O-MAN-00015-BAL

USER MANUAL

Lighting device for high-voltage cables, low-intensity steady red light with IR

Balisor HVlite15 // 114600-A

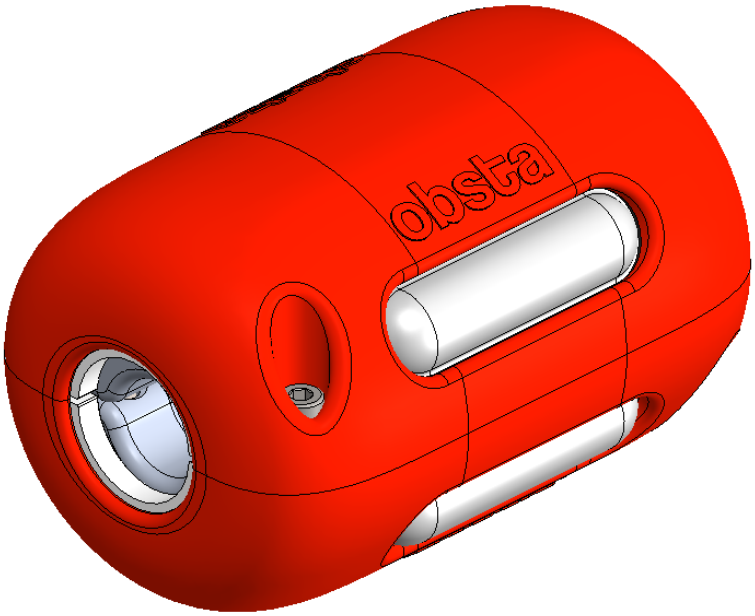
Balisor HVlite19 // 114600-B

Balisor HVlite23 // 114600-C

Balisor HVlite27 // 114600-D

Balisor HVlite31 // 114600-E

Balisor HVlite34 // 114600-E



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1. Product name and part number

Description	Part number (P/N)	Norm	QR code
BALISOR HVlite15	114600-A	ICAO low intensity type A	
BALISOR HVlite19	114600-B	ICAO low intensity type A	
BALISOR HVlite23	114600-C	ICAO low intensity type A	
BALISOR HVlite27	114600-D	ICAO low intensity type A	
BALISOR HVlite31	114600-E	ICAO low intensity type A	
BALISOR HVlite34	114600-F	ICAO low intensity type A	

2. Caution

- Do not proceed with any maintenance job when the product is under operation.
- Power supply must be shut down when opening the flash-head or the cabinet.
- Installation must be performed only by an electrically skilled operator and National electrical installation rules must be respected.
- Always wear appropriate Personal Protective Equipment (PPE) when installing, maintaining or servicing the system.
- Any installation or maintenance operation performed at height must be carried out in strict compliance with fall-protection procedures.
- Do not look directly at the projector while it is in operation: Led projectors produce brilliant flashes of lights which can result in temporary or permanent eye damage.
- OBSTA products may be affected by ESD, use state of the art precaution before manipulation.
- Unless otherwise specified, all cables must be shielded, and the shielding must be connected to ground.
- All cables connected to PCBs and terminal blocks must be equipped with a cable connector to prevent false contacts when connecting devices.

3. Warranty

OBSTA warrants the equipment described in the instruction manual and sold to purchasers to be free from defects in material and workmanship at the time of shipment. OBSTA's liability under this warranty being limited to repairing or replacing, at OBSTA's option, items which are returned to it prepaid within twenty-four (24) months from shipment to the original Purchaser, or twelve months from commissioning, and found, to OBSTA's satisfaction, to have been defective. In no event shall OBSTA be liable for consequential damages. NO PRODUCT IS WARRANTED AS BEING FIT FOR A PARTICULAR PURPOSE AND THERE IS NO WARRANTY OF MERCHANTABILITY.

This warranty applies only if: (I) the items are used solely under the operating conditions and in the manner recommended in OBSTA's instruction manual, specifications, or other literature; (II) the items have not been misused or abused in any manner or repairs attempted thereon; (III) written notice of the failure within the warranty period is forwarded to OBSTA and the directions received for properly identifying items returned under warranty are followed; and (IV) such return notice authorizes OBSTA to examine and disassemble returned products to the extent OBSTA deems necessary to ascertain the cause of failure. The warranties stated herein are exclusive.

THERE ARE NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, BEYOND THOSE SET FORTH HEREIN, and OBSTA does not assume, nor does OBSTA authorize anyone else to assume for it, any other obligation or liability in connection with the sale or use of said products. OBSTA's liability on any claim of any kind, including negligence, for loss or damages arising out of or connected with the manufacture, sale, delivery, repair or use of any equipment or services provided by OBSTA shall in no case exceed the price allocable to the item or service or part thereof which gives rise to the claim.

The integrity and reliability of OBSTA aviation obstruction lighting systems is dependent on the use of OBSTA parts and components. To ensure the optimum performance and reliability of your OBSTA system, it is strongly advised that only components and modules manufactured by OBSTA be used.

4. Introduction

4.1. General information

This manual provides information about the installation, operation and maintenance of the Balisor HVlite led low intensity obstruction lightning systems manufactured by OBSTA. The lightning systems described in this manual are low intensity type A.

4.2. General description

The BALISOR HVlite is a low current beacon that can be installed directly on high-voltage lines without the need for an external power supply.

4.3. Characteristics

- Full body casing in 2 only halves of anodized and cast aluminum. Corrosion-proof for use in marine and damp tropical climate conditions.
- Simplest but most effective form factor with axial symmetry centered on the conductor. No rotation or mounting questions.
- No other shapes or appurtenance that could generate corona effect, imbalance or vibrations on lines.
- Aluminum clamps as internal part of the design
- Very low weight and minimized wind pressure.
- Optics in hard glass. No risk of UV fading or sand erosion.
- Inductive power supply operates in active redundancy.
- All internal electronics molded in high temperatures withstand silicon resin.
- Protection against electromagnetic fields.
- Available for diameters 15 to 37 mm.

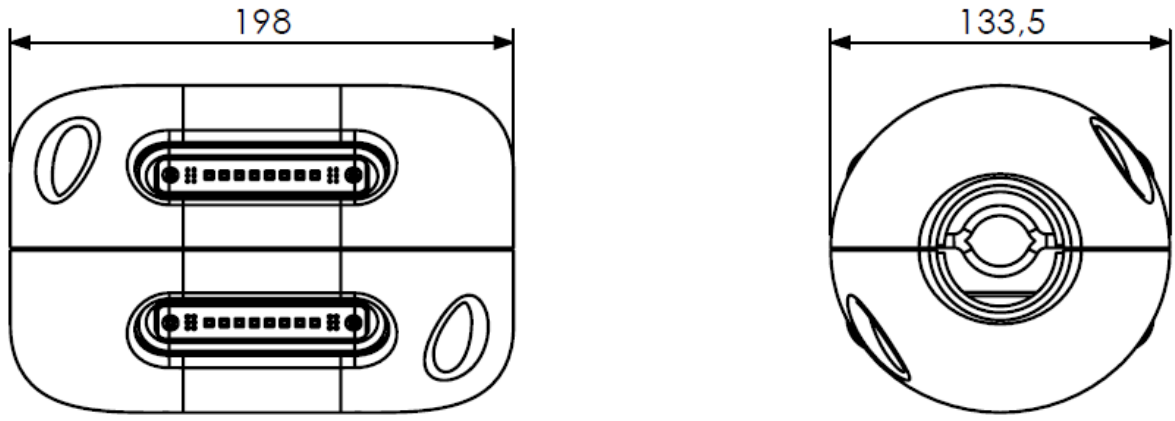
5. Installation

5.1. Unpacking

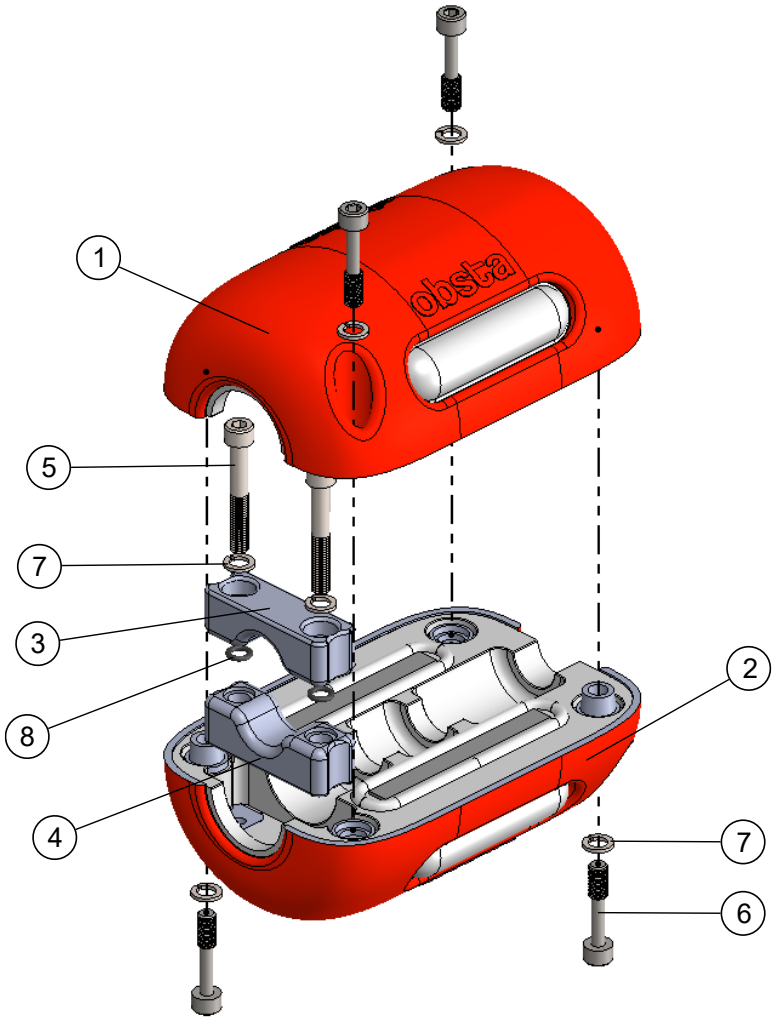
Carefully unpack the product and remove any internal packing material. Examine each item for obvious physical damage. Immediately report any claims to the carrier.

5.2. Overview

5.2.1. Beacon dimension



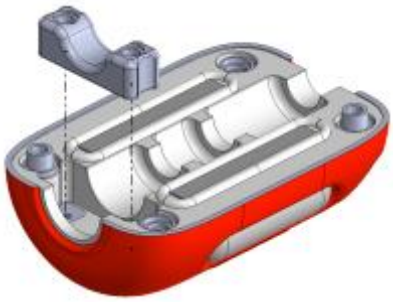
5.2.2. System component



N°	Designation	Qty
1	Upper half-shell	1
2	Lower half-shell	1
3	Upper fixing half-jaw	1
4	Lower fixation half-jaw	1
5	M8x55 SHCS screw	2
6	M8x40 SHCS Captive screw	4
7	Grower Washer M8	6
8	7 x 2.5 O-ring	2

5.3. Mounting and preparation

Before installing on the high-voltage line, position the lower half-shell in its dedicated housing.

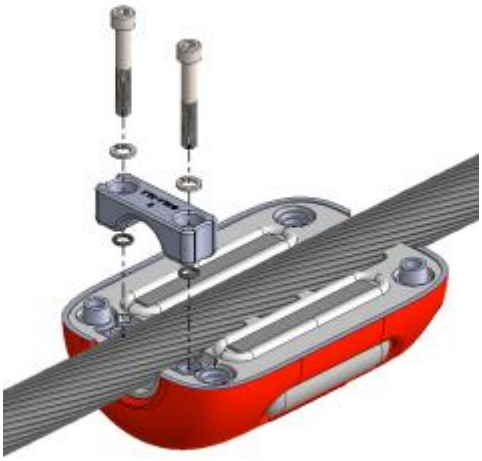


The two-aluminum mounting half-shells ensure that the product is compatible with different cable diameters.

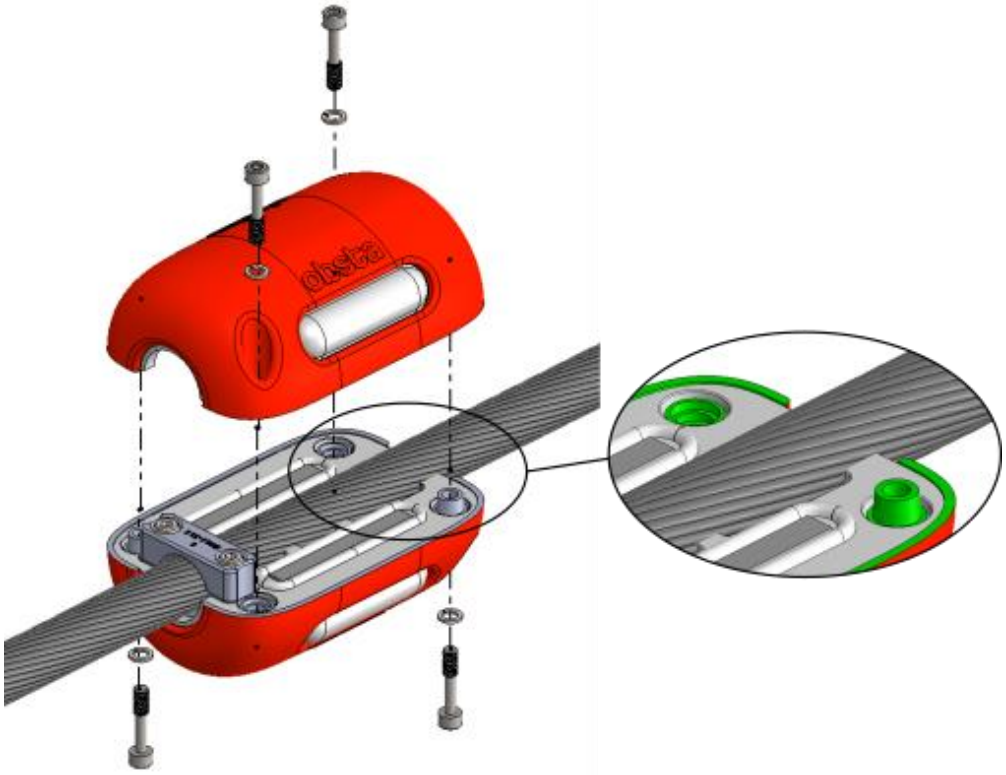
Cable diameter (mm)	HVlite version	Half shell diameter (mm)	Marking (on the half shell)
15 to 19	114600-A	16.6	A Ø15 – 19
19.1 to 23	114600-B	20	B Ø19.1 – 23
23.1 to 27	114600-C	24.6	C Ø23.1 – 27
27.1 to 30.5	114600-D	28.6	D Ø27.1 – 30.5
30.6 to 33.5	114600-E	31.6	E Ø30.6 – 33.5
33.6 to 37	114600-F	34.6	F Ø33.6 – 37

The rest of the assembly is done directly on the cable.

- Place the lower half of the shell under the cable
- Place the upper jaw on top.
- Using a 6mm Allen key, tighten the two M12 screws. Place the BALISOR HVlite in the designed location.
- Use a torque wrench to tighten the two M12 screws to a torque of 18Nm.



- Place the upper half-shell, ensuring that the alignment tabs and mounting direction are correct (in green).
- Position and tighten the two upper screws using a 6 mm Allen key.
- Position and tighten the two lower screws using a 6 mm Allen key.
- Using a torque wrench, tighten the upper screws and then the lower screws to a torque of 18 Nm.



6. Maintenance

Inspection	Frequency	Scope of work
Routine visual inspection	1 time per year	Performed from the ground (often on foot or using a drone) at dusk to check that the lights are working and that there is no visible rust.
After an extreme event	As needed	Mandatory inspection after severe storms or episodes of strong winds causing vibrations (galloping) of the lines.

7. Technical specifications

Parameter	Min	Nominal	Max	Unit
Max voltage	-	-	800	kV
Frequency	-	50/60	-	Hz
Norm IP	-	66	-	IP
Working temperature	-40	-	+55	°C
Weight	-		-	W
Maximum power during avers the air communication	-	-	8	W
Max wind force under 300 km/h	-	60	-	N