DATASHEET

AERODROME BEACON

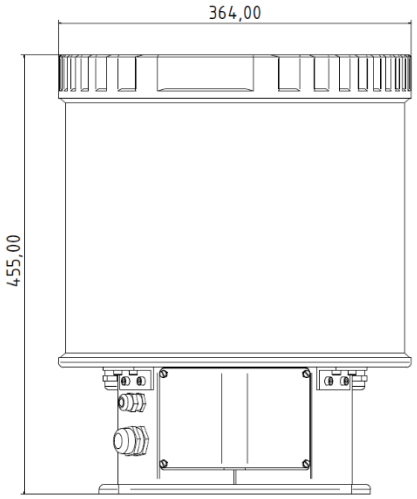
ICAO Annex 14, 2013 6th Edition
Statens Luftfartsvæsen Bestemmelser for Civil Luftfart
BL 3-21 - 3.2 Lysfyr

OBELUX AVIATION LIGHTS

Optical characteristics

- Colour White
- 50 000cd Flashing @ Day / Full power
- 20 000cd Flashing @ Twilight
- 2 000cd Flashing @ Night
- Flash Sequence 20fpm
- Pulse length 250ms
- Horizontal beam 360°

Vertical beam	Intensity (cd)
1° - 2°	25.000 cd
2° - 8°	50.000 cd
8° - 10°	25.000 cd
10° - 15°	5.000 cd
15° - 20°.	1.000 cd



AERODROME BEACON

An aerodrome beacon is intended for use at night if one or more of the following conditions exist: a) aircraft navigate predominantly by visual means; b) reduced visibilities are frequent; or c) it is difficult to locate the aerodrome from the air due to surrounding lights or terrain. The aerodrome beacon is located on or adjacent to the aerodrome in an area of low ambient background lighting.

Key Features

- Based on LED technology
- Doesn't require any additional controllers
- Light output can be remotely enabled and disabled
- Infrared (850nm) incorporated for NVG compatibility
- Power consumption less than 250W
- Aluminium body and glass cover
- Operating voltage 230VAC
- 5-year warranty – the longest in the industry

Specifications met

ICAO Annex 14, 2013, 6th Edition,
5.3.3 Aeronautical Beacon,
5.3.3.3 Aerodrome Beacon

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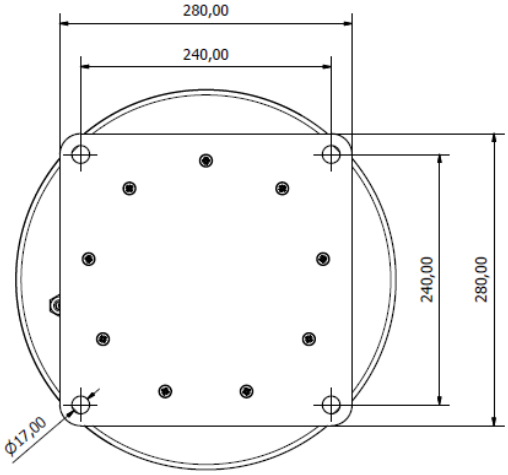
Electrical Characteristics

- Operating voltages 230V_{AC}
- Constant power input by active PFC
- Flash rate: 20fpm
- Meets standards
  EMC (Emissions): EN 61000-6-4
  EMC (Immunity): EN 61000-6-2
- Power consumption (20 fpm)
  - 150W @ Day (with heating max. 210W)
  - 60W @ Twilight
  - 20W @ Night
  - Heater 60W
- Recommended cables:
  - Power: 3x2,5mm² (Outdoor) L-N-PE
  - Control: CAT 7 (Outdoor)
  - Alarm: CAT 7 (Outdoor)

Mechanical Characteristics

- Anodised marine grade aluminium body
- Glass cover
- Degree of protection IP65
- Operating temperature range -40...+55 °C
- Mounting 240x240mm, ϕ17
- Height 428 mm, diameter 364 mm
- Weight 27 kg



Order code	Output	GPS sync	Op. volt.	Infrared	Heating (CCV)	Photocell and Fault monitoring	Packing dimensions
OBX-ARB-230-001	50 000cd	Yes	230VAC	Yes	Yes	Yes	600x400x400, 32kg

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Installation specifications

- EMC cable glands M16 and M25
- Power input
  wire diameter 0,5 – 4mm²
- ALARM input
  wire diameter 0,2 – 1,5mm²

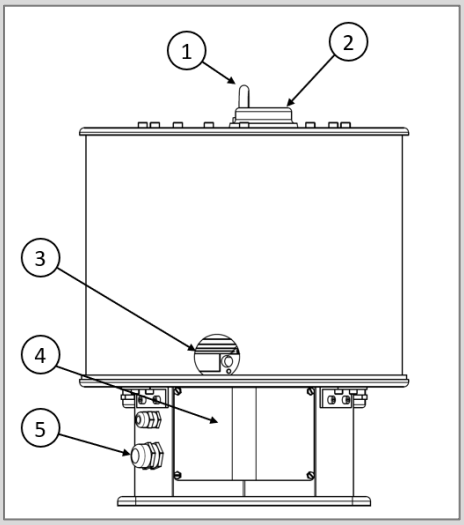
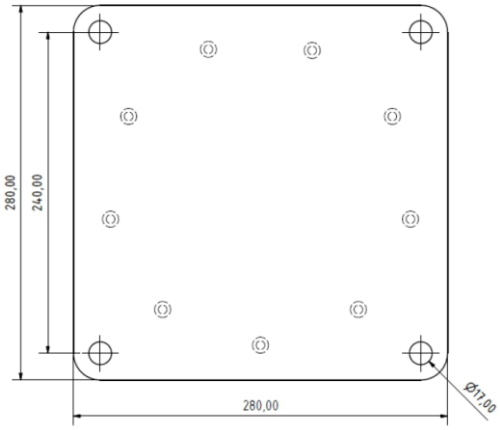


Figure 1

1. Lug (for lifting the light)
2. GPS antenna
3. Location of photocell
4. Service access hatch
5. Cable glands

Installation instructions

Mount the device to the selected mounting point using quality made fasteners. Level the light using spirit level (bubble level) if the mounting point is not already levelled. Tighten bolts & nuts. Obelux recommends 100 Nm tightening torque for M12 hot-dipped 8.8 bolts with suitable washer between bolt and mounting plate. When the cover door is open, check that there is no inflow of water (incl. hail and snow) into the cabinet.



Photocell direction
Make sure the photocell is pointed away from any buildings or light sources including other aviation lights. Check photocell location from Figure 1.

Cabling
Route power and data cables using cable gland(s). Connect the cable wires securely to appropriate terminal block connectors. Place the hatch plate (door) properly in its place and securely tighten all screws. Make sure that all unused glands or gland holes are sealed. Follow the illustration below to achieve desired EMC protection.

Please follow these instructions when routing cable via a cable gland:

1. Partially expose the braided screen by removing the outer sheath of the cable at a length of approx. 10 mm.
2. Insert the cable through the dome nut and the gland body until the contact spring is pressed against the braided screen.

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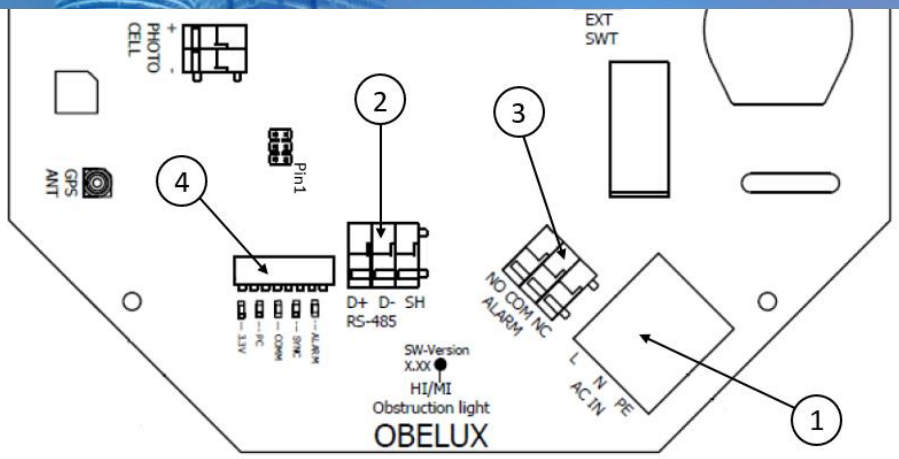


1 Power input

Mark	Description	Information
L	Live terminal	Connect the mains power supply in into these screw connectors.
N	Neutral terminal	Colours are typically brown (for Live) and blue (for Neutral)
PE	Protective earth	Connect protective earth into this screw connector. PE line is typically indicated with yellow/green shield on the wire.

Tighten the connector screws using flat-head (straight) screwdriver.

2 Control input

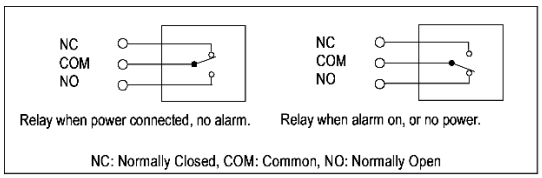
Mark	Description	Information
D+	Control +	Non-inverting pin, connect to control box negative (-) terminal
D-	Control -	Inverting pin, connect to control box positive (+) terminal
SH	Shield	Shield

Used to enable/disable the light output. Does not affect heating.

3 Alarm Relay Output

Mark	Description	Information
NO	Normally Open	In alarm, connected with COM
COM	Common	Common relay contact
NC	Normally Connected	During normal operations, connected with COM

Unused alarm relay connectors can be left floating i.e. no wiring there is required.



4 Configuration DIP switches

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Configuring Obelux Aerodrome Beacon

The light operation is configured with DIP switches. A DIP switch is off when turned in the down position and on when in the up position. The default setting for all DIP switches is off (all down).

DIP switch		Dimming
1	2	
off	off	100% power
on	off	30% power
off	on	10% power
on	on	3% power

This setting changes the dimming of the light.

DIP switch		Photocell mode
3		
off		Photocell off. Light uses full power (unless dimmed down by DIP 1 and DIP2).
on		Photocell used. Light mode adjusted to match ambient illumination level.

DIP switch		Test mode (IR)
4		
off		Test mode off
on		White light off. Only IR light on. (Test Mode DIP 7 must also be set on)

DIP switch		Test mode (White)
5		
off		Test mode off
on		White led Steady in 5% power. IR Off. (Test Mode DIP 7 must also be set on)

DIP switch		Test mode (Photocell)
6		
off		Test mode off
on		Photocell test mode on. (Test Mode DIP 7 must also be set on)

The Photocell test mode speeds up the transition between the day and night modes to few seconds. Normally this takes several minutes.

DIP switch		Test mode enable
7		
off		Normal operation.
on		Test mode on (Used together with DIP 4, 5 or 6 to select functionality to test)