

MOD light IR or Combi (IR and Red) Obstruction Lights

OBELUX
AVIATION LIGHTS

MOD Infrared and Red 25cd/200cd

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Optical characteristics

- ▶ IR only flashing
- ▶ IR and Red flashing (Combi Light)
- ▶ NVG compliant Infrared 850nm
- ▶ Red 25cd or 200cd
Color aviation Red
- ▶ Horizontal beam 360° unrestricted
- ▶ Photocell for Day / Night switch
- ▶ LEDs lifetime is at least 100 000 hours

Specifications met

MOD Low Flying Operations Flight
(SWK-OC Windfarms)

MOD Infra-Red (IR) Lighting

- Wavelength 750-900nm
- Intensity 600mW/sr min at peak flash
- Intensity 1200W/sr max
- 600 mW/sr Min flash intensity between +30 deg and -15 deg elevation
- Up to 50% reduction between +25 to +30 deg and -10 to -15 deg is acceptable

MOD Visible Lighting

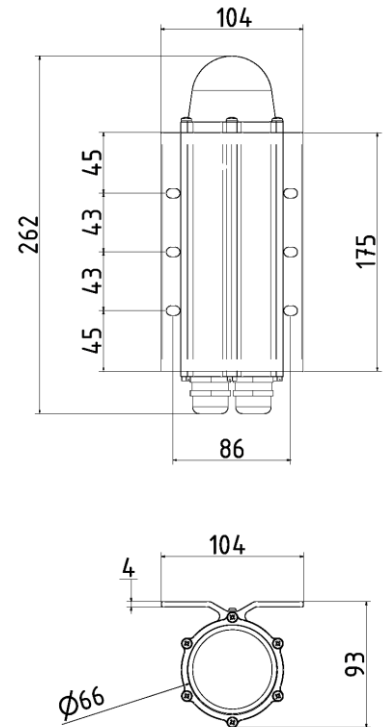
- 200cd or 25cd minimum intensity between +15 deg and 0 deg
- Downwards overspill of red light intensity is no more than 10% of the intensity at 0 deg

GPS synchronization

Flash Pattern: 60 flashes per min or
Morse Code W (6 second cycle)



Picture for illustration only



Low-intensity Obstruction Lights

LED Aviation Obstruction Lights

Obelux low intensity obstruction lights with fully Night Vision Goggle (NVG) compliant infrared. The lights are designed for marking tall structures such as wind turbines, chimneys, masts, and towers. The lights offer unique features such as fault monitoring, photocell and switcher incorporated in the light. Optionally the lights can be connected to Obelux aviation light system through Modbus.

Key Features

- ▶ Based on LED technology
- ▶ NVG compliant infrared (IR)
- ▶ GPS synchronization
- ▶ Incorporated photocell for Day/Night switching
- ▶ Both stand-alone and Modbus operation available
- ▶ Extremely low power consumption
- ▶ Provides long maintenance free operating time
- ▶ 5-year warranty, optional 10-year warranty
- ▶ Cold spare operation
- ▶ Thermostat controlled heater
- ▶ Smart heater (DC models, used in battery powered operation)
- ▶ Deep discharge protection (DC models)
- ▶ Battery powered operation (DC models)

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Electrical Characteristics

- ▶ AC voltage range:
Nominal 100-250V_{AC} @ 50-60Hz
- ▶ DC voltage range: 10-60V_{DC}
- ▶ Robust overvoltage protection (Type II)
- ▶ Isolated RS-485
- ▶ Alarm relay maximum loading: 250VAC @ 8A;
50VDC @ 1A

Mechanical Characteristics

- ▶ Anodized, marine grade aluminum body and end parts
- ▶ AISI316 acid proof stainless steel screws
- ▶ Clear polycarbonate dome, degree of protection IP65
- ▶ Acrylic lenses, UV protected
- ▶ Operating temperature range -40...+55 °C
- ▶ Height 255 mm, diameter 104 mm
- ▶ Weight 1,3 kg (without mounting set)
- ▶ Terminal blocks for 0.2...4 mm² (24-12 AWG) wires

Mounting Set Options

- ▶ MS-HV80
- ▶ MS-EV60
- ▶ MS-EV100
- ▶ MS-EV150
- ▶ MS-DEV60
- ▶ MS-DEV100
- ▶ MS-RW
- ▶ MS-LVU/LVA
- ▶ MS-N1B
- ▶ MS-WT1/5

Optional Controllers

- ▶ CP-XX Series (Interfaces: Ethernet TCP/IP and RS-485/Modbus)
- ▶ CP-M1 Series (Interface: RS-485/Modbus)

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Product codes

In product order codes (-GAM): G = GPS, A = alarm relay, M = Modbus

Order code	Output	Operating voltage	Power consumption *	IR	Photocell	Alarm relay	Modbus	GPS sync	Heater
AC MODELS									
MOD-AC-IR-RED-GA	IR+25cd/200cd	100-250VAC	5,5W	Yes	Yes	Yes	No	Yes	Yes
MOD-AC-IR-RED-GAM	IR+25cd/200cd	100-250VAC	5,5W	Yes	Yes	Yes	Yes	Yes	Yes
DC MODELS									
MOD-DC-IR-RED-GA	IR+25cd/200cd	10-60VDC	5,5W	Yes	Yes	Yes	No	Yes	Yes
MOD-DC-IR-RED-GAM	IR+25cd/200cd	10-60VDC	5,5W	Yes	Yes	Yes	Yes	Yes	Yes

* Power consumption: 25cd Red 0,3W, 200cd Red 1,5W, IR 3,5W, 60 FPM

All models available with IP67 water protection class (append -67 to product code, e.g. MOD-AC-IR-RED-A-67)

All models available with optional 10 year warranty (append -10 to product code, e.g. MOD-AC-IR-RED-A-10, with IP67 option MOD-AC-IR-RED-A-67-10)

Light intensity depends on beam width (default beam width 20°)

Beam width set in factory

Flash rate and power are software configurable (flashing is not limited to constant rates, any flash sequence can be programmed, e.g. 20, 40 FPM)

DC models idle power consumptions: 0,5W (light off, with GPS on)

Heater increases power consumption by 7W; heater turns on when temperature drops below 10 °C

Heater can be set ON/OFF, factory setting: Heater ON

Water protection class IP65 applies when the light is mounted vertically with the dome facing up

Packing dimensions and weight: 280mm x 130mm x 100mm, 1,5kg

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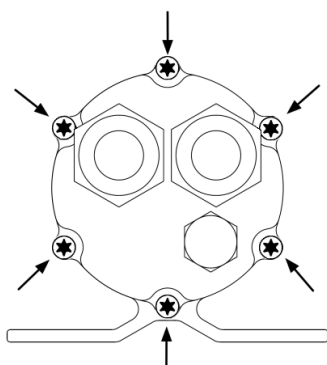
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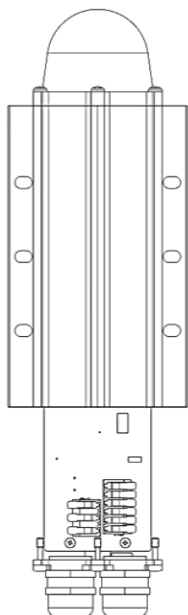
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Cabling specifications

- ▶ Cable gland M25
- ▶ Cable diameter 11-17 mm (includes cable gland seal 6-13 mm)
- ▶ Wire diameter max. 4 mm²
- ▶ Recommended cables
 - Power: 3G1,5 mm² or 3G2,5 mm²
 - Data: 3G0,5 mm² - 3G1,5 mm², shielded
 - Power + Data: Hybrid cable (e.g. Servo cable)



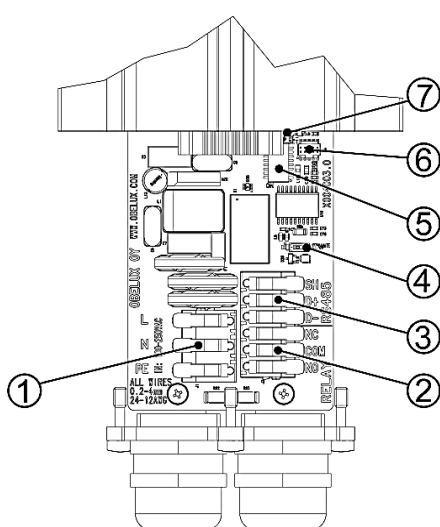
Back plate screws (T20)



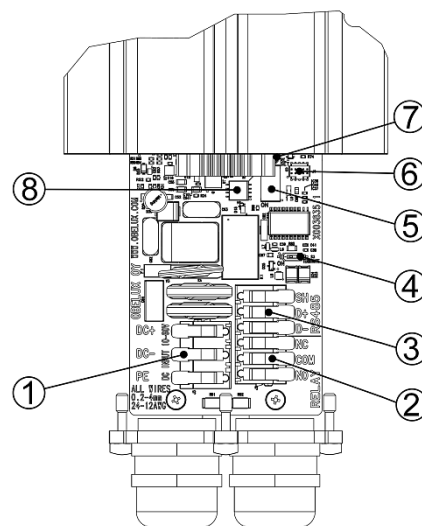
Light opened up

Installation instructions

Open the back plate screws (Torx 20). The bottom plate and the main circuit board slide out. Route power and data cables using cable gland(s) on the back side of the light. Connect the cable wires securely to appropriate terminal block connectors. Slide the bottom plate properly in its place and securely tighten all screws. Make sure that all unused glands or gland holes are sealed.



AC models



DC models

1 Power input

Mark	Description	Information
L	Live	Connect to power supply live terminal
N	Neutral	Connect to power supply neutral terminal
PE	Ground	Protective earth

Mark	Description	Information
DC+	Positive	Connect to power supply positive terminal
DC-	Negative	Connect to power supply negative terminal
PE	Ground	Protective earth

2 Alarm relay output

3 RS-485 port

Mark	Description	Information
D+	Data+	RS-485 non-inverting pin
D-	Data-	RS-485 inverting pin
SH	Shield	Use shielded cable and connect the shield to the SH pin

4 RS-485 termination DIP switch

5 Configuration DIP switches

6 Programming terminal

7 Reset button

8 Deep discharge protection switches (DC models)

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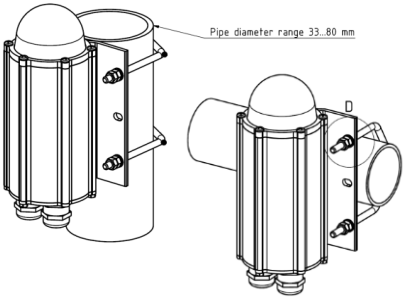
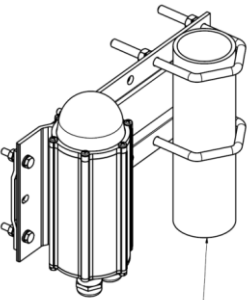
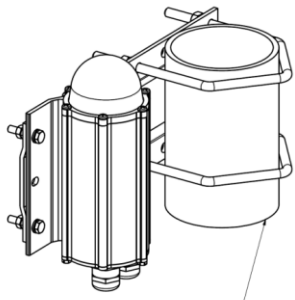
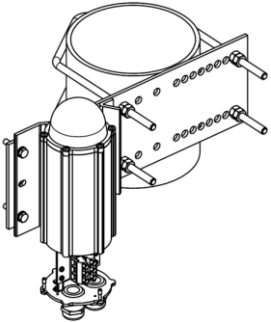
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Mounting sets

 Pipe diameter range 33..80 mm	Obelux MS-HV80 Mounting set for 33-80 mm vertical or horizontal pipe. This mounting set includes: ▶ 2 pcs M6 U-bolt ▶ 8 pcs M6 hex nut ▶ 4 pcs 6/12 mm washer All parts are AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-HV80 datasheet ▶ Order Code MS-HV80
 Pipe diameter range 30..60 mm	Obelux MS-EV60 Mounting set with extension plate for 30-60 mm vertical pipe installation. This mounting set includes: ▶ 2 pcs M8 U-bolt, 8 pcs M8 hex nut ▶ 4 pcs M6x30 bolt, 8 pcs M6 hex nut, 4 pcs 6/12 washer ▶ 1 pcs extension plate Extension plate marine grade anodized aluminium, other parts AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-EV60 datasheet ▶ Order Code: MS-EV60
 Pipe diameter range 60..100 mm	Obelux MS-EV100 Mounting set with extension plate for 60-100 mm vertical pipe installation. This mounting set includes: ▶ 2 pcs M8 U-bolt, 8 pcs M8 hex nut ▶ 4 pcs M6x30 bolt, 8 pcs M6 hex nut, 4 pcs 6/12 washer ▶ 1 pcs extension plate Extension plate marine grade anodized aluminium, other parts AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-EV100 datasheet ▶ Order Code: MS-EV100
 Pipe diameter range 100..150 mm	Obelux MS-EV150 Mounting set with extension plate for 100-150 mm vertical pipe installation. This mounting set includes: ▶ 2 pcs M8 U-bolt, 8 pcs M8 hex nut ▶ 4 pcs M6x30 bolt, 8 pcs M6 hex nut, 4 pcs 6/12 washer ▶ 1 pcs extension plate Extension plate hot dipped galvanised steel, other parts AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-EV150 datasheet ▶ Order Code: MS-EV150

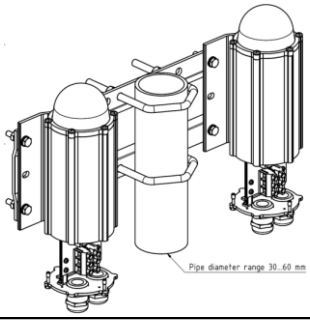
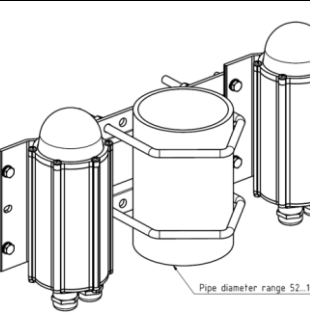
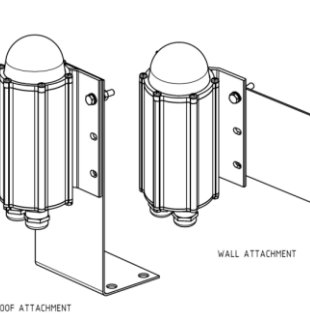
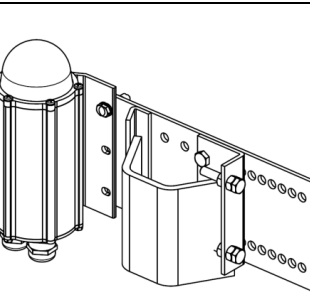
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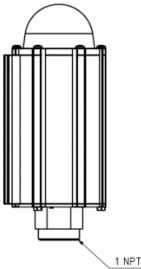
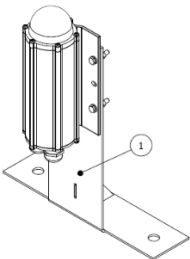
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	Obelux MS-DEV60 Double mounting set with extension plate for 30-60 mm vertical pipe installation. Mounting set include: ▶ 2 pcs M8 U-bolt, 8 pcs M8 hex nut ▶ 8 pcs M6x30 bolt, 16 pcs M6 hex nut, 8 pcs 6/12 washer ▶ 1 pcs extension plate Extension plate marine grade anodised aluminium, other parts AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-DEV60 datasheet
▶ Order Code: MS-DEV60	
	Obelux MS-DEV100 Double mounting set with extension plate for 60-100 mm vertical pipe installation. Mounting set include: ▶ 2 pcs M8 U-bolt, 8 pcs M8 hex nut ▶ 8 pcs M6x30 bolt, 16 pcs M6 hex nut, 8 pcs 6/12 washer ▶ 1 pcs extension plate Extension plate marine grade anodised aluminium, other parts AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-DEV100 datasheet
▶ Order Code: MS-DEV100	
	Obelux MS-RW Mounting set for horizontal plate or wall installation. Mounting set includes: ▶ 4 pcs M6x30 bolt, 8 pcs M6 hex nut, 4 pcs 6/12 washer ▶ 1 pcs L-shape 2 mm plate All parts AISI 316 acid-proof stainless steel. More detailed mechanical data: see MS-RW datasheet
▶ Order Code: MS-RW	
	Obelux MS-LVU/LVA Mounting set for L and V -shape profiles Mounting set includes: ▶ 1 set accessories for light fitting to plate ▶ 1 pcs extension plate with adjusting plate and accessories Extension plate hot dip galvanized steel, other parts AISI316 acid-proof stainless steel. More detailed mechanical data: see MS-LVU/LVA datasheet
▶ Order Code: MS-LVU (with galvanized extension plate)	
▶ Order Code: MS-LVA (with AISI316 extension plate)	

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	Obelux MS-N1B Mounting set for 1" NPT at bottom. Mounting set includes pre-installed bottom plate to light. More detailed mechanical data: see MS-N1B datasheet.
► Order Code: MS-N1B	
	Obelux MS-WT1/5 Mounting set for wind turbines. Mounting set for horizontal plane. Mounting set includes bracket and fasteners. Mounting bracket AISI 304 stainless steel or AISI 316 acid-proof steel, other parts AISI 316 acid-proof steel. More detailed mechanical data: see MS-WT1/5 datasheet.
► Order Code: MS-WT1 ► Order Code: MS-WT5 ► Order Code: MS-WT5A	
(Ø15,5 mm holes, AISI 304 stainless steel bracket) (Ø17,0 mm holes, AISI 316 acid proof steel bracket) (Ø17,0 mm holes, AISI 304 stainless steel bracket)	