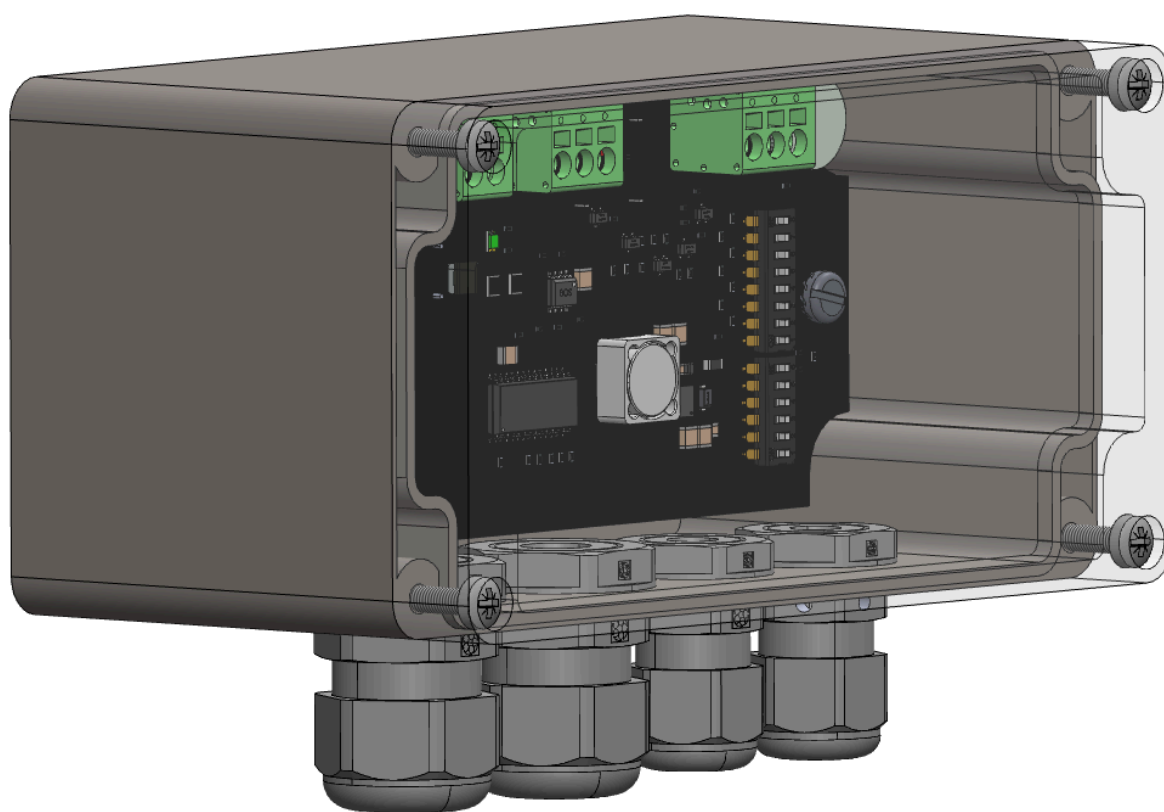




48V-NAV-CMD-120/240 // 113912

NAV-CMD-48-B // 113915

NAV-CMD-SOL // 113915-SOL






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<b>1. Product name and part number.....</b>	<b>3</b>
<b>2. Be careful.....</b>	<b>4</b>
<b>3. Warranty.....</b>	<b>5</b>
<b>4. General information.....</b>	<b>6</b>
4.1 Scope.....	6
4.2 General description.....	6
4.3 Size of the box.....	6
4.4 Compatibilities.....	6
<b>5. Technical specifications.....</b>	<b>7</b>
<b>6. Operation.....</b>	<b>8</b>
6.1 System component.....	8
6.2 Card feature.....	9
6.2 Configuration.....	11
6.2.1 SW1.....	11
6.2.2 SW2.....	11
6.2.3 Reset.....	12
6.2.4 Alternated mode.....	12
6.2.5 Master mode.....	13
6.2.6 Slave mode.....	13
6.3 Specific case (to control a 113965IRCH).....	14
<b>7. Defaults.....</b>	<b>15</b>
<b>8. Installation.....</b>	<b>15</b>
8.1 Unpacking.....	15
8.2 Mounting and preparation.....	15
<b>9. Maintenance.....</b>	<b>15</b>
<b>10. Typical wiring.....</b>	<b>16</b>

## 1. Product name and part number

Description	Part number (P/N)	Power supply	QR code
NAV-CMD-SOL	113915-SOL	12 - 24 Vdc	
NAV-CMD-48-B	113915	48 Vdc	
48V-NAV-CMD-120/240	113912	110 - 240 Vac	

## 2. Be careful



- Do not proceed 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
- 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.
- Otherwise specified all cable must be shielded.
- All cables connected to PCBs and terminal blocks must be equipped with a cable connector to prevent false contacts when connecting devices.



### 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.

## 4. General information

### 4.1 Scope

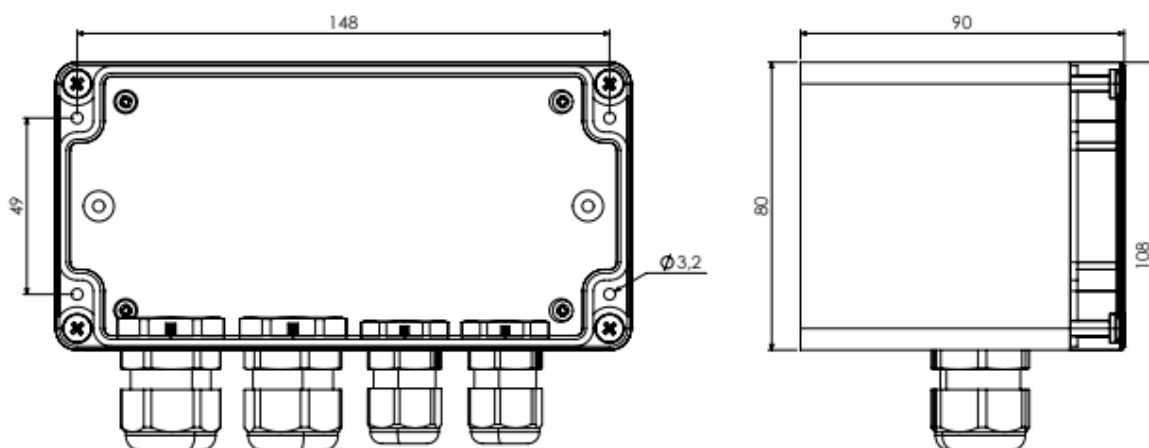
This manual provides information about the installation, operation and maintenance of the Comand box manufactured by OBSTA.

### 4.2 General description

The command box is a product consisting of a plastic box and an internal PC, which controls one to four NAVILITE 48Vdc lamps (or two with “main and backup” mode).

The Command box can be fixed by a bracket (OBSTA - P/N 113920) using four M3 screws.

### 4.3 Size of the box



### 4.4 Compatibilities

The command box *NAV-CMD-SOL*, *NAV-CMD-48-B* and *48V-NAV-CMD-120/240*, are compatible with 48Vdc NAVILITE lamp:

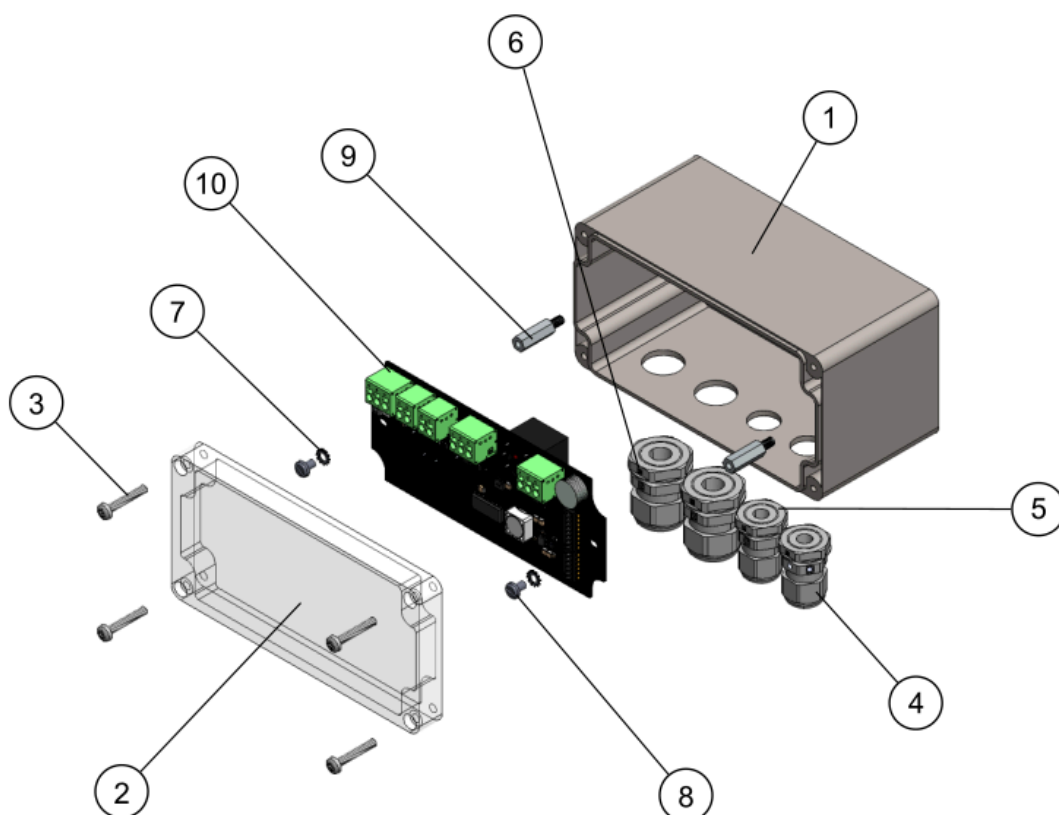
- |                         |                  |
|-------------------------|------------------|
| • NAVILITE-48V          | (P/N)113900      |
| • NAVILITE-48V-CABLE    | (P/N)113905      |
| • NAVILITE-IR-48V-CABLE | (P/N)113905IR    |
| • NAVILITE-IR-48V-CABLE | (P/N) 113905IR2  |
| • NAVILITE-F-48V        | (P/N)113965      |
| • NAVILITE-IR-NPT-48V   | (P/N) 113965IRCH |

## 5. Technical specifications

Designation	Comment	Min	Typical	Max	Unit
Input voltage	113915-SOL 113915 113912	10.8 43.2 110	12 / 24 48 90 / 240	27 55 264	Vdc Vdc Vac
Cable diameters	M16 M20	5 7		10 13	mm mm
Temperature		-20		55	°C
Alarm conditions	<ul style="list-style-type: none"> <li>- Power supply failure</li> <li>- lamp failure</li> </ul> <i>*To reset the alarm, switch off, then switch on again after one minute.</i>				
Setting of the switches	Night only operation (light sensor activated) Day and night operation (light sensor disabled)				
Number of configuration of NAVILITE	1 to 4 light operating simultaneously 2 lights "main and backup" (main light "ON" and backup light "OFF"). The backup light is switched on in case of failure on the main light.				
Connexion	By terminal connexion, wire cross section up to 2.5mm				
Attachment	By 4 M3 screws 148x150mm				

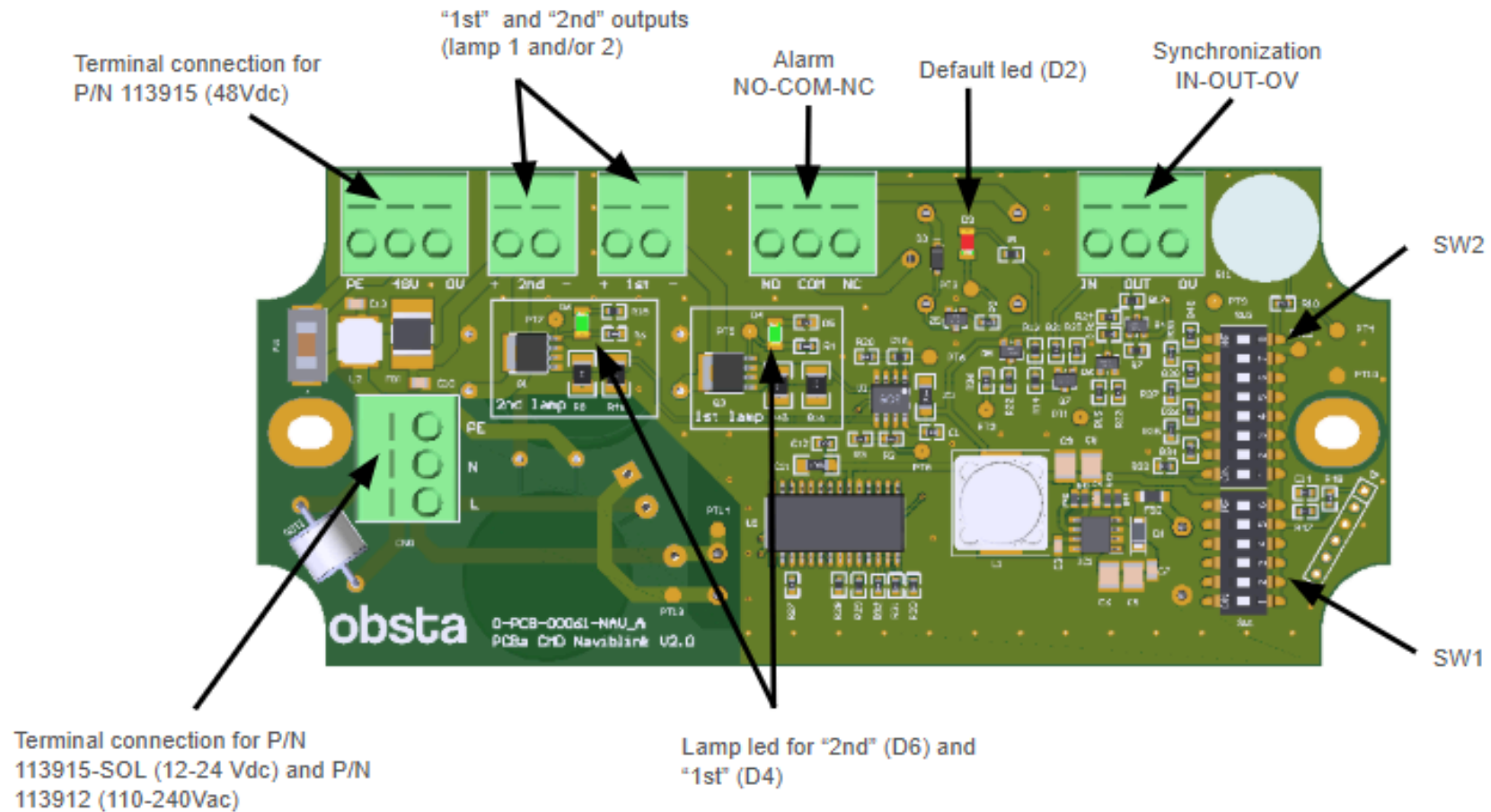
## 6. Operation

### 6.1 System component



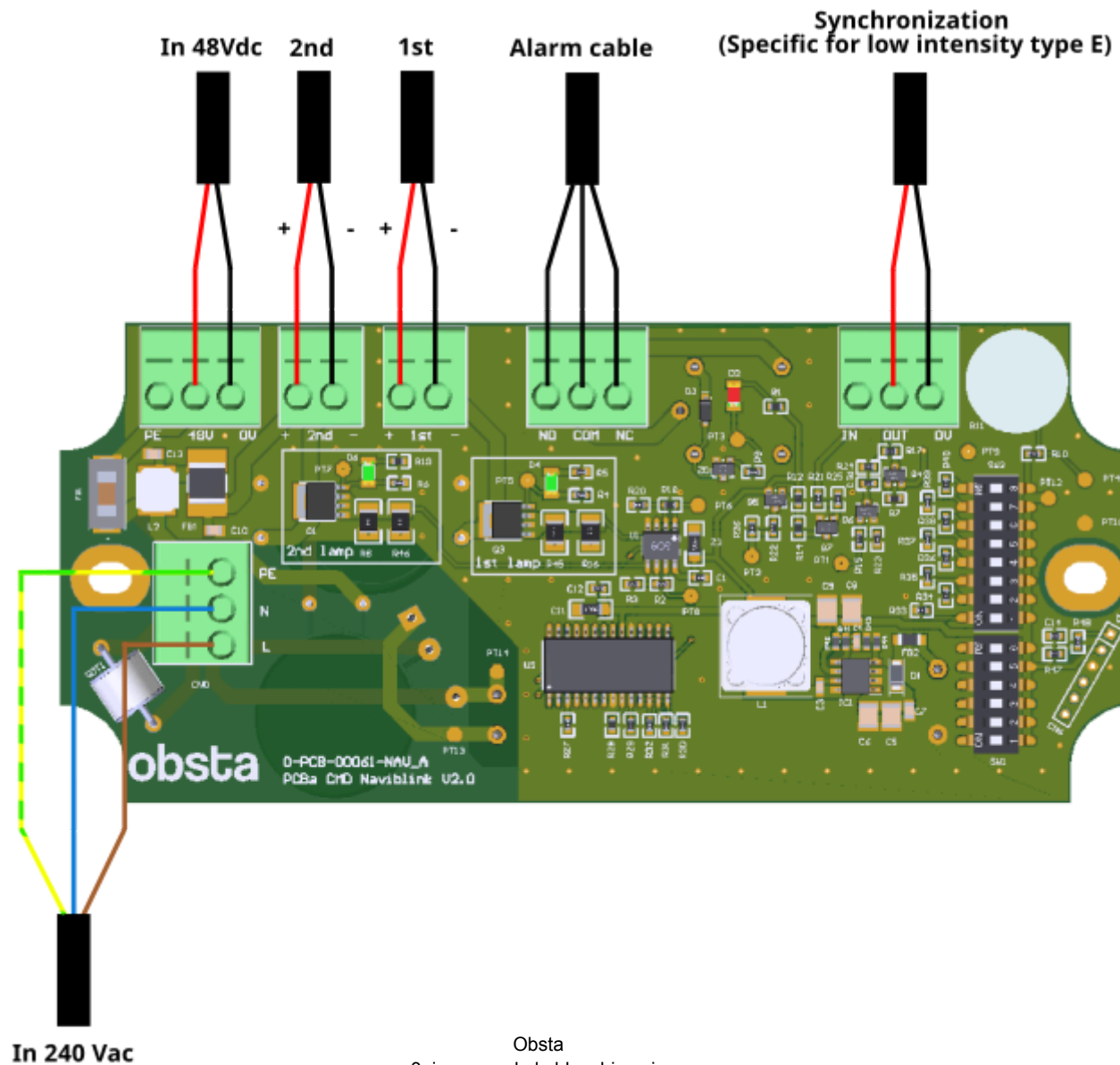
N°	Designation	Qty
1	Back of the case	1
2	Front of the case	1
3	Captive screw	4
4	M16x1.5 ventilated cable gland	1
5	M16x1.5 cable gland	1
6	M20x1.5 cable gland ventiled	2
7	M4 fan washer	2
8	M4x6 slotted cylindrical head screw	2
9	Column M/F M4 L20	2
10	PCBa Naviblink	1

## 6.2 Card feature



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## 6.2 Configuration

**All switches are factory set to use NAVILITE in “fixed” mode (no flashing for RED or IR) or according to user requirements. Any change in the position of the dip switches must be made with the agreement of OBSTA.**

### 6.2.1 SW1

SW1						
N°	1	2	3	4	5	6
ON	Nominal	Day and night	Alternate V1 and V2 flash Flash duration 1s at 30 FPM	Master	Main and backup	125mA
OFF	Reset	Night only	NO Alternate	Slave	Simultaneous	90mA

### 6.2.2 SW2

SW2								
N°	1	2	3	4	5	6	7	8
ON	Nb lamp I	Nb lamp I	-	Flash freq I	Flash freq I	Time I	Time I	V1 permanent and V2 flash
OFF	Nb lamp 0	Nb lamp 0	-	Flash freq 0	Flash freq 0	Time 0	Time 0	-

***For SW2, the following bits are configurable and describe the number of lamps connected to each channel EXCEPT when SW1.5 is OFF (Simultaneous mode) and SW1.3 is OFF (Non-alternating mode), in which case the switch describes the TOTAL number of NAVILITES for all channels combined***

SW2.1	SW2.2	Number of lamps connected
0	0	1 lamp connected
1	0	2 lamp connected
0	1	3 lamp connected
1	1	4 lamp connected

**With 2 lamps main and backup st Number of lamps only set 1 lamp.**

The following bits describe the flash frequency (when the lamp is not in alternating mode)

SW2.4	SW2.5	Flash frequency (FPM)
0	0	Continuous
1	0	20 FPM
0	1	30 FPM
1	1	40 FPM

The following bits describes the flash duration (when the lamp is not in alternating mode)

SW2.6	SW2.7	Flash duration (ms)
0	0	100ms flash
1	0	200 ms flash
0	1	300 ms flash
1	1	400 ms flash

## 6.2.3 Reset

If the SW1.1 is OFF, the programme goes into reset mode. In this mode :

- The "1st" and "2nd" output default are cleared
- The first and second lamp are light off
- The program waits for the exit from reset mode
- The Alarm is off
- The led signalisation (D7) is off
- If the lamp is in slave mode (SW1.4 OFF and SW1.3 OFF), the **SYNC\_OUT** signal is the same as **SYNC\_IN** signal.

## 6.2.4 Alternated mode

If the SW1.1 (Nominal mode) and SW1.3 are ON (alternated mode), the programme goes into alternated and nominal mode. In this mode, except in the event of default:

- Alarm is off
- The active channel lamps light up for 1000ms 30 times a minute (alternating one lamp followed by the other).
- The associated channel led (D6 and D4) light up at the same time as the channels flash

## 6.2.5 Master mode

If the SW1.3 is OFF (non alternate mode) and the SW1.1 (nominal mode) and SW1.4 is ON (master), the programme goes in master and nominal. In this mode, except in the event of default:

- Alarm and signalisation led are off
- The lamps of the active channels ("1st" and "2nd") light up according to the settings of SW1 and SW2. If SW2.2 is ON, the sequence of 1st is replaced by a continuous flash.
- The associated channel led (D6 and D4) light up at the same time as the channels flash

## 6.2.6 Slave mode

If the SW1.1 is on, the SW1.3 and SW1.4 is off, the programme goes in slave and nominal mode. In this mode, except in the event of default:

- Alarm is off
- The lamp of active channels light on:
  - Continuously if the sequence of the active channel is a continuous flash. If SW2.8 is ON, the sequence of "1st" is a continuous flash.
- The **SYNC\_OUT** signal is the same as **SYNC\_IN** signal.
- The leds of active channel (D6 and/or D4) flash at the same time as the lamp

## 6.3 Specific case (to control a 113965IRCH)

**This chapter describes how to configure a controller for a NAVILITE 113965IRCH only (specific to Switzerland, Germany, and Austria).**

In this case, the NAVILITE (113965IRCH) will be configured as follows:

- Fixed RED stage
- 200ms flashing IR stage (40 flash per minute)

SW1						
N°	1	2	3	4	5	6
ON	ON	-	-	ON	ON	-
OFF	-	OFF	OFF	-	-	OFF
	Nominal	Night only	NO Alternate	Master	Main and backup	90 mA

SW2								
N°	1	2	3	4	5	6	7	8
ON	-	-	-	ON	ON	ON	-	-
OFF	OFF	OFF	OFF	-	-	-	OFF	OFF
	1 lamp connected		-	40 FPM		200 ms flash		-

## 7. Defaults

The light manages fault conditions (short-circuit, led failure, etc...), resulting in a certain warning behaviour and also affecting its main function (flashes).

The card goes in default mode when it detects an over or under-intensity on the “1st” and/or “2nd” output.

When one of those defaults are present, the alarm and the led (D2) goes on.

## 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. Installation drawings are included in the power supply carton.

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

### 8.2 Mounting and preparation

- Check the internal wiring before fixing the lamp.
- Use wire end ferrules
- Check the power cable on the terminal connection
- Check the ground is connected on the terminal connection
- Check the synchronisation cable (if used)

## 9. Maintenance

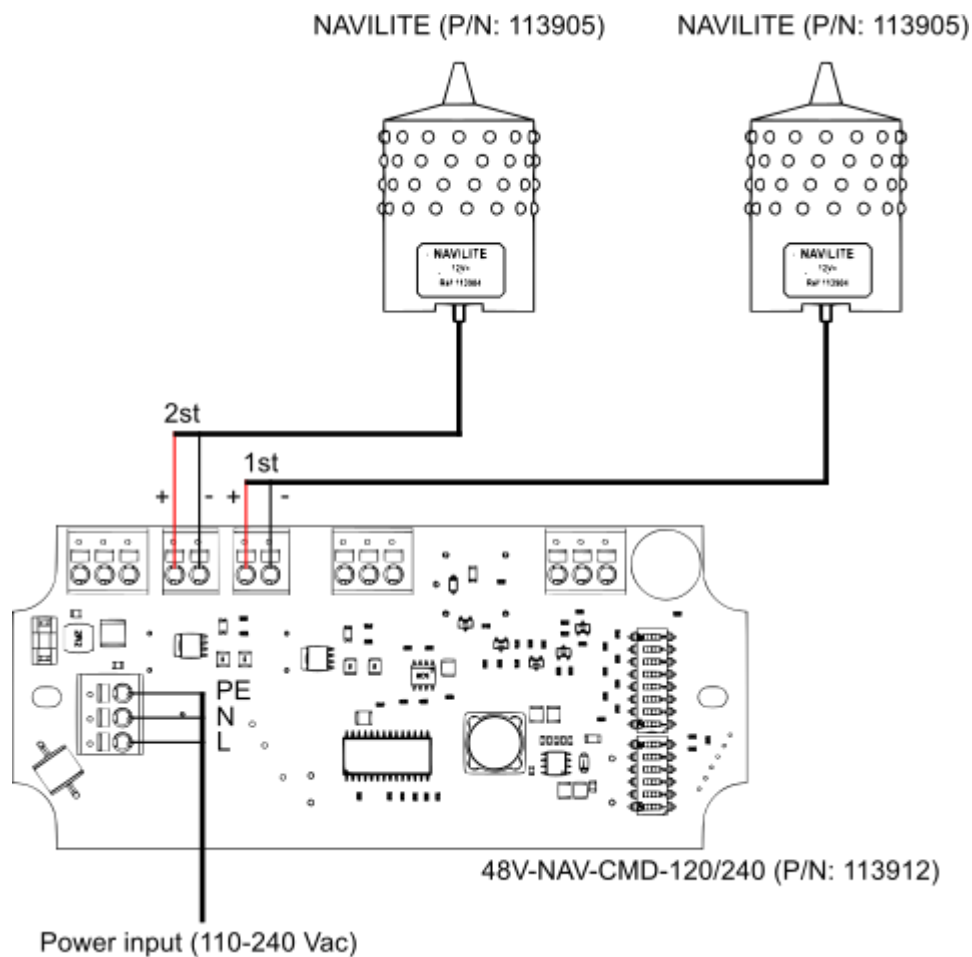
Test	Frequency	Préventive action	Risk
<b>Wiring</b>	Annual	Visual control Tightening cable glands Tightening PCB wires	Cable dégradation Poor contact Lamp in fault mode
<b>Waterproof</b>	Annual	Visual verification	Water infiltration Short circuit Lamp off
<b>Clamping</b>	Annual	Checking tightness	Box falling Tightness degradation

## 10. Typical wiring

### Index:

- Page 17: Typical “main and backup” configurations for 48V-NAV-CMD-120-240 controlling 2 NAVILITE RED.
- Page 18: Typical “Simultaneous” configurations for 48V-NAV-CMD-120-240 controlling 2 NAVILITE RED.
- Page 19: Typical configurations for 48V-NAV-CMD-120-240 controlling 1 NAVILITE RED/IR units
- Page 20: Typical configuration for NAV-CMD-SOL controlling 1 NAVILITE RED/IR (113965IRCH specific for Switzerland, Germany and Austria).

Typical “main and backup” configurations for 48V-NAV-CMD-120-240 controlling 2 NAVILITE RED.



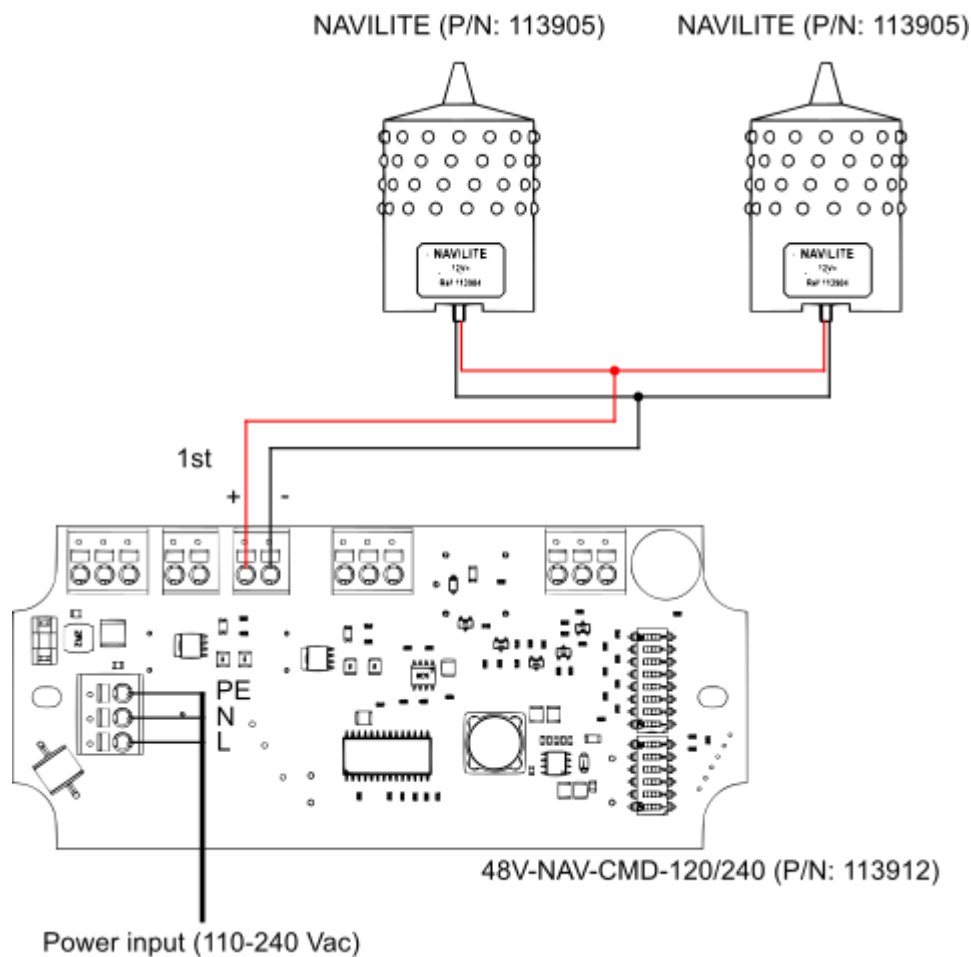
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Typical “Simultaneous” configurations for 48V-NAV-CMD-120-240 controlling 2 NAVILITE RED.



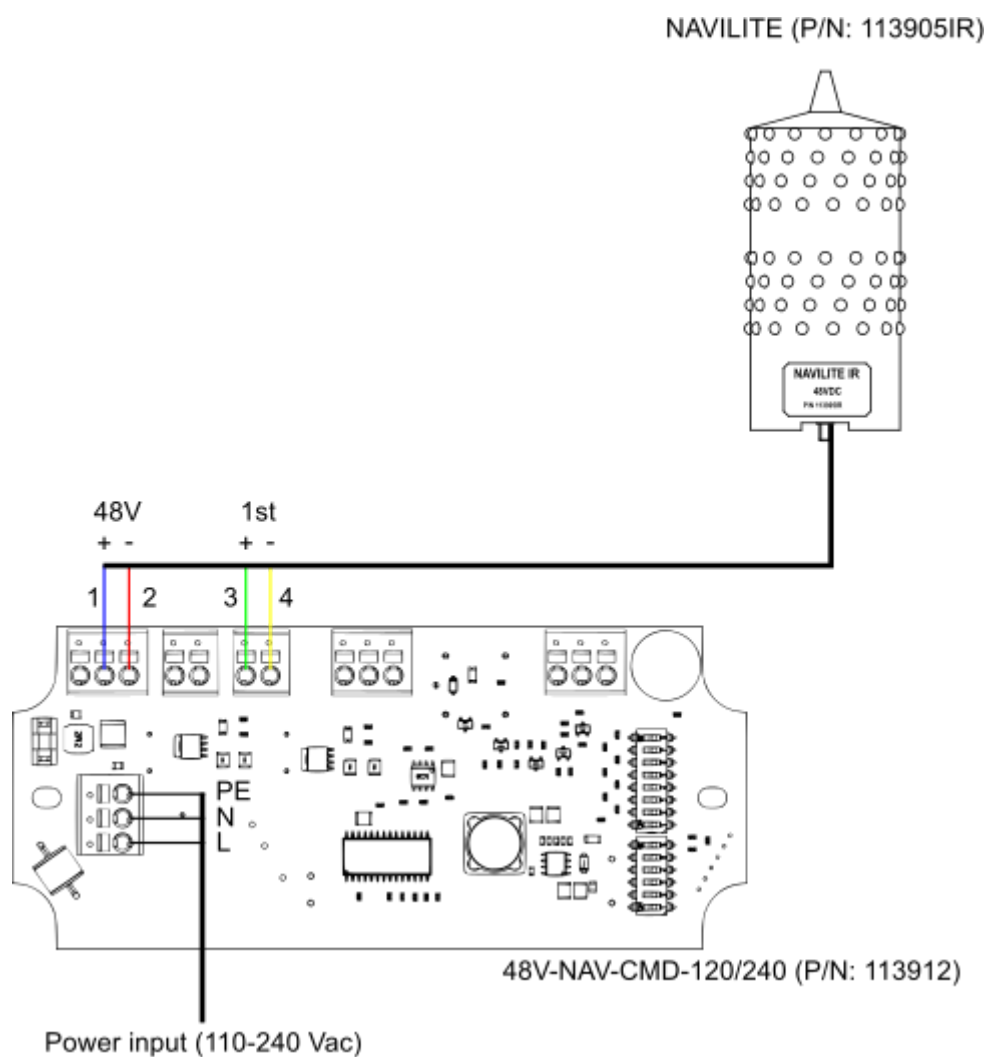
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Typical configurations for 48V-NAV-CMD-120-240 controlling 1 NAVILITE RED/IR units



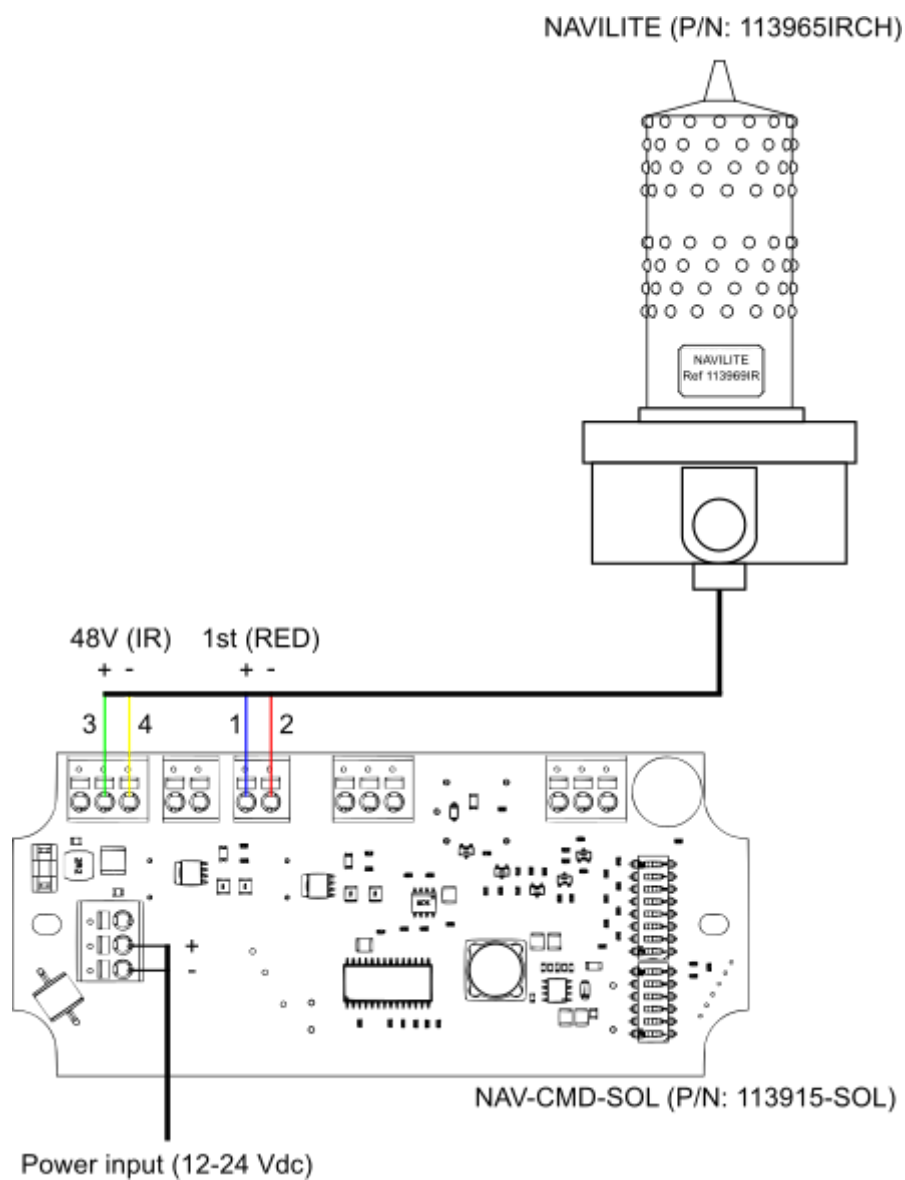
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- Typical configuration for NAV-CMD-SOL controlling 1 NAVILITE RED/IR (113965IRCH specific for Switzerland, Germany and Austria).



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