



GE-V4M_GE-V4MS

Installation Guide

GE-V4M_GE-V4MS_MI_E_V2_0





IMPORTANT NOTICE

The manufacturer reserves the right to make changes without notice in product design and specifications as warranted by evolution in user needs, progress in engineering or manufacturing technology.

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WARNINGS AND PRECAUTIONS

Although the manufacturer has made every effort to ensure that the information is correct, this document may be modified without prior warning due to the product's constant evolution.

WARNINGS AND PRECAUTIONS

Equipment, blown fuses and/or tripped breakers may prove harmful to the contents of the building. Therefore it is strongly recommended to install backup devices. Spare equipment should also be available at the owner's site. Equipment manufactured by the manufacturer is protected against normal line surges. High surges caused by thunderstorms or power supply equipment may damage this equipment. For added security against line voltage surges it is recommended that surge and noise suppression devices be installed at the electrical distribution panel. These devices are available from most electrical supply distributors. Shielded cables for probes are highly recommended for more protection against lightning. It is also prohibited to use overhead cables outside the building.

RECOMMENDATIONS

The manufacturer recommends that all installation procedures described herein be performed by a qualified electrician or installation technician. Furthermore the manufacturer recommends testing all the functions, including the backup devices, after installation, after changes to the installation and every month after that.

Fuse verification and replacement shall be the responsibility of the owner of this equipment.



TABLE OF CONTENTS

1 CONNECTION DIAGRAMS5

2 INSTALLATION8

2.1 UNPACKING 8

2.2 EQUIPMENT NECESSARY FOR INSTALLATION 8

2.3 GENERAL INSTALLATION NOTES 8

2.4 ELECTRICAL CABLES 9

2.5 POWER SOURCE 9

2.6 ASSEMBLY 9

2.7 ELECTRONIC CARD CONFIGURATION..... 10

2.8 COMMUNICATION PORT CONNECTION PROCEDURE 11

2.9 POWER UP PROCEDURE 11

3 GE-V4M_GE-V4MS SPECIFICATIONS.....12

4 WARRANTY AND SUPPORT13



LIST OF FIGURES

Figure 1: Connection Diagram (1 module per port) 5

Figure 2: Connection Diagram (2 modules per port) 6

Figure 3: Installation and Supports 10

Figure 4: GE-V#/M electronic card..... 10

LIST OF TABLES

Table 1 Specifications 12



1 CONNECTION DIAGRAMS

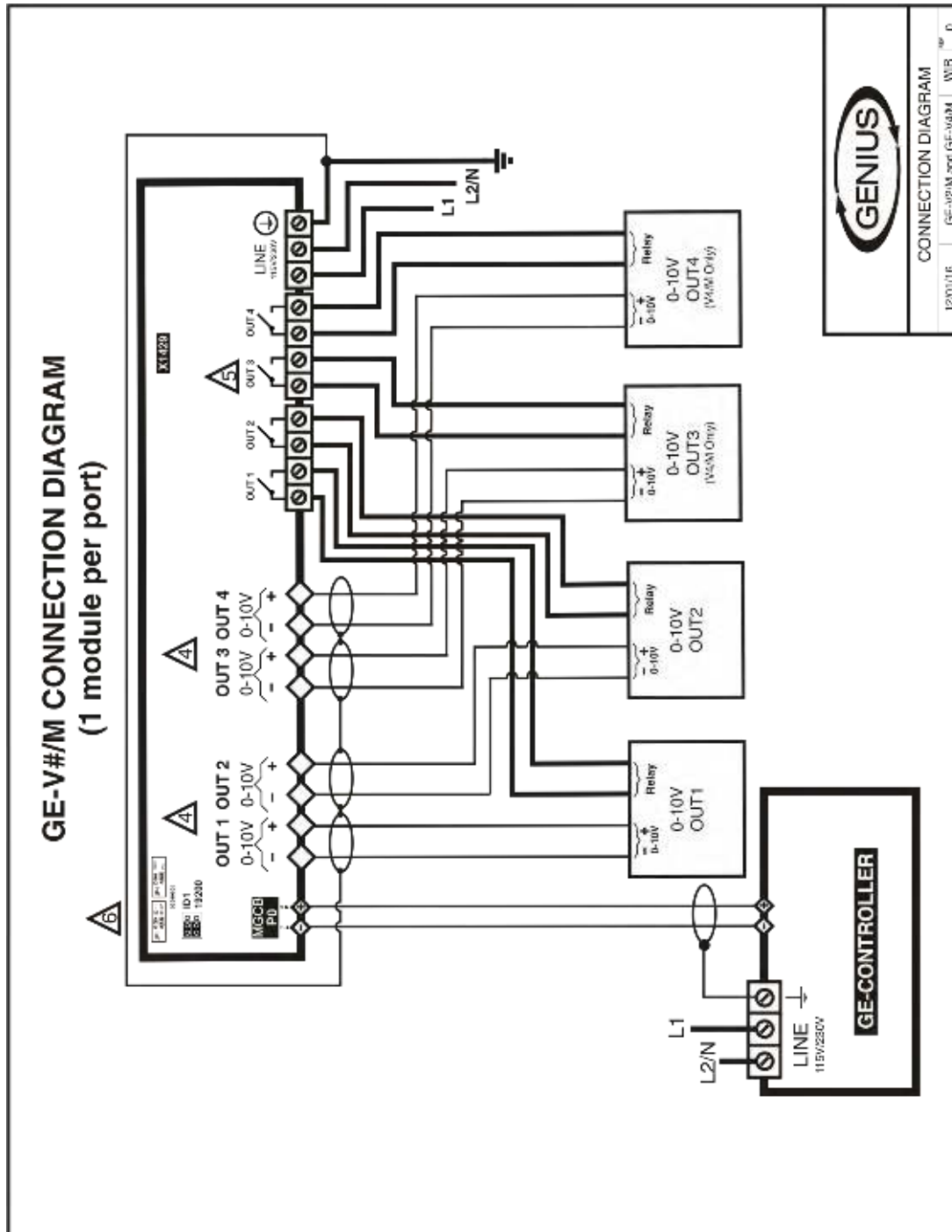


Figure 1: Connection Diagram (1 module per port)

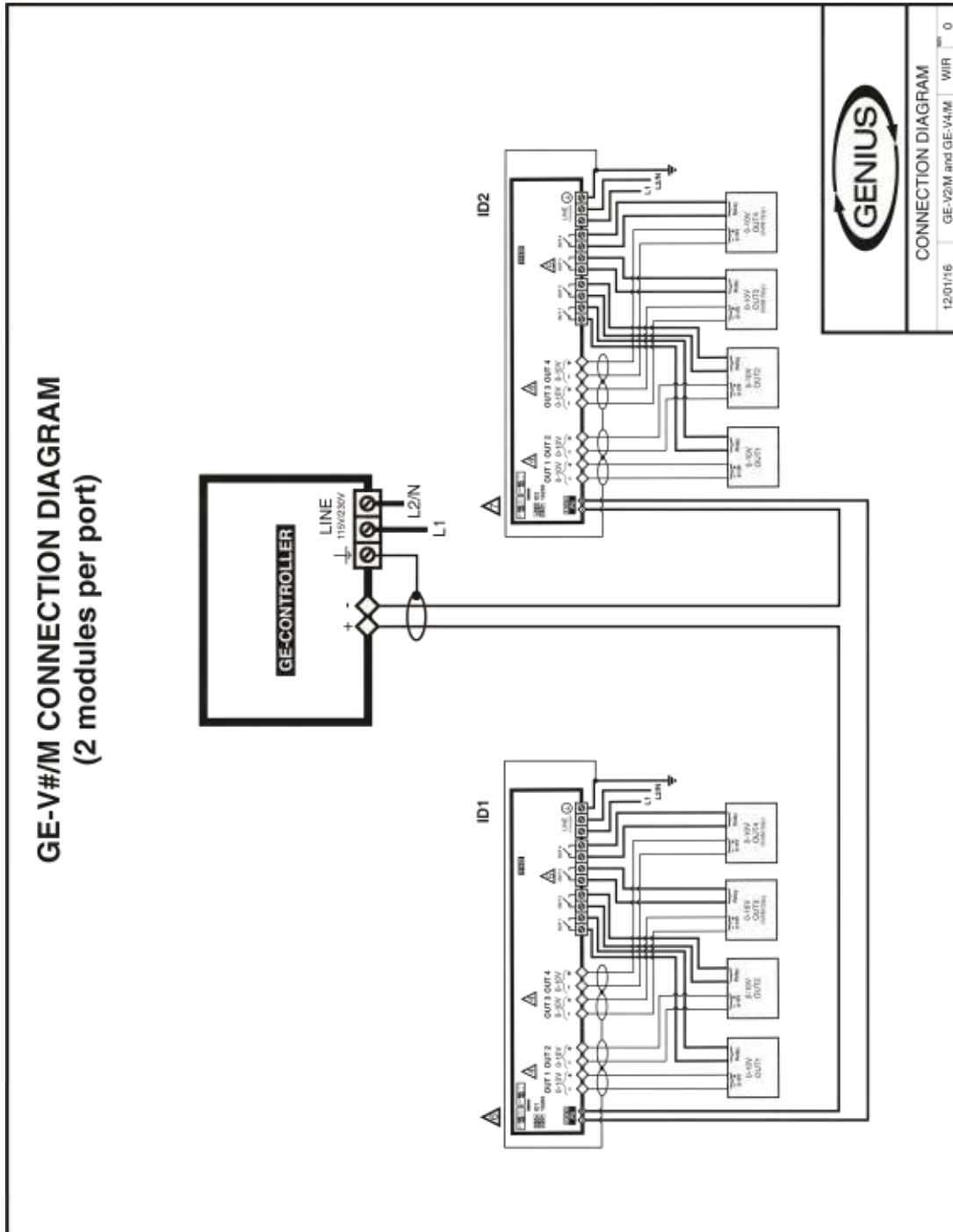





Figure 2: Connection Diagram (2 modules per port)




Note to Electricians

1  REFER TO ELECTRICIAN NOTES FROM THE MASTER CONTROLLER. IF NOT SPECIFIED, USE: SHIELDED, TWISTED COMMUNICATION CABLES (8 twists per foot), MAXIMUM LENGTH FOR A 350 pF/M CABLE: 500 FEET (150 M). MAXIMUM LENGTH FOR A 89 pF/M CABLE: 820 FEET (250 M).

2  HIGH VOLTAGE CABLE, MUST BE INSTALLED ACCORDING TO LOCAL ELECTRICAL STANDARDS.

3  INSTALL LOW VOLTAGE CABLES (COMMUNICATION) AT LEAST 12 INCHES (30CM) FROM HIGH VOLTAGE CABLES (120/230 VCA, 24 VCC). ALWAYS CROSS HIGH AND LOW VOLTAGE CABLES AT 90 DEGREE ANGLES.

 4 NEVER CONNECT MORE THAN ONE CABLE PER GREEN TERMINAL BLOCK. IF YOU MUST USE MORE THAN ONE CABLE, USE AN ELECTRICAL CONNECTOR.

 5 MAXIMUM 2 CABLES OF SAME SIZE PER BLACK TERMINAL BLOCK, MAXIMUM AWG #12, MINIMUM AWG #22.



2 INSTALLATION

This section offers the procedures necessary for the connection and installation of the 0-10V MGCB GE-V2/M, GE-V4/M, GE-V2/MS and GE-V4/MS modules. The /MS version has manual operation switches and potentiometers for every output. Throughout this manual, GE-V#/M will reference GE-V2/M, GE-V4/M, GE-V2/MS and GE-V4/MS unless otherwise noted.

The manufacturer recommends that the following installation instructions be followed to the letter and that the installation be completed by a licensed electrician. Failure to do so may void the warranty.

2.1 Unpacking

Unpack the GE-V#/M and verify the contents. If anything is missing or damaged, contact your supplier.

The packaging should contain the following items:

- 1 GE-V#/M Module
- 4 Supports / 4 Screws
- 1 Spare fuse
- 1 Installation guide

2.2 Equipment necessary for installation

The following is a list of the necessary installation equipment that is not included with the product:

- Shielded 2-wire cable, low capacitance, AWG #22 (communication), see electrician notes to select appropriate capacitance.
- 4 Screws (to fix the module to the wall)
- Screwdriver
- Soldering iron or approved waterproof connectors

2.3 General installation notes

- It is recommended to install the GE-V#/M in a corridor to protect the module from possible contact with noxious gasses.
- To eliminate condensation problems inside the GE-V#/M, it is recommended to install the GE-V#/M on an interior wall. If this is impossible, use spacing blocks to allow air circulation between the wall and the GE-V#/M.
- The GE-V#/M must be installed right side up, with cable connectors at the bottom.
- Although the unit is waterproof, it cannot withstand high pressure water sprays or full water immersion. Cover it with a plastic covering prior to room cleaning.



- ⦿ The GE-V#/M must be installed in a location that is easily accessible but far from temperature extremes, water and direct sunlight.
- ⦿ Do not drill holes into the front, sides, top or rear of the GE-V#/M.
- ⦿ Do not install the GE-V#/M near high voltage equipment, a power source or a transformer.

2.4 Electrical cables

- ⦿ Electrical cables must be installed according to local wiring codes.
- ⦿ All cable shielding must be connected to the GE controller only. Do not connect them to the GE-V#/M. The shielding is necessary to protect the GE-V#/M from electromagnetic interference produced by lightning strikes or by any nearby machinery.
- ⦿ Never use shielding as a connector.
- ⦿ Use separate channels for low voltage cabling (communication) and high voltage cabling. There must be at least 1 foot (30 cm) between the low voltage channel and the high voltage one.
- ⦿ If a low voltage cable must cross a high voltage cable, they must cross at a 90° angle.
- ⦿ All cable connections must be either soldered or completed with approved waterproof connectors.
- ⦿ Refer to the master controller manual for cable lengths.
- ⦿ It is not permitted to use above ground cables outside the building.
- ⦿ Use an appropriate electrical connection to connect the unit's ground to the installation ground.

2.5 Power source

- ⦿ Each installation should have over voltage protection.
- ⦿ Each module should have a separate circuit breaker to eliminate the potential for undesired consequences.

2.6 Assembly

- ⦿ The module must be installed in an area that allows the cover to be opened fully.
- ⦿ Attach the four supports to the four support holes to the back of the module using the four screws supplied with the supports.
- ⦿ Mount the module on the wall by inserting the screws into the adjustment slots of the wall supports. Place the module so that the cabling holes are located on the bottom portion of the module.
- ⦿ Support slots are used to adjust the position of the GE-V#/M.
- ⦿ Once the module position is set, tighten the four support screws.

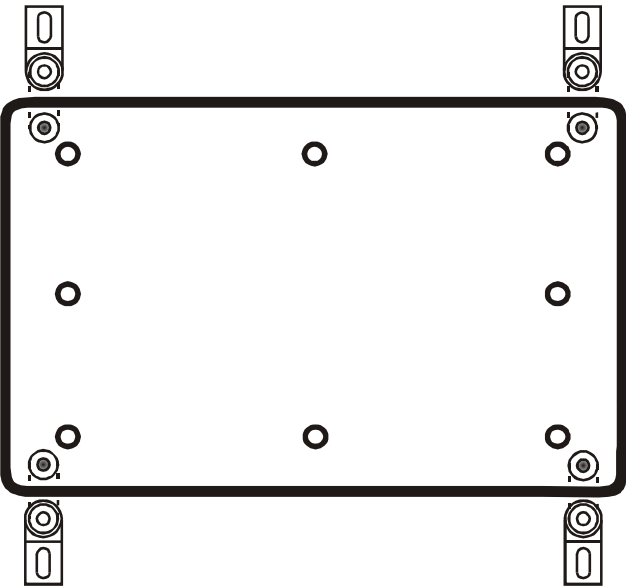
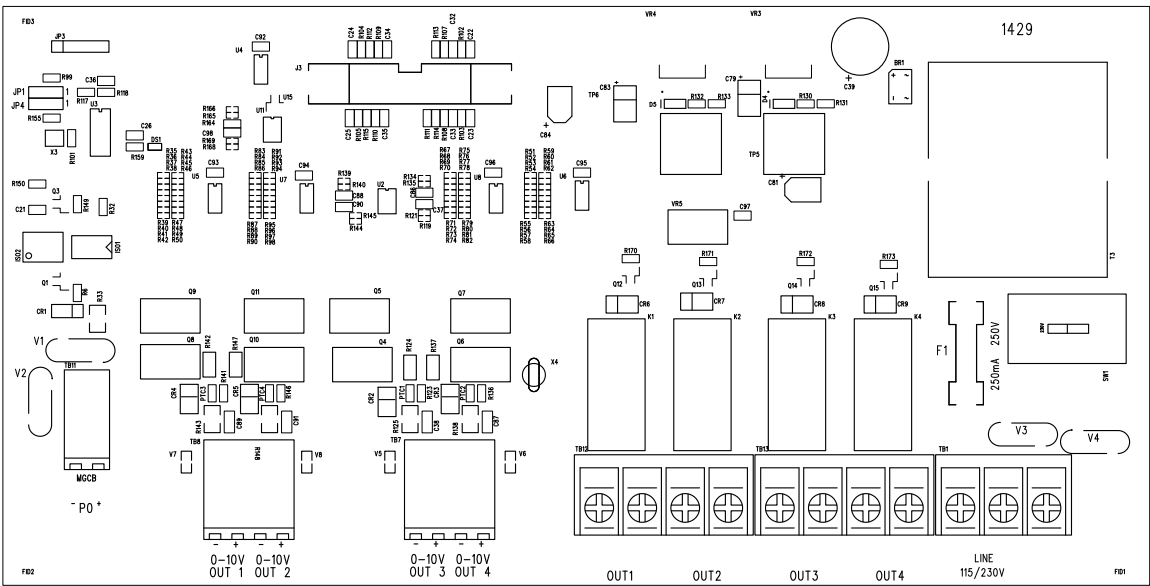


Figure 3: Installation and Supports

2.7 Electronic card configuration





2.8 Communication Port Connection Procedure

Connect the positive terminal of the GE-V#/M communication port to the positive terminal of the module. Connect the negative terminal of the GE-V#/M communication port to the negative terminal of the module's communication port.

2.9 Power up Procedure

- Once the GE-V#/M is correctly installed on the wall and all equipments are connected, perform the following steps:
- Ensure that the flat cable between the electronic card of the faceplate and the electronic card at the bottom of the module is correctly connected (GE-V#/MS only).
- Seal the cable channel holes.
- Close the bottom and top covers.
- Activate the power source.
- Once the power up procedure is complete, use a padlock to secure the module.



3 GE-V4M_GE-V4MS SPECIFICATIONS

Table 1 Specifications

Description	Value
Storage Temperature	-4°F to 131°F (-20°C to 55°C)
Operating Temperature	32°F to 122°F (0°C to 50°C)
Humidity	90% maximum without condensation
Weight	4.4 lb (2 kg)
Dimensions	11" x 7 3/4" x 6 1/4" (28.5 cm x 19.5 cm x 16 cm)
Standards	CSA (NRTL/C)
Protection Index	IP 66
Warranty	2 Years
POWER	
Operating Voltage	115 VAC/230 VAC
Maximum Consumption	125 mA
0-10V OUTPUTS	
Output Signal	0-10 Volts
Maximum Load	100 mA
RELAYS	
Relay Type	Normally Open
Maximum Load	15 A 250 VAC

Important Notes:

- ⚠ Use separate channels for low voltage cabling (communication) and high voltage cabling. There must be at least 1 foot (30 cm) between the low voltage channel and the high voltage one. If a low voltage cable must cross a high voltage cable, they must cross at a 90° angle.
- ⚠ Electrical cables must be installed by a licensed electrician according to local wiring codes.



4 WARRANTY AND SUPPORT

The manufactured equipment and supplied components have gone through rigorous inspection to assure optimal quality of product and reliability. Individual controls are factory tested under load, however the possibility of equipment failure and/or malfunction may still exist.

For service, contact your local retailer or supplier. The warranty period shall be for two years from manufacturing date. Proof of purchase is required for warranty validation.

In all cases, the warranty shall apply only to defects in workmanship and specifically exclude any damage caused by over-voltage, short circuit, misuse, acts of vandalism, lightning, fortuitous events, acts of God, flood, fire, hail or any other natural disaster. Any unauthorized work, modification or repair on this product automatically voids the warranty and disclaims the manufacturer from all responsibility.

The manufacturer assumes only those obligations set forth herein, excluding all other warranties or obligations. This warranty stipulates that in all cases the manufacturer shall be liable only for the supply of replacement parts or goods and shall not be liable for any personal injury, damages, loss of profits, interrupted operations, fines for infringement of the law or damages to the production of the PURCHASER and the PURCHASER shall take up the defense and hold the manufacturer faultless regarding any legal or extra legal proceedings, notice, or claim by the customer or by a third party, and regarding any legal and extra legal expenses and fees brought forward on by such damages.