AIRCRAFT WARNING LIGHTS SOLUTIONS & ACCESSORIES

INDEX

A.1 Low intensity aircraft warning lights

LIOLA-P1_22S, LIOLA-P1_23S

Single Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A - LOW INTENSITY OBSTACLE LIGHT

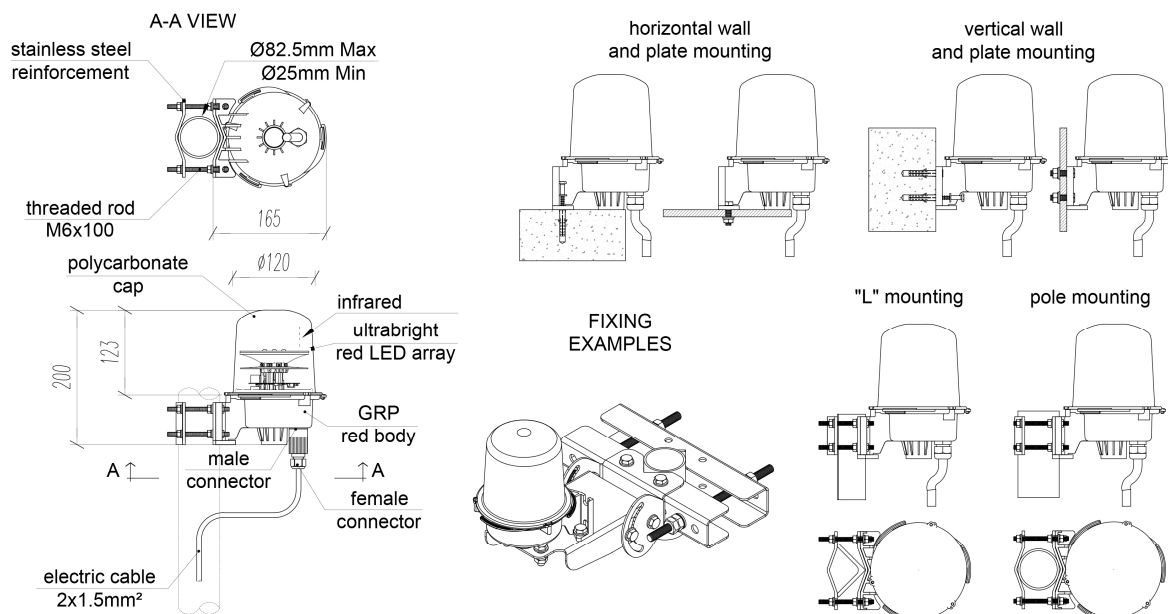**CAA- CAP 168** – LOW INTENSITY GROUP A

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- patented technology
- easy way for mounting – plug 'n' play connection
- the lowest weight and power consumption in the market
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- horizontal and vertical fixings

SPECIFICATIONS

	LIOLA-P1_22S	LIOLA-P1_23S
Order Code	**LIOLA-P1_22S**	**LIOLA-P1_23S**
Typical use	Night time	
Light source	LED	
Type of beacon	Steady	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>10 cd	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	1.6 W	2 W
Average life	100 000 hours	
Temperature range	-40 to +55 °C	-30 °C to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165

polycarbonate cap
Ø120
infrared
ultrabright red LED array
GRP red body
200
123
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

FIXING EXAMPLES

"L" mounting

pole mounting

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

Rev. 02

LIOLA-P1_22D, LIOLA-P1_23D

Double Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A - LOW INTENSITY OBSTACLE LIGHT

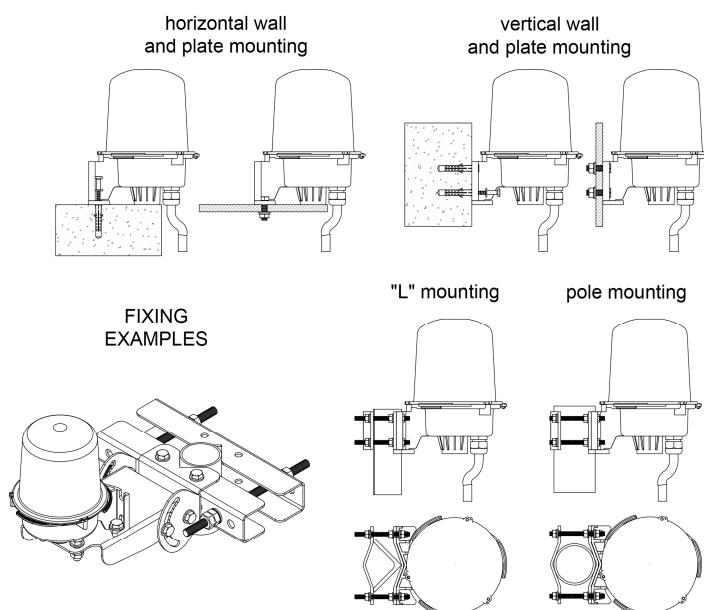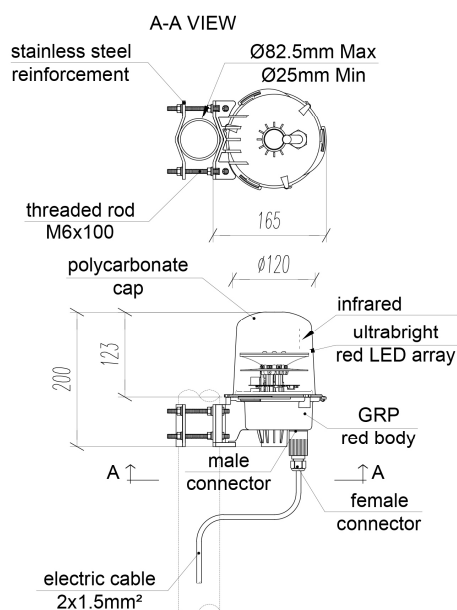**CAA- CAP 168** – LOW INTENSITY GROUP A

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- innovative single LED layer for a double light
- easy way for mounting – plug 'n' play connection
- the lowest weight in the market
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- patented technology

SPECIFICATIONS

Order Code	LIOLA-P1_22D	LIOLA-P1_23D
Typical use	Night time	
Light source	LED	
Type of beacon	Double (main + stand-by) steady	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>10 cd	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	3.2 W*	4 W*
Average life	100 000 hours	
Temperature range	-40 to +55 °C	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165

polycarbonate cap
Ø120
infrared
ultrabright red LED array
123
200
GRP red body
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

FIXING EXAMPLES

"L" mounting

pole mounting

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

LIOLB-P1_22S, LIOLB-P1_23S

Single Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE B - LOW INTENSITY OBSTACLE LIGHT
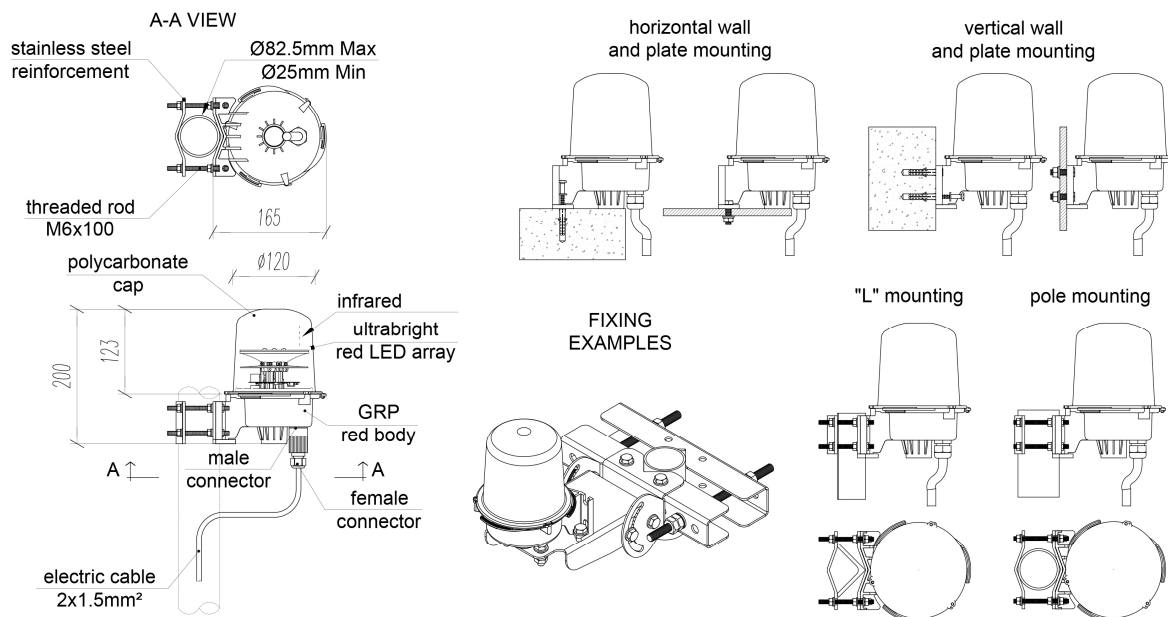
FAA AC 150/5345-43J
TYPE L-810

KEY FEATURES & BENEFITS

- designed and manufactured in Italy by Clampco Sistemi
- patented technology
- easy way for mounting – plug 'n' play connection
- the lowest weight in the market
- extended power supply range: 10 to 60 Vdc, 110-230Vac

SPECIFICATIONS

Order Code	LIOLB-P1_22S	LIOLB-P1_23S
Typical use	Night time	
Light source	LED	
Type of beacon	Steady	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>32.5 cd	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	3 W	4.5 W
Average life	100 000 hours	
Temperature range	-40 to +55 °C	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

TECHNICAL DRAWINGS

A-A VIEW

stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165

polycarbonate cap
Ø120
infrared
ultrabright red LED array
GRP red body
200
123
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

FIXING EXAMPLES

"L" mounting

pole mounting

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

LIOLB-P1_22SR, LIOLB-P1_23SR

NGV – Compatible Single Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE B – LOW INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43J
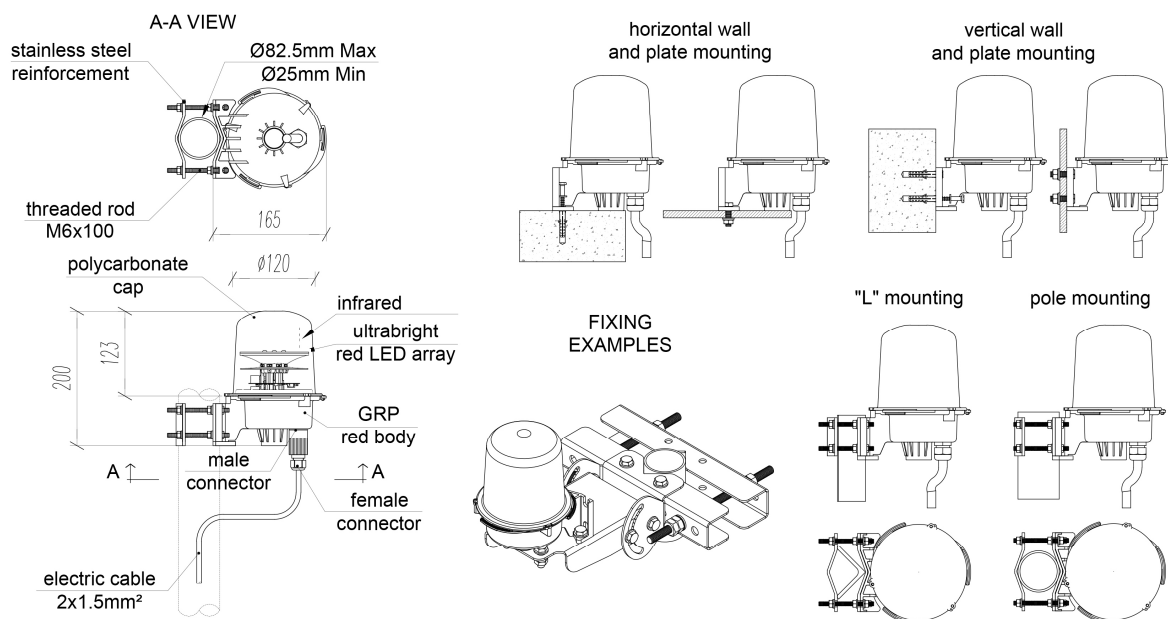**TYPE L-810** – VISIBLE AND INFRARED LIGHT

KEY FEATURES & BENEFITS

- dual mode visible + infrared
- designed and manufactured in Italy by Clampco Sistemi
- easy way for mounting – plug 'n' play connection
- infrared compliant with FAA AC 150/5345-43J, Table 3-1
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- patented technology

SPECIFICATIONS

Order Code	LIOLB-P1_22SR	LIOLB-P1_23SR
Typical use	Night time	
Light source	LED	
Type of beacon	Steady	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>32.5 cd (visible) and >4mW/sr (Infrared)	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	5 W	6 W
Average life	100 000 hours	
Temperature range	-40 to +55 °C	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165

polycarbonate cap
Ø120
infrared
ultrabright red LED array
GRP red body
200
123
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

FIXING EXAMPLES

"L" mounting

pole mounting

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

Rev. 02

LIOLB-P1_22SF, LIOLB-P1_23SF

Flashing Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

FAA AC 150/5345-43J
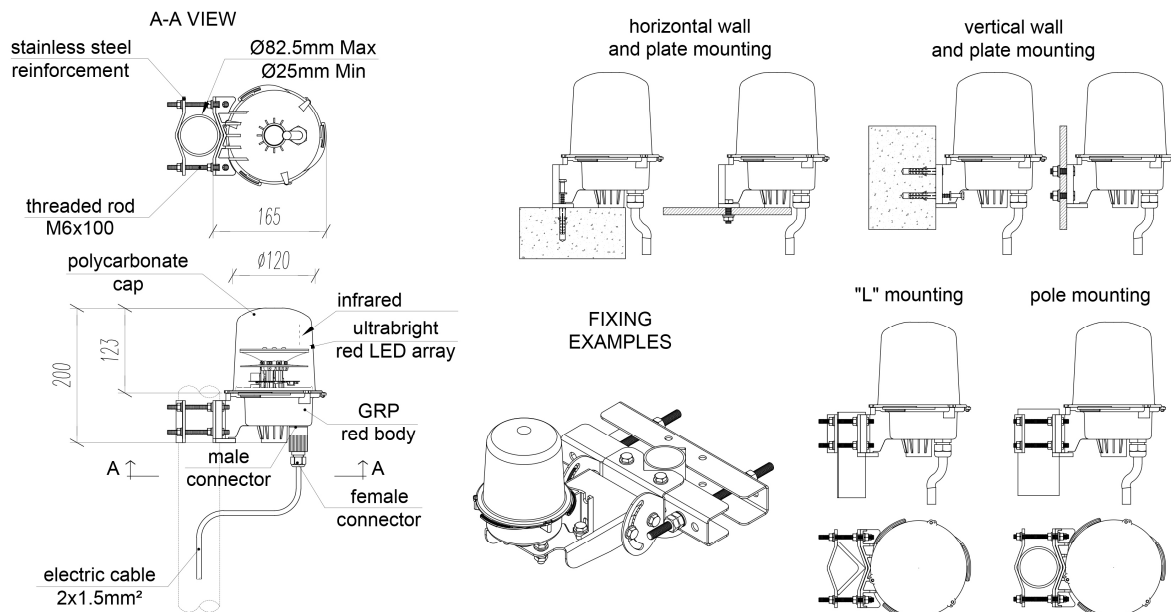**TYPE L-810 (F)** – FLASHING RED
OBSTRUCTION LIGHT

KEY FEATURES & BENEFITS

- designed and manufactured in Italy by Clampco Sistemi
- resistance to corrosion
- easy way for mounting – plug 'n' play connection
- patented technology
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- 30 flash per minute (FPM) flashing light

SPECIFICATIONS

	LIOLB-P1_22SF	LIOLB-P1_23SF
Order Code	**LIOLB-P1_22SF**	**LIOLB-P1_23SF**
Typical use	Night time	
Light source	LED	
Type of beacon	Flashing	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>32.5 cd	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	3 W(peak) – 0,8 W(mean @30FPM)	4.5 W(peak) – 1 W(mean @30FPM)
Average life	100 000 hours	
Temperature range	-40 to +55 °C<	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165
polycarbonate cap
Ø120
infrared ultrabright red LED array
200
123
GRP red body
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

FIXING EXAMPLES

"L" mounting

pole mounting

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

Rev. 02

LIOLB-P1_22SRF, LIOLB-P1_23SRF

NGV – Compatible Flashing Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

FAA AC 150/5345-43J
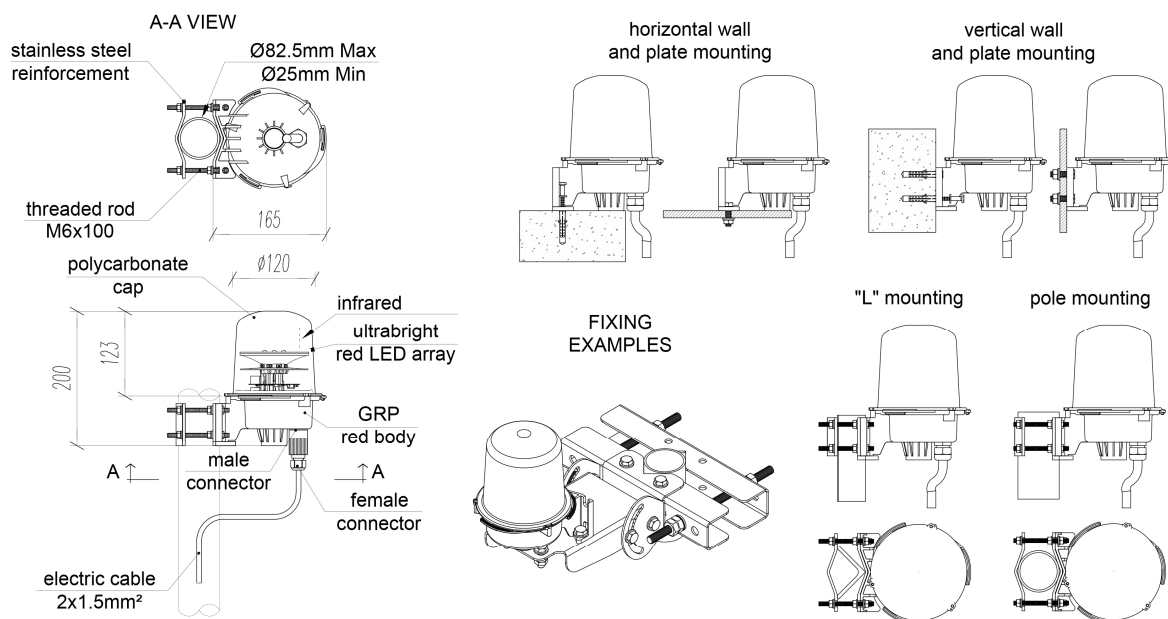**TYPE L-810 (F)** – FLASHING RED VISIBLE
AND INFRARED OBSTRUCTION LIGHT

KEY FEATURES & BENEFITS

- designed and manufactured in Italy by Clampco Sistemi
- dual mode visible + infrared
- easy way for mounting – plug 'n' play connection
- infrared compliant with FAA AC 150/5345-43J, Table 3-1
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- 30 flash per minute (FPM) flashing visible and infrared
- patented technology

SPECIFICATIONS

	LIOLB-P1_22SRF	LIOLB-P1_23SRF
Order Code	**LIOLB-P1_22SRF**	**LIOLB-P1_23SRF**
Typical use	Night time	
Light source	LED	
Type of beacon	Flashing	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>32.5 cd and >4mW/sr (Infrared)	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	5 W(peak) – 1,3 W(mean @30FPM)	6 W(peak) – 1,5 W(mean @30FPM)
Average life	100 000 hours	
Temperature range	-40 to +55 °C<	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165

polycarbonate cap
Ø120
infrared
ultrabright red LED array
123
200
GRP red body
A
male connector
female connector
A
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

FIXING EXAMPLES

"L" mounting

pole mounting

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

LIOLB-P1_22D, LIOLB-P1_23D

Double Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE B - LOW INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43J
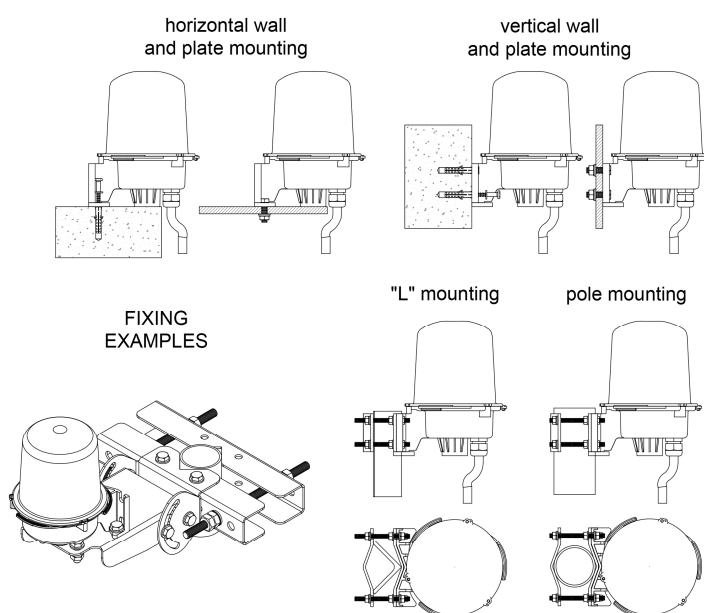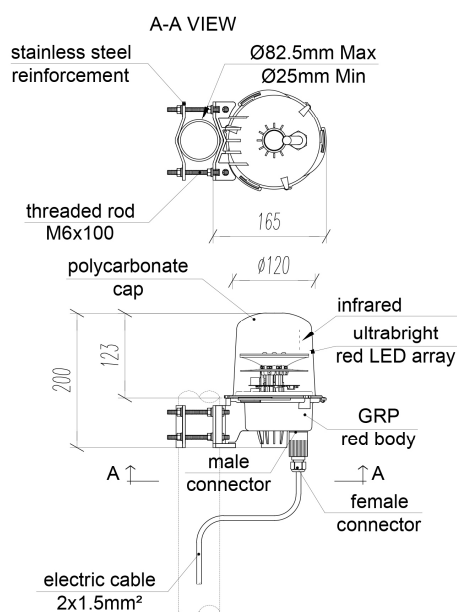**TYPE L-810**

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- innovative single LED layer for a double light
- easy way for mounting – plug 'n' play connection
- the lowest weight in the market
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- patented technology

SPECIFICATIONS

Order Code	LIOLB-P1_22D	LIOLB-P1_23D
Typical use	Night time	
Light source	LED	
Type of beacon	Double (main + stand-by) steady	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>32.5 cd	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	3 + 3 W*	4.5 + 4.5 W*
Average life	100 000 hours	
Temperature range	-40 to +55 °C	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165
polycarbonate cap
Ø120
infrared ultrabright red LED array
200
123
GRP red body
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

"L" mounting

pole mounting

FIXING EXAMPLES

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

LIOLB-P1_22DR

NGV – Compatible Double Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE B – LOW INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43J
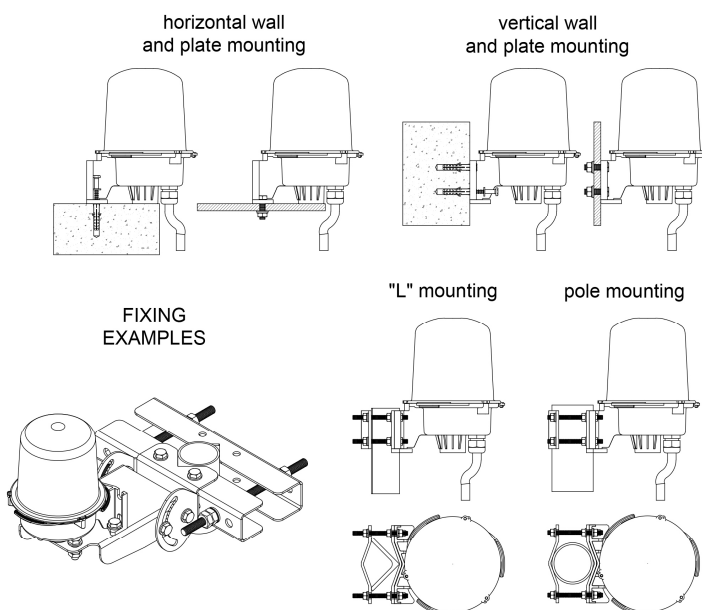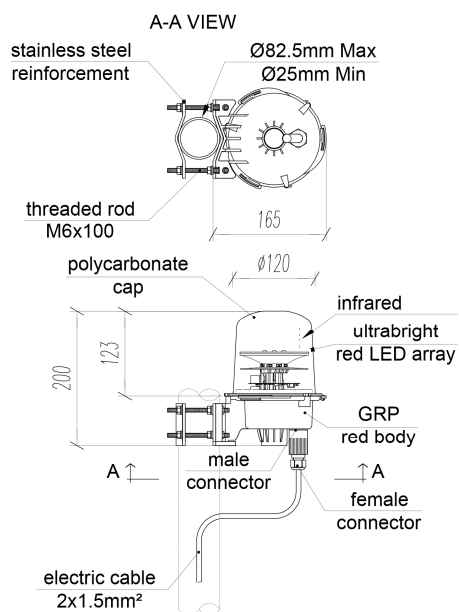**TYPE L-810** – VISIBLE AND INFRARED LIGHT

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- dual mode visible + infrared
- easy way for mounting – plug 'n' play connection
- infrared compliant with FAA AC 150/5345-43J, Table 3-1
- extended power supply range: 10 to 60 Vdc
- patented technology

SPECIFICATIONS

Order Code	**LIOLB-P1_22DR**
Typical use	Night time
Light source	LED
Type of beacon	Double (main + stand-by) steady
Colour	Red according to CIE Chromaticity Boundary
Light Intensity	>32.5 cd (visible) and >4mW/sr (Infrared)
Horizontal coverage	360°
Input voltage	10 ÷ 60 Vdc
Power consumption	5 + 5 W*
Average life	100 000 hours
Temperature range	-40 to +55 °C
Protection degree	IP66
Material of the body	Glass Reinforced Plastic red body (UL94-HB)
Material of the transparent cap	Polycarbonate (UL94-V2)
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm
Weight	700 g
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

A-A VIEW
stainless steel reinforcement
Ø82.5mm Max
Ø25mm Min
threaded rod M6x100
165
polycarbonate cap
Ø120
200
123
infrared ultrabright red LED array
GRP red body
A
male connector
A
female connector
electric cable 2x1.5mm²

horizontal wall and plate mounting

vertical wall and plate mounting

"L" mounting   pole mounting

FIXING EXAMPLES

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

LIOLB-P1_22DF, LIOLB-P1_23DF

Double Flashing Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

FAA AC 150/5345-43J
TYPE L-810 (F) – FLASHING RED
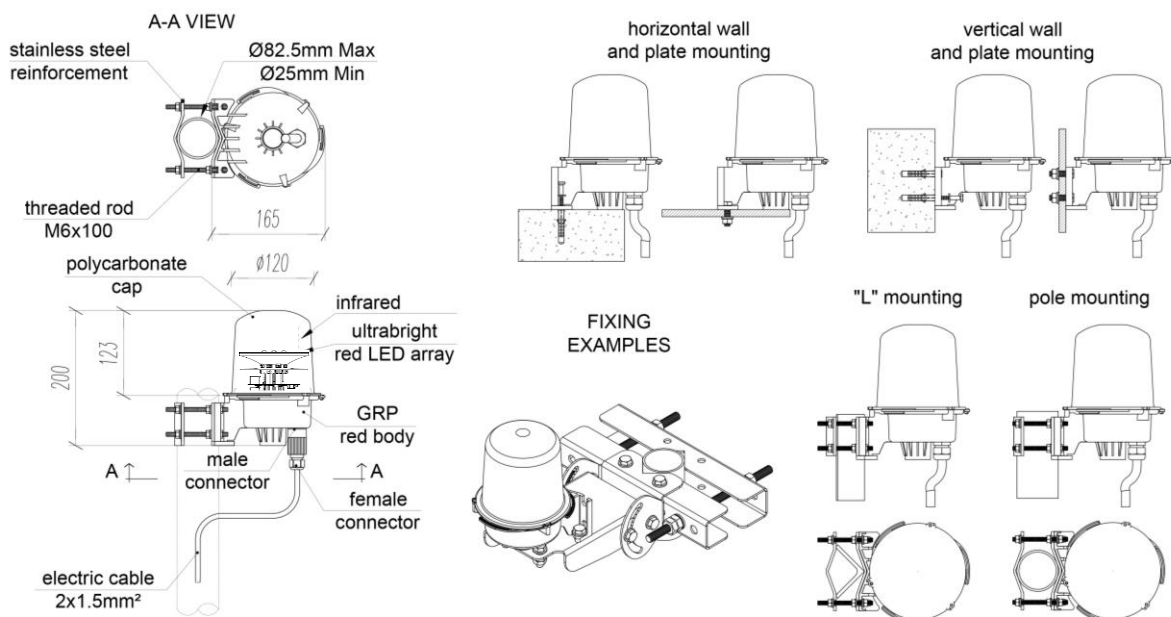OBSTRUCTION LIGHT

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- innovative single LED layer for a double light
- easy way for mounting – plug 'n' play connection
- patented technology
- extended power supply range: 10 to 60 Vdc, 110-230Vac
- 30 flash per minute (FPM) flashing light

SPECIFICATIONS

	LIOLB-P1_22SDF	LIOLB-P1_23SDF
Order Code	**LIOLB-P1_22SDF**	**LIOLB-P1_23SDF**
Typical use	Night time	
Light source	LED	
Type of beacon	Double (main + stand-by) flashing	
Colour	Red according to CIE Chromaticity Boundary	
Light Intensity	>32.5 cd	
Horizontal coverage	360°	
Input voltage	10 ÷ 60 Vdc	110 ÷ 230 Vac
Power consumption	6 W (peak)* – 1,4 W (mean @30FPM)*	9 W (peak)* – 2,3 W (mean @30FPM)*
Average life	100 000 hours	
Temperature range	-40 to +55 °C	-30 to +55 °C
Protection degree	IP66	
Material of the body	Glass Reinforced Plastic red body (UL94-HB)	
Material of the transparent cap	Polycarbonate (UL94-V2)	
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm	
Weight	700 g	
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.	
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)	

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

LIOLB-P1_22DRF

NGV – Compatible Double Flashing Low Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

FAA AC 150/5345-43J
TYPE L-810 – FLASHING RED VISIBLE AND INFRARED LIGHT
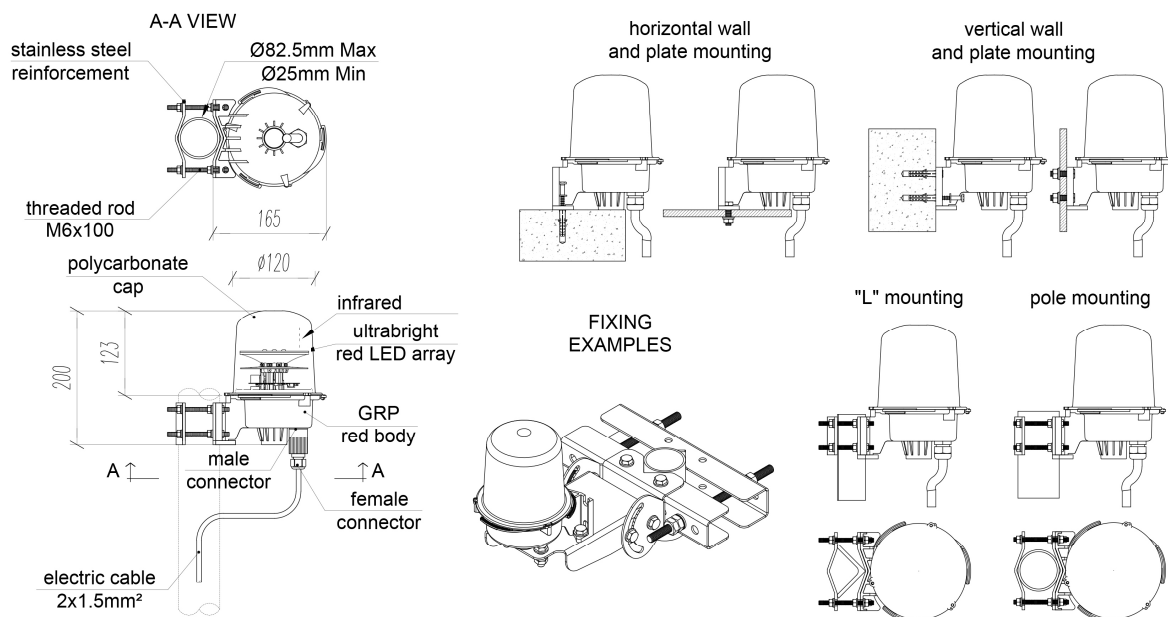
KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- dual mode visible + infrared
- easy way for mounting – plug 'n' play connection
- infrared compliant with FAA AC 150/5345-43J, Table 3-1
- extended power supply range: 10 to 60 Vdc
- 30 flash per minute (FPM) flashing light
- patented technology

SPECIFICATIONS

Order Code	**LIOLB-P1_22DRF**
Typical use	Night time
Light source	LED
Type of beacon	Double (main + stand-by) steady
Colour	Red according to CIE Chromaticity Boundary
Light Intensity	>32.5 cd (visible) and >4mW/sr (Infrared)
Horizontal coverage	360°
Input voltage	10 ÷ 60 Vdc
Power consumption	10 W(peak)* – 2,4 W(mean @30FPM)*
Average life	100 000 hours
Temperature range	-40 to +55 °C
Protection degree	IP66
Material of the body	Glass Reinforced Plastic red body (UL94-HB)
Material of the transparent cap	Polycarbonate (UL94-V2)
Connection	M/F connector IP66/68 for cable up to ø 7 - 13 mm
Weight	700 g
Fixing	Stainless steel anchor basement for poles with diameter up to 82 mm.
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219,1 mm). Adjustable fixing plate (± 60° on the horizontal plan)

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

ACWL_SOLAR01

Single Low Intensity Solar Obstruction Light and kit

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A - LOW INTENSITY OBSTACLE LIGHT
TYPE B - LOW INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43J
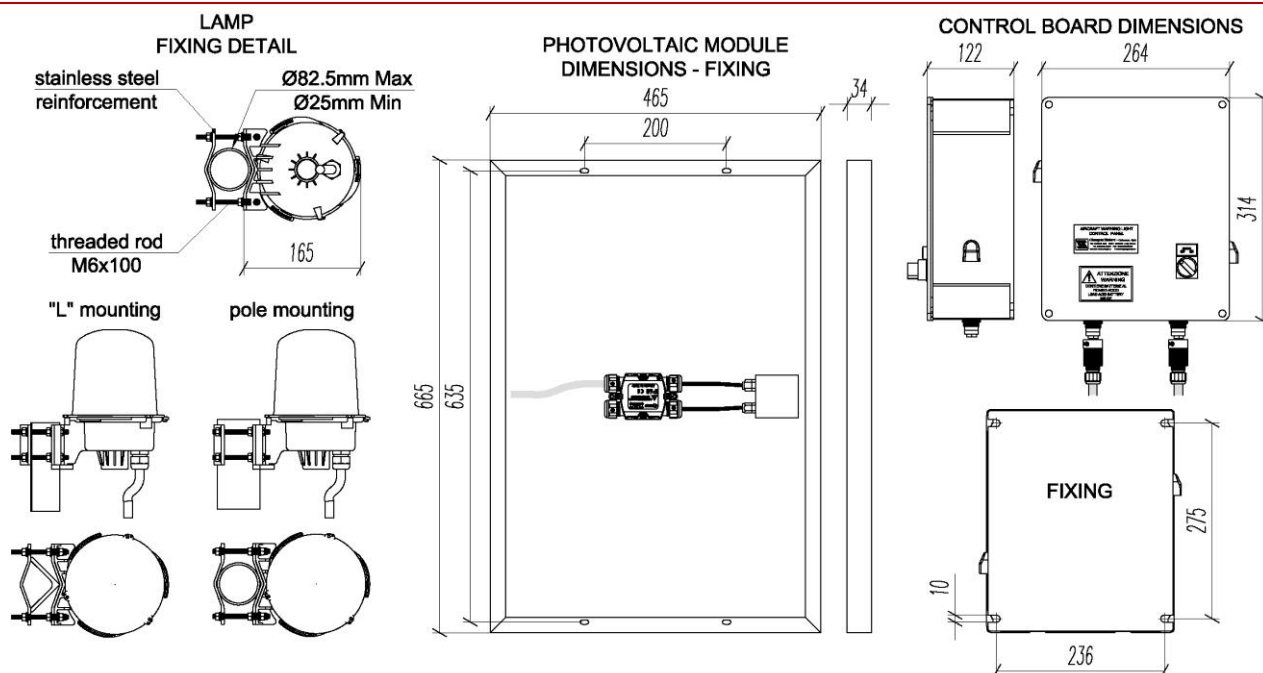**TYPE L-810**

KEY FEATURES & BENEFITS

- designed and manufactured in Italy by Clampco Sistemi

- patented warning light technology

- easy way for mounting – plug 'n' play connection

- Long life battery, more than 60 hours of continuous autonomy after a full charge

- The kit is composed by LED lamp, PV panel, control box, cable pigtails (1,5 m standard), mounting accessories

SPECIFICATIONS

Order Code	ACWL_SOLAR01
Typical use	Night time
Light source	LED
Type of beacon	Steady
Colour	Red according to CIE Chromaticity Boundary
Light Intensity	>32.5 cd
Horizontal coverage	360°
Input voltage	Solar Panel Polycrystalline 40Wp
Autonomy without charging	> 60 hours (after a full charge)*
Average life	100 000 hours
Temperature range	-40 to +50 °C (do not store below -40°C)
Protection degree of the lamp	IP66
Material of the body	Glass Reinforced Plastic red body (UL94-HB)
Material of the transparent cap	Polycarbonate (UL94-V2)
Material of the control box	Aluminium alloy passivated and painted
Weight	700g (lamp) - 10kg (control box) - 3,9kg (PV panel)
Lamp Fixings	Stainless steel anchor basement for poles with diameter up to 82.5 mm.
PV panel fixing	L shaped anchoring plate for poles up to 60mm

the autonomy may vary due to battery age, total number of cycles and working conditions
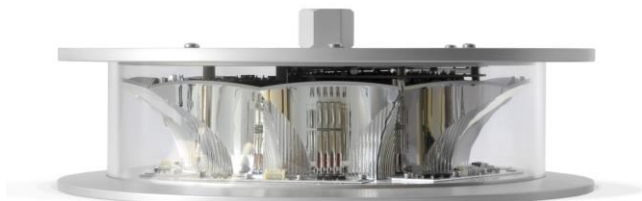
TECHNICAL DRAWINGS

A.2 Medium intensity aircraft warning lights

MIOLC-M1_12S, MIOLC-M1_48S, MIOLC-M1_23S

Single Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE C - MEDIUM INTENSITY OBSTACLE LIGHT
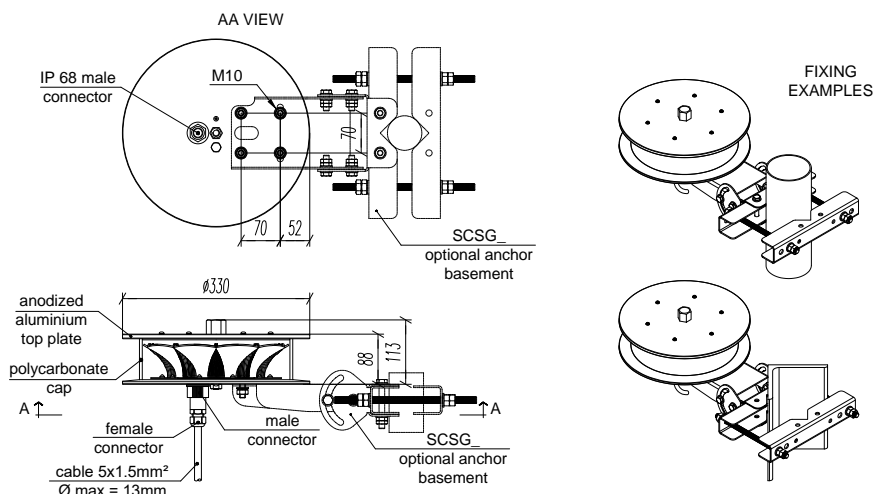
CAA-CAP 168
MEDIUM INTENSITY OBSTACLE LIGHT

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former model SEGSxxC2K_15
- the lowest power consumption in the market
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	MIOLC-M1_12S	MIOLC-M1_48S	MIOLC-M1_23S
Lamp ID	SEGS12C2K_15	SEGS48C2K_15	SEGS23C2K_15
Typical use	Night time		
Light source	LED		
Type of beacon	Steady		
Colour	Red according to CIE Chromaticity Boundary		
Light Intensity	2000 cd		
Horizontal coverage	360°		
Input voltage	12 Vdc	24 ÷ 48 Vdc	110 – 230 Vac
Power consumption	26 W	26 W	27,5 W
Average life	100 000 hours		
Temperature range	from -40 °C to +55 °C		
Protection degree	IP66		
Material of the body	Anodized aluminum		
Material of the transparent cap	Polycarbonate		
Connection	M/F connector IP68 for cable up to ø 13 mm		
Weight	5,5 Kg		
Radiation shield	Stainless steel AISI 304 to be ordered separately		
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).		

Optional codes		
MIOLC-M1_xxSC	Equipped with Faraday cage, SEGSxxC2K_15_FC compliant
MIOLC-M1_xxSL	Powerline control (dedicated control board needed), SEGSxxC2K_17 compliant

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector
M10

SCSG_ optional anchor basement

Ø330
anodized aluminium top plate
polycarbonate cap
female connector
male connector
cable 5x1.5mm² Ø max = 13mm
SCSG_ optional anchor basement

FIXING EXAMPLES

Rev. 03

MIOLC-M1_12SR, MIOLC-M1_48SR, MIOLC-M1_23SR

NVG – Compatible Single Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
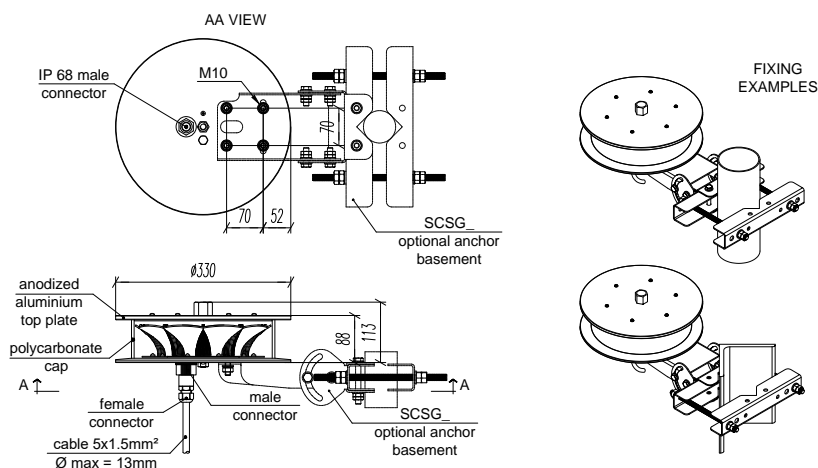**TYPE C** - MEDIUM INTENSITY OBSTACLE LIGHT

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former model SEGSxxC2K_IR
- EMF immunity up to 60V/m
- Night Vision Goggle (NVG) compatible: Infrared (IR) steady lamp

SPECIFICATIONS

Order Code	**MIOLC-M1_12SR**	**MIOLC-M1_48SR**	**MIOLC-M1_23SR**
Lamp ID	SEGS12C2K_IR	SEGS48C2K_IR	SEGS23C2K_IR
Typical use	Night time		
Light source	LED		
Type of beacon	Steady		
Colour	Red according to CIE Chromaticity Boundary		
Light Intensity	2000 cd (visible) and > 246 mW/sr (infrared)		
Horizontal coverage	360°		
Input voltage	12 Vdc	24 ÷ 48 Vdc	110 – 230 Vac
Power consumption	40 W	40 W	42 W
Average life	100 000 hours		
Temperature range	from -40 °C to +55 °C		
Protection degree	IP66		
Material of the body	Anodized aluminum		
Material of the transparent cap	Polycarbonate		
Connection	M/F connector IP68 for cable up to ø 13 mm		
Weight	5,5 Kg		
Radiation shield	Stainless steel AISI 304 to be ordered separately		
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).		

Optional codes	**MIOLC-M1_xxSRC**	Equipped with Faraday cage, SEGSxxC2K_IR_FC compliant

TECHNICAL DRAWINGS

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

Rev. 03

![clampco sistemi - LIGHTING · ENGINEERING · SOLUTIONS]

MIOLC-M1_12D, MIOLC-M1_48D, MIOLC-M1_23D

Double (main + stand-by) Medium Intensity Obstruction Light

MIOLC-M1_23D

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE C - MEDIUM INTENSITY OBSTACLE LIGHT
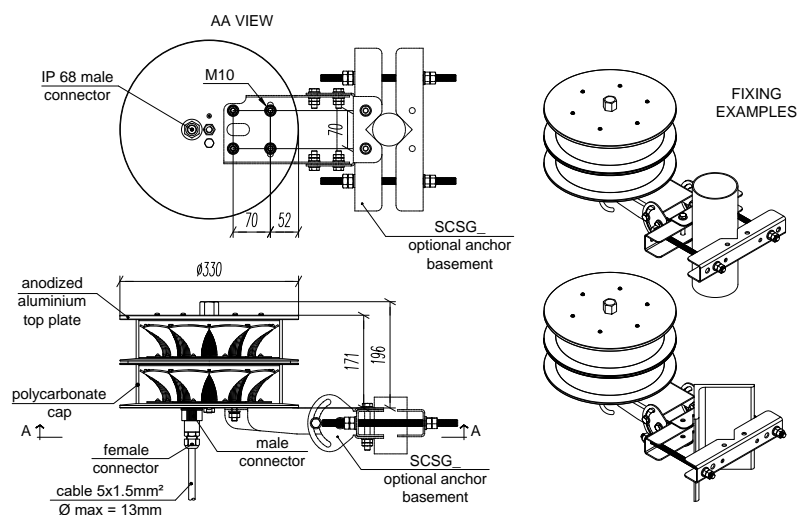
CAA-CAP 168 MEDIUM INTENSITY OBSTACLE LIGHT

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former model SEGSxxC2K_1_15
- the lowest power consumption in the market
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	MIOLC-M1_12D	MIOLC-M1_48D	MIOLC-M1_23D
Lamp ID	SEGD12C2K_1_15	SEGD48C2K_1_15	SEGD23C2K_1_15
Typical use	Night time		
Light source	LED		
Type of beacon	Steady		
Colour	Red according to CIE Chromaticity Boundary		
Light Intensity	2000 cd		
Horizontal coverage	360°		
Input voltage	12 Vdc	24 ÷ 48 Vdc	110 – 230 Vac
Power consumption	26 + 26 W*	26 + 26 W*	27,5 + 27,5 W*
Average life	100 000 hours		
Temperature range	from -40 °C to +55 °C		
Protection degree	IP66		
Material of the body	Anodized aluminum		
Material of the transparent cap	Polycarbonate		
Connection	M/F connector IP68 for cable up to ø 13 mm		
Weight	10 Kg		
Radiation shield	Stainless steel AISI 304 to be ordered separately		
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).		

Optional codes		
MIOLC-M1_xxDC	Equipped with Faraday cage, SEGDxxC2K_1_15_FC compliant	
MIOLC-M1_xxDL	Powerline control (dedicated control board needed), SEGDxxC2K_1_17 compliant	

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector

M10

SCSG_ optional anchor basement

FIXING EXAMPLES

anodized aluminium top plate

Ø330

polycarbonate cap

female connector

male connector

SCSG_ optional anchor basement

cable 5x1.5mm²
Ø max = 13mm

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

MIOLB-M1_12S, MIOLB-M1_48S, MIOLB-M1_23S

Single Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE B - MEDIUM INTENSITY OBSTACLE LIGHT

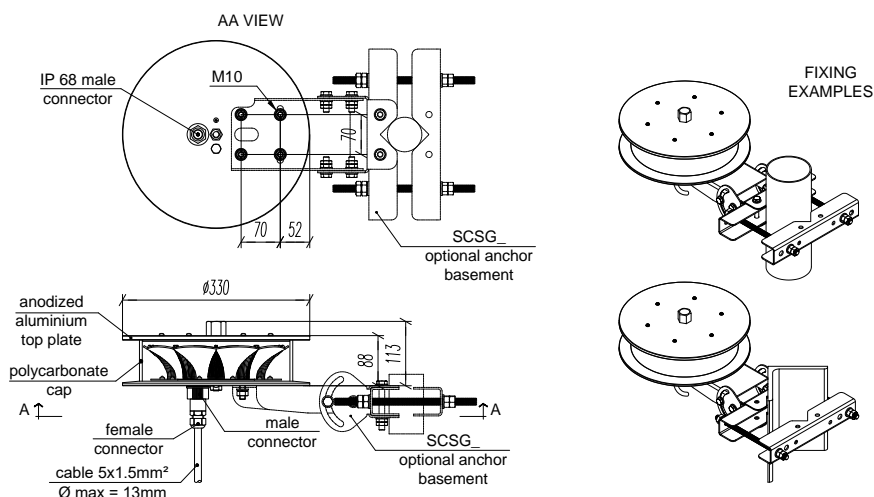**FAA** AC 150/5345-43J
TYPE L-864

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former model SEGSxxP2K_xx
- the lowest power consumption in the market
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	MIOLB-M1_12S	MIOLB-M1_48S	MIOLB-M1_23S
Lamp ID	SEGS12P2K_15	SEGS48P2K_15	SEGS23P2K_15
Typical use	Night time		
Light source	LED		
Type of beacon	Flashing		
Colour	Red according to CIE Chromaticity Boundary		
Light Intensity	2000 cd		
Flashing rate	20 ÷ 40 fpm (flash per minute)		
Horizontal coverage	360°		
Input voltage	12 Vdc	24 ÷ 48 Vdc	110 – 230 Vac
Average power consumption	5 W @ 20 FPM, τ = 500 ms	5 W @ 20 FPM, τ = 500 ms	6 W @ 20 FPM, τ = 500 ms
Peak power consumption	30 W	30 W	35 W
Average life	100 000 hours		
Temperature range	from -40 °C to +55 °C		
Protection degree	IP66		
Material of the body	Anodized aluminum		
Material of the transparent cap	Polycarbonate		
Connection	M/F connector IP68 for cable up to ø 13 mm		
Weight	5,5 Kg		
Radiation shield	Stainless steel AISI 304 to be ordered separately		
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).		

Optional codes		
MIOLB-M1_xxSC	Equipped with Faraday cage, SEGSxxP2K_15_FC compliant
MIOLB-M1_xxSL	Powerline control (dedicated control board needed), SEGSxxP2K_17 compliant

TECHNICAL DRAWINGS

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

MIOLB-M1_12SR, MIOLB-M1_48SR, MIOLB-M1_23SR

NVG – Compatible Single Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE B - MEDIUM INTENSITY OBSTACLE LIGHT
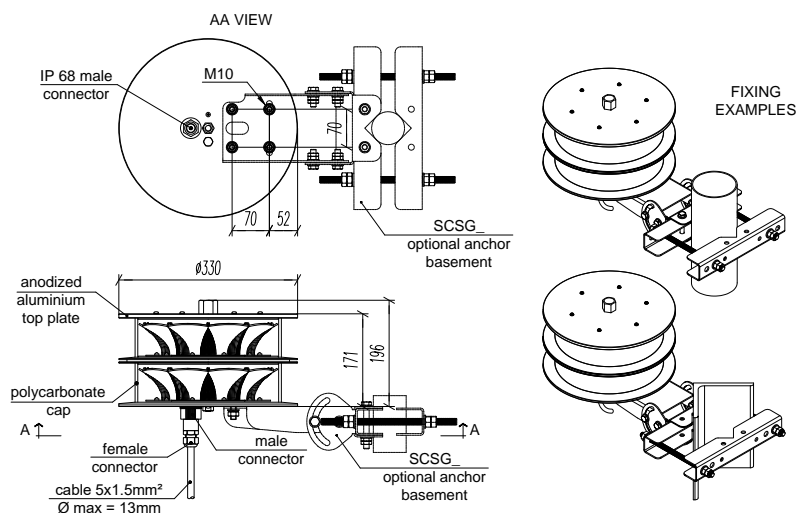
FAA AC 150/5345-43J
TYPE L-864 VISIBLE AND INFRARED LIGHT

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former model SEGSxxP2K_IR
- infrared compliant with FAA AC 150/5345-43J, Table 3-1
- EMF immunity up to 60V/m
- Night Vision Goggle (NVG) compatible: Infrared (IR) steady lamp

SPECIFICATIONS

Order Code	**MIOLB-M1_12SR**	**MIOLB-M1_48SR**	**MIOLB-M1_23SR**
Lamp ID	SEGS12P2K_IR	SEGS48P2K_IR	SEGS23P2K_IR
Typical use	Night time		
Light source	LED		
Type of beacon	Flashing		
Colour	Red according to CIE Chromaticity Boundary		
Light Intensity	2000 cd (visible) and > 246 mW/sr (infrared)		
Flashing rate	20 ÷ 40 fpm (flash per minute)		
Horizontal coverage	360°		
Input voltage	12 Vdc	24 ÷ 48 Vdc	110 – 230 Vac
Average power consumption	6,5 W @ 20 FPM, τ = 500 ms	6,5 W @ 20 FPM, τ = 500 ms	7 W @ 20 FPM, τ = 500 ms
Peak power consumption (visible)	40 W	40 W	42 W
Average life	100 000 hours		
Temperature range	from -40 °C to +55 °C		
Protection degree	IP66		
Material of the body	Anodized aluminum		
Material of the transparent cap	Polycarbonate		
Connection	M/F connector IP68 for cable up to ø 13 mm		
Weight	5,5 Kg		
Radiation shield	Stainless steel AISI 304 to be ordered separately		
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).		

Optional codes	**MIOLB-M1_xxSRC**	Equipped with Faraday cage, SEGSxxP2K_IR_FC compliant

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector

M10

70 70 52

SCSG_ optional anchor basement

FIXING EXAMPLES

anodized aluminium top plate

ø330

polycarbonate cap

88 113

A ↑

female connector
male connector

A

SCSG_ optional anchor basement

cable 5x1.5mm²
Ø max = 13mm

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

Rev. 03

MIOLB-M1_12D, MIOLB-M1_48D, MIOLB-M1_23D

Double (main + stand-by) Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
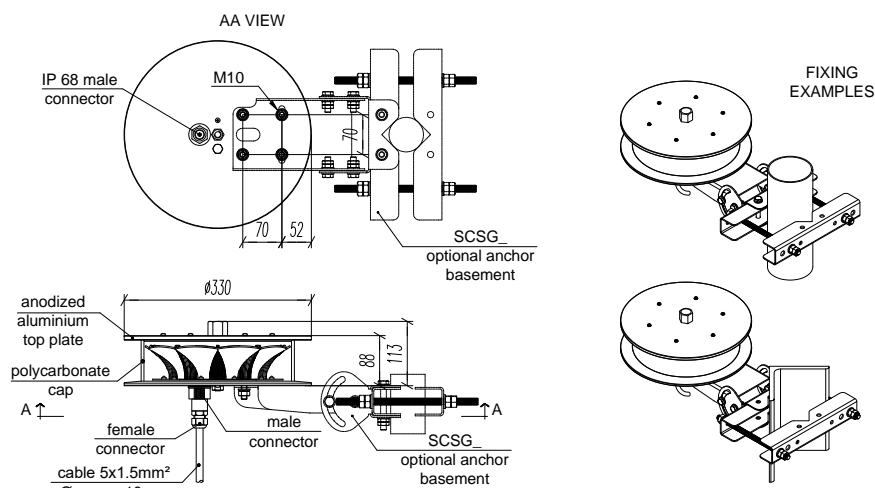**TYPE B** - MEDIUM INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43J
TYPE L-864

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former model SEGDxxP2K_1_15
- EMF immunity up to 60V/m

MIOLB-M1_23D

SPECIFICATIONS

Order Code	MIOLB-M1_12D	MIOLB-M1_48D	MIOLB-M1_23D
Lamp ID	SEGD12P2K_1_15	SEGD48P2K_1_15	SEGD23P2K_1_15
Typical use	Night time		
Light source	LED		
Type of beacon	Flashing		
Colour	Red according to CIE Chromaticity Boundary		
Light Intensity	2000 cd		
Flashing rate	20 ÷ 40 fpm (flash per minute)		
Horizontal coverage	360°		
Input voltage	12 Vdc	24 ÷ 48 Vdc	110 – 230 Vac
Average power consumption	5 W @ 20 FPM, τ = 500 ms	5 W @ 20 FPM, τ = 500 ms	6 W @ 20 FPM, τ = 500 ms
Peak power consumption	30 + 30 W*	30 + 30 W*	35 + 35 W*
Average life	100 000 hours		
Temperature range	from -40 °C to +55 °C		
Protection degree	IP66		
Material of the body	Anodized aluminum		
Material of the transparent cap	Polycarbonate		
Connection	M/F connector IP68 for cable up to ø 13 mm		
Weight	10 Kg		
Radiation shield	Stainless steel AISI 304 to be ordered separately		
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).		

Optional codes		
	MIOLB-M1_xxDC	Equipped with Faraday cage, SEGDxxP2K_1_15_FC compliant
	MIOLB-M1_xxDL	Powerline control (dedicated control board needed), SEGDxxP2K_1_17 compliant

* Worst case consumption if for a minor fault both main and stand-by lights are working

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector

M10

SCSG_ optional anchor basement

FIXING EXAMPLES

anodized aluminium top plate

ø330

polycarbonate cap

female connector

male connector

SCSG_ optional anchor basement

cable 5x1.5mm² Ø max = 13mm

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

Rev. 03

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LIGHTING ■ ENGINEERING ■ SOLUTIONS

MIOLA-M1_48S

Single Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A - MEDIUM INTENSITY OBSTACLE LIGHT
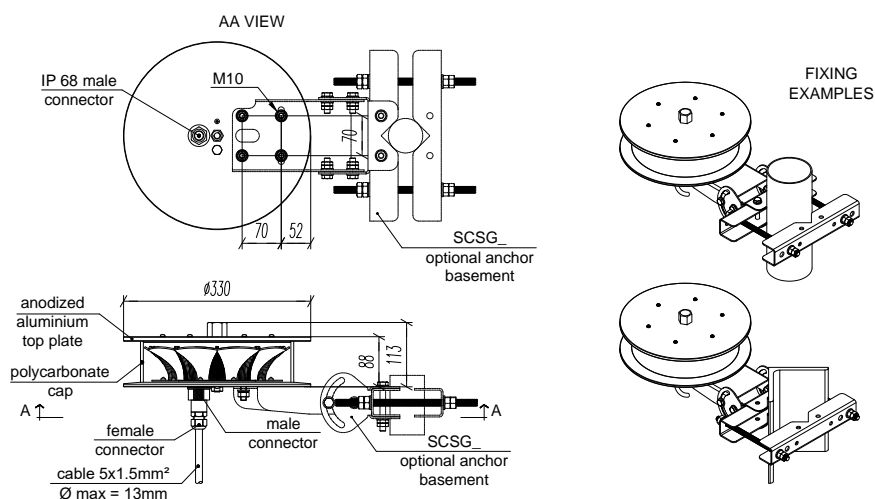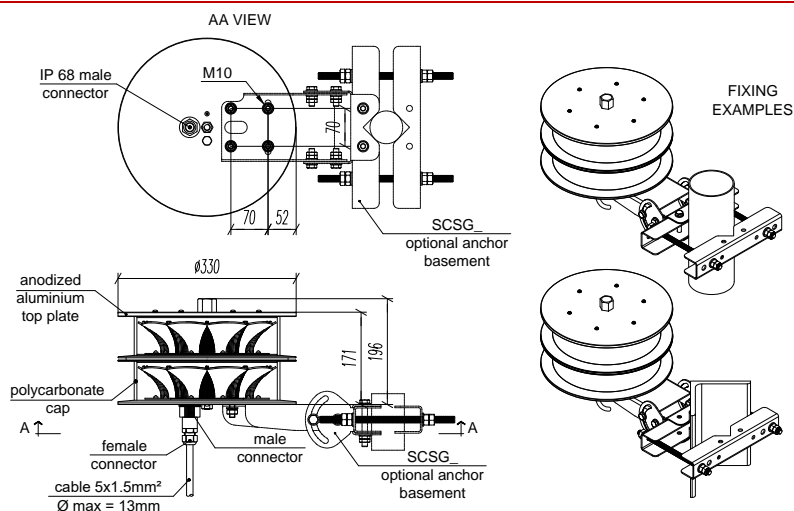
FAA AC 150/5345-43F
TYPE L-865

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former SEGS48P20K_15 model
- easy way for mounting – plug 'n' play connection
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	**MIOLA-M1_48S**
Lamp ID	SEGS48P20K_15
Typical use	day and night time
Light source	LED
Type of beacon	flashing
Colour	white according to CIE Chromaticity Boundary
Light Intensity	20.000 cd day mode / 2.000 cd night mode
Flashing rate	20 ÷ 40 fpm (flash per minute)
Horizontal coverage	360°
Input voltage	48 – 55 Vdc
Average power consumption	40 W day mode / 5 W night mode @20fpm, τ = 500 ms
Peak power consumption	240 W day mode / 30 W night mode
Average life	100.000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the body	Anodized aluminum
Material of the transparent cap	Polycarbonate
Connection	M/F connector IP68 for cable up to ø 13 mm
Weight	6,5 Kg
Radiation shield	Stainless steel AISI 304
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).

Optional codes	**MIOLA-M1_48SC**	Equipped with Faraday cage, SEGS48P20K_15_FC compliant
	MIOLA-M1_48SL	Powerline control (dedicated control board needed), SEGS48P20K_17 compliant

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector

M10

70

70   52

SCSG_
optional anchor basement

Ø330

anodized aluminium top plate

polycarbonate cap

88   113

A

female connector   male connector

SCSG_
optional anchor basement

cable 5x1.5mm²
Ø max = 13mm

FIXING EXAMPLES

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

MIOLA-M1_23S

Single Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A - MEDIUM INTENSITY OBSTACLE LIGHT
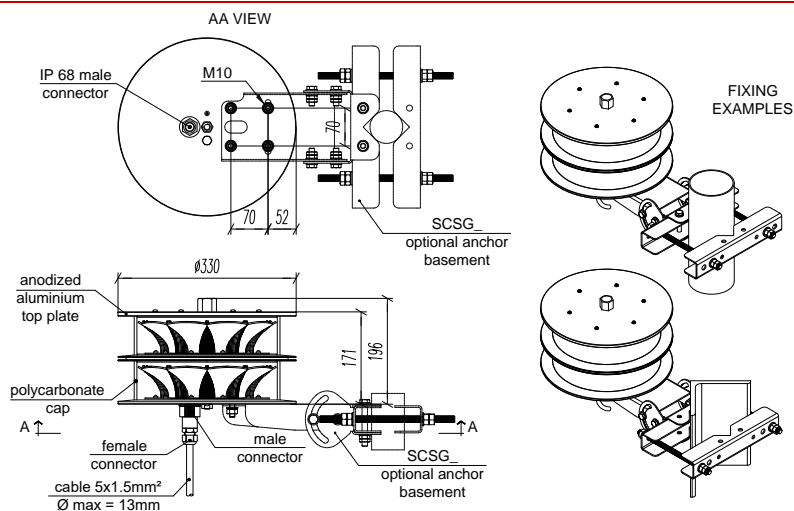
FAA AC 150/5345-43F
TYPE L-865

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former SEGS23P20K_15 model
- easy way for mounting – plug 'n' play connection
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	**MIOLA-M1_23S**
Lamp ID	SEGS23P20K_15
Typical use	day and night time
Light source	LED
Type of beacon	flashing
Colour	white according to CIE Chromaticity Boundary
Light Intensity	20.000 cd day mode / 2.000 cd night mode
Flashing rate	20 ÷ 40 fpm (flash per minute)
Horizontal coverage	360°
Input voltage	110 – 230 Vac
Average power consumption	40 W day mode / 5 W night mode @20fpm, τ = 500 ms
Peak power consumption	250 W day mode / 30 W night mode
Average life	100.000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the body	Anodized aluminum
Material of the transparent cap	Polycarbonate
Connection	M/F connector IP68 for cable up to ø 13 mm
Weight	6,5 Kg + 13 Kg (Junction Box)
Radiation shield	Stainless steel AISI 304
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).

Optional codes	**MIOLA-M1_23SC**	Equipped with Faraday cage, SEGS23P20K_15_FC compliant
	MIOLA-M1_23SL	Powerline control (dedicated control board needed), SEGS23P20K_17 compliant

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector

M10

70 52

SCSG_ optional anchor basement

FIXING EXAMPLES

anodized aluminium top plate

polycarbonate cap

ø330

88   113

A ↑

female connector

male connector
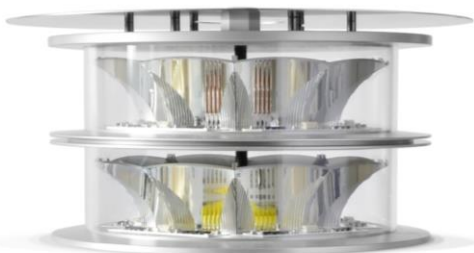
A

SCSG_ optional anchor basement

cable 5x1.5mm²
Ø max = 13mm

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

MIOLAC-M1_48S

Dual mode Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A & C - MEDIUM INTENSITY OBSTACLE LIGHT
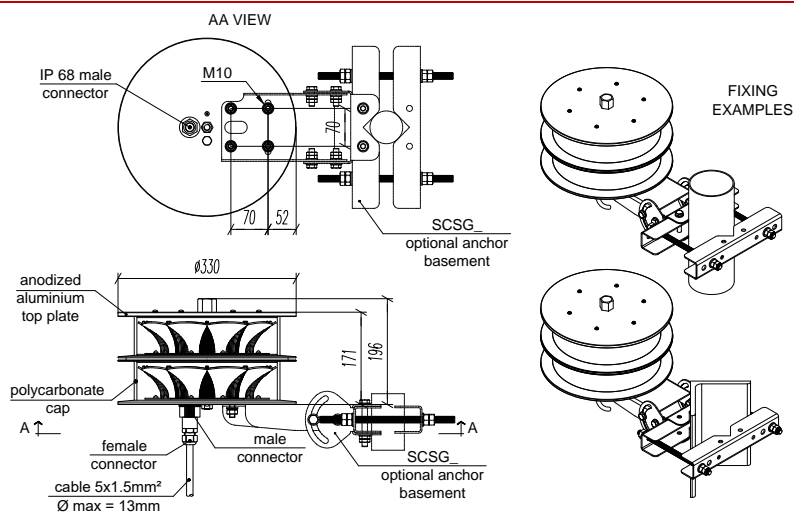
FAA AC 150/5345-43F;
TYPE L-865

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former SEGS48P20K_C2K_15 model
- easy way for mounting – plug 'n' play connection
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	**MIOLAC-M1_48S**
Lamp ID	SEGS48P20K_C2K_15
Typical use	day and night time
Light source	LED
Type of beacon	Flashing (day mode) and Steady (night mode)
Colour	white day mode / red night mode according to CIE Chromaticity Boundary
Light Intensity	20.000 cd day mode / 2.000 cd night mode
Flashing rate	20 ÷ 40 fpm (flash per minute)
Horizontal coverage	360°
Input voltage	48 – 55 Vdc
Average power consumption	55 W day mode @20fpm, τ = 500 ms
Peak power consumption	250 W day mode / 30 W night mode
Average life	100 000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the body	Anodized aluminum
Material of the transparent cap	Polycarbonate
Connection	M/F connector IP68 for cable up to ø 13 mm
Weight	11 Kg
Radiation shield	Stainless steel AISI 304
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).

Optional codes		
	MIOLAC-M1_48SC	Equipped with Faraday cage, SEGS48P20K_C2K_15_FC compliant
	MIOLAC-M1_48SL	Powerline control (dedicated control board needed), SEGS48P20K_C2K_17 compliant

TECHNICAL DRAWINGS

AA VIEW

IP 68 male connector

M10

SCSG_ optional anchor basement

FIXING EXAMPLES

anodized aluminium top plate

ø330

polycarbonate cap

female connector

male connector

SCSG_ optional anchor basement

cable 5x1.5mm²
Ø max = 13mm

171   196

70   52

70

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

Rev. 02

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MIOLAC-M1_23S

Dual mode Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A & C - MEDIUM INTENSITY OBSTACLE LIGHT
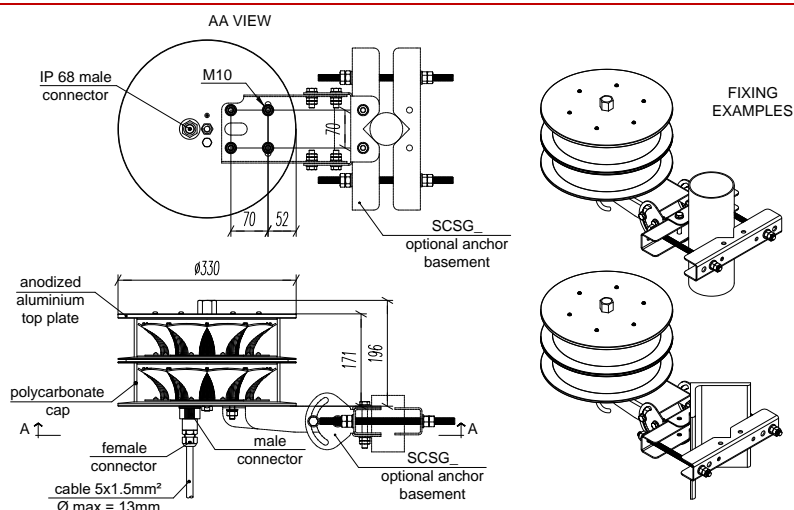
FAA AC 150/5345-43F;
TYPE L-865

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former SEGS23P20K_C2K_15 model
- easy way for mounting – plug 'n' play connection
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	**MIOLAC-M1_23S**
Lamp ID	SEGS23P20K_C2K_15
Typical use	day and night time
Light source	LED
Type of beacon	Flashing (day mode) and Steady (night mode)
Colour	white day mode / red night mode according to CIE Chromaticity Boundary
Light Intensity	20.000 cd day mode / 2.000 cd night mode
Flashing rate	20 ÷ 40 fpm (flash per minute)
Horizontal coverage	360°
Input voltage	110 – 230 Vac
Average power consumption	55 W day mode @20fpm, τ = 500 ms
Peak power consumption	250 W day mode / 35 W night mode
Average life	100 000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the body	Anodized aluminum
Material of the transparent cap	Polycarbonate
Connection	M/F connector IP68 for cable up to ø 13 mm
Weight	11 Kg + 13 Kg (Junction Box)
Radiation shield	Stainless steel AISI 304
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).

Optional codes	**MIOLAC-M1_23SC**	Equipped with Faraday cage, SEGS23P20K_C2K_15_FC compliant
	MIOLAC-M1_23SL	Powerline control (dedicated control board needed), SEGS23P20K_C2K_17 compliant

TECHNICAL DRAWINGS

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

MIOLAB-M1_48S

Dual mode Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A & B - MEDIUM INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43F;
TYPE L-865 & L-864

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former SEGS48P20K_2K_15 model
- easy way for mounting – plug 'n' play connection
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	**MIOLAB-M1_48S**
Lamp ID	SEGS48P20K_2K_15
Typical use	day and night time
Light source	LED
Type of beacon	flashing
Colour	white day mode / red night mode according to CIE Chromaticity Boundary
Light Intensity	20000 cd day mode / 2000 cd night mode
Flashing rate	20 ÷ 40 fpm (flash per minute)
Horizontal coverage	360°
Input voltage	48 – 55 Vdc
Average power consumption	40 W day mode / 5 W night mode @20fpm, τ = 500 ms
Peak power consumption	240 W day mode / 30 W night mode
Average life	100 000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the body	Anodized aluminum
Material of the transparent cap	Polycarbonate
Connection	M/F connector IP68 for cable up to ø 13 mm
Weight	11 Kg + 13 Kg (Junction Box)
Radiation shield	Stainless steel AISI 304
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).

Optional codes	**MIOLAB-M1_48SC**	Equipped with Faraday cage, SEGS48P20K_2K_15_FC compliant
	MIOLAB-M1_48SL	Powerline control (dedicated control board needed), SEGS48P20K_2K_17 compliant

TECHNICAL DRAWINGS

AA VIEW
IP 68 male connector
M10
SCSG_ optional anchor basement
FIXING EXAMPLES
anodized aluminium top plate
ø330
polycarbonate cap
female connector
male connector
SCSG_ optional anchor basement
cable 5x1.5mm²
Ø max = 13mm

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

Rev. 02

MIOLAB-M1_23S

Dual mode Medium Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
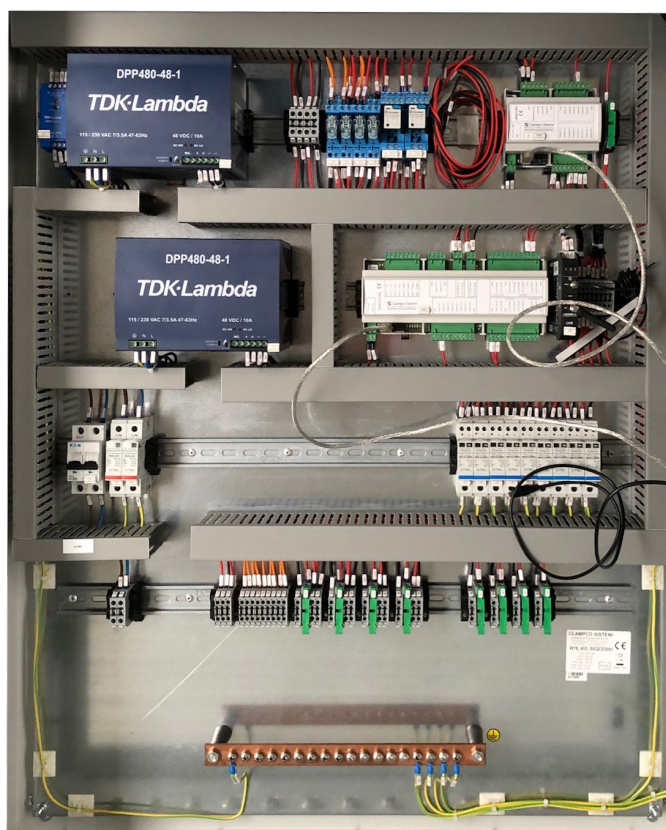**TYPE A & B** - MEDIUM INTENSITY OBSTACLE LIGHT

FAA AC 150/5345-43F;
TYPE L-865 & L-864

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- fully compliant with former SEGS23P20K_2K_15 model
- easy way for mounting – plug 'n' play connection
- EMF immunity up to 60V/m

SPECIFICATIONS

Order Code	**MIOLAB-M1_23S**
Lamp ID	SEGS23P20K_2K_15
Typical use	day and night time
Light source	LED
Type of beacon	flashing
Colour	white day mode / red night mode according to CIE Chromaticity Boundary
Light Intensity	20000 cd day mode / 2000 cd night mode
Flashing rate	20 ÷ 40 fpm (flash per minute)
Horizontal coverage	360°
Input voltage	110 – 230 Vac
Average power consumption	55 W day mode / 6 W night mode @20fpm, τ = 500 ms
Peak power consumption	250 W day mode / 35 W night mode
Average life	100 000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the body	Anodized aluminum
Material of the transparent cap	Polycarbonate
Connection	M/F connector IP68 for cable up to ø 13 mm
Weight	11 Kg + 13 Kg (Junction Box)
Radiation shield	Stainless steel AISI 304
Optional fixing SCSG_HDGS	Mounting hardware for "L" shaped sections (50x50 mm min.; 160x160 mm max.); circular profiles (min. ø = 48,3 mm; max. ø 219.1 mm). Adjustable fixing plate (± 60° on the horizontal plan).

Optional codes		
MIOLAB-M1_23SC	Equipped with Faraday cage, SEGS23P20K_2K_15_FC compliant
MIOLAB-M1_23SL	Powerline control (dedicated control board needed), SEGS23P20K_2K_17 compliant

TECHNICAL DRAWINGS

AA VIEW
IP 68 male connector
M10
SCSG_ optional anchor basement
FIXING EXAMPLES
anodized aluminium top plate
ø330
polycarbonate cap
female connector
male connector
SCSG_ optional anchor basement
cable 5x1.5mm² Ø max = 13mm

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

Rev. 02

A.3 High intensity aircraft warning lights

HIOLA-M1_23SxT

Single High Intensity Obstruction Light

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I
TYPE A - HIGH INTENSITY OBSTACLE LIGHT

KEY FEATURES

- 4 modules projector with a modular design
- designed and manufactured in Italy by Clampco Sistemi
- proprietary driver with customized technology for extremely efficient performances
- equalized driving current and patented technology
- Fully customizable fixing support

SPECIFICATIONS

Order Code	**HIOLA-M1_23SxT**
Typical use	Day, twilight and night time
Light source	LED
Type of beacon	flashing
Colour	white according to CIE Chromaticity Boundary
Light Intensity	200.000 cd day mode / 20.000 cd twilight mode / 2.000 cd night mode
Flashing rate	40 ÷ 60 fpm (flash per minute)
Horizontal coverage	120°
Input voltage	110 – 230 V_{ac}
Average power consumption	70 W day mode @40fpm, τ = 500 ms per flash bulb
Peak power consumption	840 W day mode
Average life	100.000 hours
Temperature range	from -40 °C to +55 °C
Protection degree	IP66
Material of the flashing bulbs	Anodized aluminum
Weight	55 kg for the 4 light modules with fixing frame + 24 kg driver
Radiation shield	Stainless steel AISI 304

Order codes		
	HIOLA-M1_23SST	Integrated fault detection with alarm terminals
	HIOLA-M1_23SLT	Powerline control and monitoring
	SPL0HA-M1_24S	Single module (spare part)
	SPLSHA-M1_23SS	Driver with fault detection and alarm terminals

TECHNICAL DRAWINGS

FRONT VIEW

SIDE VIEW

4 LED MODULES PROJECTOR - 120°

SPL0HA-M1_24S

TOP VIEW

DRIVER

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.
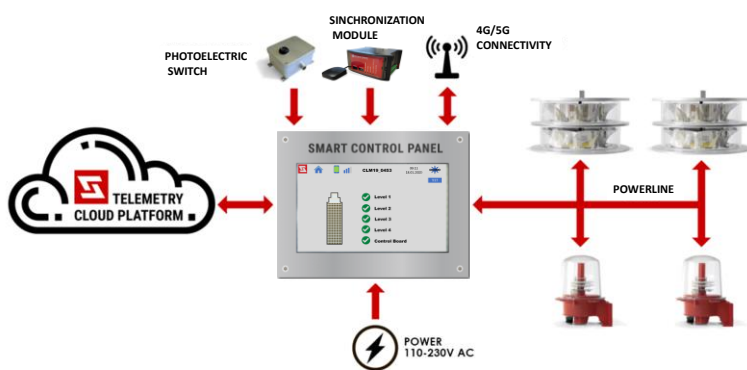
Rev. 05

B. Control boards & accessories

KEY FEATURES & BENEFITS

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

- power distribution to all the obstruction lights installed with a full set of nominal tensions both in DC and in AC

- synchronization of all the flashing obstruction lights in the system through standard or GPS based module

- protected power supply to obstruction lights and photoelectric switch

- generation of visual alarms (front panel pilot lamps) and remote transmission of URGENT and NON URGENT alarms (COM, NC, NO dry contacts on screw terminals)

- 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 special Clampco Sistemi 'plug-in' modules which are easy to replace without tools

FUNCTIONAL DIAGRAM

SPECIFICATIONS

Model Code	**SEQC**
Typical use	Power distribution, synchronization and control
Flashing rate	20-60 fpm (flash per minutes) managed by synchronization modules
Alarm Management	Alarm remotization as dry contact
Input voltage	110 - 230 Vac (50-60 Hz)
Output voltage	12, 24, 48 Vdc – 110 - 230 Vac
Average power consumption	The power of the control board depends on Obstruction light's quantity
Temperature range	from -30 °C (-40°C for Vdc systems) to +55 °C
Protection degree	IP66
Material of the body	coated steel box – GRP – SS AISI 304 or 316
Connection	cable gland PG11- PG29 suitable for cable up to 24 mm
Weight/size	The weight of the control board depends on Obstruction light's quantity

Rev.01

ORDER CODE SYNTAX

SEQC	8		3		01	1		–06
	Nominal Input voltage		Nominal Lights voltage		Number of Obstruction Lights	Photoelectric switch configuration		Number of lighting arresters
	1	12 Vdc	1	12Vdc	1	1	Single	1
	2	24 Vdc	2	24Vdc	2	2	Double	2
	3	48 Vdc	3	48Vdc	3			3
	7	110Vac	7	110Vac	4			4
	8	230Vac	8	230Vac	5			5
	9	3F+N Vac			6			6
					….			….

TECHNICAL DRAWINGS

A (mm)*	B (mm)	C (mm)	D (mm)	E (mm)
306	256	150	348	180
356	256	200	398	180
406	406	200	448	330
706	506	250	748	430
806	606	250	848	530
1006	806	250	1048	730

*This table is for illustrative purposes only, dimensions may vary for the specific project

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

KEY FEATURES & BENEFITS

Clampco Sistemi FEQC control board provides innovative features to operate the whole system more efficiently, especially with a large number of obstruction lights. The board has the following key functions:

- power distribution to all the obstruction lights installed with a full set of nominal tensions both in DC and in AC

- synchronization of all the flashing obstruction lights in the system through standard or GPS based module

- easy checking of the whole system and alarms by means of a **smart control panel** with 7'' touch screen accessible to the operator (also available legacy front panel buttons)

- IoT Power Line Communication technology to monitor and control the overall system (lights, accessories, power supply)

- critical lights parameters detection: functioning status, temperatures, tensions, currents

- the above functions are associated with special Clampco Sistemi 'plug-in' I/O and control modules which are easy to replace without tools

- optional feature: telemetry cloud platform connection with 3/4/5G cellular modem

FUNCTIONAL DIAGRAM

SPECIFICATIONS

Order Code	FEQC
Typical use	Up to 32 medium intensity or low intensity obstruction lights managed
Flashing rate	20-60 fpm (flash per minutes) managed by synchronization modules
Alarm Management	Smart control panel and telemetry cloud platform (dry contact for alarm remotization optional)
Input voltage	110 - 230 Vac (50-60 Hz)
Output voltage	12, 24, 48 Vdc – 110 -230 Vac
Average power consumption	The power consumption of the control board depends on obstruction light quantity
Temperature range	from -30 °C (-40°C for Vdc systems) to +55 °C
Protection degree	IP66
Material of the body	coated steel box – GRP – SS AISI 304 or 316
Weight/size	max: 100 kg /1600 x 800 x 410 mm (coated steel) – min: 15 kg / 405 x 500 x 200 mm (GRP)
Configuration examples	32 Medium intensity lights (16 main, 16 stand-by)
18 Low intensity lights (9 main, 9 stand-by) + 6 Medium intensity lights (3 main, 3 stand-by)
12 Low intensity lights (main) + 4 Medium intensity lights (main)

Rev.01

SMART CONTROL PANEL FUNCTIONS

The smart control panel, integrated in the telemetry control board, allows for on-site easy visual checking of the whole system status and potential alarms.

From the first screen technicians have a vision of the system overall health status and at what level of the lights installation any potential fault is located.

The correct condition of daylight or night-time that the system detects is displayed and modem status is highlighted if cellular communication is integrated.

Finally, a test function is accessible to force all the system in daytime or nighttime and verify the correct light operation.

From the home screen the technician can access to a detailed summary of the light status for every level of installation.

The Level Detail screen shows a sketch of the status of every light installed in the selected level.

If a faulty current, tension or temperature is detected in a lamp, an alert is displayed, through a red icon, showing what light is not functioning correctly.

This general status of each light is displayed for both main and stand-by devices; moreover, clicking on every status icon the user can access a detailed view of the light key parameters and functioning status.

A detailed table showing the key light parameters is finally accessible using the smart control panel.

This detail view allows to see an intuitive graphic representation of the lamp condition and status (daytime or nighttime).

A table with a summary of monitored data is included.

With the information displayed on this view an easy check of the vital light parameters is done on-site, without the need to access directly the lights.

If a fault is detected the technician on-site is able to make a first analysis of the problem and ask support from the back-office colleagues.

The same monitoring functions are available also to check board status and correct functioning of the I/O and control module installed inside.

This view allows the user to check the status of all the smart modules installed in the control board and eventually have a detailed information of the correct operation of the entire system.

Through smart panel functionalities the user has access to information about current, voltage and temperatures of the control and I/O board; moreover, information on the status of communications channel with installed lights helps in root cause analysis if a fault is detected.

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

TELEMETRY CLOUD PLATFORM

Telemetry

KEY FEATURES

Obstruction lights produce many types of information, including telemetry, metadata, state, and commands and responses. Telemetry Cloud Platform collects data on large-scale systems in order to process this data and make positive impacts on aspects like increasing efficiency and productivity, reducing operational costs, increasing customer experiences.

Telemetry Cloud Platform is an IoT platform, integrated with Clampco Sistemi Telemetry control board and smart panel.

The platform is an effective tool for distributed systems:

Web-based, intuitive, easy at first sight

Multi-tenant aware with multiple and different user levels

Data collection & monitoring

Remote monitoring and control of all asset (obstruction lights geographically scattered throughout the territory)

Technical status verification of the lights (on or off, daytime/nighttime, voltages, currents, temperatures)

System condition (alarms, door open, battery voltage, temperature, etc.)

Alarm sensing and action triggering

E-mail sending for alert conditions

Option to perform diagnostic tests (turn the lights on or off)

Remote firmware update for super users and system managers

Telemetry Clampco Sistemi Login

Username: Guest
Password: ••••••••

Login

Telemetry Web interface is an effective solution for visualizing critical data from all installed systems in real time and to support improved operational efficiency.
Through a summary graphical view of all sites, installed assets (lights and control boards) and their working status the monitoring and controlling process is very easy and the reaction to unforeseen faults is effective and immediate.

The system allows for collecting and analyzing historical data, showing trends and variances.
Data collection and control supports both preventive and predictive maintenance, increasing the reliability of assets and reducing the number of costly workarounds to cope with failures.

Rev.01

SCREENSHOT DETAILS

Telemetry home screen shows in a glimpse all critical data from all monitored sites through the use of an intuitive HMI.

The use of the standard green, yellow and red color code allows to determine overall system status at a glance.

On the right side of the screenshot, a detailed set of information about the selected site is displayed.

Site information provides data about the physical location, about communication channel status, voltages of power supplies or batteries. A detailed list of lamp status and key values is also listed, together with the monitoring data of the I/O and control modules installed inside the site control board.

From the home screen the super-user can also access to details of every lamp and control board installed. Checking lamp status and operating mode (night/day), and current values, voltages values and temperatures of different lamp sections.

With this data any aspect of the lamp can be analyzed by super-user to detect potential problems, perform a root cause analysis and suggest or plan preventive maintenance for the final user or maintainer of the sites.

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

PHOTOMETRIC STANDARD COMPLIANCE

ICAO ANNEX 14, VOLUME I

FAA AC 150/5345-43J

KEY FEATURES & BENEFITS

- designed and manufactured in Italy by Clampco Sistemi
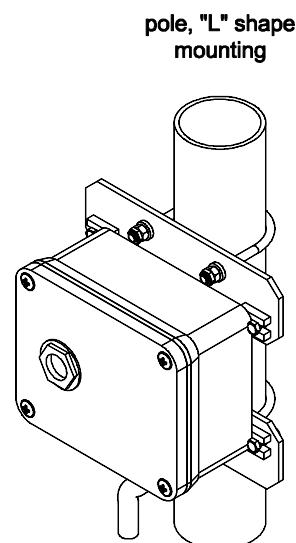- resistance to corrosion
- mountable directly on control board

SPECIFICATIONS

Order Code	SEI1012DC	SEI1024DC	SEI1048DC	SEI1120AC	SEI1230AC
Typical use	Night time use systems				
OFF delay time	9" ± 10%				
ON delay time	38" ± 10%				
Threshold	Adjustable from 22 to 3000 lux (factory setting 300 lux)				
Input voltage	12 Vdc	24 Vdc	48 Vdc	120 Vac	230 Vac
Power consumption	<1 W				
Temperature range	from -40 °C to +55 °C				
Protection degree	IP66				
Material of the body	Die cast aluminum alloy				
Material of the transparent cap	Polycarbonate				
Connection	Cable gland PG13				
Weight	800 g				
Fixing	No. 4 holes ø 6mm				
Option	Hot dip galvanized steel anchor basement pole mounting (ø max 114mm) or L mounting (up to 160mm)to be ordered separately.				

TECHNICAL DRAWINGS

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible

SEMSYGPSV2

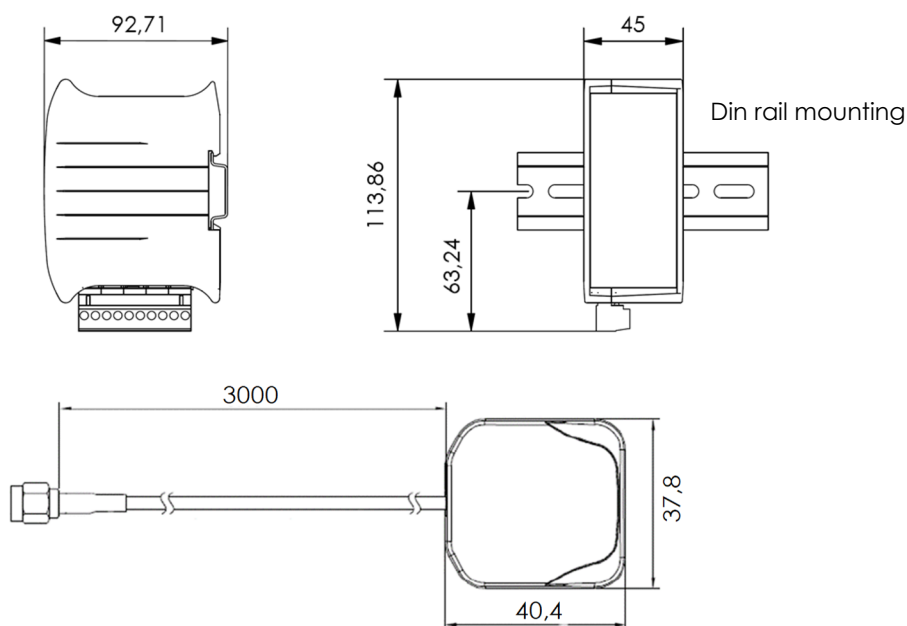## ACWL GPS synchronization module

KEY FEATURES

- designed and manufactured in Italy by Clampco Sistemi
- GPS satellite constellation supported
- industry leading -167 dBm navigation sensitivity
- easy configuration through dip switch settings
- flashing frequencies: 20, 25, 30, 40, 60 fpm
- flashing durations: 100, 200, 300, 350, 400, 450, 500 ms
- complete with high gain low profile magnet GPS antenna
- Square wave flashing sequence available
- DIN rail mounting (EN 60715)

SPECIFICATIONS

	SEMSYGPSV2
Accuracy of time pulses	30ns RMS – 60ns 99%
Maximum sensitivity	-167 dBm
Input voltage	10 ÷ 60 Vdc
Power consumption	2 W (maximum)
Sync Out Voltage (Current)	12 Vdc (100mA)
Out Relay Voltage (Current)	250 Vac (2A)
Temperature range	-40 to + 85 °C
Material of the body	Self-extinguishing blend PC/ABS
Weight	150 g
Size	114 x 93 x 45 mm
Mounting	Vertical mounting on DIN rail (EN 60715)
Antenna protection degree	IP67
Antenna size	40 x 38 x 10 mm
Cable length	3000 mm
Conformity	2014/53/EU

TECHNICAL DRAWINGS

92,71
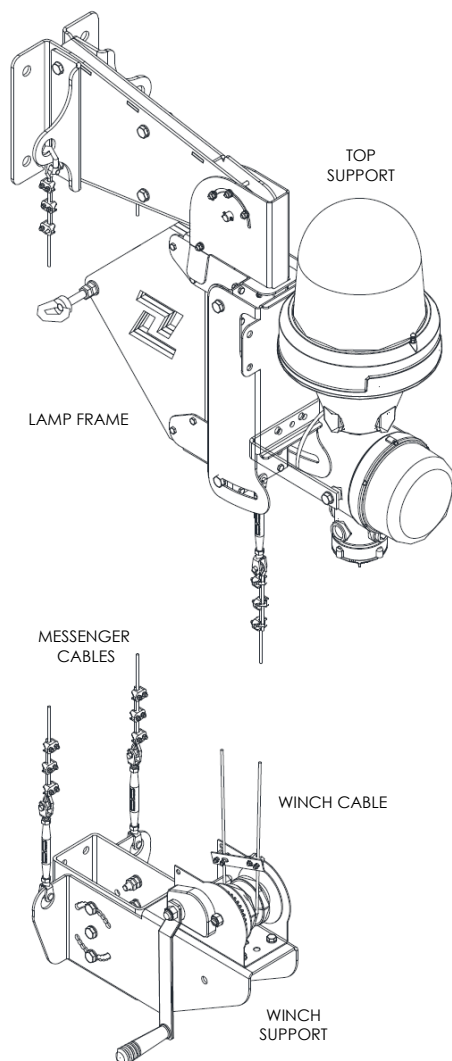
45

Din rail mounting

113,86

63,24

3000

37,8

40,4

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible.

C. Retractable maintenance solutions

TOP SUPPORT

LAMP FRAME

MESSENGER CABLES

WINCH CABLE

WINCH SUPPORT

DESCRIPTION

The ACWL Rope Demountable Compact System is an hoisting system for Aircraft Warning Lights in which the warning lights are installed on lifting supports (on steel guy wires).

This compact system is made by 316 stainless steel and is very lightweight, ideal for installation up to 35m.

It is indicated for all possible applications, in particular for Oil&Gas installations (refineries, petrochemical plants and offshore sites).
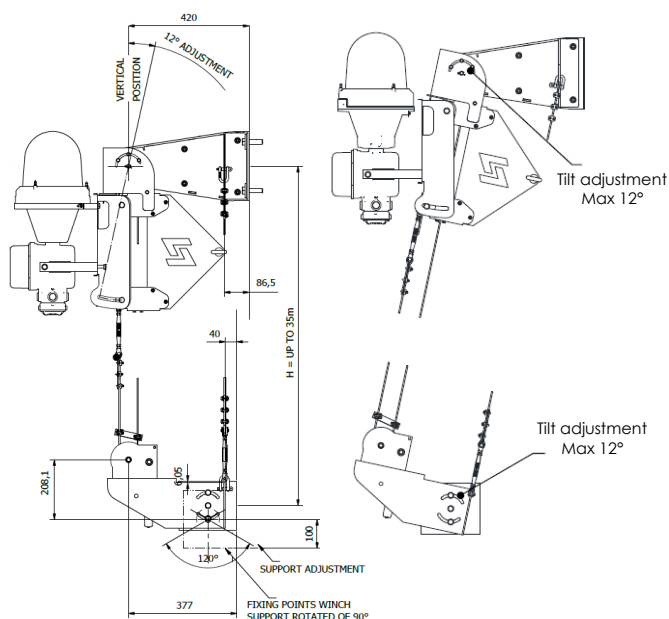
SYSTEM COMPOSITION KEY FEATURES

- Upper Top Support, suitable for vertical or inclined installation (max 12°) by acting on tilt adjustments
- Lifting support, Lamp Frame, for obstruction lights
- Guiding stay wires, Messenger Cables
- Lifting wire, Winch Cable
- Lower support frame, Winch Support, suitable for vertical or inclined installation (max 12°) by acting on tilt adjustments
- Winch support can be installed in an horizontal or a vertical frame both on ground level or platform level
- Lifting/lowering system of the lamps with a winch
- Safety plate to secure the system
- Sleeve for rope winding
- Turnbuckle for rope stretching
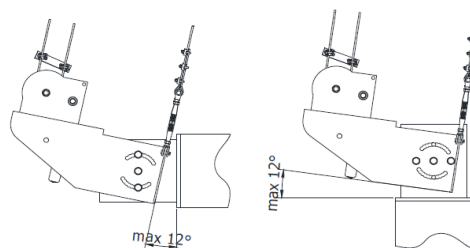- Counterweights
- Messenger cables

SPECIFICATIONS

Order code	RPDM35S
Max height	35m
Max obstruction lamp weight	~ 15 kg
Max. weight of electric ropes	0,3 kg/m
Minimum service ambient temperature	- 10°C
Maximum service ambient temperature	+ 55°C
Max. weight of electric ropes	0,3 kg/m
Maintenance Service wind*	9 mph
Reference Design wind°	100 mph

* Max wind conditions for system maintenance and installation work

° See reference design data calculation in the following page

Tilt adjustment Max 12°
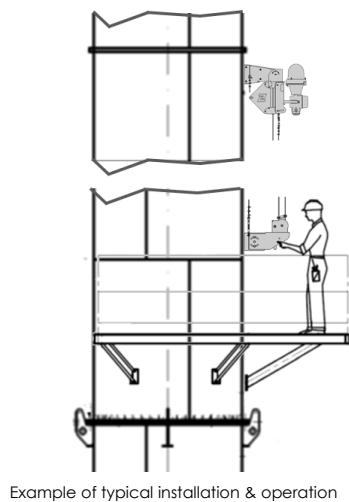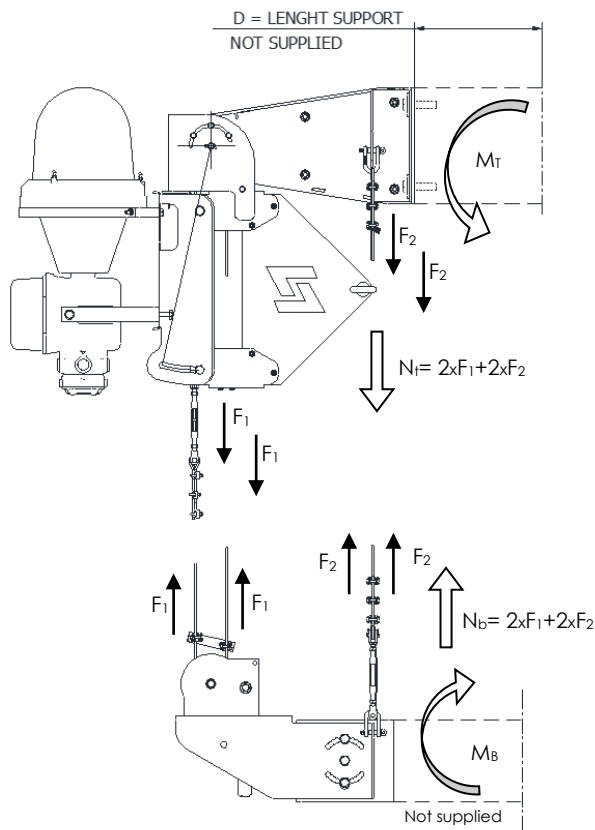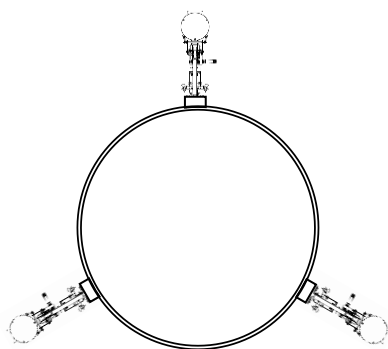
Tilt adjustment Max 12°

Vertical & inclined installation options

Winch support horizontal & vertical frame installation options

RPDM35S

ACWL Rope Demountable Compact System

D = LENGHT SUPPORT
NOT SUPPLIED

M_T

F_2

F_2

$N_t = 2 \times F_1 + 2 \times F_2$

F_1

F_1

F_2

F_2

F_1

F_1

$N_b = 2 \times F_1 + 2 \times F_2$

M_B

Not supplied

Example of typical installation & operation

Example of 3 retractable feeders installed on flare (Diameter ≤ 6m)

REFERENCE DESIGN DATA

- The ACWL Rope Demountable system is designed according to Community Standards relative to safety of machinery

- The Demountable must be installed only on structures able to withstand the stresses transmitted by the system

- Design Standard: ASCE7/05, Exposure category: C, Importance factor: 1,15

- Reference calculation for 1 retractable feeder. Number of identical feeder sections are provided as for client application requirements

Design wind (gust wind) 100mph

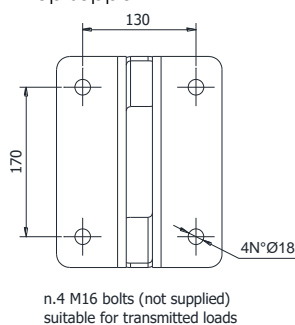| H (m)	F_1 (N)	F_2 (N)	D (mm)	M_T (Nm)	M_B (Nm)
35	2000	3000	400	2199	1748
30	2000	3000	250	2199	1748
25	2000	3000	150	2199	1748
20	1500	2500	100	1693	1331
15	1500	2000	100	1606	1291
10	1500	1500		1520	1251
5	1500	1500		1520	1251

F_1 : winch cable pretension
F_2 : messenger cable pretension

ENVIRONMENTAL CONDITIONS

This system is designed for utilization within the maximum corrosion class C4 - Average with classification compliant with UNI EN 12500:2002. The ACWL Rope Demountable must not be used in presence of salt spray, which causes damages on junctions between galvanized and stainless steel.

SYSTEM TOP AND WINCH FIXING DIMENSIONS

Top support

130

170

4N°Ø18

n.4 M16 bolts (not supplied)
suitable for transmitted loads

Winch support

130

N°4 Ø13

50

n.4 M12 bolts (not supplied)
suitable for transmitted loads

Clampco Sistemi reserves the right to make changes at any time in order to supply the best product possible