



Specialists in Liquid Level Indication

NightStar

Magnetic Level Gage Illuminator

Section:	M500
Bulletin:	M500.140
Date:	1-2-05
Supersedes:	NEW

INSTALLATION, OPERATING & MAINTENANCE INSTRUCTIONS (Model A27348-X-XXX)

STORAGE and HANDLING

The *NightStar* Indicator 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, 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 *NightStar*: the flag indicator/light housing, 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.

INSTALLATION

CAUTION: All units 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 indicator 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 (if the indicator is received installed on a Magnetic Level Gage, proceed to step 3):

- 1) Loosen the hose clamps provided and place one around the top and bottom of the magnetic gage chamber. (See *Figure 1*).
- 2) Place the indicator on the magnetic level gage, aligning "zero" with the lower process connection, Using the hose clamps provided, fasten the clamps around the mounting ears at the top and bottom of the *NightStar* indicator.
- 3) The power supply is provided mounted to the indicator. The power supply may be remote mounted up to 8' away. An extension cable is available, part number V20569.
- 4) 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.

- 5) **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.**

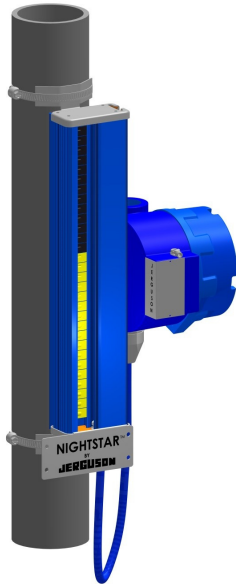


Figure 1

- 6) If the cable will not reach the power supply, contact your local representative for the required extension cable.

CAUTION: Verify that the area is free of flammables.

- 7) Replace the cover on the power supply housing.
- 8) Switch “ON” the power supply making sure the Illuminator is functioning properly, with all LED’s illuminated.
- 9) 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”
- 10) 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 the fuse with any manufacture 2AG 0.375A 240VAC fuse. (See figure 2)

OPERATION

The LED illuminator can run continuously. The operating life of the LED’s 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[®] 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.

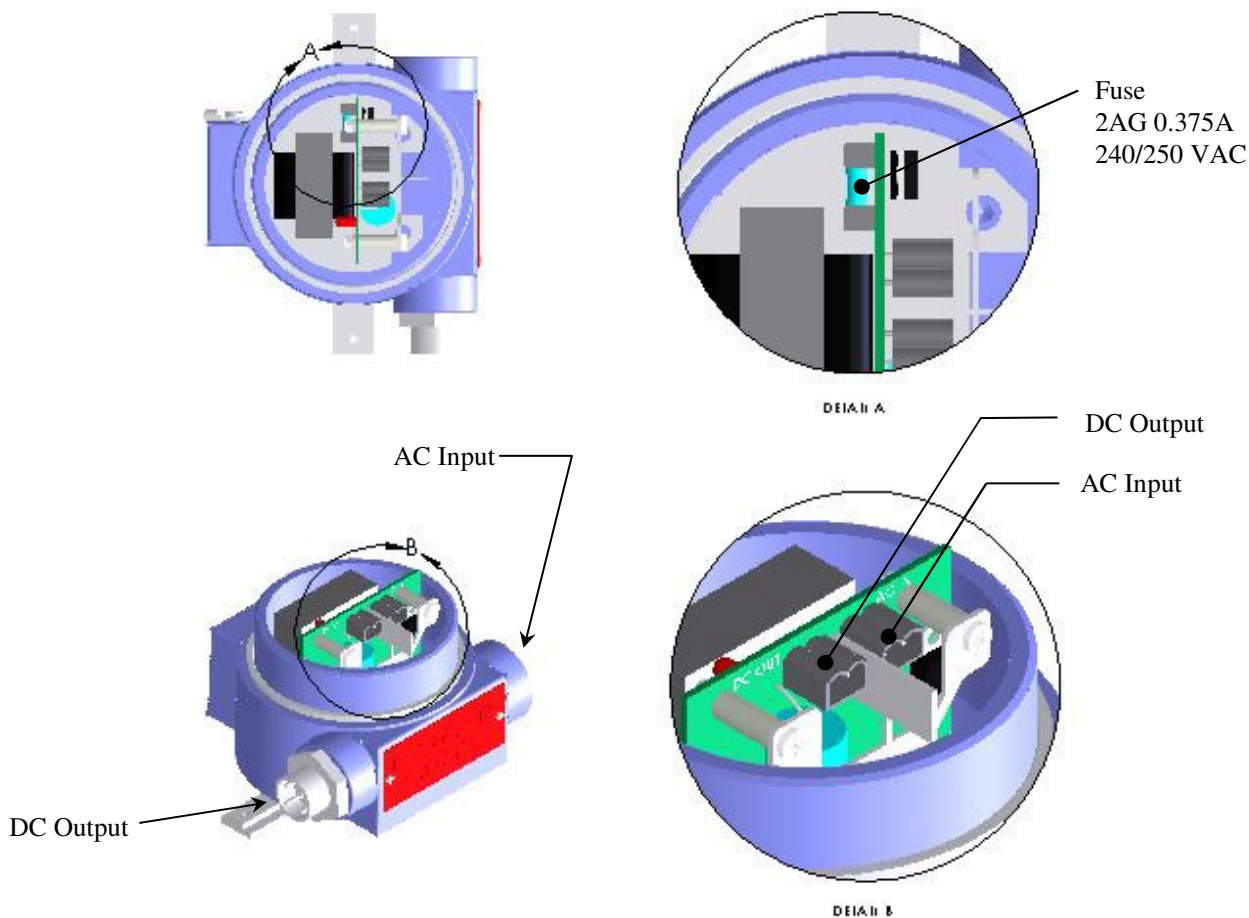
The Illuminator may be disconnected from the power supply, if desired. Disconnect the cord at the supplied screw connector adjacent to the power supply. The plant power going to the power supply does not need to be disconnected.

SPECIFICATIONS

Power Supply:	120 or 240 VAC @ 50-60 Hz
Power	< 750 mA @ 120 VAC
Consumption:	< 375 mA @ 240 VAC
Est. Life:	100,000 Hours (continuous)
Agency Approvals:	FM Approved, CSA Class I, Div. I Grps. B, C, & D Class II, Div I, Grps. E, F, & G
Wire Size:	Min 18 AWG / Max 12 AWG
Max dist. from power supply to light:	72ft (22M)
Ambient Temperature:	-40 F (-40 C) to 170 F (77 C)
Electrical Connection:	¾” FNPT



Figure 2: Wiring Instruction



Associated Equipment [Exia]

Caution:

Incorrectly connecting the AC Input to the DC Output will caused permanent damage to the power supply and possibly create the ignition of hazardous atmospheres.

Spare Parts

Item	Part Number	Description
1	S23293	120 VAC Power Supply Board / Bracket Sub-Assembly
2	S23294	240 VAC Power Supply Board / Bracket Sub-Assembly
3	S23428	120 VAC Power Supply with Explosion Proof Enclosure
4	S23429	240 VAC Power Supply with Explosion Proof Enclosure
5	E-F-2AG-P375	Fuse
6	V20569	6.5 Ft (2.5 M) Extension Power Cable, For Remote Mounting
7	S23431-6	LED Array Circuit Board, 6" Length
8	S23431-9	LED Array Circuit Board, 9" Length
9	S23431-12	LED Array Circuit Board, 12" Length

