

CRYSTAL LED



IP40

INSTALLATION AND MAINTENANCE MANUAL **EN**

MOUNTING TYPE

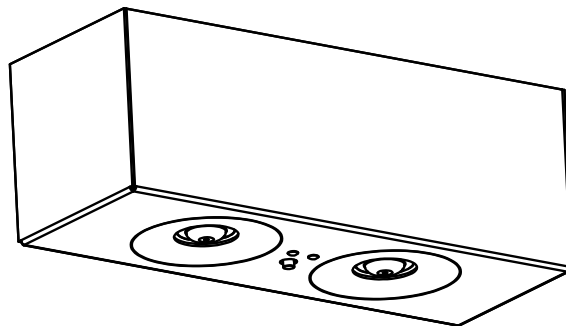
Directly to the wall or ceiling. For other mounting types see: „Mounting accessory” in product data sheet

OPERATING MODE

- NM** - NON-MAINTAINED - luminaire operates in emergency mode after power supply failure
- M** - MAINTAINED - lighting provided all the time, in case of power supply failure switches automatically into emergency mode

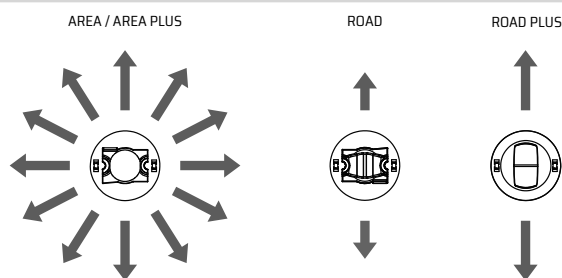
SYSTEM VARIANT

- CB** - luminaire supplied from HVCBS (230V AC/216V DC), without address module
- CBAM** - luminaire supplied from the HVCBS (230V AC /216V DC), with built-in address module and operating mode selection
- LV** - luminaire supplied with 24V DC
- LVAM** - luminaire supplied with 24V DC from the LVDBS system, with built-in address module and operating mode selection



OPTICS

- AREA** - (AR) symmetrical light distribution in all directions, recommended for use in places of considerable height or to illuminate fire points
- AREA PLUS** - (AP) symmetrical light distribution in all directions, ensuring adequate illumination on a large area
- ROAD** - (RO) light distribution mainly along the escape route, recommended for use in high corridors
- ROAD PLUS** - (RP) light distribution mainly along the escape route with a much greater range than for the ROAD optics, for small heights



TECHNICAL DATA

Supply voltage	CB	230V AC 50/60Hz 80-275V DC
	CBAM	230V AC 50/60Hz 170-275V DC
	LV/LVAM	10-32V DC
Minimum luminous flux (2W / 4W / 6W)	AR	220 / 417 / 642 lm
	AP	175 / 331 / 508 lm
	RO	177 / 368 / 563 lm
	RP	127 / 351 / 537 lm
Protection class	CB/CBAM	I
	LV/LVAM	III
Ingress protection		IP40

Light source type	LED modules ¹⁾	
Light colour temperature	5700K	
Light source power	2W, 4W, 6W	
Light source lifespan	> 50 000h	
Ambient temperature range	CB/CBAM	-10 - +45°C
	LV/LVAM	-25 - +65°C
Supply cable cross-section area	0,5 - 2,5mm ²	
Supply cable diameter	≤ 13mm	
Suitable for through wiring	YES	

¹⁾ Non-exchangeable, but serviceable light source

SAFETY

- During the installation and usage of emergency luminaires, follow the national safety rules as well as generally accepted technical rules
- Supply voltage should never be removed from the permanent phase by any external switches, relays or contactors (BMS, wall switch, etc.)
- During usage of emergency luminaires keep a register of inspection reports
- Luminaire installation or maintenance has to be preceded by turning off the power supply and battery
- Ensure that all foreign bodies are removed before the luminaire power is switched on
- The luminaire is to be used undamaged and in accordance with specifications

THE ABOVE-MENTIONED LUMINAIRE IS A FIRE PROTECTION EQUIPMENT AND THEREFORE FALLS WITHIN RELEVANT STANDARDS AND REGULATIONS.



NOT OBEYING THE SAFETY INSTRUCTIONS AND RECOMMENDATIONS CAN CAUSE LIFE THREAT OR EVEN DEATH

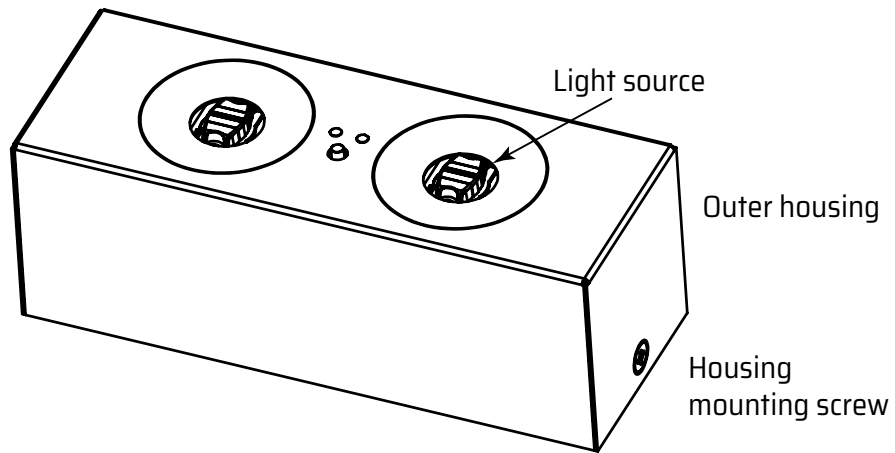
Not obeying this instruction manual can result in luminaire damage and loss of warranty



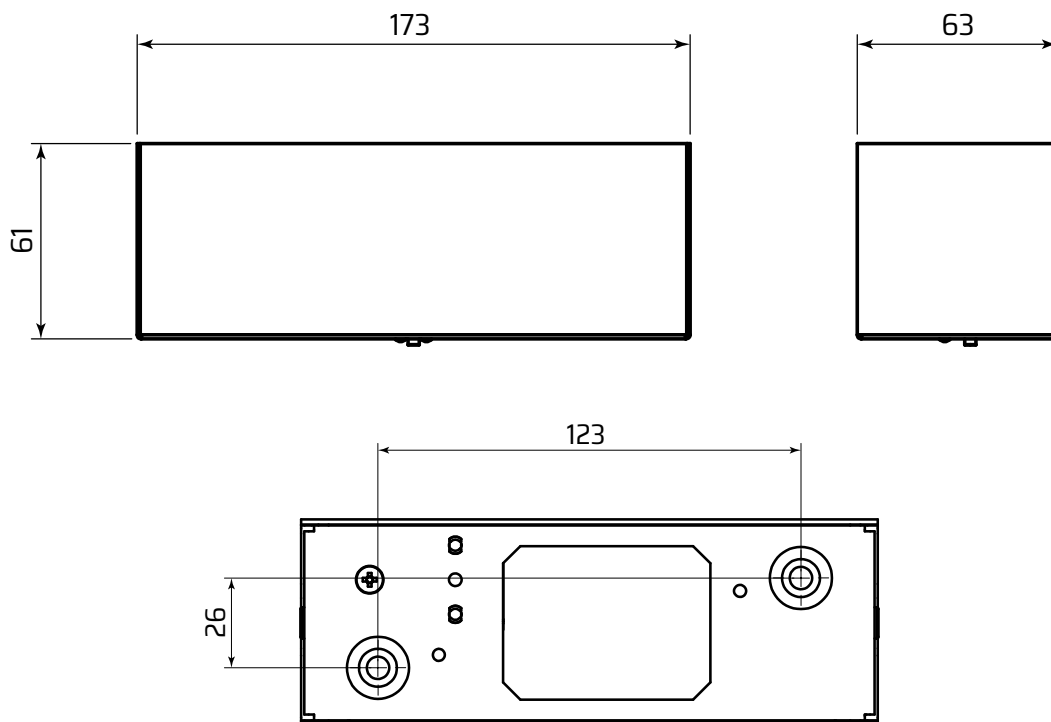
DO NOT STARE AT THE OPERATING LIGHT SOURCE

The luminaire should be positioned so that prolonged staring into the luminaire at a distance closed than 0.5m is not expected

CONSTRUCTION

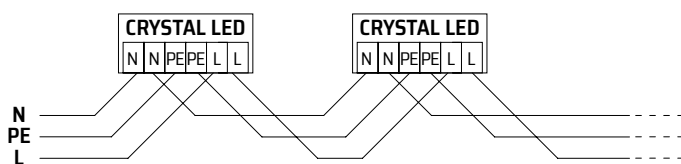


DIMENSIONS (mm)

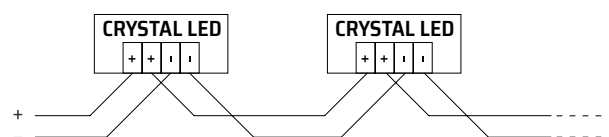


WIRING DIAGRAM

CB/CBAM



LV/LVAM



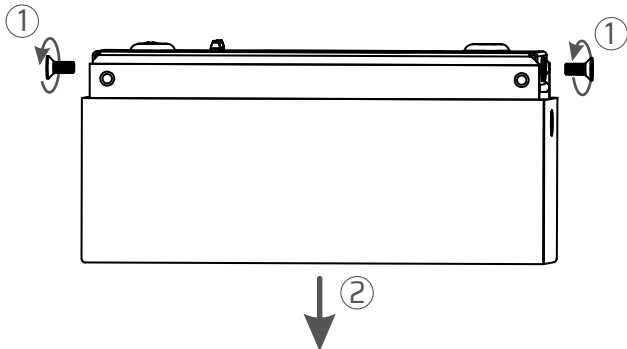


BEFORE ANY INSTALLATION OR MAINTENANCE WORK IS PERFORMED ON THE LUMINAIRE THE POWER SUPPLY SHOULD BE DISCONNECTED

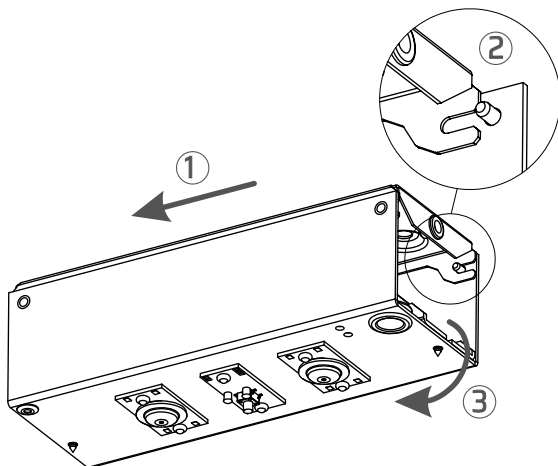
All installation and maintenance procedures can be performed only by qualified, properly trained and if appropriate, certified staff

INSTALLATION

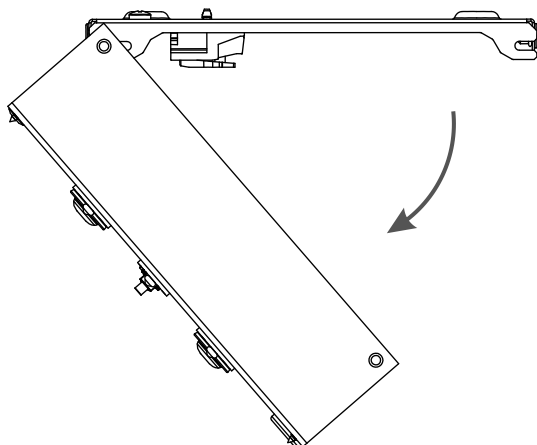
1. Unpack the luminaire after transport and verify its condition.
2. Drill holes in ceiling according to mounting hole spacing (see DIMENSIONS) and in the light direction (see OPTICS), so that the cables coming from the ceiling go freely through the hole provided for this purpose. Use dowels and screws appropriate for the material luminaire is being mounted to.
3. Remove the screws that secure the outer casing and remove it.



4. Slide the top plate horizontally to release the mechanical catch from the pin.



5. Rotate the top cover to get an access to luminaire connectors.

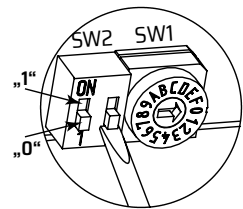
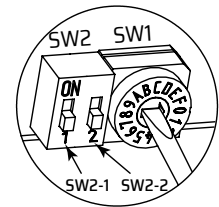


6. Pass the power cables through the hole in the top plate, and then screw the luminaire base to the ceiling.
7. Connect the luminaire power supply cables. The luminaire is suitable for through wiring.

WARNING! The L phase has to be the same as the one used for the supply of normal luminaires, where after power loss on it the luminaire goes into emergency operation (permanent phase).

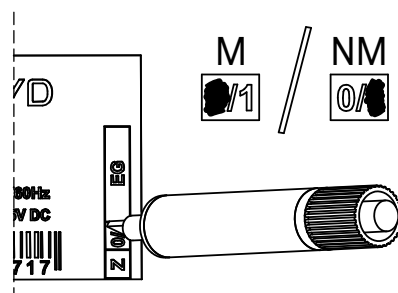
8. In case of luminaires with built-in address module:
 - a. set luminaire address using the rotary switch SW1 and second slider of SW2 switch (SW2-2). Setting the SW2-2 position to „1” means adding 10 to the address, according to the table below.

SW2-2	SW1	Address	SW2-2	SW1	Address
0	1	1	1	1	11
0	2	2	1	2	12
0	3	3	1	3	13
0	4	4	1	4	14
0	5	5	1	5	15
0	6	6	1	6	16
0	7	7	1	7	17
0	8	8	1	8	18
0	9	9	1	9	19
0	A	10	1	A	20



- b. using the first slider of SW2 switch (SW2-1) select the operating mode. Position „1” - maintained (M), position „0” - non-maintained (NM).

9. Mark the operating mode on the luminaire label. Mark **0** for maintained mode (M) and **1** for non-maintained mode (NM).



10. Then do the reverse of steps 5, 4 and 3.
11. Perform the commissioning procedure.

COMMISSIONING

After all installation procedures are finished, luminaire operation needs to be verified. Follow the instructions below:

1. Switch the luminaire power supply on the HVCBS (CB, CBAM) or LVDBS (LV, LVAM) system.
2. For luminaires without built-in address module (CB, LV):
 - a. Leave luminaire operating and verify light source operation – should be operating.
 - b. Turn off luminaire power supply.
3. For luminaires with built-in address module:
 - a. Configure the HVCBS/LVDBS system.
 - b. Configure HVCBS/LVDBS circuit as maintained.
 - c. If required, switch between maintained and non-maintained luminaire operating mode.
 - d. Run the functional test on HVCBS/LVDBS system.
 - e. Verify luminaire operation. The light source should operate properly.
 - f. Verify if the HVCBS/LVDBS system reports proper luminaire operation.

POTENTIAL IRREGULARITIES AND TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
After turning on the power the light source is off	Not connected or badly connected power cords.	Make sure the power cables are properly connected to the power connector inside the luminaire.
	No power supply in the cables connected to the luminaire.	Using a voltage detector, check the cables connected to the luminaire has appropriate supply voltage.

MAINTENANCE

Luminaire should be cleaned with a damp cloth according to building maintenance plan.

Do not use abrasive cleaners, solvents, substances and cleaning agents containing alcohol to clean the luminaire

The light source used in this luminaire may only be replaced by the manufacturer, his service agent or a similar qualified person.

STORAGE

The luminaire should be stored no longer than 6 months from the date of purchase, in a dry place with an ambient temperature range of -10 - +30°C.

WARRANTY

Warranty is valid and enforceable only when manufacturer's recommendations are preserved, and the installation and usage are proper.

Warranty is granted for a period of 12 months from the date of sale, unless the luminaire has been sold under different contract conditions.

The warranty is excluded in case of misuse, unsuitable use, wrong connection or mechanical defects of the luminaire caused by the client.