O-MAN-00012-OFI

USER MANUAL

120° medium intensity beacon

OFI120-RW-48/240-U // 113758UA



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1 Product name and part number

Description	Norm	Power supply	Part number (P/N)	QR code
OFI120-RW-48/240-U	ICAO type A, B and C FAA L-864/L-865 ETL certified	110-240 Vac ±10%	113758UA	

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2 Caution



- Do not proceed with any maintenance job when the product is under operation.
- Power supply must be shut down when opening the flash-head or the cabinet.
- Installation must be performed only by an electrically skilled operator, and National electrical installation rules must be respected.
- Always wear appropriate Personal Protective Equipment (PPE) when installing, maintaining or servicing the system.
- Any installation or maintenance operation performed at height must be carried out in strict compliance with fall-protection procedures.
- Do not look directly at the projector while it is in operation: Led projectors produce brilliant flashes of lights which can result in temporary or permanent eye damage.
- OBSTA products may be affected by ESD, use state of the art precaution before manipulation.
- Unless otherwise specified, all cables must be shielded, and the shielding must be connected to ground.
- All cables connected to PCBs and terminal blocks must be equipped with a cable connector to prevent bad contacts when connecting devices.



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3 Warranty

OBSTA warrants the equipment described in the instruction manual and sold to purchasers to be free from defects in material and workmanship at the time of shipment. OBSTA's liability under this warranty being limited to repairing or replacing, at OBSTA's option, items which are returned to it prepaid within twenty-four (24) months from shipment to the original Purchaser, or twelve months from commissioning, and found, to OBSTA's satisfaction, to have been defective. In no event shall OBSTA be liable for consequential damages. NO PRODUCT IS WARRANTED AS BEING FIT FOR A PARTICULAR PURPOSE AND THERE IS NO WARRANTY OF MERCHANTABILITY.

This warranty applies only if: (I) the items are used solely under the operating conditions and in the manner recommended in OBSTA's instruction manual, specifications, or other literature; (II) the items have not been misused or abused in any manner or repairs attempted thereon; (III) written notice of the failure within the warranty period is forwarded to OBSTA and the directions received for properly identifying items returned under warranty are followed; and (IV) such return notice authorizes OBSTA to examine and disassemble returned products to the extent OBSTA deems necessary to ascertain the cause of failure. The warranties stated herein are exclusive.

THERE ARE NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED, BEYOND THOSE SET FORTH HEREIN, and OBSTA does not assume, nor does OBSTA authorize anyone else to assume for it, any other obligation or liability in connection with the sale or use of said products. OBSTA's liability on any claim of any kind, including negligence, for loss or damages arising out of or connected with the manufacture, sale, delivery, repair or use of any equipment or services provided by OBSTA shall in no case exceed the price allocable to the item or service or part thereof which gives rise to the claim.

The integrity and reliability of OBSTA aviation obstruction lighting systems is dependent on the use of OBSTA parts and components. To ensure the optimum performance and reliability of your OBSTA system, it is strongly advised that only components and modules manufactured by OBSTA be used.

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4 Introduction

4.1 General information

This manual provides information about the installation, operation and maintenance of the OBSTAFLASH led medium and high intensity obstruction lighting systems manufactured by OBSTA. The lighting systems described in this manual are intensity type A, B, C and/or FAA 150-5345-43J type L-865/L-864/L-866/L-856/L-857 obstruction light.

The OBSTAFLASH is manufactured to comply with ICAO annex 14 chapter 6 and Federal Aviation Administration Advisory Circular 150/5345-43J.

4.2 General description

The spotlight is a subset of the OBSTAFLASH LED light heads. These lights are designed to mark out aerial obstacles such as wind turbines, electricity pylons or telecommunications towers.

The projector is responsible for the light output of the light head. Thanks to its integrated lens, it focuses on the light produced by the leds to comply with current aerial beaconing standards. The projectors are systematically combined with an electronic control system in a control box (OBSTAFLASH P/N-113797U cabinet).

OFI, OFH and OFP systems are combinations of several projectors that can be used in different ways depending on the customer's requirements.

For example:

- OFI 120 is 3 OFP120 + 1 Power unit (+1 power supply for 240 version)
- OFP 120 and 180 are 2 or 3 differently oriented spotlights
- OFH 120 and 180 is a combination of several OFP stages

Depending on the application, the OBSTAFLASH can be mounted on a range of brackets to provide 120°, 180° or 360° illumination. Models operating on 110-240Vac are fitted with an additional power supply unit.

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5 FAA version

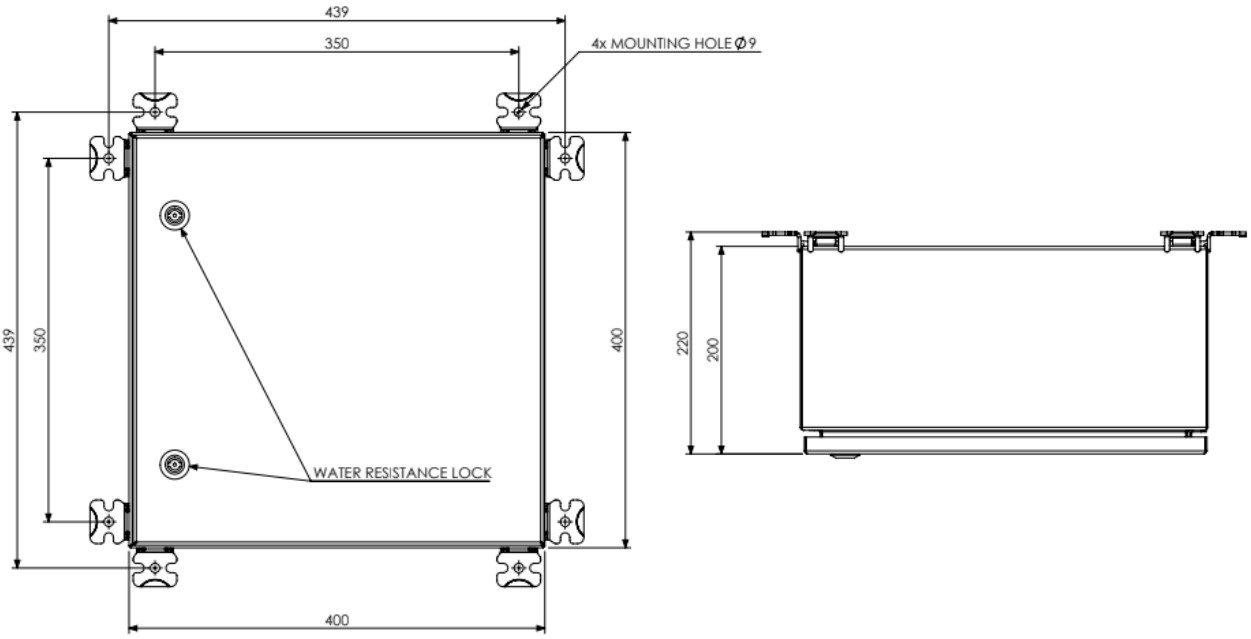
The OBSTAFLASH lighting system L-865/L-864 is a medium intensity system manufactured to comply with Federal Aviation Administration advisory circular 150/5345-43J.

To comply with standard L-865/L-864, FAA-certified OFPs and OFIs use specific projectors (P/N 113761UIR).

The list of OFI (OFP + power supply unit + power supply (110/240 Vac version) is as follows:

- OFI120-RW-48/240-U (P/N 113758UA)

6 Power supply cabinet (only for 240Vac version)

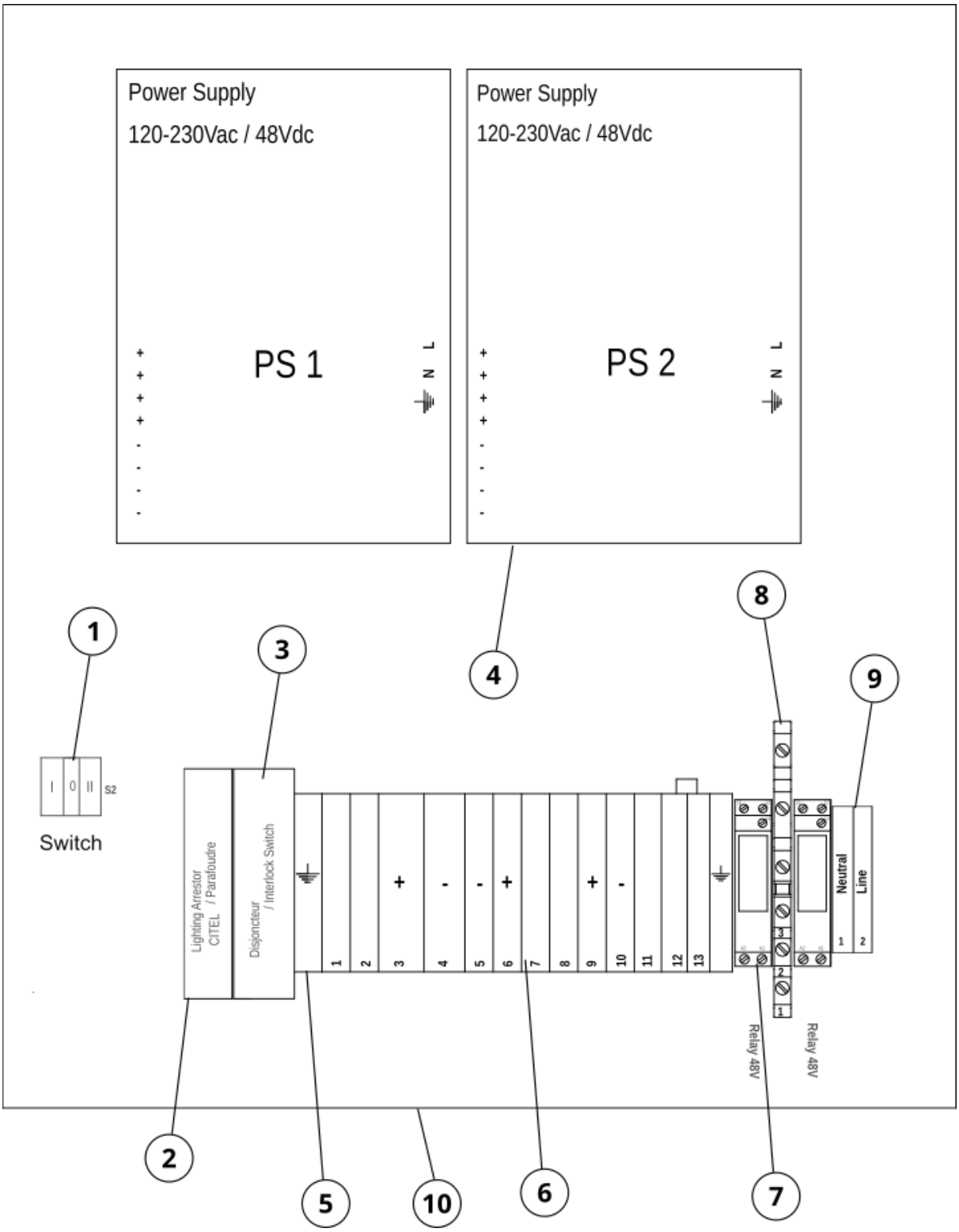


6.1 Overview

Functionality and features of the cabinet (only for 240Vac version) **P/N 113797U:**

- “Weather tight” stainless steel 316L power cabinet enclosure
- Test button for day and night
- Alarm dry contact NC and NO
- Master/slave configuration for multiple lights synchronization
- Can be used with photocell 48Vdc
- In option low intensity lights NAVILITE 48Vdc or L-810 (F) NAVILITE-IR-FAA-120-240V or night only operation
- Wireless GPS synchronization (P/N-113746)

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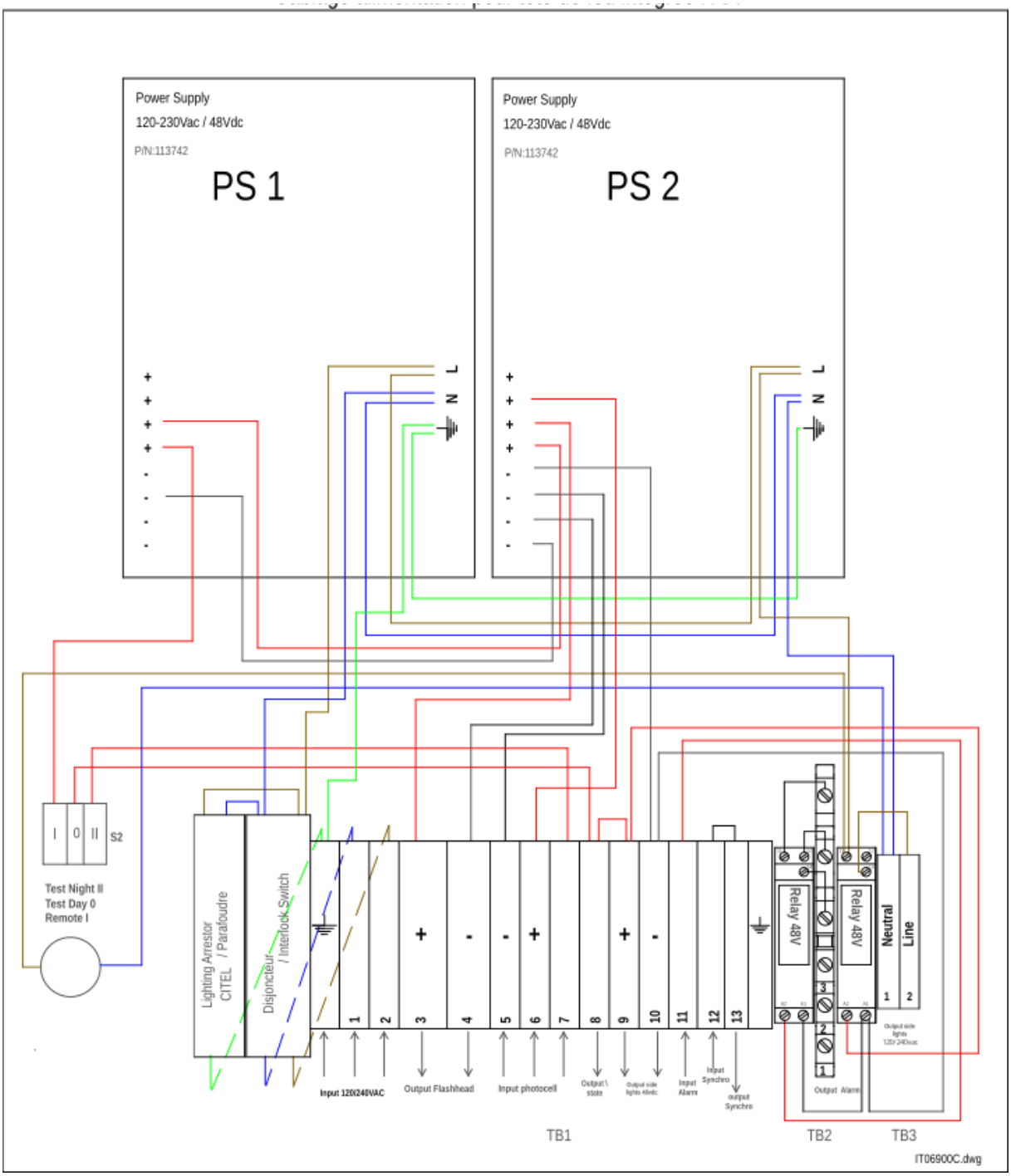


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N°	Designation	Spare part (if available)	Qty
1	Security / Day/ Night test switch (Bracket and indicator button HI)	113743	1
2	CITEL DS215-230/G (Surge protection DS215-230/G)	451721	1
3	16A circuit breaker		1
4	S600 48Vdc 12.5A power supply (Power Supply 230VA 600W)	113742	2
5	Ground terminal		2
6	Terminal blocks		13
7	48Vdc relay		2
8	Connection blocks UT 2.5-3L		1
9	Connection block 2		2
10	400x400x200 INOX cabinet		1

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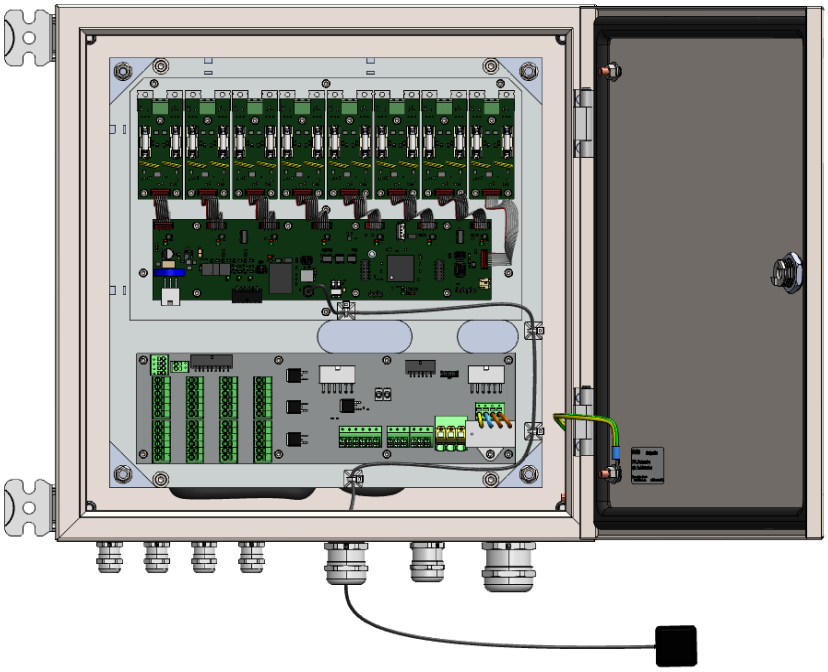
6.2 Internal wiring



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7 Power unit

7.1 Overview

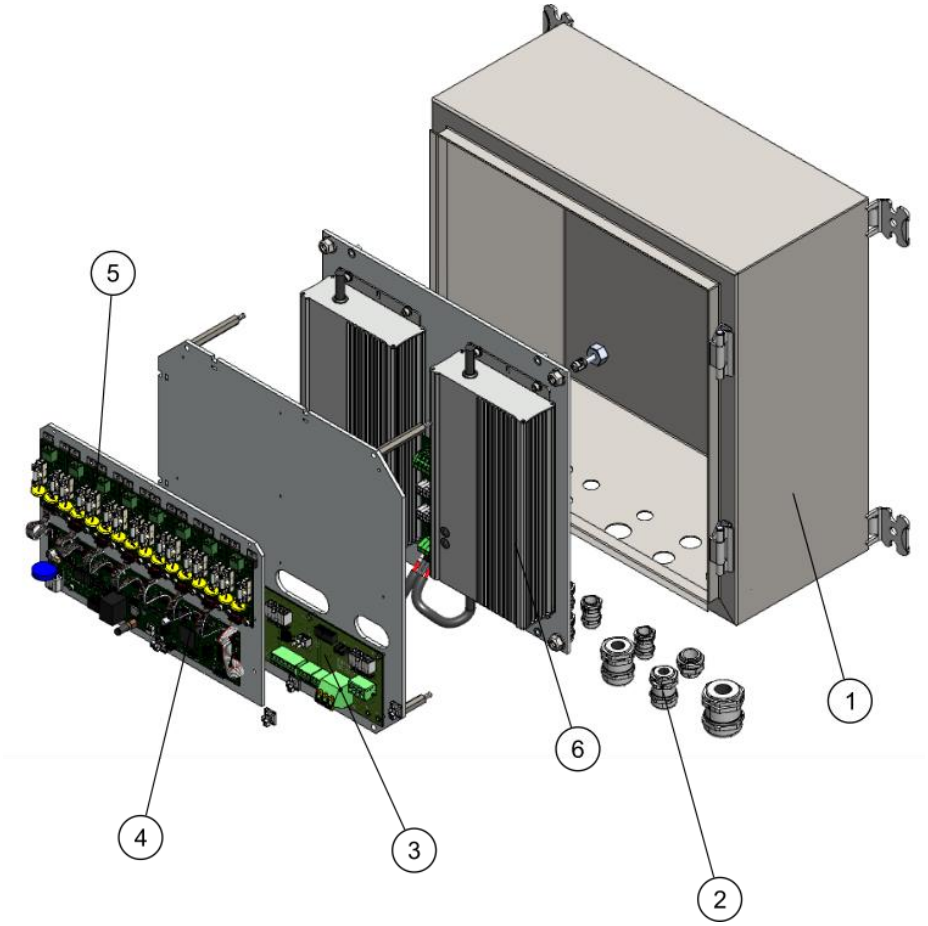


OFP-CAB-1B

The OBSTA power unit cabinet is a stainless steel or painted steel cabinet whose main function is to power and control OBSTA OFP120 and/or OFP180 lamps. With one controller (one block), you can connect to 6 projectors.

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7.2 Bill of materials



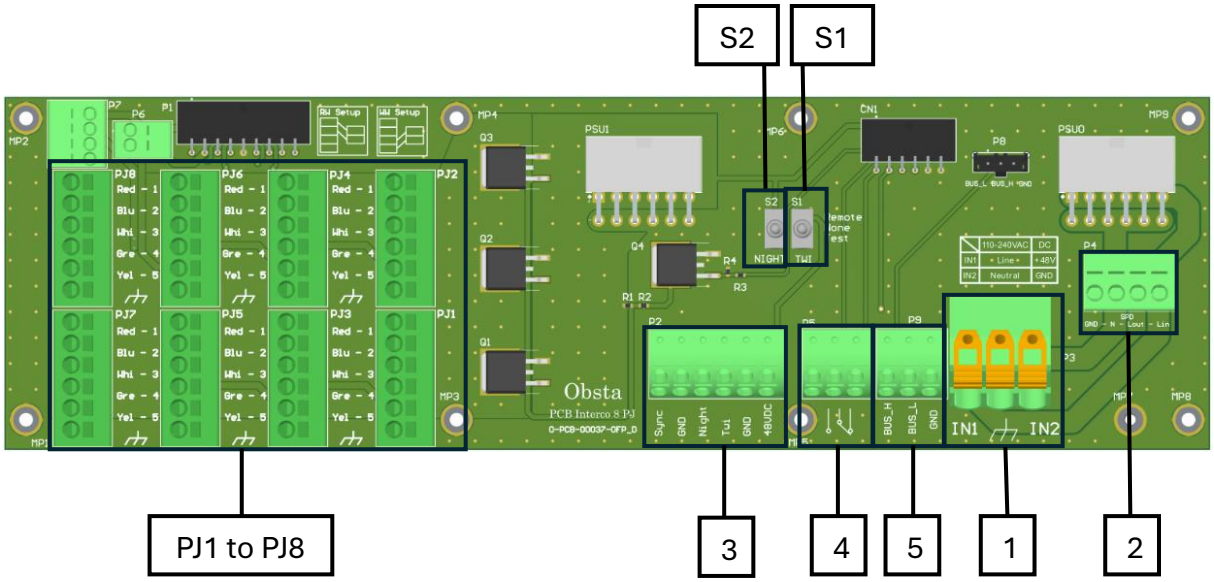
n°	Designation	Spare part (P/N)
1	Cabinet	228415
2	Cable gland* (M16, M20, M25, M32, M40) *see 6.2 for detail	
3	Interconnection card	770334
4	Command card	113744B
5	Power card	113741B
6	Power supply and power supply card (only for 240 Vac version)	228325

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7.3 Cards inside the stainless power cabinet

7.3.1 Interconnection card

PCBa OFP Projecteur (**228224**):

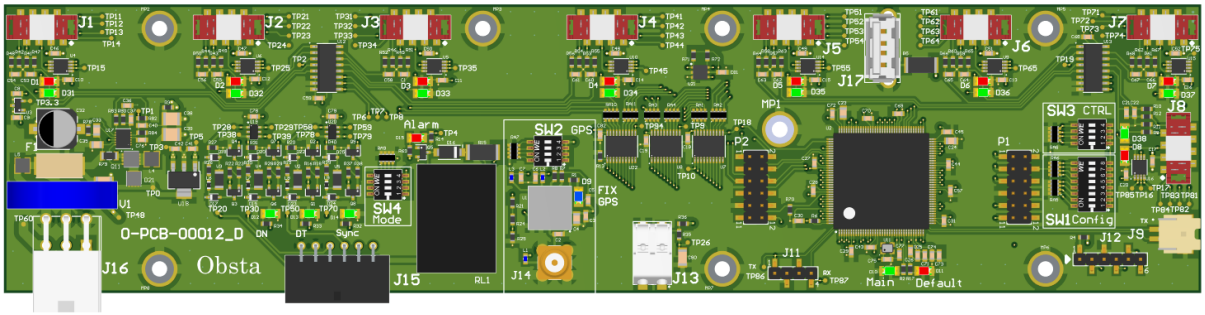


- PJ1 to PJ8/ Projector connector must be connected according to the cable color or number. Other harnesses are cabled directly from the factory. Do not modify the cabling without Obsta's direct consent.
- 1/ Power input: +/-/Earth (Vdc) or L/N/Earth (Vac)
- 2/ Surge protection terminal
- 3/ Communication signal for flash and mode (day, night) from photocell signal and top synchro
- 4/ Alarm: NO/ COM/ NC
- 5/ Communication BUS terminal
- S1/ Test switch for twilight: manually force the signal to twilight (Must be always in remote position for normal operation)
- S2/ Test switch for day/night: manually force the signal to day/night (Must be always in remote position for normal operation)

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7.3.2 Command card

COMMAND-CARD-48VDC-8P (**113477B)**:



**Detail on next page*

- **J1 to J7**: Connected to a dedicated power card. Near each connector, a pair of led (Green & Red) signals the status of the power card hence the associated projector, see figure 4 below.
- **J9**: Connected to another command board for internal synchronization (specific).
- **J13**: Connector for photo resistor application (specific).
- **J14**: Connector for GPS antenna.
- **J16**: USB connector used for reprogramming the Card and retrieving event log (don't operate any USB device without Obsta's consent).

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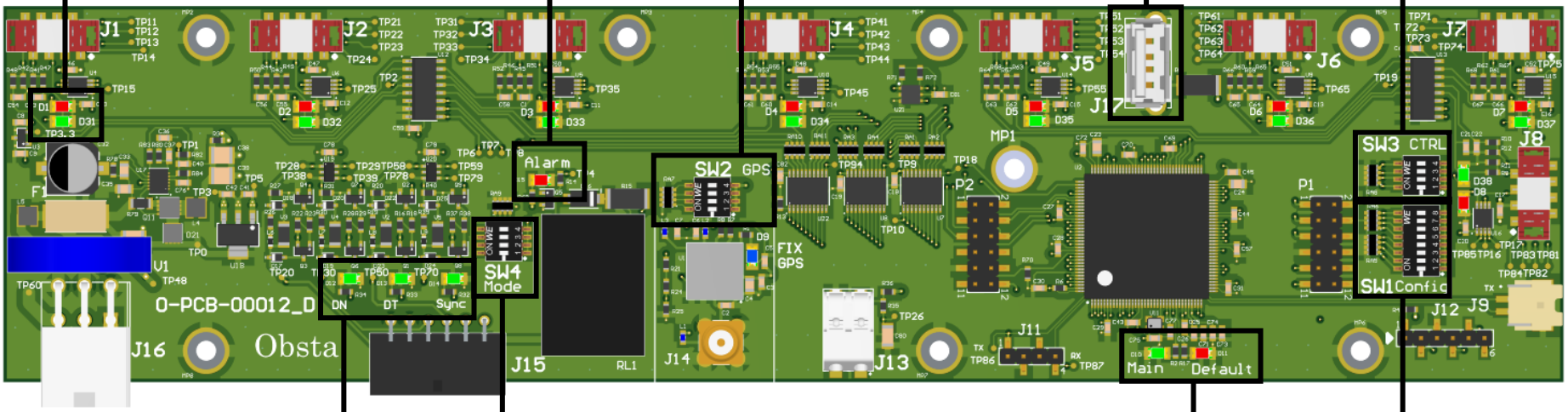
Power card led:
Red led: blinking if default on channel(s)
Green led: ON when channel(s) is flashing
(same for J1 to J7)

Alarm led: ON if relay is OFF (relay OFF means COM and NO connected)

SW2: GPS configuration

USB port: to connect a mass storage device and process to connect a mass storage device and process

SW3: Beacon control



Mode led:
DN led: ON if DN input is set
DT led: ON if DT input is set
SYNC led: ON if SYNC input or output is set

SW4: Day/Twilight/Night (DTN) detection mode

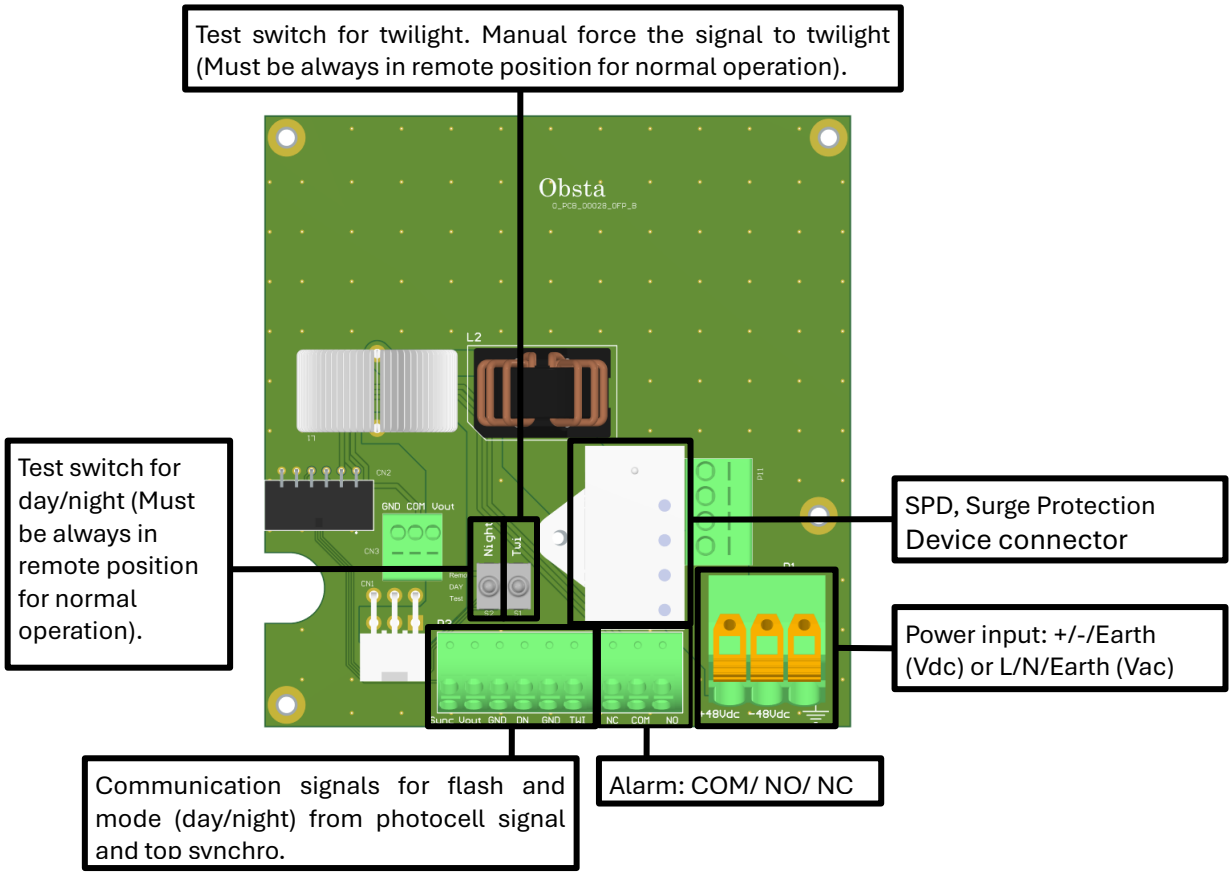
Operation led:
Default led: plays a sequence if general default condition
Main led: ON during flash

SW1: FAA or ICAO configuration

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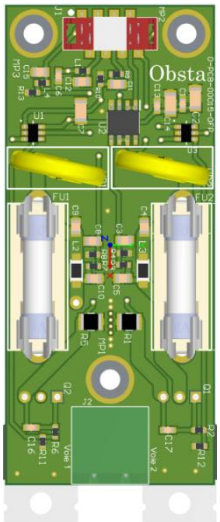
7.3.3 Supply card

PCBa OFP PSU CONNECTOR (48Vdc) (**770301**)
PCBa OFP PSU CONNECTOR (230Vac) (**200238**)



7.3.4 Power card

POWER CARD 48VDC (**113741B**)



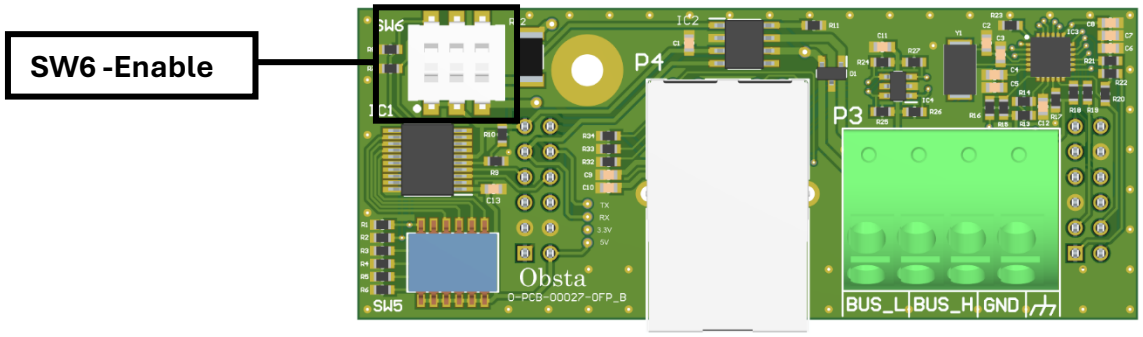
The power supply unit includes 7 power cards. Those cards regulate the current of the 14 led circuits.

- 6 power cards drive the 2 white led circuits inside each projector.
- 1 power card drives the 2 red and infrared led circuits inside the 6 projectors.

Each card is affected by the associated projector number on the inter-connection board. The power cards #1 to #6 are associated to white led circuits inside projectors from left to right (PJ1 → Power card #1, PJ2 → Power card #2 … PJ6 → Power card “6). The Power card #7 is associated with the 2 red and infrared circuits in series in the three projectors #5, #3, #1 and in the three projectors #6, #4 and #2.

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7.3.5 CAN card



If the Ethernet/CAN PCB module is connected, the command card can manage CAN communication, with light status reporting, command processing, flash and DTN synchronization.

SW6-Enable			
	1	2	3
ON	CAN BUS	Ethernet	CAN terminal resistor
OFF	-	-	-

Enable condition for slave mode:

- System is in slave mode (SW3-2 is ON)
- CAN bus is enabled (SW6-1 is ON)

Connection status:

CAN is considered as “Connected” if any CAN message has been received less than 30 seconds ago. If no message is received after this delay, CAN is considered as “not connected” status.

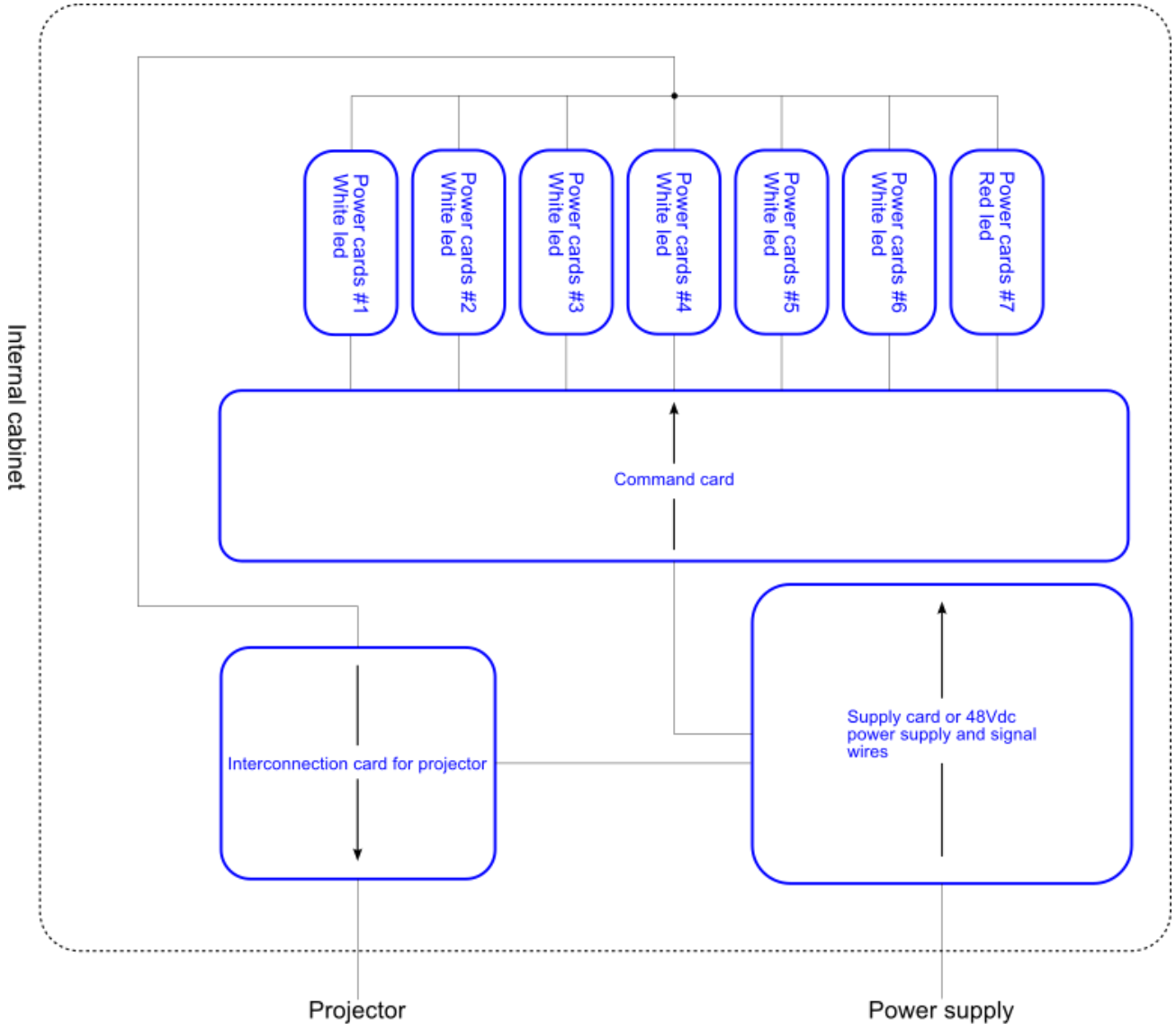
7.4 Internal Wiring

All cards are connected by cable harness. There are 4 harnesses in total:

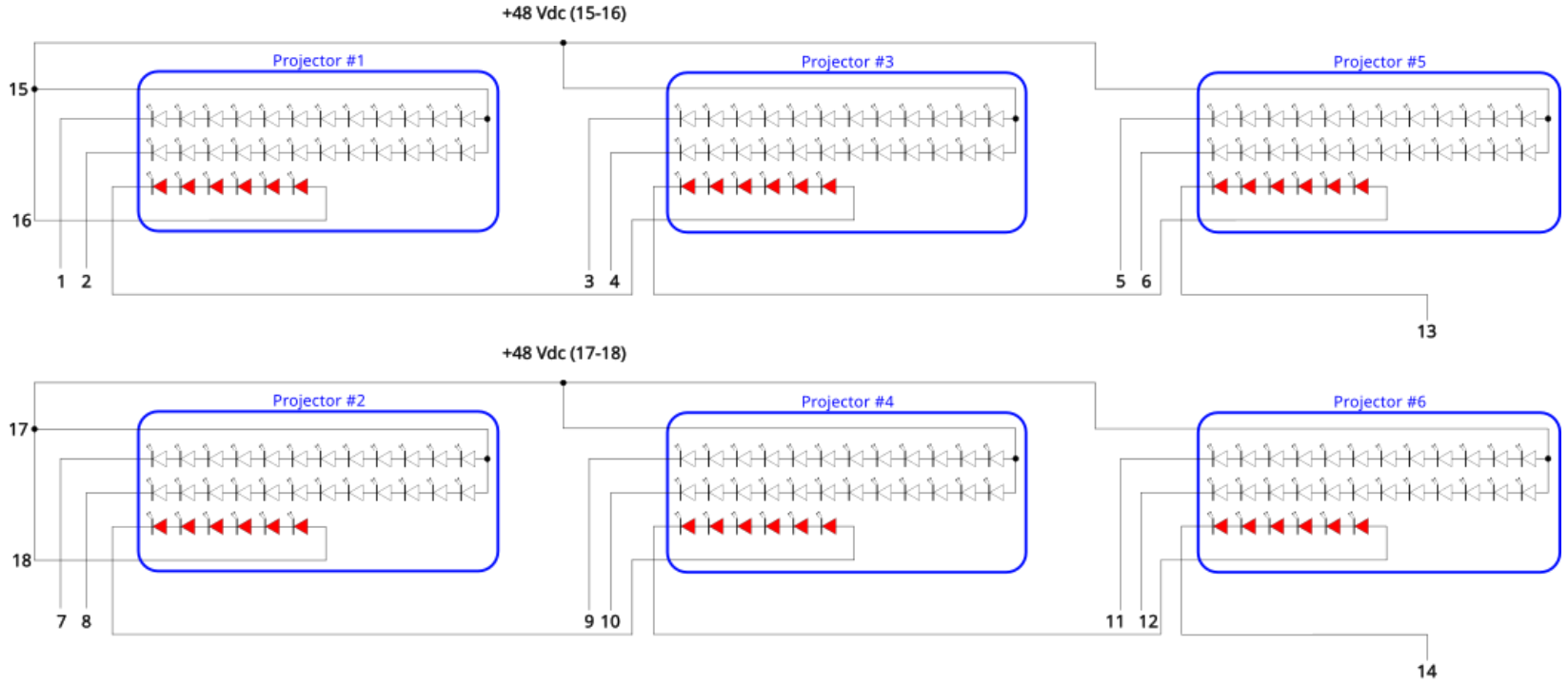
- 1x AC Power harness From Interconnection to Power supply card
- 1x DC Power harness From Interconnection to Power supply card
- 1x Signal Harness From Interconnection to Command card
- 1x Projector Harness From Interconnection to Power card (1 to 7)

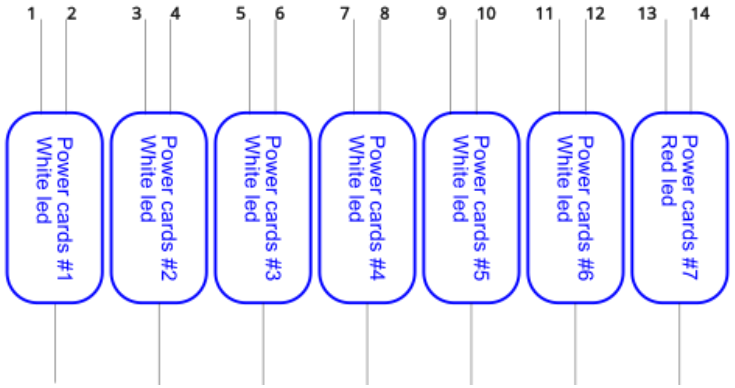
All harnesses are installed in the OBSTA factory. If any operation is needed, please contact OBSTA before any intervention. Harness must be manipulated with care, do not pull the harness by the wire. Avoid using tools (Screwdriver) for removing connectors from the card, this could damage the harness or the card.

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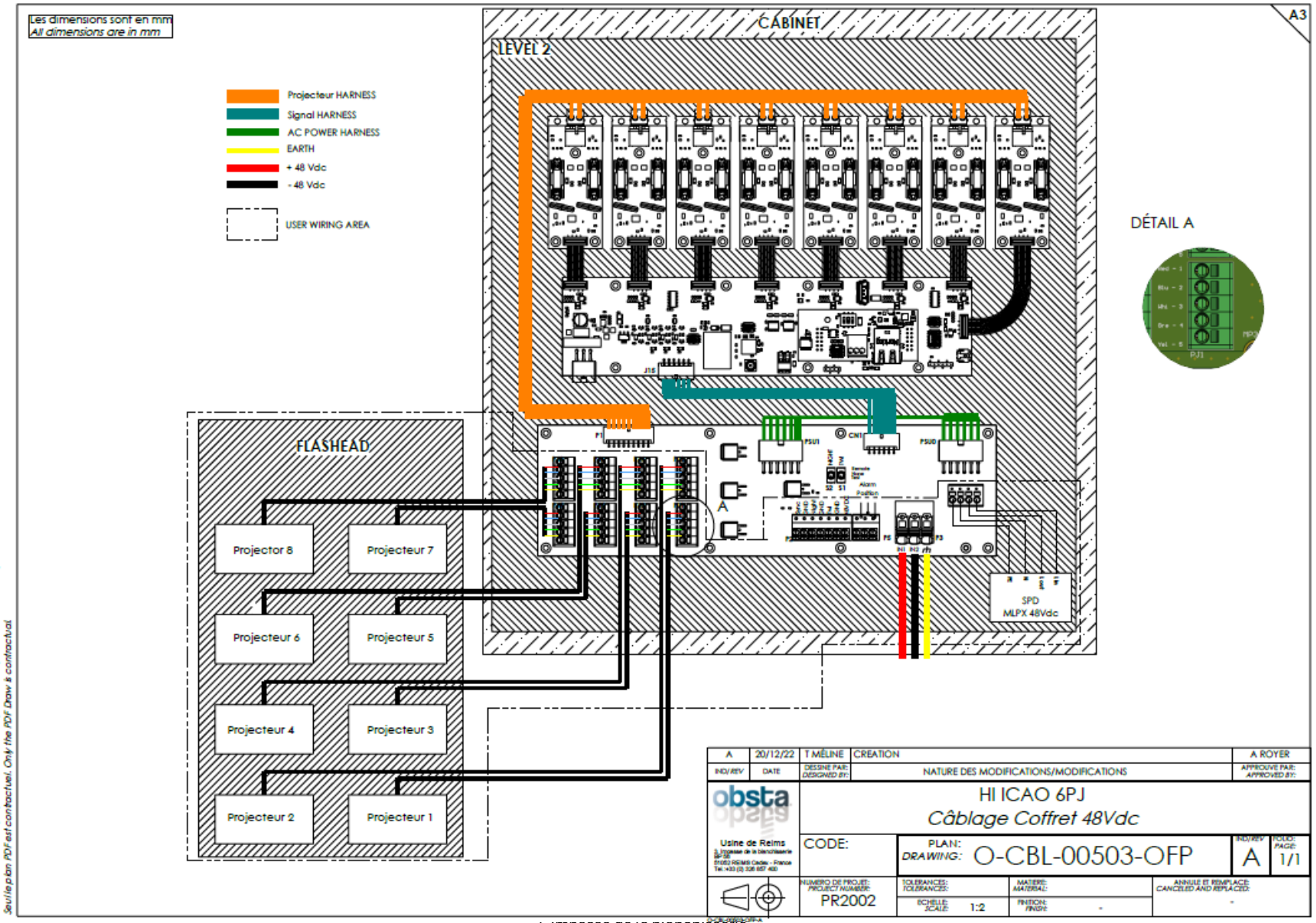


Per projector:

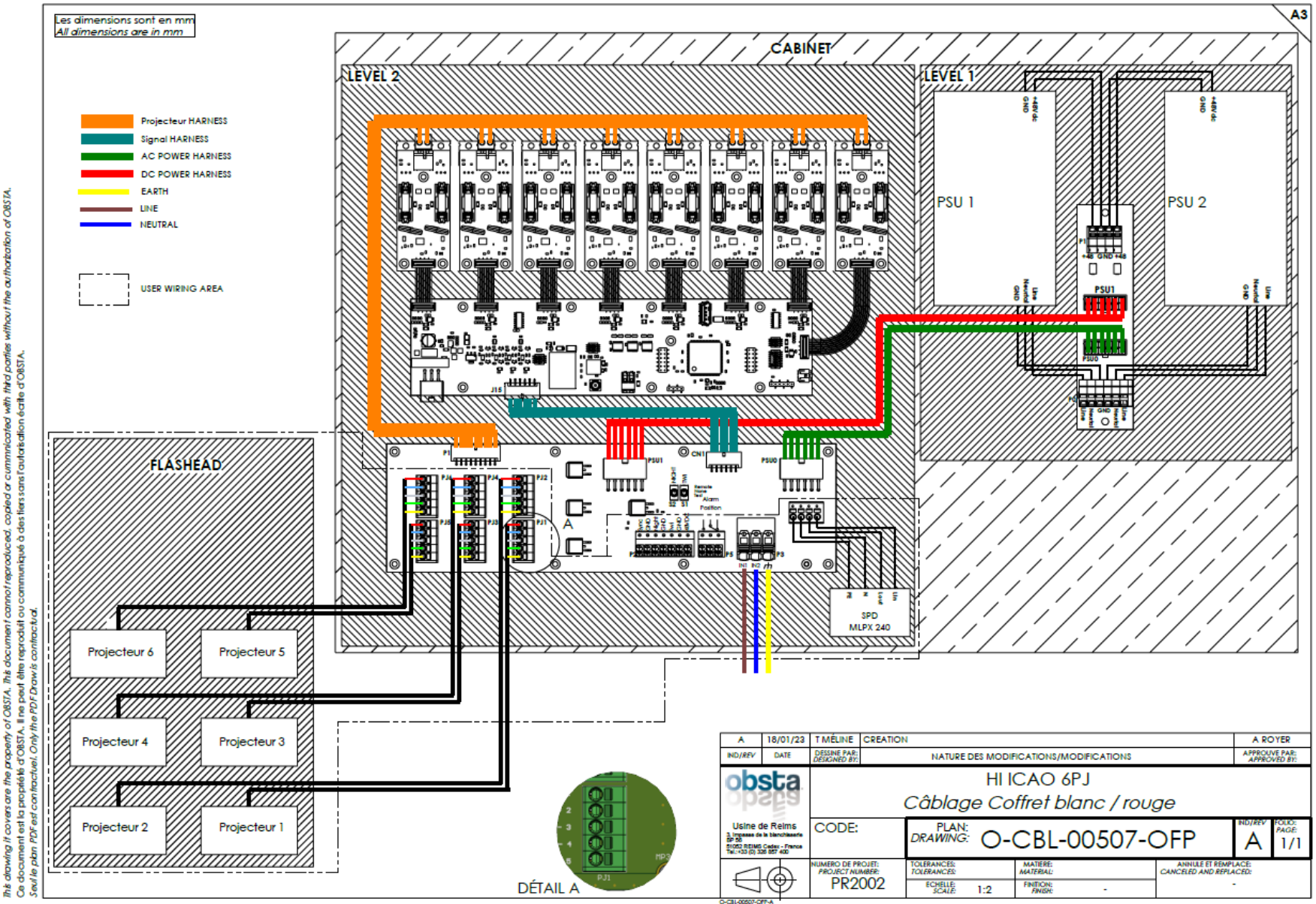
For R circuit (13-14):
1/3 led channel consisting of 6 led

For W led circduit:
2 led channel, each consisting of 12 led.

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Les dimensions sont en mm
All dimensions are in mm
A3
CABINET
LEVEL 2
LEVEL 1
Projecteur HARNESS
Signal HARNESS
AC POWER HARNESS
DC POWER HARNESS
EARTH
LINE
NEUTRAL
USER WIRING AREA
PSU 1
PSU 2
FLASHEAD
Projecteur 6
Projecteur 5
Projecteur 4
Projecteur 3
Projecteur 2
Projecteur 1
SPD
MLPX 240
DÉTAIL A
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A 18/01/23 T MÉLINE CREATION A ROYER
NATURE DES MODIFICATIONS/MODIFICATIONS
HI ICAO 6PJ
Câblage Coffret blanc / rouge
Usine de Reims
CODE:
PLAN: O-CBL-00507-OFP
IND/REV A
PAGE 1/1
NUMERO DE PROJET: PR2002
ECHELLE: 1:2
ANNULE ET REMPLACE: -

8 Installation

8.1 Unpacking

Carefully unpack the product and remove any internal packing material. Examine each item for obvious physical damage. Immediately report any claims to the carrier.

It's strongly recommended to supply the product and verify that it's working properly at ground level before final installation.

8.2 Mounting

Any manual intervention must be performed on a NON-POWERED product. Human and material issues could occur inducing injury or permanent damage to the product.

Depending on the application multiple flash units may be required. OBSTA recommends that each unit has its own support (One supports the kit: Flash-head + Cabinet). Cabinet or Flash-head must be installed in a fixed position. OBSTA also recommends that the cabinet should be in easy access position/orientation for maintenance purposes. Each part of the kit must be correctly fixed to the structures.

The flash must be levelled using a spirit level.

1. Verify that the mounting surface is free of debris.
2. Align the five mounting holes in the base of the flash-head with the holes in the structure mounting plate.
3. Secure loosely the flash-head on its support. Do not tighten the screws yet.
4. Ensure that the flash-head is installed horizontally by using the level provided (air bubble shall be centered).
5. If the flash-head is not leveled, add stainless steel shim material or washers (stainless steel or galvanized) as necessary to level the flash-head.
6. Once leveled, firmly secure the hardware once the flash-head, using the same torque on each screw. Verify that the flash-head is level when the hardware is fully tightened. If not leveled, then loosen the mounting hardware and repeat Step 5 until the beacon is firmly secured horizontally.

Cabinet shall be placed in upright position (cable glands face to the ground)

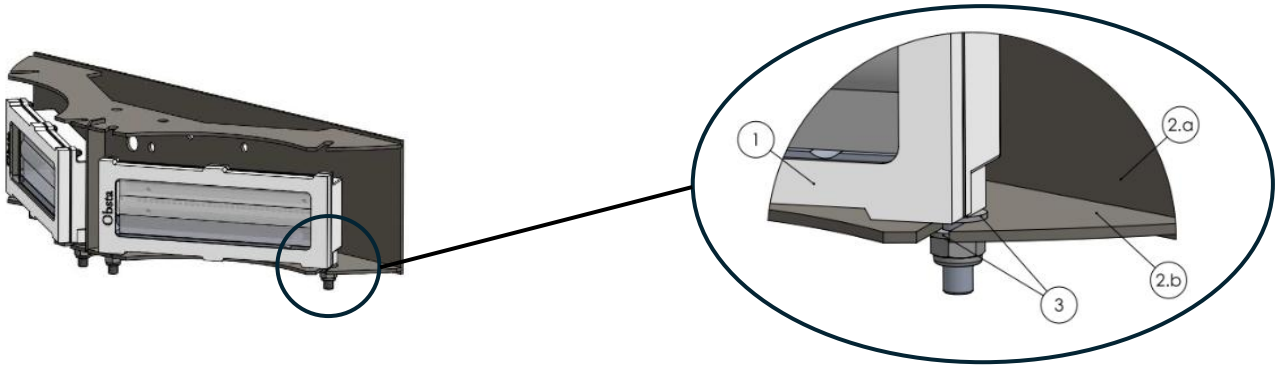
Cables shall be installed with cable clamps to avoid any oscillation movement due to wind pressure.

In some specific cases with high electromagnetic fields an additional shield is required to ensure proper operating. OBSTA may provide or suggest additional equipment to improve stability and durability of the kit. Please contact OBSTA if the product may be exposed to this kind of perturbation.

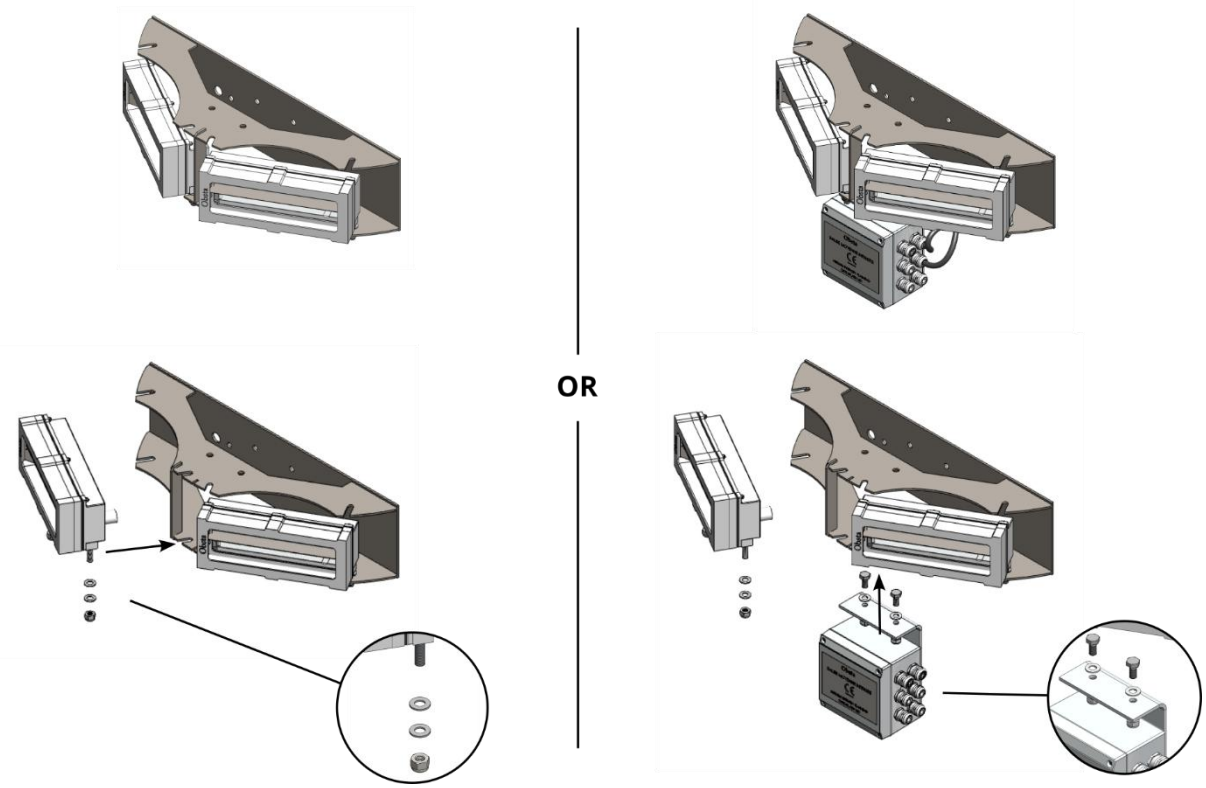
Otherwise, the cross section of the power cable as per the maximum current of 14A during the daytime

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The two (120°) or three (180°) spotlights are mounted on the bracket at 120° or 180°. They are tightened to a torque of 5 Nm with M8 nuts and washers as follows.



n°	Designation
1	MI LED projector
2	120° Bracket (available in 180°)
3	M8 nut (x1) and washer (x2)



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9 Wiring

9.1 Caution before wiring

- **Power OFF**: Always ensure the main power supply is completely turned off before starting any wiring work.
- **Verify voltage**: Confirm the voltage level of the circuit. Be aware of high-voltage hazards.
- **Use proper PPE**: Wear personal protective equipment (insulated gloves, safety glasses and safety shoes).
- **Secure the work area**: Ensure the area below is cordoned off to prevent injury from falling tools or components.
- **Check equipment ratings**: Confirm the product's voltage and current ratings match the installation circuit.
- **Inspect components**: Examine all parts (wires, connectors, terminals) for damage before wiring.
- **Proper tools**: Use insulated tools appropriate for electrical work.
- **Follow wiring diagram**: Refer to the OBSTA's schematic to ensure correct connections.
- **Grounding**: verify proper grounding/earthing for all metal parts and enclosures.
- **Secure wiring**: Fasten cable properly to prevent strain, chafing, or accidental disconnection.
- **Verify before powering**: Double check all connections before restoring power.
- **Shielded cable**: Cables must be shielded when used in electromagnetic fields.
- **Position**: The lamps shall be installed as close as possible from the command box.
- **Polarities**: The polarities must be correctly positioned on the DC power. If reversed, the printed circuit board may be seriously damaged.
- **Configuration:** Do not forget to set the dipswitches as required by the warning lights: Unless specified, dipswitch settings configurations are factory.

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9.2 Overview

- 1→ White channel power supply.
- 2 → Return to the white channel.
- 3 → Return to the white channel.
- 4 → Return to the red channel.
- 5 → Return to the red channel.

	For dual color or white only beacon (P/N): 113725AUI, 113723AUI, 113758AU, 113757AU)			
Cable length	1 to 60m (1 to 200 ft)	61 to 105m (201 – 350 ft)	106 to 160m (305 to 510 ft)	161 to 215m (511 to 700 ft)
Cable section	2.5 mm^2 (12 awg)	6 mm^2 (10 awg)	7.5 mm^2 (8 awg)	10 mm^2 (7 awg)

Otherwise, the cross section of the power cable as per the maximum current of 14A during the daytime.

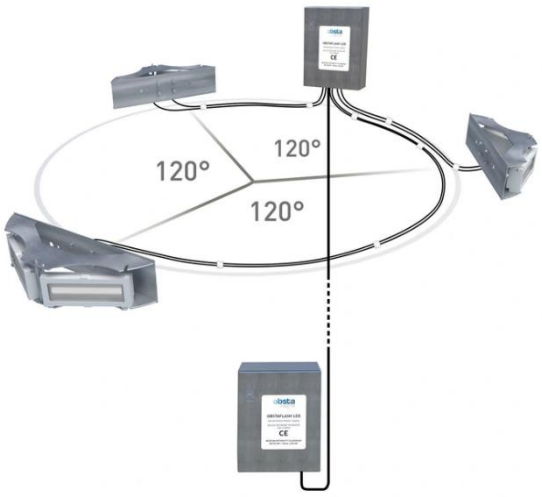
The KIT 113758UA includes:

TOP:

- 3 flash heads with 10 meters of molded cable (P/N 113747-U-10)
- 1 DC power unit (P/N 114103)

BOTTOM:

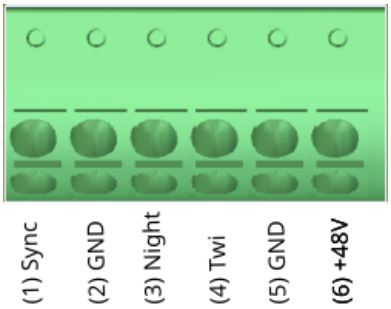
- AC power cabinet (P/N 113797U) + photocell 100757 and cable 5 core



For all kits, it is possible to add a photocell for the day/night switch connected to the power supply unit. (P/N 100757)

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9.3 Terminal connection



(1) Synchronization: in cases where several blocks are connected to lamps that need to be synchronized, connect the two “sync” terminals with a cable (8. Typical applications). This is referred to as a master/slave configuration. All settings (flash sequence, photocell, etc.) must be managed solely by the master unit. To define the slave units, use the dip switches (5.2 Switch configuration).

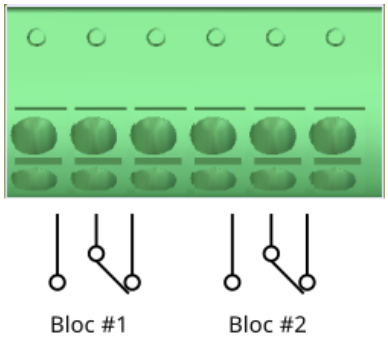
(2) Ground

(3) Night: The change of state occurs when the photocell switches to “night” mode.

(4) Twilight: The state change occurs when the photocell switches to “twilight” mode.

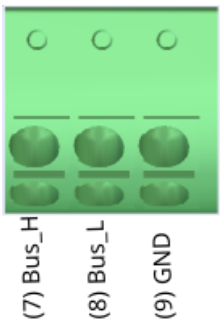
(5) Ground

(6) +48V : Photocell supply



Bloc #1: Alarm relay NO / COM / NC

Bloc #2: Alarm relay NO / COM / NC



(7) Bus_H: Only with controller OFH-CTR-CAN

(8) Bus_L: Only with controller OFH-CTR-CAN

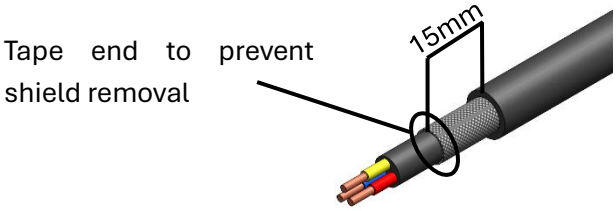
(9) Ground

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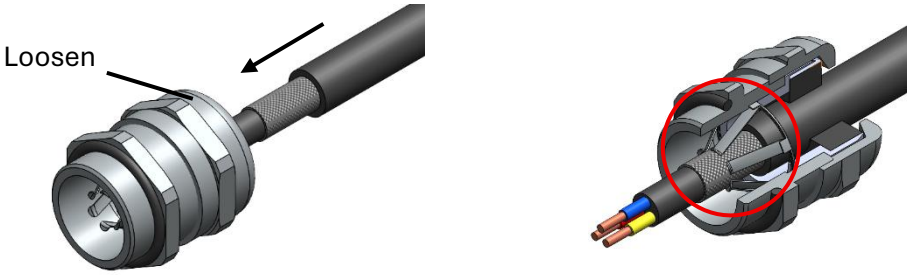
9.4 Cable gland installation

As a reminder, all shielded cables must be earthed at both ends. It is the installer's responsibility to check that OBSTA cabinets and lamps are correctly wired.

- Strip excess cable length to expose shielding.
- Leave 15mm of shielding, strip the rest.



- Thread the cable through the cable gland (the ring is loosened but not removed) so that the shield is in contact with the gland springs.
- The gasket must be correctly positioned flat and in its housing for optimum sealing.



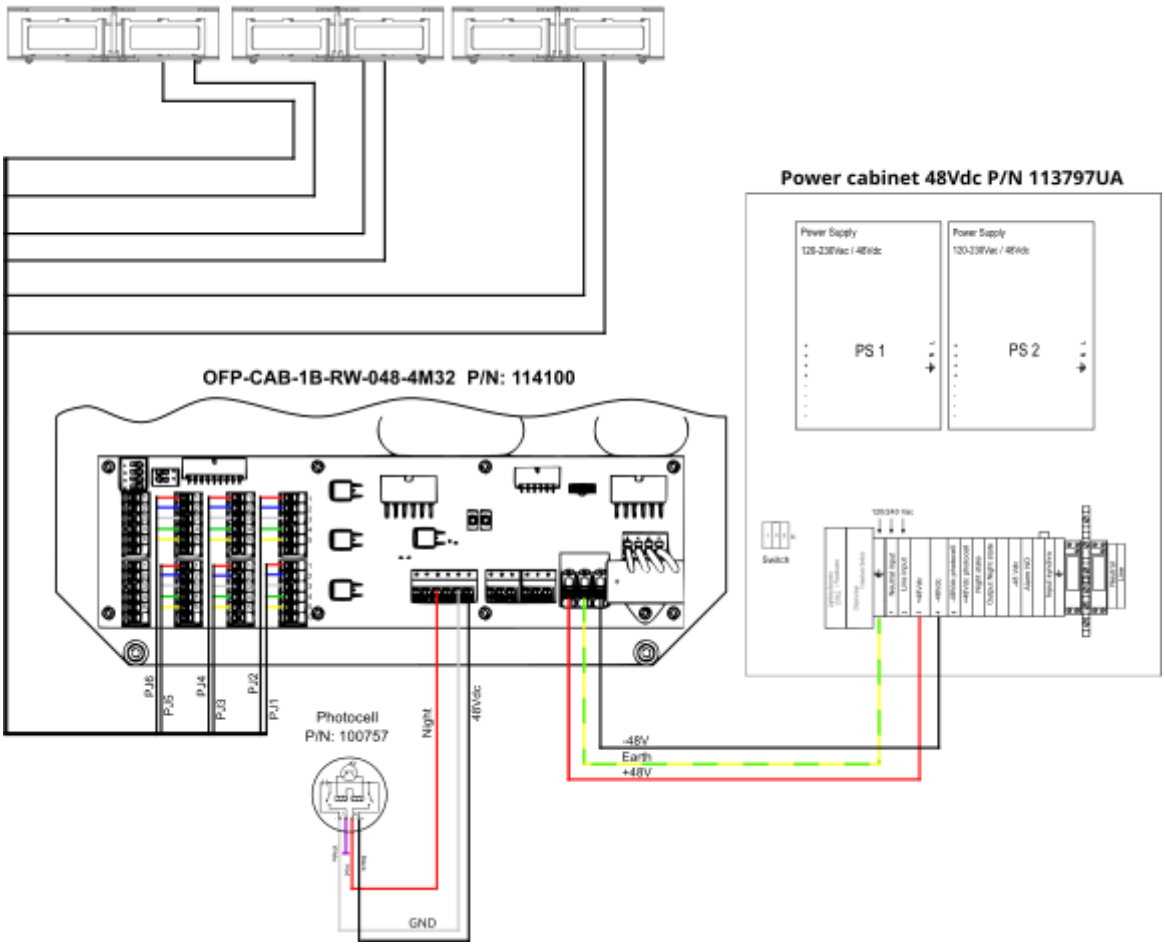
- Tighten the gland ring with the appropriate wrench.
- Once the cable has been clamped in the cable gland, cut and strip the wires to the length required to connect the terminal blocks (don't forget to fit cable ferrules before connection).

CEM	Cable diam min (mm)	Cable diam max (mm)	Pressure nut wrench	Locknut wrench
M16	4.5	10	20	20
M20	7	13	24	24
M25	9	17	29	29
M32	11	21	36	36

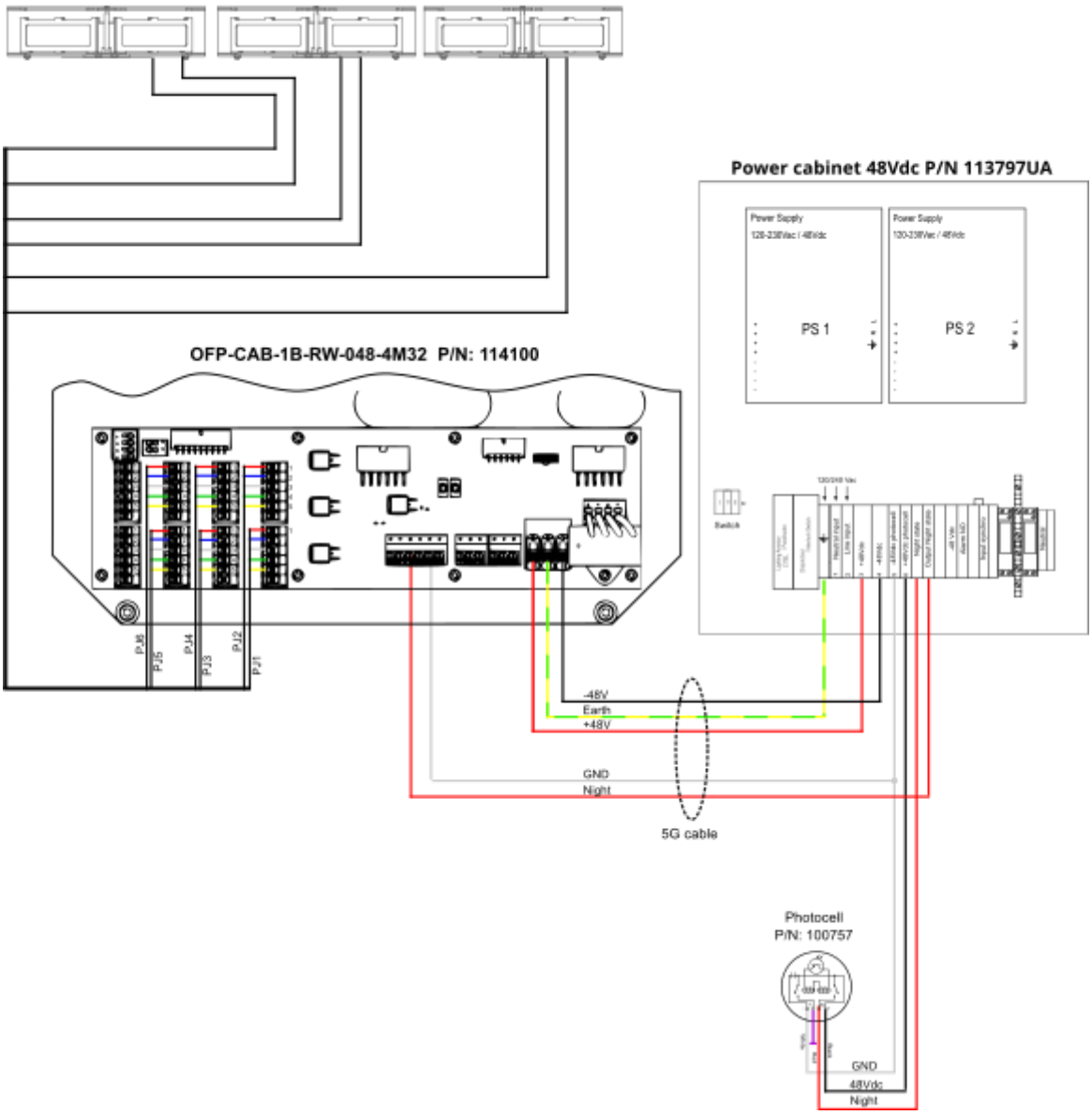
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9.5 Typical wiring

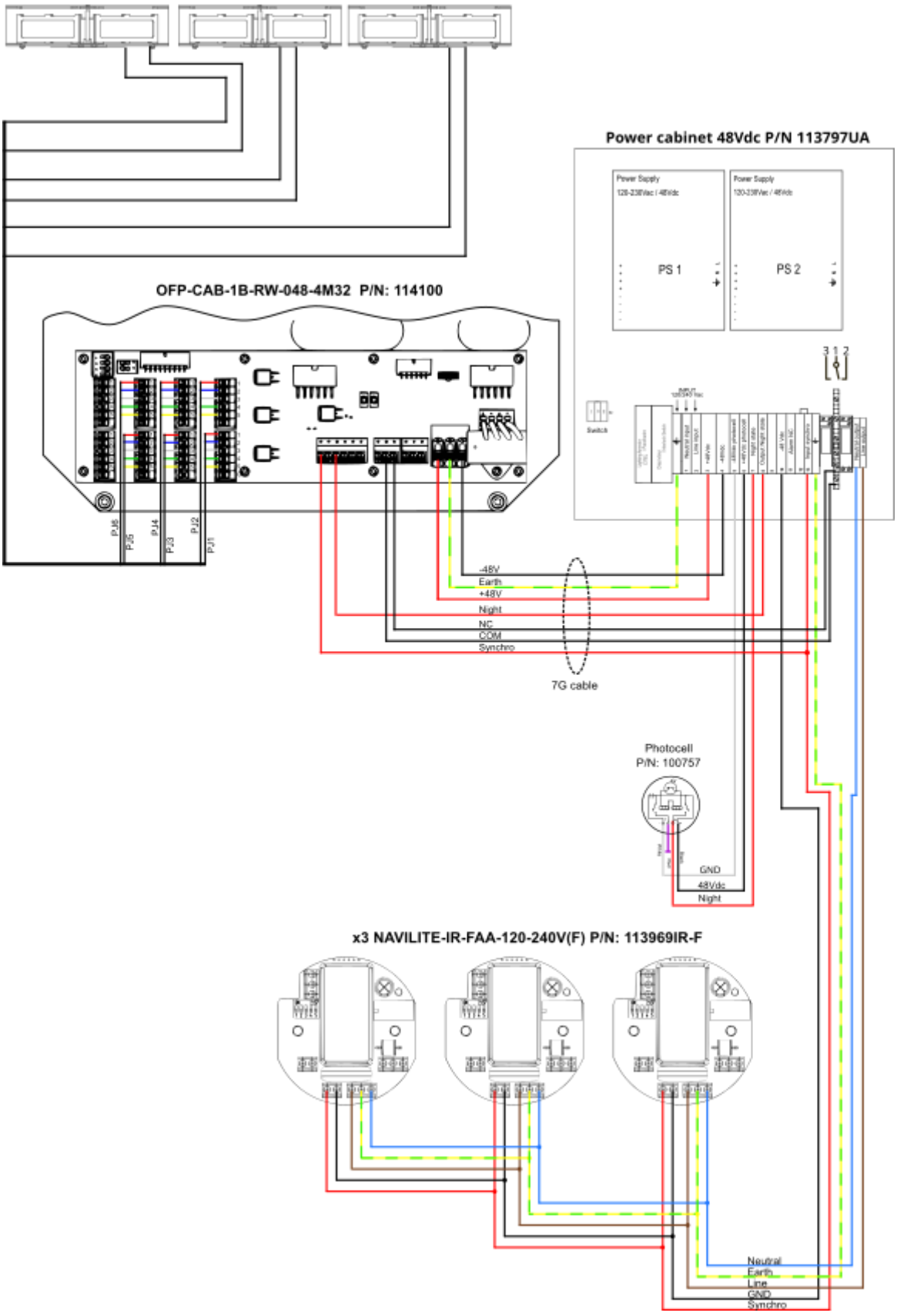
The following typical wiring are provided for illustrative purposes only.



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10 Startup and configuration

10.1 Power-up

Before turning on the power, ensure that all electrical connections are properly made and that the supply voltage matches the product specifications. Check that the wiring is secure and that there are no bare wires or conductive elements that could cause a short circuit.

10.2 Configuration

Configuration is set in the factory as the topology of the systems. ***Changing the switches without OBSTA approval may cause irreversible damage either to the lamp or the power supply.***

10.2.1 SW1- Operating mode

Config number	Dipswitch position (5 to 12)	Norm	Type	Day		Twilight		Night	
				Flash duration (ms)	FPM	Flash duration (ms)	FPM	Flash duration (ms)	FPM
3	11000000	FAA	L-865/L-864 (W/R)	100	40	100	40	200	30
4	00100000	FAA	L-865 (W/W)	100	40	100	40	100	40
5	10100000	FAA	L-864 (-/R)	-	-	-	-	200	30
6	01100000	ICAO	Type A/B (W/R)	200	20	200	20	200	20
7	11100000	ICAO	Type A/B (W/W)	200	20	200	20	200	20
8	00010000	ICAO	Type A (W/-)	200	20	200	20	-	-
9	10010000	ICAO	Type A/C (W/R)	200	20	200	20	Steady	Steady
10	01010000	ICAO	Type A/B (W/R)	200	40	200	40	200	20
11	11010000	ICAO	Type A (W/W)	200	40	200	40	200	40
12	00110000	ICAO	Type A (W/-)	200	40	200	40	-	-
13	10110000	ICAO	Type A/C (W/R)	200	40	200	40	Steady	Steady
19	11001000	ICAO	Type B (-/R)	-	-	-	-	200	20
20	00101000	ICAO	Type C (-/R)	-	-	-	-	Steady	Steady
42	01010100	ICAO (Wind)	Type A/B (W/R)	200	20	200	20	1000	20
43	11010100	ICAO (Wind)	Type A/B (W/R)	200	30	200	30	666	30

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10.2.2 SW2 - GPS

Configuration of the GPS for flash synchronization (the SW3 must be set to master).

N°	1	2*	3*	4
ON	GPS used	Sync 0.0	Sync 1.0	ORD: Override the mode and force it into day mode
OFF	GPS not used	Sync 0.1	Sync 1.1	ORN: Override the mode and force it into night mode

*2 (Syn 0)	*3 (Sync 1)	Behavior
OFF	**OFF**	Flash sequence starts at the second “0” of watch minute
OFF	**ON**	Flash sequence delayed by 1/13th of period from second “0”
ON	**OFF**	Flash sequence delayed by 3/13th of period from second “0”
ON	**ON**	Flash sequence starts at the second “1” of each minute

During initialization after start-up, the GPS chip waits for a precise signal. When preliminary signals are received, the GPS status LED may blink or light up (Operation LED).

Once the preliminary signals have been received, it may take up to 15 minutes for the card to receive a complete, valid signal, enabling the product to synchronize correctly. During this phase, synchronization may not be fully valid, and a GPS fault may occur. We recommend waiting at least 20 minutes before considering the synchronization valid. If a GPS led default is still activated after 20 minutes, the product is not receiving signals correctly.

If the system is using external signals for synchronization, in case of defect of signal, the GPS is automatically used for the flash and day/twilight/night mode:

- Flash synchronization is done as per dipswitches 3 and 4 on SW2.
- Day/Twilight/Night mode is done as per astronomical twilight (the sun is -6° below the horizon).

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10.2.3 SW3 – Control

N°	1	2	3*	4*
ON	Operation	Master	ORN 0.0	ORD 1.0
OFF	Reset	Slave	ORN 0.1	ORD 1.1

- ORD → Override the mode and force it into Day mode
- ORN → Override the mode and force it into Night mode
- ORT (ORN + ORD) → Override the mode and force it into Twilight mode

*3 (ORN)	*4 (ORT)	Behavior
OFF	**OFF**	-
OFF	**ON**	ORD
ON	**OFF**	ORN
ON	**ON**	ORT

10.2.4 SW4 - Mode

This switch selects which sensor is used on the product:

N°	1	2	3	4
ON	Photoresistor	External	GPS	Alarm used
OFF	-	-	-	Alarm not used

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10.3 Operation and default LEDs

When the beacon is in operation, several LEDs located on the command card indicate the operating status of the system. Specific sequences indicate whether the beacon or system is operating correctly or has failed.

10.3.1 Operation led

In operating conditions

- ····· Power supply voltage problem (Over-voltage or under-voltage)
- — ··· Configuration is invalid. Means inconsistency in dipswitches
  - GPS is disabled and Sync 1 + Sync 0 are set
  - Several sensors for switching mode are set
  - The selected configuration number does not exist
- ·· Default mode activated due to channels errors
- · Relay activated due to channels errors
- — · Slave out of synchronization (no TOP SYNCHRO received)
- — ·· GPS out of synchronization
- ··· HIFAA internal communication problem (between the two PCBs)
- — Day/Twilight/Night mode unchanged (in the past 48 hours)
- — — External (CAN or Ethernet) communication problem
- = GPS lost synchronization after less than 15 minutes

During USB firmware update process

- ····· Log retrieval has been processed successfully
- ····· Software update has been processed successfully
- ····· The IP configuration was correctly done (· and · alternate 12 times)
- — · — Error mounting the file system
- — — ·· Error in the format of the ip.cfg file
- · Empty USB key
- — · Error opening Mi.bin file
- — ·· Error while waiting for write access to flash memory
- — ··· Error during MI.bin file reading (Input/Output error or invalid file size)
- · — Error decrypting the MI.bin file
- ·· — Error writing MI.bin file to flash memory
- ··· — CRC incorrect (this error may be caused by an incorrect encryption key)
- ·· Error during mi_log.bin file encryption
- ··· Error when writing the mi_log.bin file
- — Error when unmounting the file system (this event reported AFTER the USB key has been removed, for 10 sec)
- — — Error processing USB events: unexpected events

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10.3.2 Power card led

Errors when starting up the card

The following cases appear when the card is started up, when the configuration is incomplete, and prevent the program from running. All red led on the power card:

- Flash at the same time if the program is for production and the series number has not been programmed.
- Light up one after the other if Ethernet is enabled but the IP address has not been configured.

Errors in operating conditions

7 pairs of 2 led indicators are present to inform about the operation status of each power card (J1 to J7).

· Short circuit
· — Full open circuit: Both led circuits driven by the power card are in open circuit
· — — Full regulation problem: Power card cannot set the according current on both circuits led
— One channel open circuit: One of the two led circuits driven by the power card is in open circuit
— · One channel regulation problem: Power card cannot set the according current on one circuit led

10.3.3 Mode led

3 led are present to inform about synchronization and “Mode” information:

- Top sync: blink at each lamp flash in master configuration or at each flash request received from the controller.
- DT: for twilight mode (depending on switch 4 configuration and model).
- DN: for night mode (depending on switch 4 configuration and model).

10.3.4 Alarm led

The LED lights up when the alarm relay wired to the “supply card” is triggered (switching to NO).

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11 Maintenance

11.1 Annual visit

Test	Frequency	Preventive action	Risk
Cable	Annual	• Tighten power card connector screw • Tighten projector connector plugged on the PSU	Short circuit
Waterproof	Annual	Visual verification	Short circuit
Corrosion	Annual	Visual verification	Short circuit
Power supply	Annual	Visual verification	Power supply failed
Led projector	Annual	Clean with a damp cloth the glass of each projector	Luminosity

11.2 Spare part

PROJECTOR (Specific for FAA version)	**113761UIR**
COMMAND-CARD-48VDC-6P-RW	**113744B**
POWER SUPPLY BLOC + SUPPLY CARD	**113742B**
POWER CARD 48VDC	**113741B**

External power cabinet - 113797U

Security switch and test button	**113743**
Surge protection DS215-230/G 240VAC	**451721**
Power Supply (AC/DC Converter)	**113742**

Accessories

Photocell	**100757**
NAVILITE L-810(F)	**113969IR-F**

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12 Technical specifications

12.1 Light output

Parameter	Min	Nominal	Max	Unit
Flash Rate	-	40 (white mode) 30 (red mode)	-	FPM
Beam pattern				
Horizontally	-	360	-	°
Vertically	3	5	6	°
Ratio Intensity 0°/ 10°	-	-	3	%
Day luminosity +- 25%	-	20 000	-	Cd
Twilight luminosity +-25%	-	20 000	-	Cd
Night luminosity +-25%	-	2 000	-	Cd
Flash duration day	-	100	-	ms
Flash duration twilight	-	100	-	ms
Flash duration night	-	200	-	ms

12.2 Electrical input for 48 Vdc

Parameter	Min	Nominal	Max	Unit
DC power input voltage	45	50	55	Vdc
Max current (white day mode)	-	-	13.8	A
Average consumption (with 40fpm – 100ms day mode)	-	-	50	W
Voltage for signal (synchro, night, twilight)	30	48	55	Vdc

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12.3 Electrical input for 120/240 Vac

Parameter	Min	Nominal	Max	Unit
AC power input voltage	110	120/240	264	Vac
AC frequency	47	50/60	63	Hz
DC output voltage for the flash head	-	50	-	Vdc
Cold start inrush current	-	-	70	A
Average power consumption (with 40fpm – 100ms day mode)	-	-	50	W
Voltage for signal (synchro, night, twilight)	30	48	55	Vdc

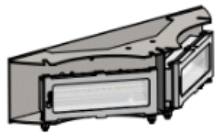
12.4 Operating environments

Parameter	Min	Nominal	Max	Unit
Working temperature	-40	20	55	°C
Relative humidity	5	-	95	%

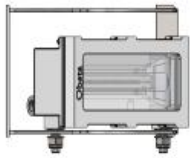
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13 Drawing

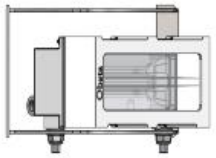
OFP 120 (with and without junction box and ICAO or FAA version)

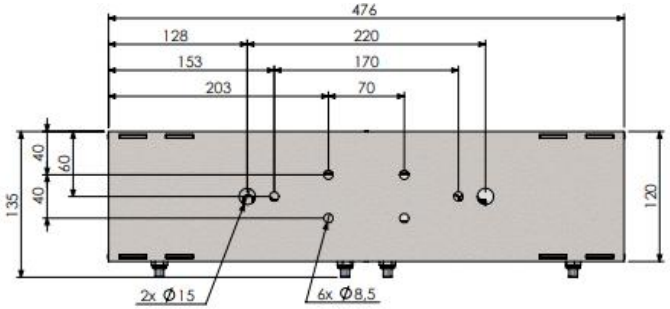


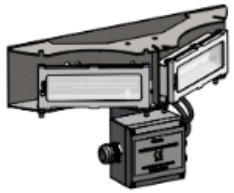
ICAO



FAA



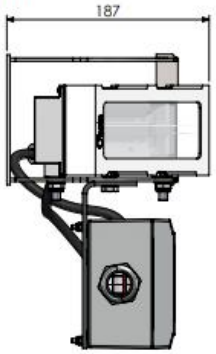


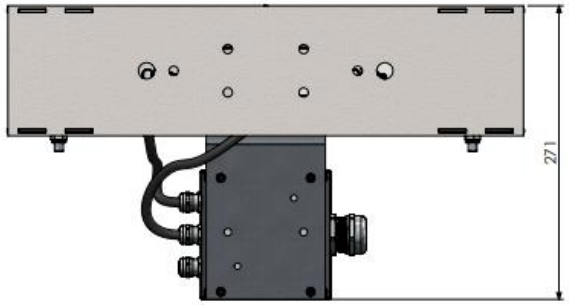


ICAO



FAA





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