
**AllStar w/Encoder Control Panel
UltraSecure 3000**

INSTALLATION



Table of Contents



STATEMENT OF WARRANTY	2
Safety Practices	3
Installation.....	4
ALLSTAR™ DRIVE SYSTEM WITH ENCODER SETUP.....	5
Setting the Door Limits.....	6
Function Set-up.....	7
Final Checks	7
Power Print PANDX3F (220V or 460V, 60HZ, 3 phase)	8
Power Print PANDX35F (600V, 60HZ, 3 phase).....	9
Logic Print VAE3KDX Base Logic.....	10
Logic Print VANDX2 Options Logic	11
Wiring Diagram VWDA1BON-01	12
Safety Edge Wiring BESEMOD.....	13
Light Curtain LCPLC.....	14
Actuators VACT1	15
Open/Close/Stop Actuators VACT2.....	16

NOTE

The attached electrical diagrams with these instructions are for reference purposes only and may show wiring for options not supplied with the door. Please refer to the actual schematics that are supplied with the control panel.

WARNING

DO NOT INSTALL, OPERATE, OR SERVICE THIS PRODUCT UNLESS YOU HAVE READ AND UNDERSTAND THE SAFETY PRACTICES, WARNINGS, INSTALLATION, AND MAINTENANCE INSTRUCTIONS CONTAINED IN THIS MANUAL.

STATEMENT OF WARRANTY

UltraSecure 3000 High Speed Doors

ONE-YEAR WARRANTY ON MECHANICAL AND ELECTRICAL COMPONENTS

- **Albany Door Systems** warrants to the original owner of the door that the mechanical and electrical components will be free from defects in material and workmanship for a period of **one (1) year** from the date of shipment. The warranty does not cover fuses, heat lamp elements, bulbs, and seals.
- **Only defects brought to the attention of Albany Door Systems during the warranty period will be covered by this warranty.**
- **Albany Door Systems** will replace component parts covered by this warranty, which are found to be defective upon inspection by an **Albany Door Systems** representative. Installation or use of parts other than those authorized by **Albany Door Systems** will void this warranty.
- PARTS AND ASSEMBLIES sold separately by **Albany Door Systems** that fail due to defects in material or workmanship within **ninety (90) days** from the date of shipment will be replaced under warranty provided installation has been carried out in accordance with all **Albany Door Systems** procedures. This warranty is limited to providing a replacement part only. This warranty does not cover freight, special charges, or any costs associated with the installation of the replacement part.
- This warranty covers material failure under normal wear conditions; it does not cover damage caused by collision or other abuse of the product. Adjustments made to the control panel or to the mechanical operation of the door without the authorization of **Albany Door Systems** will void this warranty. Any changes made to product configuration without the express written approval from Albany Door Systems may null and void this warranty.
- **Albany Door Systems'** obligations under this warranty are limited to repairing or replacing the defective part including labor and **Albany Door Systems** shall not be responsible for any other losses or damages due to the operation of any door or parts covered by this warranty. Warranty parts will be shipped regular ground freight at the expense of Albany Door Systems.
- This warranty shall be void in its entirety if the failure of any product shall be caused by any installation, operation, or maintenance of the product which does not conform with the requirements set forth by the seller in the applicable product manuals or is in the result of any cause other than a defect in the material or workmanship of the product.
- No other oral or written representations made by **Albany Door Systems** or its agents are a part of this warranty unless specifically set forth in writing by an authorized **Albany Door Systems** official.

THE ABOVE SET FORTH WARRANTY IS SELLER'S SOLE WARRANTY. SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESTATED OBLIGATION ARE HEREBY DISCLAIMED BY SELLER AND EXCLUDED FROM THIS AGREEMENT.

WARNING

Do not install, operate or service the product unless you have read and understand the safety practices, warnings, installation and maintenance instructions contained in this manual.

Safety Practices

WARNING

THOROUGHLY READ THESE SAFETY PRACTICES PRIOR TO INSTALLING, OPERATING, OR SERVICING A HIGH-SPEED DOOR. FAILURE TO FOLLOW THESE SAFETY PRACTICES MAY RESULT IN PROPERTY DAMAGE, PERSONNEL BODILY INJURY, OR DEATH.

1. Do not operate an Albany High Speed Door while you are under the influence of drugs or alcohol.
2. Do not use the door if any parts appear to be broken or damaged.
3. Stay clear of the door while it is operating.
4. Keep hands and feet clear of the door at all times.
5. Do not drive through the door opening unless door is completely open.
6. Maintain a clear door opening at all times. Keep the door opening free of any obstructions.
7. Remove power at the fused disconnect during all electrical or mechanical service. OSHA requires a disconnect to be properly tagged and locked out during all maintenance or service of equipment.
8. All electrical troubleshooting or service must be performed by a qualified electrician or service person and must meet all applicable local, state, federal, and other governing agency codes.
9. **USE EXTREME CAUTION** when it is necessary to service the control panel while it is energized.

WARNING

CONTROL PANEL CONTAINS HIGH VOLTAGE. QUALIFIED ELECTRICAL PERSONNEL SHOULD PERFORM THE FOLLOWING PROCEDURES ONLY. WIRING MUST MEET ALL LOCAL, STATE, FEDERAL, INTERNATIONAL, OR OTHER GOVERNMENT AGENCY CODES. FAILURE TO DO COULD RESULT IN SERIOUS INJURY OR DEATH.

If you have any questions, please contact your local Albany service provider for assistance. Otherwise contact Albany Door Systems 1-877-925-2468 for information on your local distributor.

Installation

The following instructions are guidelines for electrically installing a generic UltraSecure Door with an AllStar Drive System. Actual wiring may be different based on what options; special instructions, special components, etc. were ordered with the door. Consult the electrical schematics that are supplied with the door. These should be located inside the door's control panel.

WARNING

CONTROL PANEL CONTAINS HIGH VOLTAGE. QUALIFIED ELECTRICAL PERSONNEL SHOULD PERFORM THE FOLLOWING PROCEDURES ONLY. WHENEVER REMOVING POWER FROM THE CONTROL PANEL, WAIT AT LEAST 1 MINUTE PRIOR TO SERVICING TO ALLOW CAPACITORS INSIDE THE FREQUENCY INVERTER TO DRAIN. WIRING MUST MEET ALL LOCAL, STATE, FEDERAL, INTERNATIONAL, OR OTHER GOVERNMENT AGENCY CODES. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.

NOTE

TO AID THE WIRING AND SERVICE OF ALL ELECTRICAL CIRCUITS, TAG OR LABEL ALL WIRE ENDS DURING THE FOLLOWING ELECTRICAL INSTALLATION. HIGH VOLTAGE POWER LEADS TO THE DRIVE UNIT MUST BE RUN IN A SEPARATE CONDUIT FROM THE LOW VOLTAGE CONTROL WIRES.

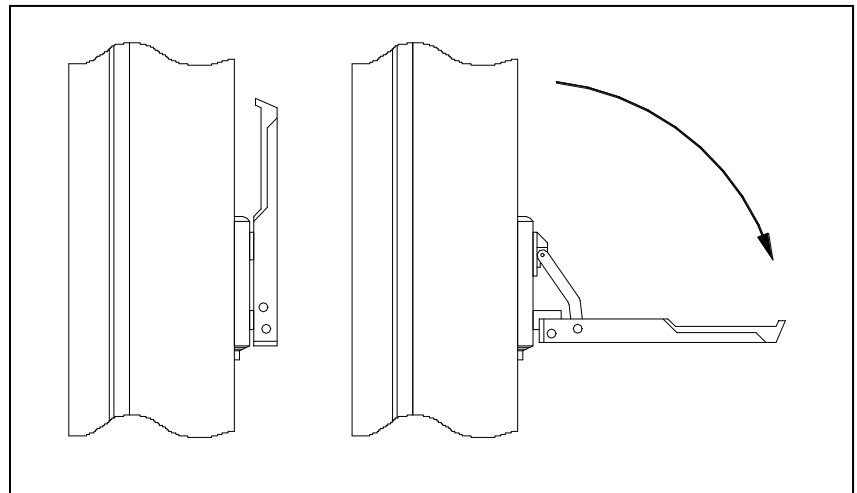
1. Ensure the mechanical installation of the door is complete.
2. Mount the control panel at a serviceable height on the drive side of the door.
3. Run two electrical conduits from the control panel to the drive unit. Install a suitable junction box at the drive unit for the motor leads. **RUN ENCODER WIRE IN A SEPARATE CONDUIT!** Install a separate suitable junction box for the Encoder wiring. **DO NOT DRILL IN THE TOP OF THE CONTROL PANEL. Penetrating (drilling, punching, etc.) through the top of the control panel could void the warranty.**
4. Run conduits from the control panel to the side frame(s) to accommodate the door jamb photocell(s) and safety edge.
5. Install all the actuators and wire according to the electrical wiring diagrams.
6. Install a non-fused disconnect beside the control panel.

CAUTION

VERIFY ALL FIELD WIRING TO ENSURE TERMINAL CONNECTIONS ARE TIGHT AND CORRECT. A DISCONNECT IS REQUIRED FOR EACH ALBANY DOOR AS A MEANS OF DISCONNECTING INCOMING POWER FROM THE CONTROL PANEL. THIS DISCONNECT IS NORMALLY SUPPLIED BY OTHERS.

ALLSTAR™ DRIVE SYSTEM WITH ENCODER SETUP

1. Located on the side frame, pull down on the brake disengagement lever to release the brake. While the brake is released, manually move the door to the halfway point by pulling the door down. Allow brake to re-engage.



2. Apply power to the control panel. Check for correct line voltage at FU1, FU2, and FU3 with a voltmeter. (**Supplying improper voltage to the inverter will result in damage to the inverter!**) Ensure the **POWER** LED's on both the PLC and frequency inverter are lit. Also ensure that the **RUN** LED is lit on the PLC.

CAUTION

ALL STEPS ASSOCIATED WITH SETTING THE DOOR LIMITS MUST BE PERFORMED WITH THE EMERGENCY STOP BUTTON PULLED OUT.

3. Pull out the emergency stop button and put the system into the setup mode by pressing the **SETUP** button (located on the control panel back plate). The **RESET** button on the face of the panel should be illuminated. The 11-CR relay should also be energized at this point. On the PLC the Y0, Y5 lights will be lit.
4. Using the **UP/DOWN JOG DOOR** switch located on the control panel back plate (small rocker switch), jog the door in the up direction as it is labeled on the jog button sticker. If the door opens, then go to the next step. If the door closes, then the phase rotation on the drive unit is backwards. Swap two of the three motor leads in the panel to change the motor rotation (Terminals T11, T12, and T13).

IMPORTANT NOTE

FOR THE FOLLOWING STEPS IT IS IMPORTANT TO ENSURE THE DOOR IS MOVING WHEN THE RESET BUTTON IS PUSHED TO SET THE CLOSE LIMIT. DO NOT RELEASE THE JOG SWITCH UNTIL DOOR HAS STOPPED MOVING AND ONLY AFTER YOU PRESS THE REST BUTTON TO SET THE LIMIT.

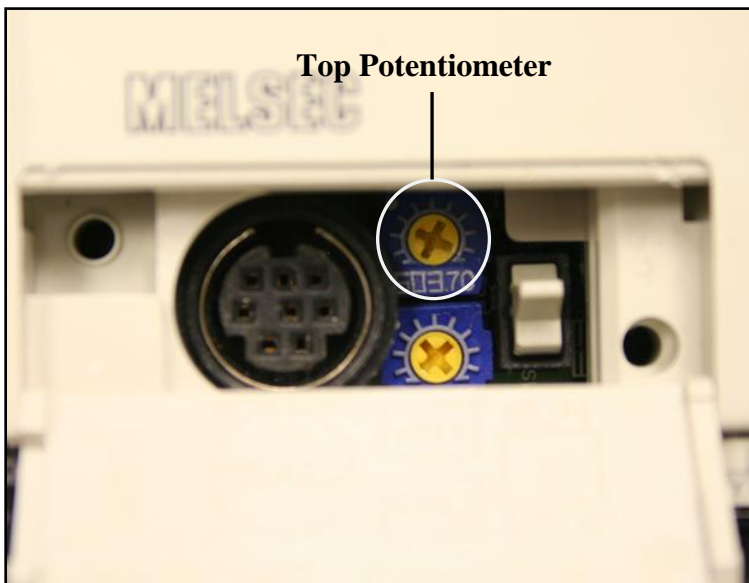
Setting the Door Limits

1. Press the **SETUP** button putting the door into the setup mode. The **RESET** should be illuminated at this point. Using the **JOG SWITCH**, verify the door movement is in the direction that the job button is labeled.
2. Using the **JOG SWITCH** to run the door down. While the door is closing, press the **RESET** button when the door reaches the desired bottom limit position. This would be before the door actually stops on the ground. The PLC will set this as the doors' bottom limit. The **RESET** button will go out also when you set this limit. *(Door must be closing when the reset button is pressed to store the bottom position Do not remove your finger from the JOG button until after the reset button is pressed.)*
3. Put the system in the setup mode again by pressing the **SETUP** button.
4. Run the door open using the **JOG SWITCH**. When door reaches the open limit proximity switch, it will stop automatically and the top limit position will be set. The PLC will automatically set this as the doors top limit. The **RESET** light will also go out at this time.
5. Put the system in the setup mode by pressing the **SETUP** button.
6. Run the door CLOSED to the halfway point using the **JOG SWITCH**. This time release the JOG SWITCH and allow the door to come to a complete stop. Press the RESET button to clear the setup mode. *(Door must NOT be moving when reset button is pressed.)*
7. Push the actuator button. As the door cycles, observe the open and close limits. Reset the limits as necessary to obtain exact desired limits (repeat steps 1-6 as necessary).
8. Check all actuators for proper operation. Check all reversing photocells for proper operation.
9. Verify the automatic operation of the door. The close delay timer is adjustable. See the next illustration for location and instruction for setting. If non-automatic mode is desired for door operation, turn the adjustment screw fully counterclockwise. In non-automatic mode, the actuator must be pulsed to open the door and pulsed again to close the door.

NOTE
NON-AUTOMATIC MODE CANNOT BE USED WITH MOTION DETECTORS, LOOP DETECTORS, OR PRESENCE SENSORS.

Function Set-up

PLC Top Potentiometer	Function	Terminal	Description
Fully Counterclockwise	Manual	XRO, XA1	Impulse open, impulse close
Fully Counterclockwise	Manual	XRO, XA3	Impulse open
Fully Counterclockwise	Manual	XRO, XA4	Impulse close
Not Fully Counterclockwise	Auto	XRO, XA1	Impulse open, timer close

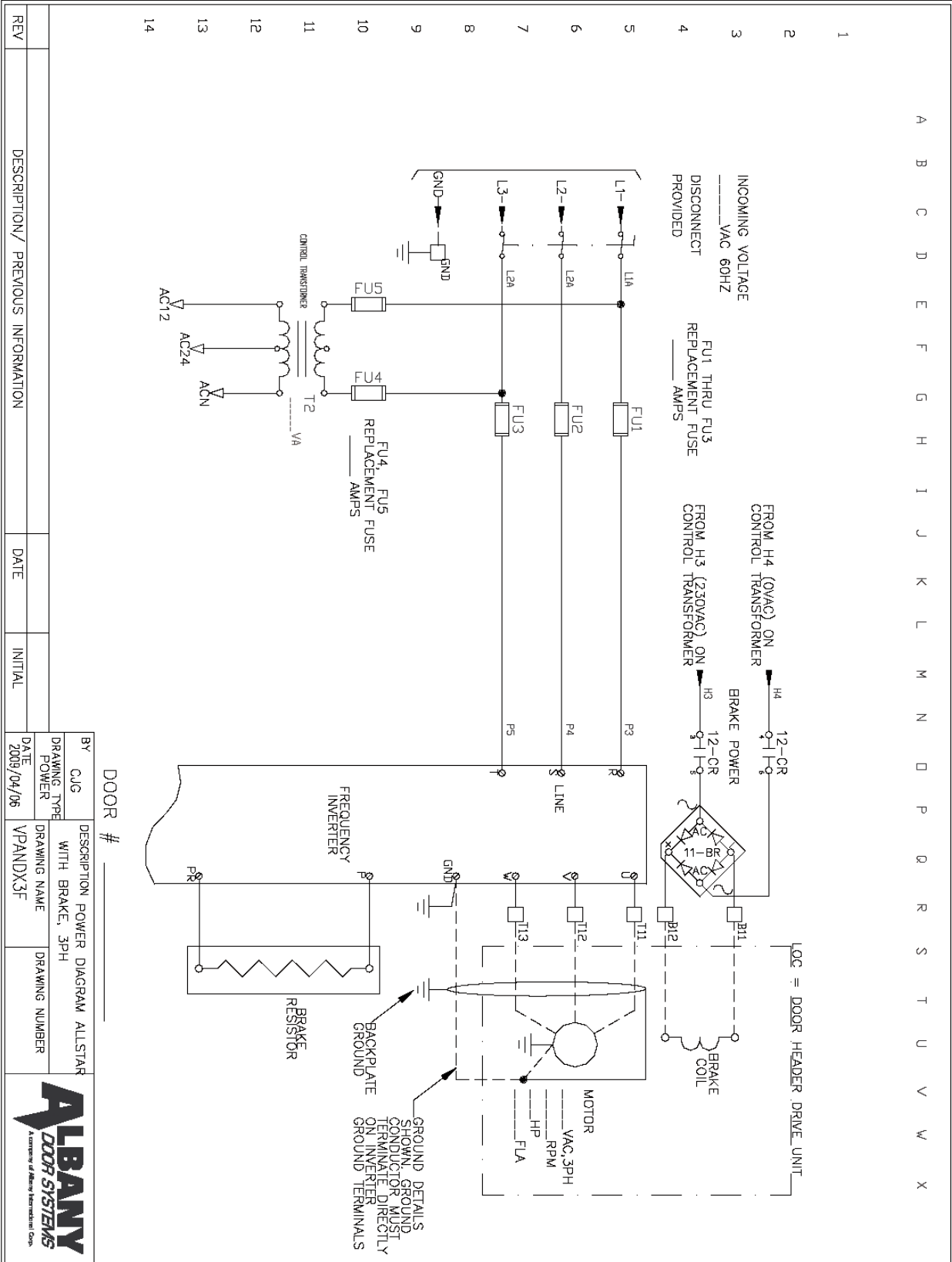


Note: PLC bottom Potentiometer not used.

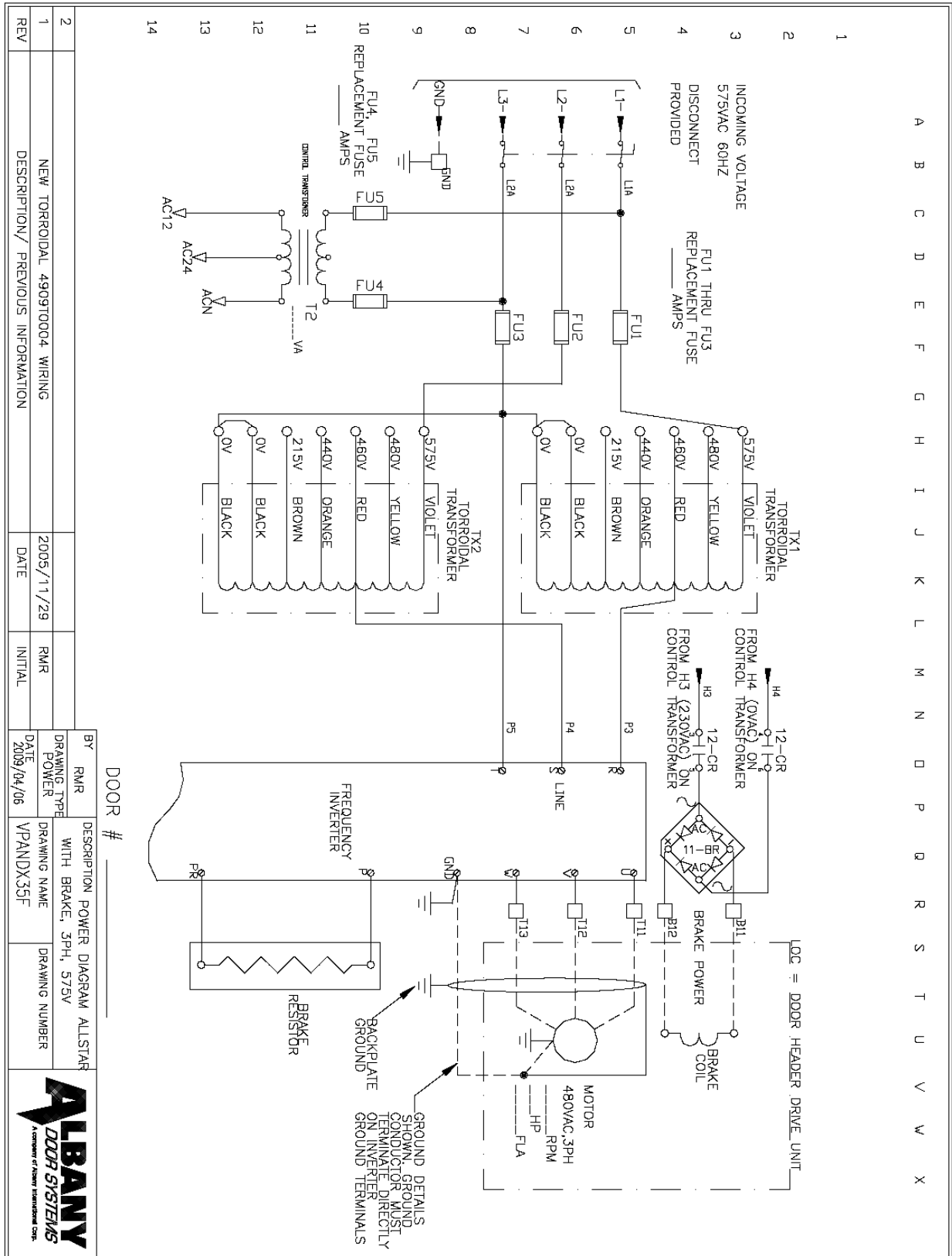
Final Checks

1. Check photocells for proper operation. Breaking the photocell beam should reverse the door.
2. Check reversing edge for proper operation. The door should reverse when the reversing edge hits an object.
3. Check all actuators for proper operation.

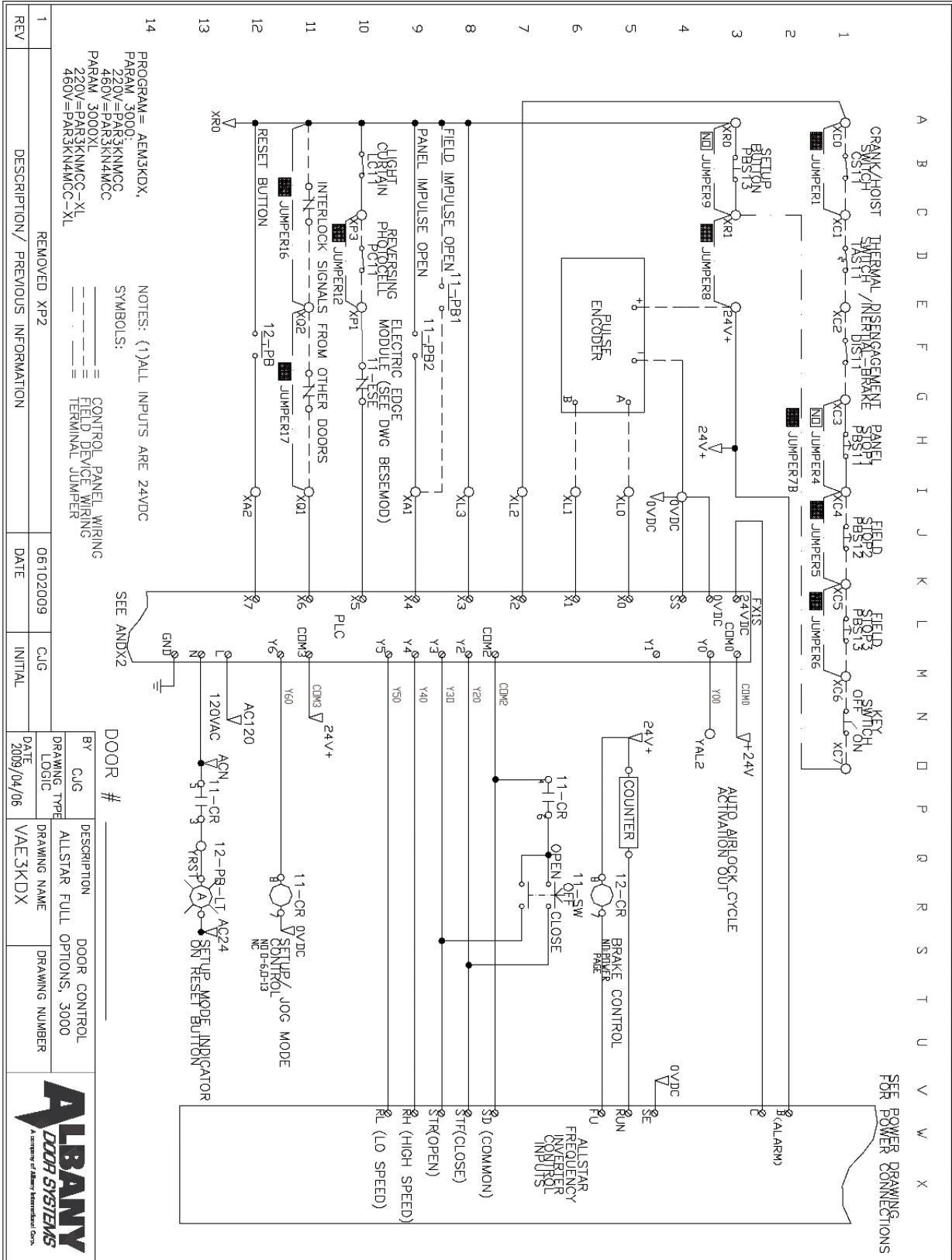
Power Print PANDX3F (220V or 460V, 60HZ, 3 phase)



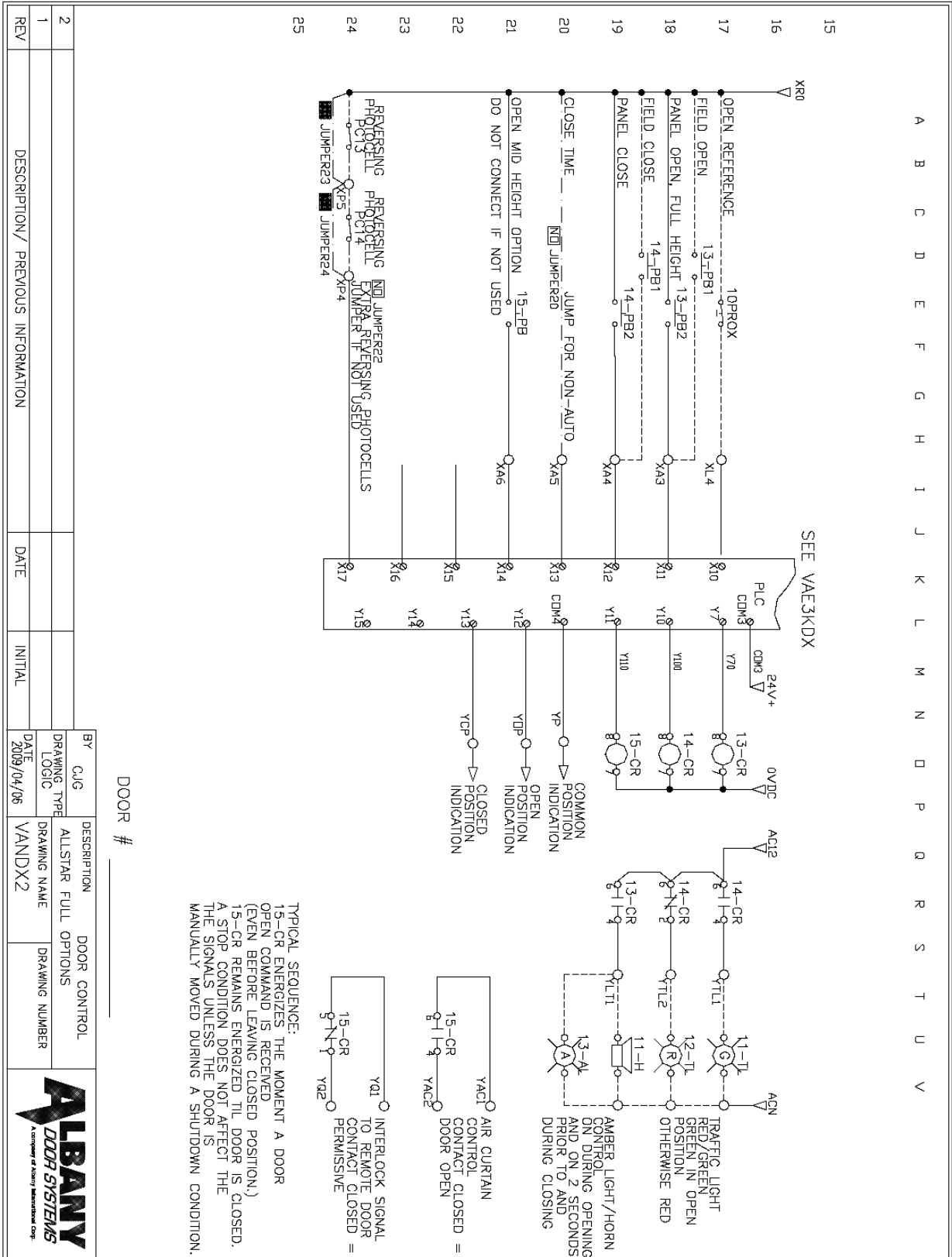
Power Print PANDX35F (600V, 60HZ, 3 phase)



Logic Print VAE3KDX Base Logic



Logic Print VANDX2 Options Logic

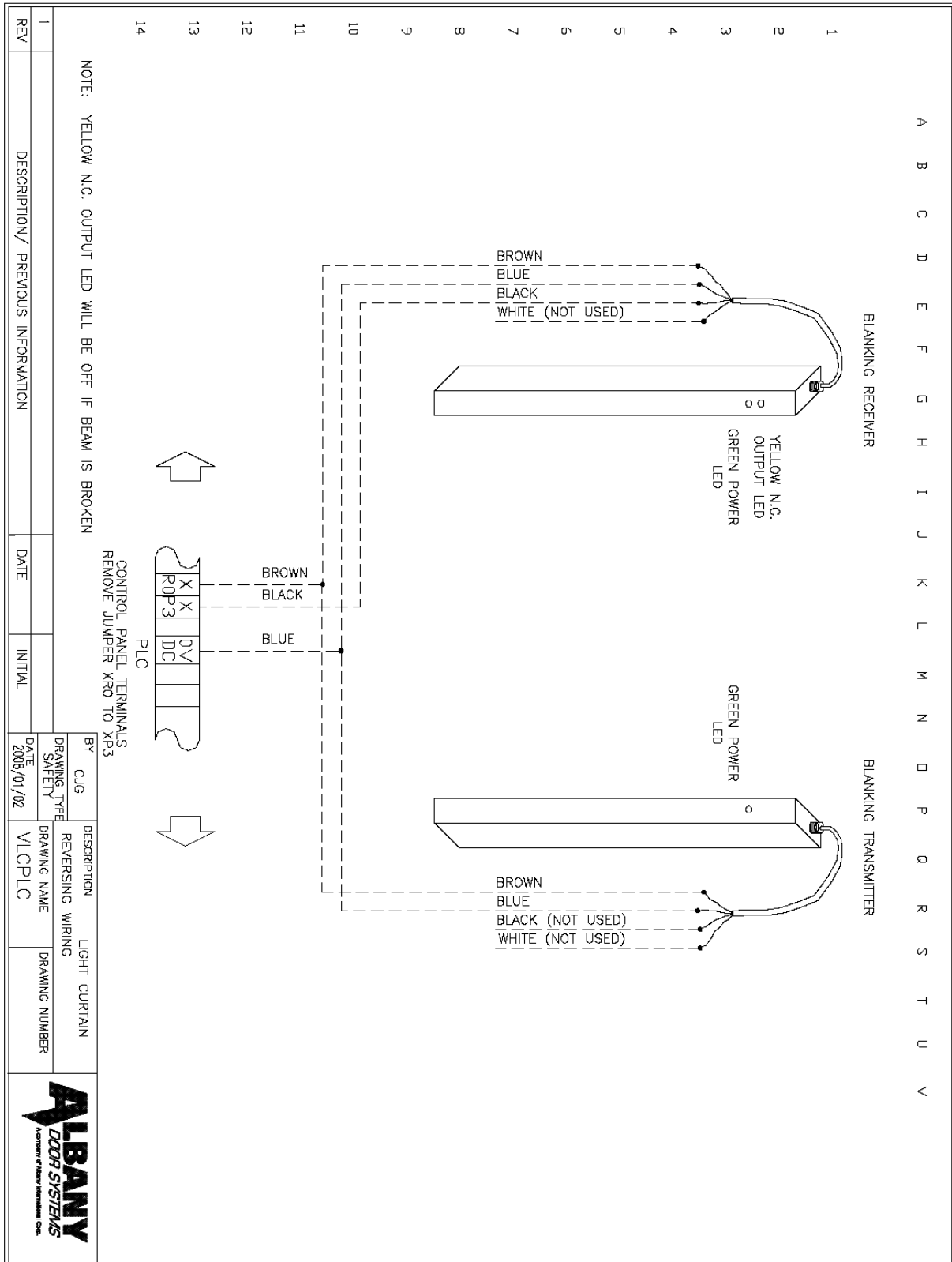


REV	DESCRIPTION / PREVIOUS INFORMATION	DATE	INITIAL
1			
2			

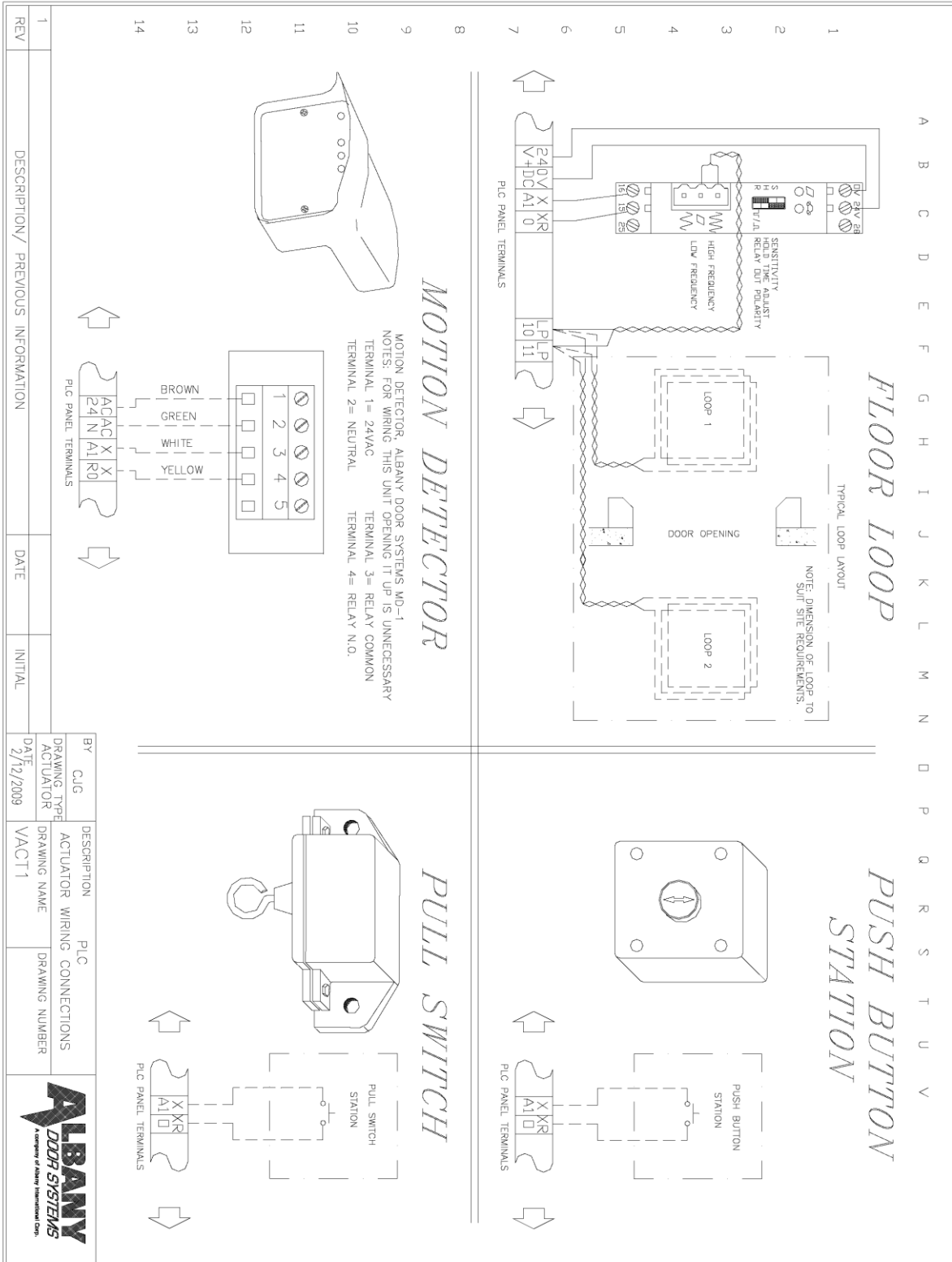
BY	CJG	DESCRIPTION	DOOR CONTROL
DRAWING TYPE	LOGIC	ALLSTAR FULL OPTIONS	
DATE	2009/04/06	DRAWING NAME	VANDX2
		DRAWING NUMBER	



Light Curtain LCPLC



Actuators VACT1





TROUBLESHOOTING GUIDE for program AEM3KDX

WARNING: ALL ELECTRICAL TROUBLESHOOTING OR SERVICE MUST BE PERFORMED BY A QUALIFIED ELECTRICIAN OR SERVICE PERSON AND MUST MEET ALL APPLICABLE LOCAL, STATE, FEDERAL, AND OTHER GOVERNING AGENCY CODES. EXERCISE EXTREME CAUTION WHEN IT IS NECESSARY TO SERVICE THE CONTROL PANEL WHILE IT IS ENERGIZED.

The **POWER** and **RUN** green LED's on the PLC must be on. If not, check for 120V power to terminals AC12 & ACN. If no power is present, de-energize control panel and check main disconnect and all control panel fuses. Fuses **FU1 thru FU3** are the main power supply to the panel. Fuses **FU4 & FU5** are for 120 VAC power supply to the PLC. At least one, red input LED's on the PLC should be on. If not, ensure the **EMERGENCY STOP** button is pulled out. If no inputs turn on, check for missing jumpers and/or switch wiring in series with the **EMERGENCY STOP** button (i.e. crank/chain hoist switch, thermal overloads, inertia brake contact, etc.).

PLC INPUTS (X0-X17)		
INPUTS ("IN" LED'S)	Terminal #	DESCRIPTION
0	XL0	Encoder Position Signal – Channel A. Flickers when door runs.
1	XL1	Encoder Position Signal – Channel B. Flickers when door runs.
2	XL2	Shutdown Devices. Should be lit unless a shutdown device (E-Stop, Crank Switch, ect.) or SRD is activated
3	XL3	Shutdown Devices. Should be lit unless a shutdown device (E-Stop, Crank Switch, ect.) or SRD is activated
3 THRU 17		Setup. Should be lit unless the setup button has been tripped.
4	XA1	Impulse Open. Will come lit for as long as the actuator has been activated. If on continuously, check actuators.
5	XP1, XP3	Safety Devices. Photocell and Reversing edge contacts are wired in series with this input. Should be lit unless a safety device is activated. (N/C)
6	XQ1, XQ2	Interlock. Needs be lit to enable door operation, or jumped out if no interlock is being using.
7	XA2	Reset Button. Will Reset the door when activated.
10	XL4	Open Reference Proximity. Should be on unless door is near open position.
11	XA3	Actuator Full Height Open. Will come lit for as long as the actuator has been activated. If on continuously, check actuators.
12	XA4	Actuator Close. Will come on for as long as the actuator has been activated. If on continuously, check actuators.
13	XA5	Auto/Manual. Jump for non-auto. (Will be lit when in Manual mode)
14	XA6	Not used
17	XP4, XP5	Extra Reversing Photocells. Will be lit (N/C). If no photocells are being used, should be jumped out for normal door operation.

