Sealite®
www.sealite.com

SL-BR AC Model

Up to 4NM Bridge Light

INSTALLATION & SERVICE MANUAL

V1-4

Version No.	Description	Date	Author	Approved
1.0	Manual Launch	September 2015	D. Tomaszewicz	
1.1	Update: Contact details	January 2016	J. Dore	
1.2	Footer	January 2017	B. Gielen	
1.3	Alarm Relay Positions Described Graphically	March 2017	A. Dixon	M. Nicholson
1.4	Technical Specification Update	March 2020	M. Dutka	M. Nicholson

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Introduction

Congratulations! By choosing to purchase a Sealite lantern you have become the owner of one of the most advanced LED marine lanterns in the world.

Sealite Pty Ltd has been manufacturing lanterns for over 25 years, and particular care has been taken to ensure your lantern gives years of service.

As a commitment to producing the highest quality products for our customers, Sealite has been independently certified as complying with the requirements of ISO9001:2015 quality management system.

Sealite lanterns comply with requirements of the US Coast Guard in 33 CFR part 66 for Private Aids To Navigation.

By taking a few moments to browse through this booklet, you will become familiar with the versatility of your lantern, and be able to maximise its operating function.

Technology

Sealite is the world's fastest growing manufacturer of marine aids to navigation. We employ leading mechanical, optical, hardware & software engineers to create innovative products to service the needs of our customers worldwide, and offer the widest range of solar-powered LED lanterns in the marketplace.

Electronics

Sealite employs leading in-house electronic engineers in the design and development of software and related circuitry. All individual electronic components are sourced directly by Sealite procurement staff ensuring that only the highest quality components are used in our products.

LED Technology

All marine lanterns use the latest advancements in LED (Light Emitting Diode) technology as a light source. The major advantage of LED's over traditional light sources is well established in that they typically have an operational life in excess of 100,000 hours, resulting in substantial savings to maintenance and servicing costs.

Precision Construction

Commitment to investing in the design and construction of injection-moulded parts including optic lenses, light bases and a range of other components ensures that all Sealite products are of a consistent & superior quality.

Optical Performance

Sealite manufactures a range of marine LED lenses moulded from multi-cavity dies. The company has superior in-house lens manufacturing capabilities to support outstanding optical performance.

Award-winning, Patented Technology

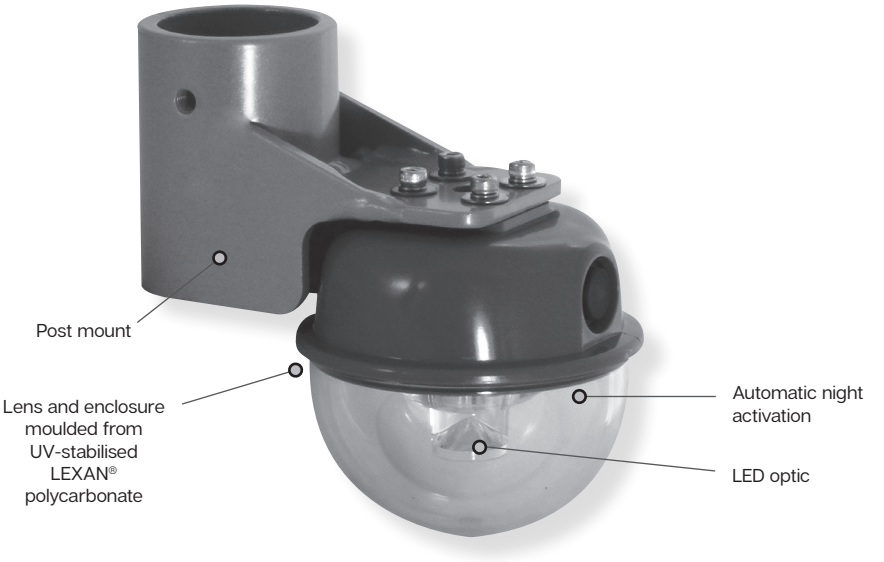
Several United States and Australian patent registrations are held on Sealite's range of innovative designs, with other regional patents pending in Canada, United Kingdom and Europe.

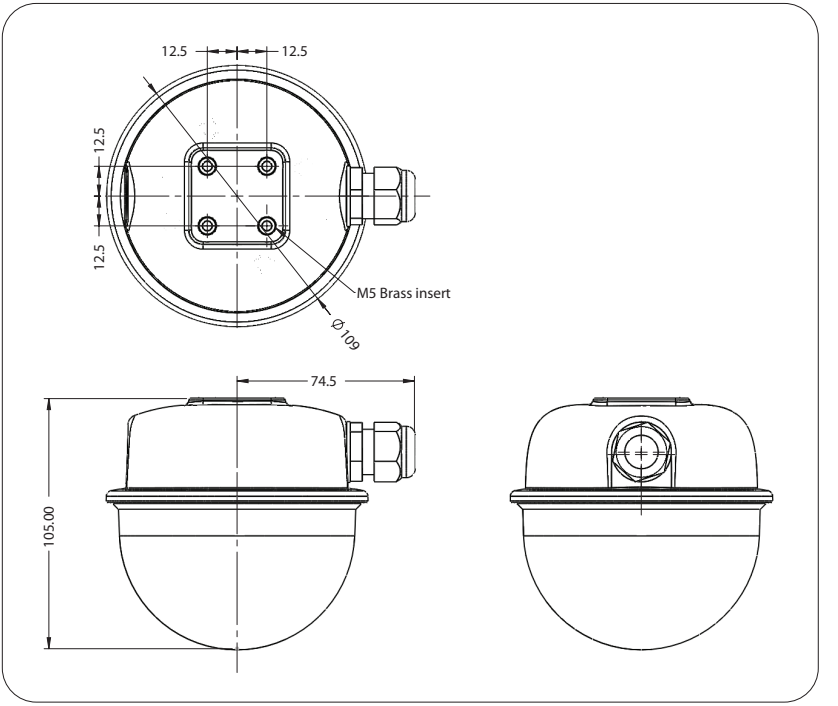
SL-BR
Bridge Light
AC Model

The SL-BR is an LED Bridge Light specifically designed to clearly mark bridges and structures extending over navigable waterways and is used extensively throughout the USA. The SL-BR has been designed to offer superior visibility with up to 4NM visible range, and operates in conjunction with existing power supplies.

The light is available as a 180° sectored red model or 360° green model and comes fixed-on as standard. The fixtures are also available with a range of factory-set flash characteristics and sectoring requirements to suit local regulations.

SL-BR


Post mount
Lens and enclosure moulded from UV-stabilised LEXAN® polycarbonate
Automatic night activation
LED optic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M5 Brass insert
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SPECIFICATIONS·*	SL-BR Series (2NM)	SL-BR4 Series (4NM)
Light Characteristics		
Light Source	LED	
Available Colours	Red, Green, other colours available on request	
Visible Range (NM)	AT @ 0.74: 2 (nominal) AT @ 0.85: 2.3	AT @ 0.74: 4 (nominal) AT @ 0.85: 4.6
Horizontal Output (degrees)	360 or 180	
Vertical Divergence (degrees)	9	
Available Flash Characteristics	Steady-on (standard). Other factory set flash patterns available on request	
LED Life Expectancy (hours)	>100,000	
Electrical Characteristics		
Current Draw (mA)	VDC Model: 40 @ 12 VDC	VDC Model: 80 @ 12 VDC
Circuit Protection	Integrated	
Nominal Voltage (V)	VDC Model: 12 VDC VAC Model: 110–240 VAC	
Temperature Range	-40 to 80°C	
Physical Characteristics		
Body Material	LEXAN® Polycarbonate – UV stabilised	
Lens Material	LEXAN® Polycarbonate – UV stabilised	
Lens Diameter (mm/inches)	107 / 4¼	
Lens Design	LED optic	
Mounting	50mm OD pole	
Height (mm/inches)	105 / 4	
Width (mm/inches)	109 / 4¼	
Mass (kg/lbs)	1.2 / 2⅝	
Product Life Expectancy	Up to 12 years ^	
Certifications		
CE	EN61000-6-3:2007 EN61000-6-1:2007	
IALA	Signal colours compliant to IALA E-200-1	
USCG	33 CFR Part 118	
Quality Assurance	ISO 9001:2015	
Waterproof	IP68	
Intellectual Property		
Patents	US Pat. No. 6,667,582. AU Pat. No. 778,918	
Trademarks	SEALITE® is a registered trademark of Sealite Pty Ltd	
Warranty *	3 years	
Options Available	· Mounting assemblies · Solar/battery systems · Light sectoring · Additional cable	

Safety Information

- Install the light in compliance with the effective local electrical code(s).
- Mains power should always be disconnected when work is being done in close proximity to electrical fittings, and electrical work should only be done by a licensed electrician.
- Operate the light only within the indicated electrical ratings and product usage instructions.
- To ensure that the light and peripheral equipment function safely and correctly, use cable in compliance with the effective local electrical code.
- Do not stare at the LED or shine the LED into your eyes or those of another person.
- Do dispose of the product according to the local laws and regulations for your region, for example, at a recycling centre that accepts electronic devices.

Unpacking, Installation, Wiring & Setup

Unpacking

Unpack all hardware and inspect for damage. If there is any damage, please contact your Sealite Office. Retain original packing material for possible future use in shipping.

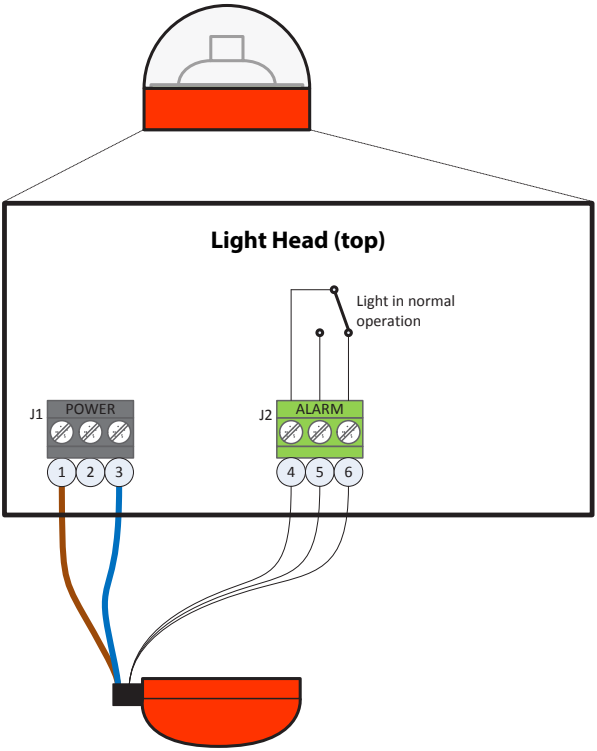
Installation & Wiring

Before proceeding with installation or service, make sure the following conditions are met:

- Ensure the tower or mast is grounded (NO RF HAZARD)
- Check the mast lighting circuit is not faulty
- Ensure power lines are not 'live' (NO ELECTRICAL HAZARD)
- Avoid touching live circuits!

NOTE:

- Make sure the mounting pole is vertically aligned to guarantee the required beam pattern of the bridge light
- Make sure the light's beam pattern is not disturbed by any nearby obstacles
- Ensure the cable gland is tightly sealed around the cable



NO.	CONNECTOR	SIGNAL
1	110-240VAC	L1 - LINE
2	110-240VAC	Not Connected
3	110-240VAC	L2 - NEUT
4	ALARM	COMM
5	ALARM	NO
6	ALARM	NC

Light head wiring diagram

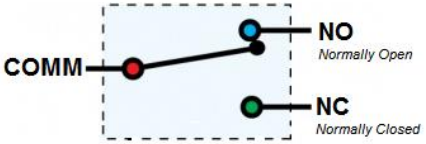
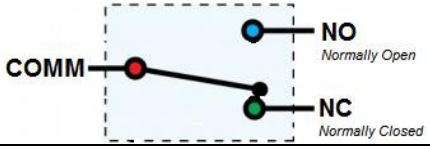
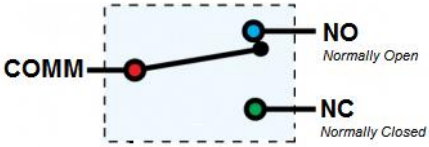
ALARM RELAY OUTPUT

In normal operation the relay is energised

- Terminal contacts COMM and NC of the relay are electrically closed
- Terminal contacts COMM and NO of the relay are electrically open

Whenever the LED is not lit due to a power failure and/or a LED failure, the relay will not be energised.

- Terminal contacts COMM and NO of the relay are electrically closed
- Terminal contacts COMM and NC of the relay are electrically open

Lantern State	*Alarm Relay*	
Power Off	**COM connected to NO**	
Lantern OK	**COM connected to NC**	
Lantern Alarm	**COM connected to NO**	

The alarm relay comes configured as follows:

- Relay normal operation (default, as described above)

The following alarm relay configurations are available as a special order. These must be specified at the time of order:

- Relay inverse operation (inverse functionality of the normal operation, used to conserve power)
- Relay disabled (in case the relay is not required, used to conserve power)

NOTE: The alarm relay is intended for low voltage (SELV) connection only.
NOT FOR MAINS CONNECTION

Maintenance & Servicing

Designed to be maintenance free the Bridge Lights require minimal attention, though the following maintenance and servicing information is provided to help ensure the life of your Sealite product.

- Occasional cleaning of the dome lens may be required using a cloth and warm soapy water.

Trouble Shooting

Problem	Remedy
Light will not activate.	• Ensure proper connectivity with power supply • Ensure the mains power supply is active • Cover the light sensor to force the light ON

Sealite LED Light Warranty

Refer to Sealite website: sealite.com

Sealite®

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