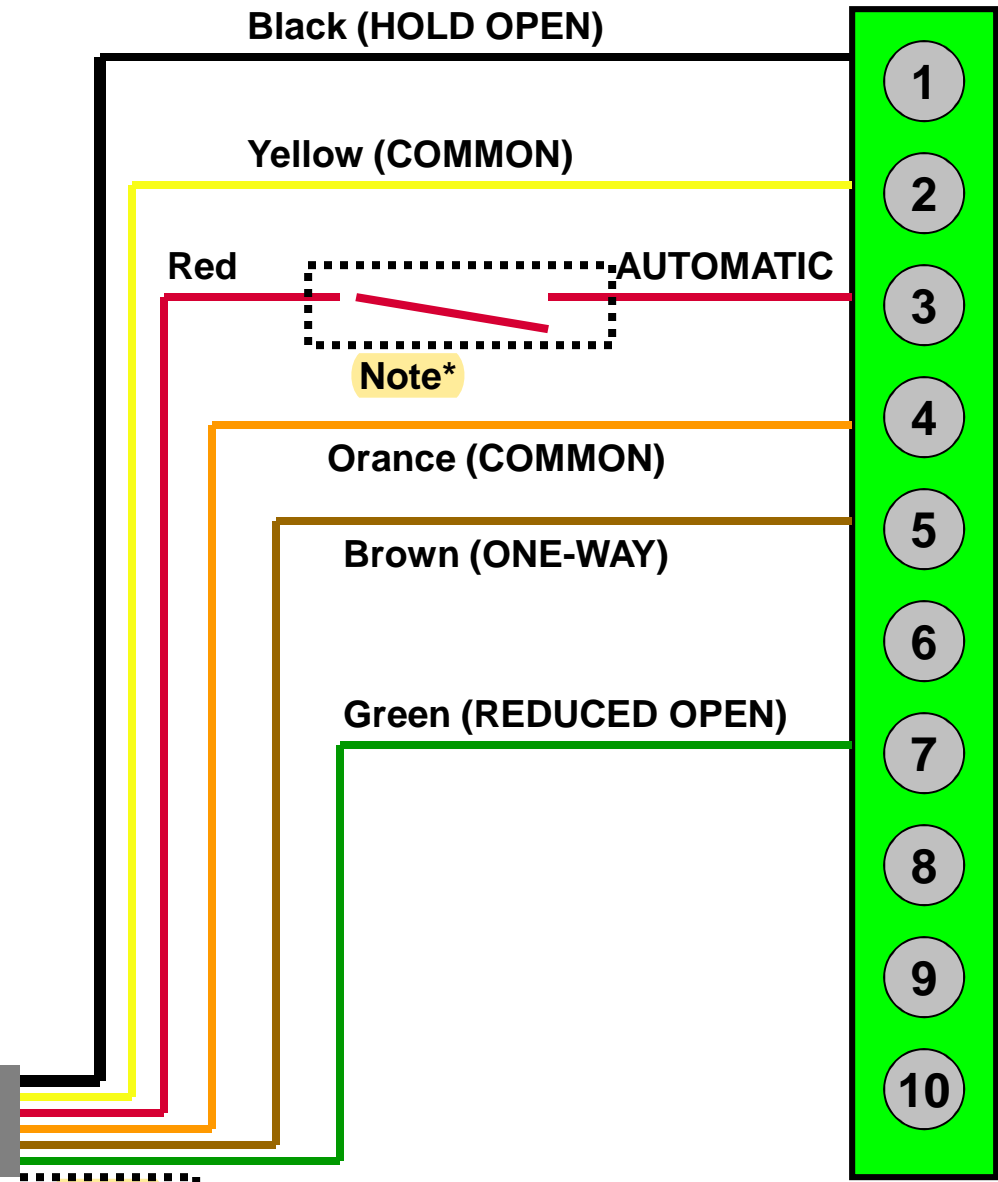
Note* To remotely put door into one way, break red wire leave function switch in automatic.

15

Remote Activation in Closed Lock
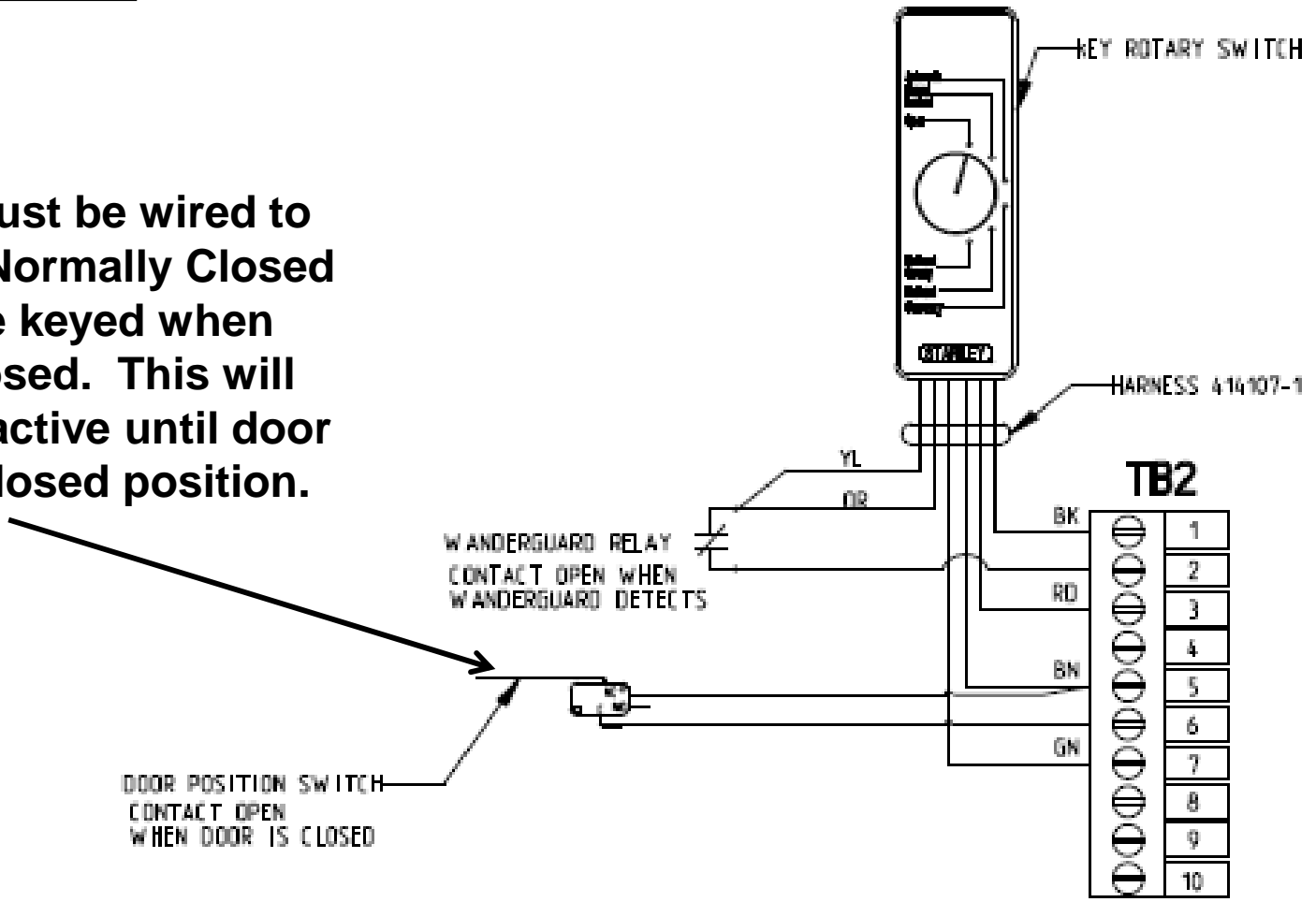
With Rotary Switch

To remotely activate the slide door when in close and lock:

Belt switch must be wired to Common and Normally Closed and must be keyed when doors are closed. This will keep sensors active until door reaches full closed position.

ROTARY SWITCH

STANLEY

TB2

1
2
3
4
5
6
7
8
9
10

BK
YL
RD
OR
BN

MOTOR / GEARBOX
DOOR POSITION SWITCH

NC
NO

GN

16

WANDERGUARD

With Rotary Switch

Belt switch must be wired to Common and Normally Closed and must be keyed when doors are closed. This will keep sensors active until door reaches full closed position.

KEY ROTARY SWITCH

STANLEY

HARNESS 414107-1

YL

OR

TB2

WANDERGUARD RELAY
CONTACT OPEN WHEN
WANDERGUARD DETECTS

BK

RD

BN

GN

| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |

DOOR POSITION SWITCH
CONTACT OPEN
WHEN DOOR IS CLOSED

ROCKER SWITCHES

NOTE: *During FIS set Function Switch Type to "Switches"*

3 Pos. Rocker switch in CLOSE position

In this position the door will close if open and remain closed, if equipped with a solenoid lock it will engage.
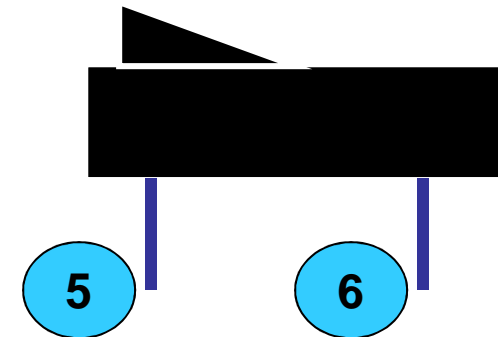
The switch must be in this position to begin an FIS.

Tb-2 term#1 yellow   term#2 Orange   term#3 Violet

H/O   CLOSE   AUTO

1

2

3
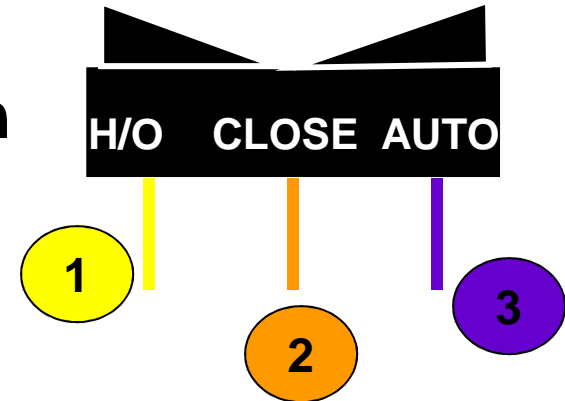
ONE WAY TRAFFIC ON//OFF switch used

for door activation from one side only. Sensors will remain active on side not intended for use only when door is opened from the direction intended for use.
TB-2 terminals 5 and 6

5

6

Red ON//OFF rocker switch used for

reduced open. Door will open to preset width. This switch is used to keep inclement weather out heat or air in.
TB-2 terminals 7 and 8

7

8

STANLEY
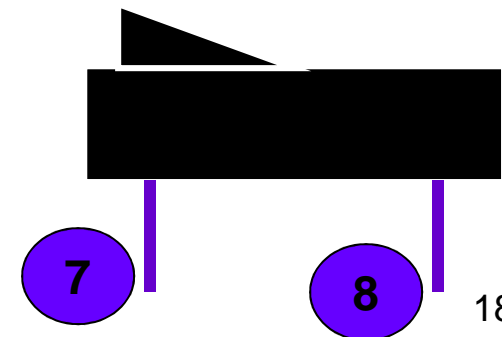
ROCKER SWITCHES

TB-2

ON / off /HO

Yellow (HOLD OPEN) — 1

Orange (COMMON) — 2

Brown (AUTOMATIC) — 3

— 4

ENTER yes / no

Blue   ENTER ONE WAY — 5

Blue   ONE WAY COMMON — 6

RED yes / no

Violet (REDUCED OPENING) — 7

Violet (COMMON) — 8

— 9

— 10

Rocker Function Switch States for TB2

	Hold Open	Closed/ Locked	Automatic	Oneway	Reduced	Reduced/ Oneway
TB2-1	■					
TB2-3			■	■	■	■
TB2-5	Don't care	Don't care	■		■	
TB2-7	Don't care	Don't care			■	■

STANLEY®

19

Rocker Switches MC521 – Slide Door

TB-2

TB-2
troubleshooting
screen

Door in AUTOMATIC
TB-2 terminal #3 will
be BLACK

YELLOW (HOLD OPEN)

ORANGE (COMMON)

BROWN (AUTOMATIC)

ON / OFF /HO

BLACK BOX INDICATES A CLOSED CIRCUIT

WHITE BOX INDICATES AN OPEN CIRCUIT

GR AY BOX = COMMON OR POWER

| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |
| 7 |
| 8 |
| 9 |
| 10 |

STANLEY

Rocker Switches MC521 – Slide Door

TB-2

TB-2 troubleshooting screen

YELLOW (HOLD OPEN) — 1

ORANGE (COMMON) — 2

Door in ONE WAY

BROWN (AUTOMATIC) — 3

terminal # 3 BLACK — 3

ON / OFF /HO

ENTER SWITCH (No)

terminal #5 WHITE — 5

7

WHITE BOX INDICATES AN OPEN INPUT

TB-2 terminals: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

STANLEY

21

Rocker Switches MC521 – Slide Door

TB-2

TB-2 troubleshooting screen

YELLOW (HOLD OPEN) — 1

ORANGE (COMMON) — 2

Door in

BROWN (AUTOMATIC) — 3

AUTOMATIC REDUCED OPENING

ON / OFF /HO

Terminal #3 BLACK — **3** — 4

— 5

Terminal #5 BLACK — **5** — 6

— 7

RED OPEN SWITCH (Yes)

Terminal #7 BLACK — **7** — 8

— 9

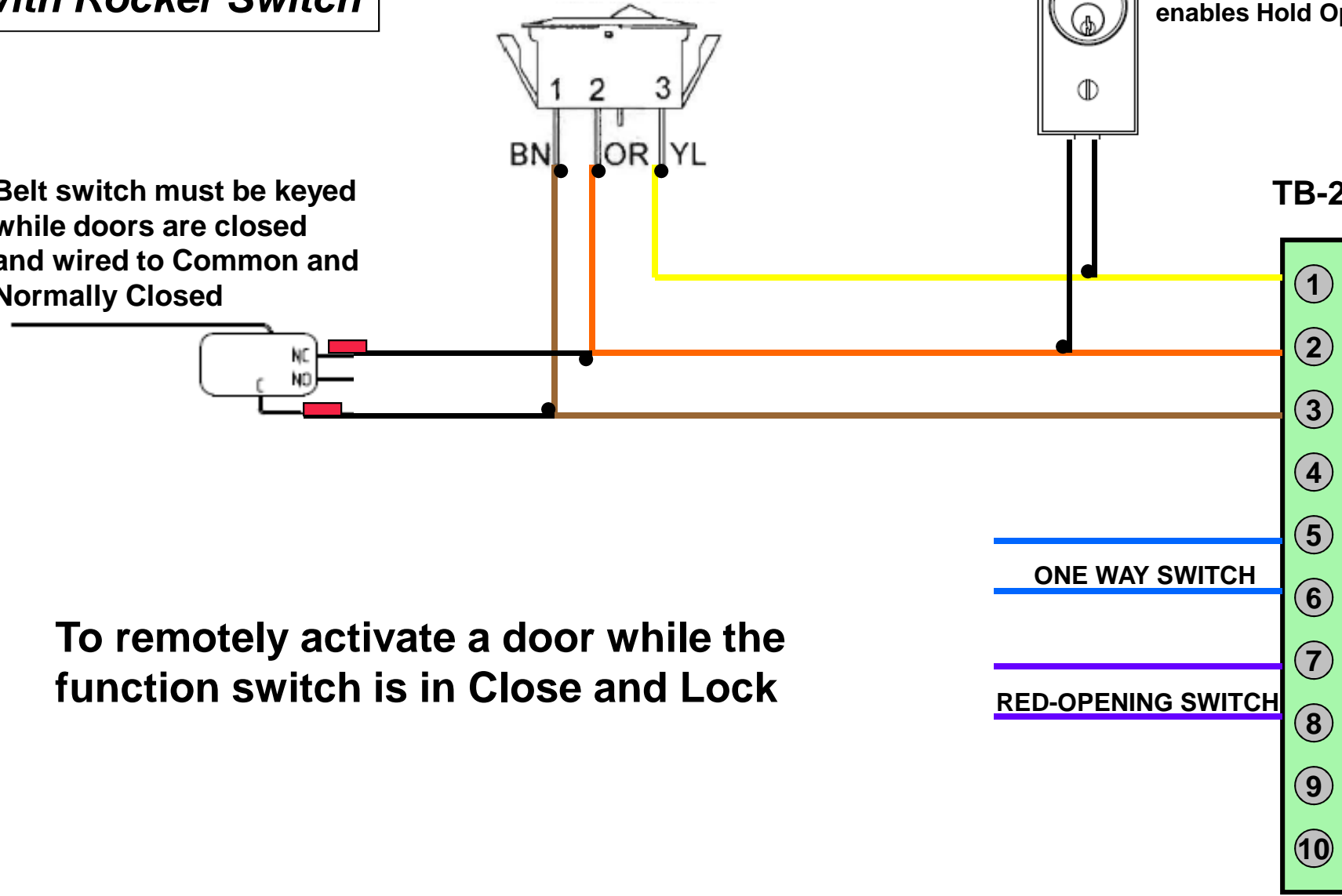**GRAY BOX INDICATES EITHER A COMMON OR POWER TERMINAL.**

— 10

STANLEY

22

Remote Activation in Closed Lock

With Rocker Switch

ON-OFF-HO SWITCH
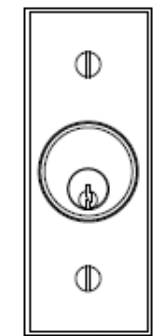
MOMENTARY KEY-SWITCH

Momentarily enables Hold Open

1   2   3

BN   OR   YL

Belt switch must be keyed while doors are closed and wired to Common and Normally Closed

NC

NO

C

TB-2

1
2
3
4
5
6
7
8
9
10

ONE WAY SWITCH

RED-OPENING SWITCH

To remotely activate a door while the function switch is in Close and Lock

23

OPTIONAL
FIRE ALARM SYSTEMS
OR
WANDERGUARD
SYSTEMS
(etc.)

TB-2

1 2 3

BN OR YL
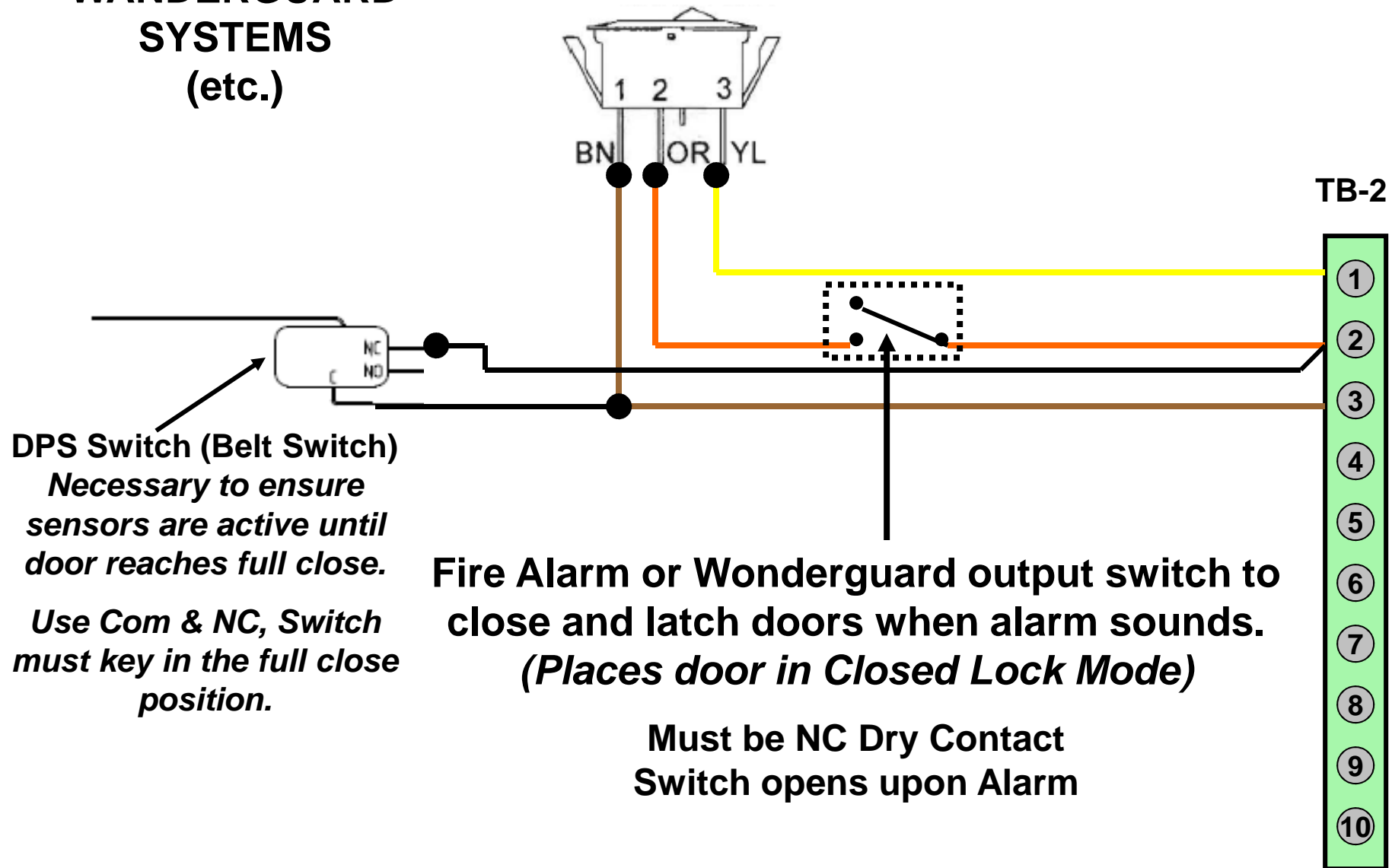
DPS Switch (Belt Switch)
Necessary to ensure sensors are active until door reaches full close.

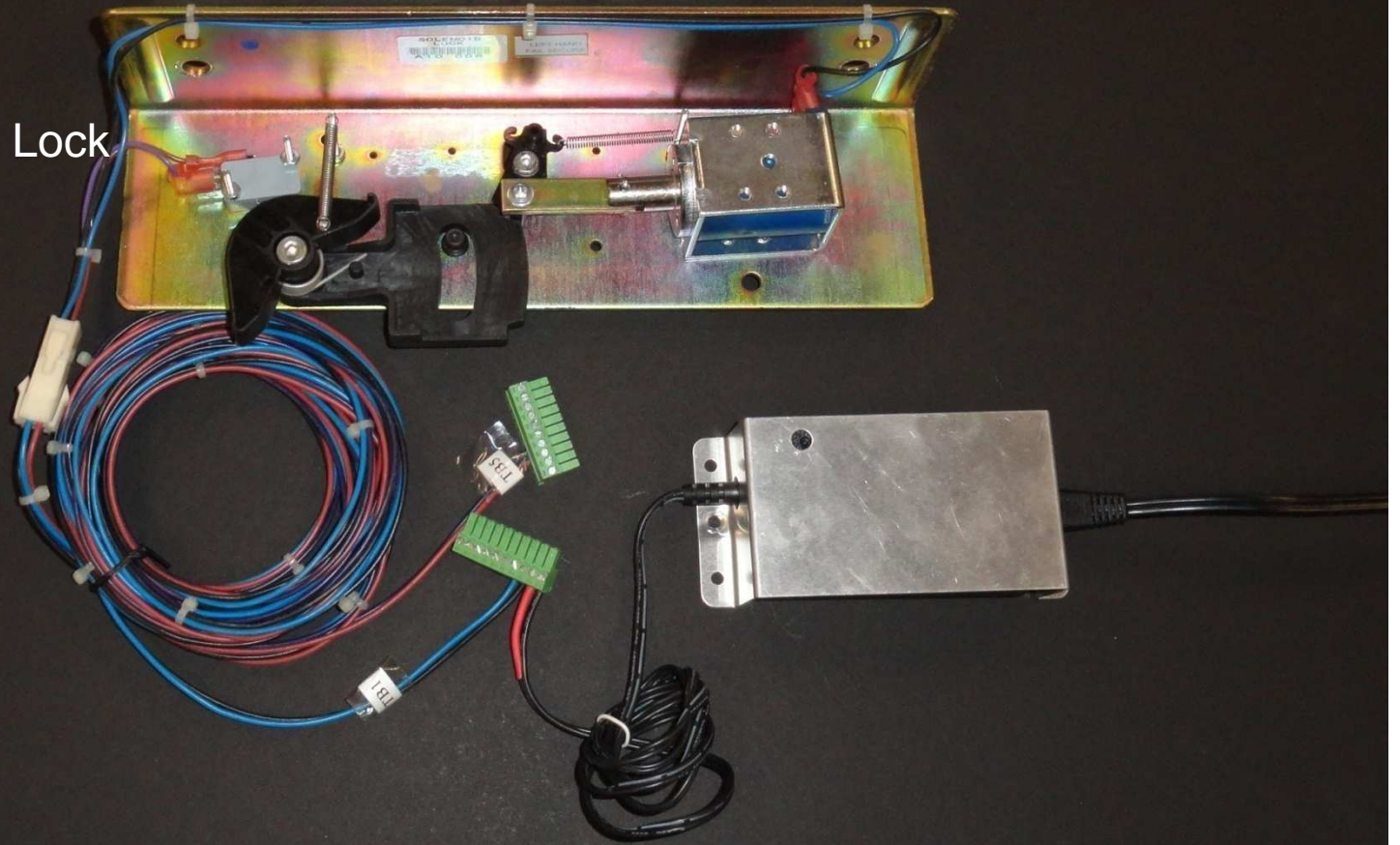*Use Com & NC, Switch must key in the full close position.*

Fire Alarm or Wonderguard output switch to close and latch doors when alarm sounds.
(Places door in Closed Lock Mode)

Must be NC Dry Contact
Switch opens upon Alarm
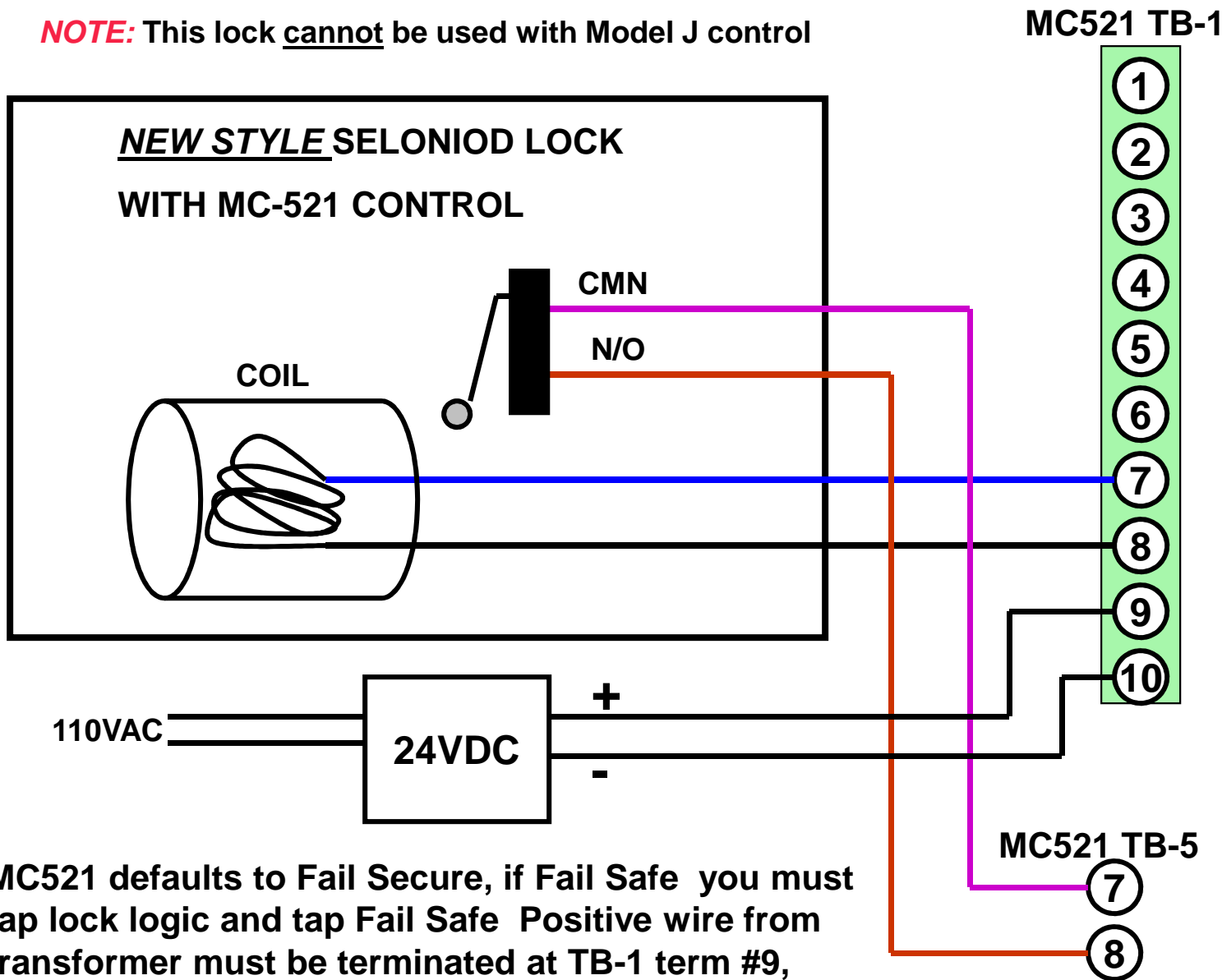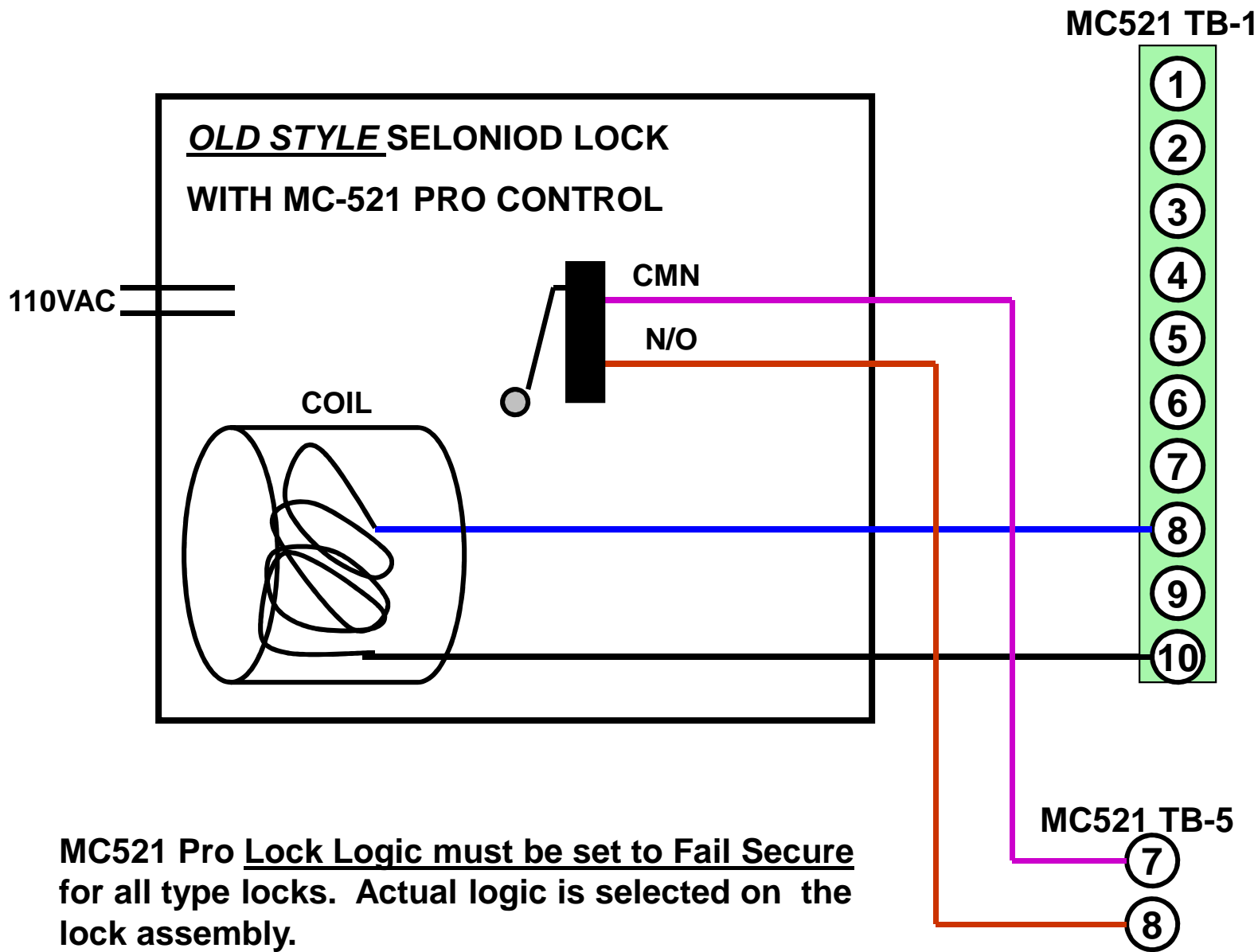
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

24

Old Style Solenoid Lock

New Style Solenoid Lock

NOTE: This lock <u>cannot</u> be used with Model J control

MC521 TB-1

NEW STYLE SELONIOD LOCK

WITH MC-521 CONTROL

CMN

N/O

COIL

110VAC

24VDC

+

−

**MC521 TB-5**

MC521 defaults to Fail Secure, if Fail Safe you must tap lock logic and tap Fail Safe Positive wire from transformer must be terminated at TB-1 term #9, Negative term #10. Purple and Brown wire from Micro switch is not needed on new MC521Pro.

STANLEY

26

MC521 TB-1

OLD STYLE SELONIOD LOCK

WITH MC-521 PRO CONTROL

110VAC

CMN

N/O

COIL

1
2
3
4
5
6
7
8
9
10

MC521 TB-5

7

8

MC521 Pro Lock Logic must be set to Fail Secure for all type locks. Actual logic is selected on the lock assembly.

STANLEY

STANLEY

CONTROL BOX
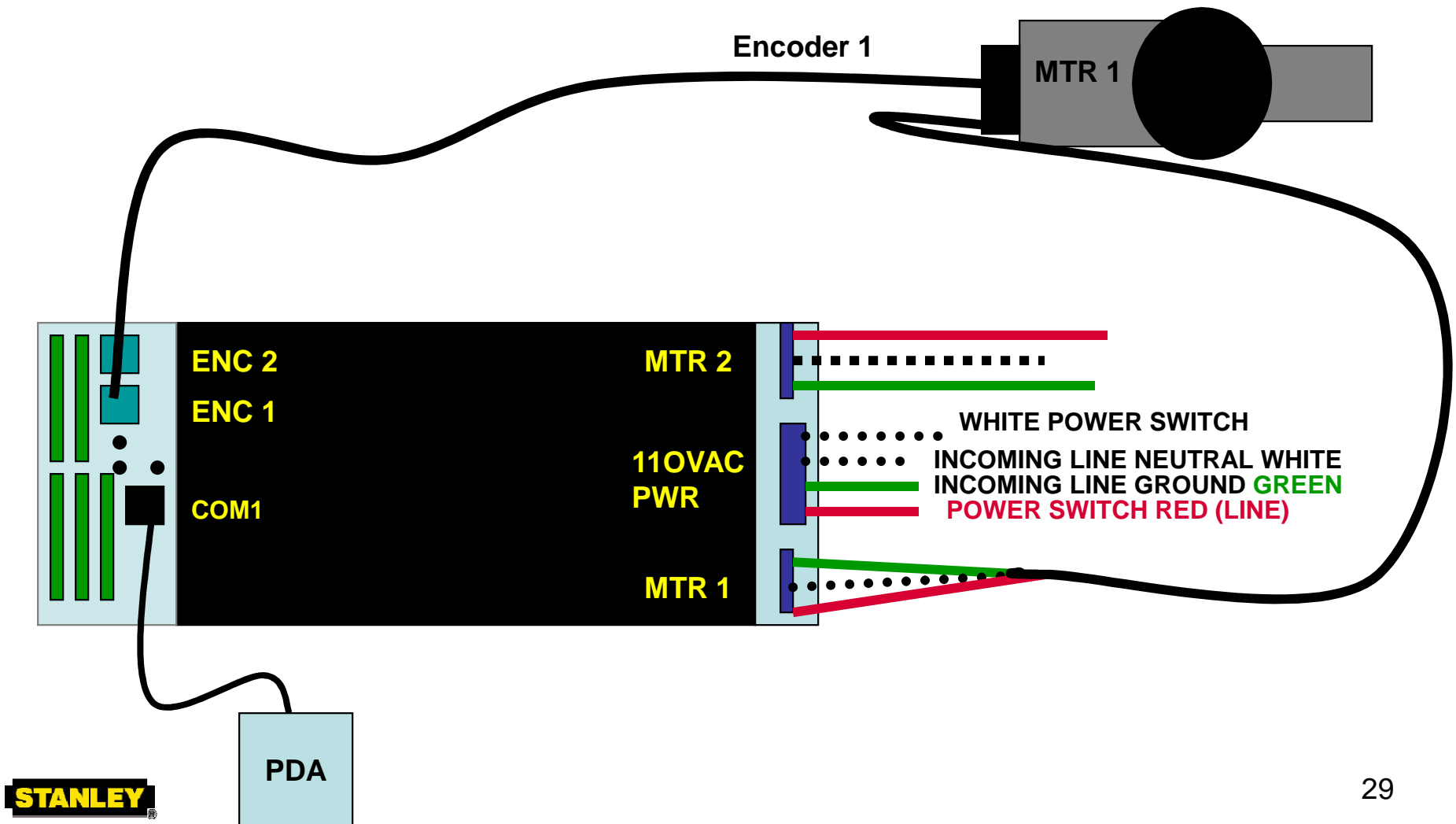
TB-3 term 9

TB-3 term #10
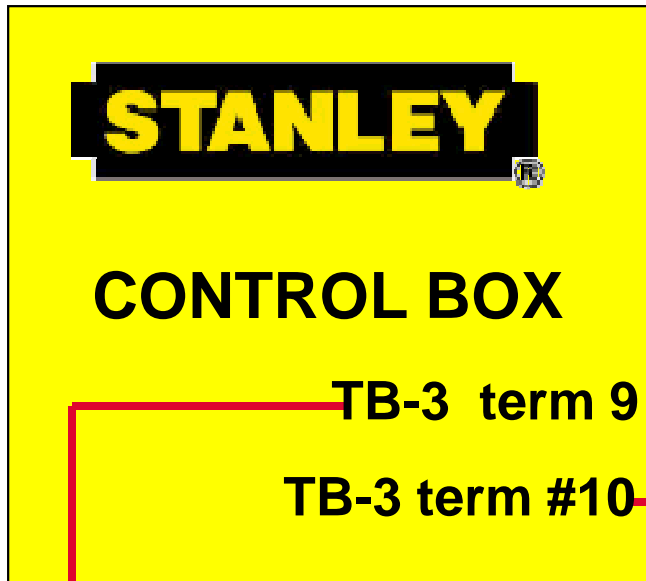
The breakout circuit on all STANLEY sliding or swinging doors is a **normally closed series circuit.** This circuit will open and stop the control box from electrically functioning if any switch is broken or opened by putting a door in the breakout position.
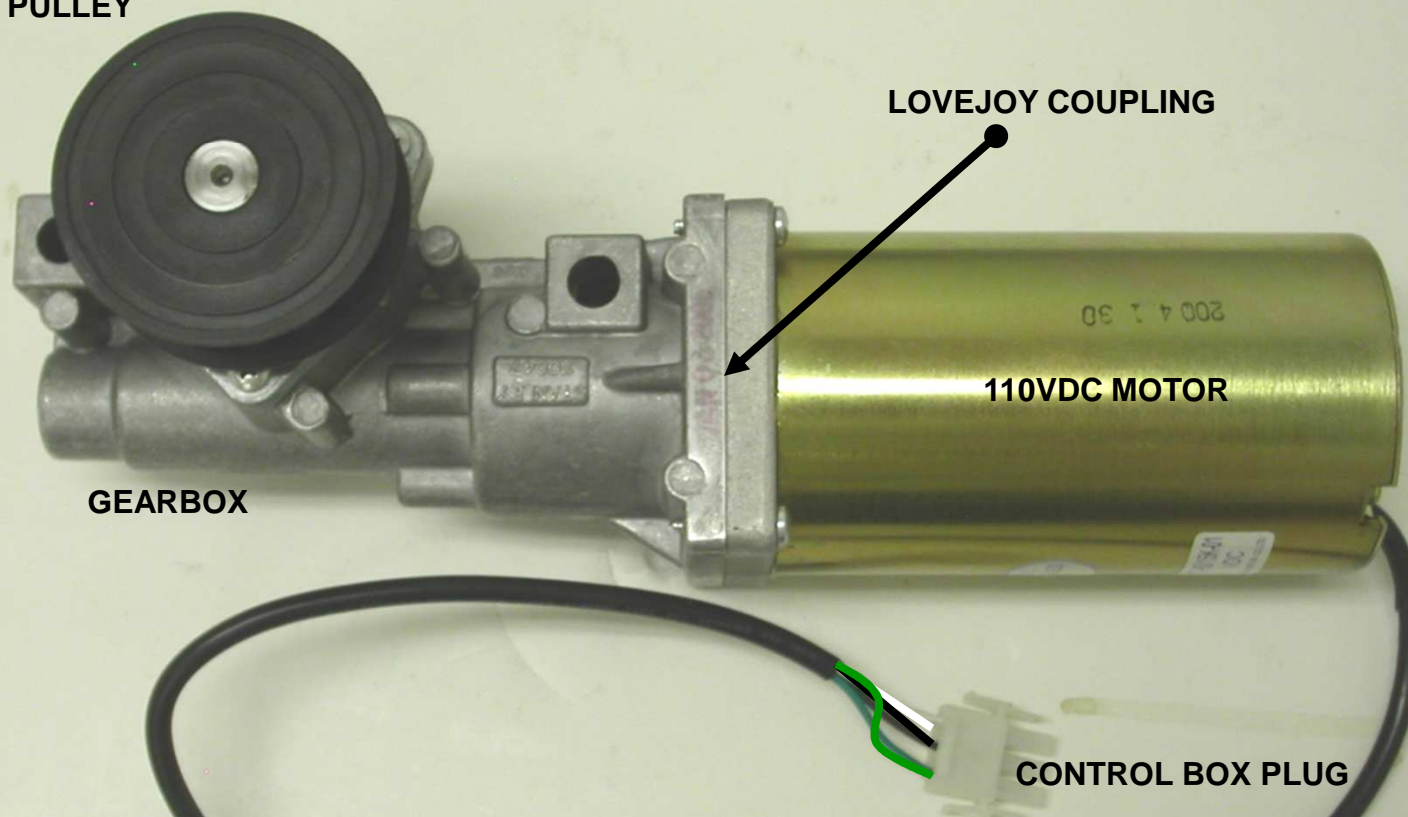
N/C **CMN**

CMN **N/C**

O **SX** **SX** **O**
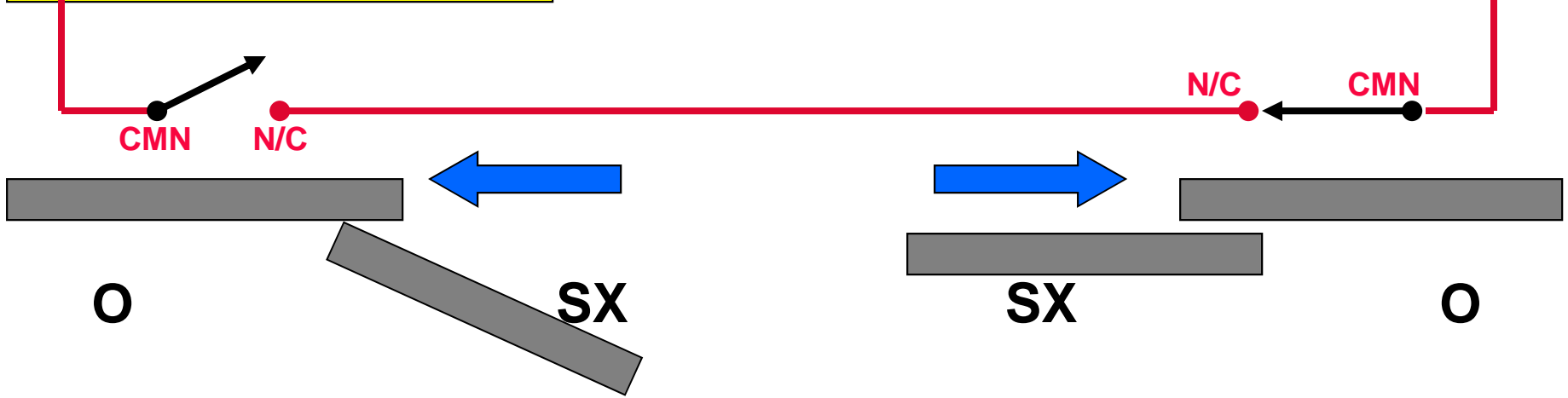
Make sure that all the sliding door panels are pushed in tightly against each other or the door will not function.

STANLEY

When using one or two motors on a Duraglide door, only one encoder is used. Motor 1 / Encoder 1. The slave motor (motor 2 input) if two motors are used has no encoder.
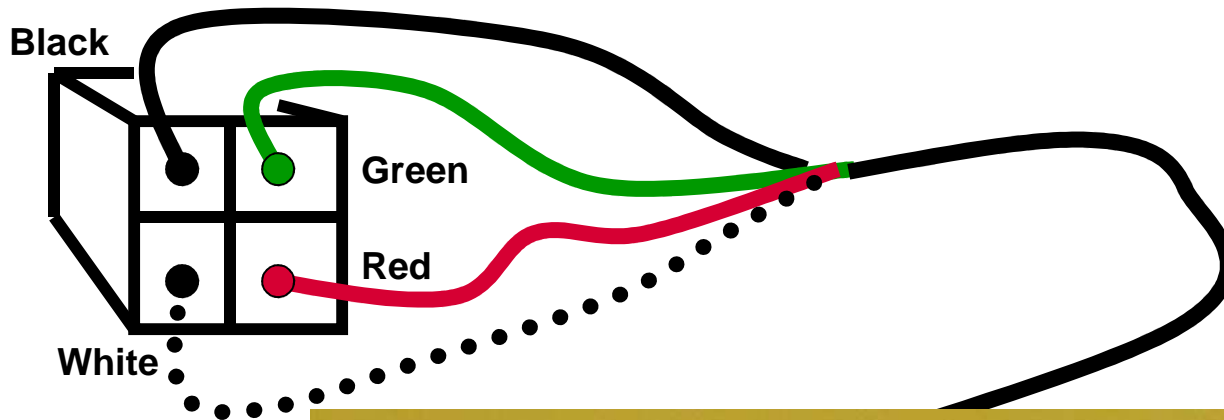
Encoder 1

MTR 1

ENC 2

ENC 1

COM1

MTR 2

11OVAC PWR

MTR 1

WHITE POWER SWITCH
INCOMING LINE NEUTRAL WHITE
INCOMING LINE GROUND GREEN
POWER SWITCH RED (LINE)

STANLEY

PDA

STANLEY

DURA-GLIDE MOTOR – GEAR BOX

MOTOR PULLEY

LOVEJOY COUPLING

110VDC MOTOR

GEARBOX

CONTROL BOX PLUG

To check a DC motor unplug motor plug from control, read continuity between the *black and white* wires, you should read approximately 13 ohms. *You may also use insulated needle nose pliers and with the motor plug unplugged short the black and white wires and move the door, you should feel heavy resistance to door movement open or close & should be smooth not jerky.*

Black

Green

Red

White

MC521 / MC521PRO ENCODER

Two Channel
Encoder (A/B)

T-0   T-1

A

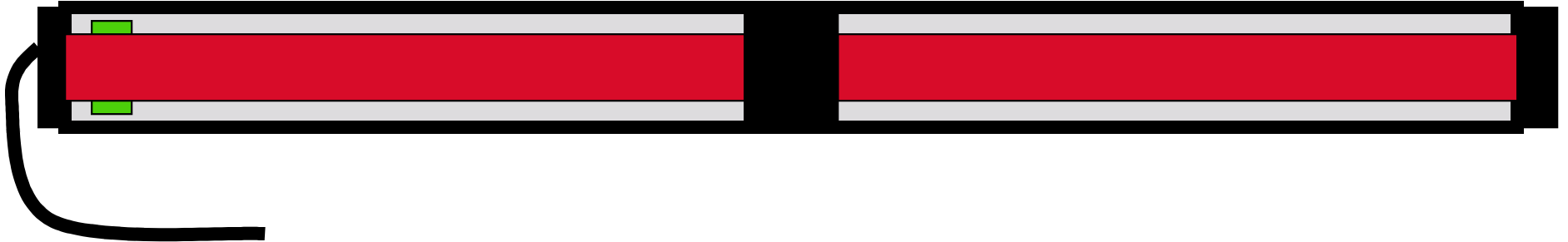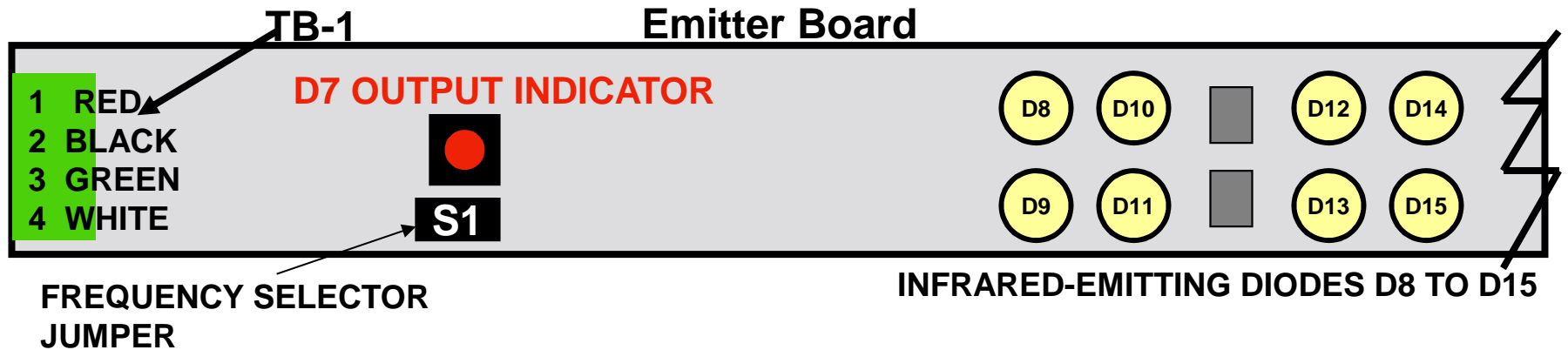B

A

B
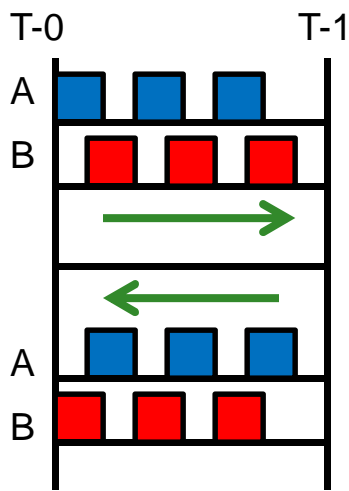
STANGUARD PRESENCE SENSOR

Under ANSI 156.10-2005 Dual safety beams must be installed with Stanguard sensing systems on sliding automatic door applications

A programmable active infrared (IR) presence sensing device.

a. A built in minimum 1.5 second hold open delay.

b. Automatic retuning. The sensor will automatically maintain its calibration and makes changes to its reference settings. If the sensor sits overnight or for long periods of time it may need to reinitialize.

c. Frequency shifting whenever two sensors are in close proximity or on the same door a jumper can be installed to eliminate interference between the two.

d. Zone width selection from narrow to wide openings.

e. Detection sensitivity from normal to high for taller openings.

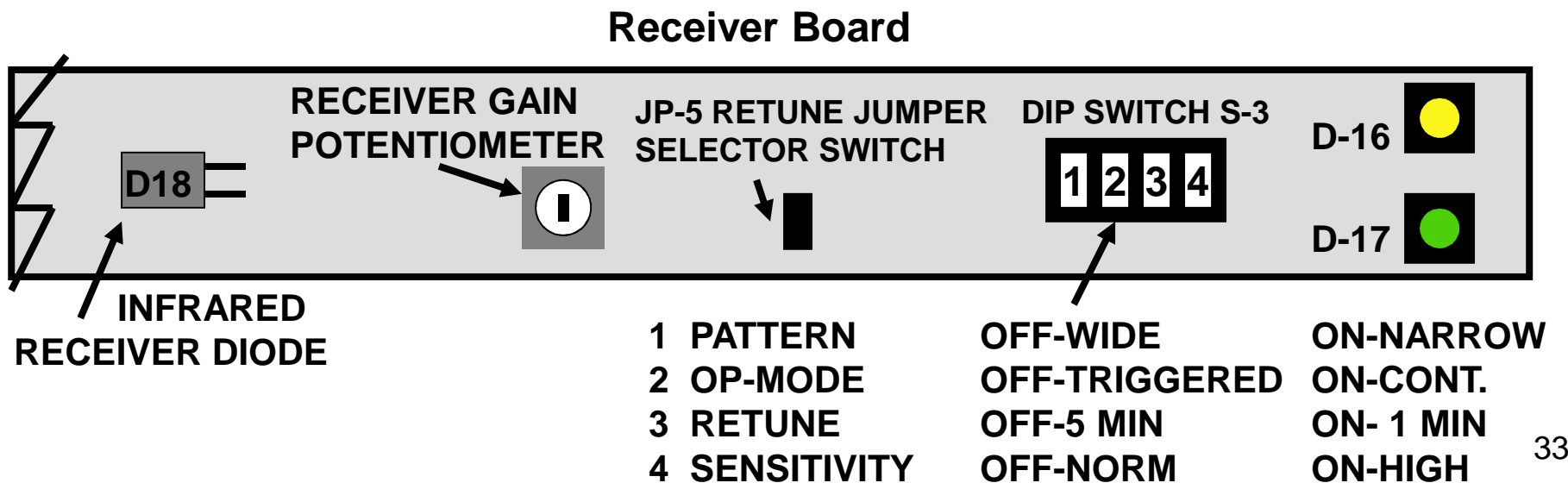f. Infrared receiver gain control. A potentiometer is provided to increase or decrease the IR receiver sensitivity.
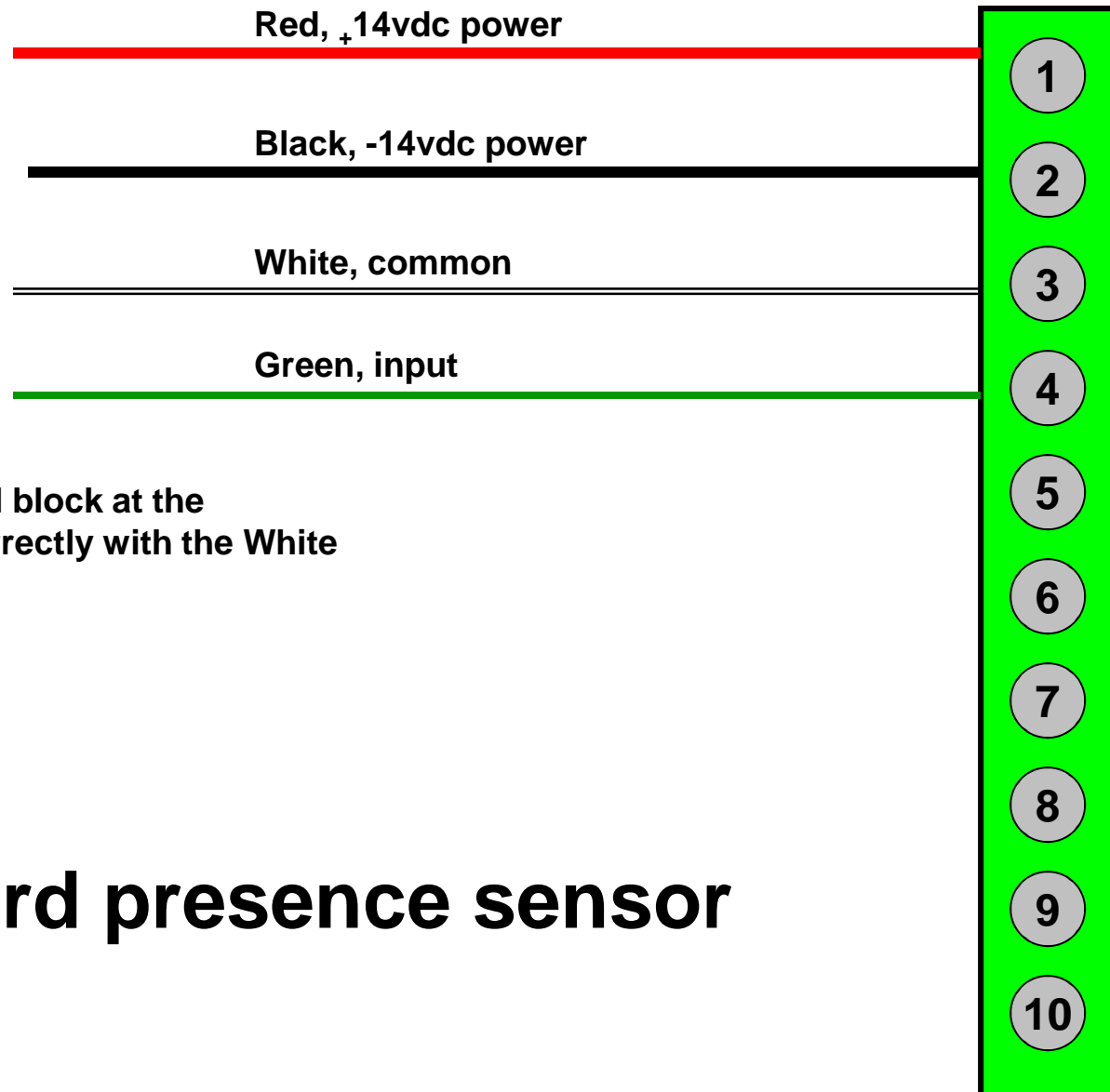
STANLEY

TB-1   Emitter Board

1 RED
2 BLACK
3 GREEN
4 WHITE

D7 OUTPUT INDICATOR

S1

D8   D10   D12   D14
D9   D11   D13   D15

FREQUENCY SELECTOR JUMPER

INFRARED-EMITTING DIODES D8 TO D15

D-7   OFF an activation signal is being sent to the door, ON no activation signal.

D-16   Indicates level of reflected light being received by the receiver diode. Yellow led may flash when the door is in the closed position.

D-17   Green OFF, no detection, Green ON, detection, Green FLASHING, retuning when door is closed the Green led should be on.

Receiver Board

D18

RECEIVER GAIN POTENTIOMETER

JP-5 RETUNE JUMPER SELECTOR SWITCH

DIP SWITCH S-3

1 2 3 4

D-16

D-17

INFRARED RECEIVER DIODE

1	PATTERN	OFF-WIDE	ON-NARROW
2	OP-MODE	OFF-TRIGGERED	ON-CONT.
3	RETUNE	OFF-5 MIN	ON- 1 MIN
4	SENSITIVITY	OFF-NORM	ON-HIGH

33

Red, +14vdc power

Black, -14vdc power

White, common

Green, input

1
2
3
4
5
6
7
8
9
10

Make sure that the terminal block at the Stanguard unit is wired correctly with the White and Green wires inverted.
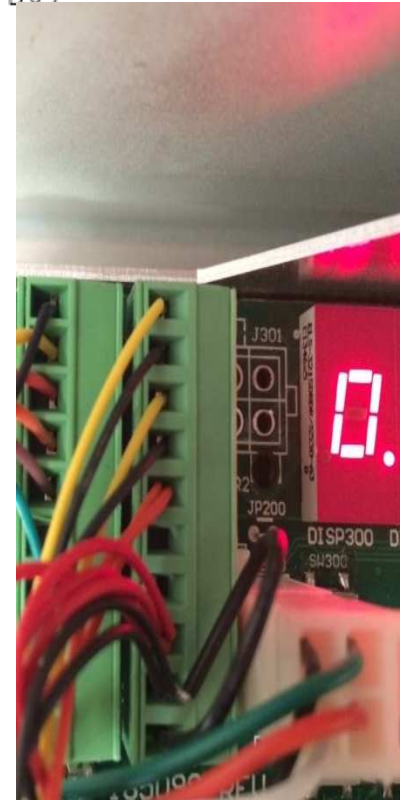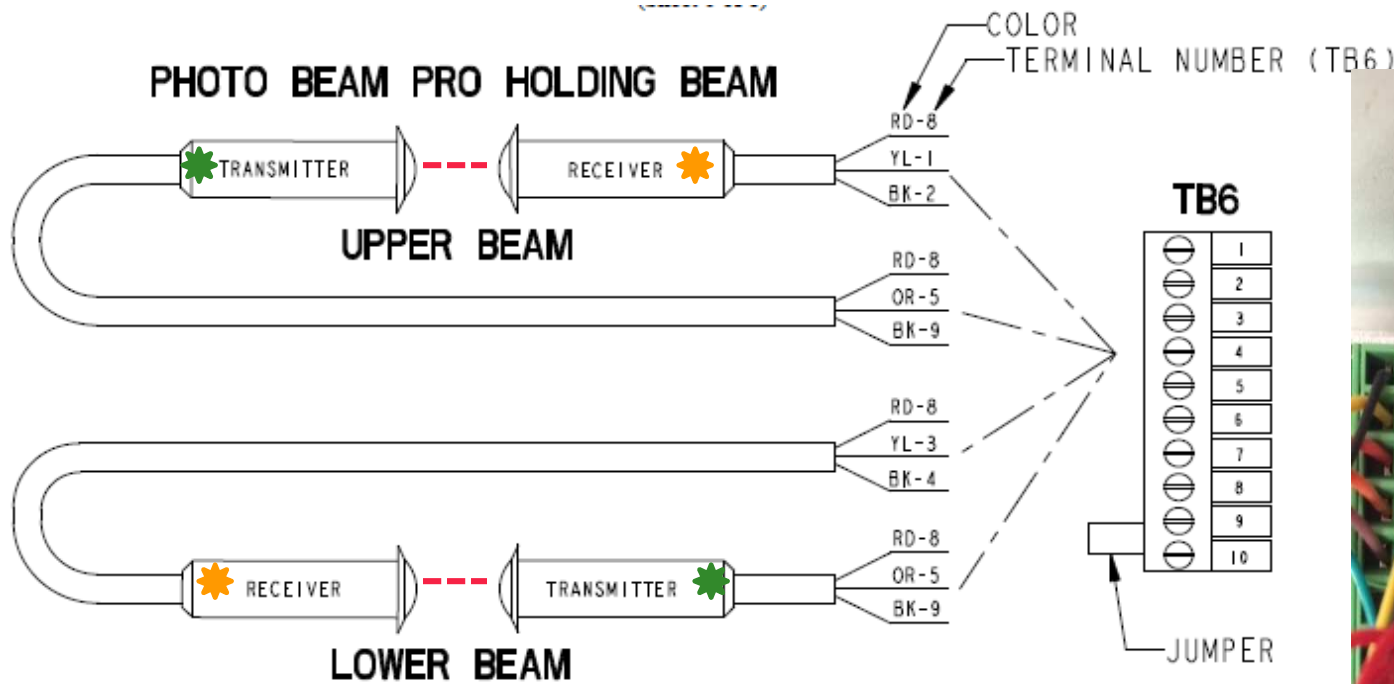
TB-1   Red
TB-2   Black
TB-3   Green
TB-4   White

Stanguard presence sensor

STANLEY

521Pro Safety Beams

NOTE: During FIS safety beam type defaults to Pro Beams

‑‑‑ NOTE: When IR barrier is established
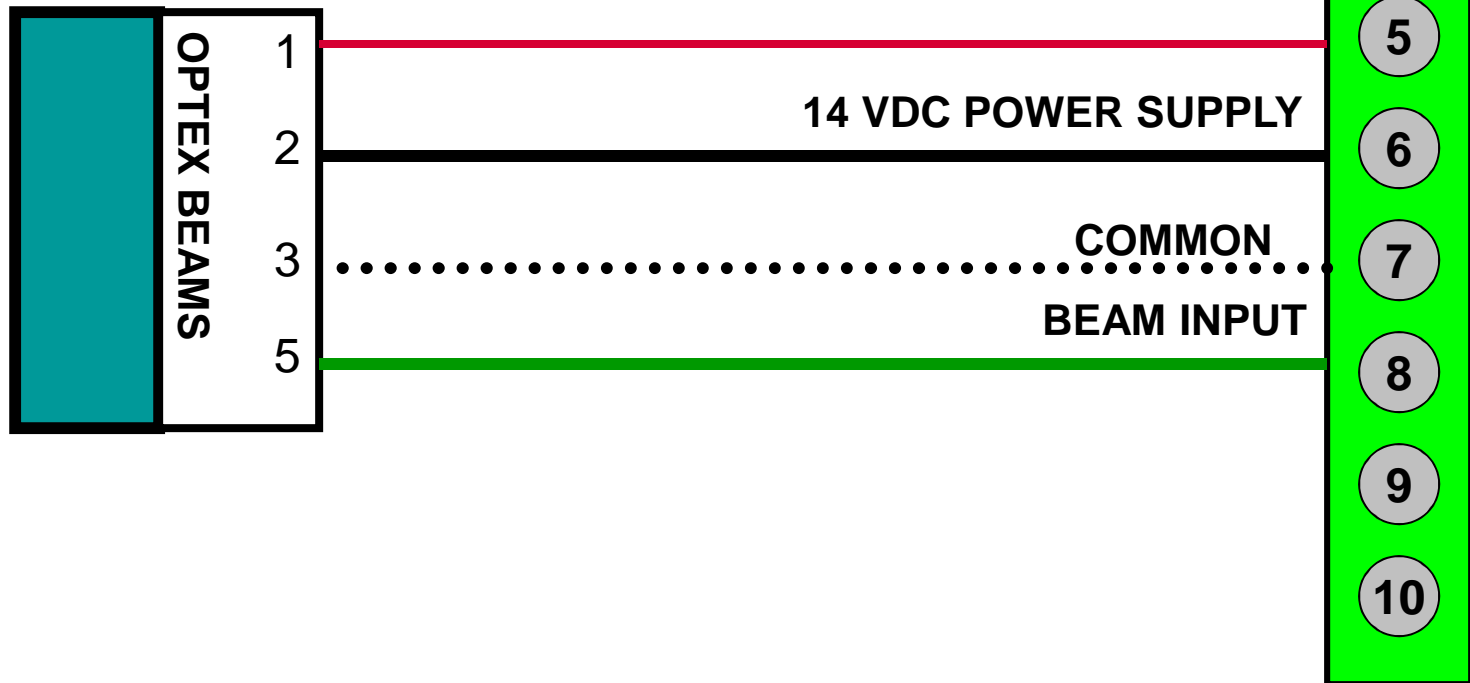
✳ Green LED on Transmitter
✳ Amber LED on Receiver

TB6	COLOR	DUAL HOLDING BEAM WIRING
1	YL	OUTPUT UPPER RECEIVER
2	BK	(-) UPPER RECEIVER
3	YL	OUTPUT LOWER RECEIVER
4	BK	(-) LOWER RECEIVER
5	OR	TRANSMITTER CONTROL LOWER AND UPPER
6	--	NO CONNECTION
7	--	NO CONNECTION
8	RD	(+) ALL RECEIVERS AND TRANSMITTERS
9	BK	(-) LOWER AND UPPER TRANSMITTERS, JUMPER TO TB6-10
10	BK	JUMPER FROM TB6-9

35

OPTEX Holding Beam Input

TB-3

NOTE: After FIS must set beam type to OPTEX

OS-12 Controller

OPTEX BEAMS

1 — 14 VDC POWER SUPPLY — 5

2 — — 6

3 ········· COMMON ········· 7

BEAM INPUT

5 — — 8

1
2
3
4
5
6
7
8
9
10

STANLEY

36

STANLEY SU-100 MOTION SENSOR

COMMON term#3

N/C term#5

12-24VAC

RED Detection led on with no detection, off when someone enters pattern. This is an ACTIVE relay system.

Narrow antennae

Wide Planar antennae

#4 Normally open

#3Common

#5 Normally closed

Normally open

Common

Normally closed

The SU-100 relay is active or the coil is energized when power is applied. The RED led is on and the Common and N/Open terminals are shorted.

When the SU-100 goes into detection or sees someone in its pattern the RED led will go out and the relay will drop out. The Common and N/Closed contacts are then made
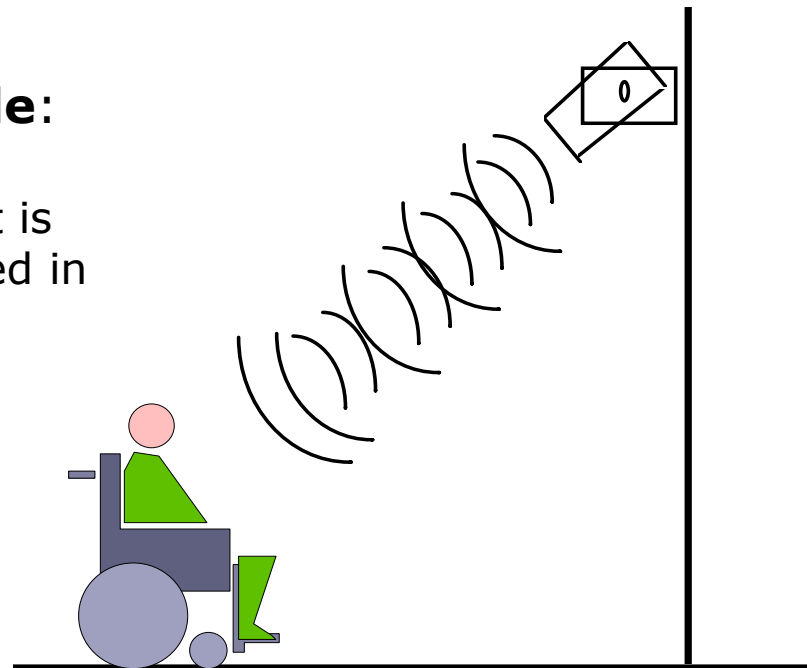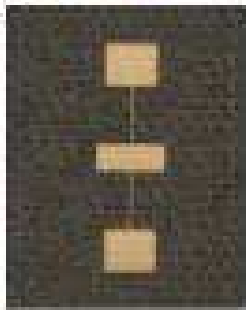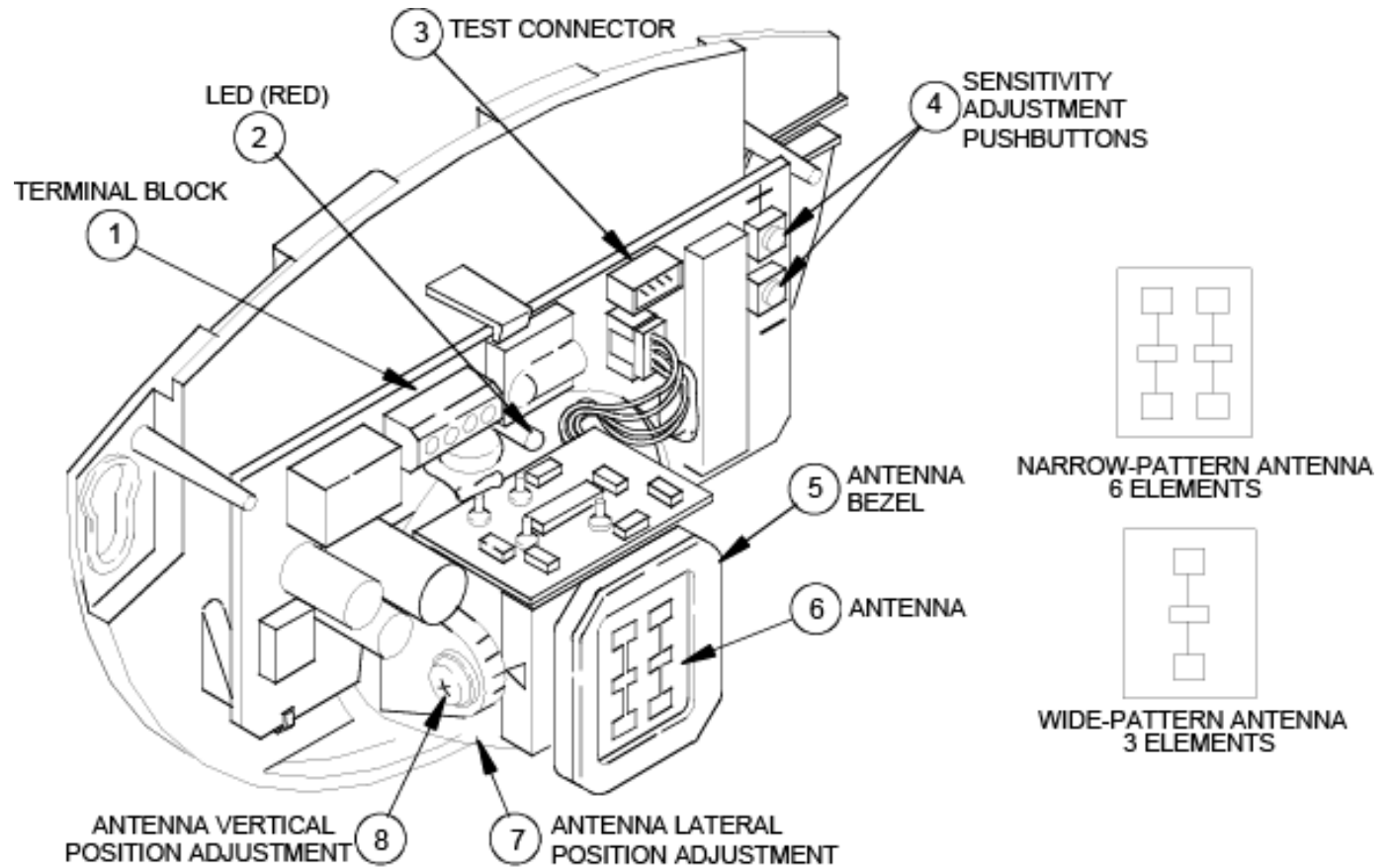
STANLEY

37

SU-100 Active relay Mode

- The SU-100 is power up. But with No Detection
  The Relay is ACTIVE in the NORMALLY/OPEN State.

- Power is removed from the relay coil during detection

- During detection, the Relay is Passive, coil not energized)
  the led is off and the relay is NORMALLY/CLOSED

- During a Sensor Failure, The Relay contacts will be CLOSED
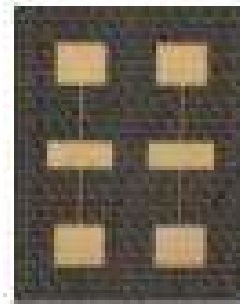 and an activation signal will be sent to the control.

Based on Doppler Effect Principle:

When a radar strikes a moving object, it is reflected back and its frequency is shifted in proportion to the speed of the object.

STANLEY

TEST CONNECTOR ③

LED (RED) ②

SENSITIVITY ④ ADJUSTMENT PUSHBUTTONS

TERMINAL BLOCK ①

⑤ ANTENNA BEZEL

⑥ ANTENNA

NARROW-PATTERN ANTENNA 6 ELEMENTS

WIDE-PATTERN ANTENNA 3 ELEMENTS

ANTENNA VERTICAL POSITION ADJUSTMENT ⑧

⑦ ANTENNA LATERAL POSITION ADJUSTMENT

Wide antenna

Narrow antenna

39

(PLUS +

(MINUS -)
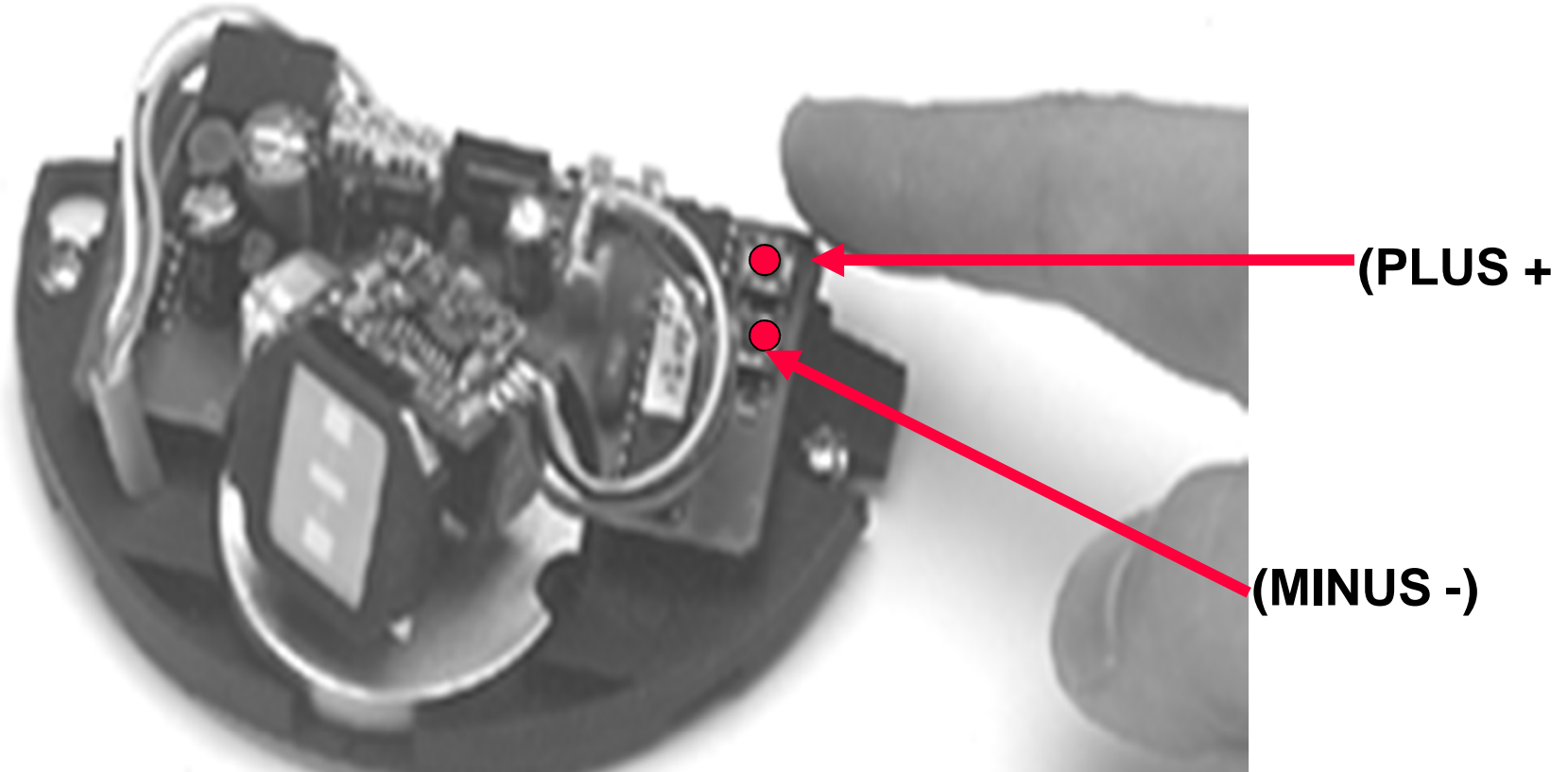
If a remote control is not available, you can adjust the sensitivity parameter ONLY, by means of the push buttons + (Plus) and - (Minus).

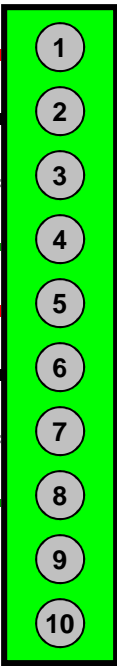STANLEY

TB-4

Red, power + — 1
Black, power - — 2 — Interior
White, common — 3 — Sensor
Green, input — 4
Red, power + — 5
Black, power - — 6 — Exterior
White, common — 7 — Sensor
Green, input — 8
9
10

-1 12 to 24 VAC/VDC

-2 12 to 24 VAC/VDC

-3 Relay Common

4 Normally Open

-5 Normally Closed

NOTE:
TB-3 Must have jumpers from pin 1 to 5 & 2 to 6 to provide power on pins 1 & 2

1
2
3
4
5

STANLEY

41

TB-5

Sliding door side lite sensor

14 VDC — 1

14 VDC — 2

SIDELITE SENSOR INPUT 3

SIDELITE SENSOR COMMON — 4

5

6

Brown (INPUT) — 7

Violet (COMMON) — 8

9

10

Solenoid lock or Belt switch input. Normally closed when door is closed to inhibit exterior sensor TB-4 terminals 7 and 8, from activating door when switch is set to One-way-traffic

STANLEY ®

X-Zone-T Monitor Capable Sensor
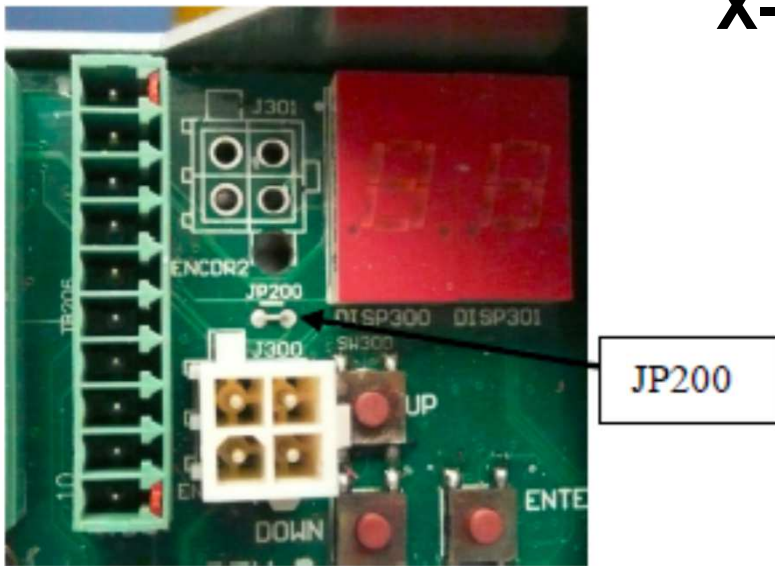
JP200

When enabling monitoring for X-Zone T, the control box needs to be configured.
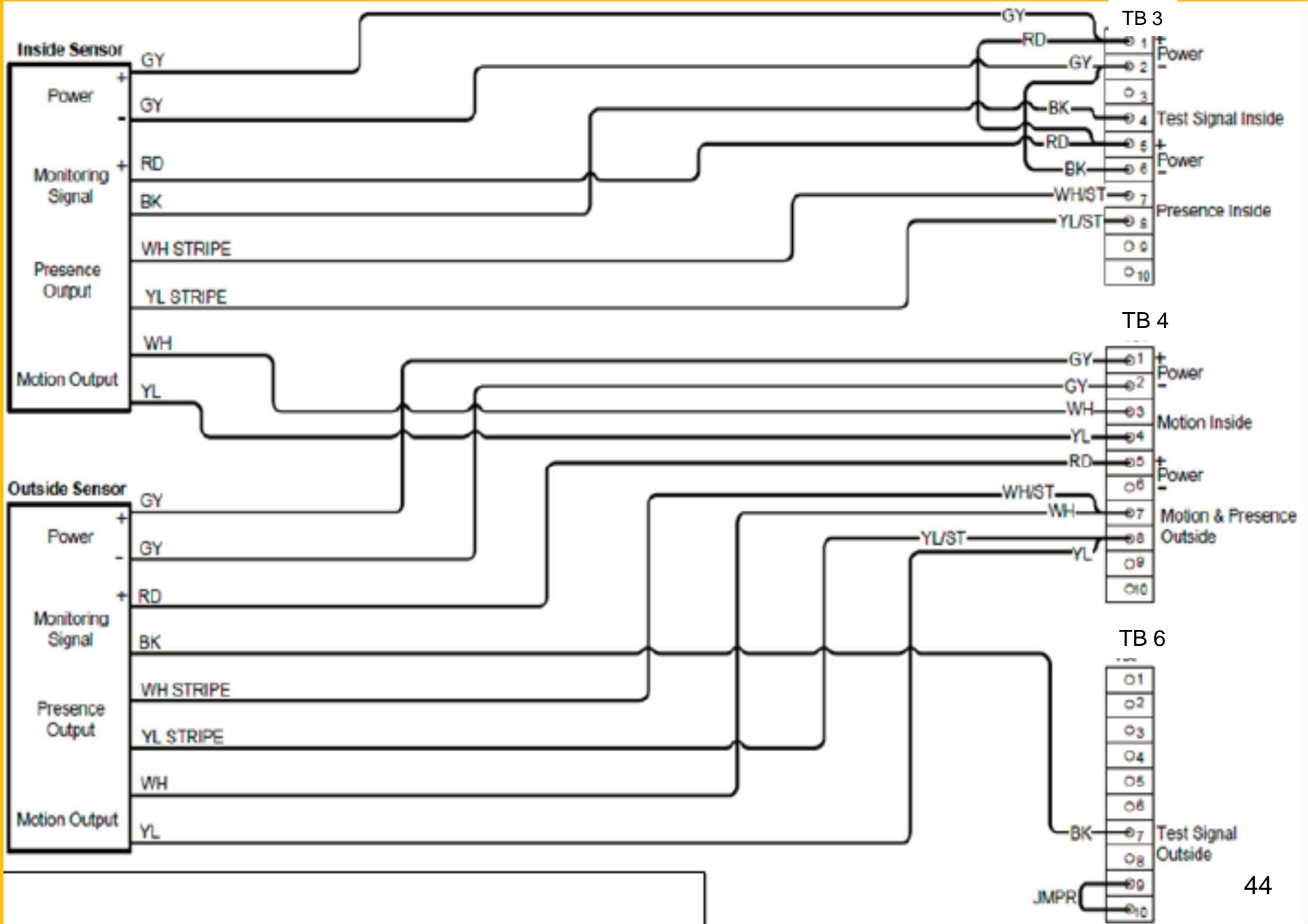
1. Clip the JP200 jumper wire on the MC521 Pro, located between the two Encoder connectors.

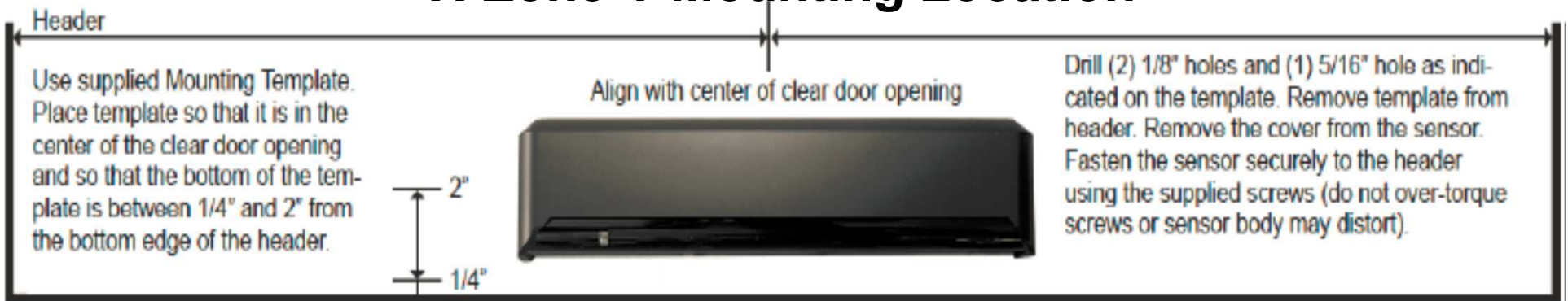**NOTE: AFTER JP200 IS REMOVED, THIS CONTROL BOX CANNOT BE USED WITH A STANGUARD SENSOR.**

The JP200 jumper is an internal MC521 Pro connection that enables TB3-4 to be used as an input and output required for StanGuard.

2. Enable Monitoring:

    A. Using push buttons on control set Index 19 = Value 03.
    B. Using BT dongle and MC-521 Toolbox application set function Safety Logic = Monitored Sensors.

X-Zone-T wiring to MC-521 Pro

Inside Sensor

- Power: + GY, − GY
- Monitoring Signal: + RD, BK
- Presence Output: WH STRIPE, YL STRIPE
- Motion Output: WH, YL

Outside Sensor

- Power: + GY, − GY
- Monitoring Signal: + RD, BK
- Presence Output: WH STRIPE, YL STRIPE
- Motion Output: WH, YL

TB 3

1. GY / RD — + Power
2. GY —
3.
4. BK — Test Signal Inside
5. RD — + Power
6. BK — −
7. WH/ST — Presence Inside
8. YL/ST —
9.
10.

TB 4

1. GY — + Power
2. GY — −
3. WH — Motion Inside
4. YL —
5. RD — + Power
6. — −
7. WH/ST / WH — Motion & Presence Outside
8. YL/ST / YL —
9.
10.

TB 6

1.
2.
3.
4.
5.
6.
7. BK — Test Signal Outside
8.
9. JMPR
10.

44

X-Zone-T Mounting Location

Header

Use supplied Mounting Template. Place template so that it is in the center of the clear door opening and so that the bottom of the template is between 1/4" and 2" from the bottom edge of the header.

Align with center of clear door opening

2"

1/4"

Drill (2) 1/8" holes and (1) 5/16" hole as indicated on the template. Remove template from header. Remove the cover from the sensor. Fasten the sensor securely to the header using the supplied screws (do not over-torque screws or sensor body may distort).

For ease of wiring recommend mounting height 2" from bottom of header to bottom of template.

Exception - Duramax 5400

Cover side of predrilled for mounting. If no prep then place template ¼" up from bottom of cover. On Non cover side place template ¼" up from bottom of header. Drill a ½" diameter wire access hole in location as shown below.

View of DuraMax Header Header Mounting Template

Drill ½" Hole at this location for wire to clear Alarm Contact/Ball Detent

CENTER
DRILL
φ3.4mm
(φ1/8")

36mm(1 7/16")

INSERT CABLE HERE
φ8mm
(φ5/16")

125mm(4 15/16")

DRILL
φ3.4mm
(φ1/8")

[NOTE]
1. Place this template in center parallel with the header
2. For concealed cable, drill a hole within the shaded portion(A).

MOUNTING TEMPLATE
CENTER

1/4"

X-Zone-T Settings

Remove the cover and unfold the label.

1. Dipswitch settings

Microwave Sensitivity 5734260
Low High
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

NOTE: If uni-directional motion detection is desired, move dipswitches 9 UP.

Refer to instruction manual for details on all dipswitch settings.

Start with dipswitch settings shown upper right. Dipswitch 12 MUST be DOWN & 13 MUST be UP. All dipswitch functions are listed on the label.

Dipswitches labeled in RED only affect Presence/AIR.

Dipswitches labeled in Blue only affect Motion/Microwave.

| ↓ | Bi | OFF | OFF | ↓ | N/A | N |

AIR Width
L R
Narrow
Wide
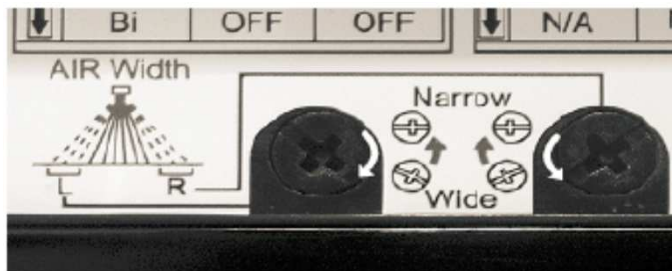
Adjust Presence/AIR area width with shutters
Left & right area can be set independently
At standard height (89" A.F.F.):
Wide = Approx. 8.5 feet wide
Narrow = Approx. 4.25 feet wide

To adjust the microwave detection area width, use the narrow lens as shown in the picture below.

2. Open 1. Remove screw Narrow lens
2. Open

Adjust the Motion/Microwave area width
by installing or removing the Narrow lens.
Wide = Approx. 12.5 feet wide
Narrow = Approx. 6.25 feet wide

46

X-Zone-T Settings Continued

Start with the settings shown below and in most cases no other adjustment will be necessary.
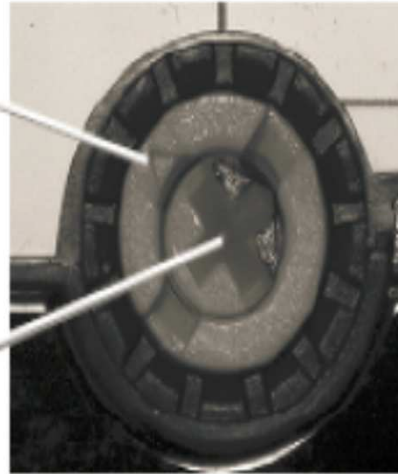
AIR (Presence) and Microwave Angle Adjustments

AIR Angle Adjust
Set Red Ring at –2 degrees
(Arrow at Approx. 10 o' clock)

Microwave Angle Adjust
Set center Philips adjuster to 38 degrees
(Blue Dots are at 2 o' clock)

WARNING: To comply with ANSI A156.10, if the reveal on the door (mounting surface of sensor to face of sliding panel) is greater than 2½", turn the AIR adjuster (Red Ring) CCW (Shallow) until the door recycles on the closing cycle. Then refer to step 2 under troubleshooting to properly adjust the AIR angle.

4. Microwave Sensitivity

Set to 10 o'clock (two dots at top)

47
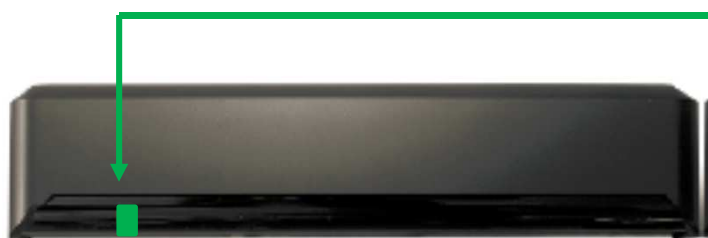
OPERATION L.E.D.

Solid Green = Standby, No Detection

Solid Orange = Motion/Microwave Detection

Solid Red = 3rd row AIR Detection

Flashing Red = 2nd Row AIR Detection

Solid Blue = 1st Row AIR Detection (Blue Zone thru Threshold)
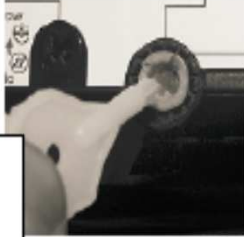
Troubleshooting

Door reopens on closing cycle:

1. Operation LED turns **solid Orange** then door reopens (Microwave Motion Detecting Door)

a. Reduce sensitivity: turn sensitivity potentiometer CCW.

b. Adjust Microwave angle towards deep (Clockwise) slightly.

NOTE: If recycle continues try turning Microwave Immunity ON (Dipswitch 10

2. Operation LED turns **Flashing Red**, then door reopens (Row 2 Presence Detecting Door)

a. Move AIR angle adjustment (Red Ring) slightly Clockwise until ghosting stops.

NOTE: When changing the AIR angle, sensor may go into detection and hold door open. In this case, reset sensor by moving any dip-switch, then move it back.

Door remains open, MC-521 Pro Displays F.0. or F.1. (F.0.=Inside sensor, F.1. = Outside Sensor):

- Verify sensor presence wires (White/Stripe & Yellow/Stripe) properly connected to control.
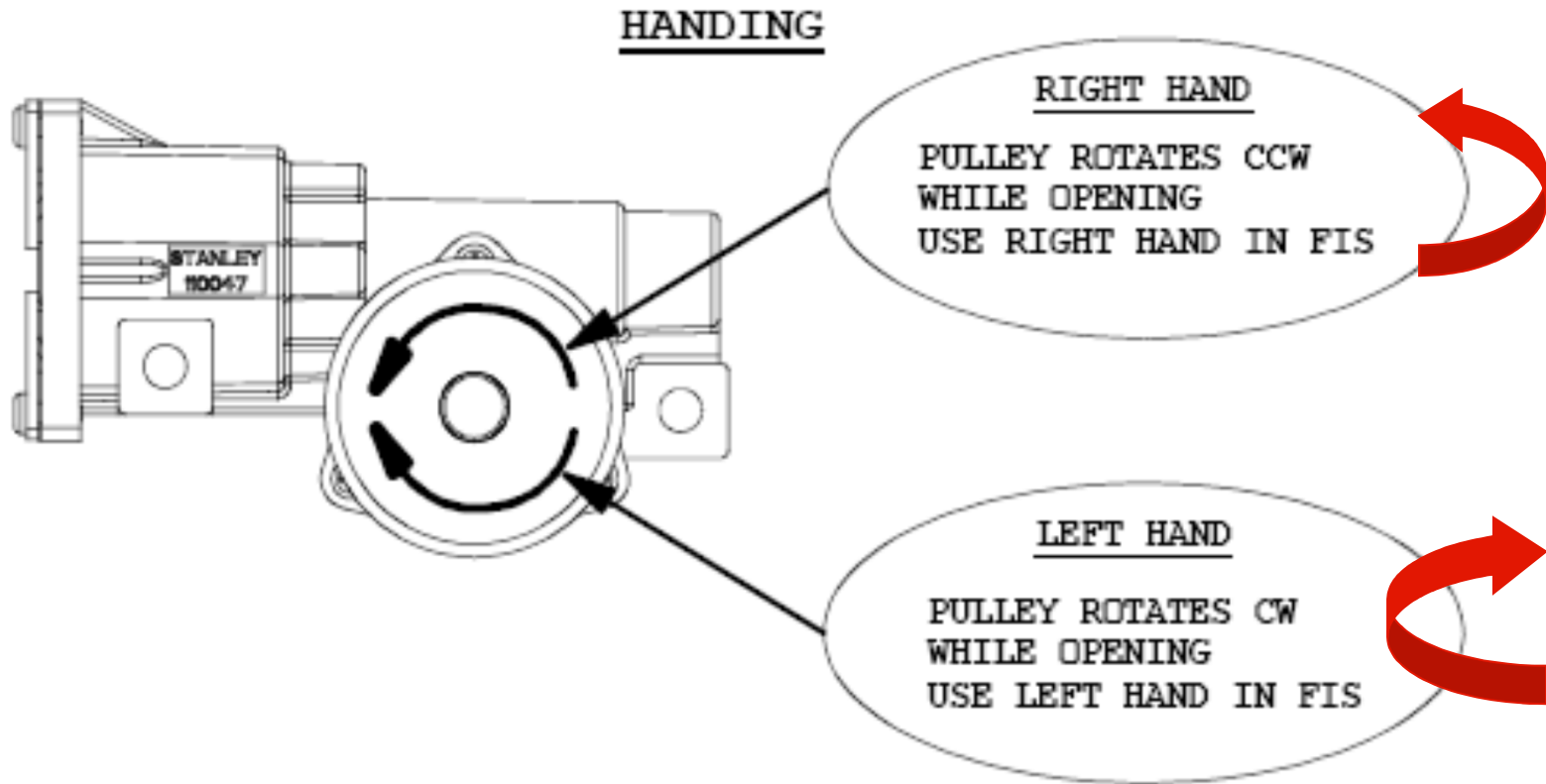
Door remains open, MC-521 Pro Displays 0.6. / h.o. alternately:

- Verify Black Wire & Red wire from Sensor connected properly at control.

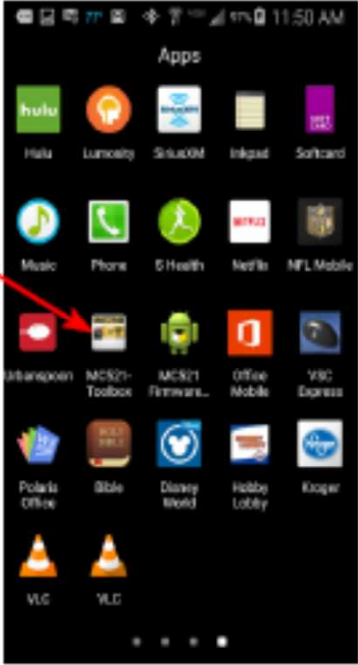Verify sensor dipswitch 12 set Down & 13 set UP.

Sliding Door Handing

For the Purpose of FIS Only

HANDING

RIGHT HAND

PULLEY ROTATES CCW
WHILE OPENING
USE RIGHT HAND IN FIS

LEFT HAND

PULLEY ROTATES CW
WHILE OPENING
USE LEFT HAND IN FIS

STANLEY
110047

> **NOTE: For <u>Bi-part</u> set to <u>Right Hand</u> and ensure Tall Belt Bracket is installed on Left SX Panel (as viewed from header cover side).**

FIS with BT Dongle and MC-521 Toolbox

NOTE: Door Mode switch must be set to Closed Locked Position
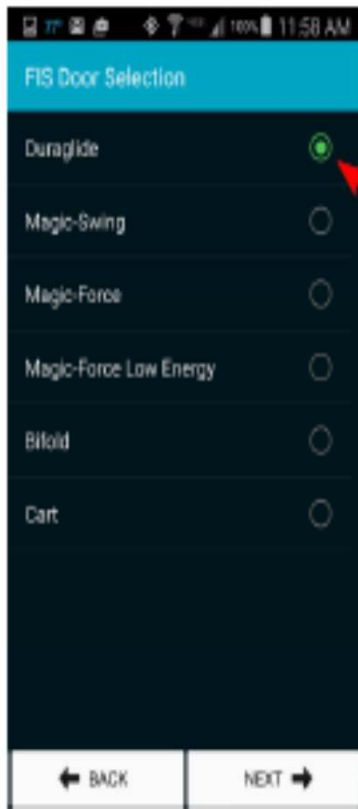

Step 1: Select **MC521 Toolbox** from the list of applications.

Step 2: Select **RESTART FIS** on the Main selection menu. (FIS = First Install Sequence).

NOTE: Firmware is the software revision. Cycles are door cycles in memory.

FIS with BT Dongle and MC-521 Toolbox (Cont.)

Step 3: Select **Duraglide**.
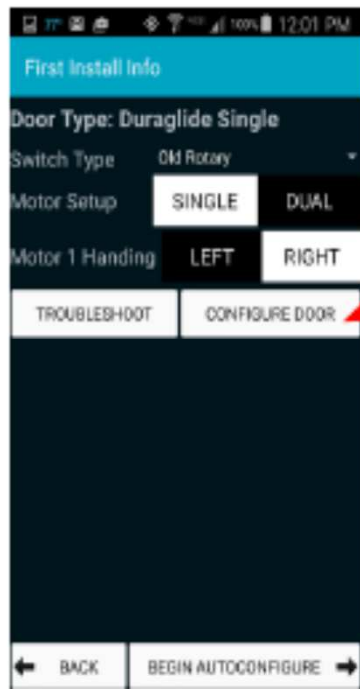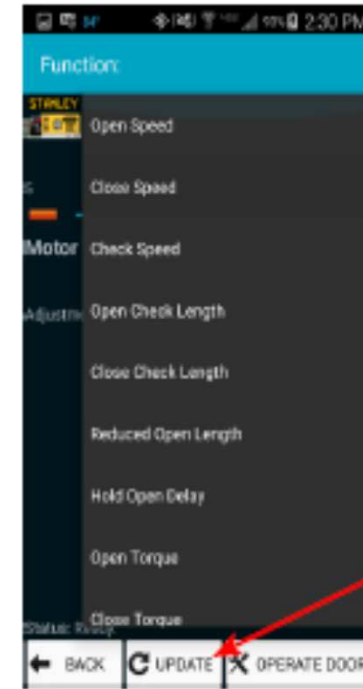
Step 4: Select applicable **Switch Type, Motor Setup,** and **Motor Handing.**

FIS with BT Dongle and MC-521 Toolbox (Cont.)

Step 5: If additional configuration is needed, press **CONFIGURE DOOR.**

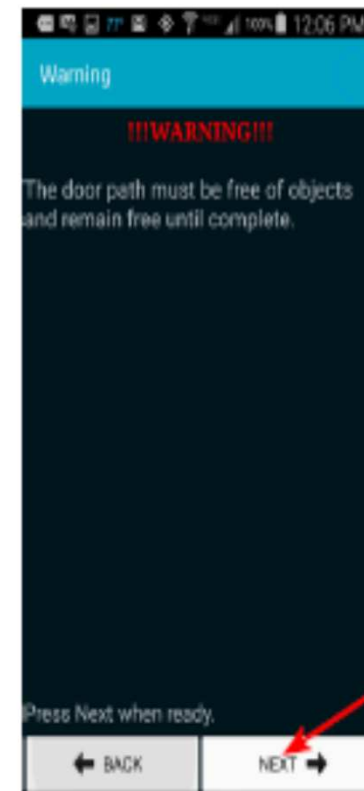**Step 6:** Configure additional settings and press **UPDATE** after each setting has been changed. Once completed, press **BACK** to go back to the Main selection menu.

FIS with BT Dongle and MC-521 Toolbox (Cont.)

NOTE: If using Rotary Switch ensure "Old Rotary" is display at "Switch Type" before selecting "BEGIN AUTOCONFIGURE".

Step 7: Press **BEGIN AUTOCONFIGURE.**

Step 8: Press **NEXT.**

FIS with BT Dongle and MC-521 Toolbox (Cont.)
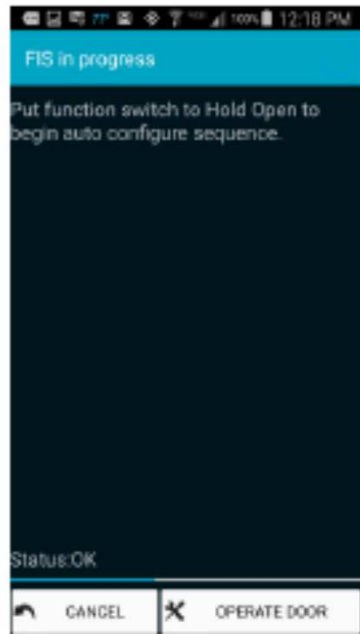
Step 9: Put door fuction switch to **Hold Open** then immediately back to **Closed**. The same function can be done remotely from the Palm by pressing **Operate**.

WARNING: During this sequence the sensors are inactive and the door has no SAFETY. To stop the door, TURN POWER OFF or PUT THE DOORS INTO BREAKOUT.

Step [10] Door will go through a learn sequence to configure itself. The door will perform the following operations in learn mode:

- Open fully at check speed.

- Close fully at check speed.

TB-1 TB-2 TB-6

ENCDR 2

ENCDR 1

A 2

UP   ENTER

DOWN

TB-3 TB-4 TB-5 TB-7

COM 1
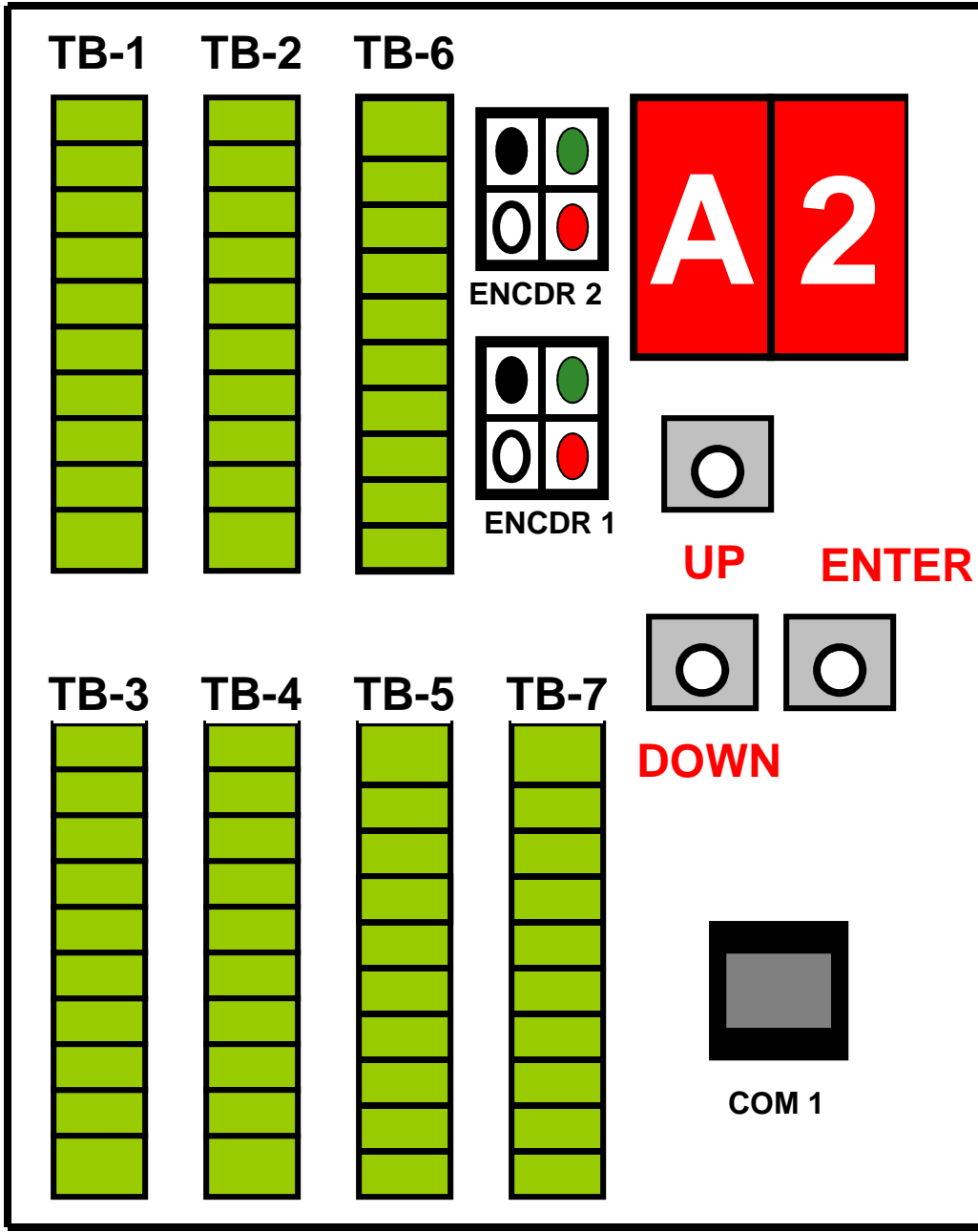
To change an (index) you must hold the ENTER button down while moving the UP and DOWN to find the correct index number.

Once you have found the correct index you release the ENTER button and immediately scroll up or down to change the value of that INDEX.

Once you have stopped scrolling up or down the value number will flash and then display the STATUS.

STANLEY

Table 1. FIS (First install sequence) procedure using pushbuttons

		INDEX	VALUE	STATUS
STEP#1	Set function switch to "CLOSED"			
STEP#2	Turn power ON			
STEP#3	Unlock Keypad	99	00	00
STEP#4	Restart FIS	96	01	A0
STEP#5	Select door type Dura-glide (motor)	00	01 (single) 02 (dual)	A0
STEP#6	Select door handing.	01	00 (right) 01 (left)	A0
STEP#7	Accept FIS. Display with go to A1	03	01	A1
STEP#8	Make changes: Function switch type	11	01 (rocker) 00 (rotary)	A1
STEP#9	Select Lock Logic	07	00 (fail safe) 01 (fail secure)	

STEP#10   WARNING; Sensors and safety inactive during this sequence, to stop the door turn the power off or put the doors into BREAK-OUT!. Put function switch to Hold-Open and then back to OFF. Door should open to stops and close, the display will show A2.

| STEP#11 | Lock the keypad | 99 | 01 | 00 |

MAKE SURE DOOR IS IN COMPLIANCE WITH ANSI 156.10 - 2011

x	Min. Value	Max. Value	Description	Defaults Single	Dual
	05	35	Open speed, increment by 1.	25	25
	05	18	Close speed, revolutions per second.	12	12
	03	10	Check speed, revolutions per second.	04	04
	10	99	Open check length, percent of full opening.	35	35
	10	99	Close check length, percent of full opening.	30	30
	00	99	Reduced open position, percent of full opening (00=full open, 99=full close).	50	50
	01	99	Hold open delay (0 to 25 sec.).	03	03
	01	03	Lock Logic, 00 = Fail Safe, 01 = Fail Secure, 02 = Dura-Max Fail Safe, 03 = Dura-Max Fail Secure. **Note:** For locks with circuit board, set to 01 Fail Secure. For locks with no circuit board, set to Fail Safe or Fail Secure.	01	01
	00	75	Open torque, percent of full scale.	25	25
	00	75	Close torque, percent of full scale.	25	15
	00	75	Check torque, percent of full scale.	25	10
	00	01	Dura-Glide function switch type: 00=double pole rotary, 01=rocker	01	01
	00	01	2S Operation, 0=off, 1=on	00	00
	01	60	Obstruction Time Delay (.01 – 1.5 sec) Heavy and dual motor doors may require a longer obstruction time (45 on buttons or 1.2 sec. on Palm).	20	40
	20	60	Open Acceleration, (larger value=faster acceleration).	50	50
	20	60	Open Braking, (larger value=increased braking). 20=No open braking	54	54
	20	60	Close Acceleration, (larger value=faster acceleration).	20	20
	20	60	Close Braking, (larger value=increased braking). 20=No close braking	40	40
	00	02	00 = Off (Delay Egress), 01 = 15 sec. delay, 02 = 30 sec. delay	00	00
	00	04	Safety Logic, Do Not Change. Must be set to 04.	04	04
	00	01	Hold Beam Type 00 = Optex, 01 = Photo Beam Pro	01	01
	01	50	Lock Delay (0.1 – 5.0 sec)	01	01
	00	64	Open Stop Distance (1/8" increments) from full open the door will stop.	04	04
	00	01	Access Control Pro 00 = off, 01 = on	00	00
	00	03	Press Time, 00 = least amount, 03 = most amount of pressing After obstruction timeout, the number of seconds the door presses at Full Closed	01	01

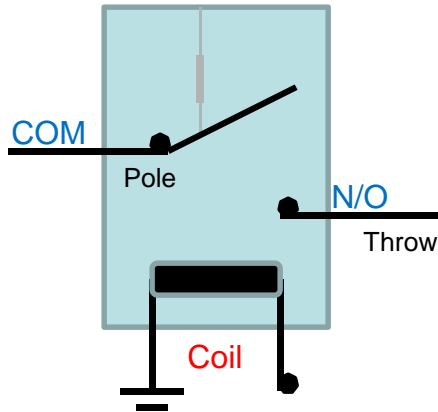: Door must be cycled open for changes to be stored in permanent memory.
t currently available on Palm
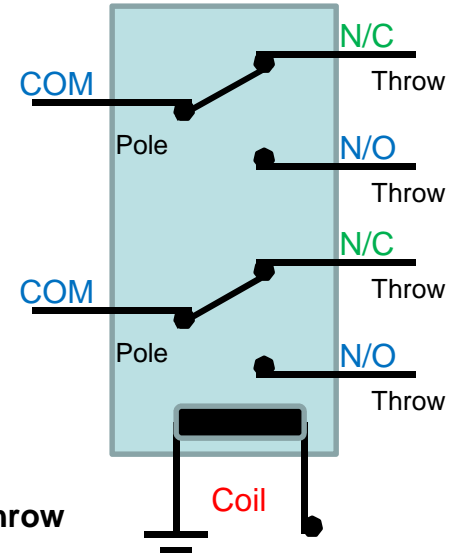
Table 4. Status Codes

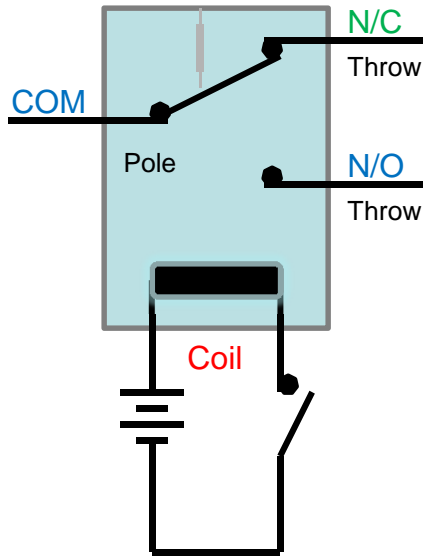| Status Code	Description	Remediation IF necessary
00	Normal operation—All OK	
0b	Obstruction	
20	Breakout	
33	System error	1. Reset Power 2. If code does not clear, Call Tech Support
A0	First installation sequence (FIS)	
A1	Auto-configuration sequence	
A2	Auto-configuration confirmation sequence	
b1	Encoder error	
Ld	Lock Down (Shear Lock Energized)	
dc	Display door cycle counter	
dE	Delayed Egress	
d0	Shear Lock De-Energized	
E1	Upper hold beam sensor error	Verify sensor wiring and safety logic setting
E3	Door length error	Re-do first installation sequence (FIS)
E4	Safety sensor error	Verify sensor wiring and safety logic setting
E5	Inside activation sensor error	Verify sensor wiring and safety logic setting
E6	Outside activation sensor error	Verify sensor wiring and safety logic setting
E7	Lower hold beam sensor error	Verify sensor wiring and safety logic setting
E8	Inside presence sensor error	Verify sensor wiring and safety logic setting
E9	Outside presence sensor error	Verify sensor wiring and safety logic setting
F0	Inside Active8 sensor failure	Verify sensor wiring and safety logic setting
F1	Outside Active8 sensor failure	Verify sensor wiring and safety logic setting
F2	Upper Photo Beam Pro sensor failure	Check transmitter, receiver, and hold beam type
F3	Lower Photo Beam Pro sensor failure	Check transmitter, receiver, and hold beam type
ho	Door held open	Check sensors and hold beam type

Relay Terminology / Logic

Single Pole Single Throw
S.P.S.T.

COM

Pole

N/O

Throw

Coil

Double Pole Double Throw
D.P.D.T.

N/C
Throw

COM

Pole

N/O
Throw

N/C
Throw

COM

Pole

N/O
Throw

Coil

Single Pole Double Throw
S.P.D.T.

N/C
Throw

COM

Pole

N/O
Throw

Coil

Single Pole Double Throw
S.P.D.T.

N/C
Throw

COM

Pole

N/O
Throw

Coil

58

Relay Terminology / Logic

Closed contact tone

000.0

VDC
VAC — OHM
OFF

Coil Not Energized
Normal State
Com to N/C = 0 ohms
(tone)
Com to N/O = Infinite Ohms
(no tone)

Open contact No tone

O.L.

VDC
VAC — OHM
OFF

Coil Energized
Active State
Com to N/C = Infinite Ohms
(no tone)
Com to N/O = 0 Ohms
(tone)

Note: Optionally you can use the continuity check mode.
Tone = Closed contact.
No Tone = Open contact.

Single Pole Double Throw
S.P.D.T.

N/C
Throw
COM
Pole
N/O
Throw

Single Pole Double Throw
S.P.D.T.

N/C
Throw
COM
Pole
N/O
Throw

Switch Open

Open contact No tone

O.L.

VDC
VAC — OHM
OFF

Switch Closed

Closed contact tone

000.0

VDC
VAC — OHM
OFF

59
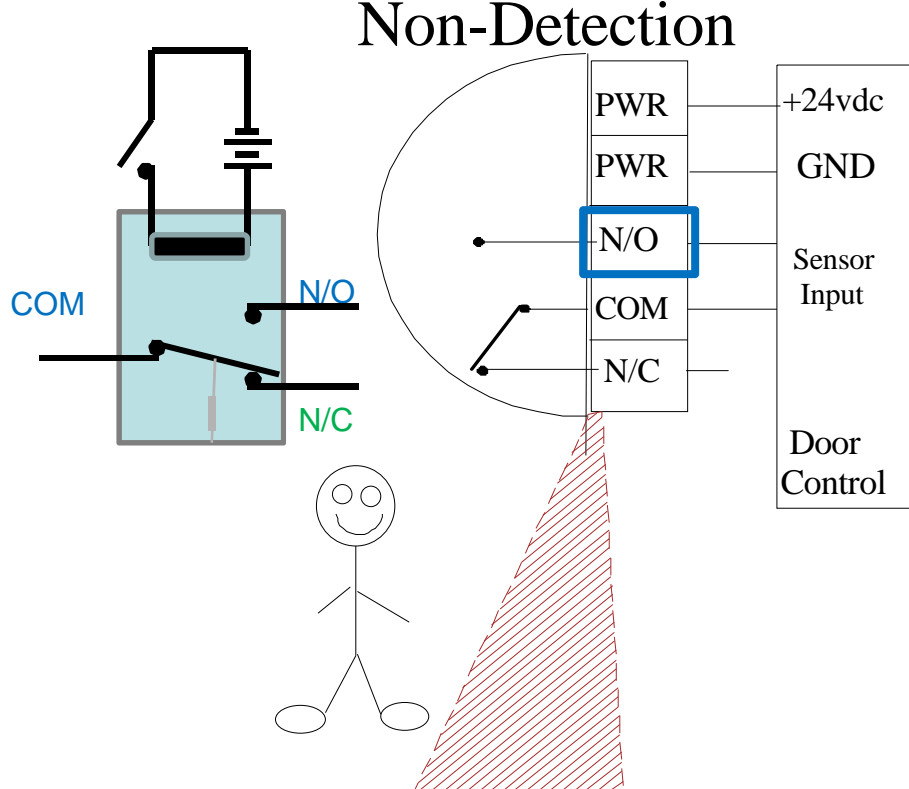
ACTIVE vs. PASSIVE Relays (Sensors)

Passive Relay Output
Non-Detection

Passive Relay Output
Detection

The door control sensor input is a Normally Open (N/O) input. Requires A closed contact across the two terminal inputs upon sensor detection.
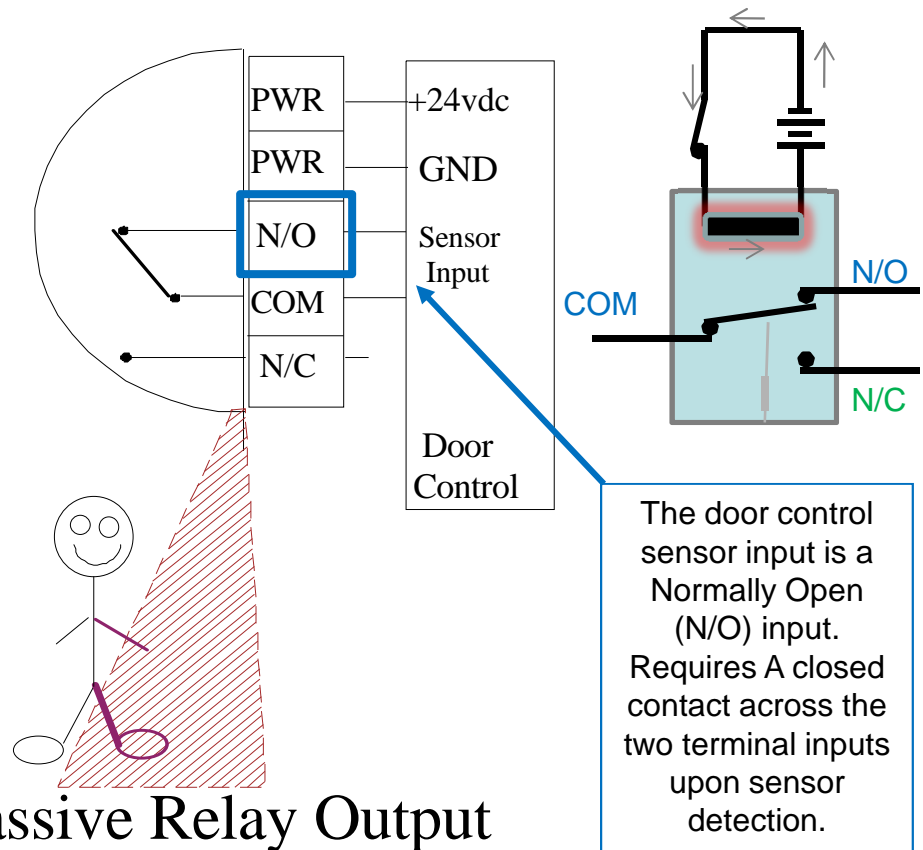
ACTIVE vs. PASSIVE Relays (Sensors)

Active Relay Output
Non-Detection

PWR	+24vdc
PWR	GND
N/O	
COM	Sensor Input
N/C	
	Door Control

COM
N/O
N/C

PWR	+24vdc
PWR	GND
N/O	
COM	Sensor Input
N/C	
	Door Control

N/O
N/C

Active Relay Output
Detection
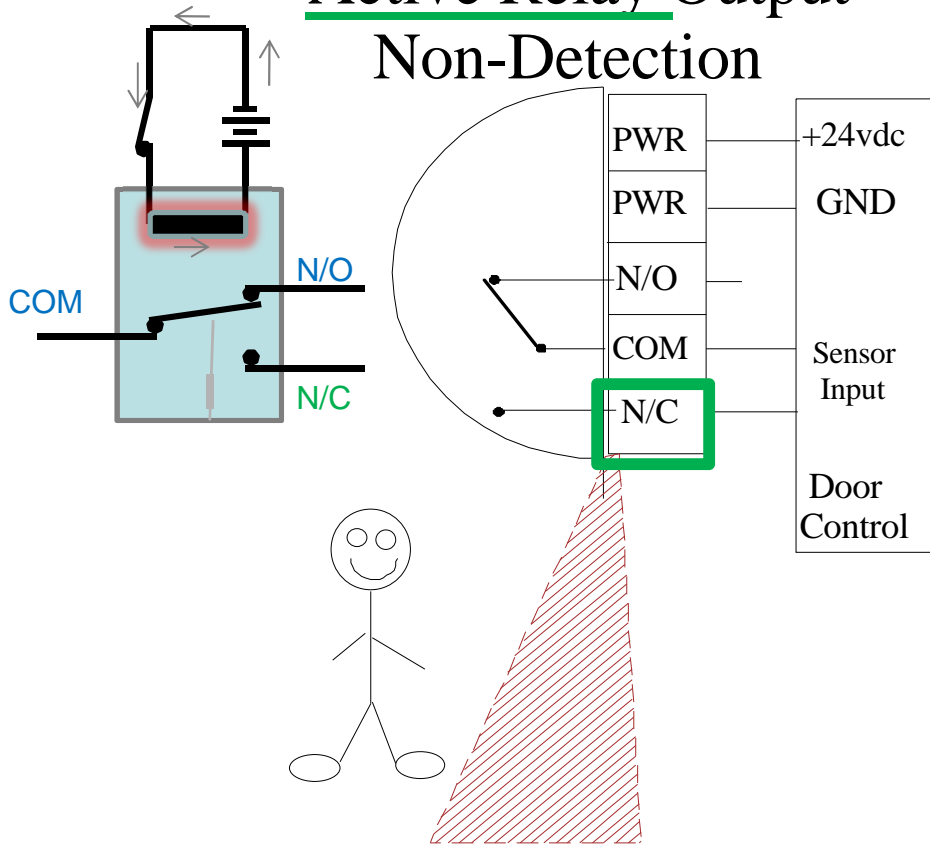
The door control sensor input is a Normally Open (N/O) input. Requires A closed contact across the two terminal inputs upon sensor detection.
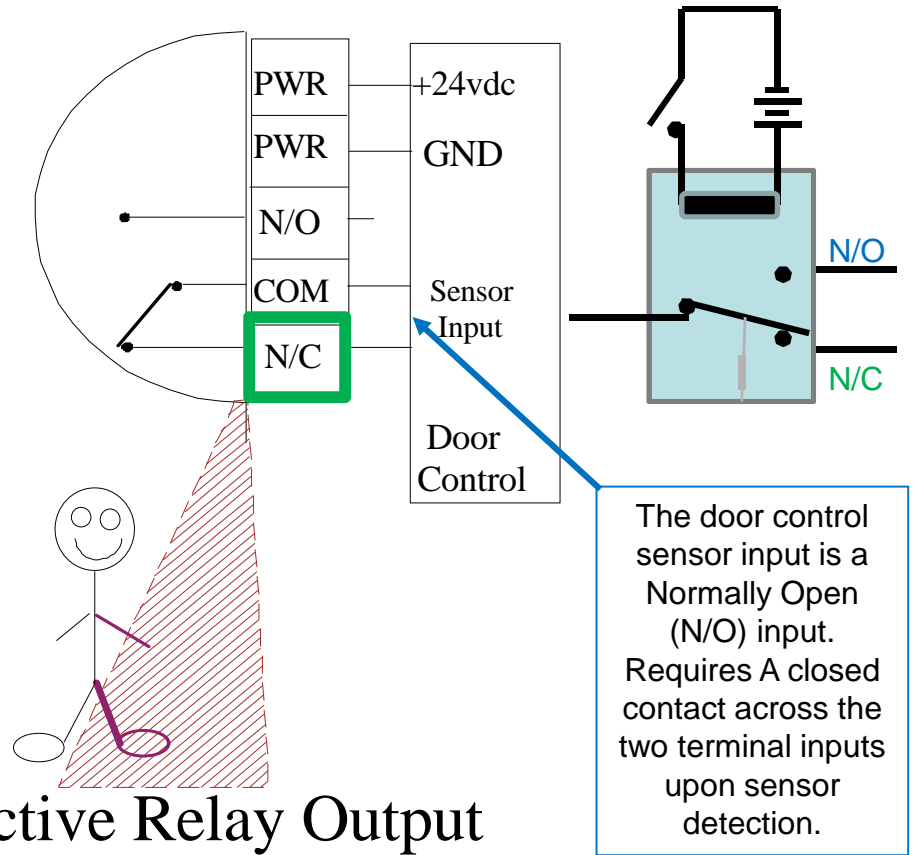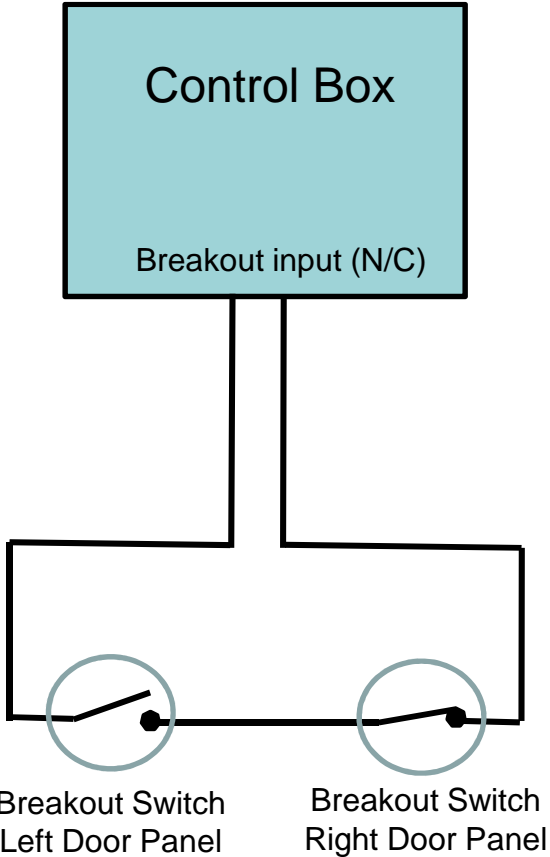
WET vs. DRY Relay Output

A **WET output relay** actually applies some sort of voltage to the connected equipment. Generally a voltage is applied to the COM and transferred to the N.O. or N.C. contact, which in turn is applied to the connected equipment.   Wet output relays are generally used for applying voltage to a device such as a magnetic lock or an electric strike.
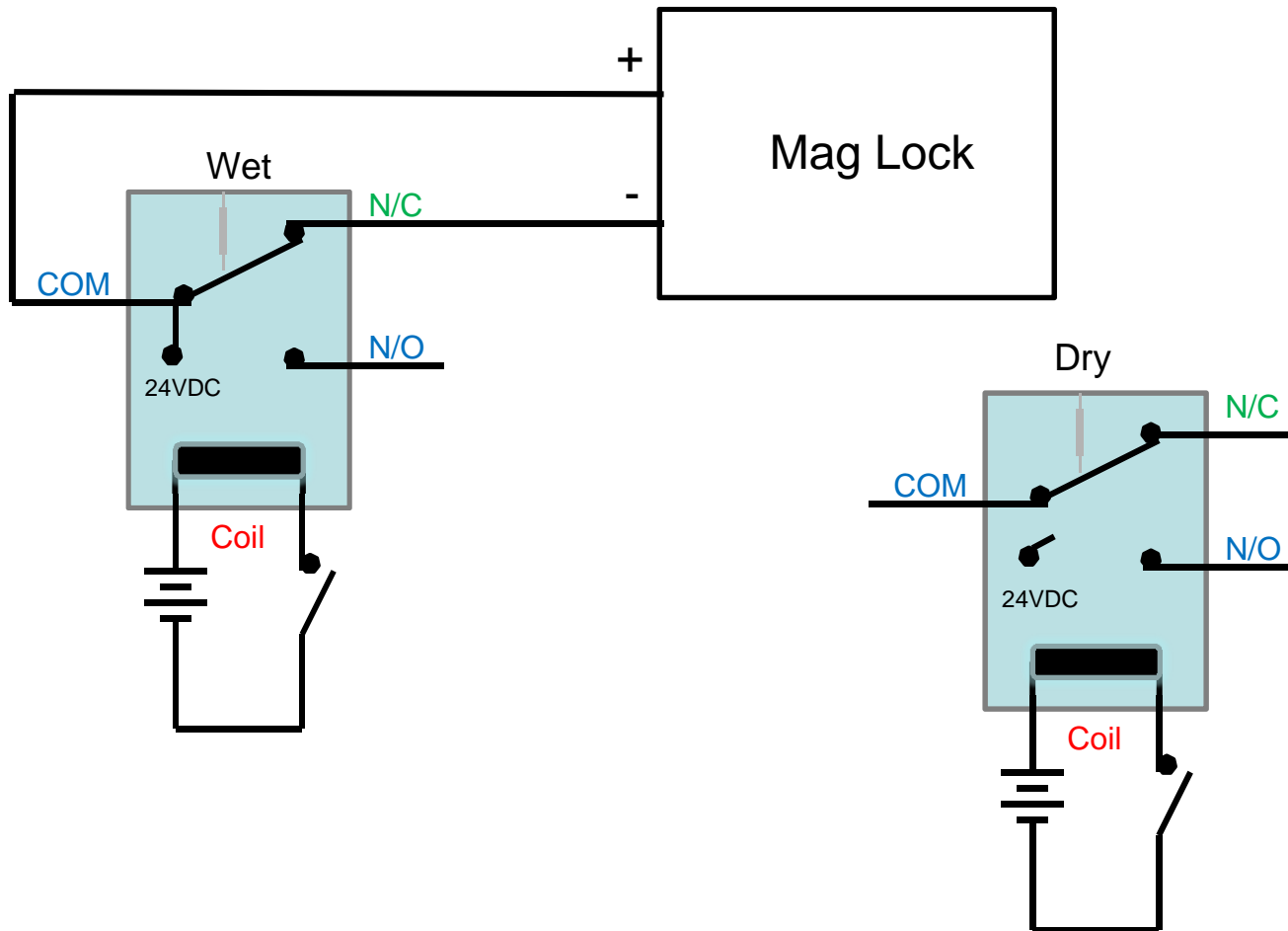
N/C inputs vs. N/O inputs
(Series)   vs.   (Parallel)

N/C sensor inputs with multiple sensors
Sensors must be connected in **series**
with the input

N/O sensor inputs with multiple sensors
Sensors must be connected in **parallel**
with the input

Control Box

Breakout input (N/C)

Control Box

Act input (N/O)

Interior Act

Exterior Act

Breakout Switch
Left Door Panel

Breakout Switch
Right Door Panel