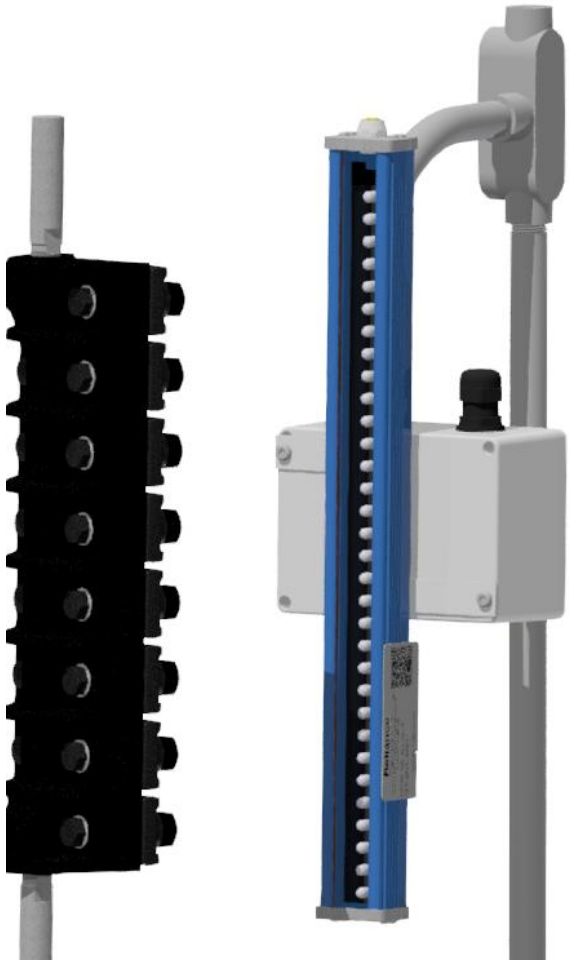
Installation, Operation, & Maintenance Instructions
R500.290A Rev.0
1/30/2026

Reliance®
A Product of Clark-Reliance

Prismatic Water Gage Illuminator (RGL100)



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1. Introduction

Clark-Reliance® is a global leader in the level indication and control, sight-flow indication, and filtration and separation industries. We are dedicated to offering the largest and broadest range of instrumentation products and being the single source for every type of level measurement and control to meet the varying demands of the process industry.

2. Warranty

Clark-Reliance warranties its manufactured goods as being free from defects in material and workmanship for one (1) year from the date of shipment. If any of the goods are found by the seller to be defective, such goods will be replaced or repaired at the seller's cost. Refer to the Clark-Reliance Terms & Conditions for full warranty details.

3. About This Manual

This manual is designed to aid and guide in the installation, operation and maintenance of the GL1000 Illuminator for Reliance Prismatic Gage. Authorized personnel must read and understand all instructions before attempting to install before attempting to install, operate or maintain this equipment. Only people certified to perform work described herein should attempt any actions suggested. Safety precautions and company safety standards should always be observed when performing activities described in this manual.

4. Inspection & Delivery

Upon receiving the RGL100 Illuminator, check all components carefully for damage incurred during shipping. Sign for the shipment noting “damaged” and immediately notify the shipping firm of any damage and request damage inspection. Confirm illuminator model number located on brackets. Units should be stored in an area protected from the elements and corrosive fumes, in a secure manner where they can neither fall, nor struck by other objects. Care should be taken to protect the window and the end connection from damage.

5. Product Description

The Reliance Prismatic Water Gage Illuminator are constructed to the highest standards. Equipped on a Reliance Prismatic Water Gage, this product can greatly enhance visibility of the liquid level contained within. It is designed to be maintenance free for an estimated service life of 100,000 hours of continuous use. Available with both Non-hazardous and hazardous location power supplies.

These illuminators must be installed, operated and maintained with reasonable care and due regard for the applications and environment if they are to provide reliability for their service lifetime.

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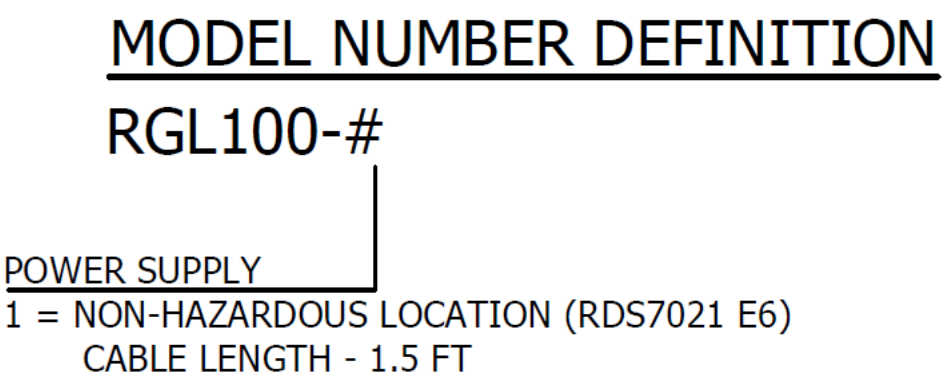
6. RGL100 Models

6.1. Specifications

How to specify Reliance RGL100 Illuminator



Power Supply Specifications	
Non-Hazardous Location	
Input Voltage	100 – 277 VAC 50/60 HZ *Voltage for North America Only 100 – 240 VAC 50/60 HZ
Input Current	0.32A @ 100 VAC
Output Voltage	12 VDC
Output Current	0 – 2.5A MAX
Max / Min Wire Size	12 AWG / 18 AWG
Max Recommended Ambient Temperature	65°C / 150°F

6.2. Components

There are three main components that make up the illuminator: the light strip, the power supply, and the cord connecting these two main pieces. The cord comes in lengths depending on the type of mounting, for remote mounting it includes an 8 ft cord. The power supply uses an aluminum enclosure with opening for A/C connection. The light bar is constructed of aluminum, glass and silicone. Questions regarding acceptable applications should be directed to The Clark-Reliance® Corporation.

6.3. Installation Wiring

Caution: All lights are tagged with the service conditions for that particular unit. These specifications are located on the tag on the power supply housing and are contained in the "Specifications" section of this manual. Do not use or refer to specifications listed on red label on the power supply housing. They are specifications for generic use. Review the rating prior to installation and again prior to start-up, to ensure proper operation in the installed environment. Should there be any doubt as to the applicability of a unit for the installed environment, consult the factory before placing the unit into service.

All installation steps should be performed by a qualified technician and should be executed in accordance with all applicable national and local codes.

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The light and power supply should be checked to ensure that they contain no foreign matter, and that the end connections are clean, undamaged, and in line with exiting conduit.

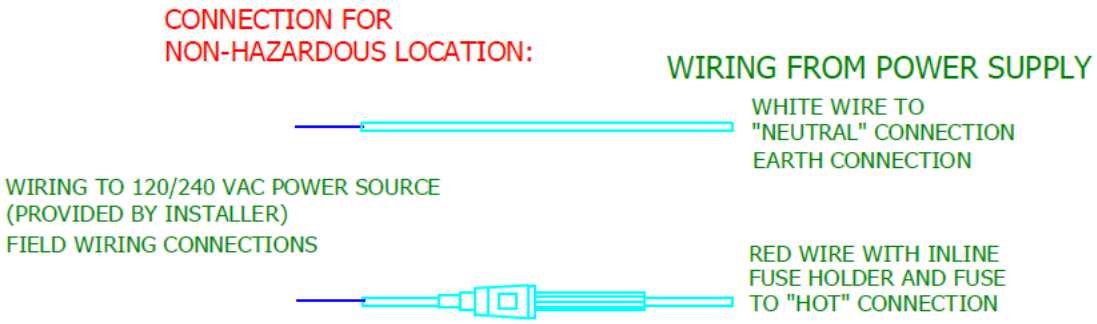
Step by step instructions for Non-Hazardous Location Power Supply

Caution: Before working with the power supply, verify that the area is free of flammables and the AC power circuit is off.

1. Open cover of the power supply housing. Connect AC Line to Fused Wire on the power supply. Connect AC neutral to the correct wire color per power supply label.

Caution: The DC output is pre-wired. Do not cut or disconnect these wires.

2. If the cord will not reach the power supply, contact your local representative for the required extension cable.
3. Replace the cover on the power supply housing.
4. Switch "ON" the power supply making sure the illuminator is functioning properly, with all LED's illuminated.
5. If the LED's does not illuminate, check power source for voltage and check fuse. If power source and fuse are good, contact Clark-Reliance® for further assistance.



The LED illuminator can run continuously. The operating life of LED lights can exceed 100,000 hours under normal conditions.

6.4. Maintenance

Fuse Replacement

This power supply is fused for AC protection. In the event of large voltage surge, the fuse may be released, causing no output. Refer to Spare Part table for replacements.

Replacing Power Supply

1. Loosen cover locking screw and open the cover of the power supply housing. Disconnect AC power in and remove AC wire from enclosure.
2. Remove assembly and relocate to desired work area.
3. Disconnect power cord between power supply and light bar assembly.
4. Trim gasket material at top end cap to match slot opening and slide out bracket and mounting hardware.
5. Loosen power supply screws and slide power supply of light bar assembly.
6. Slide new power supply onto light bar assembly.
7. Insert bracket and mounting hardware for top bracket into slot
8. Securely tighten the power supply screws and the top bracket screw.
9. Install power cord between power supply and light strip making sure connectors are fully connected.

Routine Inspection

Keep window on the front of the light clean using a clean damp cloth. Avoid using chemical cleaners that may damage silicone seals. If cleaner is required, do not spay directly onto light. Apply a small amount to the rag and carefully wipe glass only. Never use harsh abrasives, wire brushes, metal scrapers, or any materials that could scratch the window. The window may be cleaned while the unit is in operation.

The light may be removed while the unit is in operation during inspection or maintenance of the customer's gage glass. The Illuminator may also be disconnected from the power supply, if desired. Disconnect the cord at the supplied screw connector at the bottom of the light bar assembly. The plant power going into the power supply does not need to be disconnected.

6.5. Troubleshooting

Description of Problem	Possible Cause	Troubleshooting Procedure
All LEDs out	No AC line voltage Blown Fuse Loose or disconnected DC output wires Loose or damaged connections inside LED assembly Damaged power supply	Follow troubleshooting steps below
Set or sets of (4) LEDs out	Defective LED board	Contact Factory
LEDs out above a certain point	Loose connection between LED boards Defective LED board	Contact Factory
LEDs out in group (more than 4)	Defective LED board	Contact Factory

Troubleshooting Steps

Caution: Some of these troubleshooting steps are performed with live voltage applied. The assembly should be moved to a safe area before beginning work. A qualified and properly trained technician must perform these steps.

1. Remove enclosure cover. If using hazardous location power supply, confirm that red LED is on, if it is ON, go to step 4
2. Check AC wiring to make sure it is properly installed.
3. Using a meter, verify AC line voltage at AC connection.
4. Disconnect AC power. Remove fuse from holder.
5. Check fuse for continuity with an Ohm meter. If there is continuity, re-install fuse. If there is no continuity, replace fuse.
6. Check DC output wiring to make sure it is properly installed.
7. Reconnect AC power.
8. Using a voltmeter set to DC; measure the voltage across the output connector. Voltage should be between 9 VDC and 15 VDC.
9. Reconnect power cord making sure connectors are fully seated and tightened.
10. If all steps above check OK, contact factory for support.

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6.6. Labels


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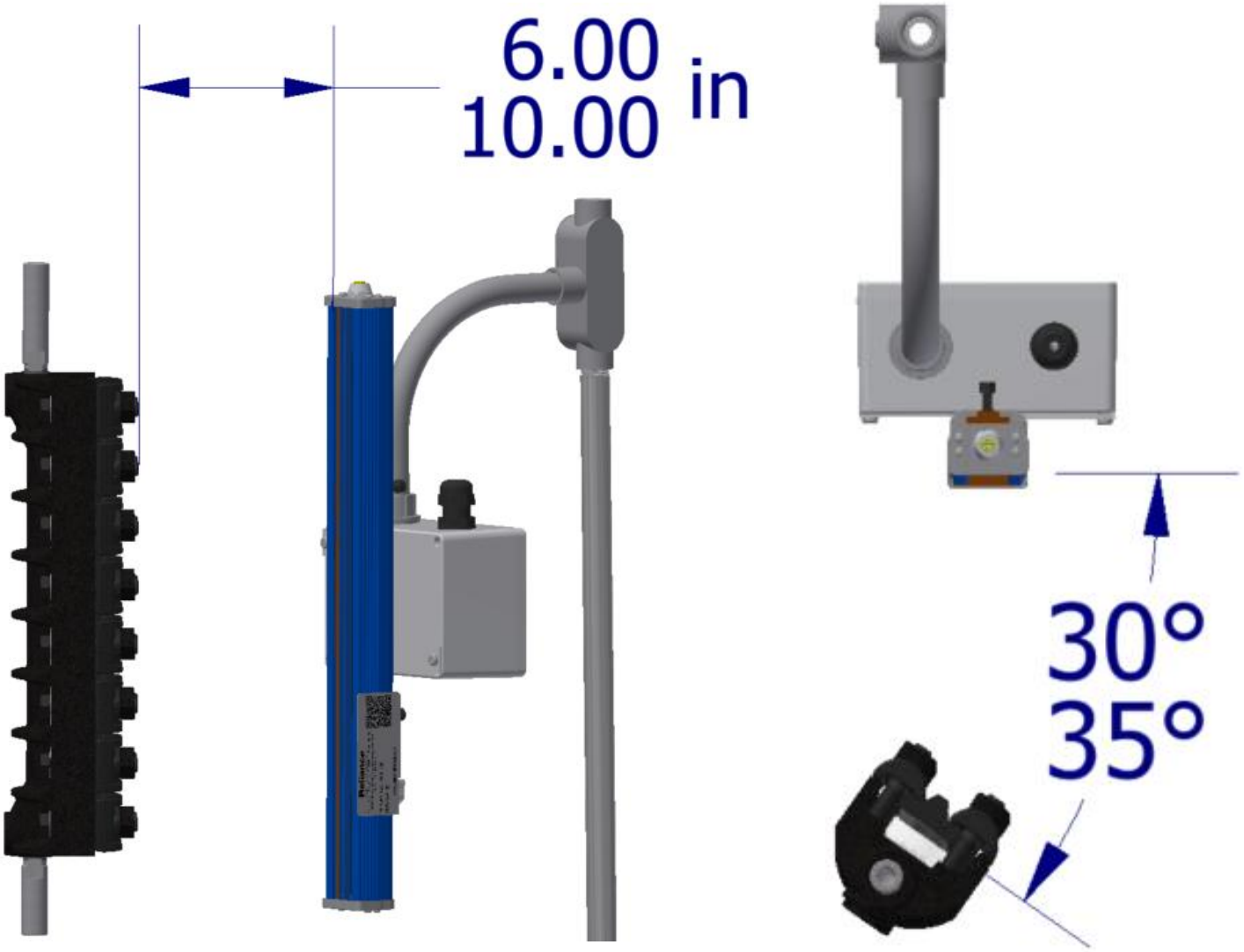
READ INSTRUCTION MANUAL BEFORE INSTALLATION
INSTALL PER IOM R500.290A
MODEL NO: RGL100-
MFG DATE:
www.clarkreliance.com

7. Installation Recommendations

Caution: Only use Rigid Metal Conduit (RMC) or Intermediate Metal Conduit (IMC) with threaded connections.

1. Uses metal conduit to locate the RGL100 into position. If using non-hazardous power supply use ½" metal conduit and for hazardous location power supply use ¾" metal conduit.
2. Use threaded connections to ensure tight seal on connections.
3. The RGL100 should be 6 to 10 inches away from the gage. The angle between the RGL100 and the gage should be around 30 degrees.



8. Spare Parts

GL1000 Spare Parts	
Description	**P/N**
ORDINARY LOCATION POWER SUPPLY, 1.5 FT CABLE	RDS7021 E6
LED ARRAY CIRCUIT BOARD (8 INCH)	S23174 8
FUSE, .5A 3AG – NON-HAZARDOUS POWER SUPPLY	E FH 3AG P500

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