



# CRMXBOXIP67

IP67 1 Universe CRMX Wireless Transceiver  
for exterior installation



## USER MANUAL

## ***Thank you for choosing PROLIGHTS***

Please note that every PROLIGHTS product has been designed in Italy to meet quality and performance requirements for professionals and designed and manufactured for the use and application as shown in this document.

Any other use, if not expressly indicated, could compromise the good condition/operation of the product and/or be a source of danger.

This product is meant for professional use. Therefore, commercial use of this equipment is subject to the respectively applicable national accident prevention rules and regulations.

Features, specifications and appearance are subject to change without notice. Music & Lights S.r.l. and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this document.

Product user manual can be downloaded from the website [www.prolights.it](http://www.prolights.it) , or can be inquired to the official PROLIGHTS distributors of your territory ([https://www.prolights.it/sales\\_network.html](https://www.prolights.it/sales_network.html)).

Scanning the below **QR Code**, you will access the download area of the product page, where you can find a broad set of always updated technical documentation: specifications, user manual, technical drawings, photometrics, personalities, fixture firmware updates.



**Visit the download area  
of the product page**



The PROLIGHTS Logo, PROLIGHTS names and all other trademark in this document pertaining to PROLIGHTS services or PROLIGHTS product are trademarks OWNED or licensed by Music & Lights S.r.l., its affiliates, and subsidiaries. PROLIGHTS is a registered trademark by Music & Lights S.r.l. All right reserved. Music & Lights – Via A. Olivetti, snc - 04026 - Minturno (LT) ITALY.

# INDEX

<b>SAFETY INFORMATION</b>	<b>02</b>
<b>1 - PACKAGING</b>	<b>04</b>
PACKAGE CONTENT .....	04
OPTIONAL ACCESSORIES .....	04
<b>2 - TECHNICAL DRAWING</b>	<b>04</b>
<b>3 - PRODUCT OVERVIEW</b>	<b>05</b>
<b>4 - CONNECTION TO THE MAINS SUPPLY</b>	<b>06</b>
<b>5 - START UP</b>	<b>06</b>
CONNECT AND DISCONNECT POWER FROM THE PRODUCT .....	06
<b>6 - CONTROL PANEL</b>	<b>07</b>
HOW ACCESS TO THE CONTROL PANEL .....	07
CONTROL PANEL OVERVIEW .....	08
DISPLAY AND BUTTONS LAYOUT .....	08
<b>7 - MENU STRUCTURE</b>	<b>09</b>
<b>8 - SHORTCUT</b>	<b>10</b>
<b>9 - RDM FUNCTIONS</b>	<b>10</b>
<b>10 - MAINTENANCE</b>	<b>12</b>
MAINTENANCE THE PRODUCT .....	12
VISUAL CHECK OF PRODUCT HOUSING .....	12
TROUBLESHOOTING .....	12
<b>11 - TEST OF IP67 RATING</b>	<b>13</b>

# SAFETY INFORMATION



## WARNING!

- See <https://www.prolights.it/product/CRMXBOXIP67#download> for installation instructions.
- Please read carefully the instruction reported in this section before installing, powering, operating or servicing the product and observe the indications also for its future handling.



**This unit is not for household and residential use, only professional applications.**



## Connection to mains supply

- The Connection to the mains supply must be carried out by a qualified electrical installer.
- Use only AC supplies 100-240V 50-60 Hz, the fixture must be electrically connected to ground (earth).
- Select the cable cross section in according with the maximum current draw of the product and the possible number of products connected at the same power line.
- The AC mains power distribution circuit must be equipped with magnetic+residual current circuit breaker protection.
- Do not connect it to a dimmer system; doing so may damage the product.



## Protection and Warning against electrical shock

- Do not remove any cover from the product, always disconnect the product from power (batteries or low-voltage DC mains) before servicing.
- Ensure that the fixture is connected to class III equipment operates at safety extra-low voltages (SELV) or protected extra-low voltages (PELV). And use only a source of AC power that complies with local building and electrical codes and has both overload and ground-fault (earth-fault) protection to power class III devices.
- Before using the fixture, check that all power distribution equipment and cables are in perfect condition and rated for the current requirements of all connected devices.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other components are damaged, defective, deformed or showing signs of overheating.
- Do not reapply power until repairs have been completed.
- Refer any service operation not described in this manual to PROLIGHTS Service team or an authorized PROLIGHTS service center.



## Installation

- Make sure that all visible parts of the product are in good visible condition before its use or installation.
- Make sure the point of anchorage is stable before positioning the device.
- Install the product only in well ventilated places.
- For non temporary installations, ensure that the fixture is securely fastened to a load-bearing surface with suitable corrosionresistant hardware.
- Do not install the fixture near sources of heat.
- If this device will be operated in any way different to the one described in this manual, it may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like short circuit, burns, electric shock, etc

**T<sub>a</sub> 45°C**

## Max operating ambient temperature (Ta)

- Do not operate the fixture if the ambient temperature (Ta) exceeds 45 °C (113 °F).

**T<sub>a</sub> -20°C**

## Minimum operating ambient temperature (Ta)

- Do not operate the fixture if the ambient temperature (Ta) is below -20 °C (-4 °F).



### Protection from burns and fire

- The exterior of the fixture becomes hot during use. Avoid contact by persons and materials.
- Ensure that there is free and unobstructed airflow around the fixture.
- Keep flammable materials well away from the fixture
- Do not expose the front glass to sunlight or any other strong light source from any angle. Lenses can focus the sun's rays inside the fixture, creating a potential fire hazard.
- Do not attempt to bypass thermostatic switches or fuses.

### IP67

#### Permanent Outdoor use

- This product is rated with an IP (Ingress protection) for permanent outdoor use when used and serviced according to the instruction contained in this document.
- Never use the fixture in places subject to vibrations or bumps.
- Make certain that no inflammable liquids, water or metal objects enter the fixture.
- Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture.
- Damages caused by inadequate cleaning or maintenance are not covered by the product warranty.



### Maintenance

- Warning! Before starting any maintenance work or cleaning of the unit, disconnect the fixture from AC mains power and allow to cool for at least 10 minutes before handling.
- Only technicians who are authorized by PROLIGHTS or Authorised service partners are permitted to open the fixture.
- Users may carry out external cleaning, following the warnings and instructions provided, but any service operation not described in this manual must be referred to a qualified service technician.
- Important! Excessive dust, smoke fluid, and particle build up degrades performance, causes overheating and will damage the fixture. Damages caused by inadequate cleaning or maintenance is not covered by the product warranty.



### Radio receiver

This product contains a radio receiver and/or transmitter:

- Maximum output power: 17 dBm.
- Frequency band: 2.4 GHz.



### Disposal

- This product is supplied in compliance with European Directive 2012/19/EU – Waste Electrical and Electronic Equipment (WEEE). To preserve the environment please dispose/ recycle this product at the end of its life according to the local regulation.
- Don't throw the unit into the garbage at the end of its lifetime.
- Make sure to dispose according to your local ordinances and/or regulations, to avoid polluting the environment!
- The packaging is recyclable and can be disposed.



### The products to which this manual refers comply with:

- 2014/35/EU - Safety of electrical equipment supplied at low voltage (LVD).
- 2014/30/EU - Electromagnetic Compatibility (EMC).
- 2011/65/EU - Restriction of the use of certain hazardous substances (RoHS).
- 2014/53/EU - Radio Equipment Directive (RED).



### Other approvals

# 1 - PACKAGING

## PACKAGE CONTENT

- 1 x CRMXBOXIP67
- User Manual

## OPTIONAL ACCESSORIES

Check the updated accessories list, description and informations of the product at the following link:

<https://www.prolights.it/product/CRMXBOXIP67#accessories>

# 2 - TECHNICAL DRAWING

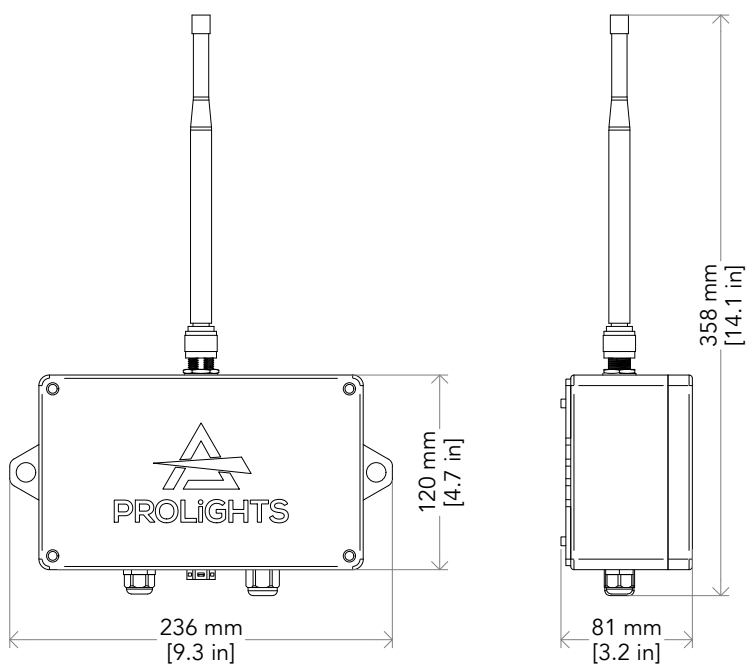


Fig. 01

### 3 - PRODUCT OVERVIEW

1. USER INTERFACE with display and buttons for access to the control panel functions;
2. GORE VALVE;
3. DMX OUT (5-p XLR): 1 = GND, 2 = sign-, 3 = sign+, 4 N/C, 5 N/C.;
4. ANTENNA of Wireless DMX Receiver.
5. POWER IN: for connection to the Mains 100-240V~/50-60Hz.
6. SIDES HOLES: for fixing to surfaces.

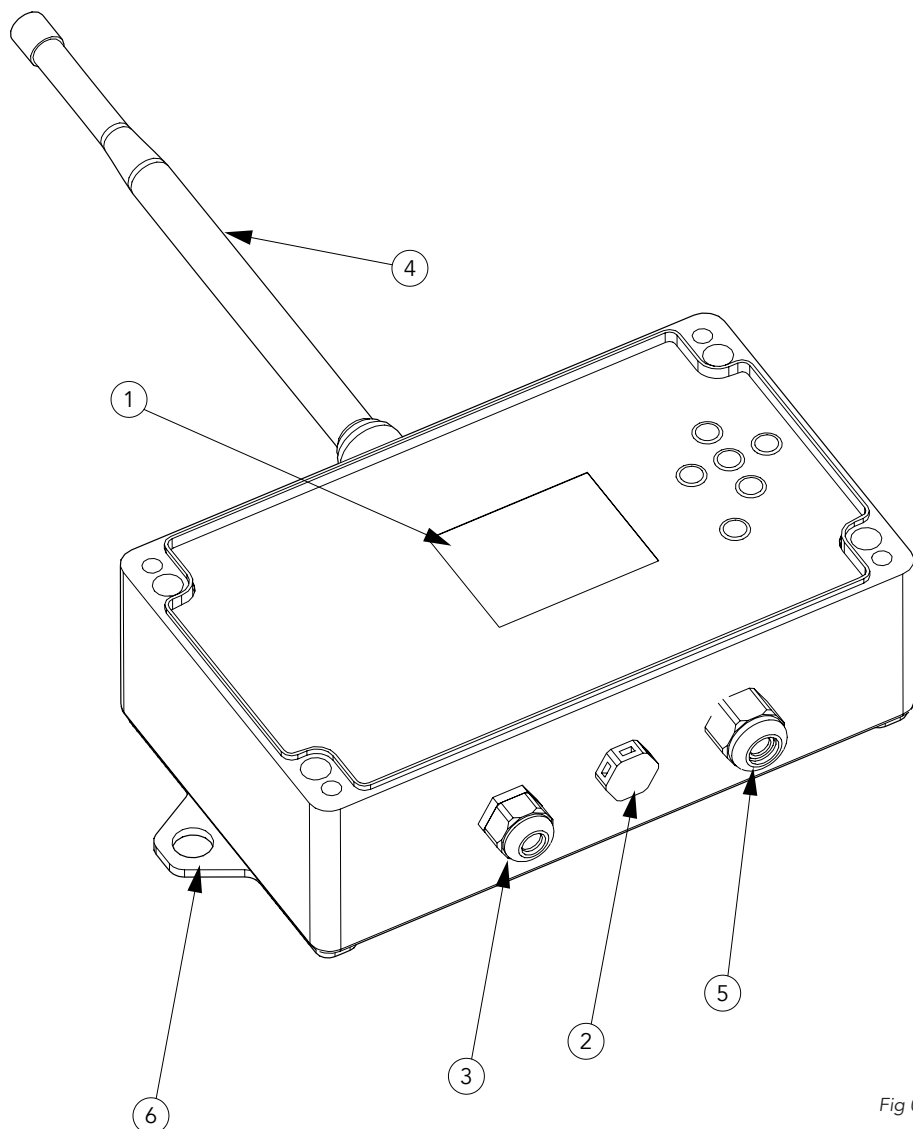



Fig 02

## 4 - CONNECTION TO THE MAINS SUPPLY

**WARNING:** For protection from electric shock, the fixture must be earthed!  
The product is equipped with auto-switching power supply that automatically adjusts to any 50-60Hz AC power source from 100-240 Volts (max absolutes range : 90- 264V).  
If you need to install a power plug on the power cable to allow connection to power outlets, install a grounding-type (earthed) plug, following the plug manufacturer's instructions. If you have any doubts about proper installation, consult a qualified electrician.  
The max power consumption is 5,8W.

Core (EU)	Core (US)	Connection	Plug terminal marking
Brown	Black	Live	L
Blue	White	Neutral	N
Yellow+green	Green	Earth	

## 5 - START UP

### CONNECT AND DISCONNECT POWER FROM THE PRODUCT

To apply and disconnect power to the product:

- Check that the product is installed and secured as indicated in the Safety Informations, and that personal safety will not be put at risk when the fixture lights up.
- Connect the power connector into the Mains input socket (100-240 VAC-50/60 Hz).
- The product is then ready for its operations and can be controlled through the available input signals on board.
- To disconnect power from the product, disconnect the Mains from the socket.



## 6 - CONTROL PANEL

### HOW ACCESS TO THE CONTROL PANEL

To access to the control panel unscrew the four screws and remove the cover as shown below.

---

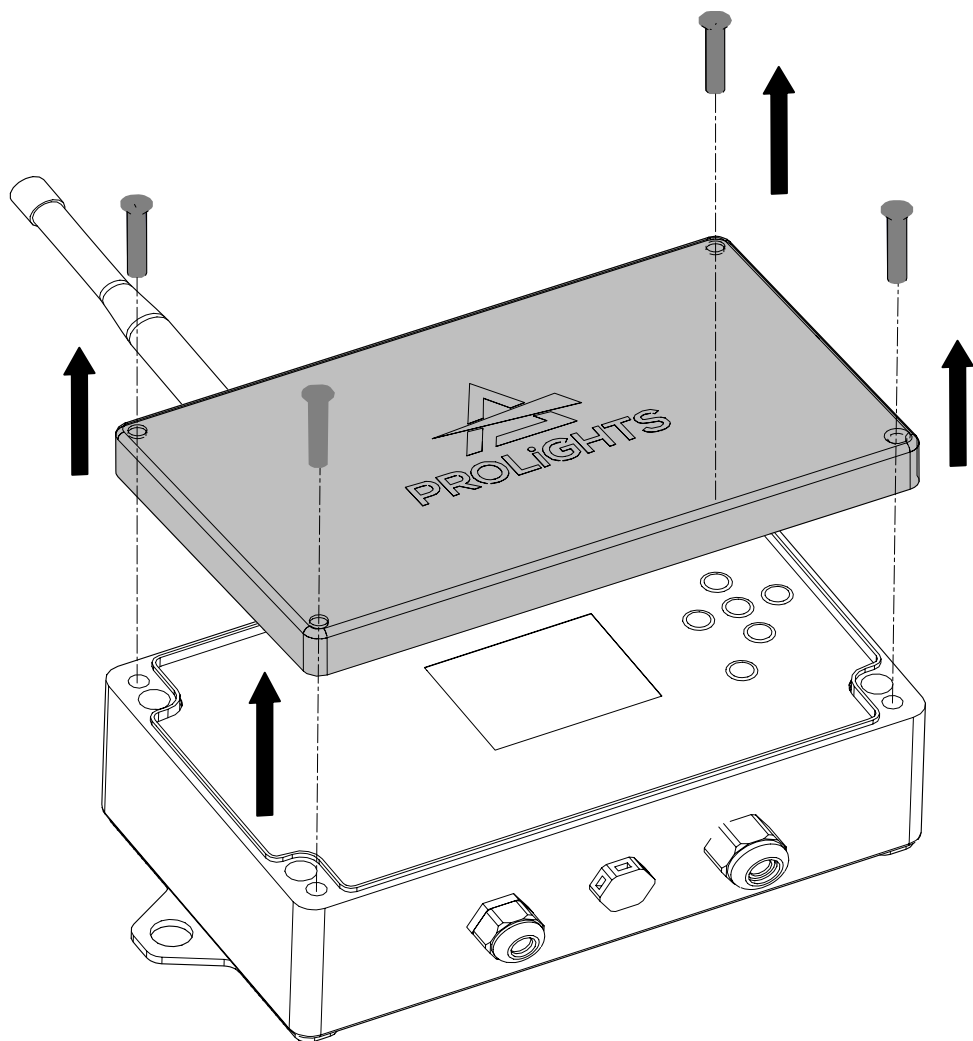


Fig. 03

CONTROL PANEL OVERVIEW

The product has an OLED display and 5 buttons for access to the functions of the control panel.

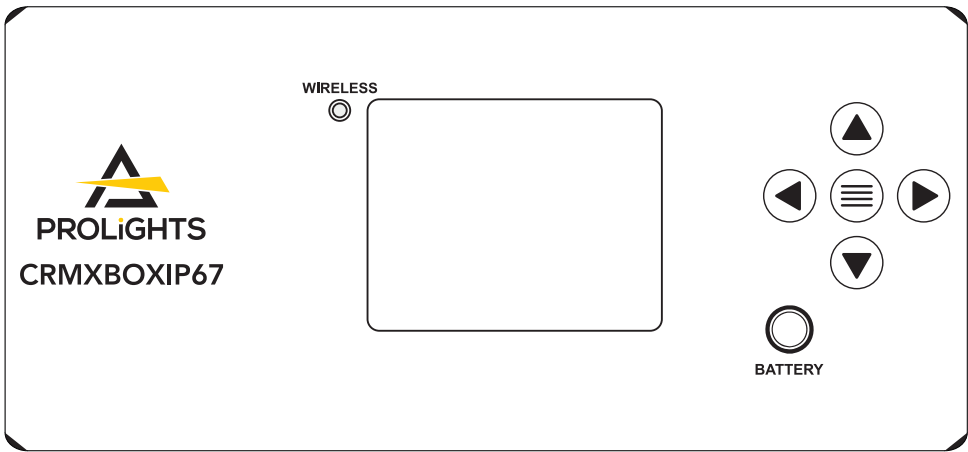







Fig. 04

DISPLAY AND BUTTONS LAYOUT

The product has a display and buttons for access to the control panel functions:

	<ul style="list-style-type: none"><li>• UP: To scroll through the functions of the main menu or increase the value of the function.</li></ul>
	<ul style="list-style-type: none"><li>• DOWN: To scroll through the functions of the main menu or decrease the value of the function.</li></ul>
	<ul style="list-style-type: none"><li>• LEFT: To move left in the function.</li></ul>
	<ul style="list-style-type: none"><li>• RIGHT: To move right in the function.</li></ul>
	<ul style="list-style-type: none"><li>• MENU/ENTER: Used to confirm the displayed value, or activate the displayed function or to access the menu tree or to return a previous menu window.</li></ul>

# 7 - MENU STRUCTURE

The following chart describes the MENU tree of the product.

N°	MENU	LEVEL 1	LEVEL 2	DESCRIPTION
1	WIRELESS	CRMX ON/OFF	ON	Enable/Disable the wireless card.
			OFF	
		CRMX MODE	TX CRMX	Allows to choose whether to set the wireless on the Transmitter or Receiver. CRMX mode is unlocked only if CRMX ON/OFF is ON.
			TX G4S	
			TX G3	
			RX	
		TX LINK	ON	TX link unlock when the unit is set as a transmitter.
			OFF	
		TX UNLINK	ON	Disconnect the transmitter from all receivers. TX unlink unlocks only if CRMX mode is on transmitter.
			OFF	
		RX RESET	ON	Total reset of the receiver. RX reset unlocks only if CRMX mode is receiver.
			OFF	
		IN TO CRMX (TX)	ON	Enable/Disable the transmission of the DMX values via CRMX.
			OFF	
		CRMX TO DMX (RX)	ON	Enable/Disable the retransmission of the DMX from the receiver to the other units connected by cable to the receiver itself.
			OFF	
		USE LINKING KEY	ON	Enable/Disable the use of the linking key.
			OFF	
		LINKING KEY SET		RX Mode: 1. Insert 8 digit code 2. Ask for mode (CRMX or CRMX²) 3. Ask for universe (CRMX: A,C,E,G   CRMX²: A,B,C,D,E,F,G,H)  TX CRMX Mode: 1. Not available.
		UNIVERSE METADATA		RX Mode: 1. RGB Color code received from TX 2. Universe name received from TX  TX CRMX Mode: 1.RGB Color code set from R,G,B combo list 2. Universe name by default takes first 16 characters of Model Name.
		RELOAD DEFAULT	ON	Default of all parameter.
			OFF	Password:050
		INFORMATION		To see RDM UID and Software version

## 8 - SHORTCUT

Keys	Mode	Description
ENTER + UP then power on	Bootloader	Force firmware upgrade

## 9 - RDM FUNCTIONS

The product can communicate using RDM (Remote Device Management) protocol over a DMX512 Networks.

RDM is a bi-directional communications protocol for use in DMX512 control systems, it is the open standard for DMX512 device configuration and status monitoring.

The RDM protocol allows data packets to be inserted into a DMX512 data stream without affecting existing non-RDM equipment. It allows a console or dedicated RDM controller to send commands to and receive messages from specific fixtures.

The PIDs in the following tables are supported in the product.

Category	Parameter	Value	GET	SET
<b>Product Information</b>	SUPPORTED_PARAMETERS	0x0050	x	
	PARAMETER_DESCRIPTION	0x0051	x	
	DEVICE_MODEL_DESCRIPTION	0x0080	x	
	MANUFACTURER_LABEL	0x0081	x	
	DEVICE_LABEL	0x0082	x	x
	FACTORY_DEFAULTS	0x0090	x	x
	BOOT_SOFTWARE_VERSION_ID	0x00C1	x	
	BOOT_SOFTWARE_VERSION_LABEL	0x00C2	x	

### Manufacturer Specific PIDs

Parameter	PID	GET	SET	Value	Description
CRMX ON/OFF	0x8170	x	x	0-1	0: On 1: Off
CRMX MODE	0x8171	x	x	0-3	0: TX CRMX 1: TX G4S 2: TX G3 3: RX
TX	0x8172	x		0-1	0: Not Linked 1: Linked
TX LINK	0x8173		x	0-1	0: Not Link 1: Link
TX RESET	0x8174	x	x	0-1	0: Off 1: On
RX	0x8175	x		0-1	0: Not Linked 1: Linked
RX RESET	0x8176	x	x	0-1	0: Off 1: On
IN TO CRMX (TX)	0x8177	x	x	0-1	0: On 1: Off
USE LINKING KEY	0x8178	x	x	0-1	0: Off 1: On
LINKING KEY 1	0x8179	x	x	0-9	<p>The Linking Key setting is given by the union of 8 PIDs: each PID can take on a value from 0 to 9.</p> <p><b>Example:</b> to set the Linking Key = 14238001 proceed as follows:</p> <p>Linking Key 1 : 1 Linking Key 2 : 4 Linking Key 3 : 2 Linking Key 4 : 3 Linking Key 5 : 8 Linking Key 6 : 0 Linking Key 7 : 0 Linking Key 8 : 1</p>
LINKING KEY 2	0x817A	x	x	0-9	
LINKING KEY 3	0x817B	x	x	0-9	
LINKING KEY 4	0x817C	x	x	0-9	
LINKING KEY 5	0x817D	x	x	0-9	
LINKING KEY 6	0x817E	x	x	0-9	
LINKING KEY 7	0x817F	x	x	0-9	
LINKING KEY 8	0x8180	x	x	0-9	
CRMX or CRMX 2	0x8181	x	x	0-1	0: CRMX 1: CRMX 2
CRMX	0x8182	x	x	0-3	0: A 1: C 2: E 3: G
CRMX 2	0x8183	x	x	0-7	0: A 1: B 2: C 3: D 4: E 5: F 6: G 7: H

This PID only takes effect when using CRMXBOXIP67 in RX and the PID "Use Linking Key"@1

This PID is used to select the CRMX protocol universe when the Linking Key is active. It acts on the device only when CRMXBOXIP67 is in RX.

This PID is used to select the CRMX<sup>2</sup> protocol universe when the Linking Key is active. It acts on the device only when CRMXBOXIP67 is in RX.

# 10 - MAINTENANCE

## MAINTENANCE THE PRODUCT

It is recommended that the product be checked at regular intervals.

- For cleaning use a soft, clean cloth moistened with a mild detergent. Never use a liquid, it might penetrate the unit and cause damage to it.
- The user may also upload firmware (product software) to the fixture via the DMX signal input port using UPBOXPRO or UPBOX2 and instructions from PROLIGHTS.
- It is recommended to check at least annually if new firmware is available and a visual check of the status of the device and mechanical parts.

WARNING: the use of alcohol or any other detergent could damage the lenses.

- **Only for IP65/IP66/IP67 projectors:** It is recommended to verify IP grade using IPTESTBOX every time the bodies are removed for maintenance, this tool helps to double check the correct assembling of the covers with a check of the IP grade of the fixture.
- All other service operations on the product must be carried out by PROLIGHTS, its approved service agents or trained and qualified personnel.
- It is PROLIGHTS policy to apply use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, components are subject to wear and tear over the life of the product. The extent of wear and tear depends heavily on operating conditions and environment, so it is impossible to specify precisely whether and to what extent performance will be affected. However, you may eventually need to replace components if their characteristics are affected by wear and tear after an extended period of use.
- Use only accessories approved by PROLIGHTS.

## VISUAL CHECK OF PRODUCT HOUSING

- The parts of the product cover/housing should be checked for eventual damages and breaking start at least every two months. If hint of a crack is found on some plastic part, do not use the product until the damaged part will be replaced.
- Cracks or another damages of the cover/housing parts can be caused by the product transportation or manipulation and also ageing process may influence materials.

## TROUBLESHOOTING

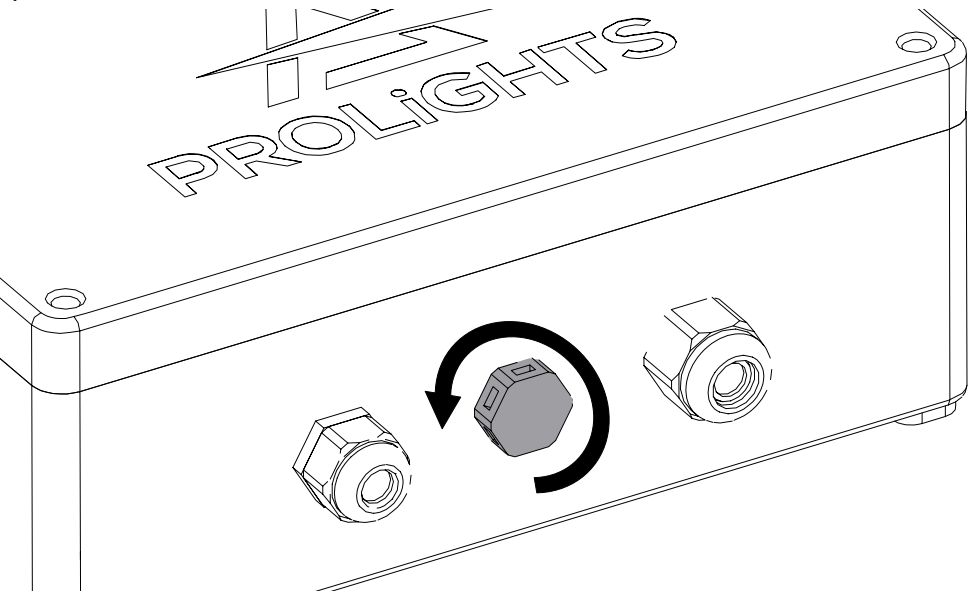
Problems	Possible causes	Checks and remedies
Product doesn't power ON	• No power to the product	• Check if the battery charges possibly charge it.
	• Internal fault	• Contact the PROLIGHTS Service or authorized service partner. Do not remove parts and/or covers, or carry out any repairs or service that are not described in this Safety and User Manual unless you have both authorization from PROLIGHTS and the service documentation.

Contact an authorized service center in case of technical problems or not reported in the table can not be resolved by the procedure given in the table.

# 11 - TEST OF IP67 RATING

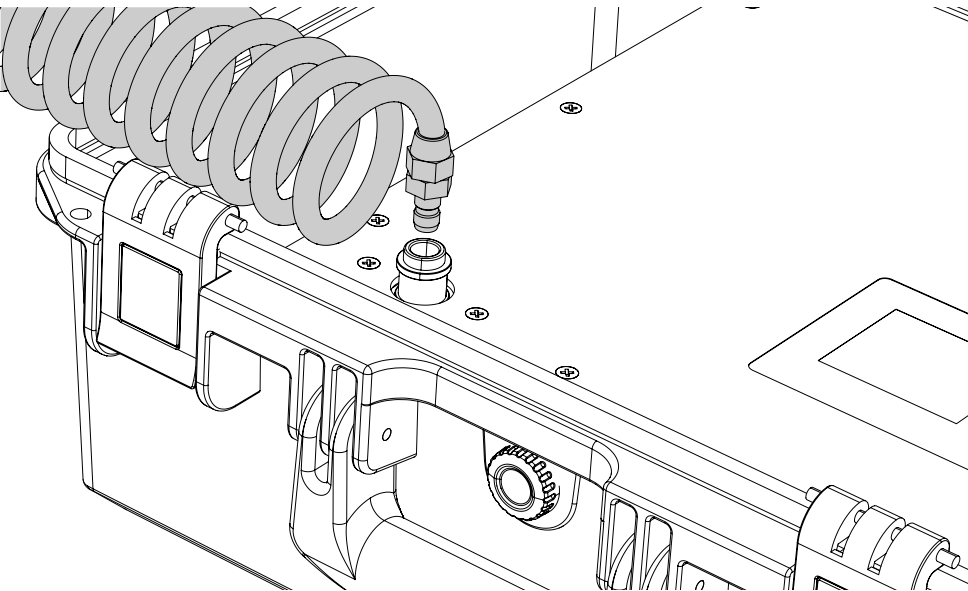
It is recommended to verify IP grade using IPTESTBOX every time the bodies are removed for maintenance.

1

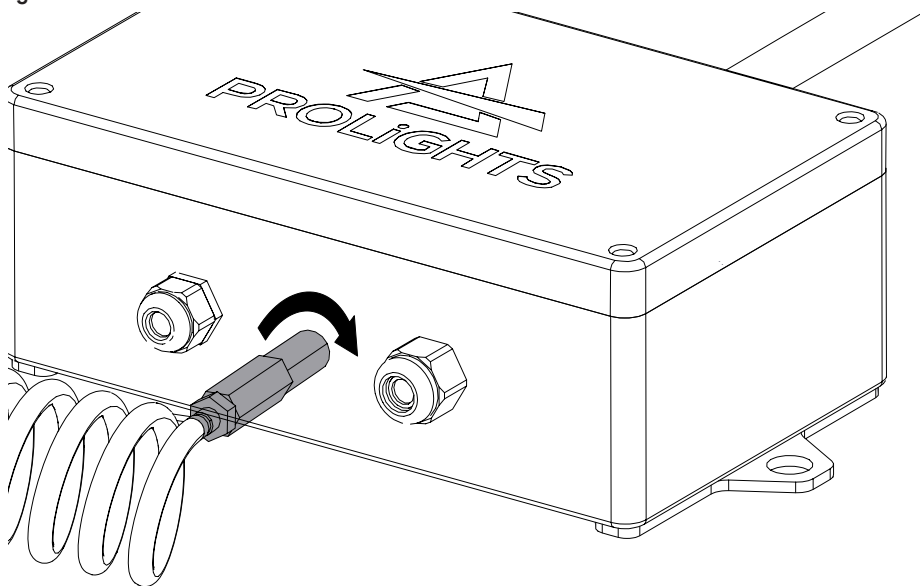


Remove the gore valve from the connections panel.

2



Connect the air hose to the IPTESTBOX by inserting the quick-connect fitting into the coupler.



Insert the threaded end into the threaded valve hole socket.

For the operating procedure using the instrument, refer to the IPTESTBOX user manual.



## Note

## Note



