

DeltaBox

HIGHLIGHTING INNOVATION



PRODUCT CATALOG

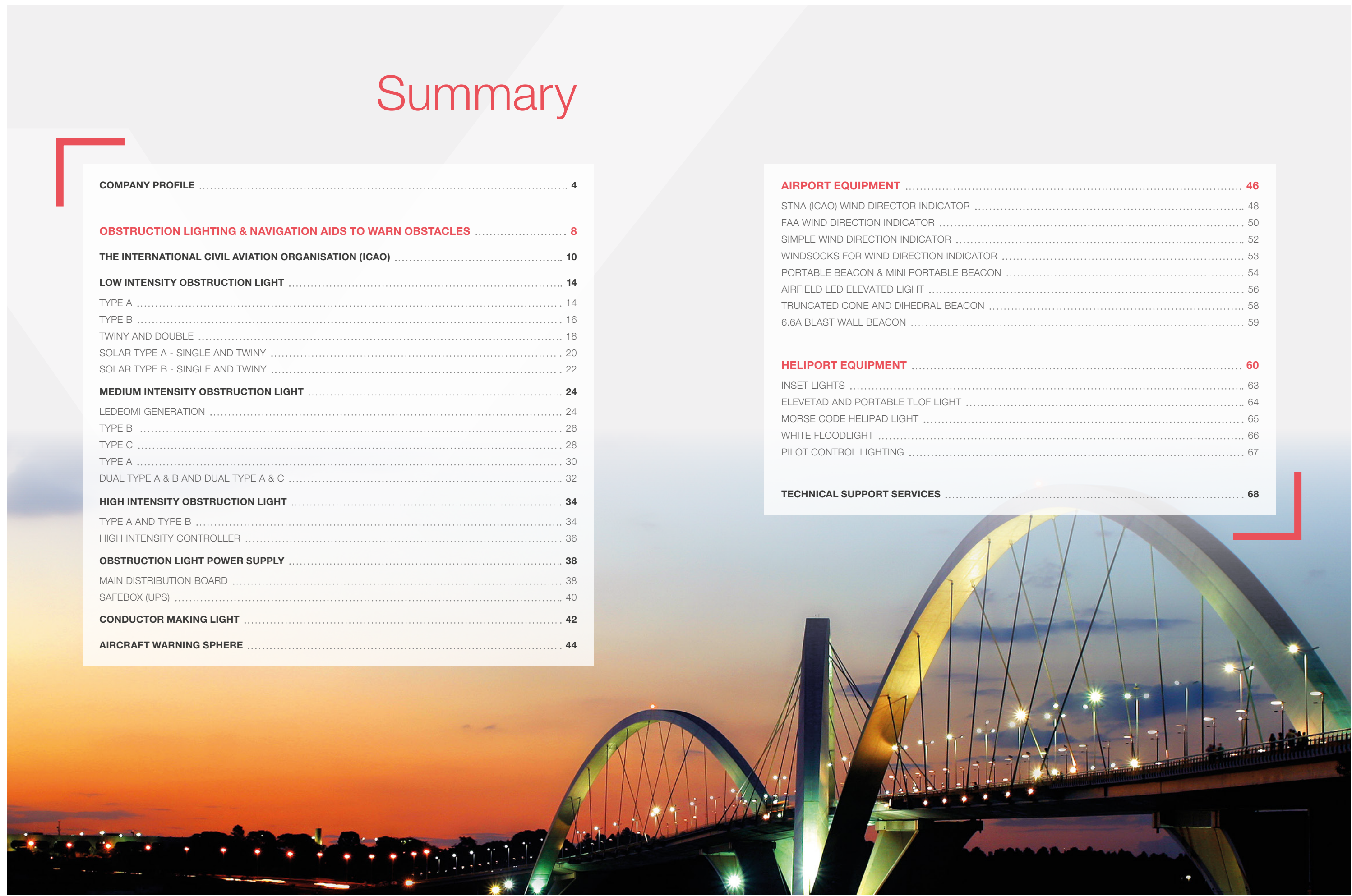
AIRCRAFT WARNING LIGHTS
& AIRFIELD EQUIPMENT



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THE COMPANY

Delta-Box, the French manufacturer of aircraft warning lights, has been supplying beaconing systems for over 30 years.

Part of the Indelec Group since 2004, leaders in the design & manufacture of lightning protection systems; at Delta-Box we design and assemble our full range of beacons at our production facility in Douai, in the north of France.

We manage in-house the development and production processes of our aircraft warning systems and associated software, which in turn allows us to innovate and propose alternative solutions.

All our products fully comply with the ICAO rules and are approved by the French Civil Aviation Authority.

DELTA BOX IN NUMBERS :

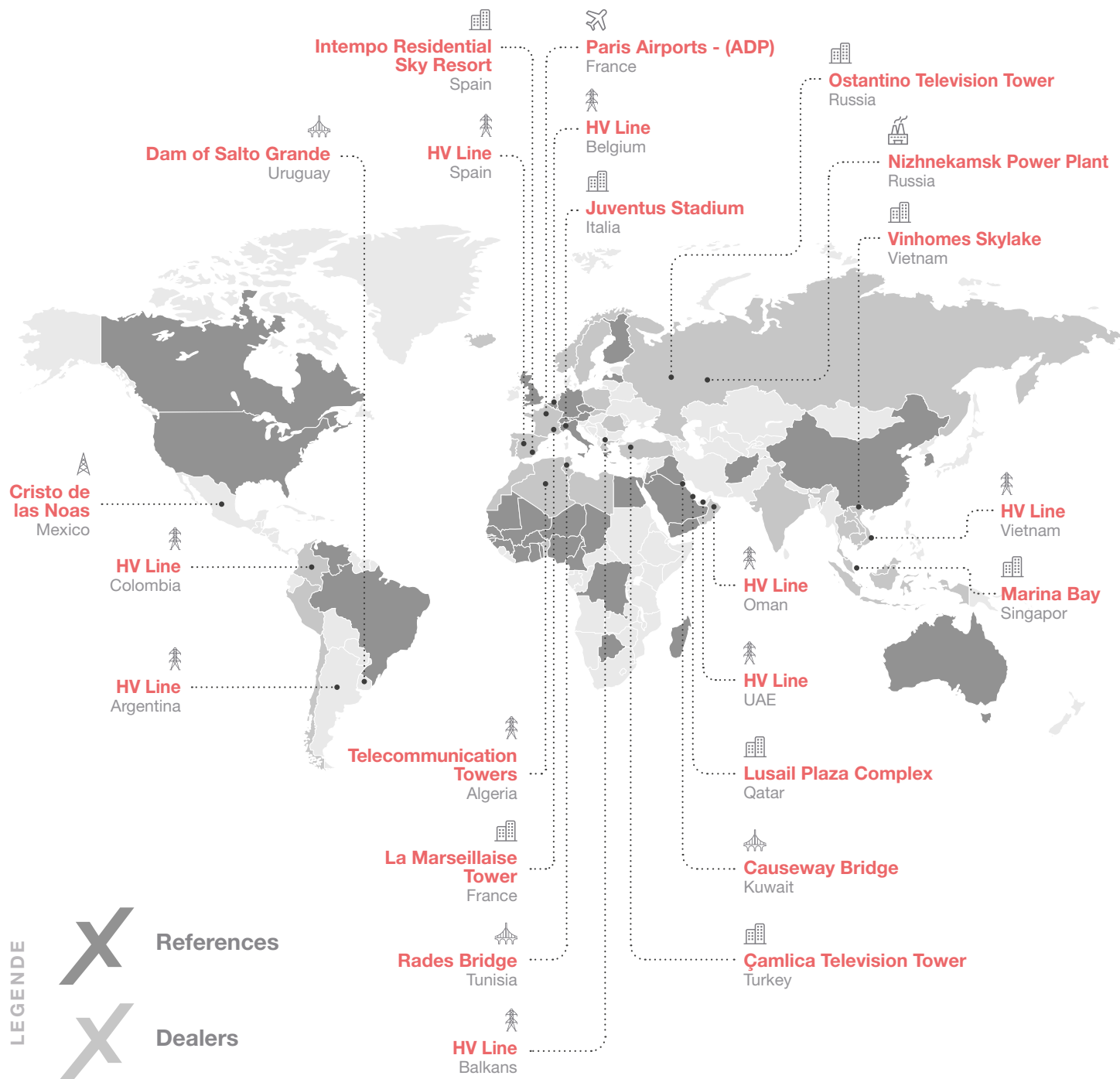
- Innovative SME into a Group of 200 employees
- Production facility of 1,000 m²
- Annual sales of €3,000,000 of which 50% is export
- Present in more than 80 countries through a network of agents and distributors
- More than 7,000 beaconing units shipped to 5 continents each year

Delta-Box's key strengths are in its recognised know-how, its reactivity and response to the technical and business needs of its clients.



AN INTERNATIONAL DIMENSION

EXPORT MARKETS



PERMANENT INVESTMENT

IN RESEARCH AND DEVELOPMENT

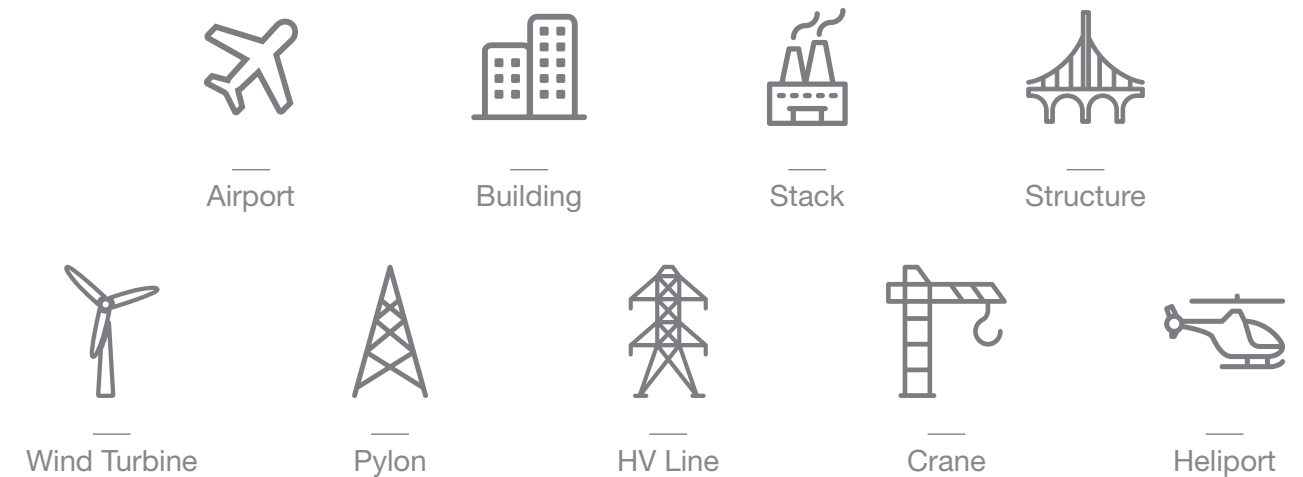
DELTA BOX's expertise in obstruction lighting systems is the result of more than 30 years of experience in development, manufacture and installation of its products and from resolving on-site and installation problems for its customers. Pioneer in the use of LED technology, DELTA BOX has its own research and development team, as well as relationships with institutions involved in applied research. This enables the company to offer advanced, state-of-the-art, technology to its clients.

Our commercial and technical departments work together to provide customized solutions for each project, taking into account every specific condition and constraint.

In addition, we also provide broad expertise to customers regarding:

- wireless data communication,
- autonomous and safety power supplies such as battery, solar station, fuel cell...
- light-signaling devices,
- specific types of lighting.

SCOPE OF APPLICATIONS



OBSTRUCTION LIGHTING
& NAVIGATION AIDS TO
WARN OBSTACLES



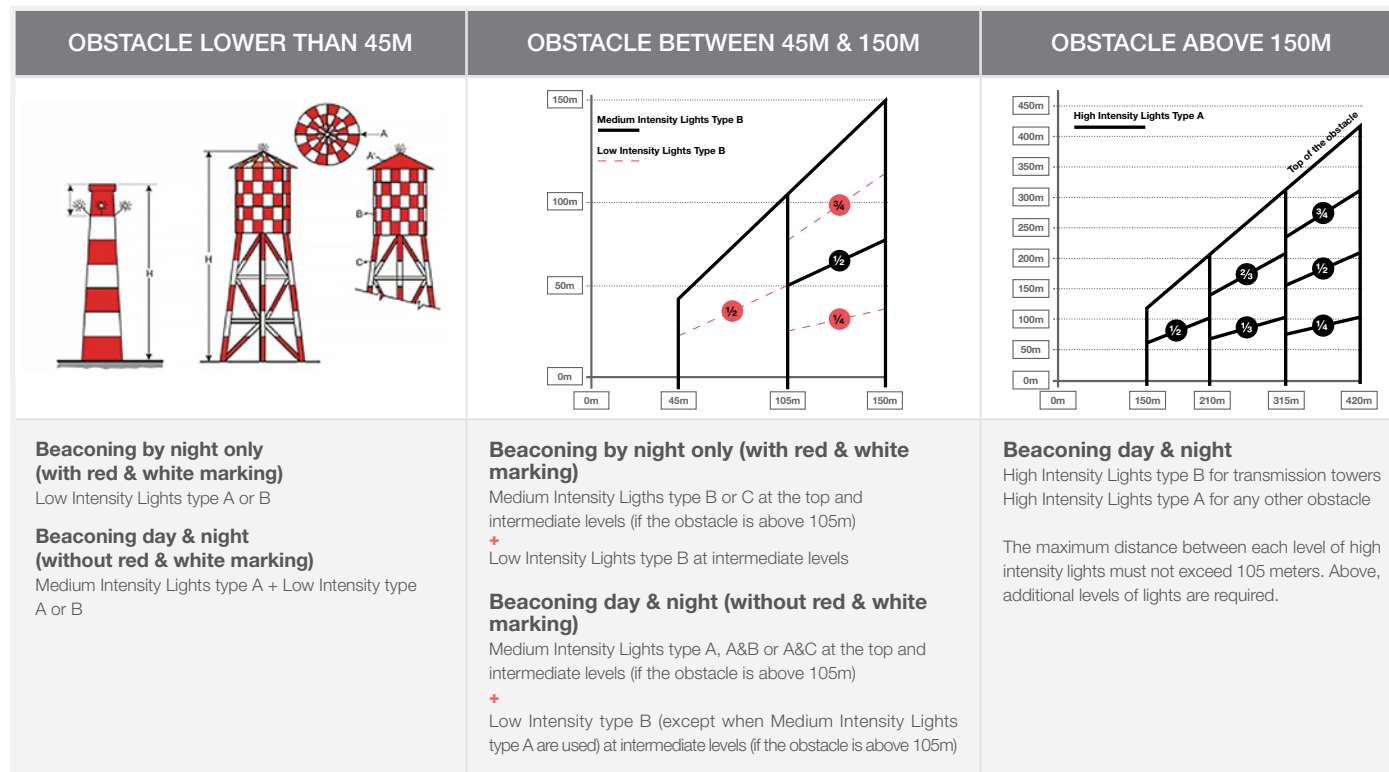
THE INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO)

RECOMMENDATIONS ON OBSTACLE WARNING

ANNEX 14 – CHAPTER 6 – 8TH EDITION, JULY 2018

GENERAL PRINCIPLES & RECOMMENDATIONS

- › All obstacles as per ICAO definition should be marked and/or lighted.
- › By day, the beaconing by lighting can replace the beaconing by marking.
- › By night, all obstacles must be beaconed with warning lights
- › The type of warning light depends on the size (height, width and length) and on the form of the object:
 - Low Intensity Lights for obstacles below 45 meters
 - Medium Intensity Lights for obstacles between 45 and 150 meters
 - High Intensity Lights for obstacles above 150 meters
- › The number and arrangements of low-, medium-, or high-intensity lights at each level to be marked shall be such that the object is indicated from every angle in azimuth.
- › Where a light is shielded in any direction by another part of the object that contributes to the definition of the obstacle, additional lights shall be provided, in such way to retain the general definition of the object to be lighted.



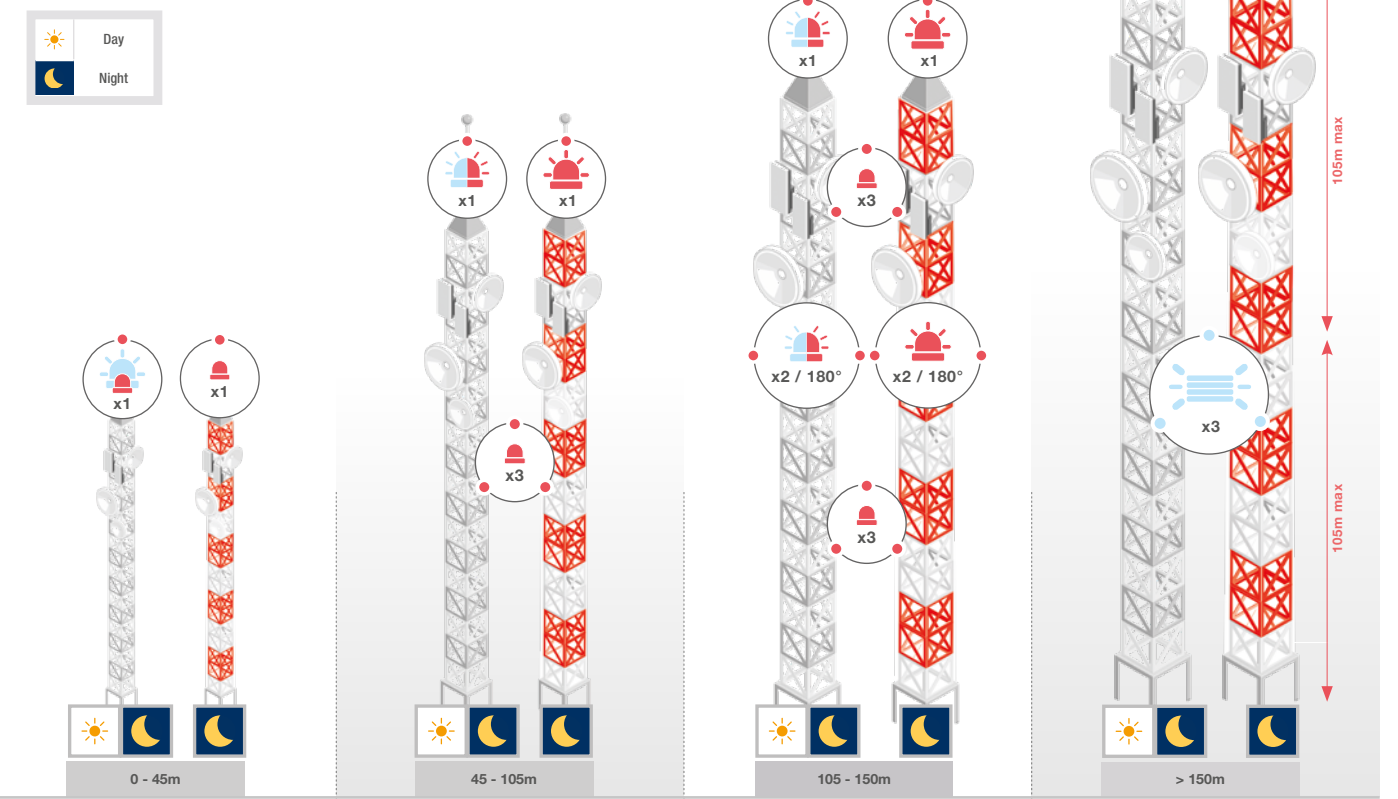
Type of Light	Color	Type of signal	Peak Intensity (Cd) at given background luminance		
			Day (Above 500 cd/m ²)	Twilight (50-500 cd/m ²)	Night (Below 50 cd/m ²)
Low Intensity	Type A	Red	Steady	-	10
	Type B	Red	Steady	-	32
Medium Intensity	Type A	White	Flashing (20-60 fpm)	20 000	2 000
	Type B	Red	Flashing (20-60 fpm)	-	2 000
	Type C	Red	Steady	-	2 000
High Intensity	Type A	White	Flashing (20-60 fpm)	200 000	2 000
	Type B	White	Flashing (20-60 fpm)	100 000	2 000



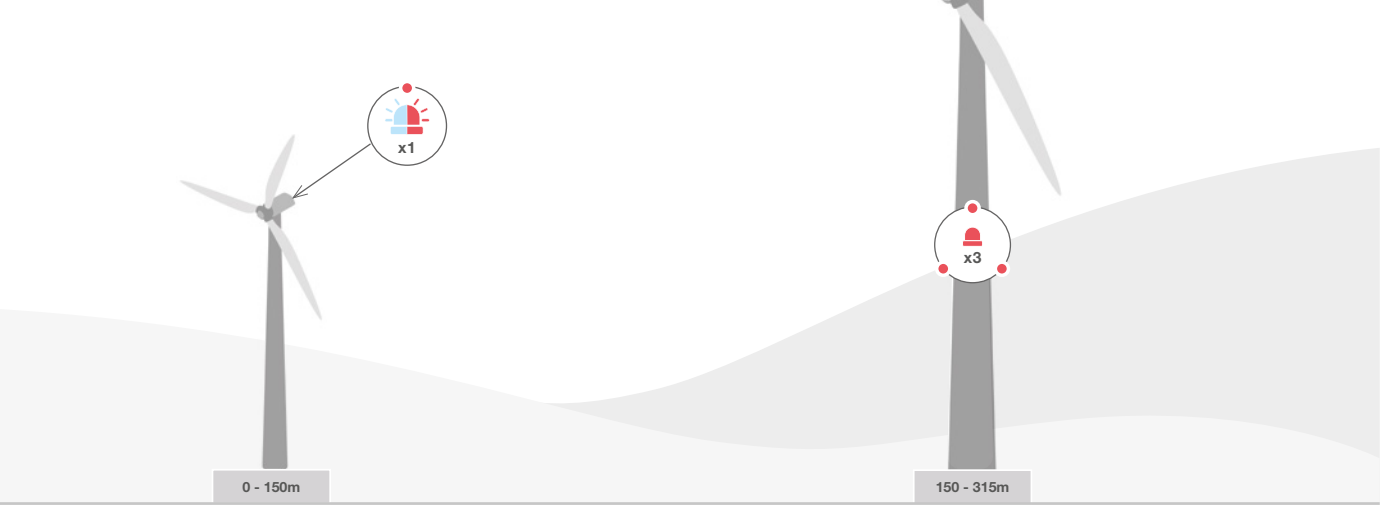
LEGENDE

- Low Intensity Light type A or B (Type B mandatory for the beaconing of intermediary levels)
- Medium Intensity Light type A
- Medium Intensity Light type B
- Medium Intensity Light type A&B
- Medium Intensity Light type A + Low Intensity Light type B
- High Intensity Light type A
- High Intensity Light type B
- Low Intensity Induction Light type A or B
- Aircraft Warning Sphere 600mm (orange, white or red)

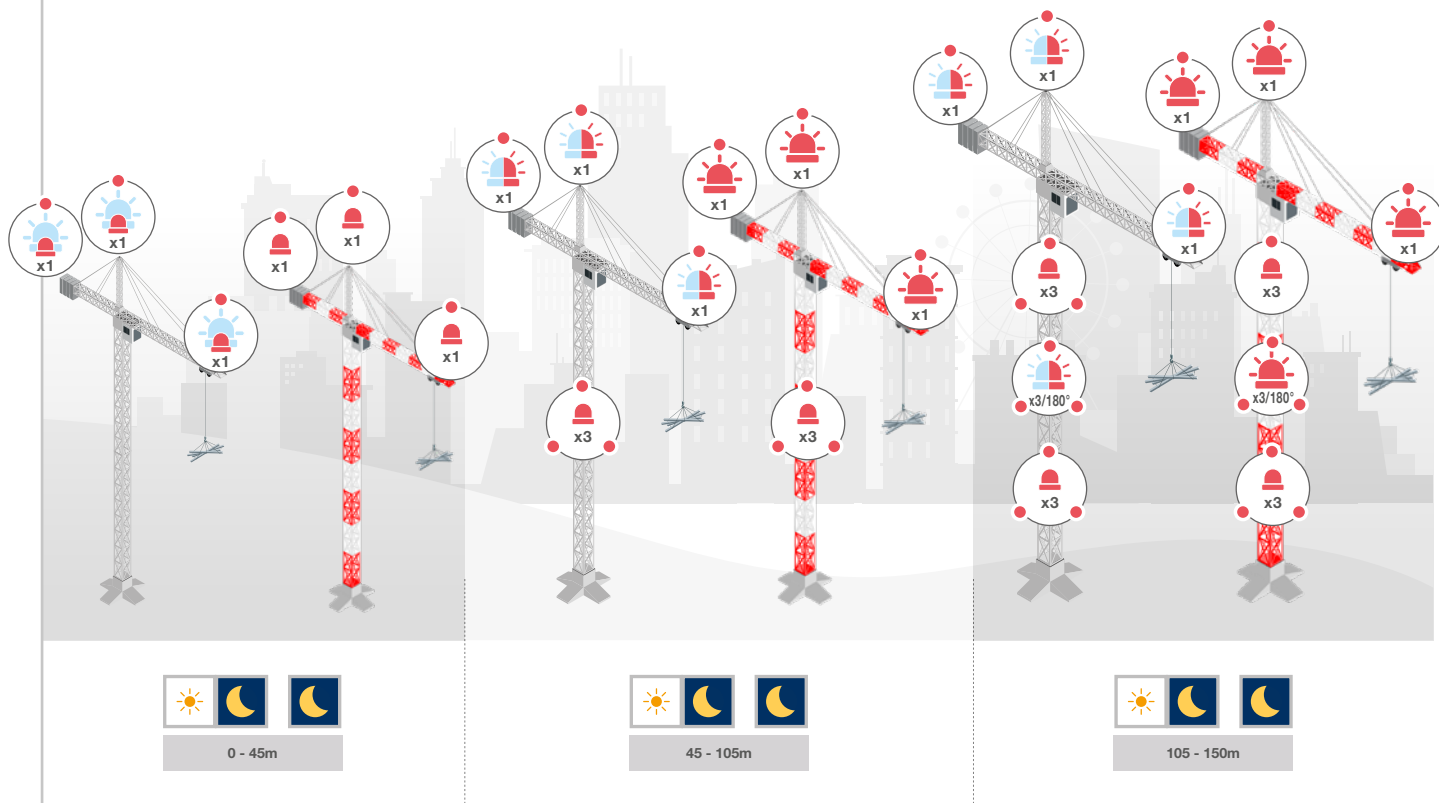
AIRCRAFT WARNING LIGHTS FOR TELECOM PYLONS



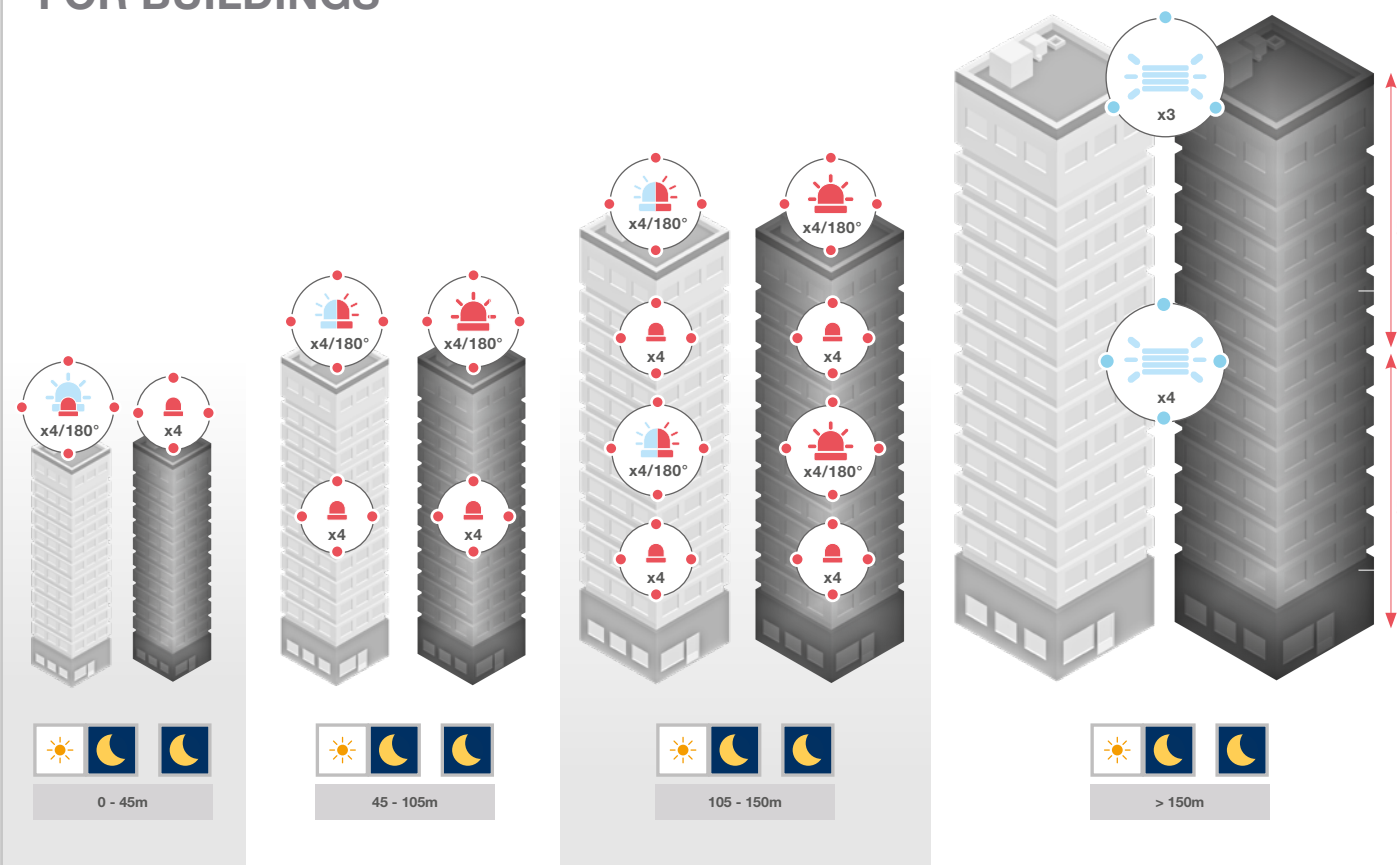
AIRCRAFT WARNING LIGHTS FOR WIND TURBINES



AIRCRAFT WARNING LIGHTS FOR CRANES



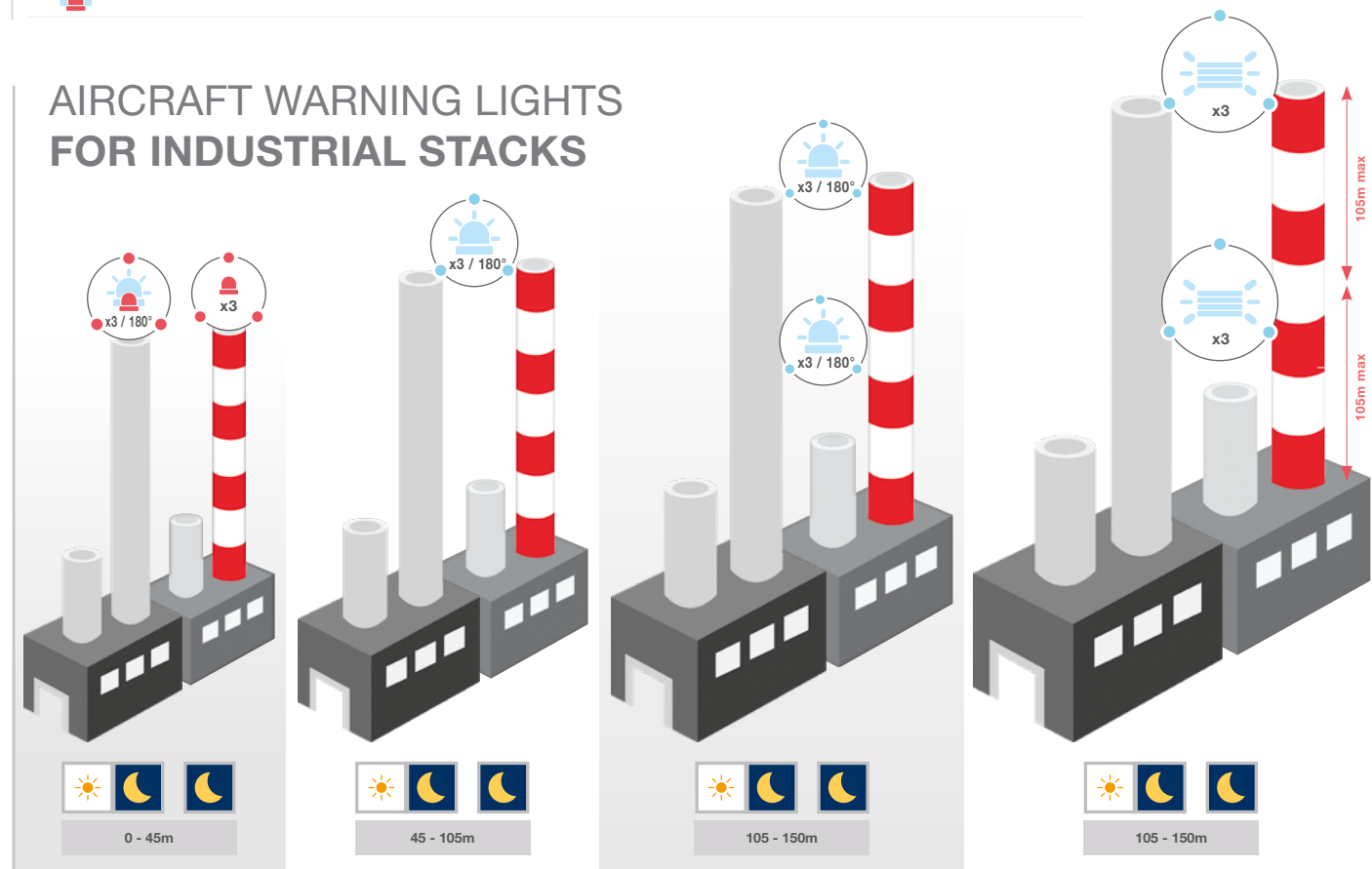
AIRCRAFT WARNING LIGHTS FOR BUILDINGS



LEGENDE

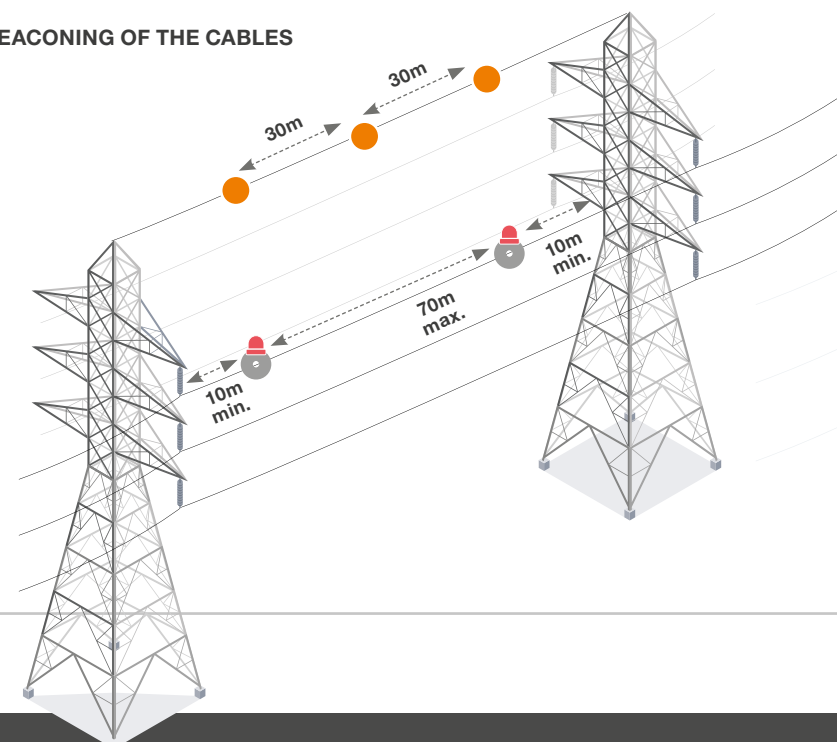
	Low Intensity Light type A or B (Type B mandatory for the beaconing of intermediary levels)		High Intensity Light type A
	Medium Intensity Light type A		High Intensity Light type B
	Medium Intensity Light type B		Low Intensity Induction Light type A or B
	Medium Intensity Light type A&B		Aircraft Warning Sphere 600mm (orange, white or red)
	Medium Intensity Light type A + Low Intensity Light type B		

AIRCRAFT WARNING LIGHTS FOR INDUSTRIAL STACKS

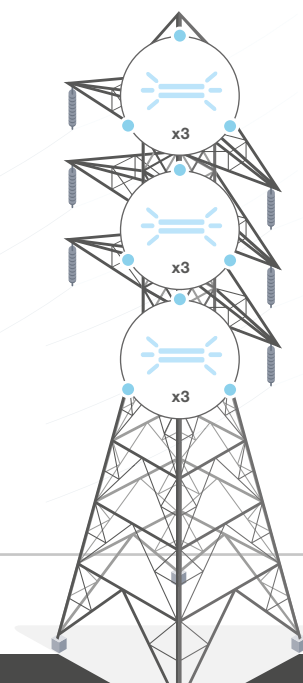


WARNING LIGHTS & SPHERES FOR HIGH VOLTAGE LINES

BEACONING OF THE CABLES



BEACONING OF THE TOWER



LOW INTENSITY OBSTRUCTION LIGHT TYPE A

RED STEADY BURN – 10 CD NIGHT



01. DESCRIPTION

The **LEDEO BIA** is a low intensity light based on multi-LEDs technology. Dedicated to a night beaconing (red steady burning), it is a long lifetime beacon (100 000 hours), with a very low consumption (<2W). The LEDEO BIA can be provided with a photocell for an automatic switch ON / OFF, and a dry contact for failure alarm. It can be solar power supplied for areas where it is difficult to bring power supply, and it is designed for an easy installation.

02. ADVANTAGES

- Long life time > 10 years
- Multi-LEDs technology
- Low consumption < 2W
- Integrated photocell and dry contact (in option)
- DELTA BOX exclusive self-test when the photocell is integrated
- No maintenance
- 2-year warranty

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Low intensity beacons can be installed on structures up to 45m in height. According to the rules, an uninterruptible power supply cabinet has to be installed to insure a 12 hours beaconing in case of power supply failure.

04. MODELS

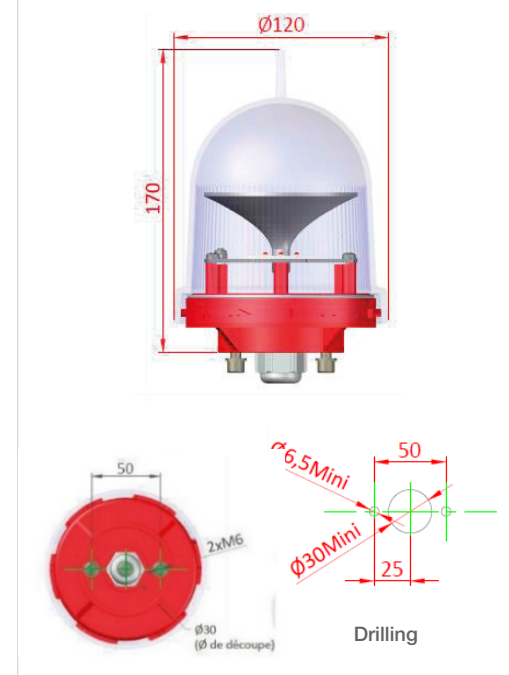
REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
LBIA00CC	12 to 48V DC	Not included	Not included
LBIA01AC	24V DC	Not included	Included
LBIA11AC	24V DC	Included	Included
LBIA01BC	48V DC	Not included	Included
LBIA11BC	48V DC	Included	Included
LBIA00MC	110-240V AC	Not included	Not included
LBIA01MC	110-240V AC	Not included	Included
LBIA11MC	110-240V AC	Included	Included



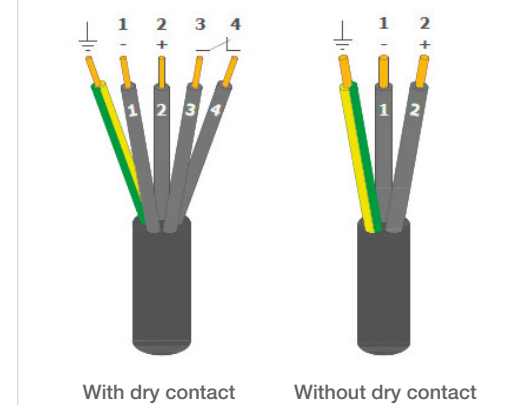
05. CHARACTERISTICS

	12, 24, 48V DC	240V AC
LUMINOUS		
Luminous source	Red LEDs	
Horizontal / Vertical beam	360° / 10°	
Luminous intensity	> 10 Cd	
MTBF	100 000 hours	
ELECTRICAL		
Voltage	12, 24, 48V DC	110 to 240V AC
Operating temperature	-55°C to +55°C	
Consumption	< 2 Watts max.	
Current I _{max}	To 12V: I=200mA	I < 10mA
	To 24V: I=100mA	
	To 48V: I=50mA	
Protection class	IP66	
Cable	2 meters	
MECHANICAL		
Body material	Composite	
Lens material	Polycarbonate with bird spike	
Mounting	M6 screw (included)	
Height / Width	170mm / 120mm	
Screw spacing	50mm	
Weight	< 1 Kg	
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume I, Chapter 6	
Quality	ISO 9001 : 2015	
WARRANTY		
Warranty period	2 years	

DIMENSIONS



WIRING



+ AVAILABLE VERSIONS

WITH INFRARED	ZAMAC BOX + UPS
<p>The infrared module uses LED technology. It provides night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.</p>	<p>Light mounted on a ZAMAC aluminum box, with 2 adjustable arms for more flexibility during installation, and a battery kit for 12 hours of autonomy. Includes cable gland and terminal block.</p>

AVAILABLE ACCESSORIES FOR INSTALLATION

- Stainless steel mounting
- Driving box
- Power supply
- Safety power supply
- Solar kit

SCOPE OF APPLICATIONS



LOW INTENSITY OBSTRUCTION LIGHT TYPE B

RED STEADY BURN – 32 CD NIGHT



01. DESCRIPTION

The **LEDEO BIB** is a low intensity light based on multi-LEDs technology. Dedicated to a night beaconing (red steady burning), it is a long lifetime beacon (100 000 hours), with a very low consumption (<6W). The LEDEO BIB can be provided with a photocell for an automatic switch ON / OFF, and a dry contact for failure alarm. It can be solar power supplied for areas where it is difficult to bring power supply, and it is designed for an easy installation.

02. ADVANTAGES

- Long life time > 10 years
- Low consumption < 6W
- Integrated photocell and dry contact (in option)
- DELTA BOX exclusive self-test when the photocell is integrated
- No maintenance
- 2-year warranty

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Low intensity beacons can be installed on structures up to 45 meter in height. For structures > 45m, it is necessary to mark the highest level with Medium Intensity light and to install at the intermediate level the Low Intensity Type B. According to the rule, an uninterruptible power supply cabinet has to be installed to insure a 12 hours beaconing in case of power supply failure.

04. MODELS

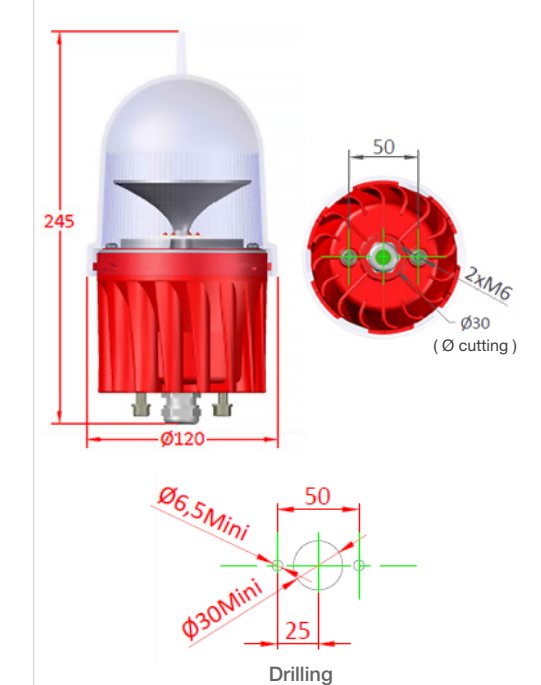
REFERENCE	VOLTAGE	VOLTAGE	DRY CONTACT
LBIB00DC	24 to 48V DC	Not included	Not included
LBIB01AC	24V DC	Not included	Included
LBIB11AC	24V DC	Included	Included
LBIB01BC	48V DC	Not included	Included
LBIB11BC	48V DC	Included	Included
LBIB00MC	110-240V AC	Not included	Not included
LBIB01MC	110-240V AC	Not included	Included
LBIB11MC	110-240V AC	Included	Included



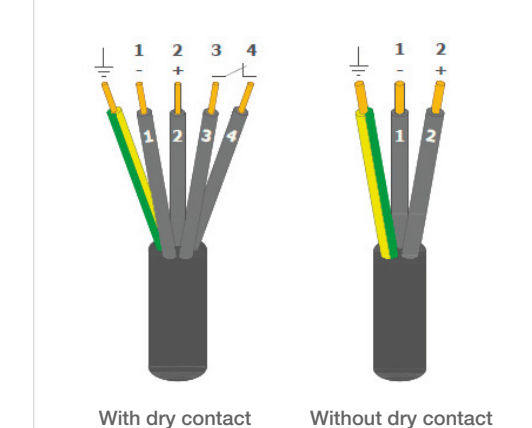
05. CHARACTERISTICS

	24-48V DC	230V AC
LUMINOUS		
Luminous source	Red LEDs	
Horizontal / Vertical beam	360° / 10°	
Luminous intensity	> 32 Cd	
MTBF	100 000 hours	
ELECTRICAL		
Voltage	24, 48V DC	110 to 240V AC
Operating temperature	-55°C to +55°C	
Consumption	< 6 Watts max.	
Current Imax	To 24V: I=220mA	I < 23mA
	To 48V: I=110mA	
Protection class	IP66	
Cable	2 meters	
MECHANICAL		
Body material	Aluminum	
Lens material	Polycarbonate with bird spike	
Mounting	M6 screw (included)	
Height / Width	245mm / 120mm	
Screw spacing	50mm	
Weight	< 1,5 Kg	
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume I, Chapter 6	
FAA	Compliant FAA L-810	
Quality	ISO 9001 : 2015	
WARRANTY		
Warranty period	2 years	

DIMENSIONS



WIRING



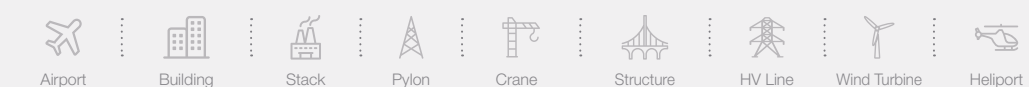
+ AVAILABLE VERSIONS

WITH INFRARED	ZAMAC BOX + UPS
<p>The infrared module uses LED technology. It provides night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.</p>	<p>Light mounted on a ZAMAC aluminum box, with 2 adjustable arms for more flexibility during installation, and a battery kit for 12 hours of autonomy. Includes cable gland and terminal block.</p>

AVAILABLE ACCESSORIES FOR INSTALLATION

- Stainless steel mounting
- Driving box
- Power supply
- Safety power supply
- Solar kit

SCOPE OF APPLICATIONS



LOW INTENSITY OBSTRUCTION LIGHT TWINY AND DOUBLE

RED STEADY BURN – 10 CD NIGHT (TYPE A) OR 32 CD NIGHT (TYPE B)



TYPE A



TYPE B

01. DESCRIPTION

The **LEDEO TWINY** and **LEDEO DOUBLE** is a one block low intensity beacon with 2 light bulbs. Thanks to DELTA BOX exclusive redundant technology, one bulb can serve as a back-up (TWINY version). For specific applications, the 2 bulbs can also operate at the same time (DOUBLE version). Each version is available with solar power supply as an option. The Multi-LEDs technology offers a long lifetime (100 000 hours). The specific design of the box is the most convenient solution on the market for flexible installation: the mounting frame is part of the box and the light position can be adjusted in the desired position.

02. ADVANTAGES

- Long life time > 10 years
- Low consumption
- Integrated photocell and dry contact (in option)
- DELTA BOX exclusive self-test when the photocell is integrated
- No maintenance
- 2-year warranty

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Low intensity beacons can be installed on structures up to 45m in height. According to the rules, an uninterruptible power supply cabinet has to be installed to insure a 12 hours beaconing in case of power supply failure.

04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL & DRY CONTACT	OPERATION*
LBIATWCB	48V DC	Included	Back-up
LBIATWMB	110-240V AC	Included	Back-up
LBIADBCB	48V DC	Included	Double
LBIADBMB	110-240V AC	Included	Double
LBIBTWCB	48V DC	Included	Back-up
LBIBTWMB	110-240V AC	Included	Back-up
LBIBDBC	48V DC	Included	Double
LBIBDBMB	110-240V AC	Included	Double

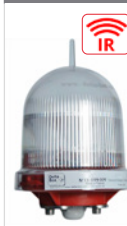
* Back-up = One lamp serves as main, one lamp serves as back-up.
Double = Both lamps are "on" simultaneously.

05. CHARACTERISTICS

	TYPE A	TYPE B
LUMINOUS		
Luminous source	Red LEDs	
Horizontal / Vertical beam	360° / 10°	
Luminous intensity	> 10 Cd	> 32 Cd
MTBF	100 000 hours	
ELECTRICAL		
Voltage	48V DC or 110 to 240V AC	
Operating temperature	-55°C to +55°C	
Consumption	Twiny	< 2 Watts
	Double	< 4 Watts
Current I _{max}	Twiny	In 48V: I < 50mA
		In 230V: I < 10mA
	Double	In 48V: I < 100mA
		In 230V: I < 20mA
Protection class	IP66	
MECHANICAL		
Body material (box)	Zamac	
Lens material	Polycarbonate with bird spike	
Height / Width	420mm / 240mm	477mm / 240mm
Weight	< 5 Kg	< 8 Kg
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume I, Chapter 6	
FAA	Compliant FAA L-810 (Type B)	
Quality	ISO 9001 : 2015	
WARRANTY		
Warranty period	2 years	


+ AVAILABLE VERSIONS

WITH INFRARED



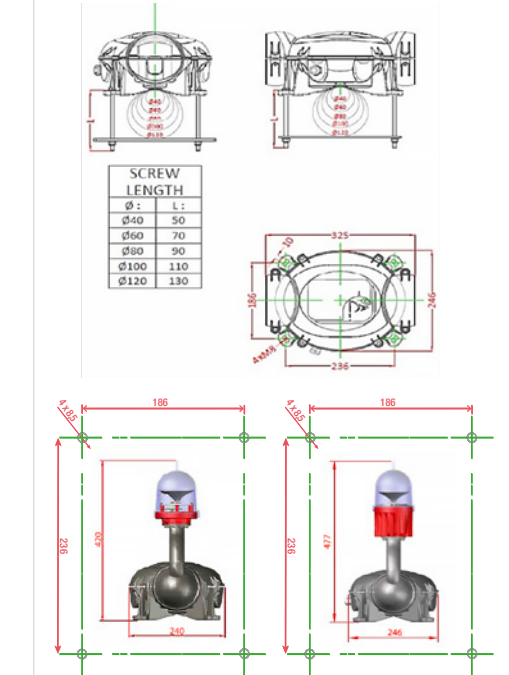
The infrared module uses LED technology. It provides night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.

ZAMAC BOX + UPS

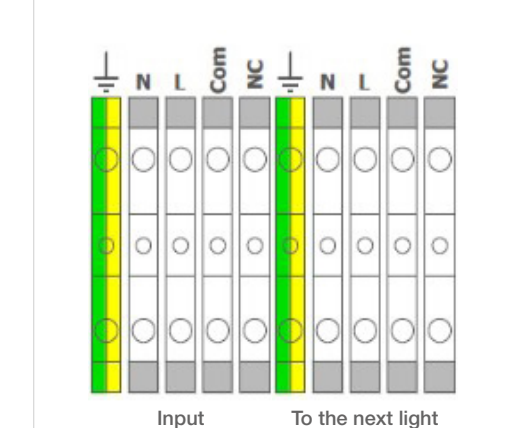


Light mounted on a ZAMAC aluminum box, with 2 adjustable arms for more flexibility during installation, and a battery kit for 12 hours of autonomy. Includes cable gland and terminal block.

DIMENSIONS

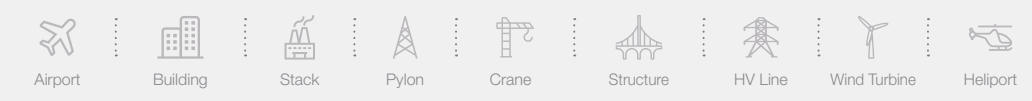


WIRING



AVAILABLE ACCESSORIES FOR INSTALLATION

- Stainless steel mounting
- Driving box
- Power supply
- Safety power supply
- Solar kit
- Iron plate and thread rod



LOW INTENSITY OBSTRUCTION LIGHT SOLAR TYPE A – SINGLE AND TWINY

RED STEADY BURN – 10 CD NIGHT



SOLEO TYPE A - SINGLE



SOLEO TYPE A - TWINY*

* One lamp serves as main, the other as back-up.

01. DESCRIPTION

The **SOLEOBIA** and **SOLEOBIA TWINY** are environmentally friendly systems, dedicated to an autonomous night beaconing (red steady burning). The long life LEDs (100 000 hours) enable to have a maintenance free system, and the solar station is dimensioned for more than 120 hours of autonomy. The device is provided with a photocell for an automatic switch ON / OFF and a dry contact for failure alarm. It is also available with a 110-240V input as back-up power supply. The TWINY version is equipped with a second light bulb and with the exclusive redundant DELTA BOX system, which is automatically tested at each start-up. In case of failure of one light bulb, the second light bulb automatically switches on. The specific design of the box is the most convenient solution on the market for installation: the mounting frame is part of the box and its arms can be adjusted in horizontal or vertical position.

02. ADVANTAGES

- Long life time > 10 years
- Proven solar technology and dimensioning
- DELTA BOX exclusive self-test when the photocell is integrated
- Autonomous system (no need for other power supply)
- 2-year warranty
- Zamac box with epoxy powder painting
- Available with cable between the lights and the solar unit for an easier accessibility to the box and panels

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Low intensity beacons can be installed on structures up to 45m in height.

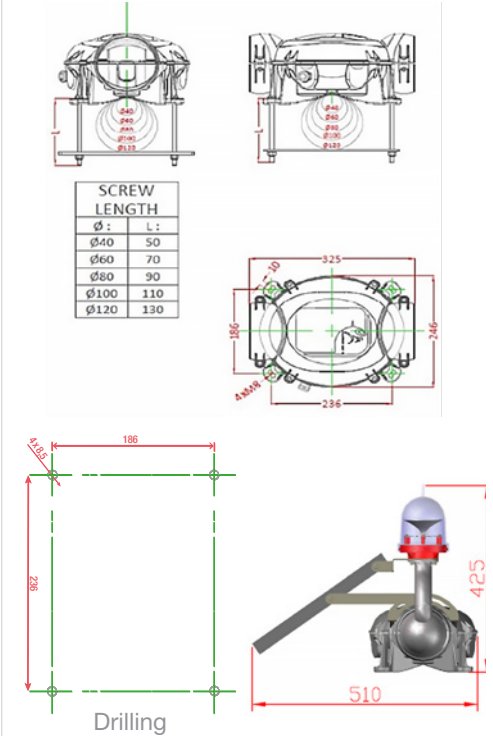
04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	TYPE
SOLBIA10C	Solar	Included	Single
SOLBIATWC	Solar	Included	Twiny*

05. CHARACTERISTICS

LUMINOUS	
Luminous source	Red LEDs
Horizontal / Vertical beam	360° / 10°
Luminous intensity	> 10 Cd
MTBF	100 000 hours
ELECTRICAL	
Voltage	Solar
Operating temperature	-10°C to +55°C
Solar panel	10 Watts Polycrystalline
Battery	2x AGM 12V 7Ah
Autonomy	120 hours (without charging)
Protection class	IP66
MECHANICAL	
Body material	Zamac
Lens material	Composite
Mounting	M8 screw (in option)
Height / Width	425mm / 510mm
Weight	< 15 Kg
Solar panel dimensions	365mm x 240 mm
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume I, Chapter 6
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

DIMENSIONS



AVAILABLE ACCESSORIES FOR INSTALLATION

- Specific stainless steel mounting
- Iron plate and thread rod
- Commercial ref : TWINY-FIXE

+ AVAILABLE VERSIONS

UNCOUPLED BULB	230V BACK-UP	REINFORCED	WITH INFRARED
Can be provided with 5 to 20m of cable between the bulb and solar unit, to ease maintenance operations.	The ZAMAC box is provided with a 110-240V input for a back-up power supply.	Available with a 20W solar panel for areas with low sun exposure.	The infrared module uses LED technology. It provides night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.

SCOPE OF APPLICATIONS



LOW INTENSITY OBSTRUCTION LIGHT SOLAR TYPE B – SINGLE AND TWINY

RED STEADY BURN – 32 CD NIGHT



SOLEO TYPE B - SINGLE



SOLEO TYPE B - TWINY*

* One lamp serves as main, the other as back-up.

01. DESCRIPTION

The **SOLEOBIB** and **SOLEOBIB TWINY** are environmentally friendly systems, dedicated to an autonomous night beaconing (red steady burning). The long life LEDs (100 000 hours) enable to have a maintenance free system, and the solar station is dimensioned for more than 60 hours of autonomy. The device is provided with a photocell for an automatic switch ON / OFF and a dry contact for failure alarm. It is also available with a 110-240V input as back-up power supply. The TWINY version is equipped with a second light bulb, and with the exclusive redundant DELTA BOX system, which is automatically tested at each start-up. In case of failure of one light bulb, the second light bulb automatically switches on. The specific design of the box is the most convenient solution on the market for installation: the mounting frame is part of the box and its arms can be adjusted in horizontal or vertical position.

02. ADVANTAGES

- Long life time > 10 years
- Proven solar technology and dimensioning
- DELTA BOX exclusive self-test when the photocell is integrated
- Autonomous system (no need for other power supply)
- 2-year warranty
- Zamac box with epoxy powder painting
- Available with cable between the lights and the solar unit for an easier accessibility to the box

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Low intensity beacons can be installed on structures up to 45m in height.

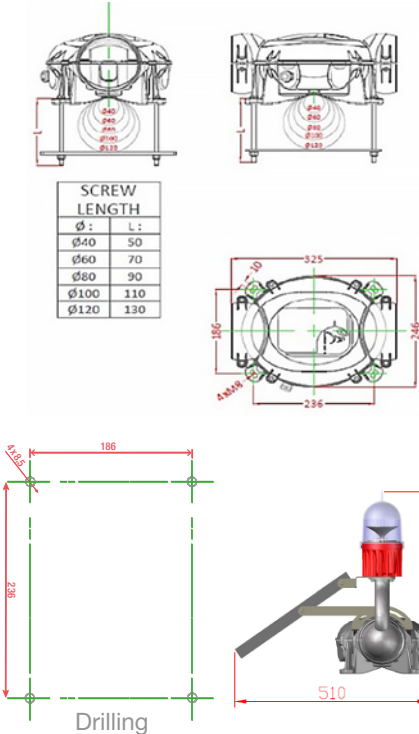
04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	TYPE
SOLBIB10C	Solar	Included	Single
SOLBIBTWC	Solar	Included	Twiny*

05. CHARACTERISTICS

LUMINOUS	
Luminous source	Red LEDs
Horizontal / Vertical beam	360° / 10°
Luminous intensity	> 32 Cd
MTBF	100 000 hours
ELECTRICAL	
Voltage	Solar
Operating temperature	-10°C to +55°C
Solar panel	1 x 20 Watts Polycrystalline
Battery	2 x AGM 12V 7Ah
Autonomy	60 hours (without charging)
Protection class	IP66
MECHANICAL	
Body material	Zamac
Lens material	Aluminum
Mounting	M8 screw (in option)
Height	480mm
Weight	< 15 Kg
Solar panel dimensions	440mm x 350mm
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume I, Chapter 6
FAA	Compliant FAA L-810
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

DIMENSIONS



AVAILABLE ACCESSORIES FOR INSTALLATION



- Specific stainless steel mounting
- Iron plate and thread rod
- Commercial ref : TWINY-FIXE

+ AVAILABLE VERSIONS

UNCOUPLED BULB	230V BACK-UP	REINFORCED	WITH INFRARED
<p>Can be provided with 5 to 20m of cable between the bulb and solar unit, to ease maintenance operations.</p>	<p>The ZAMAC box is provided with a 110-240V input for a back-up power supply.</p>	<p>Available with a 30W solar panel for areas with low sun exposure.</p>	<p>The infrared module uses LED technology. It provides night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.</p>

MEDIUM INTENSITY OBSTRUCTION LIGHT LEDEOMI GENERATION



TYPE A



TYPE C



TYPE AB and AC

01. DESCRIPTION

The **LEDEOMI** are medium intensity lights based on multi-LEDs technology. They offer great advantages in terms of lifetime (100 000 hours), resistance and consumption. The photocell can either be included within the light or be externalized in a separate controller (with or without UPS) in order to synchronize different lights. They can also be equipped with a solar station, for a complete autonomous functioning.

02. ADVANTAGES

- Integrated synchronization wire, optical fiber, GPS and TCPIP available
- Long life time > 10 years
- Multi-LEDs
- No maintenance
- 2 years warranty
- Zamac box with epoxy powder painting
- IP66

03. MODELS

REFERENCE	POWER SUPPLY	PHOTOCELL	DRY CONTACT
LMIA01BB	48V DC	Not Included	Included
LMIA11BB	48V DC	Included	Included
LMIA01MB	110-240V AC	Not Included	Included
LMIA11MB	110-240V AC	Included	Included
LMIC01BB	48V DC	Not Included	Included
LMIC11BB	48V DC	Included	Included
LMIC01MB	110-240V AC	Not Included	Included
LMIC11MB	110-240V AC	Included	Included
LMIAB01BB LMIAC01BB	48V DC	Not Included	Included
LMIAB11BB LMIAC11BB	48V DC	Included	Included
LMIAB01MB LMIAC01MB	110-240V AC	Not Included	Included
LMIAB11MB LMIAC11MB	110-240V AC	Included	Included

04. CHARACTERISTICS

	TYPE A	TYPE C	TYPE AB AND AC
LUMINOUS			
Luminous source	LED White flashing	Red steady	LED White flashing (type A) with red flashing (type B) or red steady (type C)
Horizontal / Vertical beam	360° / 3°		
Luminous intensity	20 000 Cd Day 2 000 Cd Night	2 000 Cd Night	20 000 Cd Day (white) 2 000 Cd Night (red)
Flash frequency	20 to 60 fpm	N/A	20 to 60 fpm
MTBF	100 000 hours		
ELECTRICAL			
Voltage	48V DC / 110-240V AC		
Operating temperature	-20°C to +55°C		
Consumption	< 40 Watts at 20 fpm	< 75 Watts	< 40 Watts at 20 fpm (type A) < 15 Watts at 20 fpm (type B) < 75 Watts (type C)
Protection class	IP66		
MECHANICAL			
Box material	Zamac		
Body lamp material	Aluminum		
Lens material	Polycarbonate		
Mounting	M8 screws (in option)		
Height / Width	410mm / 410mm		
Weight	< 17 Kg		
ENVIRONMENTAL			
Humidity	100%		
Frost	-60°C		
Wind speed	240 Km/h		
CERTIFICATIONS			
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE		
OACI	Annex 14, Volume I, Chapter 6		
FAA	FAA L-865		
Quality	ISO 9001: 2015		
WARRANTY			
Warranty Period	2 years		

+ AVAILABLE VERSIONS

180° VERSION

The number of LEDs is divided by two for beacons that need to flash only over a 180° horizontal beam. This way the power consumption can be decreased.

SOLAR OPTION

Customized solar stations dimensioned as per the weather conditions of the project location.

WITH INFRARED MODULE

The infrared module uses LED technology. It comes equipped to the medium intensity lights in order to provide night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.

• AVAILABLE ACCESSORIES FOR INSTALLATION

- Power supply
- UPS System
- Solar kit
- L-shape fixation mountings

SCOPE OF APPLICATIONS



MEDIUM INTENSITY OBSTRUCTION LIGHT (NEW GEN) TYPE B RED FLASH (2 000 CD NIGHT)

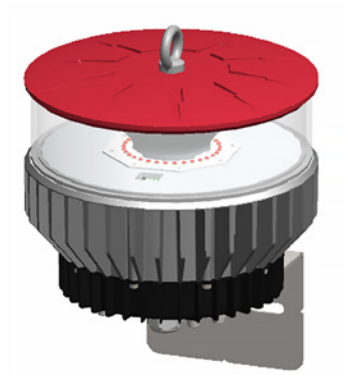


01. DESCRIPTION

The **LEDEO SMIB** is a medium intensity light with multi-LEDs technology, developed with a zamac design for a natural fresh cooling system. Dedicated to a night beaconing, it is a long life time system (100 000 hours), very strong with a low consumption (6W at 20 flashes/minute). The LEDEO SMIB is provided with a photocell for an automatic switch ON/OFF, and a dry contact for failure alarm. Moreover, it can be solar power supplied. It has been designed for an easy installation.

02. ADVANTAGES

- Integrated synchronization wire (optical fiber, GPS and TCPIP available)
- Long life time > 10 years
- Multi-LEDs
- Low consumption: 6W (20 flashes/minute)
- DELTA BOX exclusive self-test included with photocell
- No maintenance
- Zamac box with epoxy powder painting
- IP66
- Light and compact design for an easy installation
- External LED for visual diagnostic
- Modulation of consumption according to exterior T°C
- Connection box integrated in the light
- 2-year warranty





03. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
SMIB01AB	24V DC	Not included	Included
SMIB11AB	24V DC	Included	Included
SMIB01BB	48V DC	Not included	Included
SMIB11BB	48V DC	Included	Included
SMIB01MB	110-240V AC	Not included	included
SMIB11MB	110-240V AC	Included	Included

04. CHARACTERISTICS

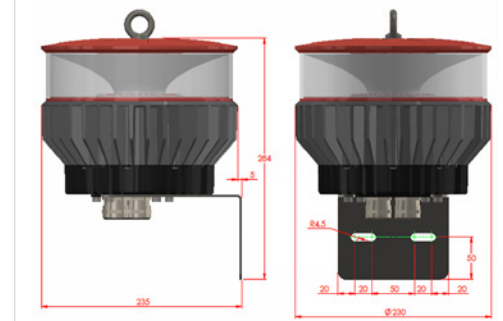
LUMINOUS	
Luminous source	Red flash LEDs
Horizontal / Vertical beam	360° / 3°
Luminous intensity	2 000 Cd Night
Flash frequency	20 to 60 fpm
MTBF	100 000 hours
ELECTRICAL	
Voltage	24V DC / 48V DC / 110 to 240V AC
Operating temperature	-45°C to +55°C
Consumption	< 6 Watts at 20 fpm
Current Imax	In 48V: I = 1.5 A In 230V: I < 400 mA
Protection class	IP66
MECHANICAL	
Box material	Zamac
Lens material	Polycarbonate
Mounting	M6 screw (included)
Height / Width (with fixation mountings)	284mm / 235mm
Weight	< 5 Kg
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume I, Chapter 6
FAA	Compliant FAA L-864
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

+ AVAILABLE VERSIONS

WITH INFRARED	SOLAR OPTION
 <p>The infrared module uses LED technology. It comes equipped to the medium intensity lights in order to provide night visibility with specific glasses (NVG). It consumes very little (<5 Watts) and will flash as per the behavior of the light.</p>	 <p>Customized solar stations dimensioned as per the weather conditions of the project location.</p>

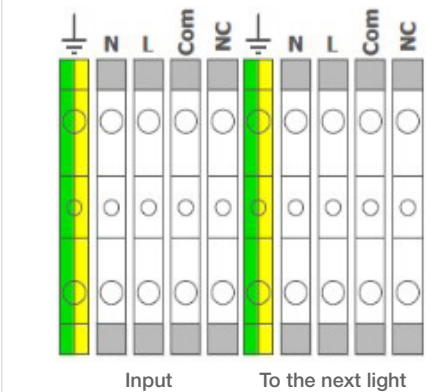


DIMENSIONS



Fixation mountings in option

WIRING



AVAILABLE ACCESSORIES FOR INSTALLATION

- Power supply cabinet
- UPS System
- Solar kit
- Type "L" fixation mountings

MEDIUM INTENSITY OBSTRUCTION LIGHT TYPE C

RED STEADY BURN (2 000 CD NIGHT)

AVAILABLE
1ST HALF
2022



WITH FIXATION MOUNTINGS

01. DESCRIPTION

The **LEDEO SMIC** is a **new generation** of medium intensity light equipped with multi-LEDs technology, developed with an aluminum design for a natural fresh cooling system. Dedicated to a night beaconing, it has a long life time (100 000 hours), a robust design, and a low consumption (Below 100W). The LEDEO SMIC can be provided with a photocell for an automatic switch ON / OFF, and a dry contact for failure alarm. It can also be solar power supplied and has been designed for an easy installation.

02. ADVANTAGES

- Light and compact design for an easy installation: only 8 kilograms
- Long life time > 10 years
- Low consumption <100W
- DELTA BOX exclusive self-test included with photocell
- No maintenance
- IP66
- Connection box integrated in the light
- 2-year warranty

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Medium Intensity lights can be installed on structures from 45 to 150 meters tall, with an intermediary level of marking. According to the rules, an uninterruptible power supply cabinet has to be installed to insure a 12 hours of beaconing in case of power supply failure.

04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
SMIC00BB	48V DC	Not included	Not included
SMIC01BB*	48V DC	Not included	Included
SMIC11BB	48V DC	Included	Included
SMIC00MB	110-240V AC	Not included	Not included
SMIC01MB*	110-240V AC	Not included	Included
SMIC11MB	110-240V AC	Included	Included

* To be used with an external DELTA BOX photocell.

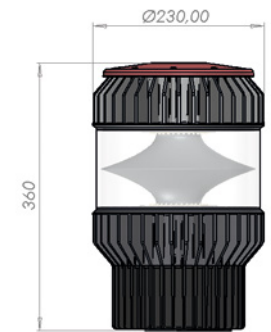
05. CHARACTERISTICS

LUMINOUS	
Luminous source	Red steady burning LEDs
Horizontal / Vertical beam	360° / 3°
Luminous intensity	2 000 Cd
LED life duration	100 000 hours
ELECTRICAL	
Voltage	48V DC / 110 to 240V AC
Operating temperature	-50°C to + 50°C
Consumption (Night Mode)	<100W
Current I _{max} (Night Mode)	In 48V: I< 2 100mA
	In 230V: I< 450mA
Protection class	IP66
MECHANICAL	
Body material	Aluminum
Lens material	Polycarbonate
Mounting	M6 screws (included)
Height / Width	360mm / 230mm (Excluding fixation mountings)
Weight	8 Kg
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume 1, Chapter 6
FAA	Compliant FAA L-864
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

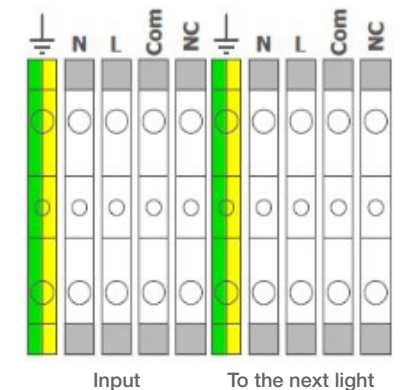
+ AVAILABLE VERSIONS

180° VERSION	SOLAR OPTION
<p>The number of LEDs is divided by two for beacons that need to flash only over a 180° horizontal beam. It enables to decrease the power consumption.</p>	<p>Customized solar stations dimensioned as per the weather conditions of the project location.</p>

DIMENSIONS



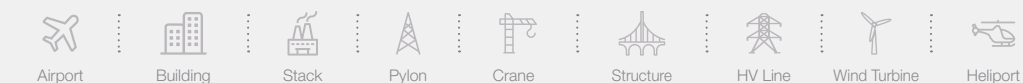
WIRING



AVAILABLE ACCESSORIES FOR INSTALLATION

- Power supply cabinet
- UPS System
- Solar kit
- Type "L" fixation mountings

SCOPE OF APPLICATIONS



MEDIUM INTENSITY OBSTRUCTION LIGHT TYPE A

WHITE FLASH (20 000 CD DAY / 20 000 CD TWILIGHT / 2 000 CD NIGHT)

AVAILABLE
1ST HALF
2022



WITH FIXATION MOUNTINGS

01. DESCRIPTION

The **LEDEO SMIA** is a **new generation** of medium intensity light equipped with multi-LEDs technology, developed with an aluminum design for a natural fresh cooling system. Dedicated to a day and night beaconing, it has a long life time (100 000 hours), a robust design, and a low consumption (starting from 40W). The LEDEO SMIA can be provided with a photocell for an automatic day/night switch, and a dry contact for failure alarm. It can also be solar power supplied and has been designed for an easy installation.

02. ADVANTAGES

- Light and compact design for an easy installation: only 8 kg
- Long life time > 10 years
- Low consumption <40W
- DELTA BOX exclusive self-test included with photocell
- No maintenance
- IP66
- Connection box integrated in the light
- 2-year warranty

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Medium Intensity lights can be installed on structures from 45 to 150 meters tall, with an intermediary level of marking. According to the rules, an uninterruptible power supply cabinet has to be installed to insure a 12 hours of beaconing in case of power supply failure.

04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
SMIA01BB*	48V DC	Not included	Included
SMIA11BB	48V DC	Included	Included
SMIA01MB*	110-240V AC	Not included	Included
SMIA11MB	110-240V AC	Included	Included

* To be used with an external DELTA BOX photocell.

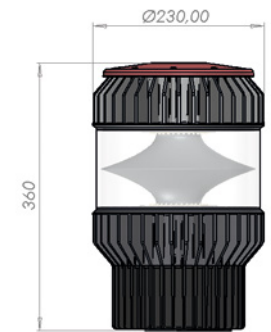
05. CHARACTERISTICS

LUMINOUS	
Luminous source	White flash LEDs
Horizontal / Vertical beam	360° / 3°
Luminous intensity	20 000 Cd Day / 2 000 Cd Night
Flash frequency	20 to 60 fpm
LED life duration	100 000 hours
ELECTRICAL	
Voltage	48V DC / 110 to 240V AC
Operating temperature	-50°C to + 50°C
Consumption (Day Mode)	<40W at 40fpm
Consumption (Night Mode)	<8W at 40 fpm
Current I _{max} (Day Mode)	In 48V: I = 4 950mA
	In 230V: I = 1 000mA
Current I _{max} (Night Mode)	In 48V: I = 1 400mA
	In 230V: I = 300mA
Protection class	IP66
MECHANICAL	
Body material	Aluminum
Lens material	Polycarbonate
Mounting	M6 screws (included)
Height / Width	360mm / 230mm (Excluding fixation mountings)
Weight	8 Kg
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume 1, Chapter 6
FAA	Compliant FAA L-865
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

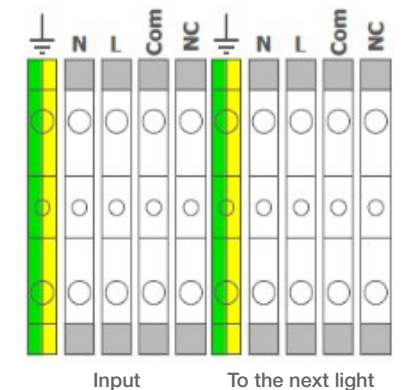
+ AVAILABLE VERSIONS

180° VERSION	SOLAR OPTION
<p>The number of LEDs is divided by two for beacons that need to flash only over a 180° horizontal beam. It enables to decrease the power consumption.</p>	<p>Customized solar stations dimensioned as per the weather conditions of the project location.</p>

DIMENSIONS



WIRING



AVAILABLE ACCESSORIES FOR INSTALLATION

- Power supply cabinet
- UPS System
- Solar kit
- Type "L" fixation mountings

MEDIUM INTENSITY OBSTRUCTION LIGHT DUAL TYPE A & B AND DUAL TYPE A & C

WHITE SIGNAL (20 000 CD DAY / 2 000 CD NIGHT) + RED SIGNAL (2 000 CD NIGHT)

AVAILABLE
1ST HALF
2022



WITH FIXATION MOUNTINGS

01. DESCRIPTION

The **LEDEO SMIAB** and **SMIAC** are a **new generation** of medium intensity lights equipped with multi-LEDs technology, developed with an aluminum design for a natural fresh cooling system. Dedicated to a day and night beaconing, it has a long life time (100 000 hours), a robust design, and a low consumption (starting from 40W by day and 6W by night). The LEDEO SMIAB and SMIAC can be provided with a photocell for an automatic day/night switch, and a dry contact for failure alarm. It can also be solar power supplied and has been designed for an easy installation.

02. ADVANTAGES

- Light and compact design for an easy installation: only 8 kg
- Long life time > 10 years
- Low consumption
- DELTA BOX exclusive self-test included with photocell
- No maintenance
- IP66
- Connection box integrated in the light
- 2-year warranty

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). Medium Intensity lights can be installed on structures from 45 to 150 meters tall, with an intermediary level of marking. According to the rules, an uninterruptible power supply cabinet has to be installed to insure a 12 hours of beaconing in case of power supply failure.

04. MODELS

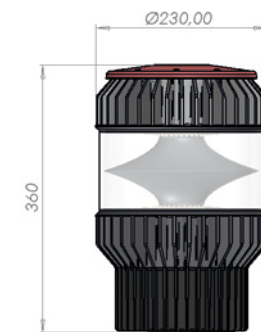
REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT	SIGNAL
SMIAB01BB*	48V DC	Not included	Included	White Flash (Day) Red Flash (Night)
SMIAB11BB	48V DC	Included	Included	
SMIAB01MB*	110-240V AC	Not included	Included	
SMIAB11MB	110-240V AC	Included	Included	
SMIAC01BB*	48V DC	Not included	Included	White Flash (Day) Red Steady Burning (Night)
SMIAC11BB	48V DC	Included	Included	
SMIAC01MB*	110-240V AC	Not included	Included	
SMIAC11MB	110-240V AC	Included	Included	

* To be used with an external DELTA BOX photocell.

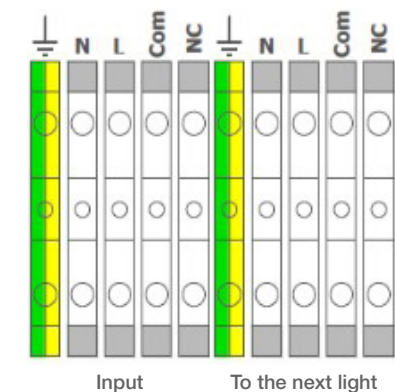
05. CHARACTERISTICS

	SMIAB	SMIAC
LUMINOUS		
Luminous source	White flash LEDs (Day) Red flash LEDs (Night)	White flash LEDs (Day) Red steady burning LEDs (Night)
Horizontal / Vertical beam	360° / 3°	
Luminous intensity	20 000 Cd Day / 2 000 Cd Night	
Flash frequency	20 to 60 fpm	
LED life duration	100 000 hours	
ELECTRICAL		
Voltage	48V DC / 110 to 240V AC	
Operating temperature	-50°C to + 50°C	
Consumption (Day Mode)	<40W at 40fpm	<40W at 40fpm
Consumption (Night Mode)	<6W at 40fpm	<100W
Current I _{max} (Day Mode)	In 48V: I = 4 950mA In 230V: I = 1 000mA	
Current I _{max} (Night Mode)	In 48V: I = 1 500mA In 230V: I < 400mA	In 48V: I < 2 100mA In 230V: I < 450mA
Protection class	IP66	
MECHANICAL		
Body material	Aluminum	
Lens material	Polycarbonate	
Mounting	M6 screws (included)	
Height / Width	360mm / 230mm (Excluding fixation mountings)	
Weight	8 Kg	
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume 1, Chapter 6	
FAA	Compliant FAA L-864 / FAA L-865	
Quality	ISO 9001 : 2015	
WARRANTY		
Warranty period	2 years	

DIMENSIONS



WIRING



+ AVAILABLE VERSIONS

180° VERSION	SOLAR OPTION
<p>The number of LEDs is divided by two for beacons that need to flash only over a 180° horizontal beam. It enables to decrease the power consumption.</p>	<p>Customized solar stations dimensioned as per the weather conditions of the project location.</p>

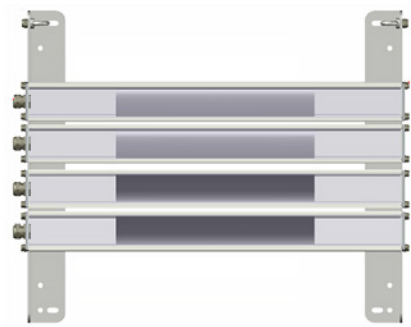
AVAILABLE ACCESSORIES FOR INSTALLATION

- Power supply cabinet
- UPS System
- Solar kit
- Type "L" fixation mountings

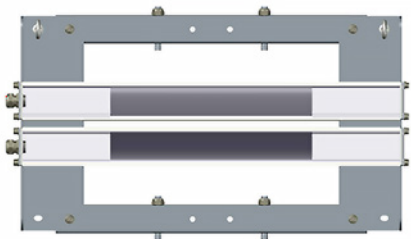
HIGH INTENSITY OBSTRUCTION LIGHTS

TYPE A AND TYPE B

WHITE FLASH



TYPE A



TYPE B

01. DESCRIPTION

Our **LEDEO HIA & HIB** are high intensity lights based on LED technology, developed with an aluminium frame for a natural fresh cooling system. Dedicated to a day, twilight and night marking, their conception allows for a long lifetime and weight optimization. The lights come equipped to a specific control cabinet, including a photocell for an automatic day/night switch and a dry contact for failure alarm. The lights are designed to ease the installation process and they all come with a junction box in order to facilitate the wiring with the main control cabinet.

02. ADVANTAGES

- Integrated synchronization wire, optical fiber, GPS and TCP/IP available
- Long life time up to 10 years
- Aluminum design for natural cooling system
- Multi-LEDs
- Average consumption LHIA <150W (a 40 fpm)
- Average consumption LHIB <75W (a 40 fpm)
- Mounting frame included
- No maintenance
- 2 years warranty
- IP 66

03. APPLICATIONS

Rules concerning aircraft beaconing are established by the ICAO (Annex 14, Chapter 6). High intensity lights can be settled on structures higher than 150 meters in height. In addition, high intensity lights type B are solely dedicated to the signaling of Transmission Towers.

04. MODELS

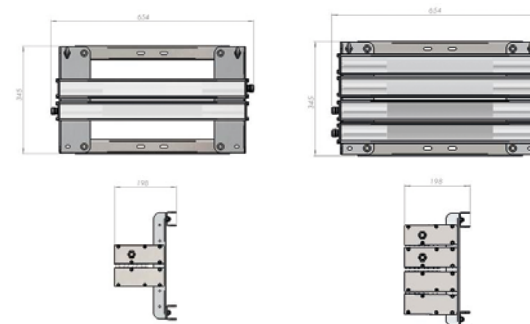
REFERENCE*	POWER SUPPLY	PHOTOCELL	DRY CONTACT
LHIA-TF	110-240V CA	In separate control cabinet	In separate control cabinet
LHIB-TF	110-240V CA	In separate control cabinet	In separate control cabinet

* Every light is delivered with a dedicated junction box for cabinet connection.

05. CHARACTERISTICS

	TYPE A	TYPE B
LUMINOUS		
Luminous source	LED White flashing	
Horizontal / Vertical beam	120° / 3°	
Luminous intensity	200 000 Cd Day 20 000 Cd Twilight 2 000 Cd Night	100 000 Cd Day 20 000 Cd Twilight 2 000 Cd Night
Flash frequency	20 to 60 fpm	20 to 60 fpm (with sequencing between levels)
MTBF	100 000 hours	
ELECTRICAL		
Voltage	110-240V CA	
Operating temperature	-40°C to +55°C	
Consumption	< 150 Watts at 40 fpm	< 75 Watts at 40 fpm
Current Imax	I < 3 500mA (120°) in 230 VAC I < 17A (120°) in 48 VDC	I < 1 800mA (120°) in 230 VAC I < 8 500mA (120°) in 48 VDC
Protection class	IP66	
MECHANICAL		
Body lamp material	Aluminum	
Lens material	Glass	
Height / Width	500mm / 640mm	370mm / 640mm
Weight	< 20 Kg	
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE	
OACI	Annex 14, Volume I, Chapter 6	
FAA	FAA L-856	FAA L-857
Quality	ISO 9001: 2015	
WARRANTY		
Warranty Period	2 years	

DIMENSIONS



AVAILABLE ACCESSORIES FOR INSTALLATION

- Power supply
- UPS System
- Solar kit
- GPS synchronization, fiber optics

HIGH INTENSITY OBSTRUCTION LIGHTS

HIGH INTENSITY CONTROLLER

MAIN DISTRIBUTION BOARD



01. DESCRIPTION

High Intensity Controllers must be used to power and monitor DELTA BOX High Intensity Lights. They are customized according to the number of lights to be installed and can handle from 1 up to 4 Light Heads LHIA or LHIB. Our controllers are equipped with one control card, one intelligence card per light head connected to the controller (between one and four) and one generator card per light module connected to the controller (4 light modules per LHIA, 2 lights modules per LHIB).

The controller is equipped with one to four power supply output to beacons. Each output can be in 16 cores (in the case of an installation with LHIB) or 32 cores (in the case of an installation with LHIA) to each light head individual connection box.

Our high intensity controllers can also serve as main control panels or main distribution boards with a connected photocell and/or GPS module to handle the change of intensity and/or flashing synchronization of one complete installation. Distance communication for default report or monitoring is available in option.

02. FEATURES

- Connection box
- Material: Painted steel (standard)
- Input lightning protection
- Protection class: IP66
- Failure alarm contacts integrated
- Photocell and GPS in option
- 1 ON/OFF switch

03. MODELS

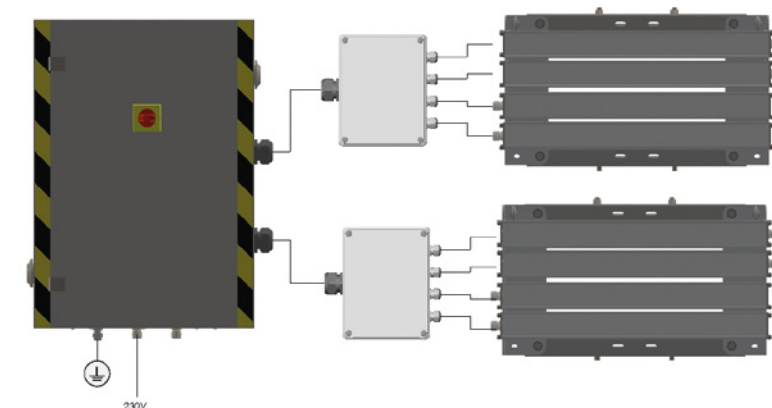
REFERENCE	DIMENSIONS*	QTY OF LIGHTS	QTY OF CONTROL CARDS	QTY OF INTELLIGENCE CARDS	QTY OF GENERATOR CARDS	QTY OF POWER SUPPLY DRIVERS
AA-LHIA-A230	500x400x210mm	1 x LHIA	1	1	4	1
AA-2LHIA-A230	800x600x250mm	2 x LHIA	1	2	8	1
AA-3LHIA-A230	800x600x250mm	3 x LHIA	1	3	12	1
AA-4LHIA-A230	1000x800x300mm	4 x LHIA	1	4	16	2
AA-LHIB-A230	500x400x210mm	1 x LHIB	1	1	2	1
AA-2LHIB-A230	700x500x250mm	2 x LHIB	1	2	4	1
AA-3LHIB-A230	700x500x250mm	3 x LHIB	1	3	6	1
AA-3LHIB-A230	800x600x250mm	4 x LHIB	1	4	8	1

* Dimensions can vary.

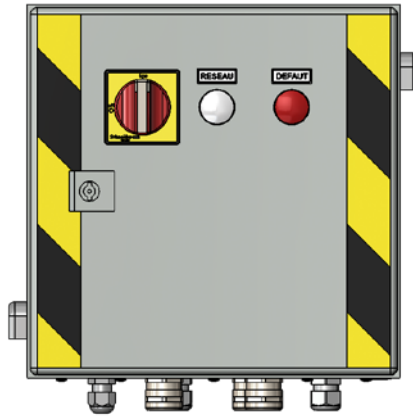
04. CHARACTERISTICS OF CONTROLLERS

TECHNICAL CHARACTERISTICS	
ELECTRICAL	
Input Standard Voltage	110-240VAC
Output Standard Voltage	48VDC
MECHANICAL	
Control Panel Material	Painted Steel
Fixation	With exterior legs
Dimensions	See above
Protection Class	IP66
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	160 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE
Quality	ISO 9001: 2015
WARRANTY	
Warranty Period	2 years
OPTIONS	
Panel in Stainless Steel	<input checked="" type="checkbox"/>
Extra Luminous Indicator on the front	<input checked="" type="checkbox"/>
Various inputs for beacons	<input checked="" type="checkbox"/>
Battery backup	<input checked="" type="checkbox"/>
Photocell and GPS	<input checked="" type="checkbox"/>

EXAMPLE OF CONFIGURATION



OBSTRUCTION LIGHT POWER SUPPLY MAIN DISTRIBUTION BOARD FOR LOW AND MEDIUM INTENSITY LIGHTS

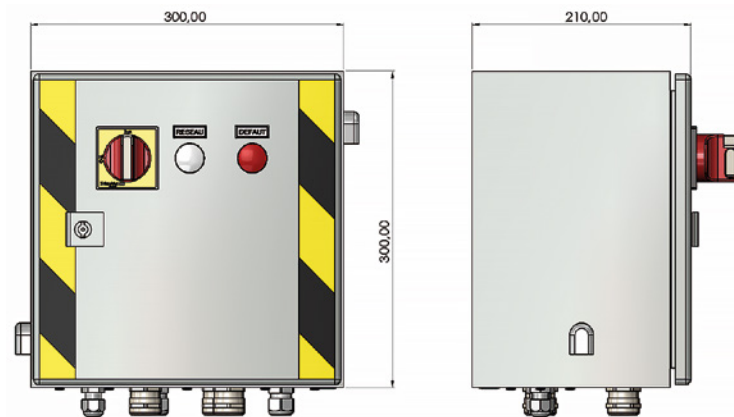
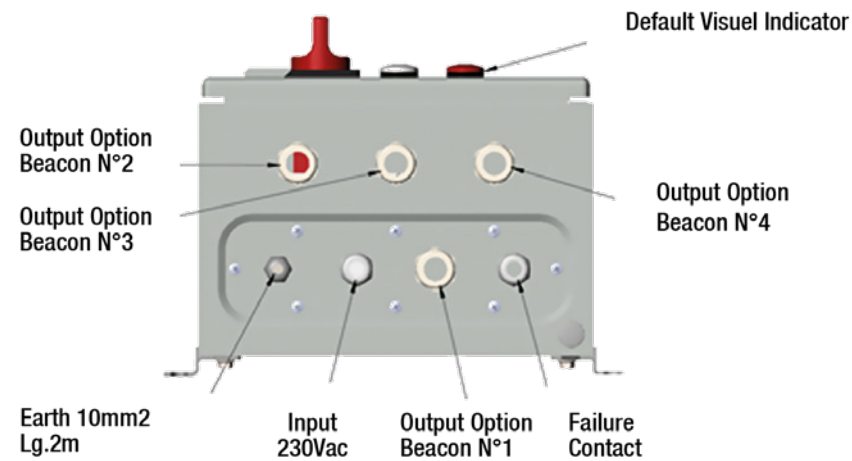


01. DESCRIPTION

Our range of control panels is designed to power supply any Obstruction Light, on any type of installation. It integrates all the necessary electric protections. The beacons can be wired in series or in a star configuration. In standard version, the control panel is equipped with an ON/OFF switch, an input lightning protection and one default visual indicator for the Main Power Supply. In option, it is possible to have additional default visual indicators and buttons or switches.

02. ADVANTAGES

- Cabling customized by DELTA BOX in its factory to match the requirements of your project
- IP66 Structure
- 2-year Warranty
- Input Lightning Protection
- Painted Steel



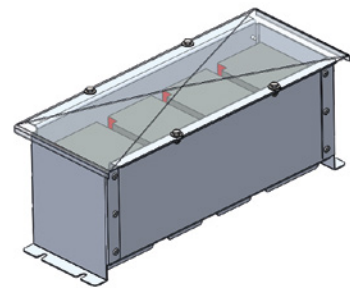
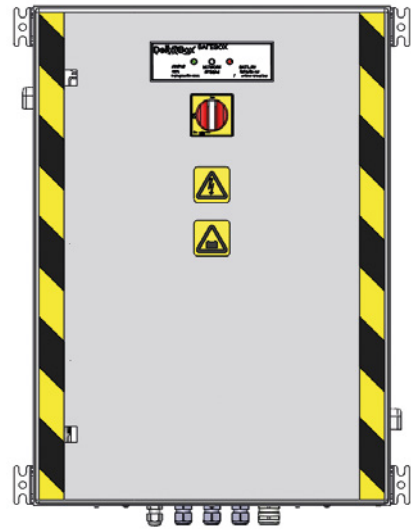
* The visual elements are for guidance only. The size of the power supply control panel can change depending on the options needed.

03. CHARACTERISTICS

Reference	AAMB-10AF-75W	AAMB - 10AF-500W	AAMB- 10AF-1000W	AAMM-10AF	AA-A400C048-10AF
APPLICATIONS					
Maximum number of beacons	25 L.I. type A 12 L.I. type B 1 M.I. type B or C	160 L.I. type A 80 L.I. type B 1 M.I. type A or AB 6 M.I. type B or C	3 M.I. type A or AB 12 M.I. type B or C	To be determined according to the installation	1 M.I. type A or AB 6 M.I. type B or C
TECHNICAL CHARACTERISTICS					
ELECTRICAL					
Input Standard Voltage	110-240V				400V
Output Standard Voltage	48V			110-240V	48V
Functioning Temperature	-55°C à +55°C				
MECHANICAL					
Type of Control Panel	1	1 or 2	3	1 or 2	2
Control Panel Material	Painted Steel		Painted Steel	Painted Steel	Painted Steel
Fixation	With exterior legs				
Protection class	IP66				
ENVIRONMENTAL					
Humidity	80%				
Wind Speed	160 Km/h				
CERTIFICATIONS					
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE				
Quality	ISO 9001 : 2015				
WARRANTY					
Warranty Period	2 years				
DIMENSIONS AND WEIGHT					
TYPE 1		TYPE 2		TYPE 3	
300x300x210mm – 7 kg		380x380x210mm – 10 kg		500x400x260mm – 15 kg	
TYPE 4*		TYPE 5*		TYPE 6*	
600x600x250mm – 16 kg		700x500x250mm – 31 kg		1000x760x300mm – 56 kg	

*For customized applications

OBSTRUCTION LIGHT POWER SUPPLY SAFEBOX (UPS) UNINTERRUPTIBLE POWER SUPPLY



01. DESCRIPTION

Our **Uninterruptible Power Supply** cabinet is dedicated to ensure 12 hours of autonomy in case of main power supply failure. The SAFEBOX is a UPS solution optimized for obstruction lights based on high quality batteries. The SAFEBOX is available with a 110-240V input and a 48V or 110-240V output. In standard version, it is equipped with an ON/OFF switch, an input lightning protection and one default visual indicator for the Main Power Supply. In option, it is possible to have additional default visual indicators and buttons or switches.

02. ADVANTAGES

- Compact
- IP66 structure
- Functional status and charging indication on the front of the cabinet
- 12 hours autonomy
- 2-year warranty

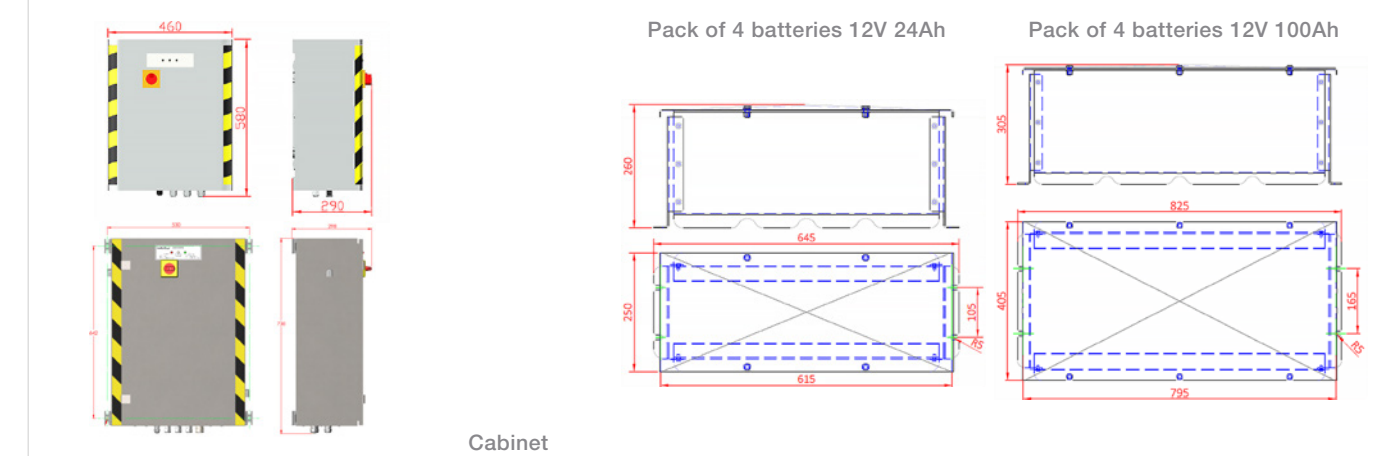
03. MODELS

REFERENCE	POWER SUPPLY	BATTERY PACK	CAPACITY
SBMCBI4-10	230V / 48V	4 Batteries 12V 7Ah	10 LBIA or 4 LBIB
SBMCBI8-20	230V / 48V	4 Batteries 12V 12Ah	20 LBIA or 8 LBIB
SBMCM1	230V / 48V	4 Batteries 12V 24Ah	1 LMIA or 4 SMIB
SBMCM2	230V / 48V	8 Batteries 12V 24Ah	2 LMIA or 8 SMIB
SBMCM3	230V / 48V	4 Batteries 12V 100Ah	4 LMIA or 6 SMIB
SBMMM1	230V / 230V	4 Batteries 12V 24Ah	1 LMIA or 4 SMIB
SBMMM2	230V / 230V	8 Batteries 12V 24Ah	2 LMIA or 8 SMIB
SBMMM3	230V / 230V	4 Batteries 12V 100Ah	4 LMIA or 16 SMIB

04. CHARACTERISTICS

MODELS & TECHNICAL CHARACTERISTICS								
Reference	SBMCBI4-10	SBMCBI8-20	SBMCM1	SBMCM2	SBMCM3	SBMMM1	SBMMM2	SBMMM3
ELECTRICAL								
Input Voltage	110-240V (400V available)							
Output Voltage	48V				110-240V			
Operating T°C	-10°C to +55°C							
Autonomy	12 hours							
Battery	AGM							
MECHANICAL (CABINET)								
Body Material	Polyester				Painted Steel			
Mounting	With external mounting bracket (not included)							
Dimensions	580x460x290 (mm)				700x500x290 (mm)			
Weight	20 kg	24 kg	37 kg			55 kg		
Protection class	IP66							
MECHANICAL (BATTERY PACK)								
Body Material	Aluminum							
Number of rack	1	1	1	2	1	1	2	1
Position of rack	Integrated in the cabinet			1 integrated in the cabinet + 1 external	External	Integrated in the cabinet	1 integrated in the cabinet + 1 external	External
Total Weight	8,8 kg	15,2 kg	40 kg	80 kg	140 kg	40 kg	80 kg	140 kg
Protection class	IP 66							
ENVIRONMENTAL								
Humidity	80%							
Wind Speed	160 Km/h							
CERTIFICATIONS								
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE							
Quality	ISO 9001 : 2015							
WARRANTY								
Warranty	2 years (excluding batteries)							

DIMENSIONS OF THE CABINET



CONDUCTOR MARKING LIGHT LOW INTENSITY TYPE A & B

RED STEADY BURN – 10 CD NIGHT (TYPE A) OR 32 CD NIGHT (TYPE B)



RESISTANCE TEST TO
LIGHTNING STRIKES

01. DESCRIPTION

The **LEDEO BHT** is a one assembly low intensity light dedicated to the beaconing of high voltage lines. It operates with a current transformer that uses the electro-magnetic field of the line to power up the LEDs. It is an autonomous and long lifetime system (100 000 hours), which design has been proven worldwide. With only one reference serving all the power line capacities, its compact design and light weight allow the quickest and easiest installation on the market.

02. ADVANTAGES

- Self-powered and autonomous system
- Proven design in operation worldwide
- Self-centered on the conductor cable thanks to a specific nut
- Product completely filled with resin to avoid vibration issues on the electronics
- Only 1 reference for all line voltage capacities
- Operation up to 3000 A of line current
- Installation time reduced
- No maintenance required
- 2-year warranty

03. APPLICATIONS

The **LEDEO BHT** complies with the ICAO regulations as it is power supplied by the magnetic field around the cable of the high voltage line. The light can be used for beaconing high voltage lines up to 500kV. The installation specifications for high voltage overhead cables are mainly dealing with the intervals between two beacons:

- 70 meters for sensitive specification location in the vicinity of an airport
- 105 meters for other locations

Moreover, the light must be installed at more than 10 meters from the closest supporting tower.

04. MODELS

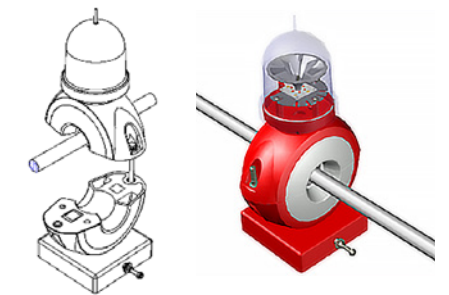
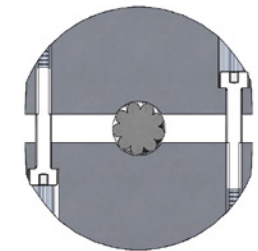
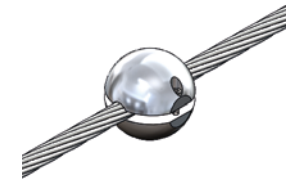
REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
LBIA00HT	1kV to 500kV	Not included	Not included
LBIB00HT	1kV to 500kV	Not included	Not included

REFERENCE	DESCRIPTION
BHT-NX-14/21	Set of 2 nuts for cable diam. 14 to 21mm
BHT-NX-22/29	Set of 2 nuts for cable diam. 22 to 29mm
BHT-NX-30/36	Set of 2 nuts for cable diam. 30 to 36mm
BHT-NX-37/40	Set of 2 nuts for cable diam. 37 to 40mm

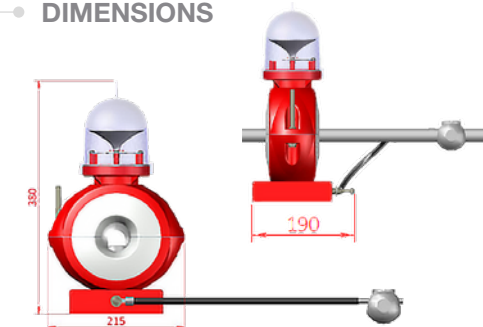
05. CHARACTERISTICS

	TYPE A	TYPE B
LUMINOUS		
Luminous source	Red LEDs	
Horizontal / Vertical beam	360° / 10°	
Luminous intensity	> 10 Cd	> 32 Cd
MTBF	100 000 hours	
ELECTRICAL		
Voltage	1kV to 500kV	
Operating temperature	-55°C to +55°C	
Current Imin	7A	
Current	10A	
Current Imax	3000A	
Protection class	IP66	
MECHANICAL		
Body material	ABS	
Lens material	Polycarbonate with bird spike	
Mounting	Fixation nuts (aluminium)	
Height / Width	380mm / 215mm	
Weight	< 6 Kg	
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume I, Chapter 6	
Quality	ISO 9001 : 2015	
WARRANTY		
Warranty period	2 years	

INSTALLATION



DIMENSIONS



AIRCRAFT WARNING SPHERE

RED - WHITE - ORANGE



01. DESCRIPTION

Our **warning sphere** is a diurnal marking ball installed on high voltage lines and pylon stays. Very light and resistant to severe weather conditions (extreme cold or high solar exposure), the warning sphere is available in red, white or orange.

The sphere can be adapted on any diameter of Earth cable and thanks to its silicon clamping system, does not require any armor rod to be fixed on the cable.

02. ADVANTAGES

- Exclusive silicon clamping system to ensure stability on the line
- Proven design in operation worldwide, no damage to the cable
- Weather resistant (extreme cold and high solar exposure)
- Physical property retention after UV exposure
- Color stability
- Practical toughness and rigidity
- Dimensional stability
- Adaptable to any diameter of cable or conductor

03. MODELS

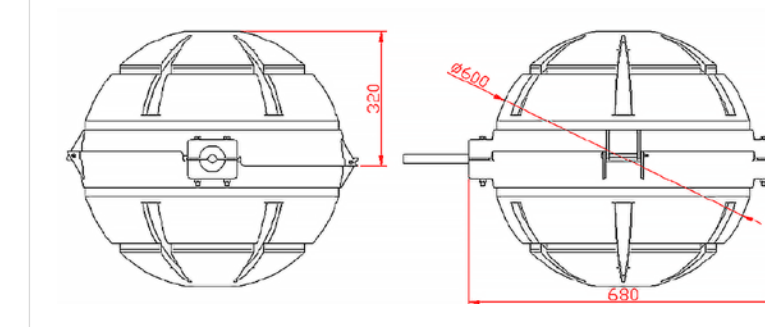
REFERENCE*	COLOR	JAW 07MM (CABLE FROM 10 TO 15MM)	JAW 12MM (CABLE FROM 15 TO 20MM)	JAW 18MM (CABLE FROM 20 TO 26.4MM)
WS60R-d07	RED	X		
WS60R-d12	RED		X	
WS60R-d18	RED			X
WS60W-d07	WHITE	X		
WS60W-d12	WHITE		X	
WS60W-d18	WHITE			X
WS60O-d07	ORANGE	X		
WS60O-d12	ORANGE		X	
WS60O-d18	ORANGE			X

* More references are available for cables of smaller or bigger diameter.
* Dual colors are also available.

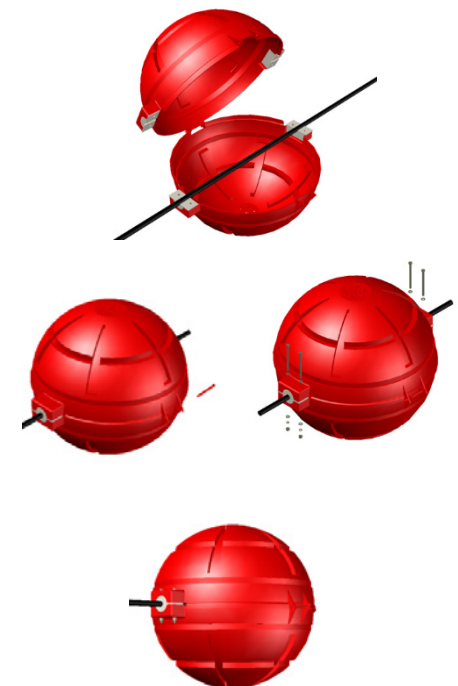
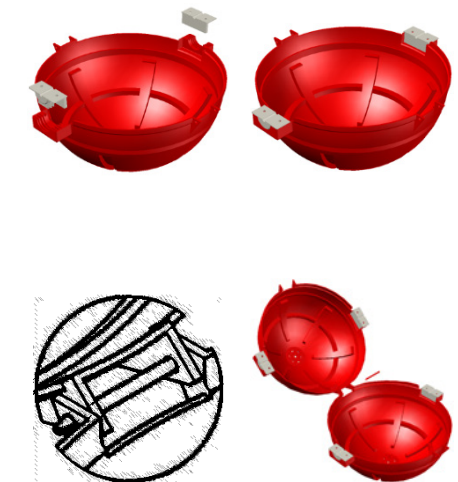
04. CHARACTERISTICS

MECHANICAL	
Body material	Composite
Color	Red, White, Orange
Mounting	Screws (Included)
Diameter	600mm
Thickness	3mm
Weight	< 5 Kg
Operating temperature	-55°C to +55°C
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume I, Chapter 6
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

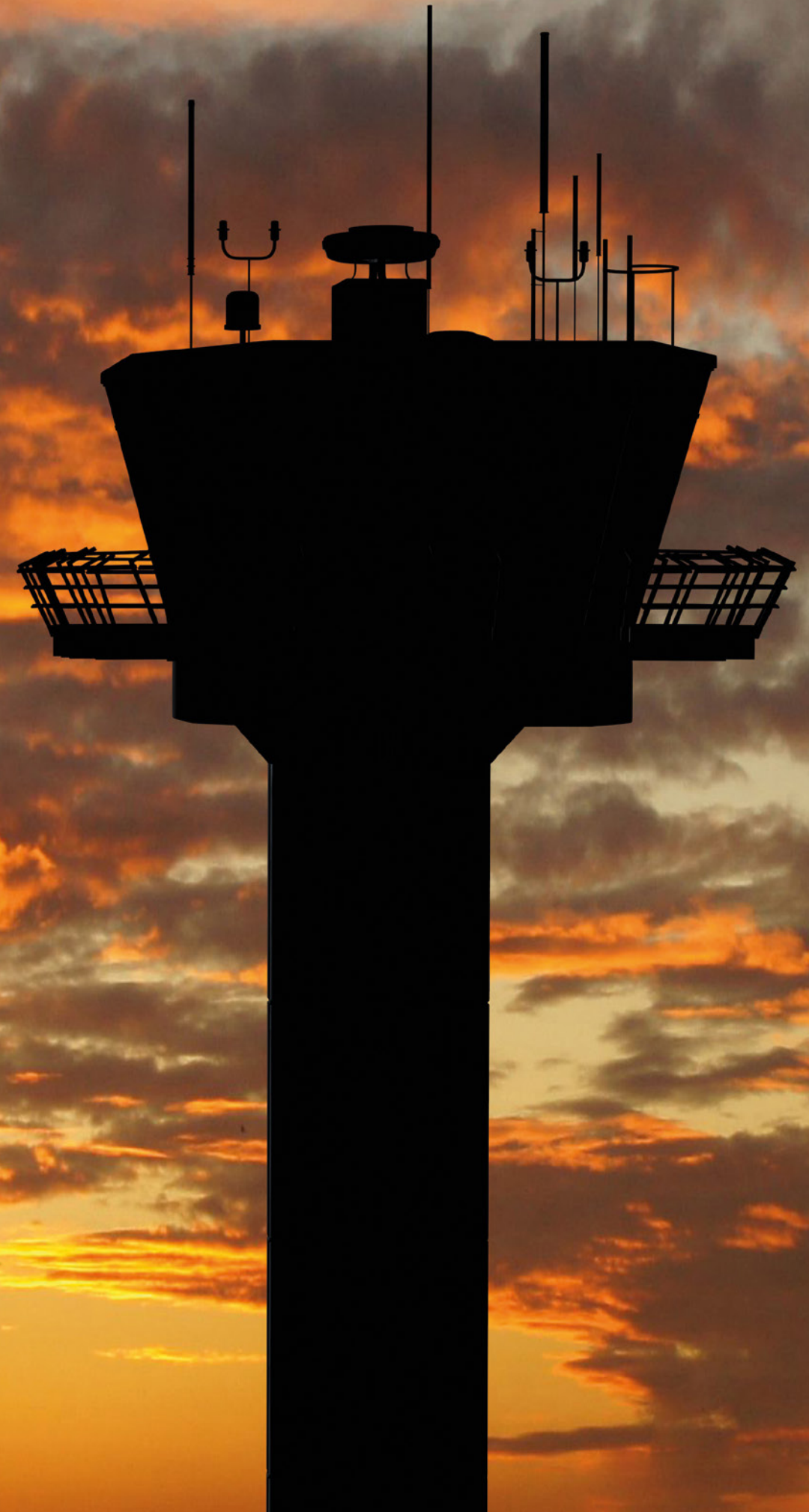
DIMENSIONS



INSTALLATION



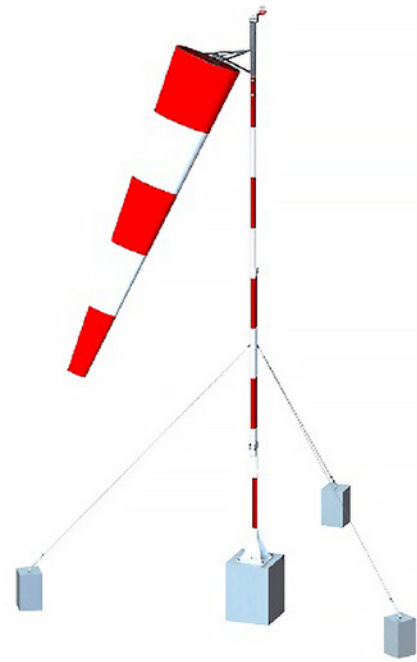
AIRPORT EQUIPEMENT



AIRPORT EQUIPMENT

STNA (ICAO) WIND DIRECTOR INDICATOR

7.40 METERS



01. DESCRIPTION

The **STNA WDI** is our ICAO compliant mast. This tilting mast measures 7,40 Meters and is equipped with 3 braces to ensure its stability. The standard wind vanes are 60 or 100 cm diameter, but other diameters are also available. The wind vane support is equipped with two auto-lubricated Teflon rings to allow its rotation. This system is very resistant to wear phenomena, and doesn't require any maintenance, therefore offering an exceptional long life time.

In option, the WDI can be manufactured in stainless steel, aluminum or fiber glass. A frangible ring can be added at the bottom of the pole for frangibility, and different power supply versions are available (solar, 230V, 6.6A).

02. MODELS

REFERENCE	WIND VANE DIAM.	POWER SUPPLY	POLE + WIND VANE	INTERNAL LIGHTING	OBSTACLE LIGHT	WIND SOCK
STNABG60	60 cm		X			
STNABG60M	60 cm		X			X
STNABG100	100 cm		X			
STNABG100M	100 cm		X			X
STNABG60E2L-II	60 cm	230V	X	X		
STNABG100E2L-II	100 cm	230V	X	X		
STNABG60E6L	60 cm	6,6A	X	X		
STNABG100E6L	100 cm	6,6A	X	X		
STNABG60C2L-II	60 cm	230V	X	X	X	X
STNABG100C2L-II	100 cm	230V	X	X	X	X
STNABG60C6L	60 cm	6,6A	X	X	X	X
STNABG100C6L	100 cm	6,6A	X	X	X	X

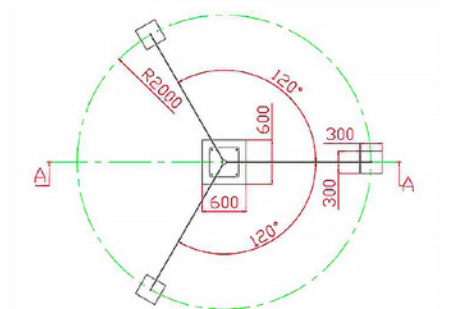
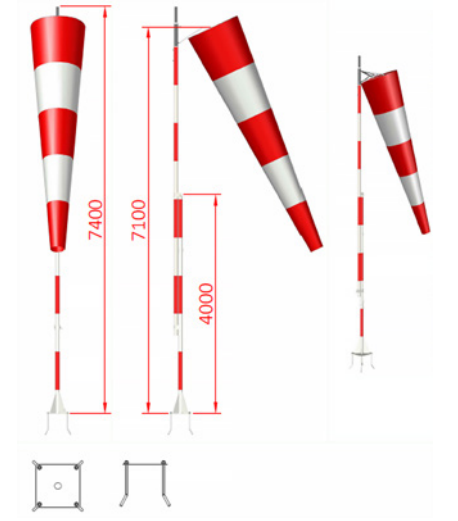
REFERENCE	DESIGNATION
LBIA-HMA-6.6A	Low intensity Obstacle Light Type A for WDI 6.6A
LBIA-HMA-C048-II	Low intensity Obstacle Light Type A for WDI 110-240V
LMA00BB-II	Windssock internal lighting
MA-FRANGIBLE	Set of 4 frangible screws



03. CHARACTERISTICS

MECHANICAL	
Height	7.40 meters
Tiltable part	Yes
Protection	Galvanized steel + White epoxy paint
Paint	Red & White
Mounting	Anchorage Block (Included)
Wind vane	Helipads: Diameter 60cm or 90cm Airports: Diameter 100cm
Braces	3 x 120°
Anchorage Block	600 x 600 x 800 mm
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	160 Km/h
CERTIFICATIONS	
CE	EN60947-1 CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume I, Chapter 6
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	1 year
ELECTRICAL	
Power supply	6.6A / 230V / 24V (Solar)
Operating temperature	-55°C to +55°C
Consumption	3 Watts (obstacle light) 10 Watts (internal light)
Protection Class	IP66
OPTIONS	
Reinforced mast	✓
Obstacle Light	✓
External lighting by 4 Leds Floodlights (230V or 6.6A) Consumption < 4 x 5.2 W	✓
Frangibility of the mast	✓
Solar power supply	✓
Stainless steel / Aluminum / Fiber Glass manufacture	✓

DIMENSIONS



Hoist (in option)

AIRPORT EQUIPMENT

FAA WIND DIRECTION INDICATOR

3 OR 6 METERS



3 METERS

6 METERS

01. DESCRIPTION

Our **FAA WDI** is compliant to the FAA rules. It is manufactured in galvanized steel with an orange paint and is available in 3 or 6 meters. The 3M WDI is tiltable at the base of the mast and the 6M WDI is tiltable in the middle of the mast.

3 diameters of preformed wind vane are proposed together with the suitable windsocks. The wind vane support is equipped with two auto-lubricated teflon rings to allow its rotation. This system is very resistant to wear phenomena, and doesn't require any maintenance, therefore offering an exceptional life time.

Various options are available such as the windsock lighting (internal or external) and the topmast Obstacle Light. These options can operate under different power supplies: 24-48V, 230V, Solar but also in 6,6 A.

02. MODELS*

REFERENCE	3 METERS	6 METERS	WIND VANE DIAMETER	
			CM	INCHES
FAA3-BG30	X		30	12'
FAA3-BG45	X		45	18'
FAA3-BG60	X		60	24'
FAA6-BG45		X	45	18'
FAA6-BG60		X	60	24'
FAA6-BG90		X	90	36'

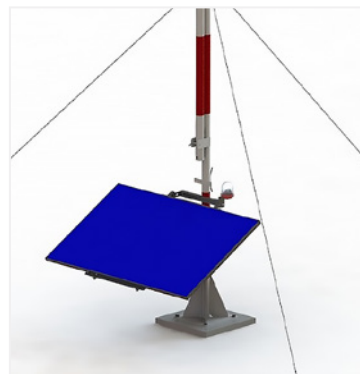
* Reference including lighting and obstacle parts are also available.



Hoist (in option)



External Lighting + Obstacle Light*

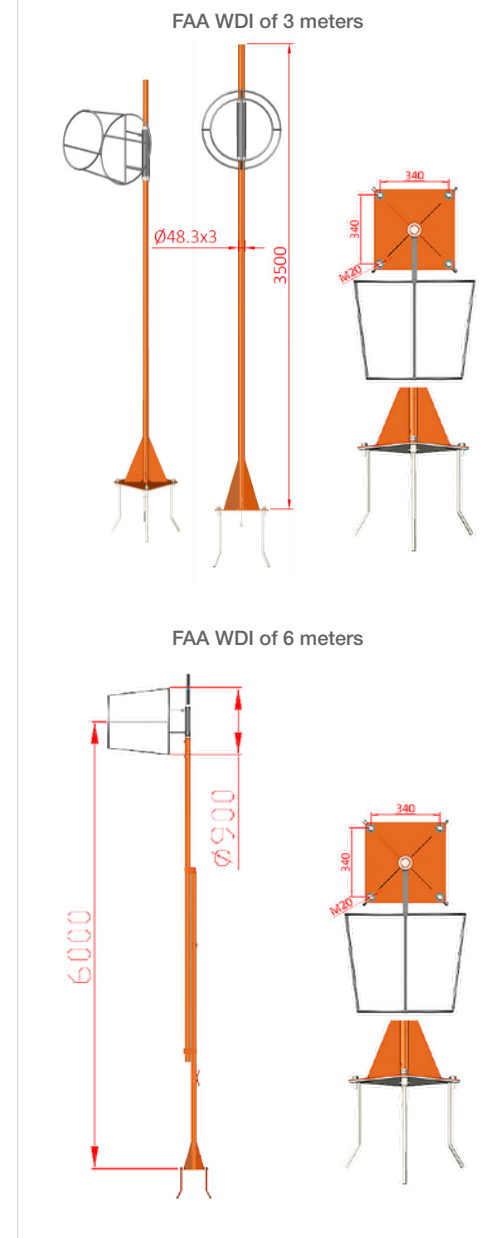


Solar power supply

03. CHARACTERISTICS

MECHANICAL	
Height	3 or 6 meters
Tiltable part location	Base (3 meters WDI) or Middle (6 meters WDI)
Protection	Galvanized steel
Paint	Orange
Mounting	Anchorage Block (Included)
Anchorage Block	600 x 600 x 800 mm
Preformed wind vane	30 / 60 / 90 cm
Braces	No
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	160 Km/h
CERTIFICATIONS	
FAA	Compliant
Quality	ISO 9001 ; 2008
Warranty	1 year
ELECTRICAL	
Power supply	6.6A / 230V / 24V (Solar)
Operating temperature	-55°C to +55°C
Consumption	3 Watts (obstacle light)
	30 Watts (external light)
Protection Class	IP66
OPTIONS	
Reinforced mast	<input checked="" type="checkbox"/>
Obstacle Light	<input checked="" type="checkbox"/>
External lighting by 4 Leds Floodlights (230V or 6.6A) Consumption < 4 x 5.2 W	<input checked="" type="checkbox"/>
Paint	Red & White or Yellow
Frangibility of the mast	<input checked="" type="checkbox"/>
Solar power supply	<input checked="" type="checkbox"/>
Stainless steel / Aluminum / Fiber Glass manufacture	<input checked="" type="checkbox"/>

DIMENSIONS

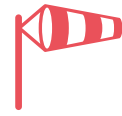


AVAILABLE ACCESSORIES FOR INSTALLATION

- Windsock
- Solar power supply

AIRPORT EQUIPMENT SIMPLE WIND DIRECTION INDICATOR

4 METERS



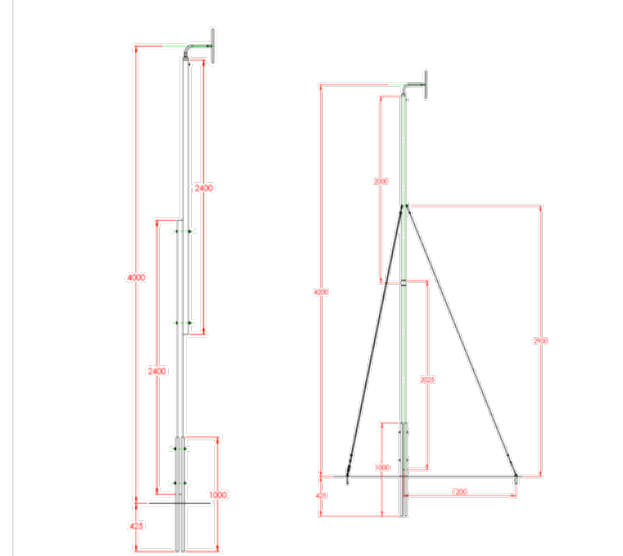
01. DESCRIPTION

The **Simple Mast** consists in a 4 meters pole that can be fixed, provided with braces, or tiltable. 2 mounting frames in "U" enable an easy and quick installation. In its standard version, the mast is in galvanized steel painted in white color. It is provided with a stainless steel wind vane to be installed at the top of the mast. The wind vane support is equipped with two auto-lubricated Teflon rings to allow its rotation. This system is very resistant to wear phenomena, and doesn't require any maintenance, therefore offering an exceptional long life time. Three diameters of wind vanes are available with their suitable windsocks.

02. MODELS

REFERENCE	WIND VANE DIAMETER	TILTABLE	FIXED
MASBG30	30 cm	✗	
MASBG40	40 cm	✗	
MASBG50	50 cm	✗	
MASFG30	30 cm		✗
MASFG40	40 cm		✗
MASFG50	50 cm		✗

DIMENSIONS



03. CHARACTERISTICS

MECHANICAL	
Height	4 meters
Tiltable part	Fixed or tiltable
Protection	Galvanized steel
Paint	White
Mounting	In « U »
Wind vane	30 / 40 / 50 cm
Braces	3 x 120°
Anchorage Block	600 x 600 x 800 mm
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	160 Km/h
CERTIFICATIONS	
FAA	Compliant
Quality	ISO 9001 : 2015
Warranty	1 year

AIRPORT EQUIPMENT WINDSOCKS FOR WIND DIRECTION INDICATOR



03. MODELS

REFERENCE	DIMENSIONS (CM)	DIMENSIONS (INCH)	COLOUR
DBM-SE-30-120-RB	30 x 120	12' x 47'	Red and white
DBM-SE-30-180-RB	30 x 180	12' x 71'	Red and white
DBM-SE-40-250-RB	45 x 250	18' x 99'	Red and white
DBM-SE-50-225-RB	50 x 225	20' x 89'	Red and white
DBM-SE-60-240-RB	60 x 240	24' x 95'	Red and white
DBM-SE-90-360-RB	90 x 360	36' x 141'	Red and white
DBM-SE-100-450-RB	100 x 450	40' x 178'	Red and white
DBM-SE-30-120-OR	30 x 120	12' x 47'	Orange
DBM-SE-30-180-OR	30 x 180	12' x 71'	Orange
DBM-SE-40-250-OR	45 x 250	18' x 99'	Orange
DBM-SE-50-225-OR	50 x 225	20' x 89'	Orange
DBM-SE-60-240-OR	60 x 240	24' x 95'	Orange
DBM-SE-90-360-OR	90 x 360	36' x 141'	Orange
DBM-SE-100-450-OR	100 x 450	40' x 178'	Orange

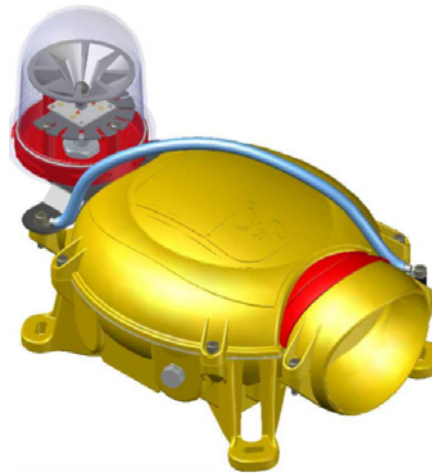
01. DESCRIPTION

Our **windsocks** are in compliance with the International Civil Aviation rules. The windsocks are handmade in France with a high quality fabric, qualified with 160g/m². With a specific U.V treatment the color fastness is warranted.

They offer high resistance to the weather and to the sun. The standard colors available are red and white, or orange. More colors are available. Your logo can be added.

02. CHARACTERISTICS

WINDSOCKS	
Dye	Colourfast
Assembly	In 5 sections
Mounting	By synthetic clamp collars
Grammage	160g/m ²



PORTABLE BEACON

01. DESCRIPTION

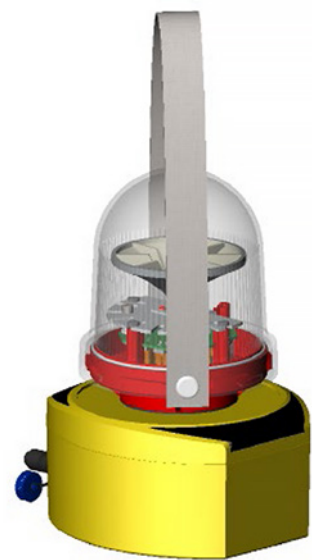
Our portable beacon range is a solution for temporary marking or emergency closing, based on multi-LEDs technology. The whole system is autonomous and includes charger (portable beacon only) and battery. Different monitoring options are available.

02. ADVANTAGES

- Long life time > 10 years
- Multi-LEDs
- Independent system
- Blinking of the light when the level of load of the battery is low
- 2 year warranty (excluding battery)
- Zamac box with epoxy pauder painting
- No maintenance
- Available in bi-colors (ex: Red AND Blue, Red OR Blue) for runway closing and taxiway beacons
- Can be connected to 6.6A (without batteries)
- Available with remote control

03. MODELS

MODEL	REFERENCE	COLOR	BATTERY	AUTONOMY
Portable	BPLBIAR	Red	1 x 12V 7Ah	80h
	BPLBIAB	White	1 x 12V 7Ah	80h
	BPLBIABL	Blue	1 x 12V 7Ah	80h
	BPLBIAR&B	Red AND Blue	1 x 12V 7Ah	80h
	BPLBIAR/B	Red OR Blue	1 x 12V 7Ah	80h
	BPLBIAV	Green	1 x 12V 7Ah	80h
	BPLBIAR&V	Red AND Green	1 x 12V 7Ah	80h
	BPLBIAR/V	Red OR Green	1 x 12V 7Ah	80h
Mini	BPMLBIAR1	Red	1 x 12V 1,2Ah	20h
	BPMLBIAR2	Red	2 x 12V 1,2Ah	40h
	BPMLBIAW1	White	1 x 12V 1,2Ah	20h
	BPMLBIAW2	White	2 x 12V 1,2Ah	40h
	BPMLBIAR/B1	Red OR Blue	1 x 12V 1,2Ah	20h
	BPMLBIAR/B2	Red OR Blue	2 x 12V 1,2Ah	40h
	BPMLBIARV1	Red AND Green	1 x 12V 1,2Ah	20h
	BPMLBIARV2	Red AND Green	2 x 12V 1,2Ah	40h



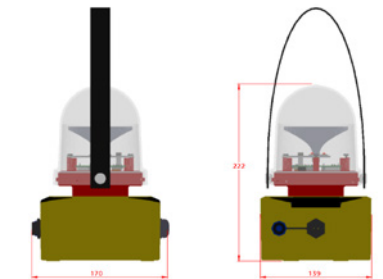
MINI PORTABLE BEACON

04. CHARACTERISTICS

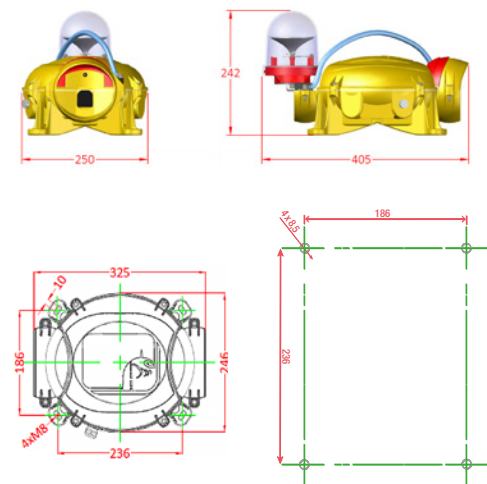
	PORTABLE BEACON	MINI PORTABLE BEACON
LUMINOUS		
Luminous source	Red / White / Blue / Green / Orange	
Horizontal / Vertical beam	360° / 10°	
Luminous intensity	> 10 Cd	
MTBF	100 000 hours	
ELECTRICAL		
Voltage	110 to 240V AC	
Functioning temperature	-10°C to +55°C	
Autonomy	80 hours	20 hours (1 battery) 40 hours (2 batteries)
Loading time	7 hours	1.5 hours per battery
Battery	AGM 12V 7Ah	AGM 12V 1,2Ah
Protection class	IP66	
MECHANICAL		
Body material	Zamac	Aluminum
Lamp material	Composite	
Lens material	Polycarbonate with bird spike	
Height	242mm	222mm
Weight	< 5 Kg	< 2,5 Kg
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume I, Chapter 6	
Quality	ISO 9001 : 2015	
WARRANTY		
Warranty period	2 years	

DIMENSIONS

MINI PORTABLE BEACON



PORTABLE BEACON

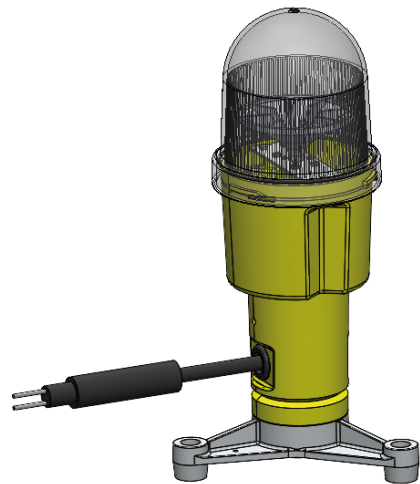


TRANSPORTATION TRAILER



AVAILABLE ACCESSORIES FOR INSTALLATION

- Specific trailer (40 or 60 beacons)
- Remote control
- Can be piloted via PCL
- Plug to recharge several beacons



01. DESCRIPTION

The LEDEO BDP range answers different needs of elevated beaconing:

- Taxiway edge lighting
- Runway end and runway threshold lighting
- Runway edge lighting

The LED technology offers strong performances in terms of life time (100 000 hours). It is designed for an easy installation.

02. ADVANTAGES

- Long life time > 10 ans
- Multi-LED technology
- Multi-use: available in various colors
- Enables a day & night beaconing (reflecting base in option)
- The exclusive design of DELTA BOX isolating transformer allows continuity of the loop in case of failure of one or several lights
- Maintenance free: no replacement of the light bulb needed
- FAA connection, depending on your need:
 - o 2 FAA input & output plugs with connectors type 1 & 7
 - o 2 FAA input & output plugs with connectors type 2 & 9
- 2-year warranty
- Can be used on primary or secondary circuit

03. MODELS

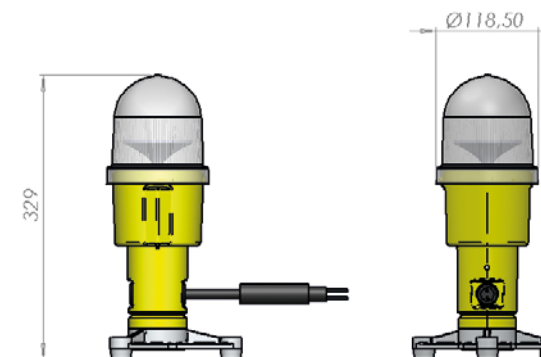
REFERENCE	POWER SUPPLY	COLOR	USAGE
BDP-G-6.6	6.6A	Green	Runway threshold lighting*
BDP-G-MC	230V	Green	
BDP-GR-6.6	6.6A	Green / Red	Runway end and threshold lighting*
BDP-GR-MC	230V	Green / Red	
BDP-R-6.6	6.6A	Green	Runway end lighting*
BDP-R-MC	230V	Green	
BDP-RW-6.6	6.6A	Red / White	Runway edge lighting*
BDP-RW-MC	230V	Red / White	
BDP-WW-6.6	6.6A	White	Runway edge lighting*
BDP-WW-MC	230V	White	
BDP-B-6.6	6.6A	Blue	Taxiway edge lighting*
BDP-B-MC	230V	Blue	

* References are valid both for Night VFR and non precision approaches.

04. CHARACTERISTICS

LUMINOUS							
Colors	Green	Green/Red	Red	Red/White	White	Blue	Yellow/Red
Luminous source	LEDs						
Horizontal beam	360°	180° Green 180° Red	360°	180° Red 180° White	360°	360°	180° Yellow 180° Red
Minimum luminous intensity (in candelas)"	30 Cd	Green: 30 Cd Red: 10 Cd	10 Cd	Red: 10 Cd White: 50 Cd	50 Cd	2 Cd (0-6°) 0.2 Cd (>6°)	Yellow: 25 Cd Red: 10 Cd
MTBF	100 000 hours						
ELECTRICAL							
Power supply	110-240V AC / 6.6A						
Consumption (230V)	6.3W	5.5W	4.5W	6.3W	8.5W	3.5W	6.5W
Consumption (6.6A)	9W	8W	6.5W	9W	12W	5W	9.5W
MECHANICAL							
Protection class	IP66						
Body material	Plastic						
Lens material	Polycarbonate						
Mounting	Tripod – 2"GAZ BSP (included)						
Height	328mm						
Weight	6 Kg						
ENVIRONMENTAL							
Humidity	100%						
Frost	-40°C						
Wind speed	160 Km/h						
CERTIFICATIONS							
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE						
ICAO	Annex 14, Volume I						
Quality	ISO 9001 : 2015						
WARRANTY							
Warranty	2 years						

DIMENSIONS

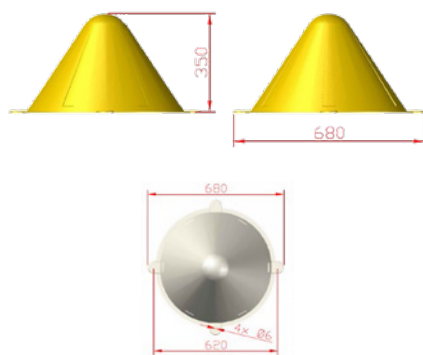


AVAILABLE ACCESSORIES FOR INSTALLATION

- Connection FAA style 1 and 7
- Connection FAA style 2 and 9 to connect in series
- Tripod 2"GAZ BSP
- Retroreflective blue adhesive



TRUNCATED CONE



01. DESCRIPTION

These composite beacons are dedicated to the signaling of runways and roads located within Airports and Airfields. They are studied to avoid any damage to the engine in case of shock. White truncated cones to delimit the runways and yellow for traffic lanes.

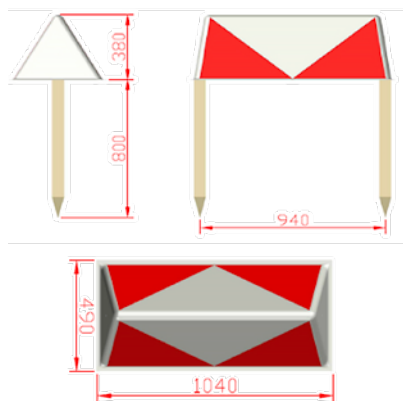
02. MODELS

REFERENCE	DESIGNATION	COLOUR
BPTRY	Truncated cone	Yellow
BPTRW	Truncated cone	White

ACCESSORIES AVAILABLES

- Fixation

DIHEDRAL CONE

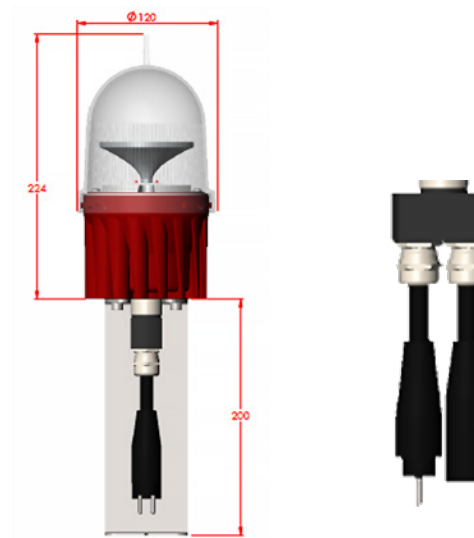


01. DESCRIPTION

These composite beacons are dedicated to the signaling of runways and roads located within Airports and Airfields. They are studied to avoid any damage to the engine in case of shock. This diedral beacon is red and white to mark the extremities of runways. This beacon is delivered with 2 frangible pickets treated with Carbonyl as well as with 4 holding nuts.

02. MODELS

REFERENCE	DESIGNATION	COLOUR
BPDIEDRE	Dihedral Cone	Red and white



01. DESCRIPTION

The LEDEO BIA 6.6A is a low intensity beacon equipped with LEDs technology, directly connected to the 6.6A loop of airports thanks to the integrated isolating transformer. Dedicated to night beaconing (steady red), it offers exceptional advantages in terms of longevity (100 000 hours), robustness and energy consumption (<2W). The double male and female secondary FAA connector allows the connection in series of multiple beacons, without any additional isolating transformer. Colors available: blue, orange, red, white, green

02. ADVANTAGES

- Directly connectable to the 6.6A loop
- Double male and female secondary FAA connectors for connection in series / or primary loop male connection
- Long Life Time > 10 years
- Multi-LEDs technology
- Low consumption < 2W
- No maintenance
- 2 year-warranty

03. CHARACTERISTICS

	TYPE A	TYPE B
LUMINOUS		
Luminous source	Red LEDs	
Horizontal / Vertical beam	360° / 10°	
Luminous intensity	> 10 Cd	> 32 Cd
MTBF	100 000 hours	
ELECTRICAL		
Supply voltage	6.6A	
Operating temperature	-55°C to +55°C	
Consumption	< 2 Watts max.	< 6 Watts max.
Protection class	IP66	
Cable	0,5 meters	
MECHANICAL		
Body material	Aluminum	
Lens material	Polycarbonate with bird spike	
Mounting	M6 screw (included)	
Height / Width	224mm / 120mm	
Screw spacing	50mm	
Weight	< 2 Kg	
ENVIRONMENTAL		
Humidity	100%	
Frost	-60°C	
Wind speed	240 Km/h	
CERTIFICATIONS		
CE	EN60947-1 CEI60364, NF C15-100 2014 / 35 / UE	
ICAO	Annex 14, Volume I, Chapter 6	
FAA	Compliant FAA L-810 (Type B)	
Quality	ISO 9001; 2015	

04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
LBIA06C	6.6A	Not included	Not included
LBIB06C	6.6A	Not included	Not included

HELIPORT EQUIPEMENT





INSET LIGHTS FOR PERIMETER BEACONING (1-2)

Perimeter lights shall not be taller than 25cm and must be recessed in the ground in case considered as obstacle to proper take-off operations. On elevated helipads FATO and TLOF areas can coincide. These fittings can be used as:

- TLOF perimeter signal (green)
- FATO perimeter signal (white)
- Aiming Points signal (white)
- Flight Path Alignment signal (white)

WHITE FLOODLIGHTS FOR TLOF ILLUMINATION (3)

White floodlights for TLOF must be positioned in such way that pilots shall not be dazzled whilst airborne. The same applies for the personnel working on the helipad.

They must be 25cm tall at the maximum when located within the safety area and have to be frangible.

Being of white signal, the average luminosity level of the floodlights should be 10 lux.

HELICOPTER APPROACH PATH INDICATOR (4)

HAPI systems provide pilots with a secure and precise glide slope on their final approach. If pilots consider their position as incorrect they can easily fix the trajectory of the helicopter with the help of these systems.

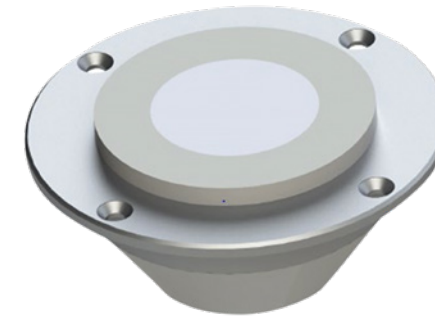
WIND DIRECTION INDICATOR (5)

Helipads should always be equipped with at least one Wind Direction Indicator (WDI). When installed, the WDI should always be positioned outside of the safety area and in a way that no perturbation is coming from the helicopter rotor.

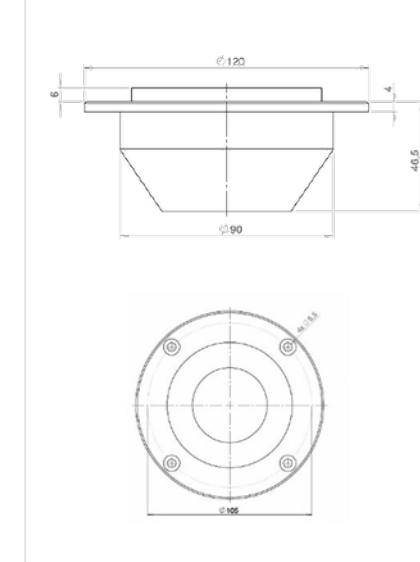
The WDI must be visible when pilots are approaching the helipad and in case the helipad is used by night a lighting system along with an obstacle light should be provided.

INSET LIGHTS FOR TAXIWAYS (6)

Taxiway beacons should be less than 25cm tall and should be recessed in the ground in case considered as obstacle to proper take-off operations. They must be of blue signal and indicate the path for vehicles on ground.



DIMENSIONS



SHALLOW BASE

01. ADVANTAGES

- Long lifetime >10 years
- Optimized light output due to patented optics concept
- Compact and low propulsion
- Maximum resistance
- 2-year warranty

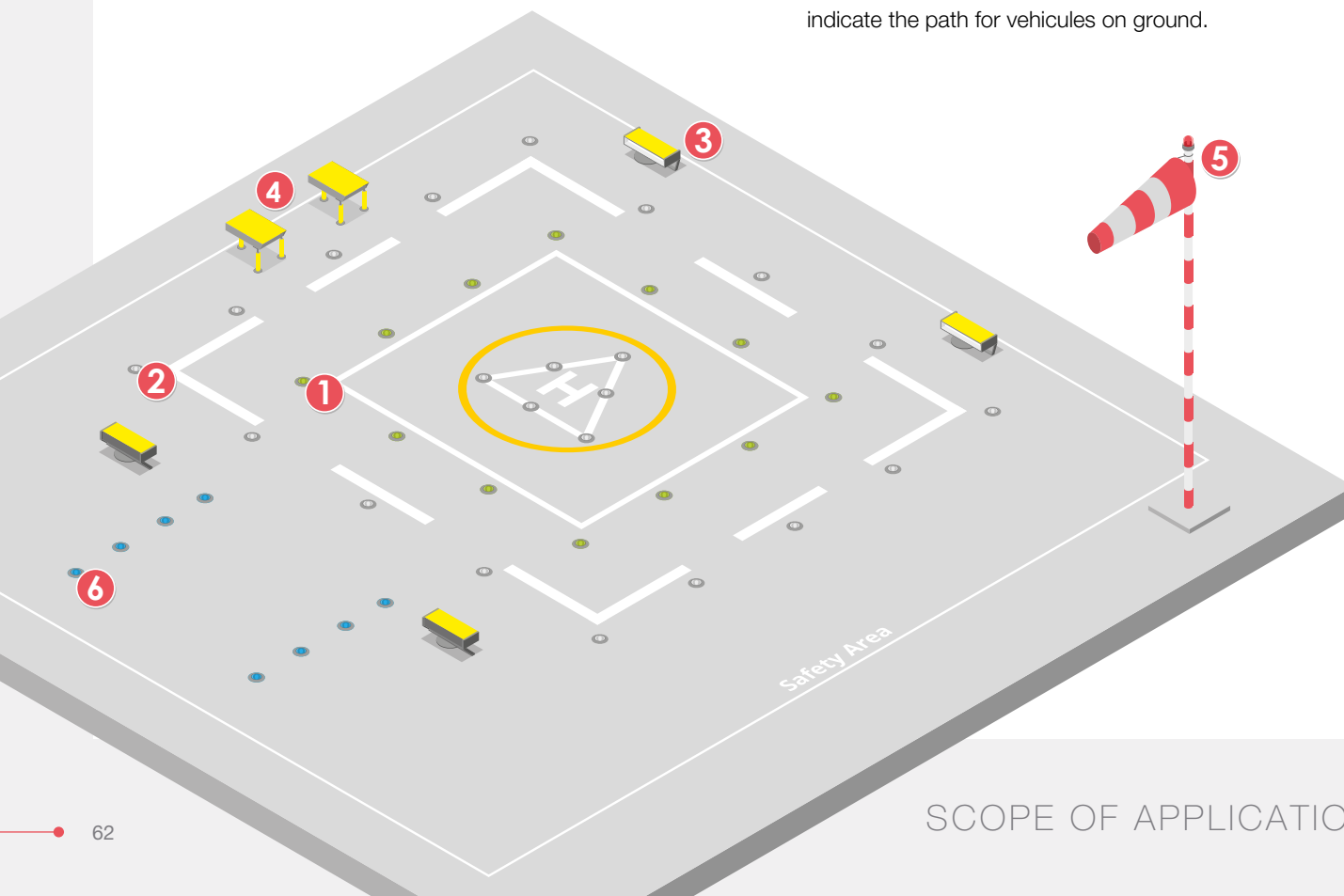
02. MODELS

REFERENCE*	USAGE	COLOR***	VOLTAGE**
TLOF-G-AB	TLOF Perimeter	Green	24V DC
TLOF-G-MB	TLOF Perimeter	Green	230V AC
FATO-W-AB	FATO Perimeter	White	24V DC
FATO-W-MB	FATO Perimeter	White	230V AC
AIM-W-AB	Aiming Points	White	24V DC
AIM-W-MB	Aiming Points	White	230V AC
PATH-W-AB	Flight Path Alignment	White	24V DC
PATH-W-MB	Flight Path Alignment	White	230V AC
TAXI-B-AB	Taxiway	Blue	24V DC
TAXI-B-MB	Taxiway	Blue	230V AC
INSET-BASE	Shallow Base	N/A	N/A

* Semi-flush or full-flush versions available. ** 6,6A versions available. *** Infrared versions available.

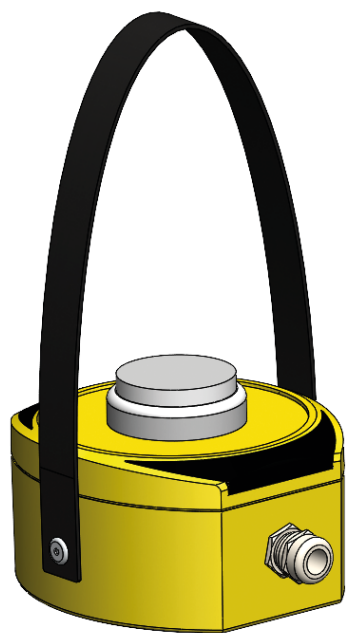
03. CHARACTERISTICS

LUMINOUS	
Luminous source	LEDS
MTBF	100 000 hours
ELECTRICAL	
Voltage	Available in 24V or 230V
Operating temperature	-40°C to +55°C
Consumption	FATO : < 10W / Others : < 6W
MECHANICAL	
Protection class	IP68
Mounting	Full flush or semi-flush
Height / Width	52,5mm / 120mm
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume II, Chapter 5
Quality	ISO 9001 : 2015



SCOPE OF APPLICATIONS





01. DESCRIPTION

- Light and compact design: < 2.5 kg
- Suitable for temporary lighting of TLOF area
- Long lifetime LED technology
- Optimized light output due to patented optics concept
- Yellow box provided with 4 holes for permanent fixation

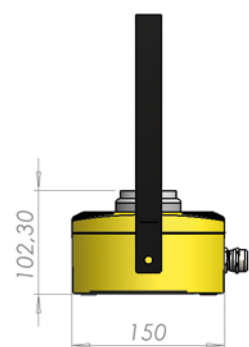
02. MODELS

REFERENCE	VOLTAGE	BATTERY	AUTONOMY
BPM-TLOF-G	24V	2 x 12V 1,2Ah	Up to 12h
BPMCHARG	Charging box for up to 8 lights		

03. CHARACTERISTICS

LUMINOUS	
Luminous source	Green LEDs
MTBF	100 000 hours
ELECTRICAL	
Voltage	24V DC
Consumption	<6W
Battery	2 x 12V 1,2Ah AGM
Autonomy	Up to 12 hours
MECHANICAL	
Height / Width	102mm / 150mm
Protection Class	IP66
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
CERTIFICATIONS	
CE	EN60947-1 ; CEI60364, NF C15-100 ; 2014 / 35 / UE
ICAO	Annex 14, Volume 2, Chapter 5
Quality	ISO 9001 : 2015

DIMENSIONS



01. DESCRIPTION

The **LEDEOMIH** is a heliport white light, monobloc, given LED technology. It offers significant advantages in terms of lifetime (100 000 hours), sturdiness and energy consumption. The ruling of the light can be achieved through a deported command system (UPS, control panel). The photocell for automatic night ignition and the dry contact are both in option. Our heliport beacon gives out series of 4 flashes, every 1.2 second (Morse H Code – in standard other code are possible). Its compact design facilitates its installation.

02. ADVANTAGES

- Lifetime > 10 years
- Multi-LEDs technology
- Low Consumption
- No Maintenance
- 2-year warranty
- Zamac box with epoxy paint
- Wiring on terminal block, cable gland output

03. APPLICATIONS

It is recommended to install a Morse Code Helipad Light on a Heliport: When visual guidance on a long distance is ruled necessary and when that visual guidance is not handled by other means. When it is difficult identifying the Helideck because of the surrounding lights. The heliport light will be placed on the helipad or next to it, preferably on a lifted point in a way that the pilots are not dazzled at low distance.

04. MODELS

REFERENCE	VOLTAGE	PHOTOCELL
LMIH00MB	110-240V	Not included
LMIH10MB	110-240V	Included

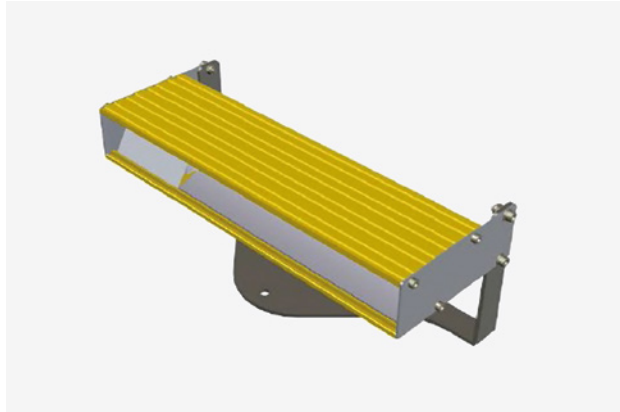
05. CHARACTERISTICS

LUMINOUS	
Luminous source	White flash LEDs
Horizontal beam spread	360°
Vertical beam spread	0° to 10°
Luminous Intensity	> 1 700 Cd at 0°
	> 2 500 Cd between 1,5° & 2,5°
	> 1 700 Cd between 3° & 4°
	> 750 Cd between 5° & 7°
Flash frequency	Morse H Code
MTBF	100 000 hours
ELECTRICAL	
Voltage	240V AC / 50 Hertz
Operating temperature	-55°C to +55°C
Current I _{max}	In 230V: I < 500mA
Protection class	IP66
MECHANICAL	
Box material	Zamac
Body lamp material	Aluminum
Lens material	Polycarbonate
Mounting	M8 screw (in option)
Height / Width	410mm / 410mm
Weight	< 16 Kg
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 CEI60364, NF C15-100 2014 / 35 / UE
ICAO	Annex 14, Volume II, Chapter 5
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years

HELIPORT EQUIPMENT WHITE FLOODLIGHT



HELIPORT EQUIPMENT PILOT CONTROL LIGHTING RUNWAY LIGHTING REMOTE CONTROL BY RADIOFREQUENCY



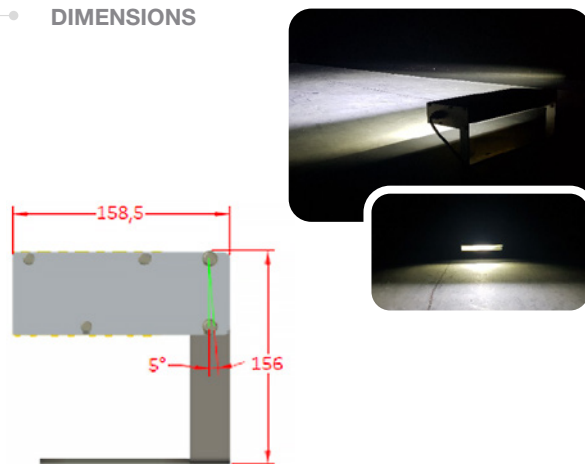
01. DESCRIPTION

The **WHITE FLOODLIGHT** is a light of 10.000 cd intensity with multi-LEDs technology, developed with an aluminum design for a natural fresh cooling system. It has been designed for an easy installation.

02. ADVANTAGES

- Lifetime >10 years
- Multi – LEDs
- Reflector for beam optimization
- Shortened time of installation
- No maintenance
- 2-year warranty
- Integrated radiator for a natural cooling
- One single bloc, with electronics embedded
- Protection Class: IP66
- Frangible

DIMENSIONS

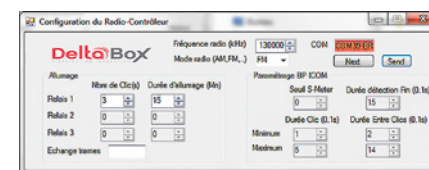


03. MODELS

REFERENCE	VOLTAGE	PHOTOCELL	DRY CONTACT
P-TLOF-LED	110-240V	Not included	Not included

04. CHARACTERISTICS

LUMINOUS	
Luminous Source	LEDs
Colour	White
MTBF	100 000 hours
ELECTRICAL	
Tension	110-240V
Functioning Temperature	-55°C to +55°C
Consumption	< 17 Watts max
Protection Class	IP66
MECHANICAL	
Body lamp material	Aluminium
Lens Material	Glass
Fixation	M8 screw – On ground
Height	156 mm
Width	158.5 mm
Weight	< 3 Kg
ENVIRONMENTAL	
Humidity	100%
Frost	-60°C
Wind Speed	240 Km/h
CERTIFICATIONS	
CE	EN60947-1 CEI60364, NF C15-100 2014 / 35 / UE
Quality	ISO 9001 : 2015
WARRANTY	
Warranty period	2 years
OPTIONS	
Solar Power Supply	<input checked="" type="checkbox"/>



ELECTRICAL	
Power supply	110V-240V
Operating temperature	-40°C to +55°C
Consumption	< 15 Watts max
MECHANICAL	
Body material	Painted steel
Height	328mm
Width	330mm
Weight	< 7 Kg
ACCESSORIES INCLUDED	
Antenna + antenna cable	2 meters
WARRANTY	
Warranty period	2 years

01. DESCRIPTION

Our **Pilot Control Lighting (PCL)** system allows a remote control of the ON/OFF of our beacons, dedicated to small airports and helidecks. The system is provided with a push button feature that the pilot will use on the radiofrequency of the helicopter or aircraft.

02. ADVANTAGES

- Quick and easy installation
- Integrated in a waterproof cabinet with electric protection
- Modular system
- Manual turn ON with dry contact available on terminal block
- Set up of the frequency through computer software
- Easy to use

03. APPLICATIONS

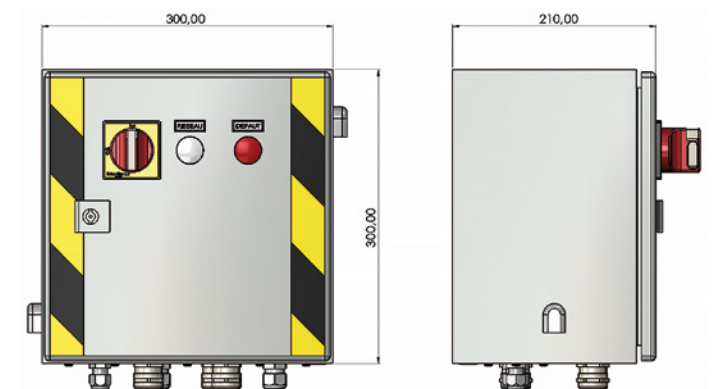
Our system allows to remote control the ignition of the runway lighting through radiofrequency and is ICAO / FAA L854 compliant.

04. OPERATION

Our runway lighting control system has 3 outputs protected by a type II circuit-breaker. In standard, 3 clicks on the pilot radio in less than 5 seconds initiates the beacon for a period of 15 minutes. The set of functionalities is programmable via a PC software supplied with the PCL kit.

05. MODELS

REFERENCE	POWER SUPPLY	DRY CONTACT
HELI-PCL	110-240V	Option



SCOPE OF APPLICATIONS





CONTACT

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