

Clampco Sistemi

Solutions for Aircraft Warning Light Systems

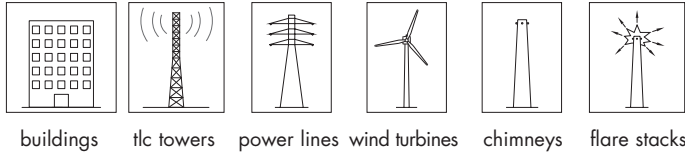
Clampco Sistemi: solutions for Aircraft Warning Light Systems

solutions for Aircraft Warning Light Systems

INTRODUCTION

Clampco Sistemi designs, manufactures and supplies complete Aircraft Warning Light Systems (AWLS) intended for day/twilight/night lighting of extensive obstacles.

APPLICATIONS



PRODUCT LINES

	Medium intensity double obstruction lights	art. SEGD...
	Low intensity double obstruction lights	art. SEGD...
	Medium intensity single obstruction light	art. SEGS...
	Low intensity single obstruction light	art. SEGS...
	Control board	art. SEQC...
	Photoelectric switch	art. SEI...
	Junction box	art. SCSD...
	Cables	art. SCCE...

AWLS MAIN PARTS

The main components described in the following pages are:

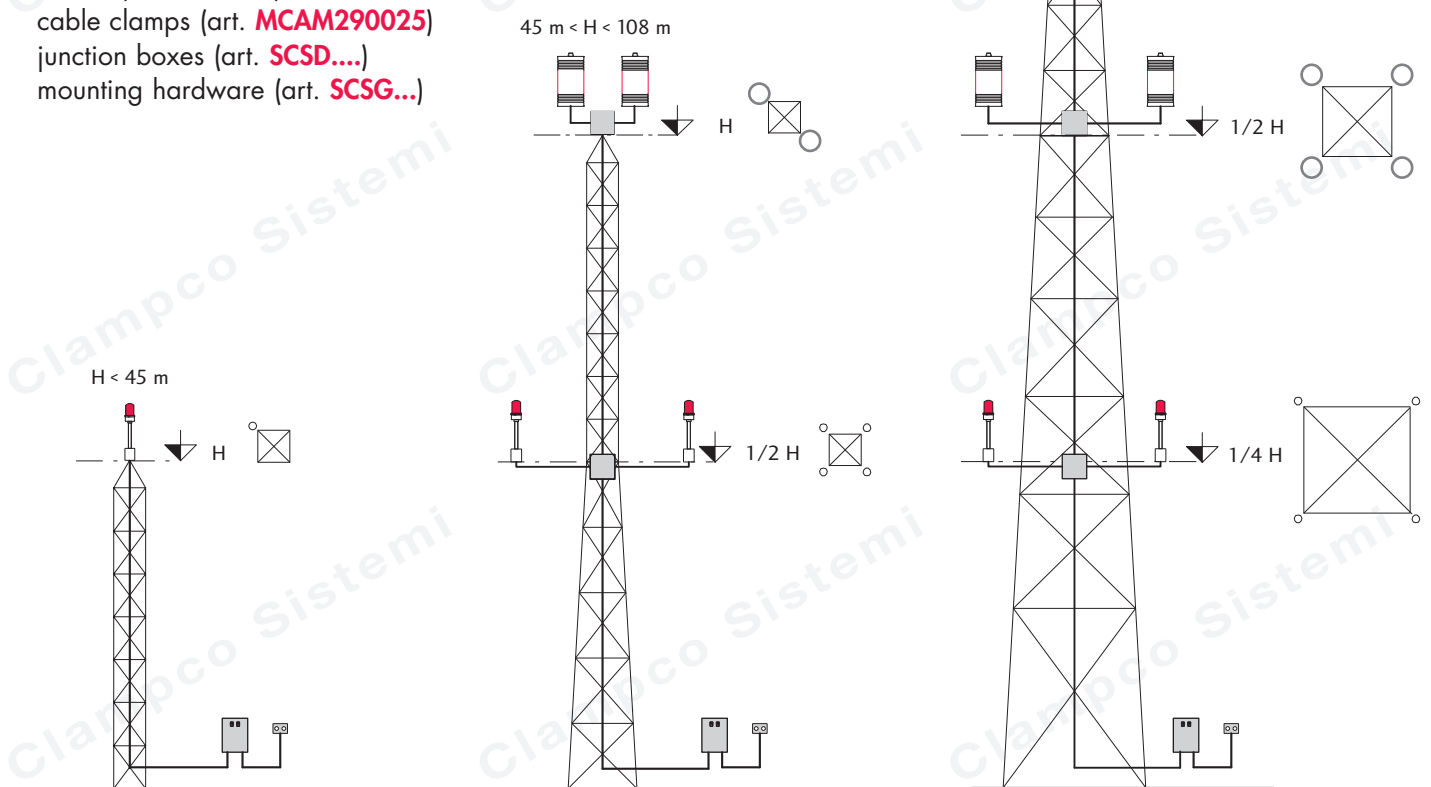
- obstruction lights (art. **SEG.....**)
- control board (art. **SEQC.....**)
- photoelectric switch (art. **SEI.....**)
- installation kit:
 cables (art. **SCCE.....**)
 cable clamps (art. **MCAM290025**)
 junction boxes (art. **SCSD.....**)
 mounting hardware (art. **SCSG...**)

ACCESSORIES

- solar power supply
- UPS units
- remote alarm monitoring capabilities
- special mounting hardware
- customized configurations such as explosion-proof and special IP protection level enclosures

COMPLIANCE

- I.C.A.O. – Annex 14, chap. 6 'Visual Aids for denoting Obstacles'
- F.A.A. – AC 70/7460-1J and AC 150/534-43E 'Obstruction Marking Lights'



The AWLS configuration diagrams shown above are an example of night-time signalling according to the height of the obstacle.

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.



art. SEG.....

low intensity, omnidirectional, fixed red LED and fluorescent bulb

Low intensity fixed red obstruction light available in two configurations: single (art. **SEGS.....**) and double (art. **SEGD.....**).

Double bulb devices (main + stand-by) each bulb powered by its own electronic circuit.

BULB

Light characteristics ICAO Type A or B obtained using two different bulb types:

- LED array powered at constant current by electronic regulator. Lamplife 100.000 hours
- fluorescent lamp: powered by electronic ballast (starter) integrated in the bulb (230 Vac models) or enclosed within the junction box (12, 24, 48 Vdc models). Lamplife 10.000 hours

Internal electronic circuits and bulb starters tropicalized.

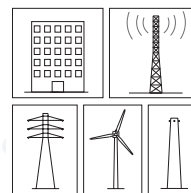
MATERIALS

- transparent polycarbonate cap, unbreakable (crash test energy = 20 J) and flame retardant
- die cast aluminium alloy cap holder
- hot-dip galvanized tubular steel supporting structure
- die cast aluminium alloy junction box
- coating: red polyester powder finish

OPERATING CONDITIONS

- air temperature: from -30°C to +55°C
- moisture: 100% with condensation
- protection level: IP 65

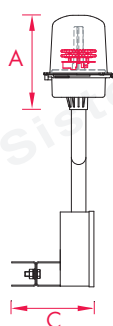
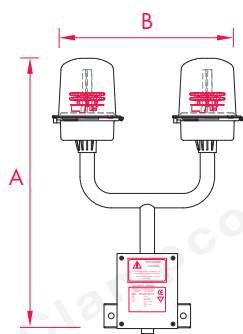
APPLICATIONS



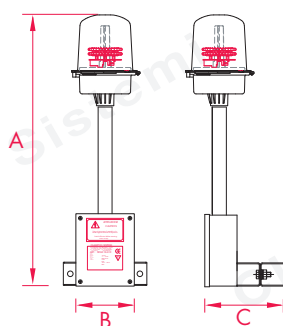
art. SEGS23B10

art. SEGD23E10

art. SEGD48A32_1



art. SEGD....	
Double beacon configuration	
Dimensions	Weight
mm	Kg
A: 570	6.3
B: 400	
C: 170	



art. SEG....	
Double/single beacon configuration	
Dimensions	Weight
mm	Kg
A: 570	4.1
B: 180	
C: 170	

LOW INTENSITY OBSTRUCTION LIGHT CODE SYNTAX

SEG	D	48	A	10	-	1			
Bulb configuration		Nominal Voltage		Bulb type		Light emission		Option	
S	Single	12	12Vdc	A	Led	10	>10 cd	1	Two led bulbs in one cap
D	Double	24	24Vdc	E	Fluorescent	32	>32 cd		
		48	48Vdc	B	Led-compact	50	>50 cd		
		23	230Vac						



Article	Bulb type	Bulb n°	Beacon	Power supply V	Power consumption W	Regulation compliancy	Light emission cd
SEGS12A10	Led arrays	1	•	12Vdc	4	I.C.A.O type A	>10
SEGS24A10	Led arrays	1	•	24Vdc	4	I.C.A.O type A	>10
SEGS48A10	Led arrays	1	•	48Vdc	4	I.C.A.O type A	>10
SEGS23A10	Led arrays	1	•	230Vac	4	I.C.A.O type A	>10
SEGS12B10	Led arrays	1	•	12Vdc	4	I.C.A.O type A	>10
SEGS24B10	Led arrays	1	•	24Vdc	4	I.C.A.O type A	>10
SEGS48B10	Led arrays	1	•	48Vdc	4	I.C.A.O type A	>10
SEGS23B10	Led arrays	1	•	230Vac	5	I.C.A.O type A	>10
SEGD12A10_1	Led arrays	2	•	12Vdc	4	I.C.A.O type A	>10
SEGD24A10_1	Led arrays	2	•	24Vdc	4	I.C.A.O type A	>10
SEGD48A10_1	Led arrays	2	•	48Vdc	4	I.C.A.O type A	>10
SEGD23A10_1	Led arrays	2	•	230Vac	5	I.C.A.O type A	>10
SEGD12A10	Led arrays	2	•	12Vdc	4	I.C.A.O type A	>10
SEGD24A10	Led arrays	2	•	24Vdc	4	I.C.A.O type A	>10
SEGD48A10	Led arrays	2	•	48Vdc	4	I.C.A.O type A	>10
SEGD23A10	Led arrays	2	•	230Vac	5	I.C.A.O type A	>10
SEGS12A32	Led arrays	1	•	12Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGS24A32	Led arrays	1	•	24Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGS48A32	Led arrays	1	•	48Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGS23A32	Led arrays	1	•	230Vac	8	I.C.A.O type B/FAA type L810	>32
SEGS12B32	Led arrays	1	•	12Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGS24B32	Led arrays	1	•	24Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGS48B32	Led arrays	1	•	48Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGS23B32	Led arrays	1	•	230Vac	8	I.C.A.O type B/FAA type L810	>32
SEGD12A32_1	Led arrays	2	•	12Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGD24A32_1	Led arrays	2	•	24Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGD48A32_1	Led arrays	2	•	48Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGD23A32_1	Led arrays	2	•	230Vac	8	I.C.A.O type B/FAA type L810	>32
SEGD12A32	Led arrays	2	•	12Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGD24A32	Led arrays	2	•	24Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGD48A32	Led arrays	2	•	48Vdc	7	I.C.A.O type B/FAA type L810	>32
SEGD23A32	Led arrays	2	•	230Vac	8	I.C.A.O type B/FAA type L810	>32



Article	Bulb type	Bulb n°	Beacon	Power supply V	Power consumption W	Regulation compliancy	Light Emission cd
SEGS23E10	Fluorescent	1	•	230Vac	20	I.C.A.O type A	>10
SEGD23E10	Fluorescent	2	•	230Vac	20	I.C.A.O type A	>10
SEGS23E32	Fluorescent	1	•	230Vac	25	I.C.A.O type B/FAA type L810	>32
SEGD23E32	Fluorescent	2	•	230Vac	25	I.C.A.O type B/FAA type L810	>32

Article	Bulb type	Bulb n°	Beacon	Power supply V	Power consumption W	Regulation compliancy	Light emission cd
SEGS12E10	Fluorescent	1	•	12Vdc	10	I.C.A.O type A	>10
SEGD12E10	Fluorescent	2	•	12Vdc	10	I.C.A.O type A	>10
SEGS48E10	Fluorescent	1	•	48Vdc	18	I.C.A.O type A	>10
SEGD48E10	Fluorescent	2	•	48Vdc	18	I.C.A.O type A	>10



All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.

art. SEGS...2K

medium intensity, omnidirectional, flashing and fixed red LED bulb

Medium intensity LED red obstruction light available in two configurations: single flashing (art. SEGS..P2K) or single fixed (art. SEGS..C2K).

BULB

Light characteristics ICAO Type B and C obtained using power LED array bulb + specially designed Clampco reflector. Powered by an electronic circuit at 24, 48 Vdc or 230 Vac according to the model. Lamplife 100.000 hours. Internal electronic circuits and lamp starters tropicalized. Single beacon device configured 'main' or 'stand-by'.

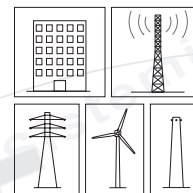
MATERIALS

- transparent polycarbonate cap, unbreakable (crash test energy = 20 J) and flame retardant;
- aluminium alloy structure. Through anodic oxidation process components are coated with an aluminium oxide layer (black);
- plug-in waterproof external connector or pigtail (L=5m) for fast installation.

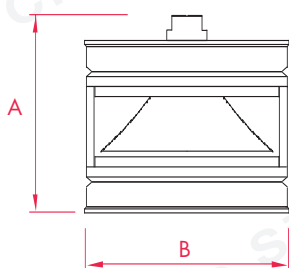
OPERATING CONDITIONS

- air temperature: from -30°C to +55°C;
- moisture: 100% with condensation;
- protection level: IP 65.

APPLICATIONS



art. SEGS48P2K



art. SEGS48P2K

Dimensions	Weight
mm	Kg
A:165 B:204	3.5

Article	Bulb type	Power supply	Power consumption	Regulation Compliancy	Effective light intensity	Flash frequency
		V	W		cd	fpm
SEGS23P2K	Led array	230Vac	11 @ 25 fpm	I.C.A.O. type B/FAA lamp type L-864	>2.000	20/60
SEGS48P2K	Led array	48Vdc	10 @ 25 fpm	I.C.A.O. type B/FAA lamp type L-864	>2.000	20/60
SEGS24P2K	Led array	24Vdc	10 @ 25 fpm	I.C.A.O. type B/FAA lamp type L-864	>2.000	20/60
SEGS23C2K	Led array	230Vac	40	I.C.A.O. type C	>2.000	fixed
SEGS48C2K	Led array	48Vdc	35	I.C.A.O. type C	>2.000	fixed
SEGS24C2K	Led array	24Vdc	35	I.C.A.O. type C	>2.000	fixed

art. SEGS...L2K

medium intensity, omnidirectional, flashing red LED bulb

Medium intensity flashing LED red obstruction light available in single configuration (art. **SEGS..L2K**).

BULB

Light characteristics ICAO Type B obtained using LED array bulb + specially designed Clampco lens. Powered by electronic circuit at 24, 48 Vdc or 230 Vac according to the model. Lamplife 100.000 hours. Internal electronic circuits and lamp starters tropicalized. Single beacon device configured 'main' or 'stand-by'.

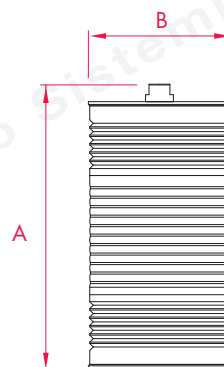
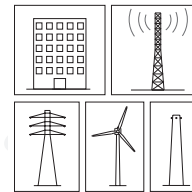
MATERIALS

See art. **SEGS...2K** page 100.

OPERATING CONDITIONS

See art. **SEGS...2K** page 100.

APPLICATIONS



art. **SEGS...L2K**



art. **SEGS23L2K**

Dimensions	Weight
mm	Kg
A:410 B:204	7.5

Article	Bulb type	Bulb n°	Power supply V	Power consumption @ 25 fpm W	Regulation Compliancy	Effective light intensity cd	Flash frequency fpm
SEGS23L2K	Led array	1	230Vac	40	I.C.A.O. type B/FAA lamp type L-864	>2.000	20/60
SEGS48L2K	Led array	1	48Vdc	40	I.C.A.O. type B/FAA lamp type L-864	>2.000	20/60
SEGS24L2K	Led array	1	24Vdc	40	I.C.A.O. type B/FAA lamp type L-864	>2.000	20/60

art. SEG.24LW.

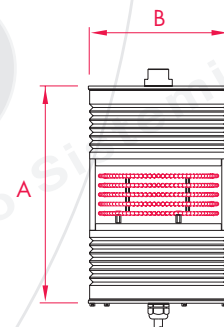
flashing red LED obstruction light for wind turbine

Medium intensity flashing LED red obstruction light available in single configuration (art. **SEGS..L2K**).

BULB

Light characteristics ICAO Type B obtained using LED array bulb + specially designed Clampco lens. Powered by electronic circuit at 24, 48 Vdc or 230 Vac according to the model. Lamplife 100.000 hours. Internal electronic circuits and lamp starters tropicalized. Single beacon device configured 'main' or 'stand-by'.

APPLICATION



art. **SEG24LWT**

Dimensions	Weight
mm	Kg
A:320 B:204	8.0

MATERIALS

See art. **SEGS...2K** page 100.

OPERATING CONDITIONS

See art. **SEGS...2K** page 100.

Article	Bulb type	Bulb n°	Power supply V	Power consumption @ 25 fpm W	Regulation Compliancy	Effective light intensity cd	Flash frequency
SEG24LWT	Led array	2	24Vdc	25+25	BMVBW Type W red	>170	1s On - 0.5s Off / 1s On - 1.5s Off
SEGS24LWH	Led array	1	24Vdc	30	UK CAP 168 GROUP B	>200	Fixed
SEGS24A200	Led array	1	24Vdc	30	ENAC	>200	Fixed / Flashing

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.



art. SEG.23F60

medium intensity, omnidirectional, flashing red xenon bulb

Medium intensity flashing red obstruction light available in two configurations: single (art. **SEGS23F60**) and double (art. **SEGD23F60**). Double bulb devices (main + stand-by) each bulb powered by its own electronic circuit.

BULB

Light characteristics ICAO Type B obtained using xenon discharge lamp. Powered by electronic circuit at 230 Vac, enclosed within the junction box. Lamplife 5.000 hours. Internal electronic circuits and lamp starters tropicalized.

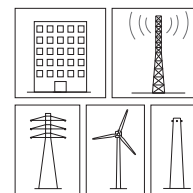
OPERATING CONDITIONS

- air temperature: from -30°C to +55°C
- moisture: 100% with condensation
- protection level: IP 65

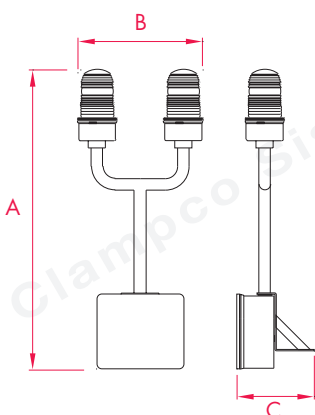
MATERIALS

- red polycarbonate cap, unbreakable (crash test energy = 20 J) and flame retardant. The cap is provided with a Fresnel lens to ensure the required light radiation pattern
- die cast aluminium alloy cap holder
- hot-dip galvanized tubular steel supporting structure
- die cast aluminium alloy junction box
- coating: red polyester powder finish

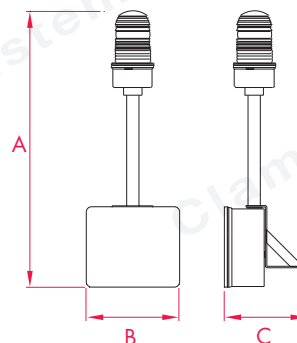
APPLICATIONS



art. SEGD23F60



art. SEGD23F60	
Double beacon configuration	
Dimensions	Weight
mm	Kg
A:800	6.5
B:370	
C:200	



art. SEGS23F60	
Single beacon configuration	
Dimensions	Weight
mm	Kg
A:730	4.2
B:250	
C:200	

Article	Bulb type	Bulb n°	Beacon	Power supply V	Power consumption @ 25 fpm W	Regulation Compliancey	Effective light intensity cd	Flash frequency fpm
SEGS23F60	Xenon	1		230Vac	40	I.C.A.O. type B.	>2000	20/60
SEGD23F60	Xenon	2		230Vac	40	I.C.A.O. type B.	>2000	20/60

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.



art. SEGS..P20K

medium intensity, omnidirectional, flashing white LED bulb

Medium intensity LED obstruction light available in two configurations: single white flashing (art. SEGS..P20K) or single dual white/red flashing (art. SEGS..P20K_2K).

BULB

Light characteristics ICAO Type A and B obtained using power LED array bulb + specially designed Clampco reflector. Powered by an electronic circuit at 48 Vdc or 230 Vac according to the model. Lamplife 100.000 hours. Internal electronic circuits and lamp starters tropicalized. Single beacon device configured 'main' or 'stand-by'.

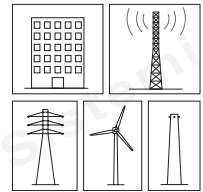
MATERIALS

- transparent polycarbonate cap, unbreakable (crash test energy = 20 J) and flame retardant;
- aluminium alloy structure. Through anodic oxidation process components are coated with an aluminium oxide layer (black);
- plug-in waterproof IP68 external connector or pigtail (L=5m) for fast installation.

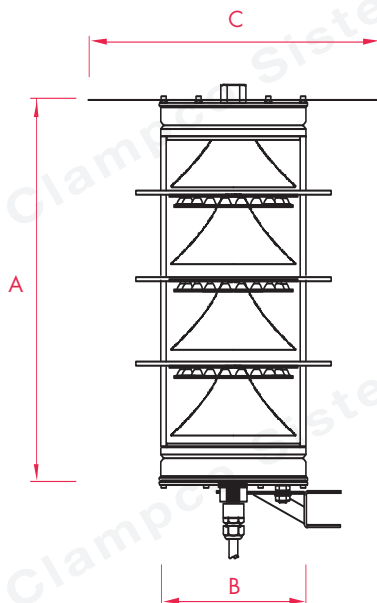
OPERATING CONDITIONS

- air temperature: from -40°C to +55°C;
- moisture: 100% with condensation;
- protection level: IP 66.

APPLICATIONS



art. SEGS48P20K



art. SEGS48P20K_2K

Dimensions	Weight
mm	Kg
A:620	10.5
B:204	
C:400	

Article	Bulb type	Power supply V	Power consumption W	Regulation Compliancy	Effective light intensity		Flash frequency fpm
					day&twilight	night	
SEGS23P20K	Led array	230Vac	50 @ 25 fpm	I.C.A.O. type A/FAA lamp type L-865	20.000 cd white	2.000 cd white	20/60
SEGS48P20K	Led array	48Vdc	50 @ 25 fpm	I.C.A.O. type A/FAA lamp type L-865	20.000 cd white	2.000 cd white	20/60
SEGS23P20K_2K	Led array	230Vac	50 @ 25 fpm	FAA lamp type L-864/L-865	20.000 cd white	2.000 cd red	20/60
SEGS48P20K_2K	Led array	48Vdc	50 @ 25 fpm	FAA lamp type L-864/L-865	20.000 cd white	2.000 cd red	20/60

art. SEGS2320K

medium intensity, 120° horizontal beam, flashing white xenon

Medium intensity obstruction lights available in single configuration (art. SEGS2320K). Multiple light units used to achieve horizontal coverage of 360 degrees.

BULB

Light characteristics ICAO Type A (day/twilight/night) obtained using xenon discharge lamp. Lamplife 8.000 hours @25FPM.

Powered by electronic circuit at 230 Vac, enclosed within external power supply box (500x400x200 mm).

Single beacon device configured as 'main' or 'stand-by'.

The light intensity controlled by photoelectric switch (art. SEI.....) connected to control board (art. SEQC.....) that changes intensity according to ambient light changes.

MATERIALS

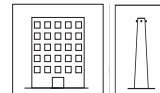
- die cast alluminium body and frame;
- reflector in pure aluminium sheet, polished and coated;
- tempered glass with silicone rubber gaskets;
- bracket made of galvanized steel with index for vertical orientation;
- coating: grey polyester powder finish.

OPERATING CONDITIONS

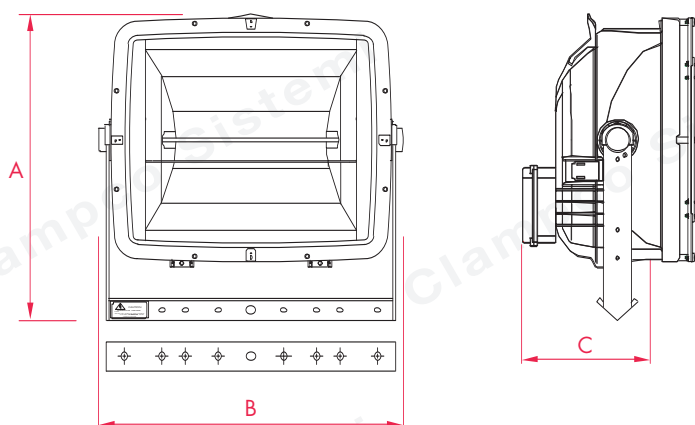
- air temperature: from -30°C to +55°C;
- moisture: 100% with condensation;
- protection level: IP 66.

Devices of this family are intended for light operation during day, nighttime and twilight. A radiation shield can be used to protect obstruction light (art. SEGOPT_SHIELD).

APPLICATIONS



art. SEGS2320K + SEGOPT_SHIELD



Dimensions	Weight
mm	Kg
A:656	23
B:650	
C:340	

Article	Bulb type	Bulb	Power supply	Power consumption @ 25 fpm	Regulation compliancy	Effective light intensity		Flash frequency
						day&twilight	night	
SEGS2320K	xenon	1	230Vac	40 15	Medium Intensity I.C.A.O. type A/FAA lamp type L-865	20.000 cd white	2.000 cd white	20/60

art. SEGSPTL..

low intensity, omnidirectional, fixed red LED bulb

The power transmission overhead line obstruction light (art. **SEGSPTL...**) extracts energy from the magnetic field surrounding the power distribution wire.

The device is easy to install on the power line due to its compact and light design and its convenient locking system. It can be directly clamped and fixed onto the high voltage line conductor using only one hand tool. The device is night-time activated by an internal photosensor. The immunity of this device has been tested and certified in a high voltage laboratory. In particular it withstands:

- 6.5 kA (200 ms) line short circuit current
- 1MV pulse line overvoltage (lightning)
- corona extinction voltage has been certified (> 367 kV)
- radio Inteference Voltage has been measured according to CISPR18-2 and found below the limits of EN 50341-3-19

BULB

Light characteristics ICAO Type A or B obtained using LED array bulbs which combine extremely long life (100.000 hours duty) with the high efficiency of ultrabright red LEDs.

MAIN CHARACTERISTICS

- weight 8.5 kg
- HV cable diameter range from 10 to 38 mm
- line voltage up to 400 kV(50/60 Hz)
- available current ranges:
 - 10 - 500 A
 - 25 - 1.000 A
 - 50 - 2.000 A

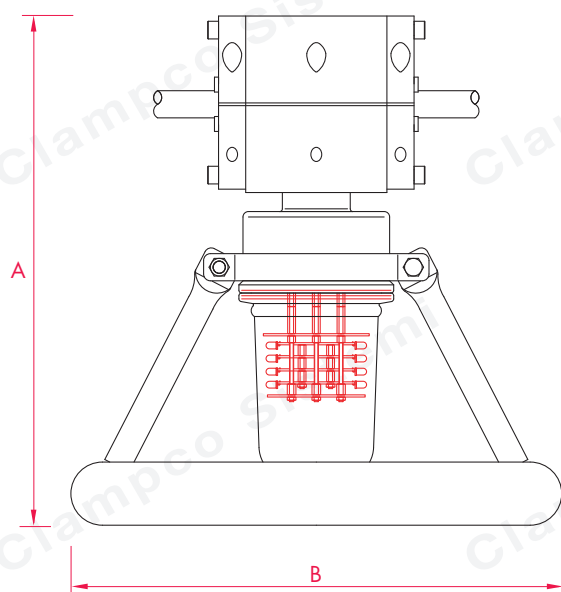
OPERATING CONDITIONS

- air temperature: from -30°C to +55°C
- moisture: 100% with condensation
- protection level: IP 65

APPLICATION



art. SEGSPTL32



Dimensions	Weight
mm	Kg
A:380	8.5
B:370	
C:340	

Article	Bulb type	Regulation Compliancey	Effective light intensity cd
SEGSPTL32	LED array	I.C.A.O type B/FAA type L810	>32

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.



art. SEG...EX

low and medium intensity, omnidirectional, fixed and flashing LED bulb

Clampco Sistemi provides Aircraft Warning Light Systems in EXPLOSION PROOF version compliant to ATEX directive and according to customer requirements. Select obstruction light type from the item list in this catalogue and indicate to our sales office the requested explosion proof Execution, Temperature class, IP protection level (e.g. EEx-d, IIB, T5, IP55). Enclosures are made of copper free aluminium alloy, epoxy coating.

On request **Clampco Sistemi** provides armoured cable or high temperature cable (art. **SCCES0615_EX_HT**) and cable-glands to complete installation kit.

Flexible or rigid conduits can be used for protection of the electrical cables. To get a complete conduit system design, please provide our sales office with necessary information on the conduit path and drawings of your structures.

APPLICATION



art. SEGS48P2K_EXIIC



art. SEGS23A32C_EXIIC

Control Board in
EExd IIC Housing



Photoelectric switch
EExd IIC Housing



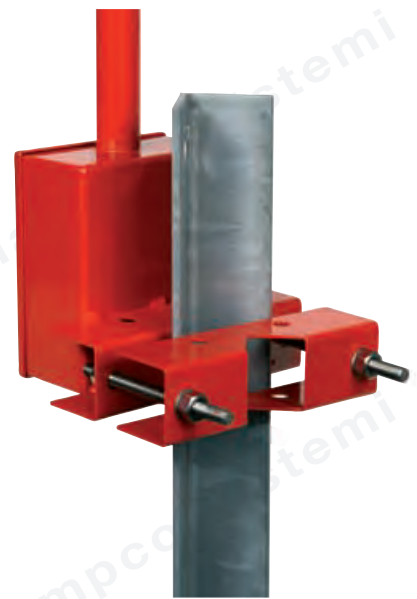
art. SEGD23A32_EXIIB

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.

art. **SEGOPT...**

options

- Optional fixing hardware for all **Clampco Sistemi** obstruction lights. It is made of two parts of welded steel, hot-dip galvanized. It is supplied complete with two stainless steel threaded bars, nuts and washers. According to the model, this support is compatible with tube or 'L' section of different dimensions (art. **SCSG.....**)
- fixing hardware can be made of stainless steel upon request (art. **SCSG..._INOX**)
- faraday cage: for light mounted on irradiating masts add to the obstruction light code art. **SEGOPT_CAGE**
- heater: for light with air temperature range from -50°C to +55°C add to the obstruction light code art. **SEGOPT_HEATER**
- stainless steel radiation shield: for light mounted on flare stack add to the obstruction light art. **SEGOPT_SHIELD**



Fixing hardware for SEG...



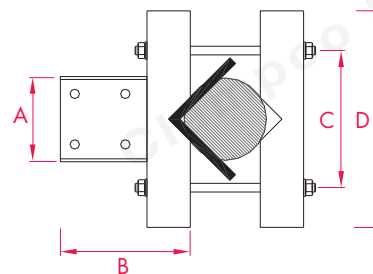
art. **SEGOPT_SHIELD**



art. **SCSG00120_INOX**



art. **SEGOPT_CAGE**



art. **SCSG00120**

Article	Dimensions				Usable pipe diameter	Usable L-section
	A	B	C	D		
SCSG00120	mm	mm	mm	mm	mm	mm
SCSG00120	120	180	190	300	50-120	50-120
SCSG00230	120	180	250	300	50-230	50-160

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.



art. SCCE.....

electric cables

Cables supplied with **Clampco Sistemi** AWLS are:

- flame retardant, PVC insulated, suitable for outdoor/indoor installation (temperature range: -35°C to 80°C)
- high temperature version (silicone rubber) range: -35° to 180°

The following cables are used:

- **connection of lights (art. SEG...)** to control board (art. SEQC...): cables with 4, 8, 12 and more conductors (1.5 or 2.5 mm²). This cable has a copper screen under the external insulating jacket
- **connection of photoelectric switch (art. SEI...)** to control board: cables with 4 conductors (1.0 mm²). The cables fit both double and single **Clampco Sistemi** photoelectric switches
- **connection of control board to power supply:** cables with 3 conductors (1.5 mm²)

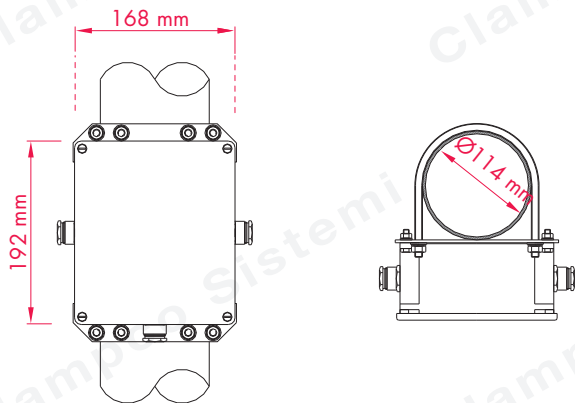
Fixing of cables to structures can be achieved by **Clampco Sistemi** cable clamps (see products on www.clampco.it).

Article	Description
SCCES0325	N1VC4V-K 06/1Kv(3 x 2.5 mm ²)
SCCES0415	FG70H2R 06/1Kv (4 x 1.5 mm ²)
SCCES0815	FG70H2R 06/1Kv (8 x 1.5 mm ²)
SCCES1215	FG70H2R 06/1Kv (12 x 1.5 mm ²)
SCCE00410	N1VVK 450/750 V (4 x 1.0 mm ²)
SCCE00315	FG70R 450/750 V (3 x 1.5 mm ²)
SCCES0615_EX_HT	SIHF-P-Si/450-750 V (6 x 1.5 mm ²)
SCCES0815_EX_HT	SIHF-P-Si/450-750 V (8 x 1.5 mm ²)

art. SCSD.....

junction box

Die cast aluminium boxes containing all cable conduit glands sized to guarantee waterproof and dustproof characteristics, according to the cable or conduit. Junction boxes are complete with terminal strip, with identification of the terminals as indicated on the supplied wiring diagram.



art. SCSD03012

JUNCTION BOX CODE SYNTAX

SCSD	0	k	x	y	z																																	
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">Gland type</th> </tr> <tr> <td style="width: 20px; text-align: center;">0</td> <td>cable</td> </tr> <tr> <td style="width: 20px; text-align: center;">T</td> <td>conduit</td> </tr> </table>	Gland type		0	cable	T	conduit	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Number of ways</th> </tr> <tr><td style="text-align: center;">2</td></tr> <tr><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">4</td></tr> <tr><td style="text-align: center;">5</td></tr> <tr><td style="text-align: center;">6</td></tr> </table>	Number of ways	2	3	4	5	6	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Number of glands for cable Type 1</th> </tr> <tr><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">2</td></tr> <tr><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">4</td></tr> <tr><td style="text-align: center;">5</td></tr> <tr><td style="text-align: center;">6</td></tr> </table>	Number of glands for cable Type 1	1	2	3	4	5	6	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Number of glands for cable Type 2</th> </tr> <tr><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">2</td></tr> <tr><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">4</td></tr> <tr><td style="text-align: center;">5</td></tr> <tr><td style="text-align: center;">6</td></tr> </table>	Number of glands for cable Type 2	1	2	3	4	5	6	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Number of glands for cable Type 3</th> </tr> <tr><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">2</td></tr> <tr><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">4</td></tr> <tr><td style="text-align: center;">5</td></tr> <tr><td style="text-align: center;">6</td></tr> </table>	Number of glands for cable Type 3	1	2	3	4	5	6
Gland type																																						
0	cable																																					
T	conduit																																					
Number of ways																																						
2																																						
3																																						
4																																						
5																																						
6																																						
Number of glands for cable Type 1																																						
1																																						
2																																						
3																																						
4																																						
5																																						
6																																						
Number of glands for cable Type 2																																						
1																																						
2																																						
3																																						
4																																						
5																																						
6																																						
Number of glands for cable Type 3																																						
1																																						
2																																						
3																																						
4																																						
5																																						
6																																						
Note: k=x+y+z																																						

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.



Clampco Sistemi control boards operate the whole system, whatever the number of obstruction lights. The board has the following functions:

- electronic conversion from locally available mains to the AWLS operating voltage (requested AC-DC, DC-DC, DC-AC converter is installed inside the control board on a DIN rail)
- photoelectric switch management
- automatic check of bulb status (test light management)
- automatic main/stand-by bulb switchover (fault management)
- generation of visual alarms: indication on front panel pilot lamp green/red (alarm management)
- remote transmission of alarms: voltage dry contacts available on screw terminal board (alarm management)
- easy checking procedure of the whole system by means of front panel switches and buttons accessible to the operator

The above functions are associated with proprietary **Clampco Sistemi** 'plug-in' modules which are easy to replace without tools.

The dimension of the control board depends on the AWLS configuration (n° of obstruction lights).

According to the installation environment the control board electrical circuit is enclosed in a housing:

- IP 55 coated steel box
- IP 65 polyester box
- IP 65 stainless steel box (art. **SEQOPT_INOX**)

Front door can be supplied with transparent window or blind (recommended for outdoor installation).

The following special functions may be present if required:

- synchronisation of all the flashing obstruction lights in the system (art. **SEQOPT_SYNC**)
- on-board or external Uninterruptible Power Supply (art. **SEQOPT_UPS**)

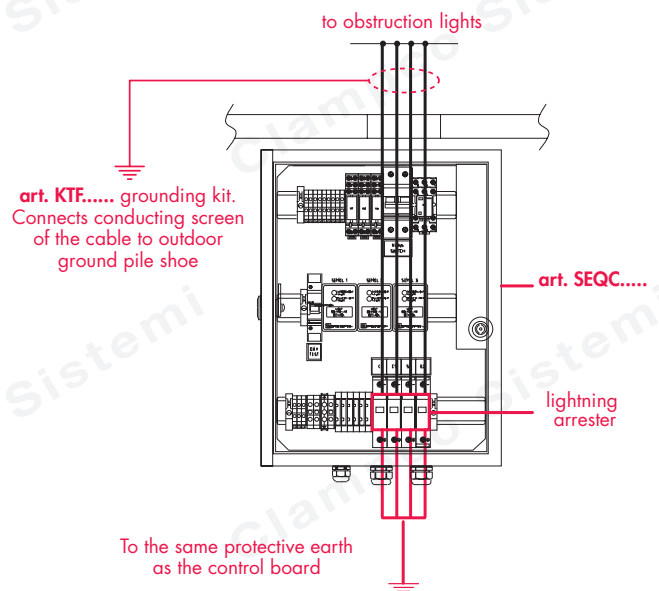
Overvoltage protection (surge) of incoming electric cables: Adds a lightning arrester module for each wire connecting the obstruction lights to the control board, according to the nominal voltage of the obstruction lights. These modules are 'plug-in', easy to replace without tools: when faulty, a small window on the module turns to red. These devices are a secondary level protection to lightning, in case of overvoltage induced by the main lightning current in the nearby conductors.



art. SEQC... + SEGOPT_INOX

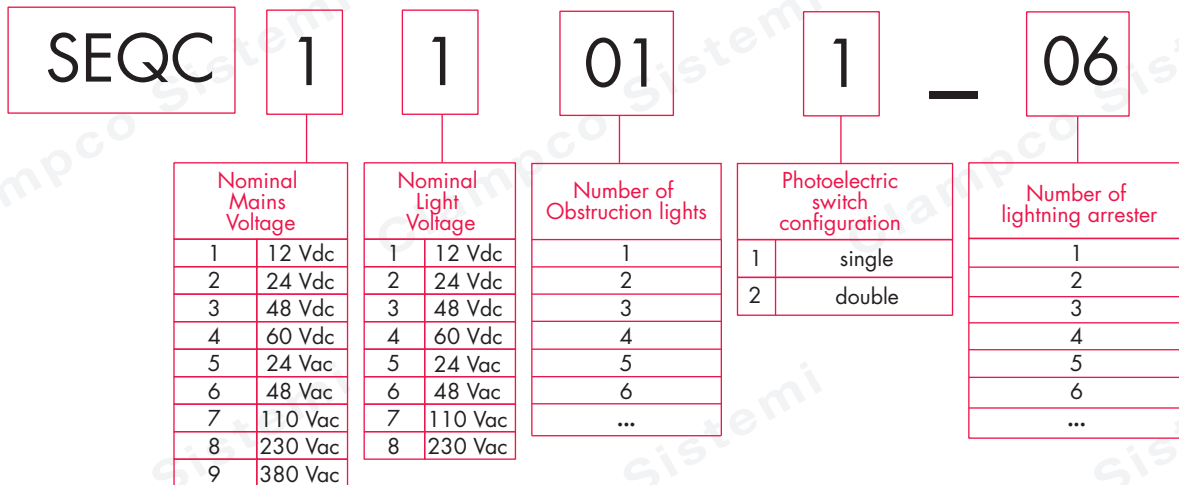


SUPPLY CONFIGURATION



All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.

CONTROL BOARD CODE SYNTAX



Photoelectric switch is installed outdoors near the control board to determine the operating mode of the system (night/day). It has a photoelectric threshold adjustable between 20 and 400 lux, factory set at 300 lux. It is available in two configurations:

- single
- double (hot stand-by independent unit) for a more reliable AWLS

In the latter case the failure of one of the independent circuits is recognised by the control board as a NON-URGENT alarm.

MATERIALS

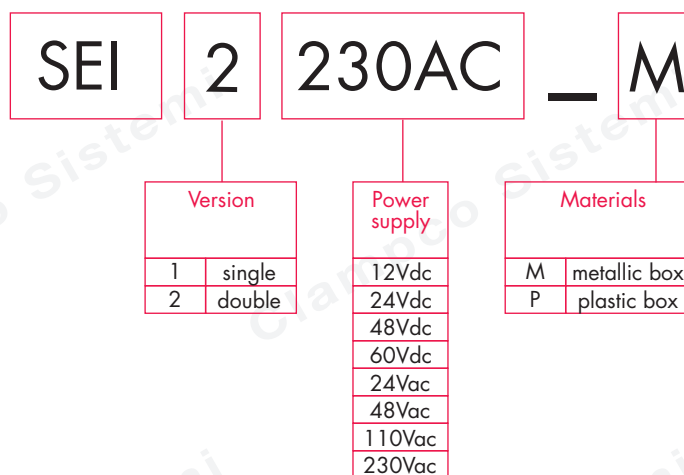
- photoelectric switch is enclosed in a metallic (art. SEI....._M) or plastic housing (art. SEI....._P)

OPERATING CONDITIONS

- air temperature: from -30°C to +55°C
- moisture: 100% with condensation
- protection level: IP 55. Additional protection level can be provided upon request.

The SEI..... photoelectric switch is fully compatible with any type SEQC..... control board provided that the model with compatible supply voltage is selected.

PHOTO ELECTRIC SWITCH CODE SYNTAX

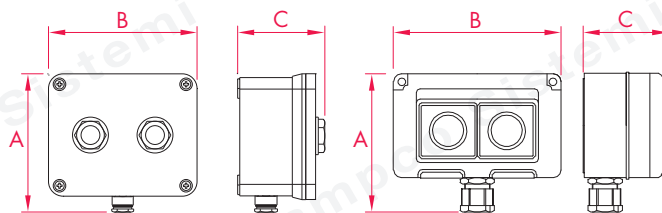


Metallic box	
Dimensions	Weight
mm	g
A:117	800
B:142	
C:80	

Plastic box	
Dimensions	Weight
mm	g
A:110	250
B:132	
C:65	



art. SEI1230AC_M



art. SEI2.....

All legal rights in this document are the exclusive property of calzavara and no part of it may be reproduced or communicated to any other party without our authorization. All data in this catalogue is for reference only and may be changed without notice, in line with our policy of continuous technical development.