

HARDWIRED SURGE PROTECTION DEVICES

CAUTION: TURN OFF POWER TO THE ELECTRIC SERVICE OR PANEL AND TO EQUIPMENT TO BE PROTECTED BEFORE INSTALLING ANY SURGE PROTECTION DEVICE. ALL WIRING SHOULD BE DONE BY A QUALIFIED ELECTRICIAN AND SHOULD COMPLY WITH THE NATIONAL ELECTRIC CODE AND LOCAL ELECTRIC CODES.

Suitable For Use on a Circuit Capable of Delivering Not More Than 200,000 rms symmetrical Amperes.

DO NOT OPEN - contains no serviceable parts

INSTALLATION:

1. Test and verify system voltage to assure proper model selection of Surge Protection Device (SPD). Refer to the wiring diagrams, configurations and voltages on page 2 for additional information.
2. Turn Power OFF.
3. Select a position in the load center or equipment panel that will require the shortest length of wire lead for connection. If installing on a breaker panel, the distance from the main breaker or input lugs to the connecting breaker is not as important as maintaining short wire lead lengths.
4. Determine the path of the lead wires making sure to avoid sharp 90 degree bends. Attempt to use 2" or larger bends.
5. Remove the knockout from the load center or equipment panel that best suits positioning of the SPD for optimum location.
6. Mount the SPD to the panel or an adjacent wall. If the mounting position prevents the direct connection of the nipple to the load center or equipment panel, a short piece of conduit or flexible conduit such as "sealtite" must be used to comply with the National Electrical Code and local codes.
7. Twist or ty-wrap lead wires to eliminate any space or gaps between them. Pass the wires through the selected knockout and secure the SPD.
8. Cut each wire lead to the proper length. DO NOT coil extra wire length.



Model PG40-480-3D

Other models and voltage configurations will appear slightly different

9. Connect the GREEN wire lead to the system ground bus.

10. Connect the WHITE wire lead to the system neutral bus. The neutral bus may be the same as the ground bus at the main or service entrance panel.

11. Connect each phase wire. The use of a circuit breaker is optional, but provides a convenient method of connecting the phase wires. Make sure that the phase wires have the correct voltage level between them. Note that for the 240 volt High Leg Delta, the wire for the High Leg is colored RED and must be connected to the leg that measures approximately 208 volts to neutral and to ground. Failure to comply with this instruction will result in failure of the SPD and void the warranty.

12. Check all connections for proper tightness or torque. Suggested torque values are published by the circuit breaker manufacturer.

13. The alarm relay is rated at 0.5 amps at 125 VAC or 1 amp at 24 VAC. Connect the alarm wires to the remote monitoring device making sure not to exceed the relay ratings. Refer to the diagram and explanations on page 3. Make sure that the proper voltage rated wire is used for connections inside the electric panel.

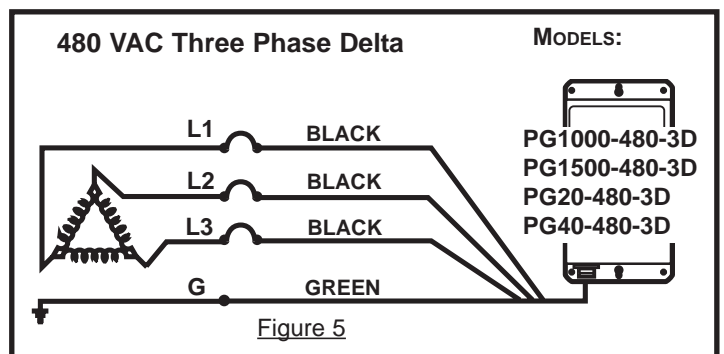
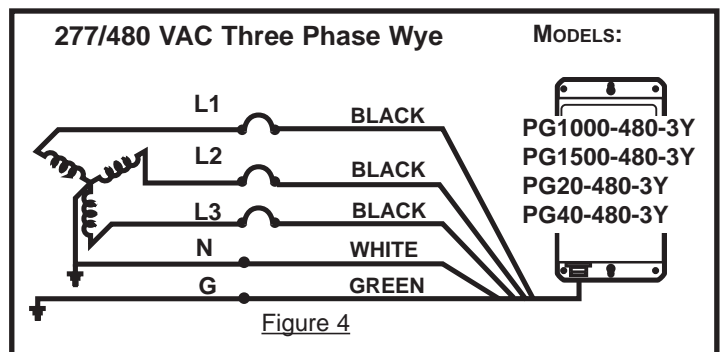
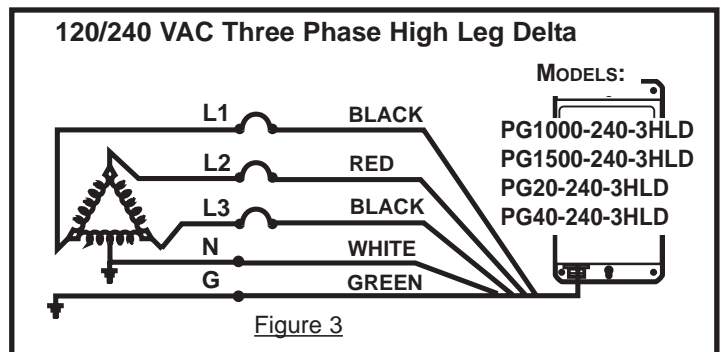
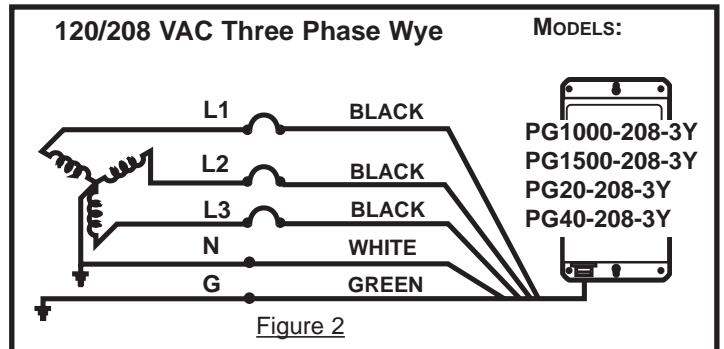
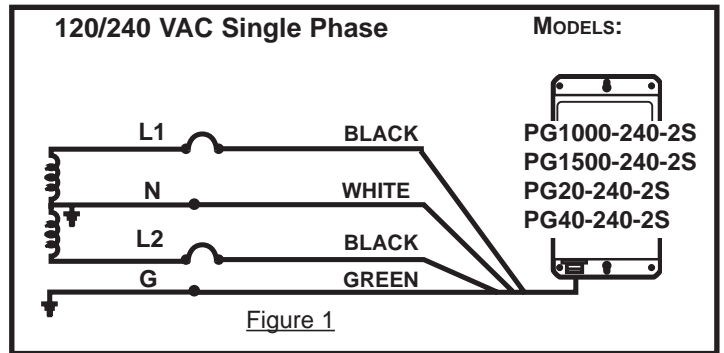
14. If the alarm relay is not used, cap and secure the wires with a cable tie or electrical tape, making sure that the wires cannot make contact with AC voltage components.

15. Turn Power on.

16. Make sure that each indicator on the SPD is ON. If not, turn power off and recheck each installation step listed above.

17. For troubleshooting assistance, call Intermatic at 815-675-7000 and ask for Technical Support.

WIRING DIAGRAMS



WIRING CONFIGURATIONS & NOMINAL VOLTAGES

Configuration	Voltage per mode		
	L-L	L-N	L-G
120/240 Single Phase	240	120	120
120/208 Three Phase Wye	208	120	120
120/240 Three Phase H.L. Delta High Leg	240	120	120
	240	208	208
277/480 Three Phase Wye	480	277	277
480 Three Phase Delta	480	n/a	480

Table 1

DIMENSIONS

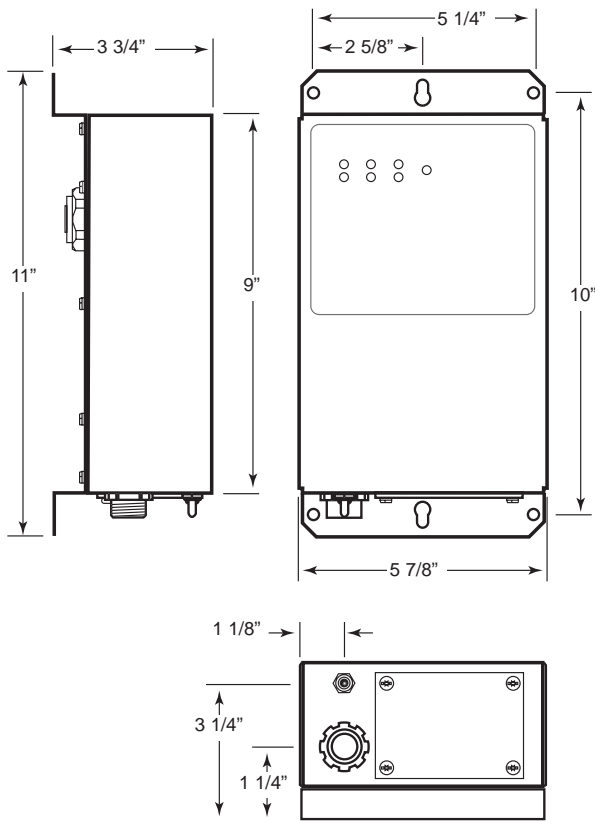


Figure 6

OPERATION and INDICATORS

Normal Operation: a green LED is **ON** for each protection mode in the device, the red ALARM LED is **OFF**, and the audible alarm is silent.

Trouble Indications: any green LED is **OFF**, red LED is **ON**, audible alarm is sounding, or any combination of these conditions.

TROUBLESHOOTING

1. Make sure that ALARM SWITCH is in **NORMAL** position.

2. Confirm that proper voltage is present at all device input leads and all leads are securely fastened.

3. If alarm condition can not be corrected, contact Intermatic at 815-675-7000 and select Technical Support.

ALARM SWITCH OPERATION

Normal Position: required for proper operation.

Test position: Audible Alarm sounds and red Alarm LED **ON**.

Silence Position: Used to silence Audible Alarm when unit is in alarm. Audible alarm will sound if switch is placed in the Silence position when operating conditions return to normal.

ALARM RELAY OUTPUT CONNECTIONS

1. **Two Wire Closed Loop:** Connect feed wire to the Common (C) wire and return wire to the Normally Opened (N/O) wire. During normal operation, the contact will be closed between C and N/O. The contact will open during an alarm condition.

2. **Two Wire Opened Loop:** Connect the feed wire to the Common (C) wire and return wire to the Normally Closed (N/C) wire. During normal operation, the contact will be opened between C and N/C. The contact will close during an alarm condition.

3. **Three Wire Supervised Loop:** Connect feed wire to the Common (C) wire, one return wire to the Normally Opened (N/O) wire and the second return wire to the Normally Closed (N/C) wire. During normal operation, the contact will be closed between C and N/O and opened between C and N/C. An alarm condition will reverse the condition.

4. Consult the instructions for your specific monitoring system for additional information.

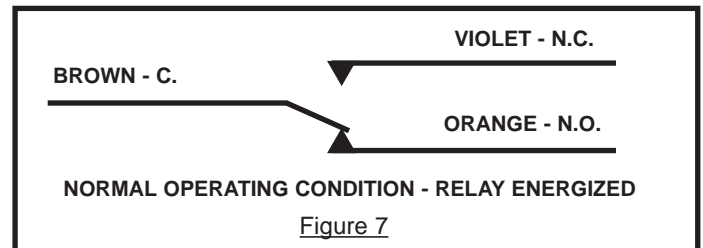


Figure 7

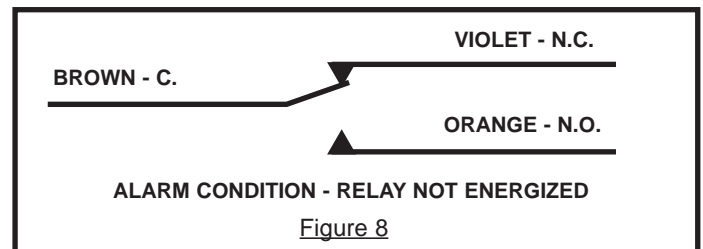


Figure 8

TEN YEAR LIMITED PRODUCT WARRANTY
For
INTERMATIC® HARDWIRED SURGE PROTECTION DEVICES

(1) What Is Covered By This Limited Warranty

Repair or Replacement of Product

Intermatic Incorporated ("Intermatic") warrants to the original purchaser only, Intermatic models PG20-240-2S, PG20-208-3Y, PG20-240-3HLD, PG20-480-3Y, PG20-480-3D, PG40-240-2S, PG40-208-3Y, PG40-240-3HLD, PG40-480-3Y, PG40-480-3D, PG1000-240-2S, PG1000-208-3Y, PG1000-480-3Y, PG1000-480-3D, PG1500-240-2S, PG1500-208-3Y, PG1500-480-3Y and PG1500-480-3D Surge Protection Devices (each a "Product") shall be free from defects in material or workmanship for a period of ten years (120 months) from date of purchase or 126 months from date of manufacture. If the purchaser discovers a defect in material or workmanship, the purchaser must promptly submit a warranty claim. Upon a determination by Intermatic that the Product is defective, Intermatic, at its sole option, shall correct any defect in material or workmanship by either repairing or replacing the Defective Product. Any repair, including both parts and labor, shall be at Intermatic's expense. The foregoing remedies are the purchaser's exclusive remedies for a breach of warranty.

For purposes of this Limited Warranty, a Power Transient shall mean over-voltage resulting from momentary voltage spikes or surges on an AC power line of magnitude that the Product, according to its specifications, is designed to stop before such spikes or surges affect downstream equipment.

The Product must be installed in the appropriate application in complete accordance with the installation instructions. All building wiring and other connections to the Product must conform to all applicable national, state and local electrical codes; the Product must not be opened, modified, exposed to extreme heat or cold, submerged or subjected to abnormal use or service. All products must be used in accordance with the instructions provided with the Product and the purchaser shall be solely responsible for selecting a Product model with specifications appropriate for the equipment to be protected. Intermatic shall determine, in its sole discretion, whether any Product returned by a purchaser has been used in accordance with its instructions, is an appropriate model for the purchaser's use thereof, and whether the Product is defective.

(2) What Is Not Covered By This Warranty

Intermatic does not warrant (a) defects in the Product or damage to any equipment caused by the failure to properly install the Product, (b) damage caused by use of the Product for purposes other than those for which it was designed, (c) damage caused by disaster such as fire, flood and wind, (d) damage caused by unauthorized attachments or modification of the Product, (e) damage to the Product occurring during shipment, or (f) electrical disturbances exceeding published product specifications, (g) damage to the Product caused by any other abuse or misuse by the purchaser.

(3) Disclaimer of Warranty

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER EXPRESSED WARRANTIES. TO THE EXTENT ALLOWED BY LAW, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY.

(4) Limitation of Remedies

IN NO CASE SHALL INTERMATIC BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY. SUCH EXCLUDED DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, DAMAGE TO SOFTWARE, LOSS OF DATA, LOSS OF PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME, THE CLAIMS OF THIRD PARTIES INCLUDING CUSTOMERS, DAMAGE TO PROPERTY AND PERSONAL INJURY. SOME STATES DO NOT ALLOW LIMITS ON WARRANTIES OR ON REMEDIES FOR BREACH IN CERTAIN TRANSACTIONS. IN SUCH STATES, THE LIMITS IN THIS PARAGRAPH AND IN PARAGRAPH (3) MAY NOT APPLY.

(5) Time Limit for Bringing Suit

No action arising out of any claimed breach of warranty may be brought more than one year after the cause of action has occurred.

(6) No Other Warranties

Unless modified in writing signed by both parties, this agreement is understood to be the complete and exclusive agreement between the parties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement. No employee of Intermatic or any other party is authorized to make any warranty in addition to those made in this agreement.

INTERMATIC INCORPORATED

SPRING GROVE ILLINOIS

815-675-2321 Fax: 815-675-2112

<http://www.intermatic.com>