

# ProGuard+™

For the protection of Graco electrical equipment against voltage fluctuations.

## Model 24W090, 24W755

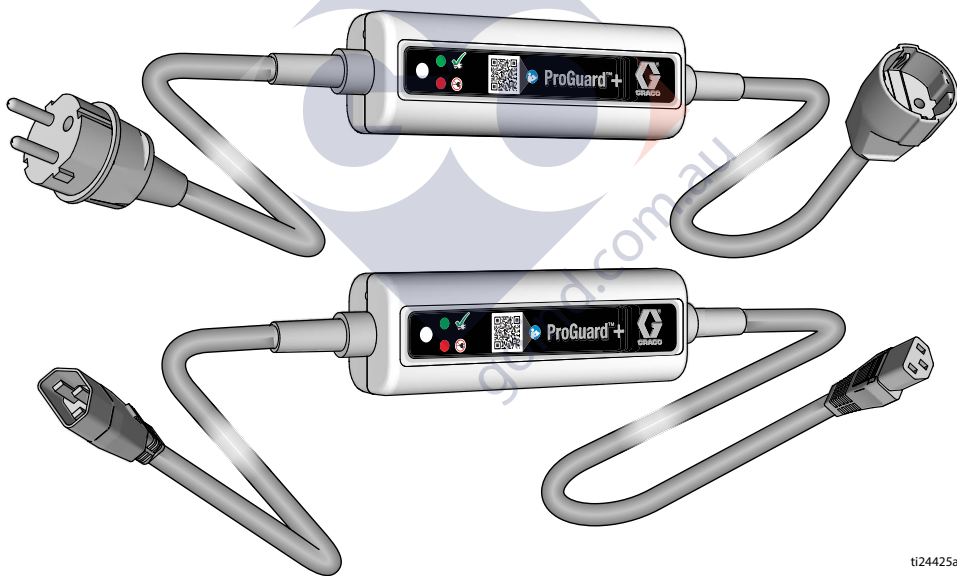
24W755, 230V IEC-320

24W090, 230V CEE 7/7 (Shuko)



### Important Safety Instructions

Read all warnings and instructions in this manual.  
Be familiar with the controls and the proper usage of the equipment.  
Save these instructions.



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Patent pending



# Warnings

## Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

### **WARNING**



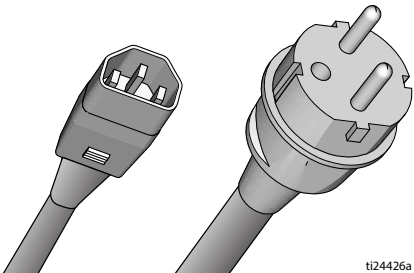
#### **GROUNDING**

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current.



This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Improper installation of the grounding plug is able to result in a risk of electric shock.
- Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded.
- Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.
- Do not replace the cords of this device; if the cord is damaged the device should be properly disposed of.
- This product is for use on a nominal 230V circuit and has a grounding plug similar to the plug illustrated in the figures.
- Only connect the product to an outlet having the same configuration as the plug.
- Do not use an adapter with this product.



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### **WARNING**



#### **EQUIPMENT MISUSE HAZARD**

Misuse can cause death or serious injury.

- Before using this device make certain that the total electrical load of your equipment does not exceed the maximum rating of this device.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.



#### **ELECTRIC SHOCK HAZARD**

This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.



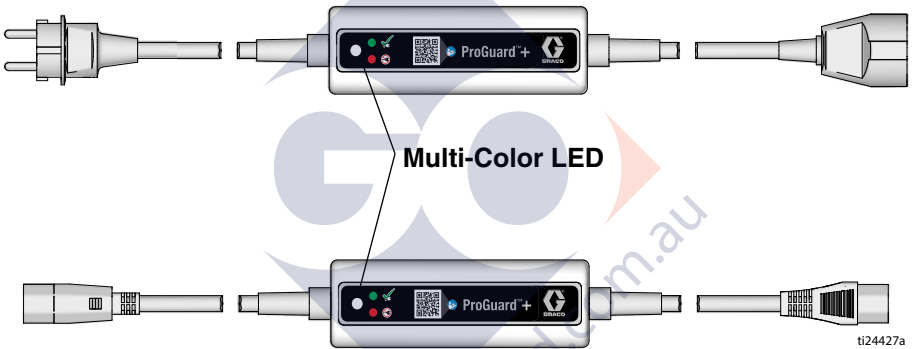
- Turn off and disconnect power cord before servicing equipment.
- Connect only to grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on power and extension cords.
- Do not expose to rain or wet conditions. Store indoors.

## Description


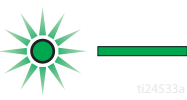

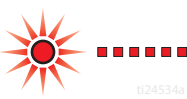

ProGuard+ is an electrically operated protective device that monitors the supply voltage to Graco electrical equipment. If there are excessive voltage fluctuations (high or low) ProGuard+ disconnects the equipment from the power source to reduce the risk of damage to the equipment. ProGuard+ automatically resets after a one minute delay when acceptable power is available.



The power cord includes a ground wire with an appropriate ground contact. Do not use ProGuard+ if the electrical cord has a damaged ground contact. The cord must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.



Operation of the ProGuard+ is indicated by a multi-color LED.

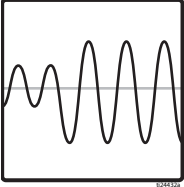
	LED	Definition
		<b>LED is ON</b> When the LED is solid green the ProGuard+ is powered and in normal operation.
		<b>LED is BLINKING</b> When the LED blinks red the supply voltage is too low or too high for the equipment and will not run until it is plugged into a good power supply.
		<b>LED is OFF</b> No power to ProGuard+.

# Description

When the LED blinks red the ProGuard+ has sensed a high or low voltage condition and has disconnected power to the equipment.

- Wait a minimum of two minutes to see if acceptable power has been restored and the LED turns green.
- If the LED continues to blink red locate a good power source.

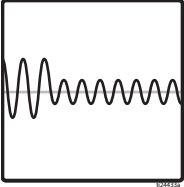
## High Voltage



Typically caused when ProGuard+ is plugged into a power source that is higher than the rated voltage of the equipment.

Locate a power source that supplies the correct voltage.

## Low Voltage



Typically caused when other equipment is on the same circuit or when operating on generator power and the generator cycles on and off based on the load. Make certain generator is operating properly and is properly sized for the equipment.

Locate a power source that is dedicated to the equipment.

If using an extension cord, make certain that it is a 3-wire, 12 AWG (2.5mm<sup>2</sup> minimum cord).

An undersized (higher gauge) cord results in a drop in line voltage to the equipment.

## Technical Specifications

ProGuard+	
Nominal voltage	230VAC, 50/60Hz
Current Rating	10Amps
High Voltage Disconnect	280VAC
Low Voltage Disconnect	170VAC
Reset Time	60 seconds
Weight	400g (0.9 lbs.)
Dimensions	150 x 50 x 45 mm (6.0 x 2.0 x 1.75 in.)
Operating temperature range	-34° to 46° C (-30° to 115° F)
Plug Configuration	
24W755	
Power In (From power source)	IEC-320-C14
Power Out (To equipment)	IEC-320-C13
24W090	
Power In (From power source)	CEE 7/7 Plug
Power Out (To equipment)	CEE 7/7 Socket

Replacement Danger and Warning labels, tags, and cards are available at no cost.

# Graco Standard Warranty

## Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

**THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.**

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

**GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO.** These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

### **FOR GRACO CANADA CUSTOMERS**

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## Graco Information

For the latest information about Graco products, visit [www.graco.com](http://www.graco.com).

For patent information, see [www.graco.com/patents](http://www.graco.com/patents).

**TO PLACE AN ORDER**, contact your Graco distributor or call 1-800-690-2894 to identify the nearest distributor.





*All written and visual data contained in this document reflects the latest product information available at the time of publication.*

*Graco reserves the right to make changes at any time without notice.*

Original instructions. This manual contains English. MM 334371

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Revision A, October 2014