Addendum Shadow 10 Wiring Changes

Summary

This addendum provides updated wiring information for the Shadow 10 Control Box, including the 110 VAC stop-circuit configuration. The updated information clarifies the required connections between the Shadow 10 Control Box and the machine stop circuits.

The Shadow 10 is designed to provide a high level of machine safeguarding when properly integrated with the machine's control system. The control box provides two independent stop-circuit connections intended to interface with the machine's control system as shown in the Shadow 10 wiring diagrams.

When installed using the standard independent stop-circuit configuration and all applicable system requirements are satisfied, the Shadow 10 can maintain the specified Type 4 / Category 4 / PLe safety performance. Use of a single channel stop circuit degrades the safety circuit, requiring a proper risk analysis to verify the overall safety performance of the safeguarding system.

Installers and system integrators must select the wiring configuration based on the machine's control architecture and safety requirements. The standard dual-channel Shadow 10 configuration should be used whenever the machine provides two independent stop circuits.

Description of Change

The Shadow 10 Control Box wiring documentation has been updated to provide clearer instructions for the connection of the machine stop circuits and to distinguish between the standard two-circuit configuration and the optional configuration intended for legacy machines having a single stop circuit.

Standard Configuration – Dual-Channel Stop Circuits

The standard Shadow 10 installation uses two separate, electrically independent stop-circuit connections between the Control Box and the machine control system, as specified in the applicable Shadow 10 wiring diagram.

This is the preferred installation method and is required when the machine provides two independent stop circuits. When properly installed and all applicable safety requirements are met, this configuration supports the Shadow 10's specified Type 4 / Category 4 / PLe safety performance.

⚠ DANGER

Under no circumstances should the Control Box outputs be wired together. Also, both outputs should be used at all times, separately connected to independent stop circuits in the target machine's control system to maintain the Type 4 specification.

Legacy Configuration — Single-Channel Stop Circuit

Some existing/older generation machines may have only a single channel stop circuit available for connection to the Shadow 10 Control Box. For these applications, the Shadow 10 dry-contact outputs may be configured as a single-channel output.

This configuration combines the two Shadow 10 stop-circuit channels into the machine's single available stop circuit and is intended for legacy machine control architectures, typically using a 110 VAC stop circuit. This configuration should be configured using External Device Monitoring (EDM)

The single-channel configuration changes the safety performance of the resulting circuit and must not be represented or documented as providing the Category 4 / PLe performance of the standard two-independent-circuit configuration.

The machine integrator or responsible safety engineer must determine, through the required risk assessment, whether the resulting safety performance is appropriate for the specific machine application.

EDM Application Specifics

When External Device Monitoring (EDM) is used, the overall system stopping response time must be verified by measurement. The measured response time shall include the response/switching time of all external relays, contactors, and other devices added to the stop circuit, as well as the machine's stopping time. The maximum verified response time shall be used when determining the required safety distance.

$$T_{total} = T_{ESPE} + T_{control} + T_{external} + T_{machine}$$

Where:

- T_{ESPE} = light curtain / ESPE response time
- $T_{control}$ = safety controller response time
- $T_{external}$ = response time of external relays, contactors, or other switching devices
- $T_{machine}$ = machine stopping time

NOTICE

The response time of the external contactors must be verified by an additional device.

Installation Requirements

Before connecting the Shadow 10 Control Box:

- Determine the machine's existing stop-circuit architecture.
- If two independent stop circuits are available, use the standard two-circuit wiring configuration.
- If the machine has only a single stop circuit, refer to the applicable legacy/single-stop-circuit wiring diagram.
- Do not jumper stop circuits just to simplify wiring when two independent stop circuits are available.
- If a Single channel stop circuit is used, recognize that the resulting safety circuit is degraded.
- Verify that the selected configuration is appropriate for the machine's safety requirements before placing the machine into service.
- Perform the required safety validation and functional testing after installation or modification.

NOTICE

The wiring diagrams included with this addendum supersede any conflicting stop-circuit wiring information in previous Shadow 10 documentation.

Use the wiring diagram corresponding to the actual machine stop-circuit configuration.

The updated drawings identify the appropriate connections for both the standard two-independent-stop-circuit configuration and legacy machines requiring a single stop circuit. The drawings should be retained with the Shadow 10 installation documentation for future service and maintenance reference.

Control Box Status Lights

The two status lights on the front of the control box operate differently depending on the control-box version.

For the 9688603 (24 VDC ESTOP), the LEDs indicate the OSSD output status of the paired light curtain inputs. TB4–TB5 correspond to LC1–2, and TB6–TB7 correspond to LC3–4. The status LEDs can therefore be used to identify which light curtain pair, LC1–2 or LC3–4, has been interrupted.

For the 9688604 (110 VAC ESTOP), both LEDs indicate the common machine-stop output status. All installed light curtains control both outputs; interruption of any light curtain turns both status LEDs OFF.

NOTICE

The status light behavior described below is based on the light curtain connections shown in Figures 1–4 for the 9688603 (24VDC ESTOP) and Figures 10–13 for the 9688604 (110 VAC ESTOP)

9688603 (SH 10 CONTROL BOX FOR 24VDC ESTOP)

- 1 Light Curtain: LC1–2 is illuminated and turns off when the light curtain is blocked. LC3–4 remains off.
- 2 Light Curtains: LC1–2 is illuminated and turns off when either light curtain is blocked. LC3–4 remains off.
- 3 Light Curtains: LC1–2 turns off when either light curtain connected to TB4–TB5 is blocked. LC3–4 turns off when the light curtain connected to TB6 is blocked.
- 4 Light Curtains: LC1–2 turns off when either light curtain connected to TB4–TB5 is blocked. LC3–4 turns off when either light curtain connected to TB6–TB7 is blocked.

9688603 – SH 10 CONTROL BOX 24VDC ESTOP		
Heads installed	**LC1-2 Status Light**	**LC3-4 Status Light**
1	● TB4	● Inactive
2	● TB4 & TB5	● Inactive
3	● TB4 & TB5	● TB6
4	● TB4 & TB5	● TB6 & TB7

9688604 (SH 10 CONTROL BOX FOR 110VDC ESTOP)

1–4 Light Curtains: Both LC1–2 and LC3–4 are illuminated when the machine-stop outputs are energized. Blocking any installed light curtain de-energizes both machine-stop outputs and turns both status LEDs OFF.

9688604 – SH 10 CONTROL BOX 110VDC ESTOP		
Heads installed	**LC1-2 Status Light**	**LC3-4 Status Light**
1-4	● TB4, TB5, TB6 & TB7	● TB4, TB5, TB6 & TB7

Key:

● = Status light is illuminated when the listed light curtain input(s) are satisfied. Blocking a light curtain connected to any listed input will turn the status light off.

● = Status light is inactive.

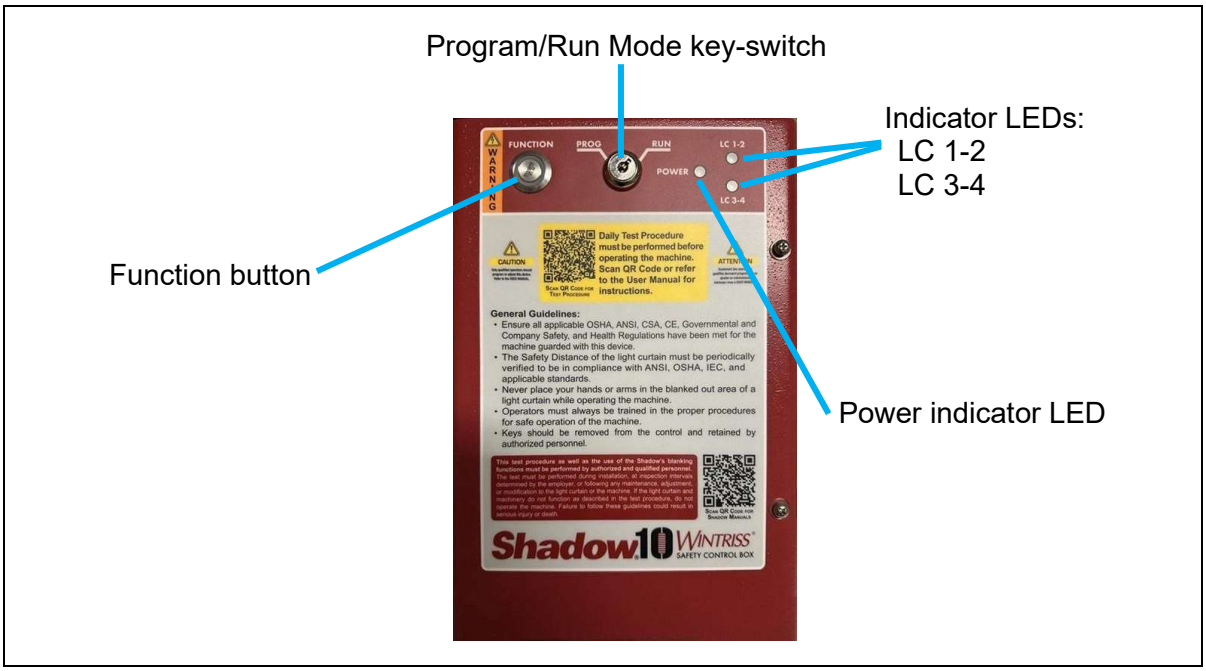


Figure 3-4. Optional Shadow 10 Control Box

Status indicator LEDS on the optional Shadow 10 control box, Figure 3-4:

Power LED

The green Power LED on the optional Shadow 10 control box illuminates when power is applied to the unit.

Output Status LEDs

The two green LEDs labelled “LC 1-2” and “LC 3-4” illuminate to indicate that the control box outputs are on (energized). When the LEDs are not illuminated the control box outputs are off (deenergized).

Switches on the optional Shadow 10 control box, Figure 3-4:

Function button

Press this button as part of programming processes to initiate blanking setup and other programmable parameters.

Mode key-switch (Program/Run)

This key-switch changes between Program and Run modes.

Output Options

The Shadow 10 optional controller box is available in two output configurations:

- 9688603 - 24VDC OSSD Output: Standard configuration, fully compatible with Wintriss WPC 1000/2000 controllers and most modern safety circuits.
- 9688604 - 115VAC Dry Contact Outputs: Available via an alternate version of the controller for compatibility with older or legacy equipment requiring higher voltage output signals.

Table 4-4. Shadow 10 RX 1 (First Receiver) Wiring Connections

Wire Color	Signal Label (TB4)
N/C	(1) +24V
N/C	(2) INTRLK
GRN	(3) AUX
WHT	(4) FCN
YEL	(5) RESET
GRY	(6) OSSD1
PNK	(7) OSSD2
BLU	(8) GND
BRN	(9) +24V
RED	(10) CHASS

N/C indicates no connection

Table 4-5. Shadow 10 TX 1 (First Transmitter) Wiring Connections

Wire Color	Signal Label (TB3 or TB8)
WHT	(1) CS1
BLK	(2) TEST
BLU	(3) GND
BRN	(4) +24V
GRY	(5) CHASS

Table 4-6. Shadow 10 RX 2 (Second Receiver) Wiring Connections

Wire Color	Signal Label (TB5)
N/C	(1) +24V
N/C	(2) INTRLK
GRN	(3) AUX
WHT	(4) FCN
YEL	(5) RESET
GRY	(6) OSSD1
PNK	(7) OSSD2
BLU	(8) GND
BRN	(9) +24V
RED	(10) CHASS

N/C indicates no connection

Table 4-7. Shadow 10 TX 2 (Second Transmitter) Wiring Connections

Wire Color	Signal Label (TB3 or TB8)
WHT	(1) CS1
BLK	(2) TEST
BLU	(3) GND
BRN	(4) +24V
GRY	(5) CHASS

Table 4-8. Shadow 10 RX 3 (Third Receiver) Wiring Connections

Wire Color	Signal Label (TB6)
N/C	(1) +24V
N/C	(2) INTRLK
GRN	(3) AUX
WHT	(4) FCN
YEL	(5) RESET
GRY	(6) OSSD1
PNK	(7) OSSD2
BLU	(8) GND
BRN	(9) +24V
RED	(10) CHASS

N/C indicates no connection

Table 4-9. Shadow 10 TX 3 (Third Transmitter) Wiring Connections

Wire Color	Signal Label (TB3 or TB8)
WHT	(1) CS1
BLK	(2) TEST
BLU	(3) GND
BRN	(4) +24V
GRY	(5) CHASS

Table 4-10. Shadow 10 RX 4 (Fourth Receiver) Wiring Connections

Wire Color	Signal Label (TB7)
N/C	(1) +24V
N/C	(2) INTRLK
GRN	(3) AUX
WHT	(4) FCN
YEL	(5) RESET
GRY	(6) OSSD1
PNK	(7) OSSD2
BLU	(8) GND
BRN	(9) +24V
RED	(10) CHASS

N/C indicates no connection

Table 4-11. Shadow 10 TX 4 (Fourth Transmitter) Wiring Connections

Wire Color	Signal Label (TB3 or TB8)
WHT	(1) CS1
BLK	(2) TEST
BLU	(3) GND
BRN	(4) +24V
GRY	(5) CHASS

1. Determine how you will bring wiring from your 115 VAC power source (or 230 VAC source, if applicable) to the appropriate hole on top of the unit. These wires should be connected directly to the press control transformer. For 115 VAC, you need three wires— line (black), neutral (white) and ground (green). For 230 VAC, high and neutral wires are black and red, the ground wire green or green-and-yellow.
2. Run the power wires to the control box. If your stop circuits are 115 VAC, the AC wiring and stop circuits will be run through the same flexible, liquid-tight conduit and will enter the enclosure ideally through the top left hole. To maintain the control box's NEMA 12 rating, you must use conduit of the same rating and make proper connections to the control.
3. Remove the hole plug(s) you plan to use for your AC wiring and stop circuits.
4. Connect the black wire to the "LINE" terminal on the grey terminal block, the white (or red) wire to the "NEUT" terminal, as shown in Figure 4-22, and in Figure 9 at the end of the manual.
5. Connect the green (or green-and-yellow) electric service ground wire to the set screw terminal on the top (ceiling) of the enclosure, as shown in Figure 4-22.
6. Leave a service loop at the control to allow for later adjustment of the conduit. Cut the wires as necessary.

WARNING

GUARD AGAINST ELECTRIC SHOCK HAZARD

Do not connect wires to AC power source until you are done with all other installation procedures.

Failure to comply with these instructions could result in death or serious injury.

Connecting Stop Circuits to the Shadow 10 Optional Control Box

⚠ DANGER

DO NOT USE SHADOW LIGHT CURTAINS ON FULL-REVOLUTION POWER PRESSES

- DO NOT use Shadow 10 safety light curtains on full-revolution clutched machinery, which cannot be stopped in mid-stroke.
- Use Shadow 10 safety light curtains only on machinery that can be stopped at any point in the stroke or cycle.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

PREVENT PRESS FROM BEING ABLE TO MOVE AFTER INTRUSION

- Ensure that Shadow 10 is wired to the stop circuitry of the press.
- Ensure that any stop initiated by the light curtain is an immediate stop, one that occurs immediately after the stop signal is sent to the machinery. If the light curtain is not correctly wired in this way, the press may continue its stroke after an intrusion is detected.

Failure to comply with these instructions will result in death or serious injury.

⚠ DANGER

AVOID WIRING STOP CIRCUITS THAT ARE NON-OPERATIVE IN SOME MODES

Wire the light curtain in series with your press control circuit so the stop signal from the light curtain stops the machine immediately in all modes of operation, including Inch.

Failure to comply with these instructions will result in death or serious injury.

- Verify that the selected configuration is appropriate for the machine's safety requirements before placing the machine into service.
- Perform the required safety validation and functional testing after installation or modification.

Wiring Shadow 10 to the Stop Circuit(s)

To connect to your machine's stop circuit, perform the following steps:

1. Locate terminal block TB9 on the Shadow 10 control main board, Figure 4-20, page 65.
2. Connect according to wiring diagram Figure 9 at the end of the manual. Figure 4-23 below, shows the relevant section of Figure 9.
3. When you have finished wiring the relays, remember to leave a service loop at the control to allow for later adjustment of the conduit. Cut the wires as necessary.

When wiring Shadow 10 into the machine's stop circuit, you should ensure that the light curtain is active in all modes of operation. This includes Inch, Single-stroke, and Continuous. Following this practice provides safety for setup personnel as well as operators. In some cases, having Shadow 10 active in all modes may even eliminate the need for lockout during a die change. See OSHA 1910.147 "Lockout/Tagout" for details.

⚠ DANGER

Under no circumstances should the Control Box outputs be wired together. Also, both outputs should be used at all times, separately connected to independent stop circuits in the target machine's control system to maintain the Type 4 specification.

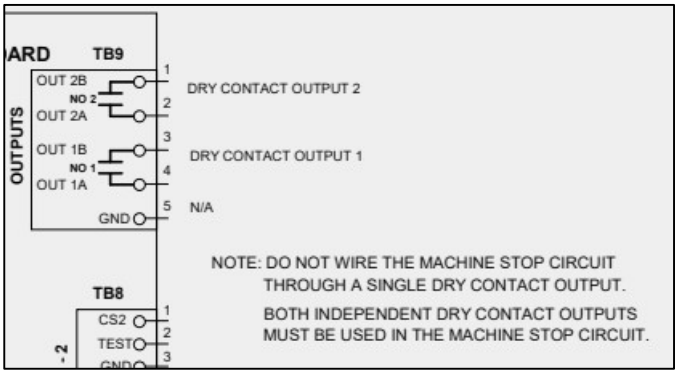


Figure 4-23. Wiring to Machine Stop Circuits (from Figure 9)

Optional Control Box Specifications

The following table shows the specifications for the Shadow 10 optional control box:

Table 10-4. Optional Control Box Specifications

	Shadow 10 Optional Control Box for 24VDC ESTOP	Shadow 10 Control Box for 110VAC ESTOP
Part Number	9688603	9688604
Temperature	-10 to 43°C (14 to 110°F)	-10 to 43°C (14 to 110°F)
Response Time	12.6 ms	24.6 ms
Input Power	100-240VAC 50/60Hz 0.19/0.12A	100-240VAC 50/60Hz 0.22/0.15A
Enclosure	NEMA 12	NEMA 12

Response Time

The response time of the Shadow 10 light curtain depends only on the total number of beams on the system.

The following table shows the maximum response time values of a single head system for the Shadow 10 for all available protective field lengths.

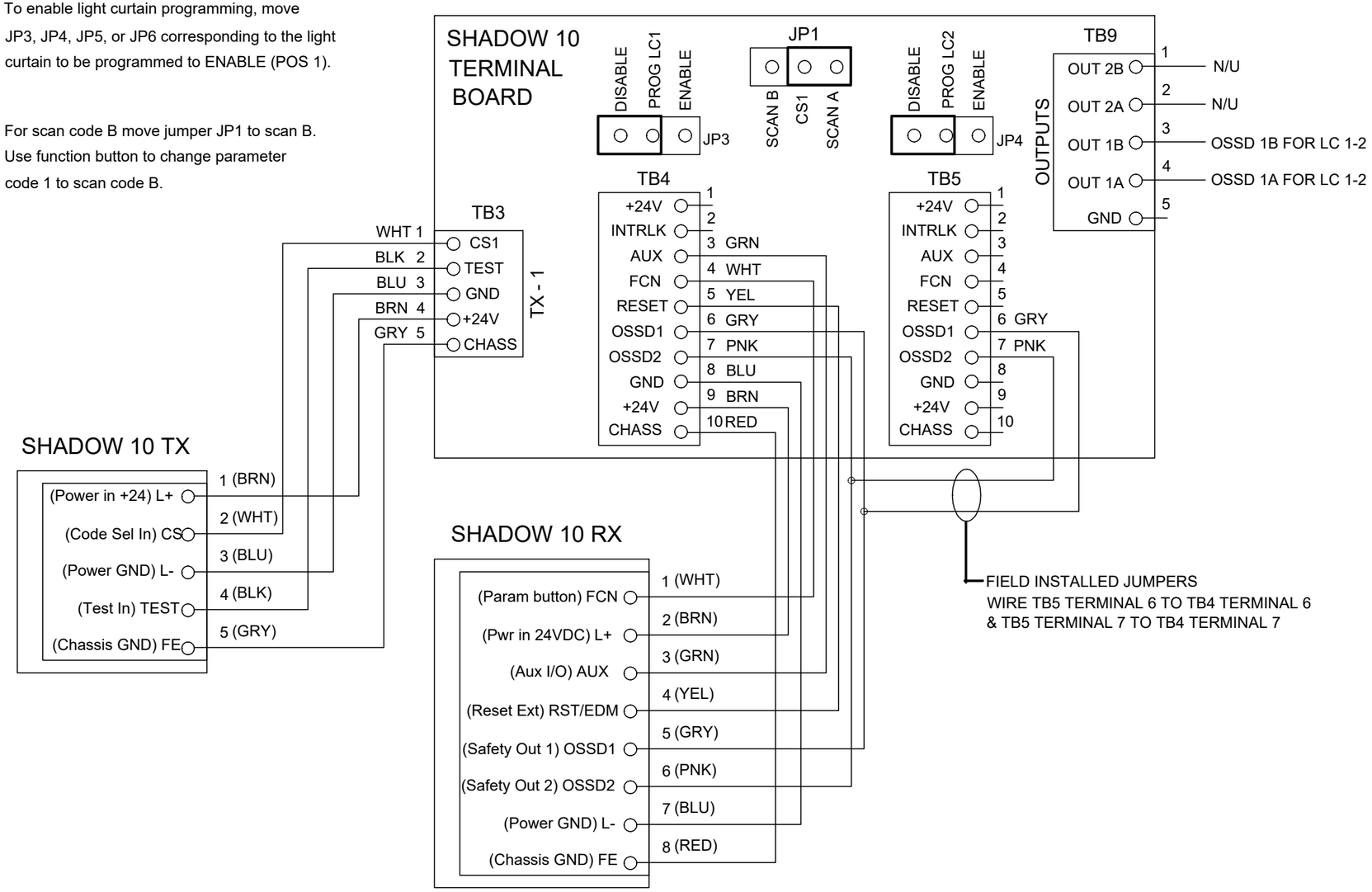
Table 10-5. Response Time as Function of Detection Capability and Protective Field Length

0.866 in. (22 mm) Detection Capability	
Protective Field Length	**Maximum Response Time (ms)**
11.8 in. (300 mm)	15
17.7 in. (450 mm)	18
23.5 in. (600 mm)	21
29.5 in. (750 mm)	25
35.4 in. (900 mm)	28
47.2 in. (1200 mm)	35
59.0 in. (1500 mm)	42

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To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B move jumper JP1 to scan B. Use function button to change parameter code 1 to scan code B.



NOTE: 'N/U' INDICATES NOT USED

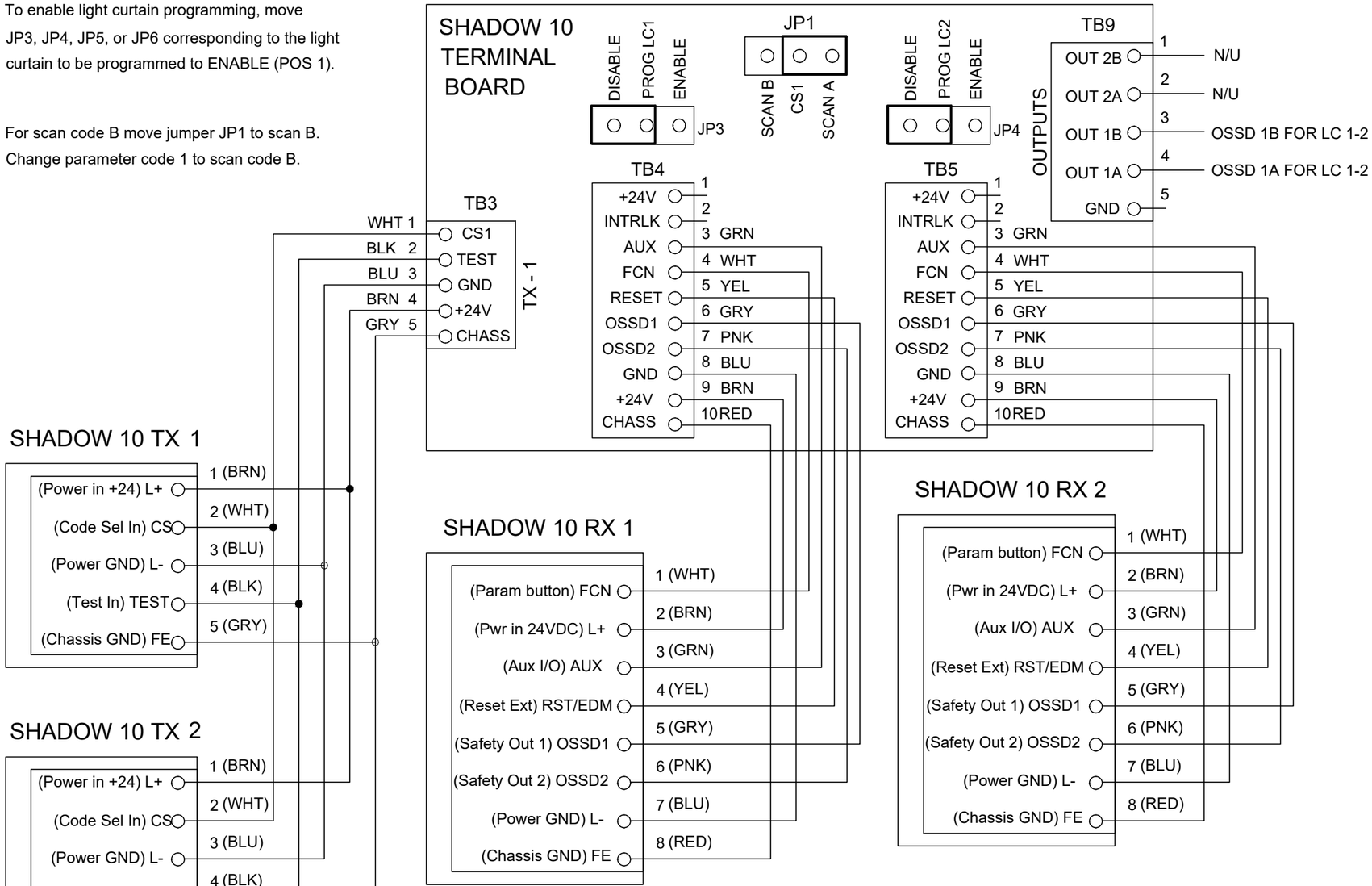
NOTE: For (9688603) SH 10 CONTROL BOX FOR 24VDC ESTOP ONLY

TITLE: SHADOW 10 SINGLE TX AND RX HEAD TO CONTROL BOX WIRING DIAGRAM 24V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 1	REV: A
DATE: 10/12/2026		SHEET: OF	

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To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B move jumper JP1 to scan B. Change parameter code 1 to scan code B.



NOTE: 'N/U' INDICATES NOT USED

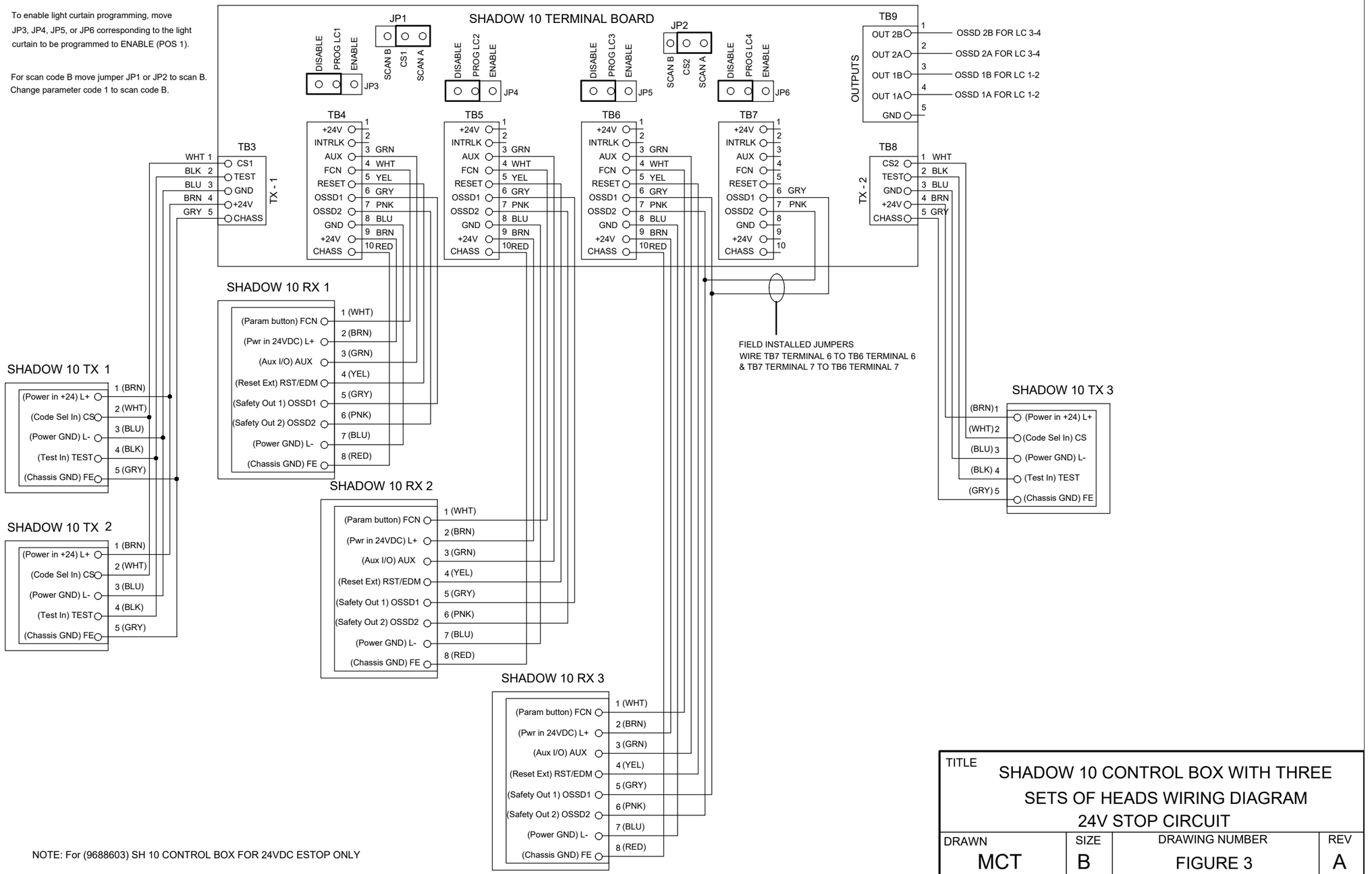
NOTE: For (9688603) SH 10 CONTROL BOX FOR 24VDC ESTOP ONLY

TITLE: SHADOW 10 TWO TX AND RX HEAD TO CONTROL BOX WIRING DIAGRAM 24V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 2	REV: A
DATE: 10/12/2026		SHEET OF	

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To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B move jumper JP1 or JP2 to scan B. Change parameter code 1 to scan code B.



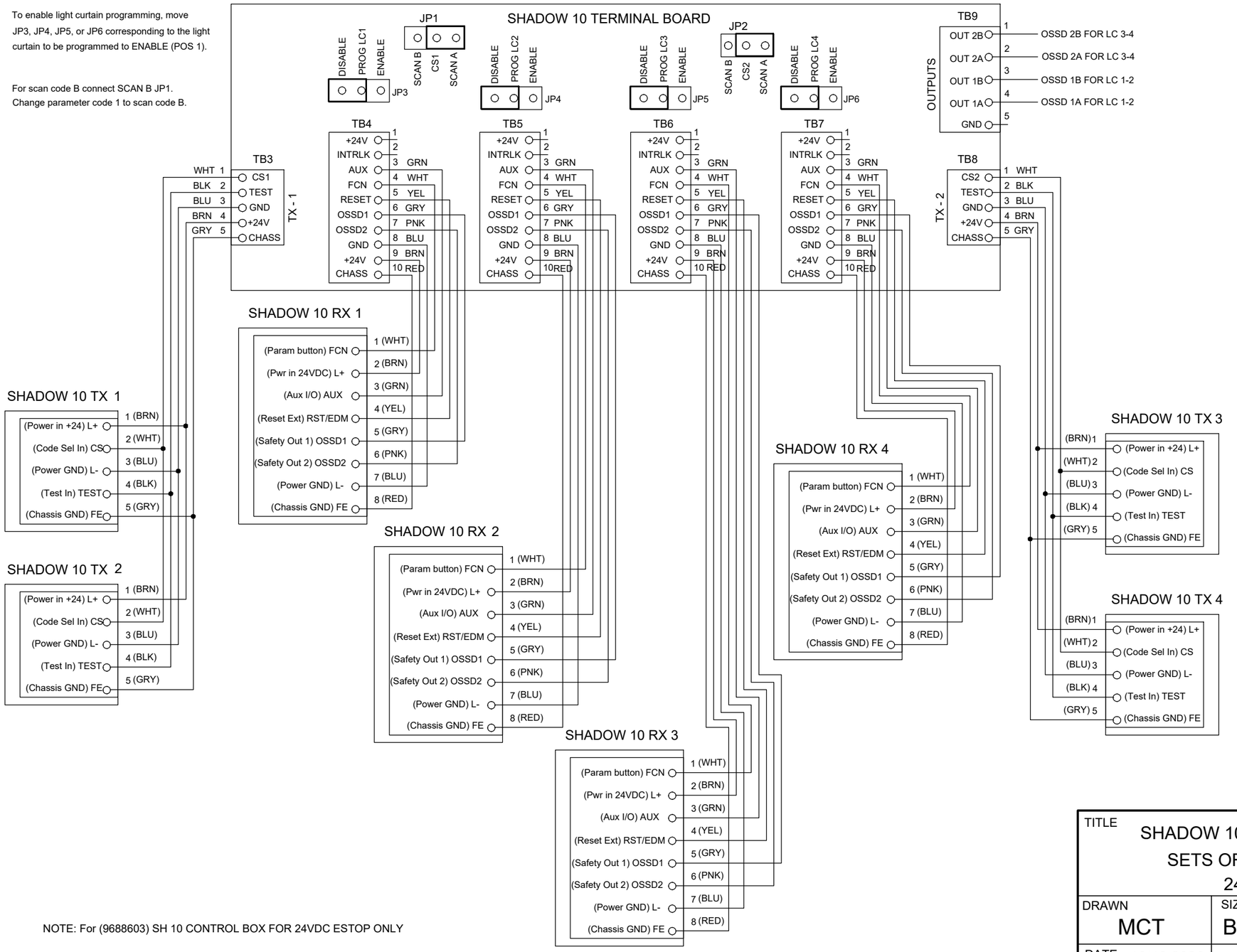
NOTE: For (9688603) SH 10 CONTROL BOX FOR 24VDC ESTOP ONLY

TITLE: SHADOW 10 CONTROL BOX WITH THREE SETS OF HEADS WIRING DIAGRAM 24V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 3	REV: A
DATE: 10/12/2026		SHEET: OF	

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To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B connect SCAN B JP1.
Change parameter code 1 to scan code B.



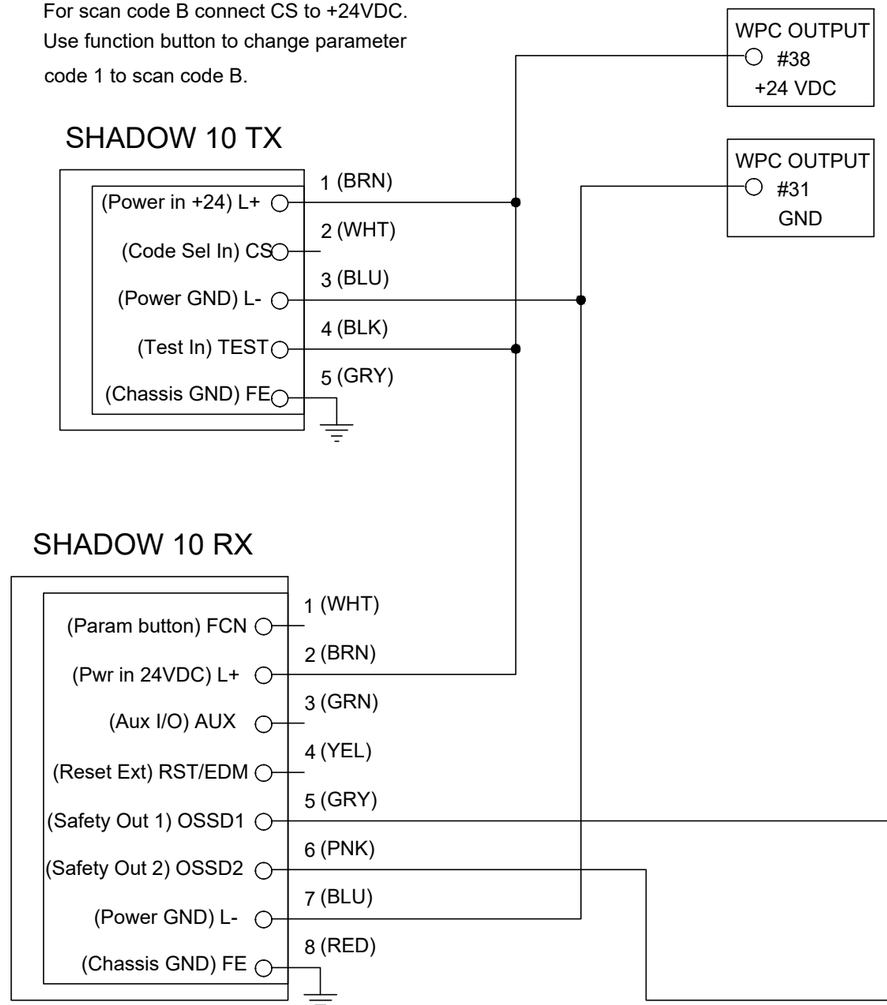
NOTE: For (9688603) SH 10 CONTROL BOX FOR 24VDC ESTOP ONLY

TITLE: SHADOW 10 CONTROL BOX WITH FOUR SETS OF HEADS WIRING DIAGRAM 24V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 4	REV: A
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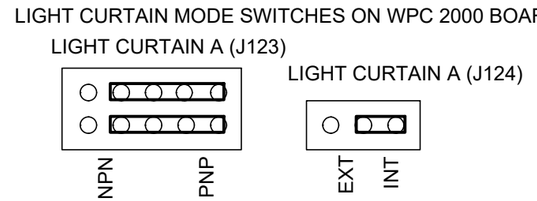
Leave CS open for scan code A.

For scan code B connect CS to +24VDC.
Use function button to change parameter code 1 to scan code B.

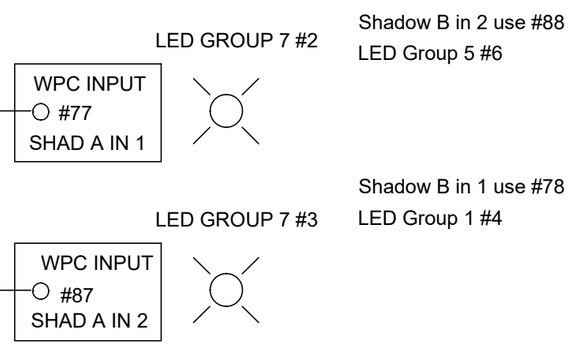


Shadow 10 Light Curtain programming can be performed utilizing the Portable Teach Tool (9688606)

LIGHT CURTAIN MODE SWITCHES ON WPC 2000 BOARD



SET TO PNP WITH INTERNAL TEST
For Shadow B see J121 and J122.



TITLE: SINGLE SHADOW 10 AND WPC 2000 WIRING DIAGRAM			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 5	REV: A
DATE: 10/12/2026		SHEET OF	

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SHADOW 10 TX 1

- 1 (BRN) (Power in +24) L+
- 2 (WHT) (Code Sel In) CS
- 3 (BLU) (Power GND) L-
- 4 (BLK) (Test In) TEST
- 5 (GRY) (Chassis GND) FE

SHADOW 10 TX 2

- 1 (BRN) (Power in +24) L+
- 2 (WHT) (Code Sel In) CS
- 3 (BLU) (Power GND) L-
- 4 (BLK) (Test In) TEST
- 5 (GRY) (Chassis GND) FE

WPC OUTPUT #38 +24 VDC

WPC OUTPUT #31 GND

Leave CS open for scan code A.

For scan code B connect CS to +24VDC. Use function button to change parameter code 1 to scan code B.

SHADOW 10 RX 1

- 1 (WHT) (Param button) FCN
- 2 (BRN) (Pwr in 24VDC) L+
- 3 (GRN) (Aux I/O) AUX
- 4 (YEL) (Reset Ext) RST/EDM
- 5 (GRY) (Safety Out 1) OSSD1
- 6 (PNK) (Safety Out 2) OSSD2
- 7 (BLU) (Power GND) L-
- 8 (RED) (Chassis GND) FE

Shadow 10 Light Curtain programming can be performed utilizing the Portable Teach Tool (9688606)

LIGHT CURTAIN MODE SWITCHES ON WPC 2000 BOARD

LIGHT CURTAIN B (J121)

LIGHT CURTAIN 2 (J122)

NPN PNP EXT INT

SET TO PNP WITH INTERNAL TEST

LIGHT CURTAIN MODE SWITCHES ON WPC 2000 BOARD

LIGHT CURTAIN A (J123)

LIGHT CURTAIN A (J124)

NPN PNP EXT INT

SET TO PNP WITH INTERNAL TEST

SHADOW 10 RX 2

- 1 (WHT) (Param button) FCN
- 2 (BRN) (Pwr in 24VDC) L+
- 3 (GRN) (Aux I/O) AUX
- 4 (YEL) (Reset Ext) RST/EDM
- 5 (GRY) (Safety Out 1) OSSD1
- 6 (PNK) (Safety Out 2) OSSD2
- 7 (BLU) (Power GND) L-
- 8 (RED) (Chassis GND) FE

LED GROUP 1 #4

WPC INPUT #78 SHAD B IN 1

LED GROUP 5 #6

WPC INPUT #88 SHAD B IN 2

LED GROUP 7 #2

WPC INPUT #77 SHAD A IN 1

LED GROUP 7 #3

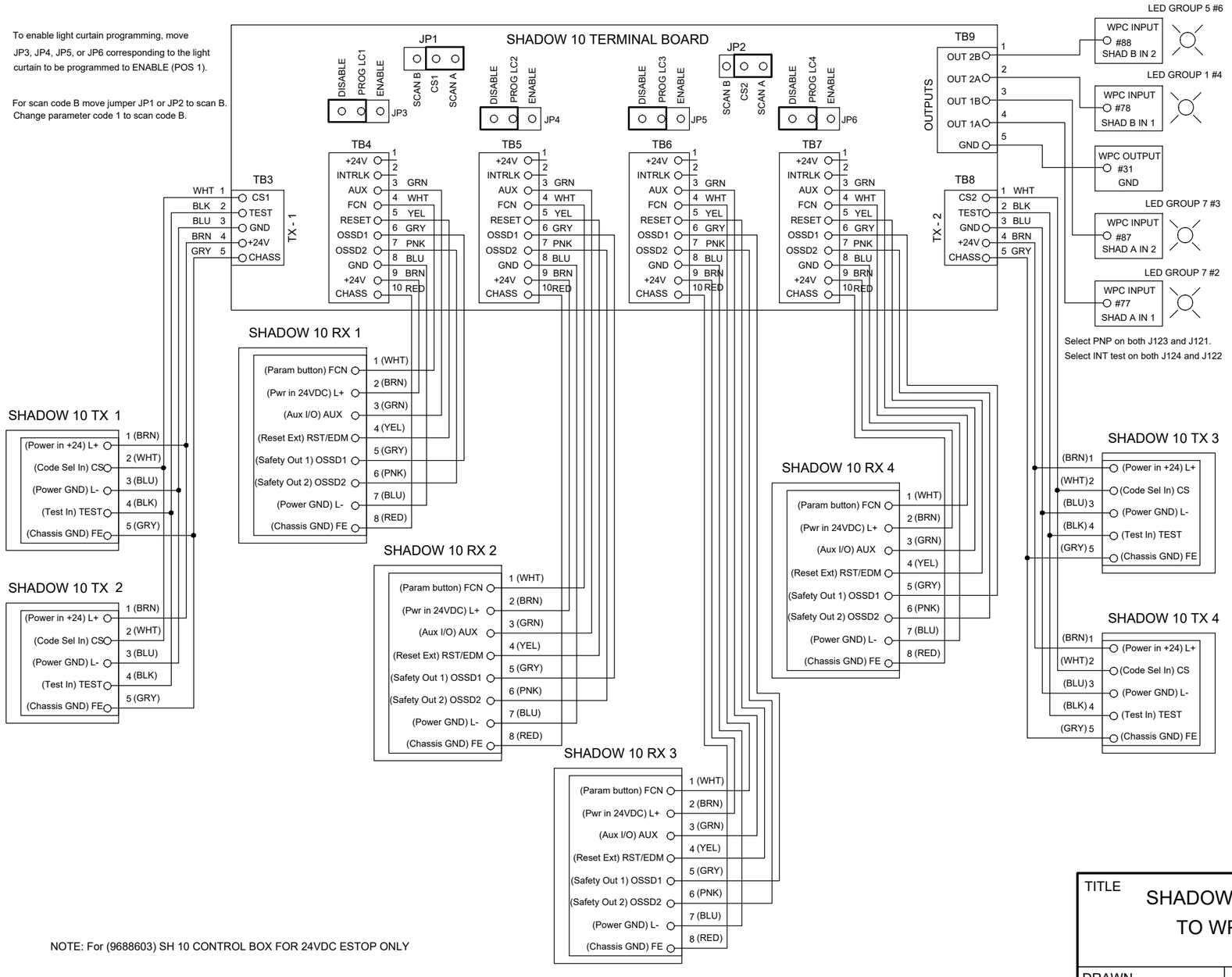
WPC INPUT #87 SHAD A IN 2

TITLE	DUAL SHADOW 10 AND WPC 2000 WIRING DIAGRAM		
DRAWN MCT	SIZE B	DRAWING NUMBER FIGURE 6	REV A
DATE 10/12/2026		SHEET OF	

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To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

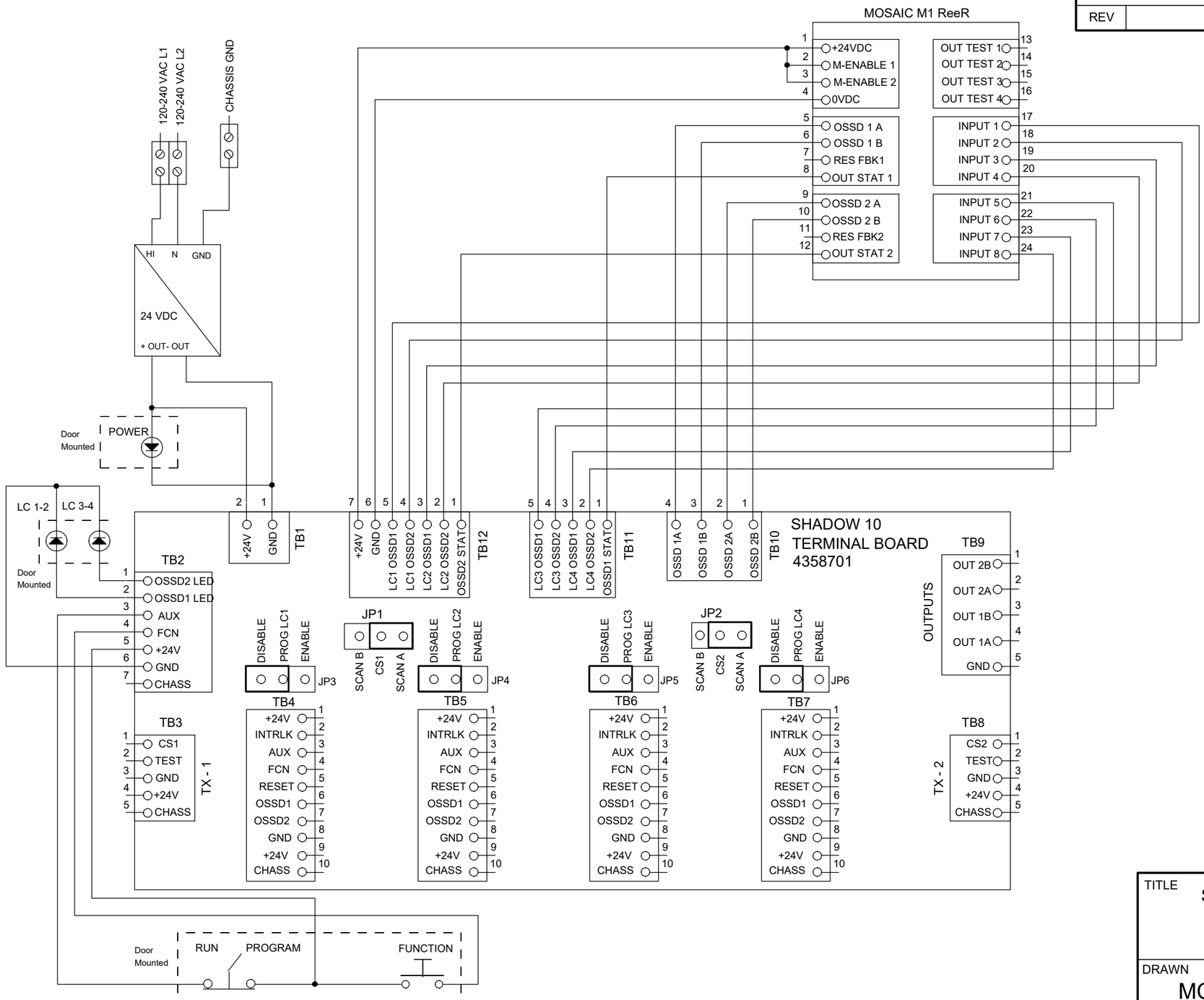
For scan code B move jumper JP1 or JP2 to scan B. Change parameter code 1 to scan code B.



NOTE: For (9688603) SH 10 CONTROL BOX FOR 24VDC ESTOP ONLY

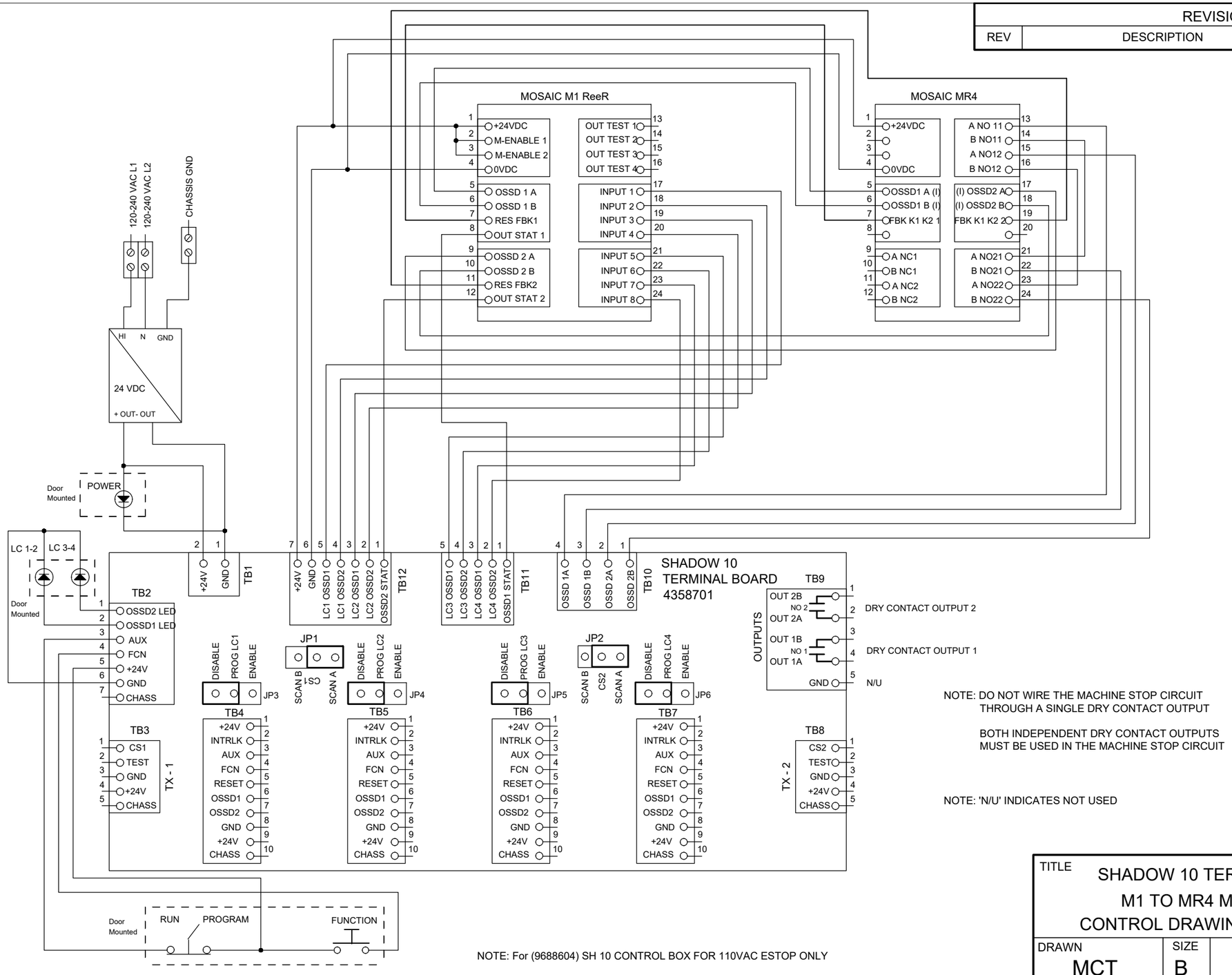
TITLE	SHADOW 10 CONTROL BOX FOUR HEADS TO WPC 2000 WIRING DIAGRAM 24V STOP CIRCUIT		
DRAWN MCT	SIZE B	DRAWING NUMBER FIGURE 7	REV A
DATE 10/12/2026		SHEET	OF

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TITLE	SHADOW 10 TERMINAL BOARD TO M1 MOSAIC CONTROL DRAWING 24V STOP CIRCUIT		
DRAWN MCT	SIZE B	DRAWING NUMBER FIGURE 8	REV A
DATE 10/12/2026		SHEET OF	

REVISIONS			
REV	DESCRIPTION	DATE	APP'D



NOTE: DO NOT WIRE THE MACHINE STOP CIRCUIT THROUGH A SINGLE DRY CONTACT OUTPUT

BOTH INDEPENDENT DRY CONTACT OUTPUTS MUST BE USED IN THE MACHINE STOP CIRCUIT

NOTE: 'N/U' INDICATES NOT USED

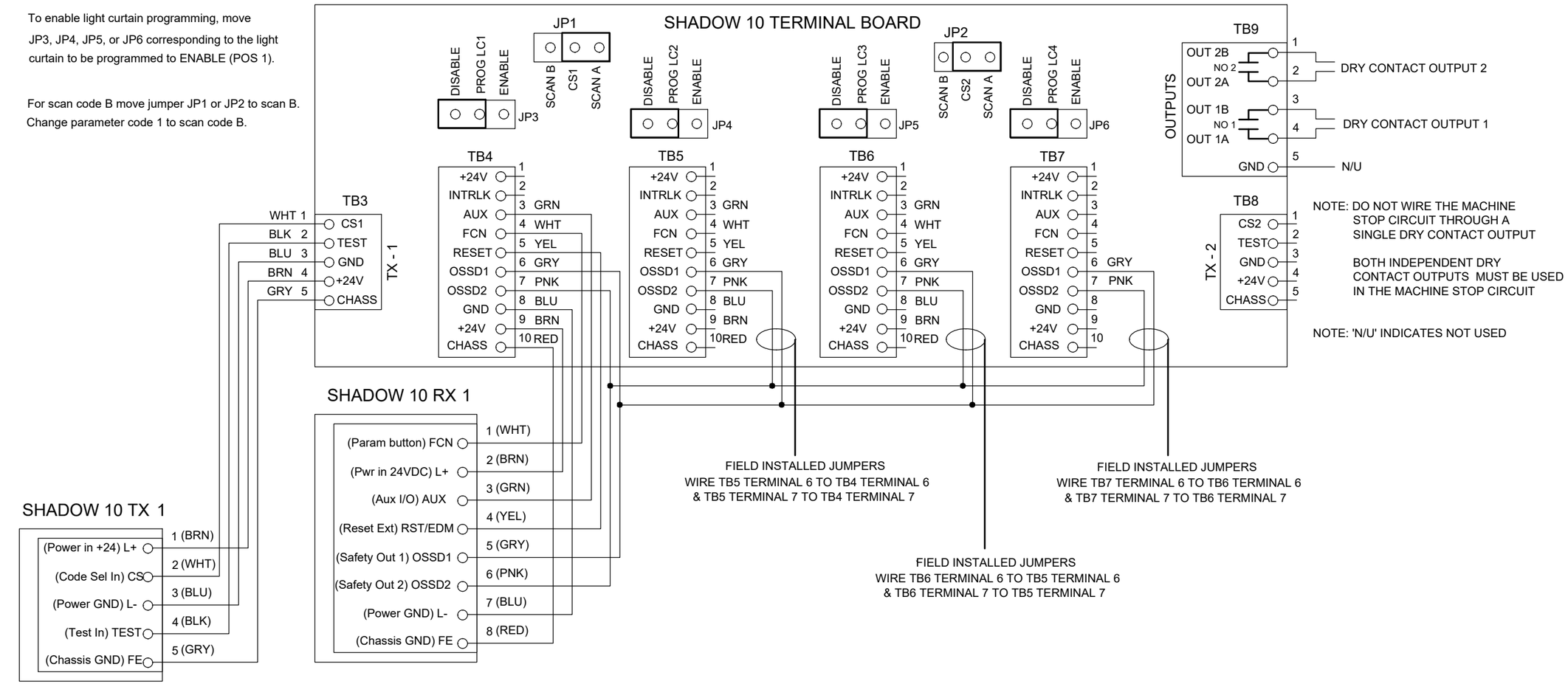
NOTE: For (9688604) SH 10 CONTROL BOX FOR 110VAC ESTOP ONLY

TITLE: SHADOW 10 TERMINAL BOARD WITH M1 TO MR4 MOSAIC 1-4 HEADS CONTROL DRAWING 110V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 9	REV: A
DATE: 10/12/2026		SHEET OF	

REVISIONS			
REV	DESCRIPTION	DATE	APP'D

To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B move jumper JP1 or JP2 to scan B. Change parameter code 1 to scan code B.



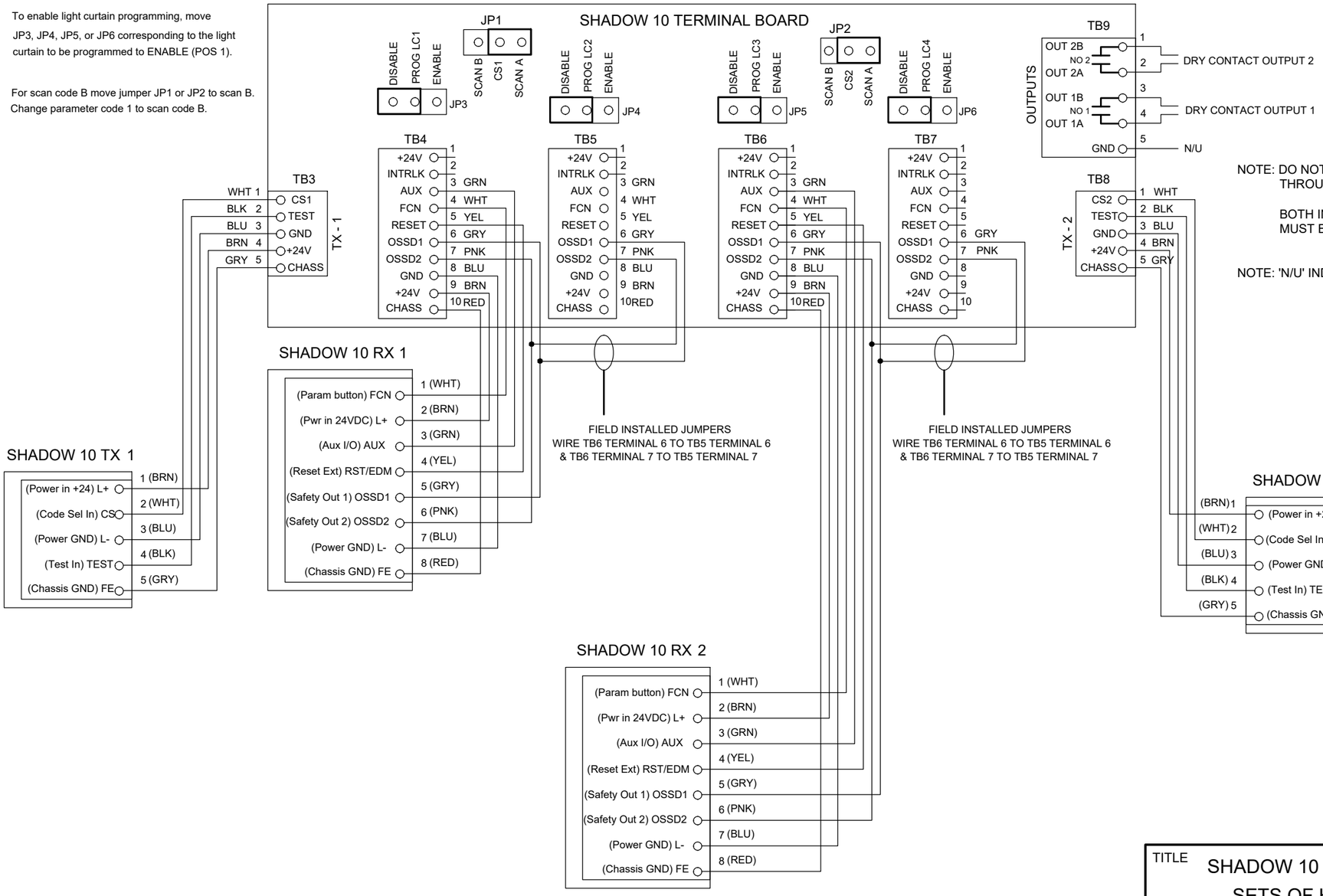
NOTE: For (9688604) SH 10 CONTROL BOX FOR 110VAC ESTOP ONLY

TITLE: SHADOW 10 CONTROL BOX WITH SINGLE SET OF HEAD WIRING DIAGRAM 115V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 10	REV: A
DATE: 10/12/2026		SHEET OF	

REVISIONS			
REV	DESCRIPTION	DATE	APP'D

To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B move jumper JP1 or JP2 to scan B. Change parameter code 1 to scan code B.



NOTE: DO NOT WIRE THE MACHINE STOP CIRCUIT THROUGH A SINGLE DRY CONTACT OUTPUT

BOTH INDEPENDENT DRY CONTACT OUTPUTS MUST BE USED IN THE MACHINE STOP CIRCUIT

NOTE: 'N/U' INDICATES NOT USED

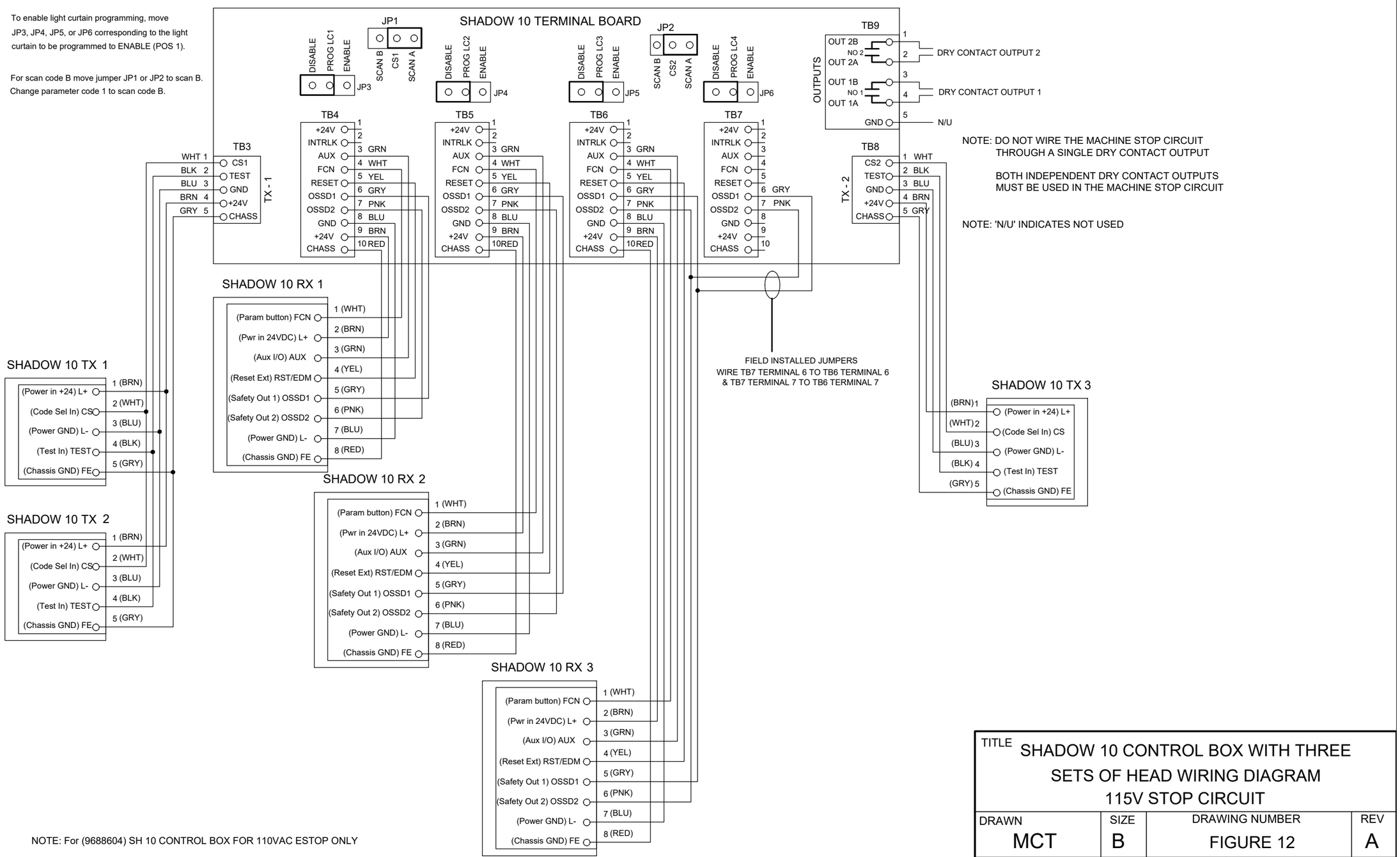
NOTE: For (9688604) SH 10 CONTROL BOX FOR 110VAC ESTOP ONLY

TITLE: SHADOW 10 CONTROL BOX WITH TWO SETS OF HEAD WIRING DIAGRAM 115V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 11	REV: A
DATE: 10/12/2026		SHEET: OF	

REVISIONS			
REV	DESCRIPTION	DATE	APP'D

To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B move jumper JP1 or JP2 to scan B. Change parameter code 1 to scan code B.



NOTE: DO NOT WIRE THE MACHINE STOP CIRCUIT THROUGH A SINGLE DRY CONTACT OUTPUT

BOTH INDEPENDENT DRY CONTACT OUTPUTS MUST BE USED IN THE MACHINE STOP CIRCUIT

NOTE: 'N/U' INDICATES NOT USED

NOTE: For (9688604) SH 10 CONTROL BOX FOR 110VAC ESTOP ONLY

TITLE SHADOW 10 CONTROL BOX WITH THREE SETS OF HEAD WIRING DIAGRAM 115V STOP CIRCUIT

DRAWN	SIZE	DRAWING NUMBER	REV
MCT	B	FIGURE 12	A
DATE 10/12/2026		SHEET OF	

REVISIONS			
REV	DESCRIPTION	DATE	APP'D

To enable light curtain programming, move JP3, JP4, JP5, or JP6 corresponding to the light curtain to be programmed to ENABLE (POS 1).

For scan code B connect SCAN B JP1.
Change parameter code 1 to scan code B.

SHADOW 10 TERMINAL BOARD

JP1: DISABLE, PROG LC1, ENABLE, JP3 — SCAN B, CS1, SCAN A
JP2: SCAN B, CS2, SCAN A
JP4: DISABLE, PROG LC2, ENABLE
JP5: DISABLE, PROG LC3, ENABLE
JP6: DISABLE, PROG LC4, ENABLE

TB3 (TX - 1): WHT 1 CS1; BLK 2 TEST; BLU 3 GND; BRN 4 +24V; GRY 5 CHASS

TB4 / TB5 / TB6 / TB7:
1 +24V; 2 INTRLK; 3 GRN AUX; 4 WHT FCN; 5 YEL RESET; 6 GRY OSSD1; 7 PNK OSSD2; 8 BLU GND; 9 BRN +24V; 10 RED CHASS

TB9 (OUTPUTS):
1 OUT 2B
NO 2
2 OUT 2A — DRY CONTACT OUTPUT 2
3 OUT 1B
NO 1
4 OUT 1A — DRY CONTACT OUTPUT 1
5 GND — N/U

TB8 (TX - 2): 1 WHT CS2; 2 BLK TEST; 3 BLU GND; 4 BRN +24V; 5 GRY CHASS

NOTE: DO NOT WIRE THE MACHINE STOP CIRCUIT THROUGH A SINGLE DRY CONTACT OUTPUT

BOTH INDEPENDENT DRY CONTACT OUTPUTS MUST BE USED IN THE MACHINE STOP CIRCUIT

NOTE: 'N/U' INDICATES NOT USED

SHADOW 10 TX 1

(Power in +24) L+ 1 (BRN)
(Code Sel In) CS 2 (WHT)
(Power GND) L- 3 (BLU)
(Test In) TEST 4 (BLK)
(Chassis GND) FE 5 (GRY)

SHADOW 10 TX 2

(Power in +24) L+ 1 (BRN)
(Code Sel In) CS 2 (WHT)
(Power GND) L- 3 (BLU)
(Test In) TEST 4 (BLK)
(Chassis GND) FE 5 (GRY)

SHADOW 10 RX 1

(Param button) FCN 1 (WHT)
(Pwr in 24VDC) L+ 2 (BRN)
(Aux I/O) AUX 3 (GRN)
(Reset Ext) RST/EDM 4 (YEL)
(Safety Out 1) OSSD1 5 (GRY)
(Safety Out 2) OSSD2 6 (PNK)
(Power GND) L- 7 (BLU)
(Chassis GND) FE 8 (RED)

SHADOW 10 RX 2

(Param button) FCN 1 (WHT)
(Pwr in 24VDC) L+ 2 (BRN)
(Aux I/O) AUX 3 (GRN)
(Reset Ext) RST/EDM 4 (YEL)
(Safety Out 1) OSSD1 5 (GRY)
(Safety Out 2) OSSD2 6 (PNK)
(Power GND) L- 7 (BLU)
(Chassis GND) FE 8 (RED)

SHADOW 10 RX 3

(Param button) FCN 1 (WHT)
(Pwr in 24VDC) L+ 2 (BRN)
(Aux I/O) AUX 3 (GRN)
(Reset Ext) RST/EDM 4 (YEL)
(Safety Out 1) OSSD1 5 (GRY)
(Safety Out 2) OSSD2 6 (PNK)
(Power GND) L- 7 (BLU)
(Chassis GND) FE 8 (RED)

SHADOW 10 RX 4

(Param button) FCN 1 (WHT)
(Pwr in 24VDC) L+ 2 (BRN)
(Aux I/O) AUX 3 (GRN)
(Reset Ext) RST/EDM 4 (YEL)
(Safety Out 1) OSSD1 5 (GRY)
(Safety Out 2) OSSD2 6 (PNK)
(Power GND) L- 7 (BLU)
(Chassis GND) FE 8 (RED)

SHADOW 10 TX 3

(BRN) 1 (Power in +24) L+
(WHT) 2 (Code Sel In) CS
(BLU) 3 (Power GND) L-
(BLK) 4 (Test In) TEST
(GRY) 5 (Chassis GND) FE

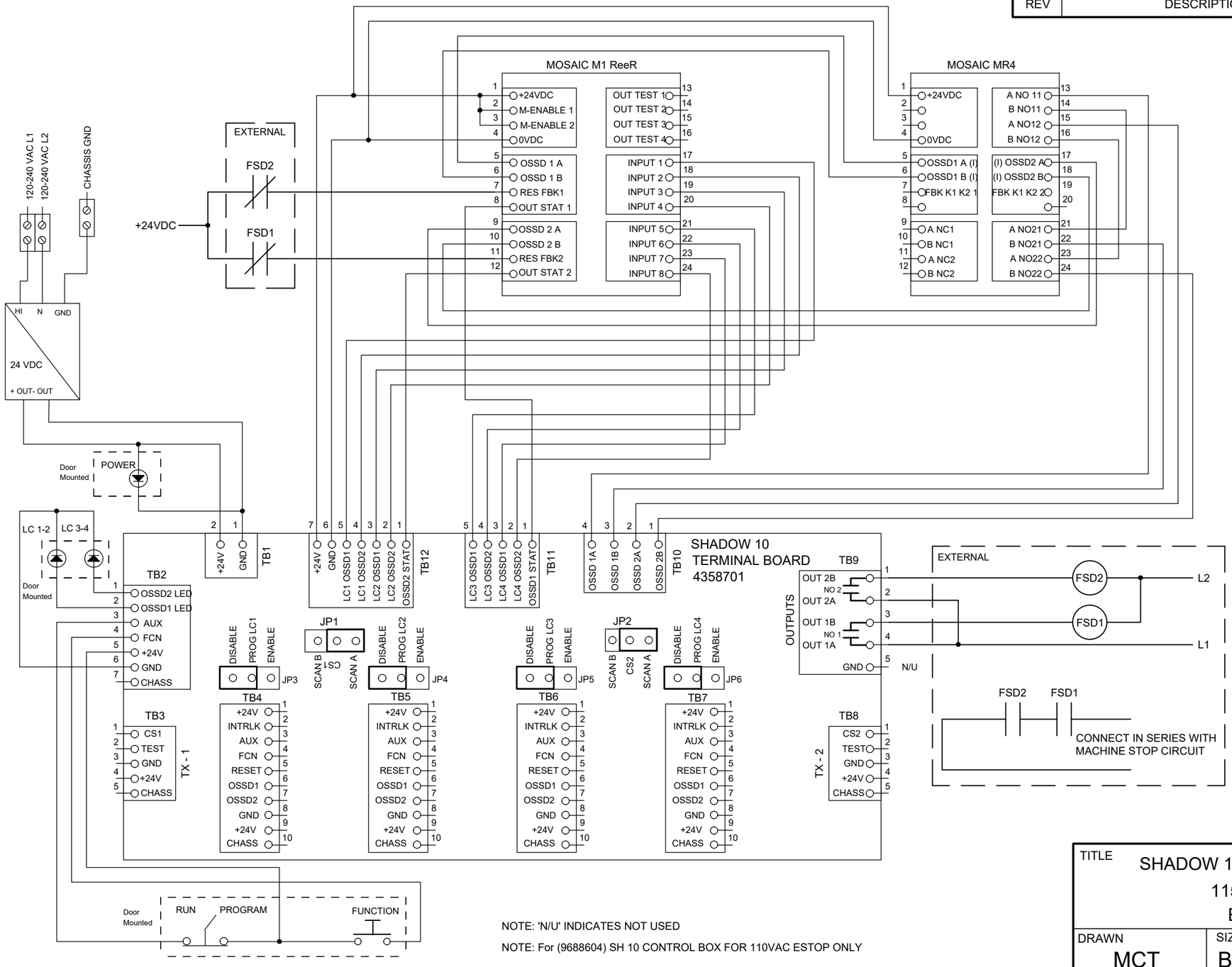
SHADOW 10 TX 4

(BRN) 1 (Power in +24) L+
(WHT) 2 (Code Sel In) CS
(BLU) 3 (Power GND) L-
(BLK) 4 (Test In) TEST
(GRY) 5 (Chassis GND) FE

NOTE: For (9688604) SH 10 CONTROL BOX FOR 110VAC ESTOP ONLY

TITLE: SHADOW 10 CONTROL BOX WITH FOUR SETS OF HEAD WIRING DIAGRAM 115V STOP CIRCUIT			
DRAWN: MCT	SIZE: B	DRAWING NUMBER: FIGURE 13	REV: A
DATE: 10/12/2026		SHEET OF	

REVISIONS			
REV	DESCRIPTION	DATE	APP'D



NOTE: 'N/U' INDICATES NOT USED

NOTE: For (9688604) SH 10 CONTROL BOX FOR 110VAC ESTOP ONLY

TITLE	SHADOW 10 TERMINAL BOARD WITH 115V STOP CIRCUIT EXTERNAL EDM		
DRAWN MCT	SIZE B	DRAWING NUMBER FIGURE 14	REV A
DATE 10/5/2026		SHEET OF	