

Functional Summary

The GLS-PLS-120/277 is a 3-phase power loss sensor designed for use with Crestron Green Light® systems to activate *Override* mode during a power failure. In response to a signal from the GLS-PLS-120/277, the lighting system program can be temporarily overridden while designated emergency lighting circuits are changed to their override preset levels and unnecessary lighting and devices are shut down to minimize the demand on emergency power equipment.

The GLS-PLS-120/277 senses each leg of a 120 or 277 volt 3-phase feed, providing LED indication of the status of each phase on its front panel. When power is lost on any phase, the corresponding status LED turns off and a contact closure is activated on each of two control outputs. Two isolated control outputs are provided to allow for interfacing with third-party equipment in addition to the Crestron® lighting system. Each contact closure output is rated for 1 A @ 24 Vdc.

Testing the GLS-PLS-120/277 is facilitated using three test switches located behind a small door on the front of the unit. Setting any switch to the **TEST** position simulates a loss of power on the corresponding phase leg, providing a test of the unit's internal circuitry and any connected equipment.

The steel enclosure is designed for mounting to a vertical surface. Conduit knockouts are provided on the bottom, top, and both sides. All electrical connections are made via screw terminals accessed by removing the front panel.

- Senses loss of power on each leg of a 3-phase feed
- Used to satisfy UL 924 (Emergency Power Equipment) requirements
- Works with 120 or 277 volt feeds
- Designed to activate *Override* mode on Crestron lighting modules
- Provides two isolated contact closure outputs
- Each output rated 1 A @ 24 Vdc
- Includes built-in test function for each phase input
- Surface mount enclosure with conduit knockouts

GLS-PLS-120/277 Physical View



Specifications

GLS-PLS-120/277 Specifications

SPECIFICATION	DETAILS
Input Voltage Range 120 Volt Application 277 Volt Application	102 to 132 volts ac, 50/60 Hz 235 to 305 volts ac, 50/60 Hz
Output Switch Contact Rating	24 volts dc @ 1 amp
Electrical Terminals Input	(3) Terminal block type; Accepts two or three 30–10 AWG (0.05–6.0 mm ²) wires
Output	(2) Terminal block type; Accepts two 30–12 AWG (0.05–4.0 mm ²) wires
Enclosure	Galvanized steel with polycarbonate label overlay; surface mount with integral mounting flanges top and bottom; 3/4" and 1/2" conduit knockouts top, bottom, and both sides
Environmental Temperature Humidity Maximum Heat Dissipation	32° to 104°F (0° to 40°C) 10% to 90% RH (non-condensing) 51 Btu/h
Dimensions Height Width Depth	12 11/16 in (323 mm) 5 3/16 in (132 mm) 2 13/16 in (72 mm)
Weight	3.7 lb (1.7 kg)

Industry Compliance

The products meet the requirements of the following UL and CSA standards as Industrial Control Equipment:

- UL 508, the Standard for Industrial Control Equipment
- CSA C22.2 No. 14-05, the Standard for Industrial Control Equipment for Use in Ordinary Locations

When marked as “EMERGENCY CIRCUITS” the products meet the additional requirements for Emergency Lighting:

- UL 924, the Standard for Emergency Lighting and Power Equipment
- CSA C22.2 No. 141, the Standard for Unit Equipment for Emergency Lighting.

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS.

- Do not use outdoors.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than intended use.
- All servicing should be performed by qualified service personnel.
- If any Emergency Circuits are fed or controlled from this panel, it must be located electrically where fed from a UPS, generator, or other guaranteed source of power during emergency and power outage situations.

SAVE THESE INSTRUCTIONS

Regulatory Compliance

This product is Listed to applicable UL Standards and requirements by Underwriters Laboratories Inc.



As of the date of manufacture, the GLS-PLS-120/277 has been tested and found to comply with specifications for CE marking and standards per EMC and Radiocommunications Compliance Labelling.



Federal Communications Commission (FCC) Compliance Statement

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user’s authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

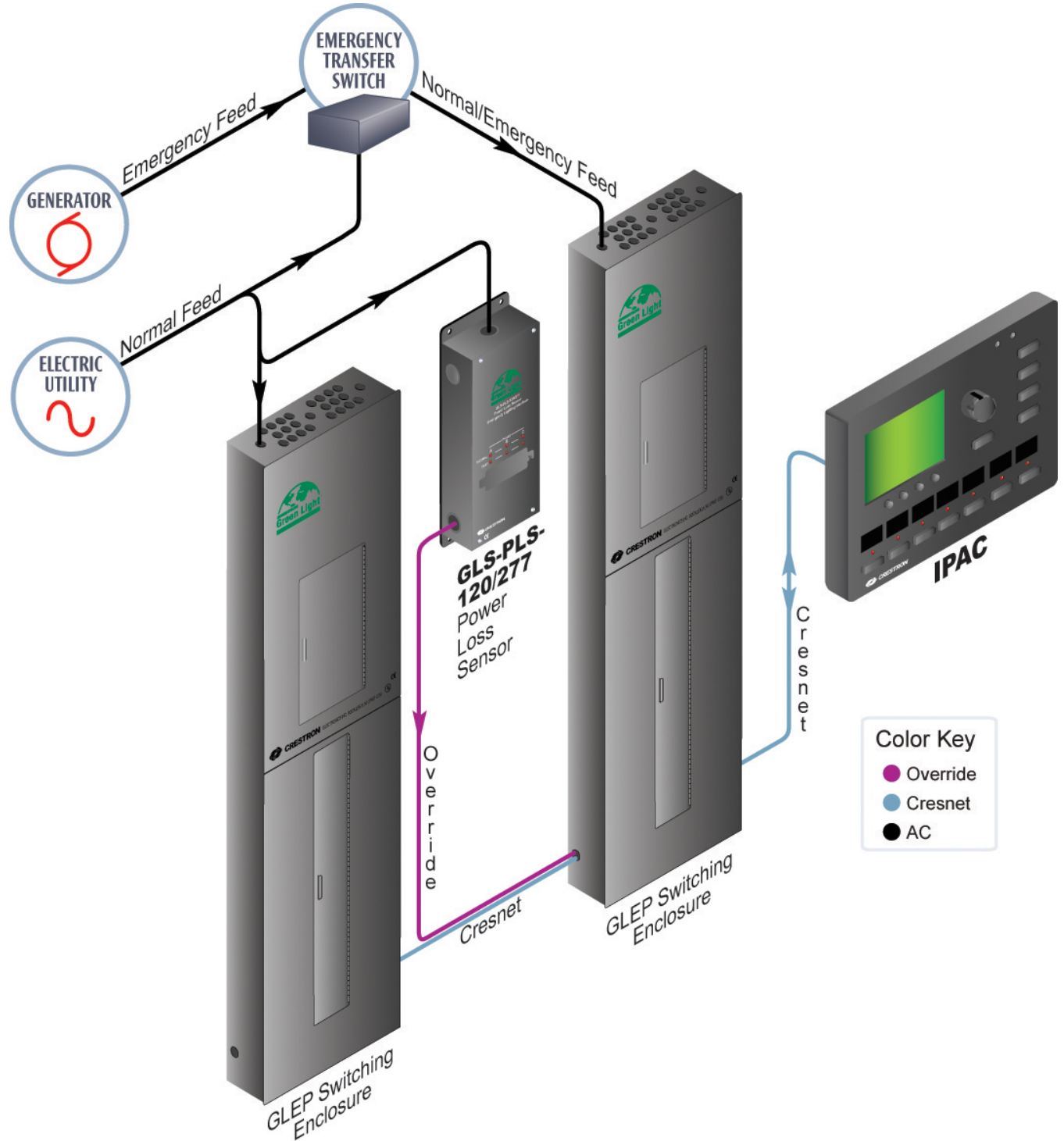
Industry Canada (IC) Compliance Statement

CAN ICES-3(B)/NMB-3(B)

Application

The following diagram shows a GLS-PLS-120/277 module in a typical lighting application.

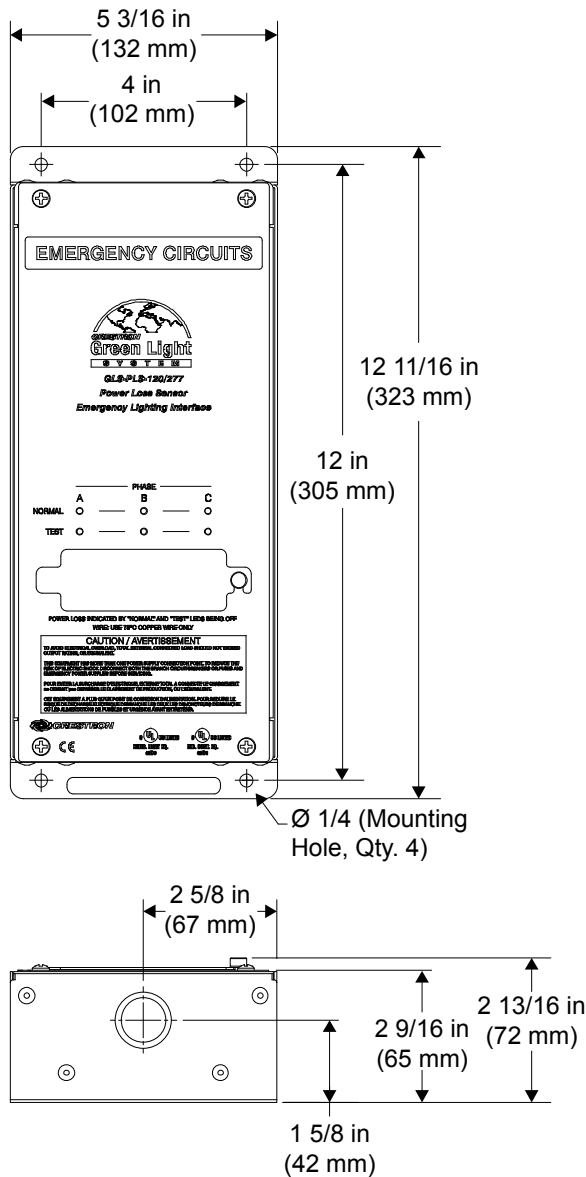
GLS-PLS-120/277 in a Typical Lighting Application



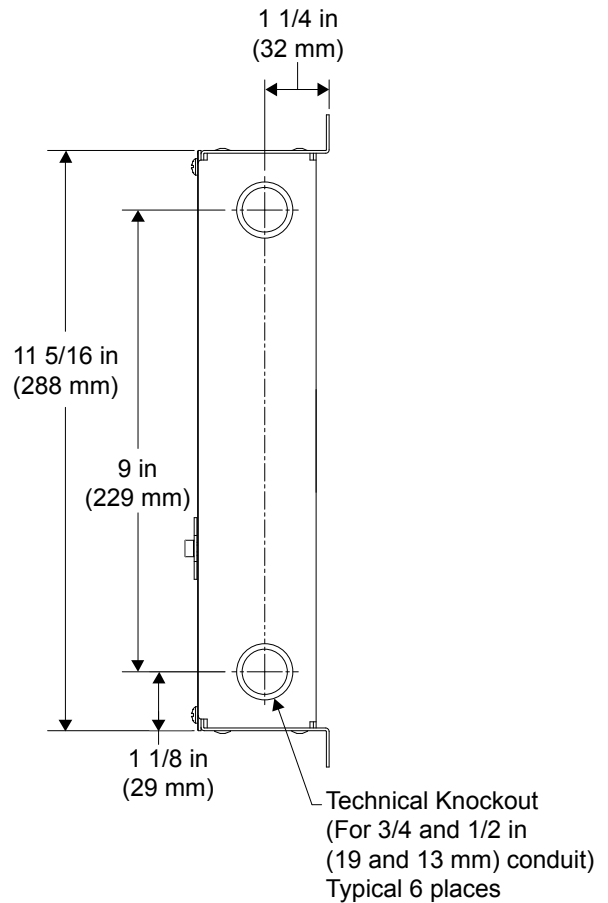
Physical Description

This section provides information on the connections and indicators available on the GLS-PLS-120/277.

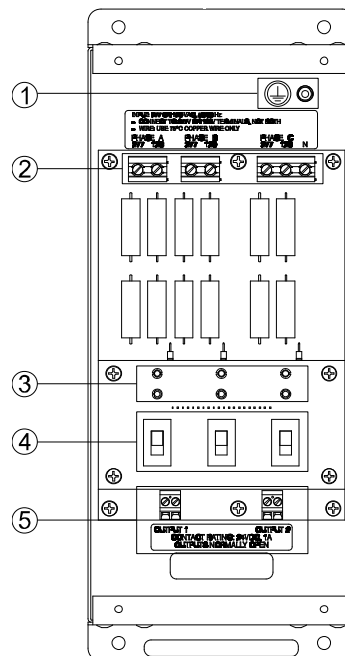
GLS-PLS-120/277 Overall Dimensions (Front and Bottom View)



GLS-PLS-120/277 Overall Dimensions (Side View)



GLS-PLS-120/277 (Cover Removed)



Connectors and Indicators

#	CONNECTORS AND INDICATORS	DESCRIPTION
1	GROUND STUD	(1) #6-32 Ground stud
2	INPUT Connectors	<p>PHASE A: (2) Captive screw terminals; Main feed Phase A sensing input, 277 or 120 volts; Wire Size: 30 to 10 AWG (0.05 to 6.0 mm²)</p> <p>PHASE B: (2) Captive screw terminals; Main feed Phase B sensing input, 277 or 120 volts; Wire Size: 30 to 10 AWG (0.05 to 6.0 mm²)</p> <p>PHASE C: (2) Captive screw terminals; Main feed Phase C sensing input, 277 or 120 volts; Wire Size: 30 to 10 AWG (0.05 to 6.0 mm²)</p> <p>N: (1) Captive screw terminal, main feed neutral; Wire Size: 30 to 10 AWG (0.05 to 6.0 mm²)</p>
3	STATUS LEDs	<p>NORMAL A-C: (3) Green LEDs, each illuminates when corresponding test switch is set to NORMAL and power is present at corresponding phase sensing input</p> <p>TEST A-C: (3) Red LEDs, each illuminates when corresponding test switch is set to TEST and power is present at corresponding phase sensing input</p>
4	TEST SWITCHES	(3) Slide switches behind door, used to set each corresponding phase sensing input to <i>Test</i> mode
5	OUTPUT Connectors	<p>(2) Sets of (2) captive screw terminals comprising (2) Form A contact closures, electrically isolated;</p> <p>Both outputs close when main feed power is removed from any phase sensing input;</p> <p>Contact Closure Rating: 1 amp @ 24 volts dc</p> <p>Wire Size: 30 to 12 AWG (0.05 to 4.0 mm²)</p>

Setup

Important Notes

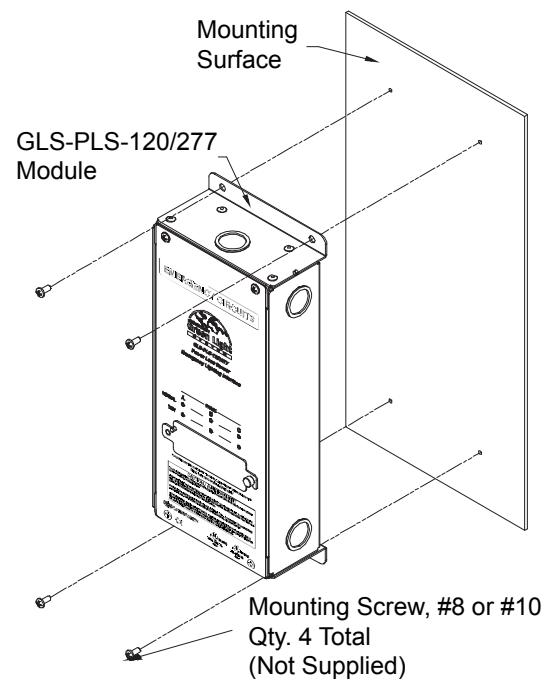
Read before installation.

- Codes: Install in accordance with all local and national electrical codes.
- Wiring: Use 75° C copper wire only.

Installation

Refer to the following diagram when installing a GLS-PLS-120/277 module.

Module Installation



NOTE: To prevent potential heat damage to drywall, do not mount the device directly onto drywall. Mount a piece of 1/2 in (13 mm) thick plywood between the device and the drywall.

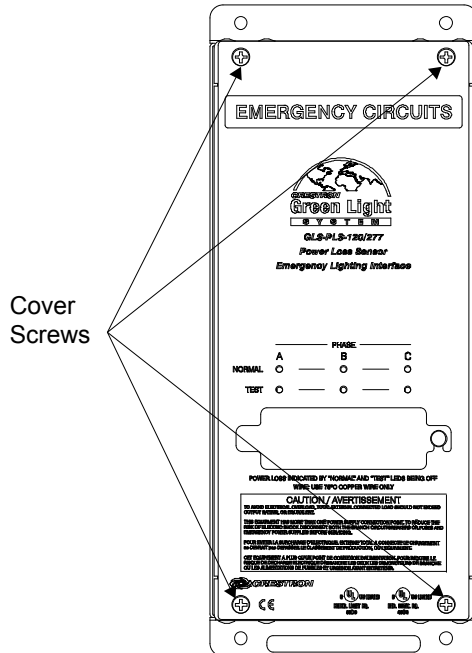
NOTE: To ensure proper ventilation, the device must be installed vertically on a vertical surface. Install device with 6 in (153 mm) of clearance from the top and bottom of the device.

Hardware Hookup

WARNING: RISK OF SERIOUS PERSONAL INJURY. Turn off power at the circuit breaker(s) prior to installation. Installing with power on can result in serious personal injury and damage to the device.

1. Use a #2 Philips screwdriver to remove the cover screws as shown in the following diagram and remove the cover.

Remove Cover Screws



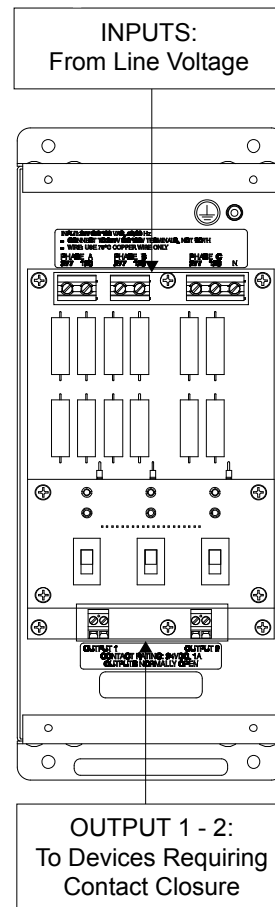
Cover
Screws

2. Connect the GLS-PLS-120/277 using the guidelines described below:

CAUTION: Wire for either 120 V or 277 V operation. If sensing is required for both 120 V and 277 V feeds, two GLS-PLS-120/277s are required.

- Strip wires to 1/2 in (13 mm).
- Tighten all terminal screws to 4.4 in-lbs (0.5 Nm).
- Wire **INPUT** connectors as Class 1.
- Wire **OUTPUT** connectors as Class 2.

Hardware Connections for the GLS-PLS-120/277



NOTE: **OUTPUT 1** operates in parallel with **OUTPUT 2**. One or both connectors can be connected to other devices.

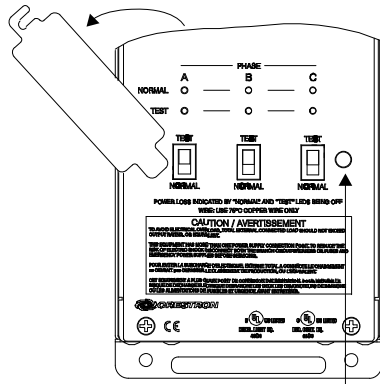
3. Verify that the three test switches are in the down (**NORMAL**) position.
4. Replace the cover and cover screws.

Operation and Testing

Once all connections have been made to the GLS-PLS-120/277 and the cover has been replaced, the unit is ready for use.

1. Apply power to the GLS-PLS-120/277. If power is present, the **NORMAL** LEDs light. If power is not present, the **TEST** and **NORMAL** LEDs extinguish and the **OUTPUT** contacts close.
2. To test the device, rotate the door as shown in the following illustration to reveal the test switches.

Reveal the Test Switches



Loosen thumb screw and rotate door counter clockwise to access the switches.

3. Move any of the test switches to the **TEST** position. The corresponding **TEST** LEDs light and the **OUTPUT** contacts close.
4. Return the test switches to the **NORMAL** position and rotate the test switch door back in place.

Problem Solving

Troubleshooting

The following table provides corrective action for possible trouble situations. If further assistance is required, please contact a Crestron customer service representative.

GLS-PLS-120/277 Troubleshooting

TROUBLE	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
NORMAL LEDs do not light.	Test switches are in the TEST position.	Make sure the test switches are in the NORMAL position.
	Power is not present.	Verify that power is properly connected to the GLS-PLS-120/277.
TEST LEDs do not light.	Test switches are in the NORMAL position.	Make sure the test switches are in the TEST position.
	Power is not present.	Verify that power is properly connected to the GLS-PLS-120/277.
OUTPUT contact is closed.	One or more test switches are in the TEST position.	Make sure the test switches are in the NORMAL position.
	Power is not present.	Verify that power is properly connected to the GLS-PLS-120/277.

Further Inquiries

To locate specific information or resolve questions after reviewing this guide, contact Crestron's True Blue Support at 1-888-CRESTRON [1-888-273-7876] or, for assistance within a particular geographic region, refer to the listing of Crestron worldwide offices at www.crestron.com/offices.

To post a question about Crestron products, log onto Crestron's Online Help at www.crestron.com/onlinehelp. First-time users must establish a user account to fully benefit from all available features.

Future Updates

As Crestron improves functions, adds new features, and extends the capabilities of the GLS-PLS-12/277, additional information may be made available as manual updates. These updates are solely electronic and serve as intermediary supplements prior to the release of a complete technical documentation revision.

Check the Crestron website periodically for manual update availability and its relevance. Updates are identified as an "Addendum" in the Download column.

The specific patents that cover Crestron products are listed at patents.crestron.com.

Crestron, the Crestron logo, and Crestron Green Light are either trademarks or registered trademarks of Crestron Electronics, Inc. in the United States and/or other countries. UL and the UL logo are either trademarks or registered trademarks of Underwriters Laboratories, Inc. in the United States and/or other countries. Other trademarks, registered trademarks, and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Crestron disclaims any proprietary interest in the marks and names of others. *Crestron is not responsible for errors in typography or photography.*

This document was written by the Technical Publications department at Crestron.

©2013 Crestron Electronics, Inc

Return and Warranty Policies

Merchandise Returns / Repair Service

1. No merchandise may be returned for credit, exchange or service without prior authorization from Crestron. To obtain warranty service for Crestron products, contact an authorized Crestron dealer. Only authorized Crestron dealers may contact the factory and request an RMA (Return Merchandise Authorization) number. Enclose a note specifying the nature of the problem, name and phone number of contact person, RMA number and return address.
2. Products may be returned for credit, exchange or service with a Crestron Return Merchandise Authorization (RMA) number. Authorized returns must be shipped freight prepaid to Crestron, 6 Volvo Drive, Rockleigh, N.J. or its authorized subsidiaries, with RMA number clearly marked on the outside of all cartons. Shipments arriving freight collect or without an RMA number shall be subject to refusal. Crestron reserves the right in its sole and absolute discretion to charge a 15% restocking fee plus shipping costs on any products returned with an RMA.
3. Return freight charges following repair of items under warranty shall be paid by Crestron, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser.

Crestron Limited Warranty

Crestron Electronics, Inc. warrants its products to be free from manufacturing defects in materials and workmanship under normal use for a period of three (3) years from the date of purchase from Crestron, with the following exceptions: disk drives and any other moving or rotating mechanical parts, pan/tilt heads and power supplies are covered for a period of one (1) year; touch screen display and overlay components are covered for 90 days; batteries and incandescent lamps are not covered.

This warranty extends to products purchased directly from Crestron or an authorized Crestron dealer. Purchasers should inquire of the dealer regarding the nature and extent of the dealer's warranty, if any.

Crestron shall not be liable to honor the terms of this warranty if the product has been used in any application other than that for which it was intended or if it has been subjected to misuse, accidental damage, modification or improper installation procedures. Furthermore, this warranty does not cover any product that has had the serial number altered, defaced or removed.

This warranty shall be the sole and exclusive remedy to the original purchaser. In no event shall Crestron be liable for incidental or consequential damages of any kind (property or economic damages inclusive) arising from the sale or use of this equipment. Crestron is not liable for any claim made by a third party or made by the purchaser for a third party.

Crestron shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, Crestron makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.