



Specialists in Liquid Level  
Indication

LUMASTAR™ EPL-100  
INSTALLATION, OPERATING & MAINTENANCE  
INSTRUCTIONS FOR ATEX UNITS

Section: J500  
Bulletin: J500.33  
Date: 09-11-06  
Supersedes:

### STORAGE and HANDLING

The Jerguson LED Explosion Protected 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 there has been damage, a claim should be filed with the carrier immediately. 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 directly on the light at any time.

### COMPONENTS

There are three main components that make up the LED illuminator: the light strip, 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. The power supply is constructed of aluminum, aluminum conduit sealing device and a stainless steel I.S. connector. The light bar is constructed of aluminum, stainless steel, glass and silicone. Questions regarding acceptable applications should be directed to The Clark-Reliance Corporation.

### INSTALLATION

**CAUTION:** All lights are tagged with the service conditions for that particular unit. These specifications are located on the Jerguson 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 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.

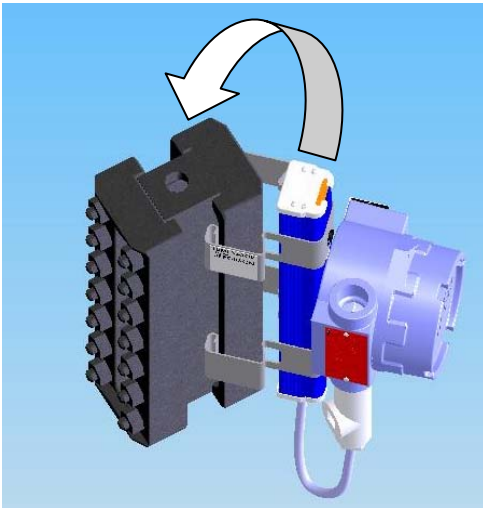
Step by step instructions:

- 1) Loosen the set screws on the mounting brackets and align the cut out on the mounting bracket so that the distance between the two mounting brackets line up with the desired bolt heads on the liquid level gage.(See Figure 1)
- 2) Place one side of both mounting brackets under one side of the gage cover and then using a rolling motion, snap the other two halves of the mounting bracket to the other side of the gage.(See Figure 1)

**CAUTION:** Verify that the area is free of flammables and AC power circuit is off.

- 3) Loosen cover locking screw and 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 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.





**Figure 1**

- 4) If the cable will not reach the power supply, contact your local representative for the required extension cable.
- 5) Replace the cover on the power supply housing.
- 6) Switch “ON” the power supply making sure the Illuminator is functioning properly, with all LED’s illuminated.
- 7) If the LED’s do not illuminate, remove the cover on the power supply once the power has been turned on. An LED will be lit if it is wired correctly. See Figure 2, Detail “A”
- 8) If the LED in the power supply is not lit, check the power source and the connection before continuing.

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

#### FUSE REPLACEMENT

This power supply is fused for AC protection. In the event of a large voltage surge, the fuse may release, causing no output voltage. Replace fuse with Bussmann Fuse p/n S501-400mA or equivalent.

**CAUTION: Verify that the area is free of flammables and AC power circuit is off.**

- 1) Loosen cover locking screw and open the cover of the power supply housing.

- 2) Remove and replace bad fuse. Refer to Figure 2 for fuse location.

#### REPLACING POWER SUPPLY

**CAUTION: Verify that the area is free of flammables and AC power circuit is off.**

- 1) Loosen cover locking screw and open the cover of the power supply housing. Disconnect AC power in and remove AC wires from enclosure.
- 2) Remove assembly from gage and relocate to desired work area.
- 3) Remove top bracket from light bar assembly.
- 4) Disconnect power cable between power supply and light bar assembly.
- 5) Trim gasket material at top end cap to match slot opening and slide out “T-nut” that was used to secure top bracket.
- 6) Loosen power supply screws and slide power supply off light bar assembly.
- 7) Slide new power supply onto light bar assembly.
- 8) Insert “T-nut” into slot and install top bracket.
- 9) Securely tighten the power supply screws and the top bracket screw.
- 10) Install power cord between power supply and light strip making sure connectors are fully connected.

**Follow new installation instructions to return unit to service.**

#### REPLACING POWER SUPPLY

**CAUTION: Verify that the area is free of flammables and AC power circuit is off.**

- 1) Loosen cover locking screw and open the cover of the power supply housing. Disconnect AC power in and remove AC wires from enclosure.
- 2) Remove assembly from gage and relocate to desired work area.
- 3) Remove top bracket from light bar assembly.
- 4) Disconnect power cable between power supply and light bar assembly.



- 5) Trim gasket material at top end cap to match slot opening and slide out “T-nut” that was used to secure top bracket.
- 6) Loosen power supply screws and slide power supply off light bar assembly.
- 7) Slide power supply onto new light bar assembly.
- 8) Insert “T-nut” into slot and install top bracket.
- 9) Securely tighten the power supply screws and the top bracket screw.
- 10) Install power cord between power supply and light strip making sure connectors are fully connected.

**Follow new installation instructions to return unit to service.**

### OPERATION

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

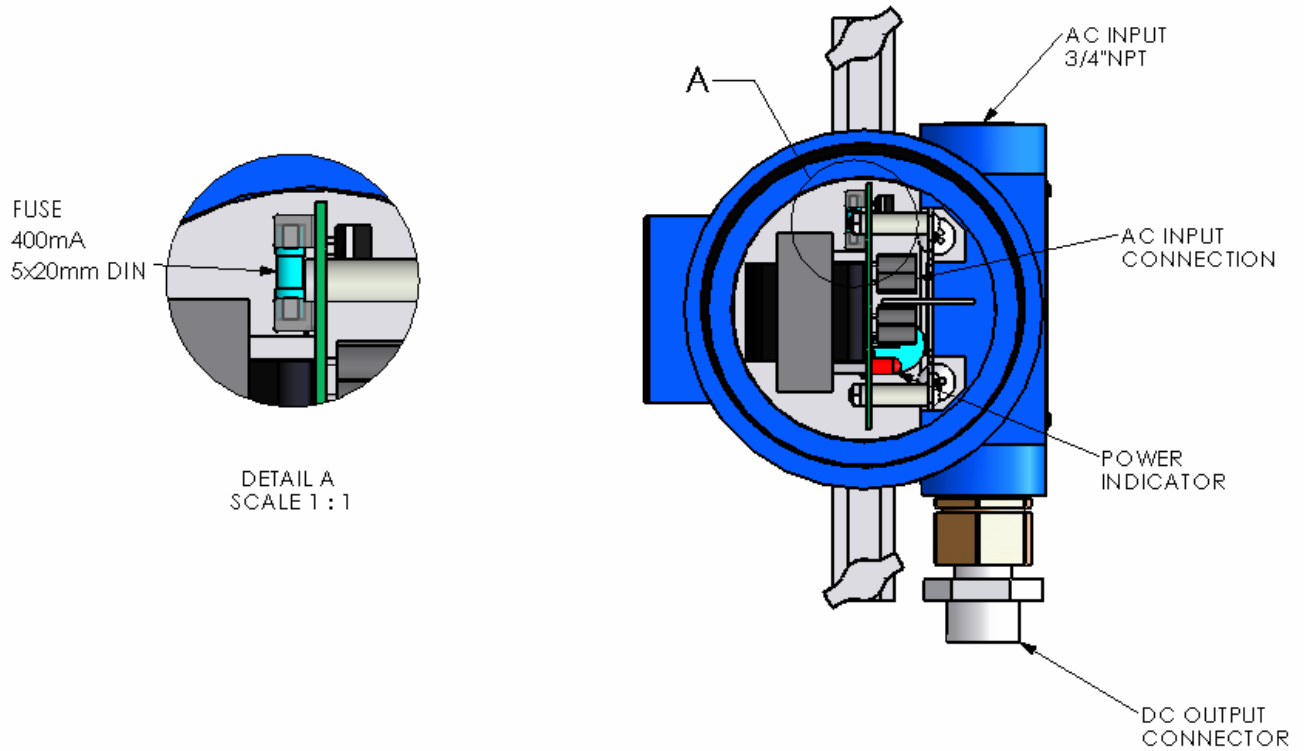
### ROUTINE MAINTENANCE

Keep window on the front of the light clean using commercial glass cleaners, such as Windex<sup>®</sup> 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.

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.

<b><u>SPECIFICATIONS</u></b>	
Power Supply:	120 or 240 VAC @ 50-60 Hz
Power	< 750 mA @ 120 VAC
Consumption:	< 375 mA @ 240 VAC
Est. Life:	100,000 Hours (continuous)
Wire Size:	Min 1mm <sup>2</sup> / Max 2.5mm <sup>2</sup>
Max dist. from power supply to light:	15 M
Ambient Temperature:	-40 C/77 C
Electrical Connection:	1/2” FNPT





**CAUTION: Incorrectly wiring the AC input to the DC output will cause permanent damage to the power supply and result in the ignition of hazardous atmospheres.**

**Replacement Parts**

Item #	Part Number	Description
1	S23477-120	120 VAC Power Supply
2	S23477-240	240 VAC Power Supply
3	* EPL100-#-#-X	Light Bar Assembly
4	E-F-DIN F400MA	400mA 5x20mm DIN

\* When replacing the Light Bar assembly the # - # portion of the part number will be determined from the original order by The Clark-Reliance Corporation.



# LumaStar™

MODEL: EPL-100

SERIAL #

MFG. DATE

BY **JERGUSON**



II 2 G  
Ex ia IIC T4  
FM06ATEX0019x



0359

V = 16VDC I = 61mA  
MAX/MIN AMB. TEMP.: 77 °C/-40 °C

Mfg. by the Clark-Reliance Corporation  
[www.Clark-Reliance.com](http://www.Clark-Reliance.com)  
Phone: (440) 572-1500  
Strongsville, Ohio 44149 U.S.A.  
INSTALL PER DWG. NO. J500.33

# LumaStar™

MODEL: EPL-100 POWER SUPPLY

WARNING: DO NOT OPEN WHEN EXPLOSIVE  
ATMOSPHERE IS PRESENT.

U<sub>o</sub> = 16V, I<sub>o</sub> = 61mA, L<sub>o</sub> = 9.5mH, C<sub>o</sub> = 0.64uF, P<sub>o</sub> = 0.24 W  
INSTALL PER DRAWING NO. J500.33

Mfg. by the Clark-Reliance Corporation  
[www.Clark-Reliance.com](http://www.Clark-Reliance.com)  
Phone: (440) 572-1500  
Strongsville, OH 44149 U.S.A.

INPUT VOLTAGE:  VAC

SERIAL #

MFG. DATE



II 2(2) G  
Ex d [ia] IIC T6  
FM06ATEX0019x

MAX/MIN AMB. TEMP.: 77°C/-40°C  
MAX. RATINGS: 120/240 VAC, 250mA, 50/60 Hz  
MAX./MIN. WIRE: 2.5/1.0  
USE FIELD WIRING CONDUCTORS  
RATED MIN. 90°C  
ENCLOSURE: 3/4" NPT CONNECTIONS



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# JERGUSON

