RLX D G3 - User Manual

KEY FEATURES

- Compact and low weight
- Powerful light performance
- Flicker-FREE, 100% constant light
- Crafted for demanding marine conditions
- Remarkable EMC/EMI characteristics
- No maintenance
- Dimmable light output with 0-10V or DALI-2
- Prepared for GEL filled connection box





CONTENTS

1 GENERAL 2
2 SAFETY 2
3 CONTENT 3
4 SPECIFICATIONS 3
5 MECHANICAL INSTALLATION 4
6 ELECTRICAL INSTALLATION 5
7 TEMPERATURE PROTECTIVE DEVICES 6
8 MAINTENANCE 6
9 TROUBLESHOOTING 7
10 APPENDIX 8

1 GENERAL

The RLX D G3 is a compact and solid LED floodlight created to last in very harsh and corrosive environments.

Read this user guide to get the most out of your RLX D G3 LED floodlight and help it to maximize its potential for your application.

Power alternatives	Input Voltage alternatives	Light Beam Alternatives	Light color alternatives
- 240 W	- 100-277 VAC 47-63 Hz 100-300 VDC	- SB10 - SB20 - MB30 - MB40 - MB60 - OBH - OBV - ASYM - Wide	- Natural white 5000K - Warm white 3000K - Other temperatures and colors on request

2 SAFETY

Inappropriate or unauthorized use or failure to comply with the information contained in these instructions, voids any warranty and may invalidate the certificate. Modifications or changes to the equipment are not allowed.

The following must be observed by the installer and end user:

- national safety regulations
- national workplace health and safety regulations
- national installation and set-up regulations
- generally accepted engineering standards
- the safety information contained in these operating instructions
- the data and rated operating conditions
- disposal of waste, parts or floodlight in accordance with national regulations
- the equipment is suitable for harmful or corrosive chemicals that may be present.



OPTICAL RADIATION
Do not stare at operating lamp.
May be harmful to the eyes.



Do not open when energized.



Crush hazard!
Be aware of moving parts when lifting and mounting the floodlight. Shall only be installed by a qualified electrician.

3 CONTENT

Box content:

- Fully assembled RLX D G3 LED floodlight
- User Manual
- Recyclable cardboard

Required tools:

- 5mm Umbraco
- Flat screwdriver (2mm slot)
- 2x 17mm combination spanners
- 24mm combination spanner
- Wire stripper
- Additional cable glands (optional)

4 SPECIFICATIONS

Voltage Input alternatives	100-277 VAC 50-60Hz 100-300 VDC
Current	240W: 1,05A @ 230 VAC 240W: 10A @ 24 VDC
Power factor AC version	cos φ <0.98
Light control	0-100kOhm/0-10V or DALI-2 (part 101, 102, 207 and 250)
Ambient Temperature	-40°C ≤ Ta ≤ 55°C
IP rating	IP66/67
Weight	14,5 kg
Cable glands	1x M20 Cable glands (7-13mm) 1x M20 and 2xM25 Blind caps

4.1 CABLE GLANDS

Make sure to replace unused cable glands with blind caps M20 or M25. Warranty will be voided if replaced cable glands / blind caps are not UV and weather resistant. In addition, it is the installers responsibility to ensure that the cable and cable glands are appropriate for each other and properly sealed. For EMC compliance to MIL-STD461F Navy Mobil & Army, overall screening must be terminated 360° in the cable gland.

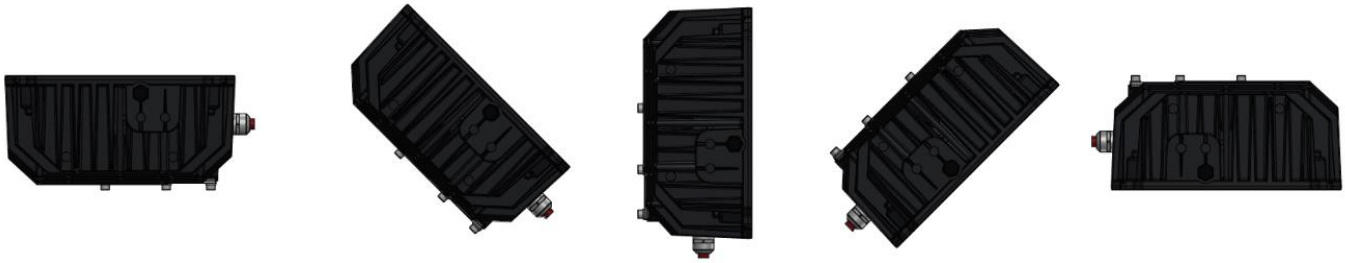
5 MECHANICAL INSTALLATION

To attain the long lifetime, please make sure that the heat sink on the back of the chassis has an adequate passage to allow air to flow freely – this for the highest possible cooling performance.

For detailed mechanical drawings see appendix.

The RLX D G3 may be mounted in any direction, however it is recommended to point the cable glands downwards.

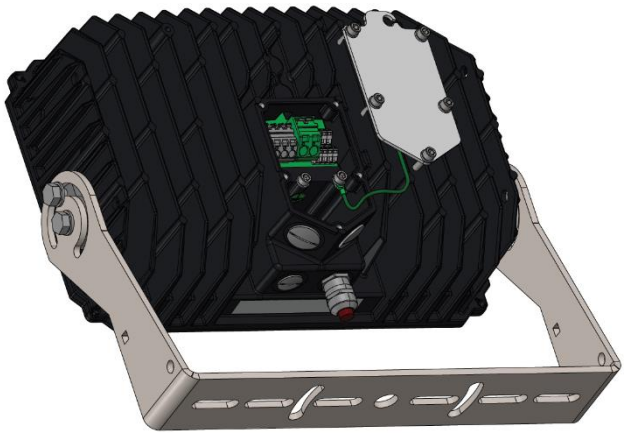
Recommended mounting on solid surface and highest possible distance between mounting points on bracket, for optimal stability.



5.1 GASKET AND COVER

When removing the back cover on the terminal box note following;

- There is no fall protection on the bolts apart from the hold in the gasket.
- Be aware that the bolts may loosen from the clamp of the gasket, if they are mechanically pushed.
- Upon mounting, ensure all gasket areas are free from any foreign objects.
- Tighten the 5x M6 bolts with 6 Nm.



5.2 SAFETY WIRE

The holes for safety wire are tested to withstand a 2m fall. It is recommended always to have wires as short as possible. ONLY use dedicated holes for safety wires. See appendix for detailed drawings.

5.3 ADJUSTING LIGHT BEAM DIRECTION

Due to the variations of beam angle alternatives, it is important to notice the difference between these and how each beam will illuminate the desired area. It is essential that the floodlight is mounted and pointing according to the light simulation or as intended.

Visit Marine, Offshore & Wind / glamox.com to understand how the different light beam angles illuminates.

6 ELECTRICAL INSTALLATION

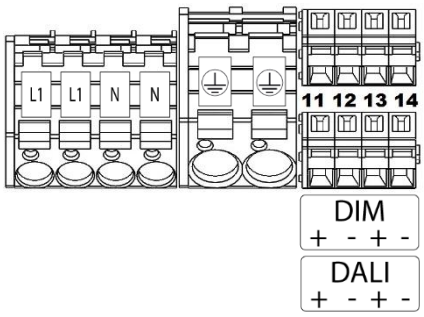
Risk of electric shock. Ensure that power is disconnected before carrying out any connections.



Both the power and dimming connection can be parallel (or in-line) connected. If so, ensure to use suitable cables due to the increased current running through the junction box and spring terminals.

6.1 CABLE CONNECTIONS

Function	Position marking	Description	Wire cross
Power Grid Connection	**L1**	Phase / +	0,2 <6mm^2
	N	Neutral / -	0,2 <6mm^2
	⏚	Ground connection	0,2 <16mm^2
DIM or DALI connection See 6.1.1	DIM **+**	Positive DIM	0,1 <2,5mm^2
	DIM **-**	Negative DIM	0,1 <2,5mm^2
	DALI +	DALI +	0,1 <2,5mm^2
	DALI -	DALI -	0,1 <2,5mm^2
ONLY Luminell battery backup Acc. Connection (Separate product)	**+** (11)	LED/PSU positive	0,1 <2,5mm^2
	- (12)	LED/PSU negative	0,1 <2,5mm^2
	C (13)	Control signal	0,1 <2,5mm^2
	N (14)	Temperature sensor	0,1 <2,5mm^2



More info in general dimensions

6.1.1 Dimming Connection (slot 7-10)

Several control options are available on the RLX D G3. All options can dim the light intensity 0 – 100%.

NOTE: A specific luminaire only has *one* of the control variants in the table below.

Control variant	Signal type	Signal specification
Analog dim (**D** in item code)	0-100kOhm (2-in-1 interface)	One floodlight: 0-100 kΩ Several floodlights(n) parallel connected: 100 kΩ/n. Eg. 4x floodlight controlled together would require a 25 kΩ variable resistor or potentiometer. It is recommended to use logarithmic resistors, since the sensitivity is greatest when resistance is small. If nothing is connected the output is 100%
	0-10V (2-in-1 interface)	External low voltage supply. 0-10VDC corresponds to 0-100& brightness. No adjustments for parallel connected luminaires
DALI (**DALI** in item code)	DALI-2	DALI-2 certified according to IEC-62386 part 101, 102, 207 and 250. In addition to brightness control, basic monitoring and status feedback is available. See DALI standards for more information

NOTE: For all signal types, luminaire brightness will be 100% if nothing is connected to the control interface

6.1.2 Startup current

A startup current is needed to energize the electronics inside the RLX D G3 LED floodlight. When using a MCB16 Type C fuse, approx. 11 RLX D G3 floodlights can be started at once. The inrush current is the equal for all power alternatives.

7 TEMPERATURE PROTECTIVE DEVICES

For hazardous safety and lifetime optimization the RLX D G3 LED floodlight is equipped with several temperature protective devices. Two individual temperature controls may have influence on the use of the floodlight.

Automated Temperature Control
A set of temperature sensors are distributed on the LED circuit board to protect the LEDs and material lifetime in high ambient temperatures. This circuit will automatically adjust the LED current as the temperature rises. It is important to note that this circuit will not have influence on the light output before the temperature reaches material limits.

Manual Resettable Temperature Protection
The floodlight is equipped with a manual resettable temperature protective device, which will trigger and turn off the lamp if it is heated with an external heat source or if another fatal error occurs. For the protective device to reset, the power input must be turned OFF and ON and the temperature must be decreased.

8 MAINTENANCE

The product is made to be maintenance free and only occasional cleaning without solvent is recommended to ensure light output and cooling.

Do not paint. Material combination and surface treatment has been carefully selected to make the RLX D G3 floodlight withstand corrosive environments even with damage to the surface treatment. The assembled unit complies with ISO9223/12944 and has a rated c5m corrosion class.

Damages to seals, gasket, breather drain, cable glands, entries, front glass, housing or terminals may invalidate the certificate. In uncertain cases, please contact Glamox for clarification.

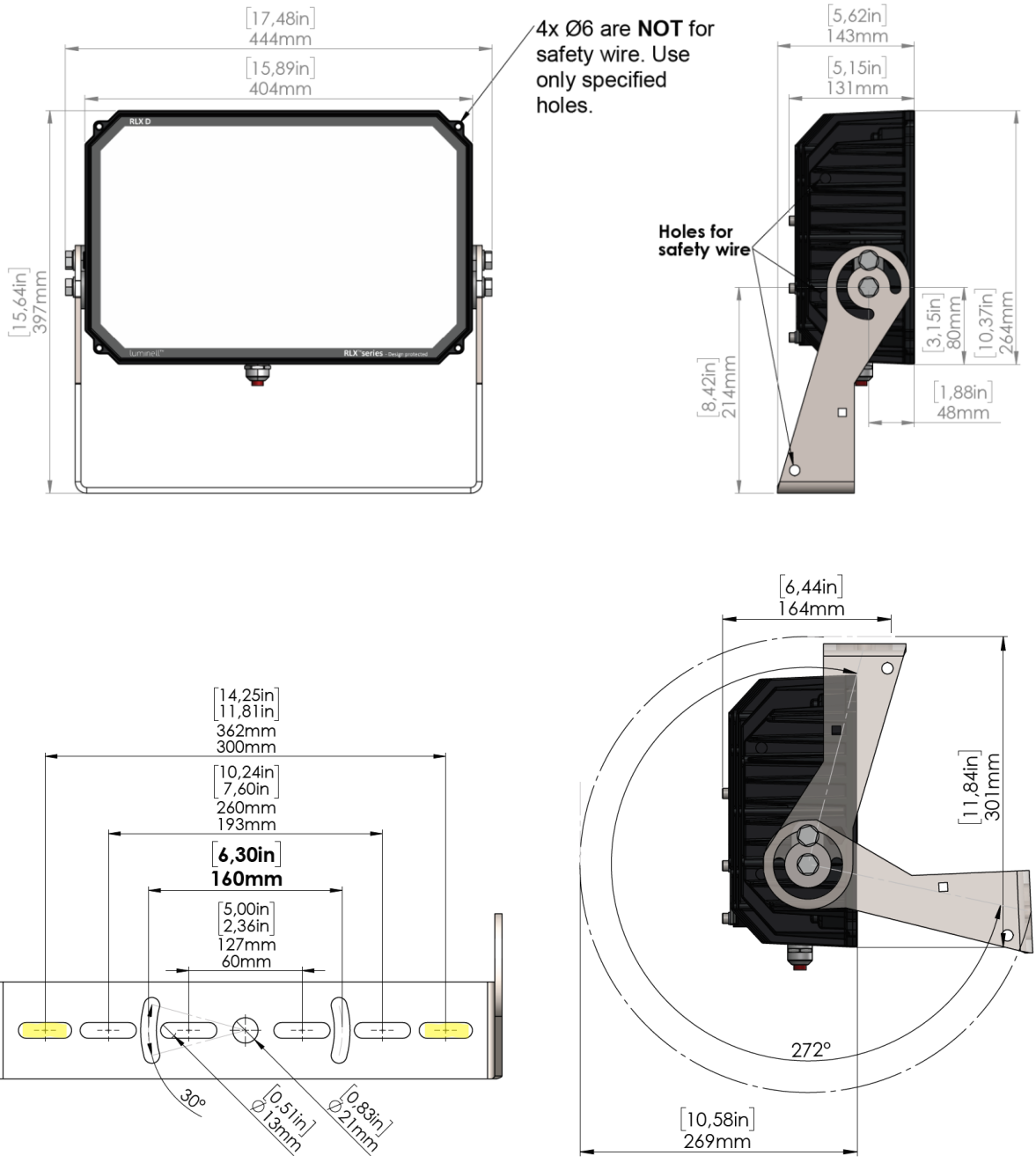
Note on coated print circuit board:
In order to withstand extreme conditions even without the glass on, the print circuit boards in the RLX series are coated with a premium quality tough-gel. During the hardening process, this gel may generate some dew, which could be visible on the inside of the glass on brand new products. This is not a product failure, and the dew will disappear over time.

9 TROUBLESHOOTING

Problem	Possible reason	Possible solution
Does not turn on.	The floodlight may be exposed to external heat, causing the temperature protection to activate.	Remove external heat source and disconnect and reconnect power. See section 10 Temperature protective devices.
Turns off automatically.	A combination of high ambient temperature and reduced airflow may cause the floodlight to heat up and turn off.	Disconnect and check for sufficient air flow.
Seems to have reduced light output.	High ambient temperature see section 10 or an unintended DIM signal or connection on the DIM connections.	Check ambient temperature and dim control connection.

10 APPENDIX

10.1 DIMENSIONS



Recommended to use marked holes as fastening position for optimal stability.

10.2 Light Beam Illustrations

