



# ICAO High Intensity Type B 100,000cd white LED flashing obstruction light

CEL-HI-100KW-230-A

CEL high-intensity lighting is designed for marking tall structures such as tall buildings, wind turbines, chimneys, masts and towers. The product offers unique features such as fault monitoring, photo-cell. Precision lenses offers an environmentally friendly optical solution which minimises light pollution to the nearby neighbourhood.

## Key features

- Based on LED-technology
- 100,000cd | 20,000cd | 2,000cd effective flashing white
- 360° x 3° beam spread
- Extremely reliable - long lifetime
- Photocell and Fault Monitoring
- GPS Synchronisation Available
- NVG compliant infrared 850nm light
- Both Standalone and ModBUS operations available
- More than 20 year design lifetime
- Dimmable for 100% / 30% / 10%
- Hot Start for Radar Control Towers
- Comes with five (5) years warranty
- Over 10 year continuous, maintenance free operating time

## Specifications met

- ICAO International Standards and Recommended Practices: Aerodromes- Annex 14 Volume 1, 6th Edition, July 2013, Chapter 6: High-intensity, Type B
- Fulfils the Recommendations Section in Table 6-3

## Photometric characteristics

- 100,000cd effective intensity @ day mode
- 20,000cd effective intensity @ twilight mode
- 2,000cd effective intensity @ night mode
- Infrared 850nm
- Colour aviation white
- Horizontal radiation pattern 360°
- Vertical radiation pattern 3°

## Electrical characteristics

- Operating voltage: 230Vac
- Constant power input by active PFC
- Flash rates: 20, 40 and 60fpm
- Meets: EMC Emissions EN 61000-6-4  
EMC Immunity EN 61000-6-2
- Power Consumptions (40fpm)
  - 200W - Day
  - 50W - Twilight
  - 20W - Night
- Recommended Cables
  - Power: 3x2.5mm<sup>2</sup> (Externally Rated) L-N-PE
  - Data: CAT7 (Externally Rated)
  - Alarm: CAT7 (Externally Rated)



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## Mechanical characteristics

- Anodised marine grade aluminium enclosure
- Glass cover
- Degree of protection IP65
- Height 428mm, diameter 364mm
- Weight 27kg

## Order codes:

CEL-HI-100KW-230-A

Made in EU

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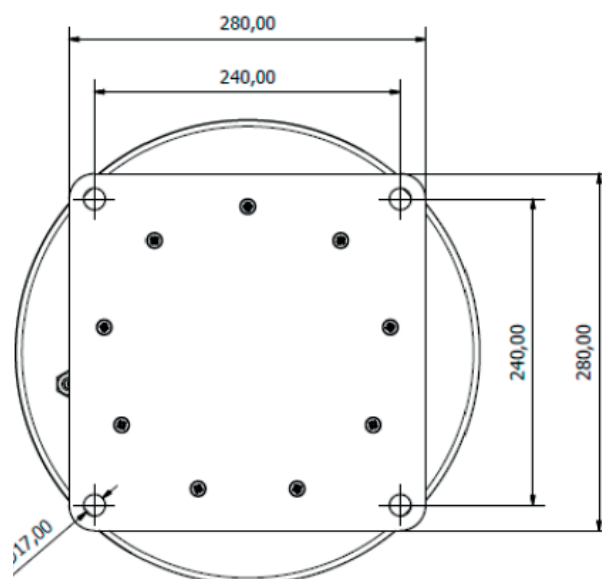
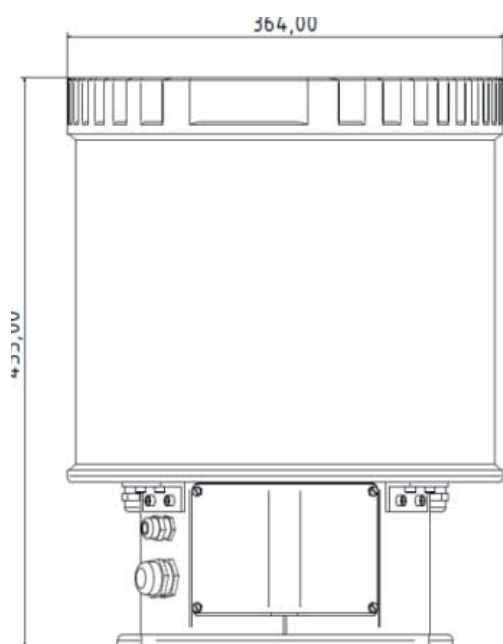


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## MECHANICAL DIMENSIONS



CEL-HI-100KW-230-A

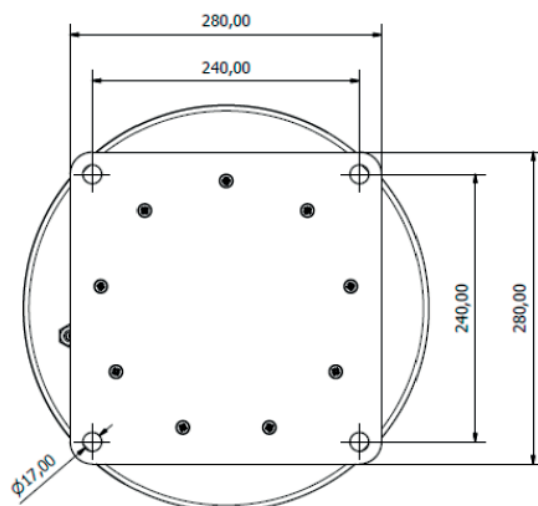


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## CEL-HI-100KW-230-A - Installation Instructions

Position light fitting to final location, use spirit level (bubble level) to ensure light fitting is truly vertical. Tighten bolts and nuts. Use M12 hot-dipped 8.8 bolts with recommending tightening torque of 100Nm with suitable washers. Open cover door a continue to carry out cables connections within cabinet.



Route power and data cables using cable gland(s). Connect the cable wires securely to appropriate terminal block connectors. Place the hatch plate (door) properly in its place and securely tighten all screws. Make sure that all unused glands or gland holes are sealed.

Follow the illustration below to achieve desire EMC protection.

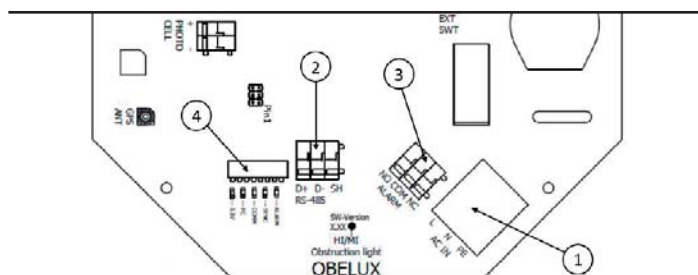


Please follow these instructions when routing cable via a cable gland:

1. Partially expose the braided screen by removing the outer sheath of the cable at a length of approx. 10 mm.
2. Insert the cable through the dome nut and the gland body until the contact spring is pressed against the braided screen.

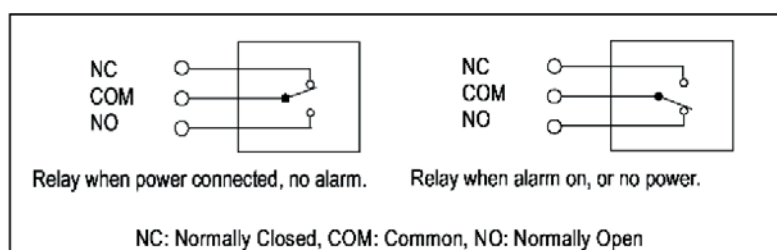
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CEL-HI-100KW-230-A - Internal Connections

1 Power input		
Mark	Description	Information
L	Live terminal	Connect the mains power supply in into these screw connectors.
N	Neutral terminal	Colours are typically brown (for Live) and blue (for Neutral)
E	Protective earth	Connect protective earth into this screw connector. PE line is typically indicated with yellow/green shield on the wire.
Tighten the connector screws using flat-head (straight) screwdriver.		
2 RS485 input		
D+	Data +	RS485 non-inverting pin
D-	Data -	RS485 inverting pin
SH	Shield	Shield
The RS-485 network (bus) input.		
3 Alarm Relay Output		
NO	Normally Open	In alarm, connected with COM
COM	Common	Common relay contact
NC	Normally Connected	During normal operations, connected with COM
Unused alarm relay connectors can be left floating i.e. no wiring there is required.		



4 Configuration DIP switches		
DIPS	Refer Configuration Setting	

Configuration DIP switches are used to configure settings (A=Stand-alone operation) and bus addresses (I=Mod BUS operation)

### Configuring HI Series for ModBUS operation

DIP switches are numbered 1 – 10, the lowest number (1) being on the leftmost edge of the red/white DIP switch block looked from service access door.

Turn on DIP 8 to configure the light in to Modbus operation. DIP 10 turns on the termination resistor (120Ω) of the light. Termination should be turned on only at the last light head on the bus.

Configuration DIP switches 1-4 are used to give the light RS485 bus address. Duplicate addresses on the same bus are not allowed.

### CEL-HI-100KW-230-A - DIP setting configuration

DIP	DIP	DIP	DIP	
1	2	3	4	Modbus Address
on	off	off	off	Address 01
off	on	off	off	Address 02
on	on	off	off	Address 03
off	off	on	off	Address 04
on	off	on	off	Address 05
off	on	on	off	Address 06
on	on	on	off	Address 07
off	off	off	on	Address 08
on	off	off	on	Address 09
off	on	off	on	Address 10
on	on	off	on	Address 11
off	off	on	on	Address 12
on	off	on	on	Address 13
off	on	on	on	Address 14
on	on	on	on	Address 15