



HIRED-HAND®

PHOTOHELIC POWER VENT

NEGATIVE PRESSURE VENTILATION CONTROL

Hired Hand, Inc.
1733 Co Rd 68
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Bremen, AL 35033

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1. Product Description

The Photohelic Power Vent is used to control vent inlets in agricultural enclosures. The gauge has adjustments for the low and high pressure limits.

2. Ratings and specifications

Voltage.....115 or 230 Volts 50/60 Hz depending on model.

Current.....8 amps maximum per vent machine.

3. Warnings

Warning!

When this controller is used in a life support heating and ventilation system where failure could result in loss or injury, the user should provide adequate back-up, or accept the risk of such loss or injury!

4. Limited Warranty

All products are warranted to be free from defects in material and workmanship for a period of one year from the date of purchase if installed and used in strict accordance with the installation instructions. Liability is limited to the sale price of any products proved to be defective or, at manufacturers option, to the replacement of such products upon their return. No products are to be returned to the manufacturer, until there is an inspection and/or a return-goods authorization (RGA) number is issued.

All complaints should be directed first to the authorized distributor who sold the product. If satisfaction is not obtained or the name of the distributor is not known, write the manufacturer that appears below, directed to the attention of Customer Service Manager.

This limited warranty is expressly in lieu of any and all representations and warranties expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose. The remedy set forth in this limited warranty shall be the exclusive remedy available to any person. No person has authority to bind the manufacturer to any representation or warranty other than this limited warranty. The manufacturer shall not be liable for any consequential damages resulting from the use of our products or caused by any defect, failure or malfunction of our products. (Some areas do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.)

This warranty gives you specific legal rights and you may also have other rights that vary from area to area.

Warrantor:

Hired-Hand, Inc.
1733 Co. Rd. 68
PO Box 99
Bremen, AL 35033

5. Installation

5.1 Tools Required

- 1 Drill with a flat head screwdriver attachment.
- 1 Small Screwdriver
- 1 Wire Stripper

5.2 Instructions

1. Mount Photohelic in a safe location, vertically. Location needs to have adequate ventilation.
2. Mark bracket holes with pencil and pre-drill.
3. Place controller on the wall and match holes.
4. Insert wood screws and use drill to tighten in place.
5. Connect the Power Supply (See Section 8.1).
6. Connect wiring from PowerTrak unit. (See Section 8.2).
7. Zero out the Dwyer gauge. Turn the zero setting knob until the black needle lines up with the "0" on the gauge.
8. Run inside (low pressure) and outside (high pressure) tubing. Connect tubing on the right side of the control box labeled Inside/Outside.
9. Inside tubing should be run inside the building containing the fans which are pulling air. Place a dust filter over the end of the inside tubing.
10. Outside tubing should be placed outside of the controlled room, such as in the attic or completely outside the building and not subject to a draft. Place a dust filter over the end of the outside tube.
11. When controller is installed check the operation of the vents when in manual mode, and then check for proper operation in automatic mode.

Caution!

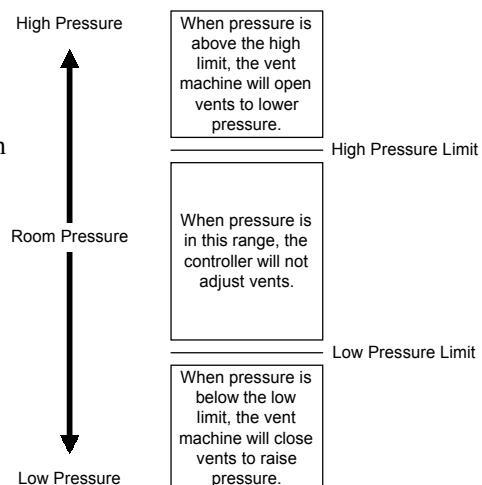
Extra care should be taken when running the tubing so that it is not cut or pinched!

6. Overview of the Photohelic Power Vent

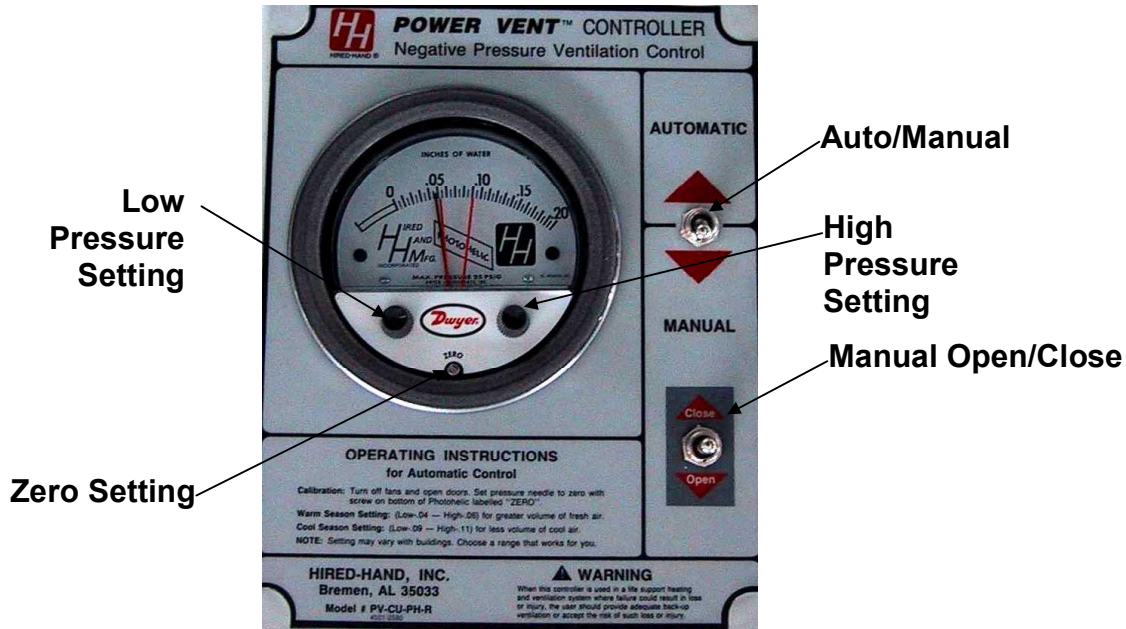
The Photohelic Power Vent has been designed with the producer in mind. Routine tasks such as changing the pressure limits are easily reset, and are familiar in nature.

This controller has only two basic settings: Target High Pressure and Target Low Pressure. The controller will open and close the vents as needed to maintain pressure between these limits.

Now that we know how the controller works, lets move on to how to set up those limits.



The Photohelic gauge has two knobs on the Dwyer gauge, one for the Low limit and one for the high limit. Turn the knob clockwise to increase the setting and counterclockwise to decrease.

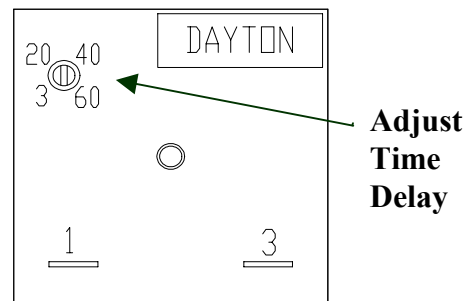


6.1 Setting the Automatic/Manual modes

The Photohelic has two switches on the right side of the front cover. The upper switch selects either the automatic or the manual mode of operation. When in the automatic position the Photohelic gauge will operate the air inlets off of static pressure. When the upper switch is placed in the manual position, the lower switch can be used to open or close the inlets.

6.2 Setting the Time Delay

For models with a time delay, the reaction time between when the fans come on and the vents open can be adjusted using a Delay timer. The Delay timer is located on the inside of the controller in the upper left corner. To adjust this delay, use a small screwdriver to set the Delay timer from 3 to 60 seconds.



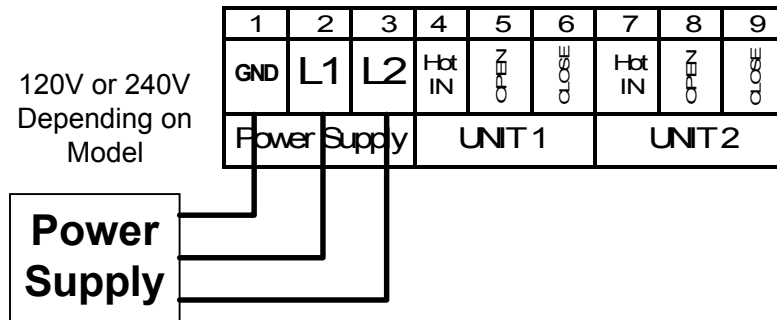
7. Why Use a Pressure Controller?

The Photohelic Power Vent is used to control vent inlets in agricultural enclosures. Maintaining a slight negative pressure inside a building ensures that air flows in evenly from all openings in the building. As static pressure increases, the speed of the incoming air increases.

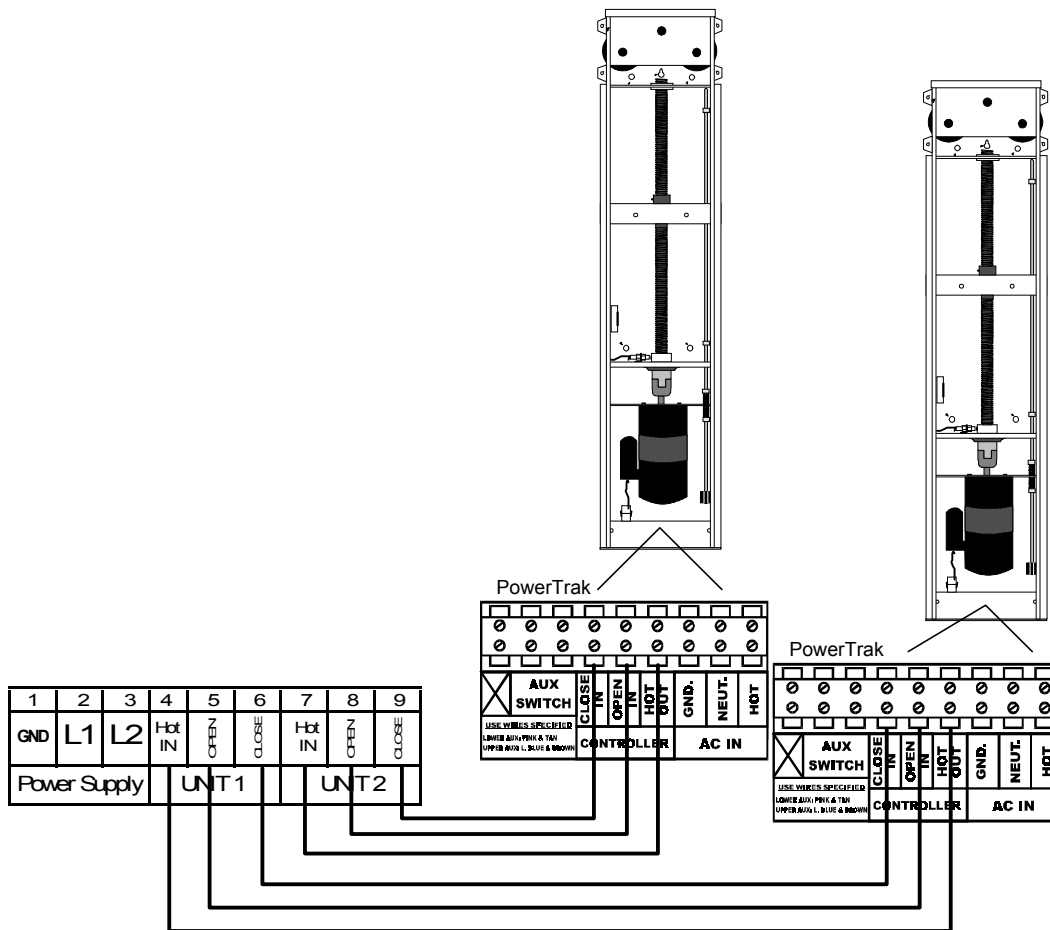
It is important to set the pressure at the appropriate level to ensure maximum efficiency. Too little vacuum, and the livestock could suffer from drafting, and temperature shock. Too much vacuum, and fan efficiency is reduced, increasing the levels of moisture, and ammonia in the enclosure, also driving up electricity costs.

8. Connecting the Photohelic

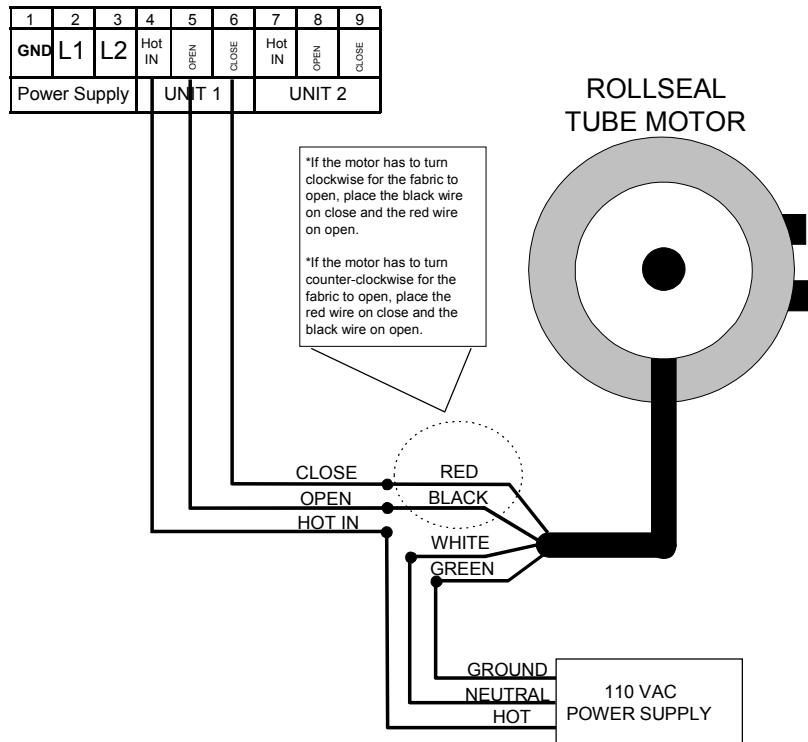
8.1 Photohelic to a Power Supply



8.2 Photohelic to a PowerTrak

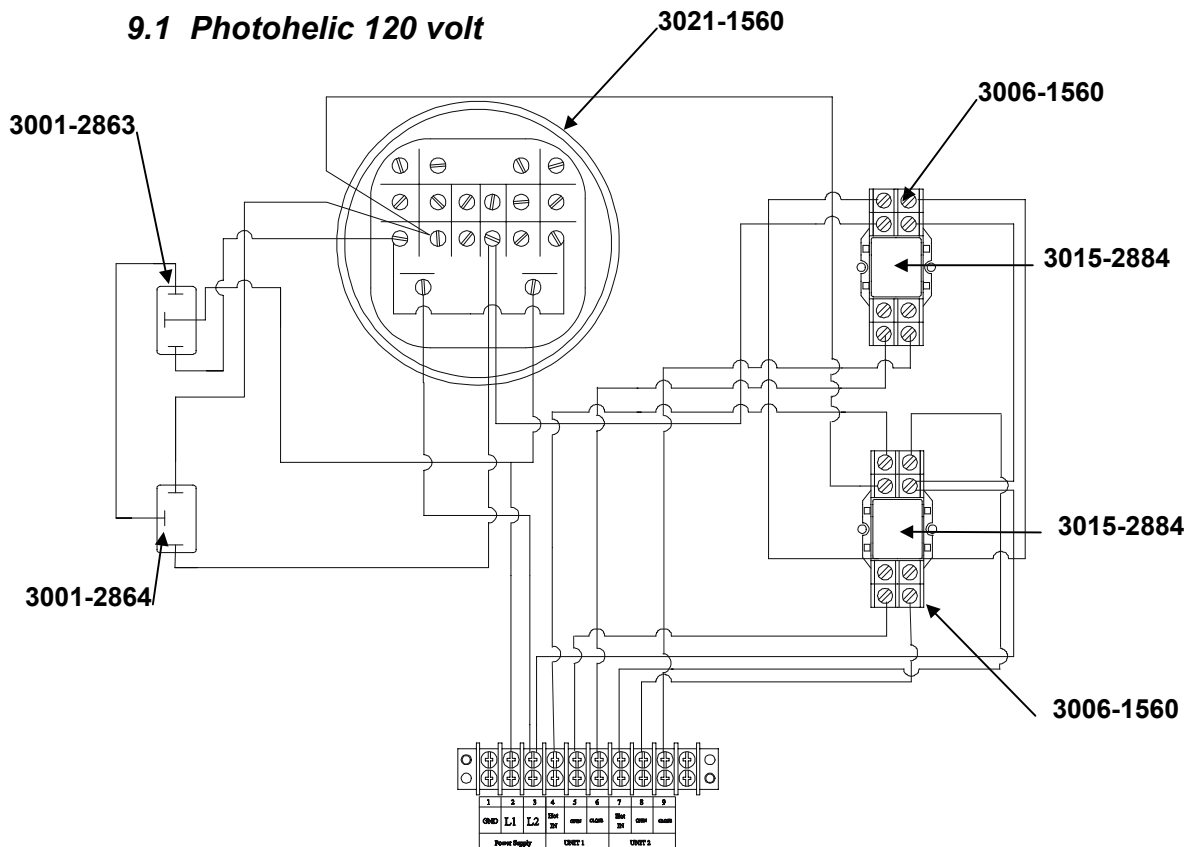


8.3 Photohelic to Rollseal Tube Motors

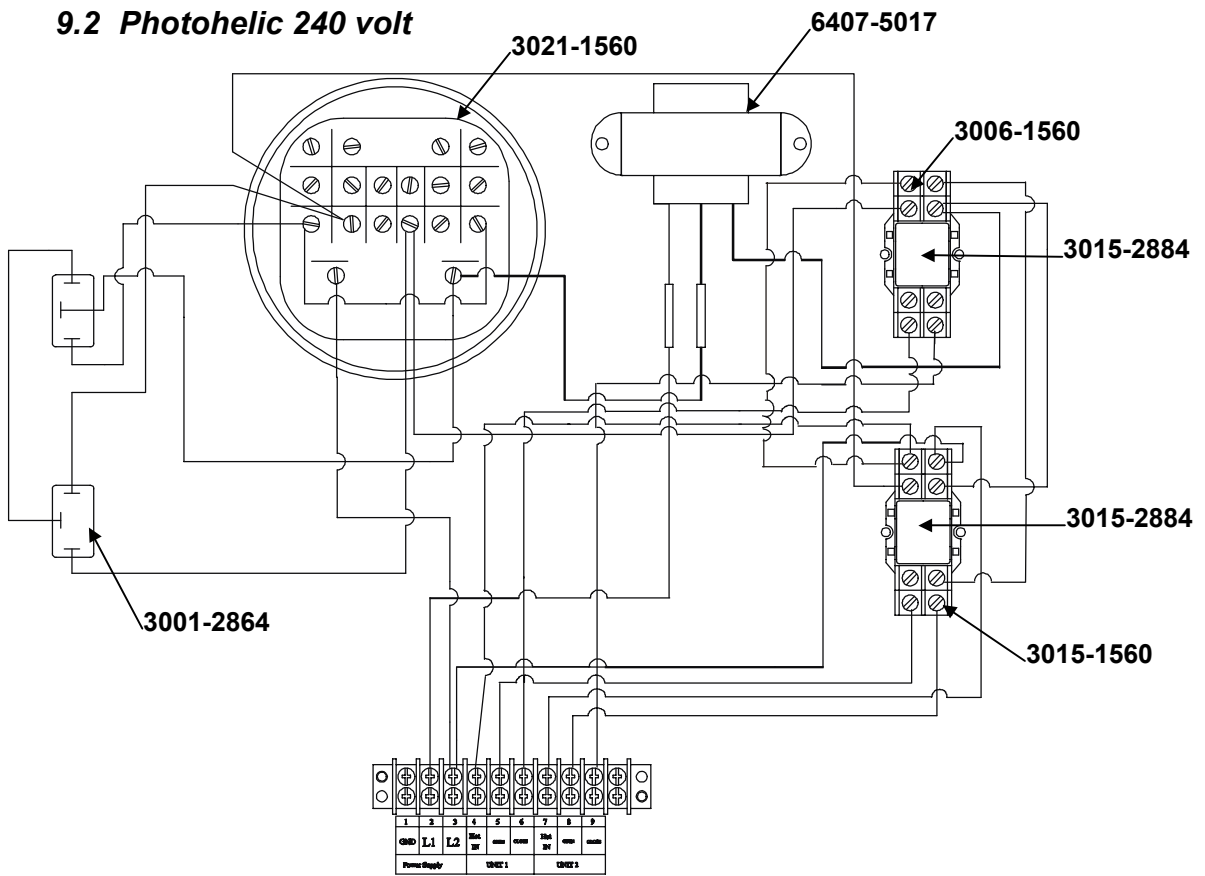


9. Internal Wiring Diagrams, Schematics, etc.

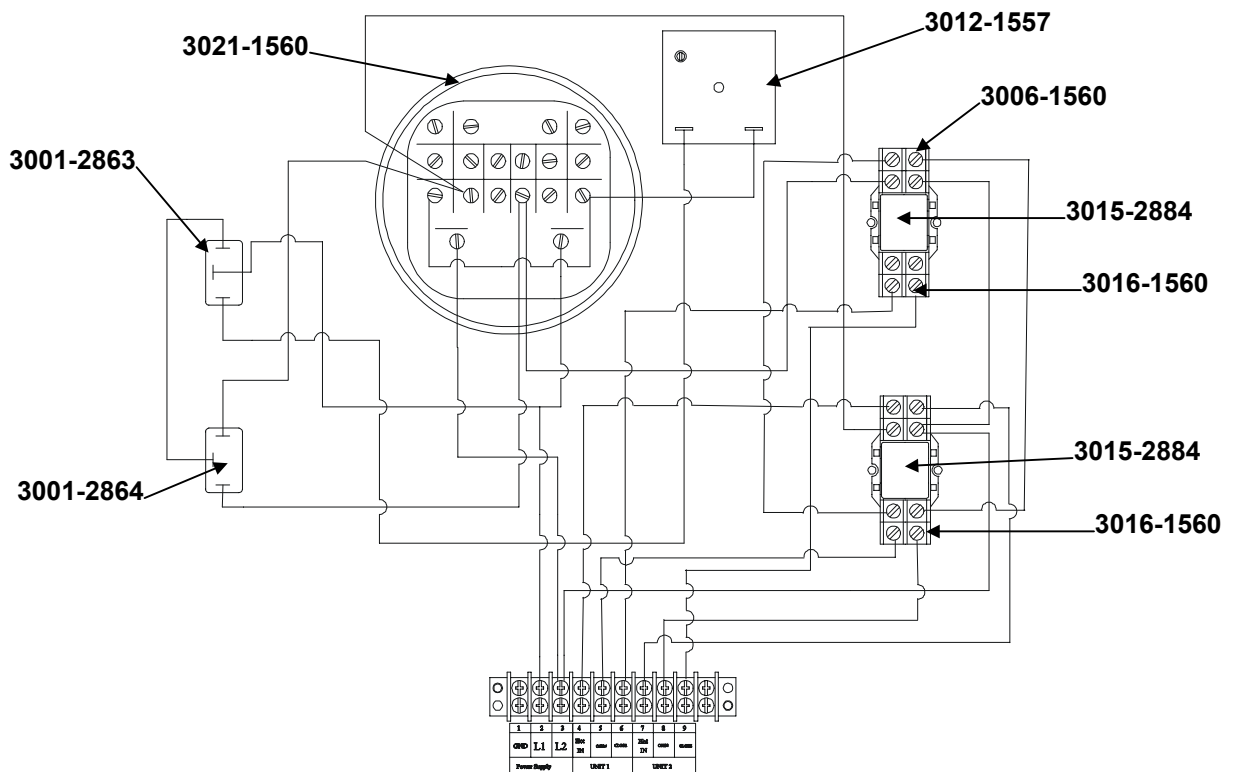
9.1 Photohelic 120 volt



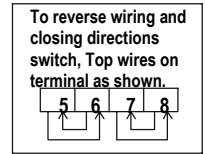
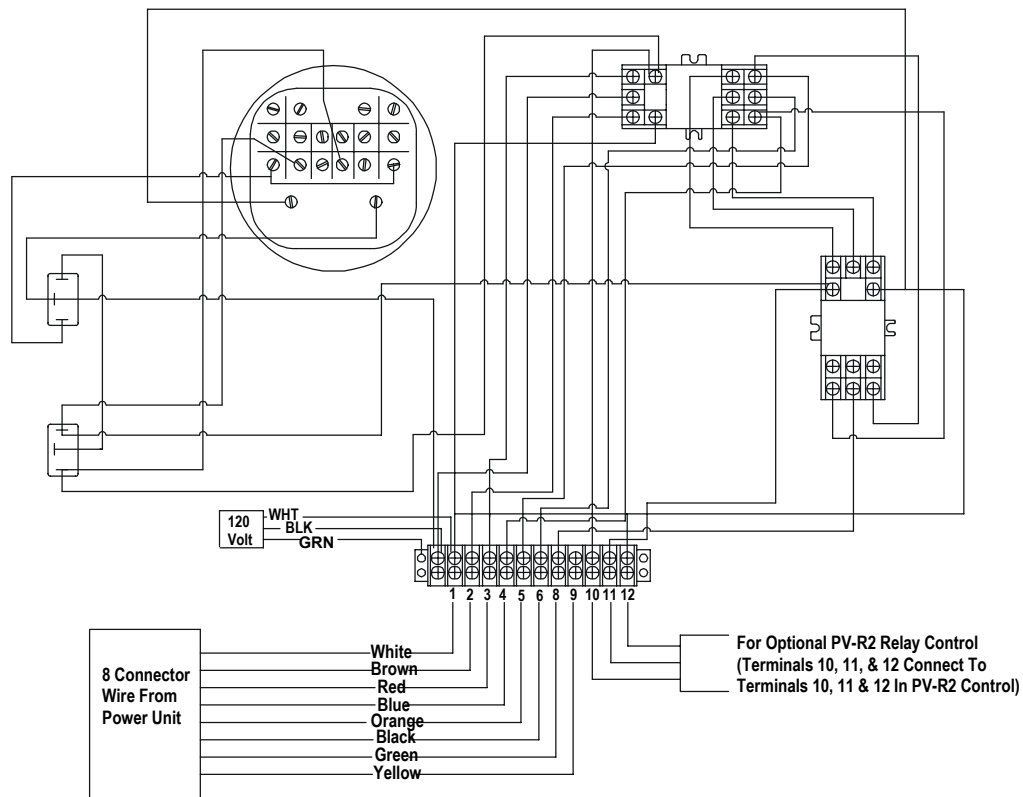
9.2 Photohelic 240 volt



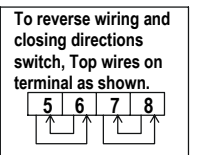
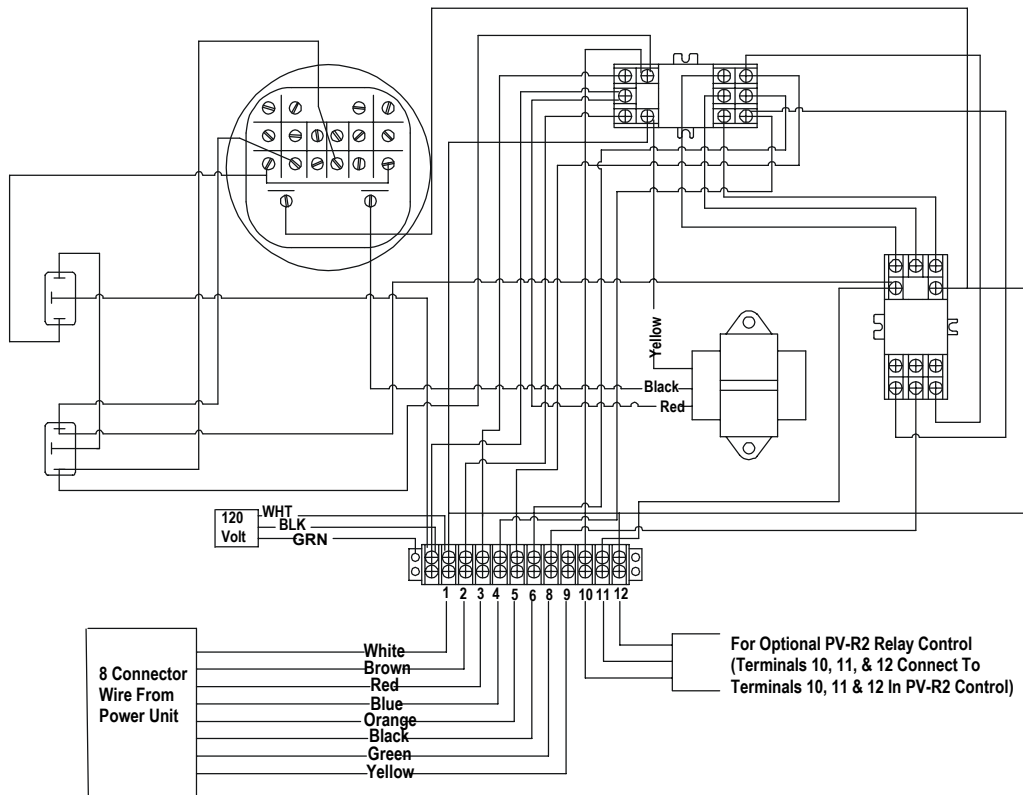
9.3 Photohelic TD (Time Delay) 120 volt



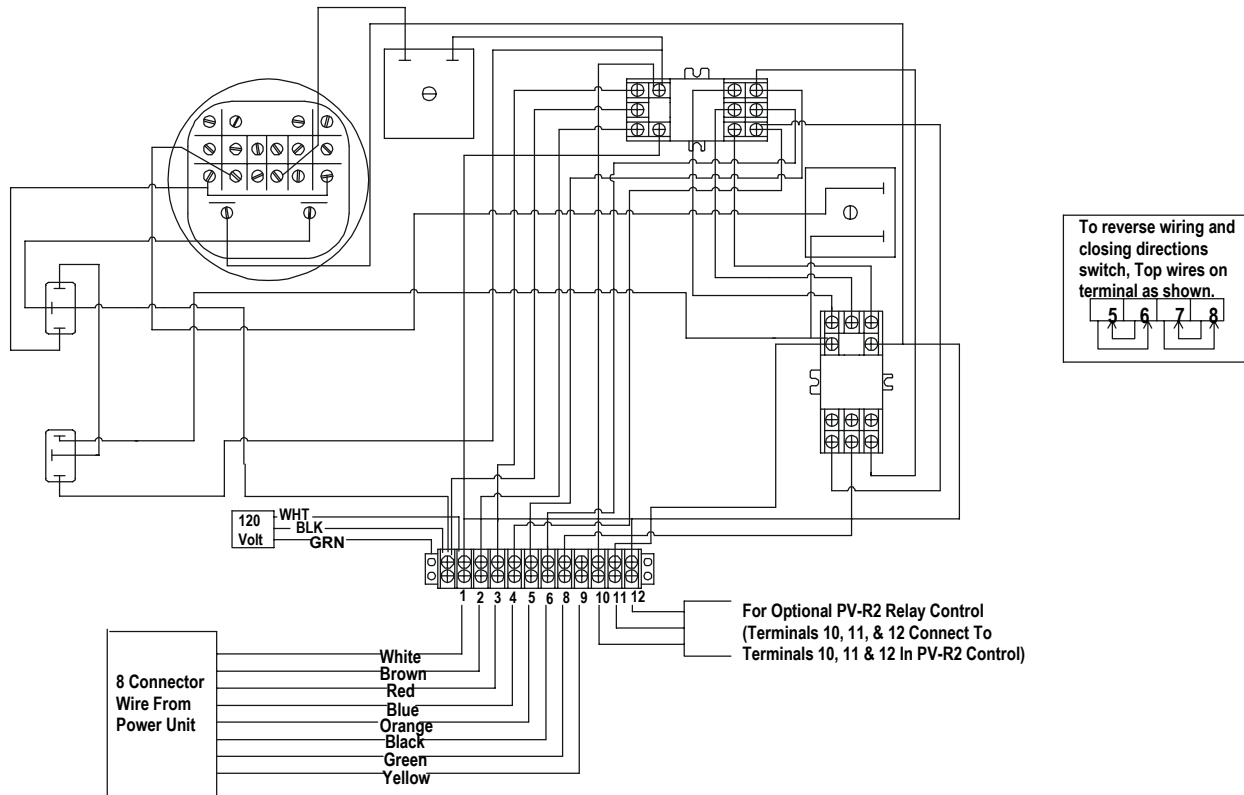
9.4 Photohelic 120 Volt (9-Wire)



9.5 Photohelic 240 Volt (9-Wire)



9.6 Photohelic 120 Volt Time Delay (9-Wire)



9.7 Electrical Parts List

Part No.	Description	Application
3001-2863	Switch SPDT Toggle Tab (Top Switch)	All Models
3001-2864	Switch SPDT Toggle Cen Off Tab (Bottom Switch)	All Models
3006-1560	Con Skt Rly GT08PC	All Models
3008-2858	XFRMR 230 to 115 50VA 50/50 Hz	240 Volt Models
3012-1557	Timer Delay TD-10 2A562	Time Delay Model
3015-2884	Relay DPDT 120V Socket Mount	All Models
3021-1560	Gauge Photohelic	All Models