



Valiant Products, Inc.
Model VAL-10-24 Interlock System

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To reduce the risk of electric shock, this equipment has a grounding type plug, that has a third grounding pin. This plug will only fit into a grounding type outlet. If the plug does not fit into the outlet, contact a qualified electrician to install the proper outlet.

DO NOT CHANGE THE PLUG IN ANY WAY.

1. Overview

Electric Interlocks are designed to lock out all the intake doors on a chute when one door is opened. When an intake is in an opened position, the locked intakes are signified by a light above the door, indicating the chute is in use.

The power supply box is equipped with a toggle switch that allows the ability to lock out all the doors when servicing the equipment.

The interlock system comes pre-wired and is designed to use 110V AC. The power supply box is equipped with a transformer so that the power is stepped down to 24VDC.

1. Installation

Note: Before attaching any wires, be sure that the power supply box is not plugged in.

Once the chute has been installed, do the following:

1. Go to the top intake floor of the chute; secure the 3-strand color-coded wire (trunk).
2. Drop the wire (trunk) down the shaft, outside of the chute.
3. Separate the 3 wires. Allow about 12" slack of wire. Attach a blue connector, (3M ScotchLok P/N 3M-952X) which is supplied, to each of the ends. Plug the wires into the corresponding color wire of the lock-out box on the intake door. Secure the slack at the intake using an adhesive tape.
4. Repeat step 3 at each intake level.
5. In the discharge area, mount the supplied shelf in the desired location.
6. Set the power supply box on the provided shelf.
7. Remove any excess trunk wire and separate the 3 wires.
8. Strip each wire's sheathing approximately 3/16" from the end and attach the provided male insulated solderless connectors (3M P/N 3M-72F25032NBL) to each wire that was just stripped and crimp them on securely.
9. Plug the wires that the ends were put on, into the connectors of the power supply box, making sure that you plug the color-coded wire into the corresponding color wire.
10. Power may now be supplied by plugging in the power supply box into a 110 volt grounded outlet.

2. Proper Care During Construction Phase

1. Seal around the door gap with duct tape.
2. Keep the doors from being exposed to water.
3. Keep the doors locked.
4. Keep the main power trunk out of the way during the masonry or drywall phase.
5. Secure the discharge level wires until the power supply box shelf is mounted in the desired location and you are ready to wire the power supply box.

3. Preparing System for Intended Use

1. Clean the exterior of the doors to eliminate debris from causing obstructions.
2. Remove the sealant tape from around the doors.
3. Attach the trunk to the power supply box.
4. Inspect the microswitch and solenoid at each intake. Check for rust, construction dust and ease of movement.

4. Troubleshooting

When the chute is working correctly, two things should happen.

- First, when you open one door all other doors should lock out. When this happens, all the doors that are locked out will have their indicator lights on and the power supply box should also have its indicator light on.
- Second, when the power supply box is turned on, so the trash or linen may be taken care of, all of the doors should lock above so that no one will be able to use them.

There are a variety of things to look for when either of the two things are not working correctly.

1. Check to see if the circuit reset button has been tripped.
2. If nothing is working from the doors to the box, check the wiring. Make sure that all the wires are going to the appropriate places. Make sure that the power supply box is plugged in and the outlet has power.

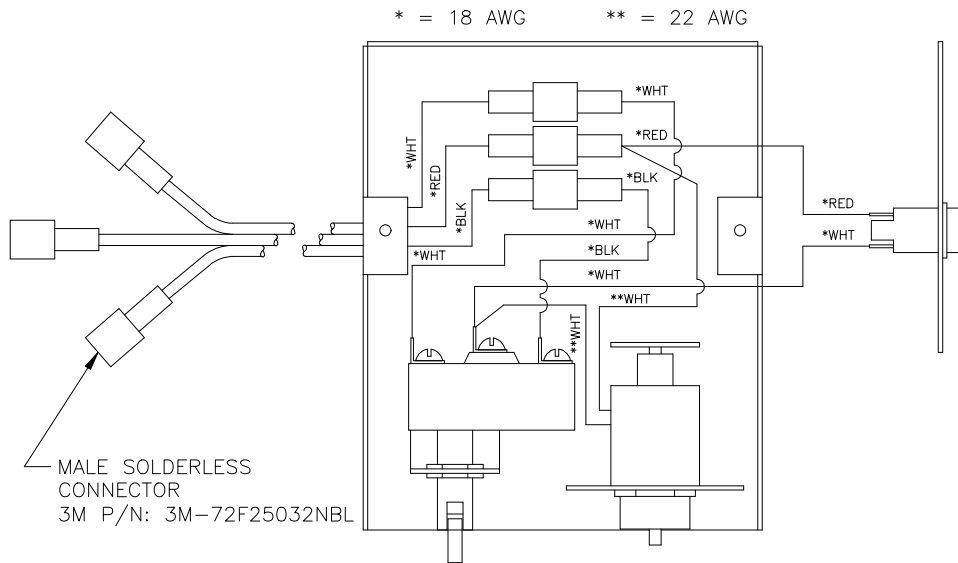
If your problem is contained to one door not working:

1. The first thing you want to do is make sure that your door is opening and closing correctly.
2. Next, open and close the door slowly, you should hear a clicking noise. If you hear this noise, the micro switch is working properly. If you do not hear this noise, close the door and look in the gap between the door and the frame, you will be able to see the roller. There is a nut that holds the micro switch in place. If you loosen that nut, you will be able to move the micro switch to where it is touching the door. Once you have moved it, close the door and repeat this step. Once you have made sure that the micro switch is touching the door and you still do not hear a clicking noise, you have a bad micro switch. If you hear a clicking noise, move on to step 3.
3. Open the door and look inside right where the lock-out box is, you will see the micro switch and the solenoid. Take your finger and press up on the roller to the micro switch. You should hear a clicking noise. This should also engage the solenoid. Every time that the micro switch is pressed up, the solenoid should engage as though it were going into the door. If this does not happen, you will need to take the faceplate off of the door, so that you may get inside the lock-out box.
4. Once inside the lock-out box, make sure that all the wires are connected to the corresponding color and that there is not a loose connection. The solenoid should also be connected.
5. If all the wires are connected securely and the colors are corresponding, check to make sure that the solenoid is working. Take your finger and press down on the black washer that is connected to the solenoid pin. Do this a few times quickly to loosen up the pin. It is also advisable to try blowing out any debris that may be in the lock-out box from construction. Once this is done, push up on the roller switch again and the solenoid should engage.

If this does not resolve the problem, please contact Valiant Products.

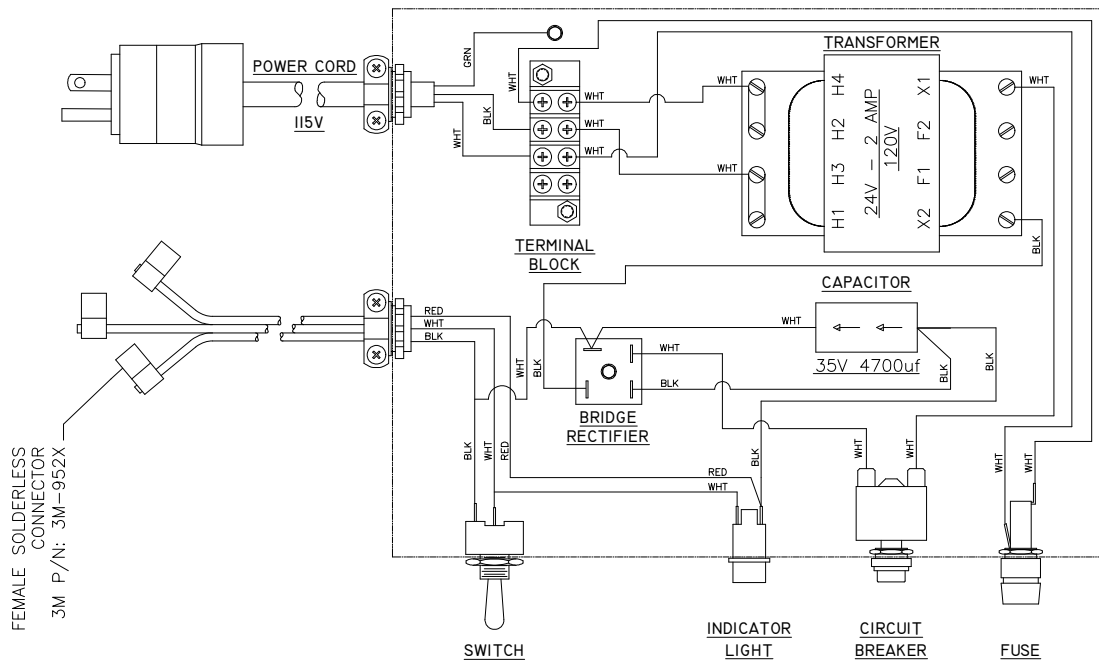
5. Schematics

1. This is the schematic for a typical lock-out box, which is located above the intake door.



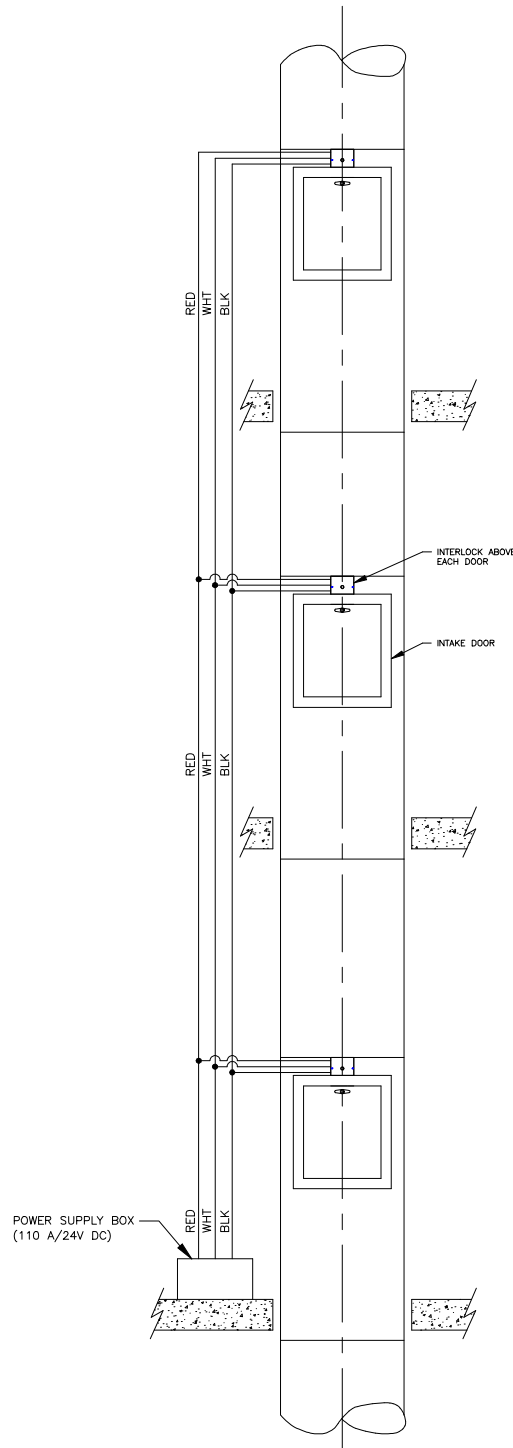
*WIRING DIAGRAM
TYPICAL LOCK-OUT BOX
FOR INTAKE DOOR*

2. This is the schematic for the power supply box, which is located at the discharge room.



*WIRING DIAGRAM
POWER SUPPLY BOX*

- 3. This is the schematic for the trunk, which is dropped from the top floor, down the chase, outside of the chute and into the discharge room.



TYPICAL WIRING DIAGRAM
FOR ELECTRIC INTERLOCKS

6. Replacement Parts List

The wiring that Valiant provides meets UL 1015/CSA.

This is a listing of the replaceable parts in the system.

1. Power Supply Box
 - a. Capacitor: Mallory Inc. P/N TC50500 Type TC, 50WVDC; 65VDC Surge
 - b. Fuse Holder: Littlefuse P/N 342001, panel mount, fingerrip, type 3AG
 - c. Fuse: Littlefuse P/N 312003, type 3AG, fast-acting, 120/240VAC, 3A
 - d. Switch: GC Electronics P/N 35-0119-0000, SPST
 - e. Terminal strip: Molex-Beau P/N 78004, double row, 4 pole
 - f. Rectifier: Fagor P/N FB5006
 - g. Transformer: Acme P/N TA-2-81143, 120/240VAC Pri, 24VDC Sec, 50/60Hz
 - h. Breaker: GC Electronics P/N 35-2103, 120/240VAC, 3A
 - i. Light: Solico P/N 3039-3-11-38310, 28V

2. Lock-out Box
 - a. Light: Solico P/N 3039-3-11-38310, 28V
 - b. Solenoid: Guardian P/N TP8X9-C-24VD, 24VDC
 - c. Micro Switch: Honeywell P/N BZ-2RQ181-A2, 15A, 125VAC

7. Guarantee

We, Valiant Products, Inc. P.O. Box 405 Lakeland, FL 33802, do hereby guarantee that all labor and materials furnished by us are in accordance with the contract, drawings, specifications and authorized alterations and additions thereto.

Should any defect develop within one (1) year from the date of substantial completion of our work on the job due to improper materials, workmanship, or arrangement, the same shall upon written notice by the owner, be made good by Valiant at no expense to the owner.