



# **LumiStar<sup>®</sup>1000<sup>™</sup> LED, 12-24V**

## **Installation and Operating Instructions**

P.O. Box 1116  
Twinsburg, OH 44087  
Phone: 330/405-3040 • Fax: 330/405-3070  
E-mail: [view@ljstar.com](mailto:view@ljstar.com) • Web Site: [www.ljstar.com](http://www.ljstar.com)

## Table of Contents

<b>1.00 Warranty</b> .....	2
1.10 Exceptions	
1.20 Provisions	
<b>2.00 Introduction</b> .....	2
2.10 Important Note on Application	
2.20 General Operating Conditions	
<b>3.00 Mechanical Installation</b> .....	2
3.10 Sight Glass Types and Sizes Suitable for Mounting	
3.20 Mechanical Installation – USL13	
3.21 Mounting using Hinged Bracket	
3.22 Mounting using Flange Adapter	
3.30 Mechanical Installation – USL33	
3.31 Assembly to Sight Glass	
<b>4.00 Electrical Installation</b> .....	2
4.10 Supply Requirements	
4.11 Notes	
4.20 Electrical Connection	
4.21 M12 Connector – for Remote Push-Button Operation	
4.22 Standard Electrical Connection	
<b>5.00 Operation</b> .....	2
5.10 Continuous Mode – for Indicator-Equipped Luminaire	
5.20 Button Operation – for Button-Equipped Luminaire	
<b>6.00 Safety</b> .....	2
<b>7.00 Maintenance</b> .....	2

## 1.00 Warranty

L. J. Star warrants its LumiStar1000 LED Luminaires against defects in material and workmanship for a period of eighteen months from the date of shipment. L. J. Star will, at its option, repair or replace those products that fail to perform as specified with the following exceptions.

### 1.10 Exceptions

Luminaires that have been opened. These luminaires are sealed products and opening of the light housing will void any warranty of the product, expressed or implied.

Luminaires that have been subject to misuse, mishandling, misapplication, neglect (including, but not limited to improper maintenance), accident, or improper installation

Luminaires that have been modified (including, but not limited to use of unauthorized parts or attachments), adjusted, or repaired by persons not authorized by L. J. Star.

### 1.20 Provisions

L. J. Star's responsibility hereunder is limited to repairing or replacing the product at its expense. L. J. Star shall not be liable for loss, damage, or expense directly or indirectly related to the installation or use of its products, or from any other cause or for consequential damages. It is expressly understood that L. J. Star is not responsible for damage or injury caused to other products, building, property or persons by reason of the installation or use of its products.

This warranty is in lieu of any other warranty expressed or implied by any party other than L. J. Star. Repairs and/or replacements shall be at the sole discretion of L. J. Star based upon the terms and conditions.

## 2.00 Introduction

### 2.10 Important Note on Application

Sight glass luminaires are intended solely for mounting on sight glass fittings. Under no circumstances should these luminaires be used for sealing vessel openings. An appropriate sight glass fitting must be used at all times.

Luminaires must always be installed, connected, and serviced by persons who have been specially trained and authorized to do said work.

### 2.20 General Operating Conditions

Independent of internal pressure/vacuum in the vessel, LumiStar1000 LED luminaires are approved for use in ambient temperatures from -40°C up to +80°C at the cable entry. For use in non-hazardous areas.

### 3.00 Mechanical Installation

#### 3.10 Sight Glass Types and Sizes Suitable for Mounting

- Circular weld-on sight glass fitting to DIN 28120: size DN 50 (3" view diameter) and larger
- Circular ANSI bolt-on sight window: size 1" and larger
- Visual flow indicators: size 1" and larger
- Circular weld-neck sight glass fitting series MV: size DN 50 and larger  
DN50 and DN65 require flange adapter
- Sanitary clamp connection series MetaClamp: size 1" and larger

#### 3.20 Mechanical Installation – USL13

##### 3.21 Mounting using Hinged Bracket

The mounting bracket is supplied with the LumiStar1000 LED USL13 luminaire. Fix bracket to a blind hole drilled and tapped on the cover flange of sight glass using supplied M6 screw.

##### 3.22 Mounting using Flange Adapter

Flange adapter mounting is required for DIN 11851 units in sizes DN50 and DN65

Adapter fits under the slotted cover nut of DIN 11851 unit. Place gasket between adapter and glass. Tighten slotted cover nut. Place LumiStar1000 into adapter sleeve. Tighten set screws to secure.

#### 3.30 Mechanical Installation – USL33

The LumiStar1000 LED USL33 luminaire is designed for mounting to a circular male upstand on the cover flange of a sight glass. An O-ring provides a seal to the sight glass. The most popular version of mounting is to Metaclamp Type 80 USL33.

##### 3.31 Assembly to Sight Glass

Verify O-ring is in place on male circular upstand on sight glass. Place LumiStar1000 body (lens side) over upstand. Tighten set screws to secure.

Sight glass assembly to vessel per manufacturer instruction.

## 4.00 Electrical Installation

### 4.10 Supply Requirements

Voltage: 12-24V AC/DC – Regulated

Power: 12W

### 4.11 Notes

CE compliance is achieved only with use of power supply components pursuant to the EMC directive (2014/30/EU) and, if applicable, the Low Voltage Directive (2014/35/EU).

Recommended - Connect supply to separate branch circuit to avoid potential interference from adjacent equipment.

### 4.20 Electrical Connection

#### 4.21 M12 Connector – for Remote Push-Button Operation

**WARNING**  
**ELECTRICAL CONNECTIONS MUST BE MADE WITH NO POWER SUPPLIED TO LIGHT. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.**

- 5-pin, A-type M12 connector cable (3-meter length) is supplied with Luminaire.
- Connect cable to light. Connect free wires per chart below.
- Unit is internally wired ready for operation.

Brown	Blue	Gray	Black	White
+Vin	-Vin	GND	Ext. Switch	Ext. Switch

#### 4.22 Standard Electrical Connection

**WARNING**  
**ELECTRICAL CONNECTIONS MUST BE MADE WITH NO POWER SUPPLIED TO LIGHT. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.**

- Equipped with a factory mounted cable gland. Supplied with a 3-meter power cable.
- Connect red wire to +Vin. Connect black wire to -Vin. Connect bare wire to GND.
- Unit is internally wired ready for operation

## 5.00 Operation

### 5.10 Continuous Mode – for Indicator-Equipped Luminaire

- When power is applied, the blue LED on the indicator will blink twice while the processor initializes.
- The LED and luminaire will remain on while power is supplied and turn off when power is removed. Control operation using external on/of power switch.

### 5.20 Button Operation – for Button-Equipped Luminaire

The below instructions apply to LED luminaires equipped with a button on the housing and/or to LED luminaires equipped with an M12 connector cable connected to an external switch.

- When power is applied, the blue LED on the switch will blink twice while the processor initializes. The LED will then periodically flash to indicate power is applied.
- One Button Press: 2-minute on time. Light shuts off after 2 minutes. Second press turns off light.
- Two Rapid Presses: 30-minute on time. Light shuts off after 30 minutes. Additional press turns off light.
- Three Rapid Presses: Light becomes dimmable. The light will dim 10% for every button press. When the light reaches 10% output, indicated by a flash, each press will increase the light output by 10%.
- Press and Hold: Switch becomes momentary. Light remains on until switch is released.

## 6.00 Safety

- Do not look directly into light source – risk of eyesight damage.
- Use caution when touching housing body as heat is generated during operation.

## **7.00 Maintenance**

- Keep luminaire clean and free of dust.
- Inspect luminaire for damage to glass.
- Inspect luminaire for inadequate sealing, shown by moisture buildup on the interior of the lens.
- Do not open the luminaire to perform service. In the event of a malfunction, please contact L. J. Star to coordinate service

