

Aerodrome Beacon

ICAO Annex 14 of ICAO Regulations

OBELUX
AVIATION LIGHTS

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Optical Characteristics

- Effective Intensity > 2 000cd
- Colour White
- Flash Sequence 20-30FPM
- Horizontal beam 360°
- Vertical beam > 3 degrees
- NVG complaint infrared (IR)

Specifications met

ICAO Annex 14, 2018, 8th Edition

- 5.3.3 Aeronautical Beacons
- 5.3.3.3 Aerodrome Beacon



AERODROME BEACON

The Obelux Aeronautical Aerodrome Beacon is based on advanced LED technology and compliant with ICAO recommendations.

An aerodrome beacon shall be provided at an aerodrome 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.

Key Features

- ▶ Based on LED technology
- ▶ 2 000 cd WHITE flashing 20-30 FPM, other colours on request
- ▶ NVG compliant Infrared (850nm)
- ▶ Aluminium body and glass cover
- ▶ Built-in temperature controlled smart heater (CCV)
- ▶ Adjustable luminous output levels (dimming) 10%, 30%, 100%
- ▶ Control using external switches/relays (with optional IO card)
- ▶ Can be connected to Obelux Control Panel via Modbus
- ▶ Design lifetime more than 20 years
- ▶ 5-year warranty (option for 10 years, longest in the industry)

Electrical Characteristics

- ▶ Operating voltage (AC):
Nominal 100-240 V_{AC} ± 10%, 50Hz / 60Hz ± 6%
Range 90-265 V_{AC}
- ▶ Operating voltage (DC): 20-60 V_{DC}
- ▶ Flash rates: 20/30 fpm
- ▶ Meets standards
EMC (Emissions): EN 61000-6-4
EMC (Immunity): EN 61000-6-2
- ▶ Overvoltage protection Type 2 (varistors between L – PE, N – PE and L – N)
- ▶ Alarm relay output NO/NC dry contact
Switch voltage / max current: 50 V_{DC} / 1 A, 250 V_{AC} / 6 A
- ▶ Modbus RS-485 isolated

Power Consumptions

- ▶ AC/DC models 2000 cd (excluding heater consumption):
(measured with 200ms flash pulse length)
 - 5,5W @ Night (WHITE, 30 fpm)
 - 7,5W @ Night (WHITE+IR, 30 fpm)

Recommended Cables

- ▶ Power (ACW): 3G1,5 mm² or 3G2,5 mm²
- ▶ Data: 3x0,5 mm² - 3x1,5 mm² shielded
- ▶ Alarm: 3x0,5 mm² - 3x1,5 mm²
- ▶ Power + Alarm: 6G1,5 mm², 6G2,5 mm² or hybrid cable
- ▶ Power + Data: Hybrid cable (e.g. Servo cable)

Mechanical Characteristics

- ▶ Anodized marine grade aluminium body and bottom / upper parts
- ▶ AISI 316 acid-proof steel screws
- ▶ Glass dome
- ▶ Degree of protection IP66
- ▶ Operating / storage temperature -40...+55 °C
- ▶ Height 350 mm, width 180 mm, depth 160 mm
- ▶ Weight 4,3 kg (without mounting set)
- ▶ Cable glands:
2 x M25 for Ø11-17 mm cables (Ø6-13 rubber incl.)
2 x M20 for Ø6-12 mm cables
- ▶ Easy to chain via power and data cables (no need for junction box)

Smart Heater (CCV)

- ▶ 15W, thermostat controlled
- ▶ Prolongs the life of the obstruction light
- ▶ Input voltage monitoring to detect battery/charger operation (DC models only)
 - Turns heater off during battery use
 - Settable input voltage threshold in which the heater will be disabled
 - Enables lower power consumption
 - Heater power consumption can be ignored in UPS autonomy calculations

Options

- ▶ Add-on cards (see order code section):
 - 4 Input 4 Output (IO) interface
 - Ethernet interface (1 x RJ-45)
 - 4-port switch (2 x RJ-45, 2 x Fiber)
- ▶ 10-year warranty (see order code section)
- ▶ Mounting sets (see appendix A)
- ▶ Pre-attached cables (see appendixes B and C)
- ▶ Optional controllers:
 - CP-series (Ethernet TCP/IP, RS-485 Modbus)
 - CP-M1-series (RS-485 Modbus)

Order code	Output	Color	Operating voltage	Nominal voltage	GPS	Photocell	CCV	IR	Fault monitoring	RS-485 Modbus
AB-AC-2KW[-x][-y]	2 000 cd	White	90-265 V _{AC}	100-240 V _{AC}	Yes	Yes	Yes	Yes	Yes	Yes
AB-DC2448-2KW[-x][-y]	2 000 cd	White	20-60 V _{DC}	24/48 V _{DC}	Yes	Yes	Yes	Yes	Yes	Yes

[-x]: Add-on card option

- IO = IO interface card with 4 inputs 4 outputs
 E = Ethernet interface card (1 x RJ45 connector)
 EF = 4-port switch (2 x RJ-45 connectors + 2 x Fiber SC Multimode female connectors)

Example: AB-AC-2KW-IO (AC model with IO interface card)

[-y]: Warranty option

- 10 = 10-year warranty

Example: AB-DC2448-2KW-10 (DC model with 10-year warranty)

Control with external switches/relays (using the optional IO interface card):

Mode	Input channels			
	IN1	IN2	IN3	IN4
Light OFF	0	0	0	0
Light ON (100%)	-	-	-	1
10%	-	-	1	0
3%	-	1	0	0
Auto dimming	1	0	0	0

1 = on

0= off

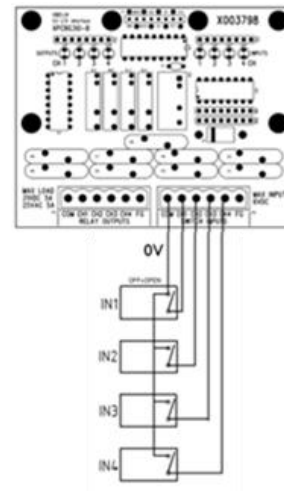
off=open (=indicator LED is ON)

Auto dimming mode

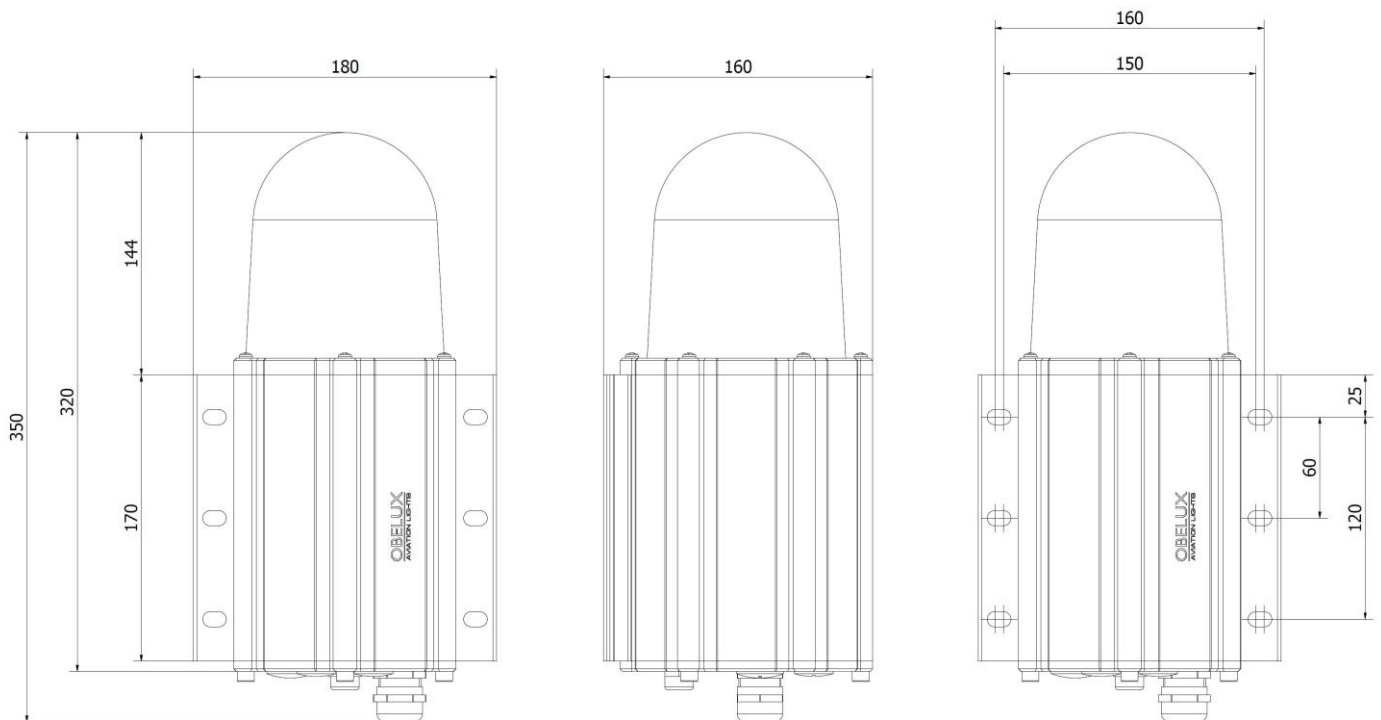
3% = Night (<50lx)

10% = Twilight (50 - 600lx)

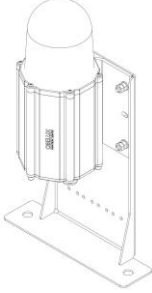
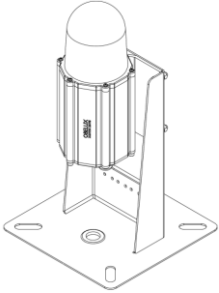
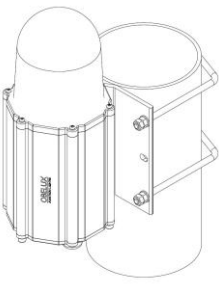
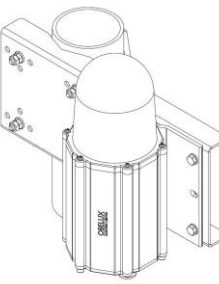
100% = Day (>600lx)



Dimensions:



Appendix A: Available mounting sets

	Obelux MS-MI-H01/02: ▶ Mounting set for horizontal plane mounting. ▶ Mounting set includes bracket and fasteners. ▶ Mounting bracket AISI 304 stainless steel or AISI 316 acid-proof steel, other parts AISI 316 acid-proof steel. More detailed mechanical data: see MS-MI-H01/02 datasheet.
▶ Order Code: MS-MI-H01 (AISI 304 stainless steel bracket) ▶ Order Code: MS-MI-H02 (AISI 316 acid-proof steel bracket)	
	Obelux MS-MI-H03: ▶ Mounting set for horizontal plane mounting. ▶ Mounting set includes bracket and fasteners. ▶ All parts AISI 316 acid-proof steel. More detailed mechanical data: see MS-MI-H03 datasheet.
▶ Order Code: MS-MI-H03	
	Obelux MS-MI-V01: ▶ Mounting set for vertical pipe mounting. ▶ Mounting set includes U-bolts and fasteners. ▶ All parts AISI 316 acid-proof steel. More detailed mechanical data: see MS-MI-V01 datasheet.
▶ Order Code: MS-MI-V01	
	Obelux MS-MI-V02: ▶ Mounting set for vertical pipe mounting. ▶ Mounting set includes bracket, U-bolts, and fasteners. ▶ Mounting bracket AISI 304 stainless steel, other parts AISI 316 acid-proof steel. More detailed mechanical data: see MS-MI-V02 datasheet.
▶ Order Code: MS-MI-V02	