

### STORAGE AND HANDLING

The Reliance DuraStar LED Illuminator meets or exceeds all applicable specifications when shipped from the factory.

All units should be inspected upon receipt to ensure that no damage has been incurred during transit. If damage has occurred, a claim should be filed with the carrier immediately. The unit should be stored in an area protected from the elements and corrosive fumes, in a secure manner where they can neither fall, nor be struck by other objects. Care should be taken to protect the window and the end connections from damage. Avoid placing any objects on the illuminator at any time.

### COMPONENTS

There are three main components that make up the DuraStar Illuminator: the light strip with louvers, the power supply, and the cable connecting these two main pieces. The cable may have more than one piece depending on the required distance between the illuminator and the power supply. *Note that an illuminator hood is not required or recommended.*

### INSTALLATION

**Caution:** All lights are tagged with the service conditions for that particular unit. These specifications are located on the Reliance 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 the red label on the power supply housing. They are specifications for the housing only. Review the ratings 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.

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

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 existing conduit.

### STEP BY STEP INSTRUCTIONS:

**Caution:** Verify that the area is free of flammables before installation.

- 1) The upper bracket on the illuminator has 4 holes that fit onto the pins that are installed on the top of the gage glass body. The inner set of holes is for installation onto FG400 and FG900 series gages. The outer 2 holes are for installation onto FG1500 and FG2000 series gages. Verify that the assembly you received fits the existing gage glass. Slip the upper illuminator bracket onto the pins.
- 2) Let the lower bracket rest on the gage glass between the cover plate. Adjust the lower bracket by loosening the set screw and align the bracket at the lowest point on the glass between the cover plate opening. Tighten the set screw to secure the lower bracket.
- 3) Open the cover of the power supply housing. Insert the AC line wires into the housing and connect to the “AC IN” terminal block. A ground screw is located inside of the enclosure if required.

**Caution:** The DC output is pre-wired. If this connection is removed during installation, reconnect the “AC IN” and “DC OUT” to the proper positions. Failure to do so will result in permanent damage to the power supply.

4) **IMPORTANT:** The customer must have a “sealing fitting” in the conduit supplying power to the light’s power supply within 18” of the power supply.

5) If the cable will not reach the power supply, contact your local Clark-Reliance representative for an optional extension cable.

**Caution:** Verify that the area is free of flammables before turning on power.

6) Replace the cover on the power supply housing.

7) Switch “ON” the power supply making sure the illuminator is functioning properly, with all LED’s illuminated.

8) If the LED’s do not illuminate, remove unit from installation and move to a safe work area. Remove the cover on the power supply and install AC test cord. Turn power on. An internal LED should be lit if it is wired correctly. See Figure 1, Detail “B”.

9) If the LED in the power supply is not lit, check the power source. If the power source is OK, contact the manufacturer.

If the LED in the power supply is lit, but the Light Bar does not light, check the fuse and the connections between the power supply and Light Bar. If the Light Bar will still not light, contact the manufacturer.

**Note:** Any additional components must be installed prior to the customer’s sealing fitting.

#### **FUSE REPLACEMENT**

The power supply is fused for AC protection. In the event of a large voltage surge, the fuse may release, causing no output. Replace the fuse with Clark-Reliance P/N E-F- DIN-F400MA only. (Ref. Figure 1 – Detail A)

#### **OPERATION**

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

#### **ROUTINE MAINTENANCE**

Keep the window on the front of the light clean using commercial glass cleaners, such as Windex ® or similar. Never use harsh abrasives, wire brushes, metal scrapers, or any material that could scratch the window. The window may be cleaned while the unit is in operation. Never use petroleum based products on the window as they will damage the glass seals.

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 adjacent to the power supply. The plant power going to the power supply does not need to be disconnected.

#### **SPECIFICATIONS**

Power Supply: 120 or 240 VAC @ 50-60 Hz  
Power Consumption: < 750 mA @ 120 VAC  
< 375 mA @ 240 VAC

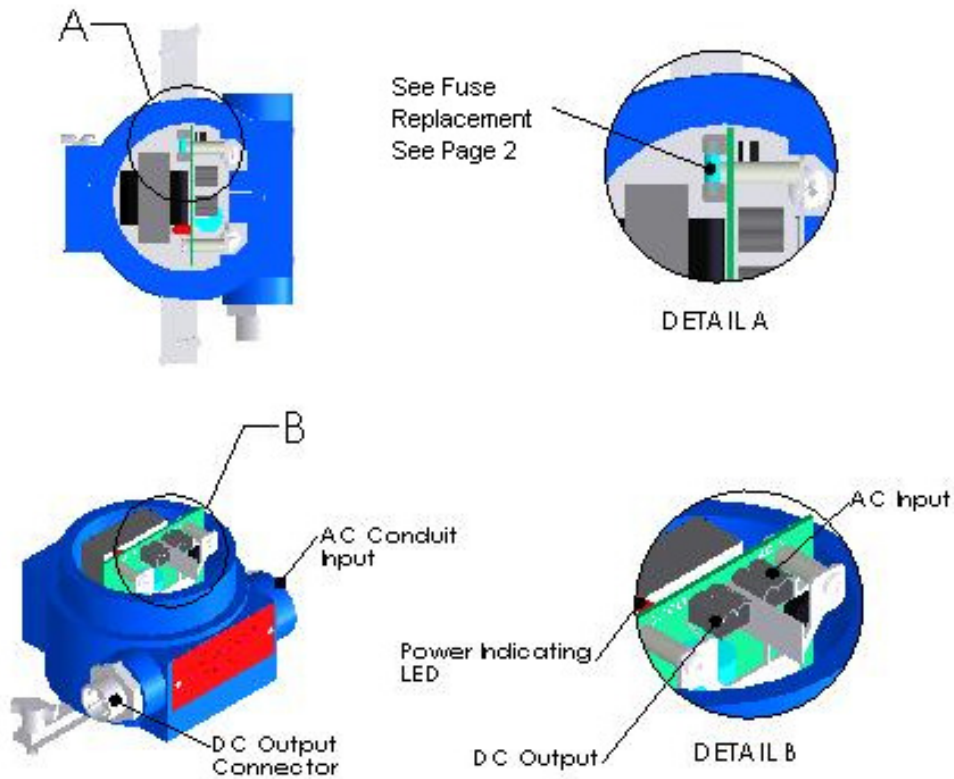
Est. Life: 100,000 Hours (continuous)

Agency Approvals: FM and CSA  
Class I, Div. I Groups B,C,D, T4  
Class II, Div I, Groups E,F,G, T4

Wire Size: Min 18 AWG / Max 12 AWG  
Max dist. from power supply to light: 72 ft (22 M)

Ambient Temperature: -40 F (-40 C) to 170 F (77 C)  
Electrical Connection: ¾” FNPT

FIGURE 1: WIRING INSTRUCTIONS



**Caution:**

Incorrectly connecting the AC input to the DC output will cause permanent damage to the power supply and possibly create the ignition of hazardous atmosphere.

Associated Equipment [Exia]



*World's Leader in Boiler  
Trim Instrumentation*

**Reliance DuraStar**  
HAZARDOUS LOCATION  
INSTALLATION, OPERATING &  
MAINTENANCE INSTRUCTIONS

**Section: R500**  
**Bulletin: R500.E240A**  
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**Supersedes: NEW**

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**NOTES:**





## Notice to Plant Operators

The use of non-Original Equipment Manufacturer parts (such as glass, gaskets, probes, modules, etc.) will void the Agency Approval (FM, UL, CSA, CRN, ABS, etc.), pressure/temperature rating, and warranty of this equipment. Clark-Reliance requires the use of OEM parts for all repairs on this product in order to maintain plant and personnel safety, and reliable operation.

**"PARTS-PLUS"**  
Critical spare parts for overnight  
delivery, direct from the manufacturer.

[clark-reliance.com/parts](http://clark-reliance.com/parts)



Steel Valve Repair Kit



Replacement Probes



Gage Glass Repair Kit



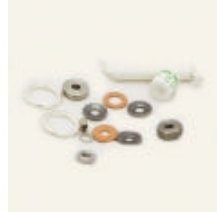
Simpliport Module



Simpliport Packing Nut



Replacement Relays



Probe Repair Kit



Replacement EA100 Ass'y



Replacement Micro-switch



Bronze Valve Repair Kit



Valve Packing



Replacement Floats

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