

POWERDROP OVERVIEW

In combination with a curtain and winch, PowerDrop will supply emergency ventilation to a livestock environment in the event of a total power outage or over temperature event. To sense temperature, a thermostat is required to disconnect electrical power from PowerDrop.

PowerDrop works on magnetic principles. The latching arm is held in place during normal operation with an electromagnet. When electrical power is disconnected from PowerDrop a delay begins. A stored charge will hold the arm in position for several minutes. When the charge is depleted, the pull of the winch handle as well as the push of a compression spring embedded in the arm will overpower the weakened electromagnet. The arm will swing to the open position and will no longer be able to hold onto the winch handle, thus dropping the curtain. PowerDrop requires no batteries.

SPECIFICATIONS

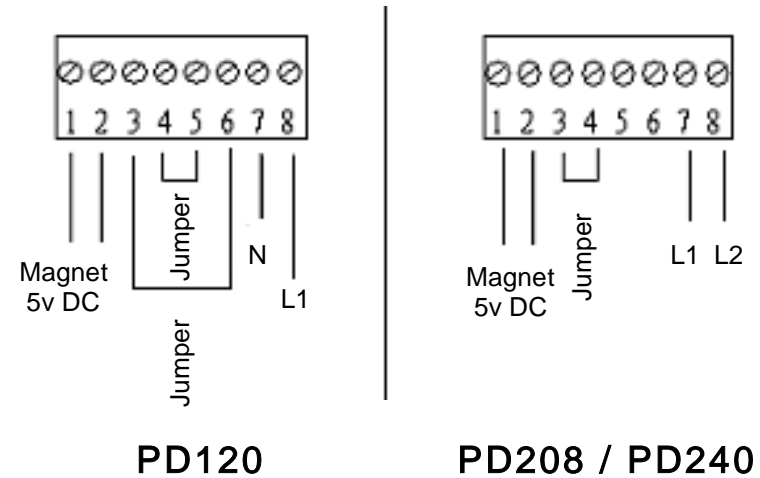
Input voltage: 120, 208, or 240 volt (see diagram below)
Magnet voltage: 5 volts DC
Power consumption: 5 watts
Delay time: 4 to 6 minutes

Length latched: 13 inches
Length unlatched: 19 inches
Width: 6 inches
Depth required: 7 inches

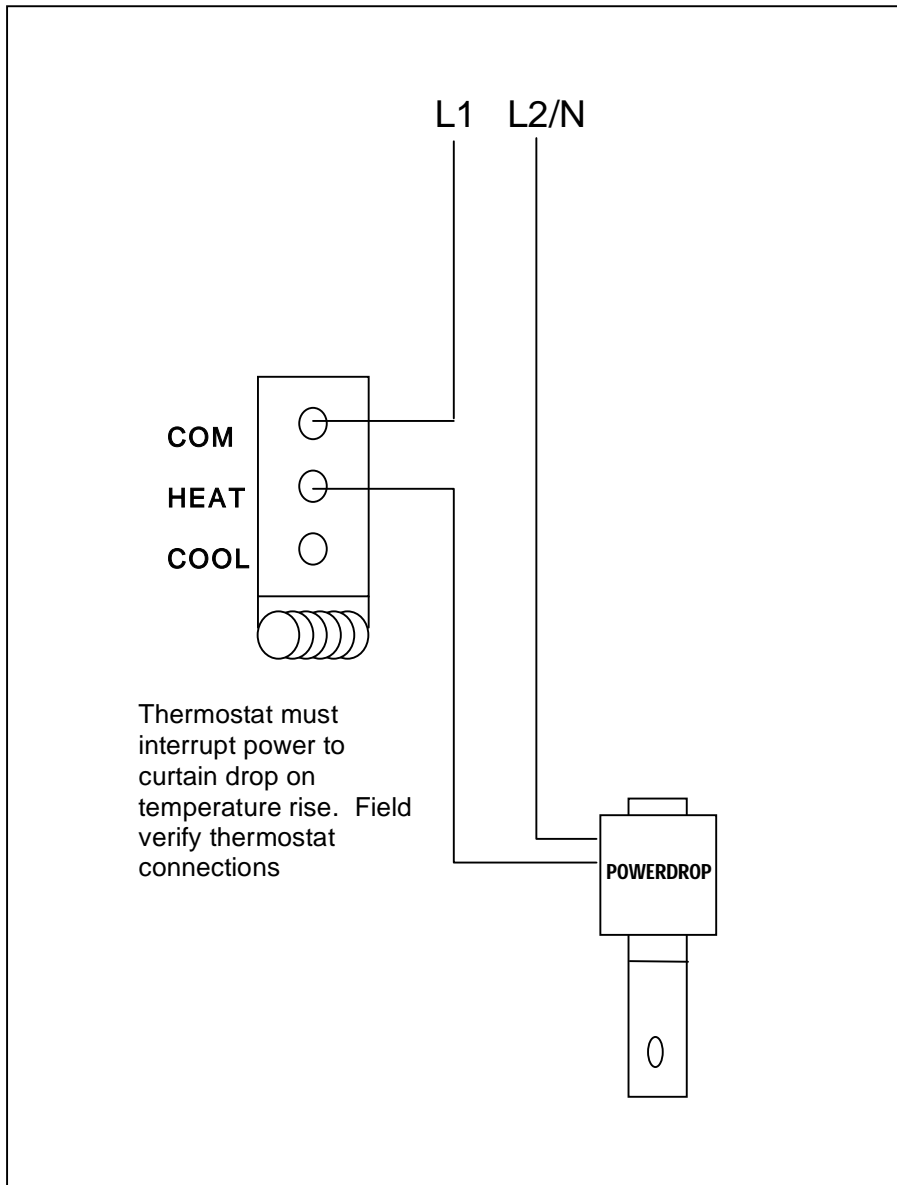


Picture is an example only

WIRING DIAGRAM FOR INPUT VOLTAGE



SCHEMATIC FOR THERMOSTAT CONNECTION WITH POWERDROP



PowerDrop Curtain Drop



Installation and Operating Instructions

Models PD120, PD208, and PD240

Patent #6,722,972

WARRANTY

The PowerDrop is warranted to be free of defects in materials and workmanship for a term of 5 years after date of purchase. The warranty terminates after this period or when damaged, modified without authorization, not maintained, or improperly installed. The warranty liability, whether directly or indirectly, shall not, in any case, exceed the replacement or repair of the product. This warranty does not cover or provide for the reimbursement or payment of incidental or consequential damages.

SERVICE

Parts and service may be available from your PowerDrop dealer. If a dealer is not available, return PowerDrop to manufacturer for repair:

**Controltech Repair Center
4431 NE 50th St, Suite 400
Des Moines, IA 50317**

Include information regarding the nature of problem, date of purchase, return address and phone number. Your PowerDrop will be promptly repaired or replaced, and you will be contacted about warranty status.

For technical support or assistance, contact Controltech by phone or Internet.

**Toll free: 866-532-3793
[http:// www.controltechonline.com](http://www.controltechonline.com)**

INSTALLATION INSTRUCTIONS

1. Mount PowerDrop to building 2 to 5 feet from curtain winch. PowerDrop may be mounted vertically or horizontally. Mount PowerDrop so the pull of the tether connected to winch handle will be aligned with the direction of opening of the PowerDrop arm. Do not install PowerDrop upside down.
2. Cut tether to proper length to secure winch handle to PowerDrop pin. Use the red hook to attach the tether to the winch handle. Form a loop at the other end of the tether with a cable sleeve to loop over the PowerDrop pin.
3. Fasten one end of safety chain to the building. Attach the other end of the chain to the curtain cable, confirming the winch will unwind and the curtain will fall open the desired amount when PowerDrop is activated. Verify chain does not become tangled.
4. Confirm PowerDrop arm or electrical cord does not become entangled with winch, chain, cables or other obstructions.

OPERATING INSTRUCTIONS

1. Close PowerDrop arm and then release, confirming that the arm springs fully open.
2. Plug PowerDrop cord into proper electrical receptacle.
3. Close PowerDrop arm again and confirm that the arm locks tightly against the electromagnet.
4. Loop tether over PowerDrop pin, confirming tether will slide off pin easily when the arm swings open.
5. Secure opposite end of tether to winch handle.
6. Disengage winch lock.
7. Allow PowerDrop to charge for 2 minutes before testing.
8. TESTING: unplug PowerDrop and the arm will swing open in approximately 5 minutes.

(continued)

WARNING: Never stand near PowerDrop or winch handle. PowerDrop will operate without warning.

9. Confirm winch, tether, and safety chain all work properly and do not become tangled. To reset PowerDrop for operation repeat steps 1 through 6.
10. PowerDrop is ready for continuous operation. Test unit on a regular basis.

TROUBLESHOOTING

PROBLEM:

PowerDrop will not latch in closed position.

SOLUTION:

- a) Check for proper voltage at receptacle.
- b) Make sure electromagnet engages arm squarely and is clean.
- c) Check for blown fuse on PowerDrop circuit board. Replace with 250-volt 1-amp 5x20mm fast-acting fuse.
- d) Check for 5-volt DC supply to electromagnet. Replace magnet if voltage is 5 volts or return PowerDrop to authorized repair center.

PROBLEM:

PowerDrop releases too soon.

SOLUTION:

- a) Check for proper voltage at receptacle.
- b) Make sure electromagnet engages arm squarely and is clean.

PROBLEM:

PowerDrop will not release.

SOLUTION:

- a) PowerDrop is powered up or is in delay mode.
- b) Foreign object blocking arm or stuck in hinge.
- c) Compression spring missing or damaged.

NOTES

PowerDrop should be used with an adequate alarm system. User assumes risk of loss when not using an alarm system to monitor environment.

PowerDrop is intended to be used only in a livestock environment.

PowerDrop should be tested monthly. Failure to check unit for freedom of movement and correct operation may cause malfunction.

WARNING: Do not stand in front of PowerDrop or near winch as unit may activate suddenly causing injury.

WARNING: High Voltage. Do not open PowerDrop electronics compartment without first disconnecting power.