

GENERAC®

Owner's Manual
For
Surge Protection Device

Model Number

G0073000 – 120/240V Single Split-Phase



SAVE THIS MANUAL FOR FUTURE REFERENCE

 **WARNING**

CANCER AND REPRODUCTIVE HARM

www.P65Warnings.ca.gov

(000393a)

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Section 1 Safety

Introduction

Thank you for purchasing a Generac Power Systems Inc. product. This unit has been designed to provide high performance, efficient operation, and years of use when maintained properly.

Read This Manual Thoroughly



WARNING

Consult Manual. Read and understand manual completely before using product. Failure to completely understand manual and product could result in death or serious injury. (000100a)

If any section of this manual is not understood, contact the nearest Independent Authorized Service Dealer (IASD) or Generac Customer Service at 1-888-436-3722 (1-888-GENERAC), or visit www.generac.com for starting, operating, and servicing procedures. The owner is responsible for proper maintenance and safe use of the unit.

SAVE THESE INSTRUCTIONS for future reference. This manual contains important instructions that must be followed during placement, operation, and maintenance of the unit and its components. Always supply this manual to any individual that will use this unit, and instruct them on how to correctly start, operate, and stop the unit in case of emergency.

Safety Rules

The manufacturer cannot anticipate every possible circumstance that might involve a hazard. The alerts in this manual, and on tags and decals affixed to the unit, are not all inclusive. If using a procedure, work method, or operating technique that the manufacturer does not specifically recommend, verify that it is safe for others and does not render the equipment unsafe.

Throughout this publication, and on tags and decals affixed to the unit, DANGER, WARNING, CAUTION, and NOTE blocks are used to alert personnel to special instructions about a particular operation that may be hazardous if performed incorrectly or carelessly. Observe them carefully. Alert definitions are as follows:

DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

(000001)

WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

(000002)

CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

(000003)

NOTE: Notes contain additional information important to a procedure and will be found within the regular text of this manual.

These safety alerts cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the action or service are essential to preventing accidents.

Electrical Hazards



DANGER

Electrocution. Potentially lethal voltages are present in this equipment. Render the equipment safe before attempting repairs or maintenance. Failure to do so will result in death or serious injury.

(000343)

WARNING

Electric shock. Only a trained and licensed electrician should perform wiring and connections to unit. Failure to follow proper installation requirements could result in death, serious injury, and equipment or property damage.

(000155a)

CAUTION

Equipment Damage. Do not perform a high potential or high voltage test with the unit connected to the electrical system. Doing so will result in unit damage.

(000681)

- Competent, qualified personnel should install, operate and service this equipment. Adhere strictly to local, state and national electrical and building codes. When using this equipment, comply with regulations established by the National Electrical Code (NEC), CSA Standard; the Occupational Safety and Health Administration (OSHA), or the local agency for workplace health and safety.

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Section 2: General Information, Specifications, and Warranty

Equipment Description

The Surge Protection Device (SPD) is designed to be installed on service entrance, branch panels, and/or individual equipment disconnects, and functions to protect sensitive electronic equipment from damaging voltage transients. The connecting wires do not carry supply current. Instead, they carry only short-duration currents associated with a transient event.

Contact an IASD for information regarding a particular application or installation not covered in this manual.

Specifications

Description	Rating
Surge Current Capacity Per Phase	50 kA
Nominal Discharge Current (In)	20 kA
Short Circuit Current Rating (SCCR)	200 kA
SPD Type	Type 1 (can also be used in Type 2 applications)
System Voltages Available: • Single Split-phase	120/240 VAC
Protection Modes: • Single Split-phase	L-N, L-L
Maximum Continuous Operating Voltage (MCOV)	150 L-N, 300 L-L
Input Power Frequency	50/60 Hz
Enclosure Rating	NEMA 4
Operating Temperature	-4 °F through 122 °F (-20 °C through 50 °C)
Operating Humidity	5% through 95%, non-condensing
Operating Altitude	Up to 16,000 ft (5,000 m)
Agency Certification and Approvals	UL1449 4th Edition Listed Device
Warranty	2 Years

Warranty

Generac warrants these products to be free from defects in both workmanship and materials for a period of 2 years from the date of delivery to the purchaser. Generac assumes no risk or liability for results of the use of the products purchased from it, including but without limiting the generality of the foregoing: (1) The use in combination with any electrical or electronic components, circuits, systems, assemblies, or any other materials or substances; (2) Unsuitability of any product for use in any circuit or assembly. Purchaser's rights under the warranty shall consist solely of requiring Generac to repair, or at Generac's sole discretion, replace, free of charge, F.O.B. factory, and defective items received at said factory within said term determined by Generac to be defective. The giving of or failure to give any advice or recommendations by Generac shall not constitute any warranty by or impose any liability upon Generac. The foregoing constitutes the sole and exclusive liability of Generac AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED, IMPLIED OR STATUTORY AS TO THE MERCHANTABILITY, FITNESS FOR PURPOSE SOLD, DESCRIPTION, QUALITY, PRODUCTIVENESS OR ANY OTHER MATTER. In no event shall Generac be liable for special or consequential damages or for delay in performance of the warranty. This warranty does not apply if the product has been misused, abused, altered, tampered with, or used in applications other than specified on the nameplate. At the end of the warranty period, Generac shall be under no further warranty obligation expressed or implied. The product covered by this warranty certificate can only be repaired or replaced by the factory. For help on troubleshooting the SPD, or for warranty information, contact an IASD. Repair or replacement units will be returned collect. If Generac finds the return to be a manufacturer's defect, the product will be returned prepaid.

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Section 3: Installation and Operation

Introduction to Installation

This section describes how to install a Surge Protection Device (SPD) in parallel (shunt) across the AC supply of a split phase electrical system.

Installation

Refer to the label on the SPD to verify the voltage rating and wiring configuration of the SPD matches that of the electrical system. Use an AC voltmeter to measure the system line voltage to verify the correct model of SPD is being installed. Damage to the SPD may result if it is connected to an electrical system of a higher voltage or different wiring configuration.

Mounting

The SPD can be mounted directly to the electrical panel:

- Choose a mounting location for the SPD that provides the shortest and straightest possible wiring (lead length) from the SPD to the electrical system connections. Excessive lead length and sharp bends will degrade SPD performance.
- If the electrical system uses an isolated ground, the SPD must be isolated from ground using insulated conduit fittings.
- See [Figure 3-2](#). When using conduit, avoid using 90° elbows (A) and keep the conduit run as short and straight as possible (B).

Conduit Installation

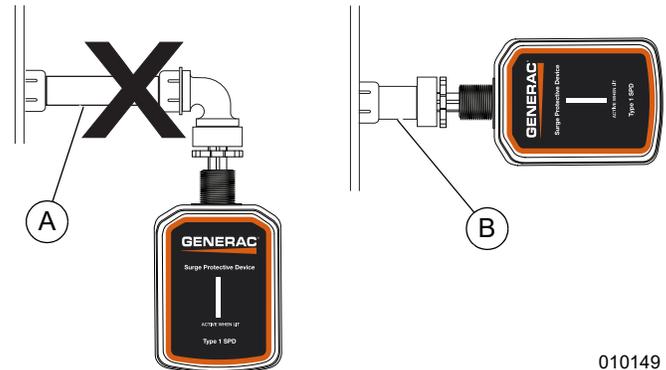
See [Figure 3-1](#). Mount the SPD directly to the electrical panel using a 1/2 in. locknut.



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Figure 3-1. 1/2 in. Locknut Mounting

See [Figure 3-2](#). When mounting the SPD outdoors, use weatherproof conduit and fittings to maintain the enclosure's NEMA 4 rating.



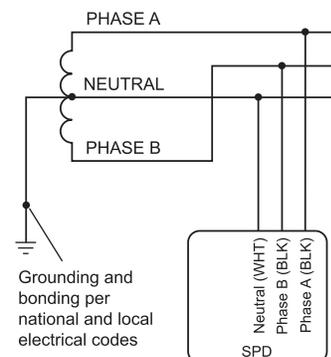
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Figure 3-2. Conduit Installation

Wiring

When installing wiring:

- Follow all national, state, and local electrical codes when making wiring connections.
 - When connecting the wires from the SPD to the electrical system, cut the wires as necessary to keep them as short as possible.
 - To maximize the SPD's performance, twist and bind the wires together to reduce the impedance of the wire (one twist/inch).
 - If the system utilizes an isolated ground, the SPD's ground wire must be connected to the system's isolated ground bus.
1. See [Figure 3-3](#). Connect the SPD's neutral wire (white) to the system's neutral connection.
 2. Connect the SPD's phase A and B wires (black) to the system's corresponding phase A and B connections according to applicable national, state, and local electrical codes.



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Figure 3-3. Split Phase Wiring Diagram

Operation

1. Apply system power. The LED should illuminate.

NOTE: If the connected LED does not illuminate, remove power, check connections, and test again. If the LED still does not light, contact an IASD.

2. The SPD will automatically begin to protect downstream electrical devices from damaging voltage transients.

With all phase voltages present, the LED indicator reports the status of the protection elements and is active when all of them are intact and providing protection. Any loss of protection is signaled when the LED turns OFF.

The unit is not repairable and contains no user serviceable parts. If the unit fails, as evidenced by the LED turning OFF, contact an IASD for a replacement.

IMPORTANT NOTE: Do not use the Suppression Circuit Status LEDs as an indication of the presence or absence of system phase voltages.

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