



Mosaico FX100FC

100W RGBW IP66 modular LED image projector with dual effect wheel and one gobo slot



USER MANUAL

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

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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.



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SAFETY INFORMATION



WARNING!

- 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 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 AC power before servicing.
- Ensure that the fixture is electrically connected to ground (earth). 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.
- 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 projector.
- When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety cable that is approved as a safety attachment for the weight of the fixture to the attachment point on the main frame of the product. In case the safety cable, enter in action, it needs to be replaced with a new one.
- 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.
- For a temporary installation with clamps, ensure that the quarter-turn fastener and/or screws are turned fully, and secured with a suitable safety cable.



Minimum distance of illuminated objects

- The projector needs to be positioned so that the objects hit by the beam of light are at least 0,5 meters (1,64 ft) from the lens of the projector.

T_a45°C

Max operating ambient temperature (T_a)

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

T_a -20 °C

Minimum operating ambient temperature (T_a)

- Do not operate the fixture if the ambient temperature (T_a) 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.

IP66

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.



Light collimation optical system

- This product contains internal light collimation optical system. Avoid to expose the optical system to any intense source of light (including sunlight) from any angle.

T_c 59 °C

Temperature of the external surface

- The surface of the fixture can reach up to 59 °C (138,2 °F) during operation. Avoid contact with people and materials.



Maintenance

- Warning! 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.



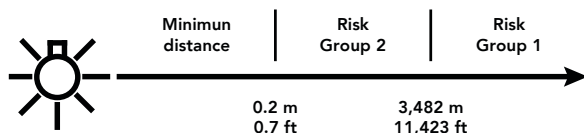
Photobiological safety

- This device emits potentially dangerous optical radiation and is identified in the category of Risk Group 2 according to EN 62471.



Do not stare at the operating light source

- Do not look directly at the LED source during operation. It can be harmful to the eyes and skin.
- During Installation, operation and maintenance, be prepared for the fixture to light and move suddenly when connected to power.
- The device should be positioned so that prolonged staring into the luminaire at a distance closer than 3,482 m (11,423 ft) is not expected.



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.



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

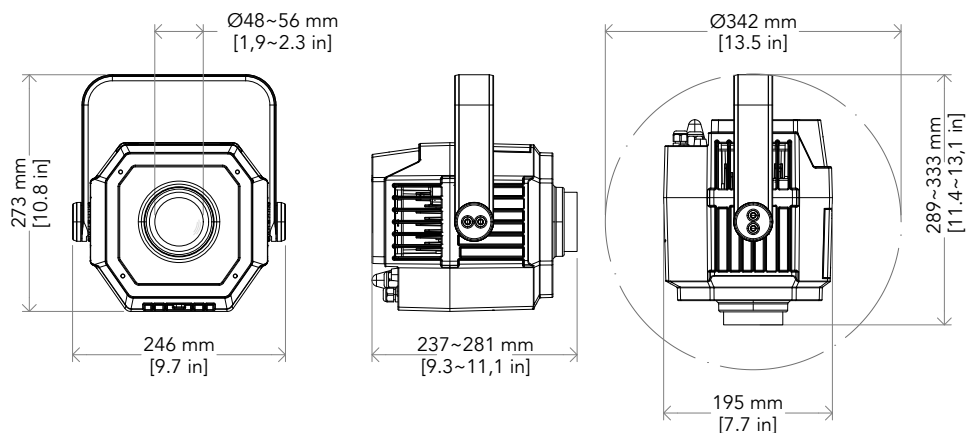
- 1x MOSAICOFX100FC.
- 1x MFX100CH: color holder for MOSAICOFX100FC serie (color filters not included).
- 1x MFX100GH: gobo holder for MOSAICOFX100FC serie (gobo not included) with manual indexing.
- 1x MFX100WE1: water effect wheel for MOSAICOFX100FC series, short axis 1.
- 1x MFX100WE2: water effect wheel for MOSAICOFX100FC series, long axis 2.
- 1x BARE END - IP connection adapter.
- 1x 5p XLR - IP connection male adapter.
- 1x 5p XLR - IP connection female adapter.
- User Manual.

OPTIONAL ACCESSORIES

- MFX100BAG1U: Pelican case for 1 pc of MOSAICOFX100FC
- MFX100WBRAKGY: Wall bracket for MOSAICOFX100FC, gray
- MFX100WBRAKKBK: Wall bracket for MOSAICOFX100FC, black
- MFX100FBRAKGY: Surface bracket for MOSAICOFX100FC, gray
- MFX100FBRAKKBK: Surface bracket for MOSAICOFX100FC, black
- MOSUNIBRAKJR: Bracket for MOSAICOJR for wall mounting and suspension on poles
- MFX100LWGN: 15° FLEX lens for Mosaico FX100 series, narrow beam angle for animation and gobo
- MFX100LWTM: 30° lens for Mosaico FX100 series, medium beam angle for animation effects
- MFX100LWTW: 50° lens for Mosaico FX100 series, wide beam angle for animation effects
- MFX100LWGW: 70° FLEX lens for Mosaico FX100 series, very wide beam angle, animation and gobo
- MFX100LGBM: 30° lens for Mosaico FX100 series, medium beam angle for gobo projection
- MFX100LGBW: 50° lens for Mosaico FX100 series, wide beam angle for gobo projection
- GBVFX100120F06: Cyan filter with white stripes for MOSAICOFX100FC
- GBVFX100220F03: Red filter with white stripes for MOSAICOFX100FC
- GBVFX100320F04: Green filter with white stripes for MOSAICOFX100FC
- MFX100RAINW: Structured glass RAIN effect animation wheel
- MFX100HAMMERHEADW: Structured glass HAMMERHEAD effect animation wheel
- MFX100D35CRED: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., red
- MFX100D35CBBLUE: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., blue
- MFX100D35CLGREEN: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., light green
- MFX100D35CLORANGE: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., light orange
- MFX100D35CMARINE: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., aquamarine
- MFX100D35CPINK: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., pink
- MFX100D35CYELLOW: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., yellow
- MFX100D35CMAGENTA: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., magenta
- MFX100D35CCYAN: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., cyan
- MFX100D35CGREEN: Color for MFX100CH for MOSAICOFX100FC, 34,5 mm d., green
- MFX100WE2: Standard structured glass effect wheel, long shaft 2 (included with projector)
- MFX100WE1: Standard structured glass effect wheel, short shaft 1 (included with projector)
- MFX100GW: Gobo wheel for MOSAICOFX100FC series (gobos not included)
- MFX100CW: Color wheel for MOSAICOFX100FC series
- MFX100GH: Gobo holder for MOSAICOFX100FC series (gobo not included) with manual indexing
- MFX100CH: Color holder for MOSAICOFX100FC series (color filters not included)
- MFX100SNOOTBK: Snoot for MOSAICOFX100FCBK series, black
- MFX100SNOOTGY: Snoot for MOSAICOFX100FCGY series, gray
- MFX100SNOOTPROTGY: Anti tampering full snoot with front glass, gray
- MFX100SNOOTPROTBK: Anti tampering full snoot with front glass, black

- AWEXDC1221ADP: Signal adapter kit from AWEXDC1 series to AWEXDC2 series and vice versa
- AWEXAC12ADP: Power adapter from AWEXAC1 cable series to AWEXAC2 cable series
- AWEXAC1L03: IP67 power extension cable for outdoor architectural projectors, L.03 m
- AWEXAC1L05: IP67 power extension cable for outdoor architectural projectors, L.05 m
- AWEXAC1L10: IP67 power extension cable for outdoor architectural projectors, L.10 m
- AWEXAC1L20: IP67 power extension cable for outdoor architectural projectors, L.20 m
- AWEXDC1L03: IP67 DMX extension cable for outdoor architectural projectors, L.03 m
- AWEXDC1L05: IP67 DMX extension cable for outdoor architectural projectors, L.05 m
- AWEXDC1L10: IP67 DMX extension cable for outdoor architectural projectors, L.10 m
- AWEXDC1L20: IP67 DMX extension cable for outdoor architectural projectors, L.20 m
- LRLUNA: Single Universe DMX transceiver with Bluetooth
- LLRAURORA: Single Universe DMX/RDM transceiver with WiFi and Bluetooth
- RSR1235B: Steel security cable for hanging bodies, inox steel shackle, L=120 cm, black
- C6002B: Slim aluminum clamp, 200kg loading, 48-51mm tubes, M10 bolt, Black
- UPBOX2P5: Firmware uploader kit, USB IN, 5-pin XLR DMX OUT

2 - TECHNICAL DRAWING



Weight: 5,7 kg - 12,56 lbs

MOSAICO FX100

Fig. 01

3 - INSTALLATION

MOUNTING

Check that the supporting structure can safely bear the weight of all installed fixtures, clamps, cables, auxiliary equipment, etc. and complies with locally applicable regulations.

When suspending the fixture above ground level, secure it against failure of primary attachments by attaching a safety wire that is approved as a safety attachment for the weight of the fixture to an anchor point on the product main frame.

Do not use removable parts or weak anchors for secondary attachment.

Warning! When clamping the fixture to a truss or other structure at any angle, use clamps of half-coupler type. Do not use any type of clamp that does not completely encircle the structure when fastened.

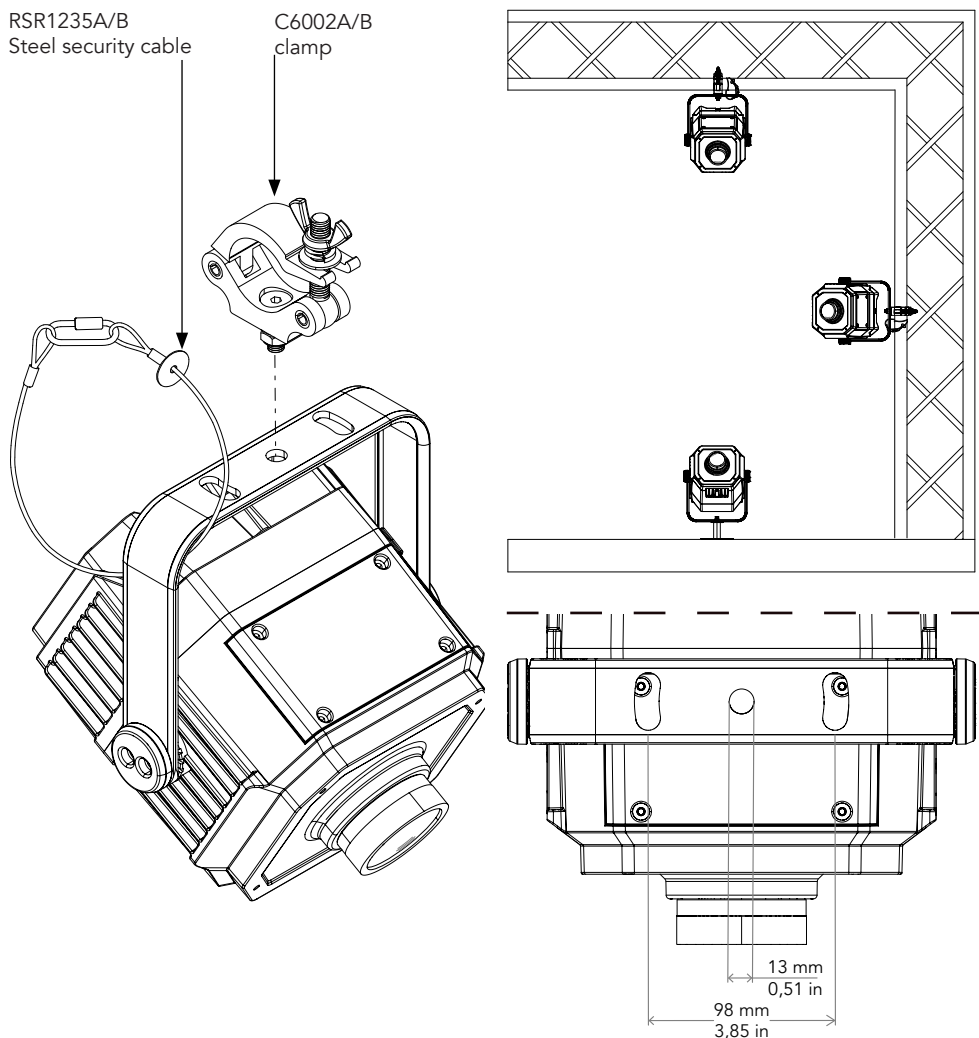


Fig. 02

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.
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 127W.

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 - PRODUCT OVERVIEW

1. BRACKET.
2. STAND ALONE CONTROL WITH 3 PUSH ENCODER.
3. GORE VALVE.
4. POWER IN: for connection to the Mains 100-240V~/50-60Hz.
5. DMX IN (3-pole): 1 = GND, 2 = sign-, 3 = sign+.
6. ANTENNA.
7. DMX OUT (3-pole): 1 = GND, 2 = sign-, 3 = sign+.
8. POWER OUT: for connection to the Mains 100-240V~/50-60Hz.
9. MAIN FUSE HOLDER: replace a burnt-out fuse by one of the same type only (T2A 250V).

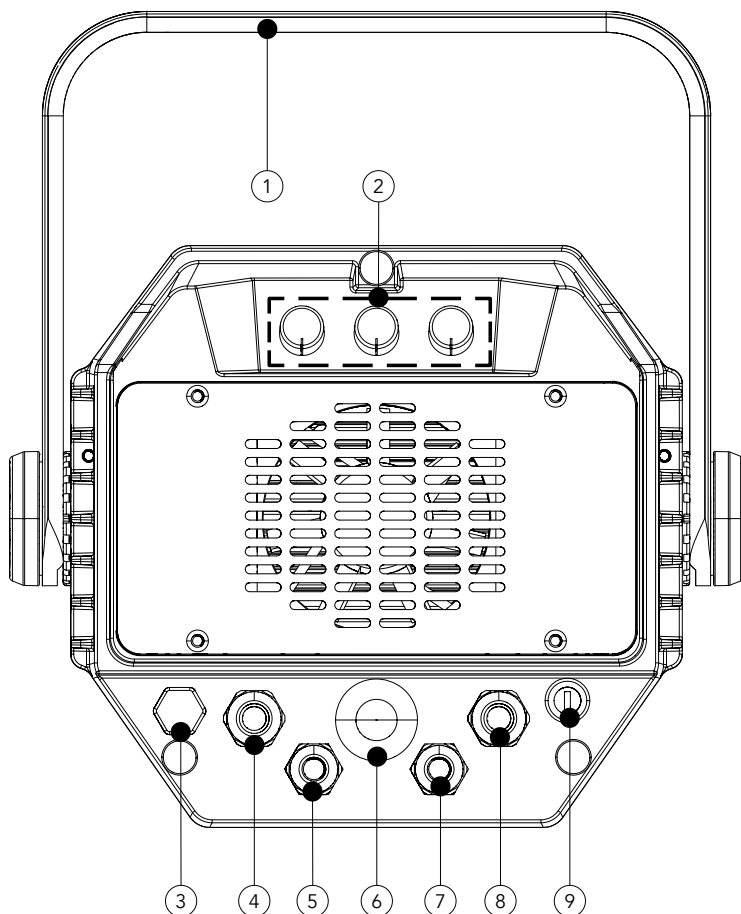


Fig. 03

7 - 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.
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 120W.
You can link up to 25 units at 230 V. Never exceed this number. Power linking cords can be purchased separately.
When connecting the unit to a local power, it may be necessary to use the Schuko to IP67 adapters supplied with this product.

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

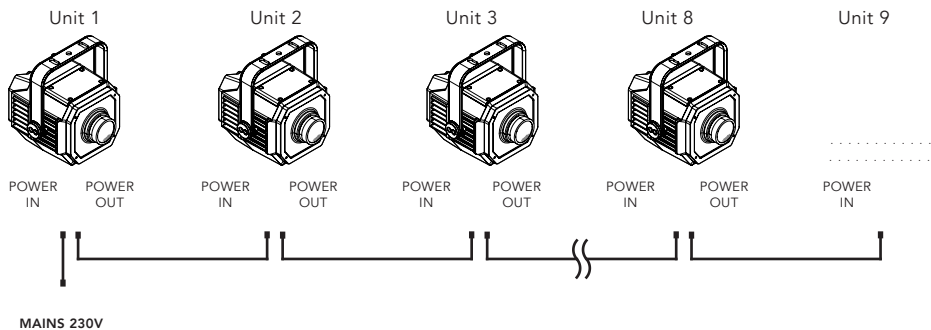
MALE POWER
IP67 CONNECTOR



FEMALE POWER
IP67 CONNECTOR



Fig. 04



NOTE: when not using the Power output connectors, you must seal the cable ends with the supplied caps.

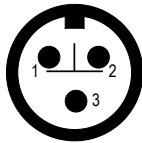
Fig. 05 - Example configuration (Output at 230 V)

8 - DMX CONNECTION

CONNECTION OF THE CONTROL SIGNAL: DMX LINE

The product has connectors for DMX input and output.
The default pin-out on both connectors is as the following diagram:

DMX - INPUT
IP67 CONNECTOR



Pin1 : GND - Shield
Pin2 : - Signal
Pin3 : + Signal

DMX - OUTPUT
IP67 CONNECTOR

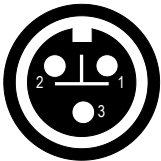


Fig. 06

INSTRUCTIONS FOR A RELIABLE DMX CONNECTION

Use shielded twisted-pair cable designed for RS-485 devices: standard microphone cable cannot transmit control data reliably over long runs. 24 AWG cable is suitable for runs up to 300 meters (1000 ft). Heavier gauge cable and/or an amplifier is recommended for longer runs.
To split the data link into branches, use splitter-amplifiers in the connection line.
Do not overload the link. **Up to 32 devices may be connected on a serial link.**

NOTE: To connect the unit to your DMX network, it is necessary to use the adapters XLR 5 pin-IP67 signal connector, supplied with this product.

CONNECTION DAISY CHAIN OF THE DMX LINE

Connect the DMX data output from the DMX source to the product DMX input (male connector).
Run the data link from the product DMX output (female connector) connector to the DMX input of the next fixture.
Terminate the data link by connecting a 120 Ohm signal termination.
The termination is prepared by 120Ω 1/4 W resistor between pins 2 and 3 of the male DMX connector.
Install a DMX termination plug on the last fixture on the link. If a splitter is used, terminate each branch of the link.

NOTE: when not using the DMX input or DMX output connectors, you must seal the cable ends with the supplied caps.

The following diagram shows the DMX connection:

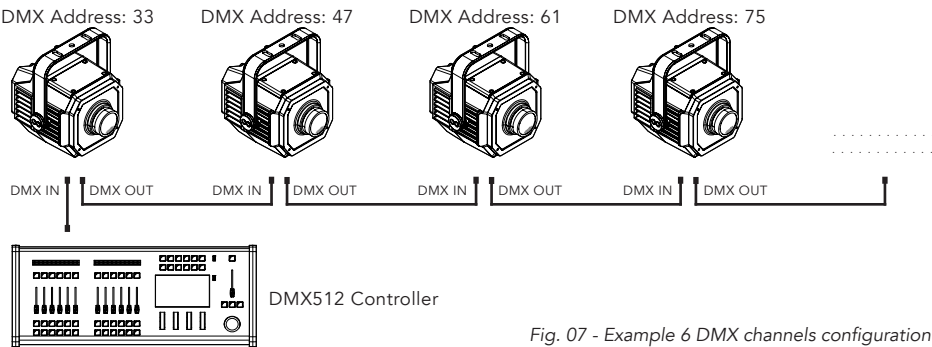


Fig. 07 - Example 6 DMX channels configuration

CONNECTION OF THE CONTROL SIGNAL: DMX LINE ADAPTERS

The product has XLR sockets adapters for DMX input and output.
The default pin-out on both socket is as the following diagram:

DMX - INPUT XLR plug



Pin1 : GND - Shield
Pin2 : - Signal
Pin3 : + Signal
Pin4 : N/C
Pin5 : N/C

DMX - OUTPUT XLR socket



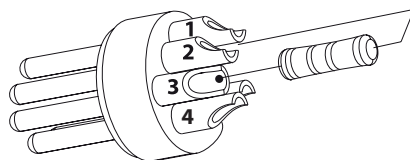
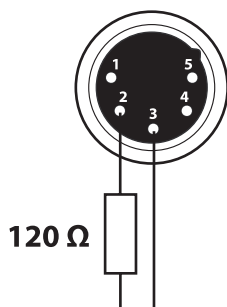
Fig. 08

CONNECTION OF THE DMX LINE

DMX connection employs standard XLR connectors. Use shielded pair-twisted cables with 120 Ω impedance and low capacity.

CONSTRUCTION OF THE DMX TERMINATION

The termination is prepared by soldering a 120 Ω 1/4 W resistor between pins 2 and 3 of the male XLR connector, as shown in figure:



Example:
5 pin XLR connector

Fig. 09

DMX ADDRESSING

In order to start controlling the product via DMX, the first step is to select a DMX address, also known as the start channel, this is the first channel used to receive instructions from a DMX controller. If you wish to control the product individually, it is necessary to assign a different starting address channel to each fixture.

The number of channels occupied from the product depends on the DMX mode selected, so always verify the DMX Mode before start addressing.

If you assign two fixtures the same address, they will be executing the same behaviour. Selecting the same address to multiple fixtures can be useful for diagnostic purposes and symmetrical control.

DMX addressing is limited to make it impossible to set the DMX address so high that you are left without enough control channels for the product.

Set the fixture's DMX address by RDM with the DATAMASTER.

OPERATION AS A WIRELESS RECEIVER

MOSAICOFX100FC can be used as wireless receiver connected to a wireless transmitter.

The unit uses a DATAMASTER for configuration purposes. To use MOSAICOFX100FC as wireless receiver, have to set this function for please follow the procedure below:

- Turn on the DATAMASTER;
- Select the "RDM" function;
- Wait the discovering of all units;
- Select the desired unit and press ENTER button;
- Search for "Specific PID" item in the menu;
- Select the "Description" function;
- Scroll through the menu items until "CRMX POWER", and set value to 1;
- Select "CRMX LINK RESET" and set value to 1;
- On the transmitter, enable TX LINK to ON to link transmitter to the receivers;
- If the connection is successful and DMX input is available the display the display on the receiver unit will shows the DMX address. If DMX signal is not available, the display will shows "No signal" but keeps the transmitter linked;
- If the connection fails, check the position of the receiver;
- Check wireless signal in the "WIRELESS QUALITY" RDM menu item indicates the received signal strength.

Reset the receiver

Follow the procedure below to reset the receiver.

- Turn on the DATAMASTER;
- Select the "RDM" function;
- Wait the discovering of all units;
- Select the desired unit and press ENTER button;
- Search for "Specific PID" item in the menu;
- Select the "Description" function;
- Scroll through the menu items until "CRMX LINK RESET", and set value to 1.

CRMX TO DMX (RX)

This function enable or disable the retransmission of the wireless DMX signal received through the DMX port on the receiver side. Follow the procedure below to activate this function:

- Turn on the DATAMASTER;
- Select the "RDM" function;
- Wait the discovering of all units;
- Select the desired unit and press ENTER button;
- Search for "Specific PID" item in the menu;
- Select the "Description" function;
- Scroll through the menu items until "CRMX TO DMX", and set value to 1.

9 - CONTROL WITH PUSH ROTATORY KNOB

The product is equipped with rotatory knobs for manual control of the product, those are enabled only in Stand Alone mode and they enable access to control certain attributes according to the selected STAND ALONE mode as indicated below.
In the following image the Rotatory Knob Layout.

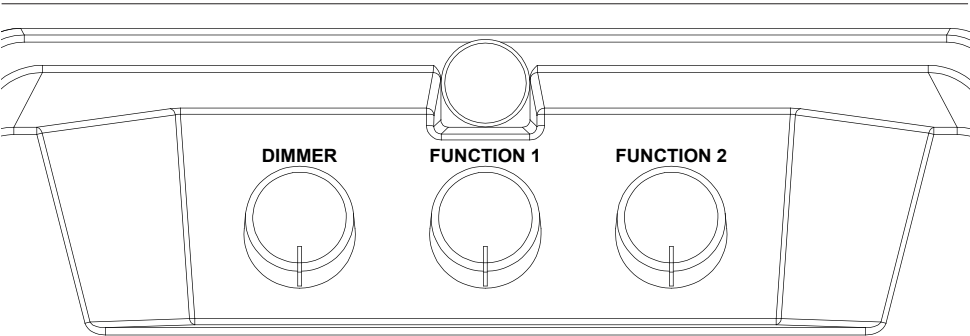


Fig. 10

ENCODER DIMMER				
ACTION	Long Press (3s)		Highlight (FULL ON)	
	Single Press		Jump to next STATE	
	Turn		Modify value of the STATE from 0 to 100%	
CURRENT STATE				
DIMMER	R	G	B	W
Flash 3 times full on	Flash 2 times full red	Flash 2 times full green	Flash 2 times full blue	Flash 2 times full white

ENCODER FUNCTION 1 (Motor 1)		
ACTION	Single Press	Jump to next STATE flash 2 times actual color
	Turn	Modify value of the STATE
CURRENT STATE		
Indexing	Rotation CW	Rotation CCW
0-360°	Speed slow to fast	Speed slow to fast

ENCODER FUNCTION 2 (Motor 2)		
ACTION	Single Press	Jump to next STATE flash 2 times actual color
	Turn	Modify value of the STATE
CURRENT STATE		
Indexing	Rotation CW	Rotation CCW
0-360°	Speed slow to fast	Speed slow to fast

10 - SHORTCUT

BUTTON CONTROL SHORTCUT		
Keys	Mode	Description
Encoder 1 + Encoder 2 long press (3s)	-	Triggers WDMX Reset - Flash 2 times current color
Encoder 1 + Encoder 3 long press (10s)	-	Enable/ Disable Key lock - Flash 2 times current color

11 - RDM MENU STRUCTURE

The following chart describes the MENU tree of the product, the terms shown in **BOLD** indicates the default settings.

1	DMX ADDRESS	001 - 512				Set address used for Fixture.
2	DMX MODE	STANDARD				Set DMX chart for Main Fixture.
3	DIMMER CURVE	LINEAR				To choose the dimmer curve.
		S-CURVE				
		SQUARE LAW				
		INVERSE SQUARE LAW				
4	DIMMER SPEED	AUTO				To choose the dimmer curve.
		FAST				
		MEDIUM				
		SLOW				
5	LED FREQUENCY	600Hz				Select PWM frequency.
		1200Hz				
		2000Hz				
		4000Hz				
		6000Hz				
		25kHz				
6	DMX FAULT	HOLD				To choose the behaviour of fixture in case of dmx signal lost.
		BLACKOUT				
		STAND ALONE				
7	INVERT ROTATION	OFF				
		ON				
8	FAN MODE	AUTO				Select Fan behaviour.
		HIGH				
		SILENT				
		OFF				
9	CALIBRATION PIDS	RED	125 - 255			
		GREEN	125 - 255			
		BLUE	125 - 255			
		WARM WHITE	125 - 255			
		...				
10	INFORMATIONS	DEVICE TIME	FIXTURE HOURS	TOTAL	(ONLY READ)	To check the total working hours of the unit.
				PARTIAL	(READ AND RESET)	
		CURRENT HOURS		TOTAL	(ONLY READ)	To check the current working hours of the unit.
				PARTIAL	(READ AND RESET)	
		SOURCE HOURS		TOTAL	(ONLY READ)	To see the total operating hours of the LED source.
				PARTIAL	(READ AND RESET)	
		POWER ON CYCLE		TOTAL	(ONLY READ)	To see the power cycles of the machine.
				PARTIAL	(READ AND RESET)	
		MAINTENANCE TIME		ELAPSED TIME		To choose and reset unit maintenance warning hours.
				ALERT PERIOD	10 -1000	
		POWER CONSUMPTION				To see the power consumption
		TEMPERATURE	NEAR SOURCE TEMP, DRIVER PCB TEMP, LED PCB TEMP,...			To see the unit temperature.
		SOFTWARE VERSION				View informations about software version.
		DEVICE INFO				To see device info.
		DEVICE LABEL				To see device label.
		RDM UID				View ID for the RDM control.

11	STAND ALONE	MASTER/SLAVE	MASTER DMX			Allow you to link and operating in synk multiple units without a DMX console. Choose a unit to perform as the Master. This unit must be the first unit in line; Set the successive units to be slave.
			MASTER NO DMX			
			SLAVE			
		STATIC	STATIC COLORS	DIMMER: 0-255 MOTOR 1 ROT MOTOR 2 ROT		Select of the following pre-defined color combination and its Dimmer value. After enabled this mode, the unit will be automatically assigned as Master.
			WHITE PRESETS			
			COLOR MACRO			
			MANUAL RGBW			
12	FACTORY DEFAULT					To reset the unit to factory default settings.

EXAMPLE

FIXED COLOR

0	: R
1	: G
2	: B
3	: W
4	: GB
5	: RB
6	: RG
7	: RGB
8	: RW
9	: GW
10	: BW
11	: RGW
12	: RBW
13	: GBW
14	: RGBW

12 - 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.

RDM is also available on Wireless and Tiny's Downstead must be enabled in its custom PIDs to work.

RDM Model ID
0xA022

RDM PIDs						
Parameter	Category	PID Address	GET	SET	Value	Description
DEVICE_INFO	Product Information	0x0060	x			
PRODUCT_DETAIL_ID_LIST	Product Information	0x0070	x			
DEVICE_MODEL_DESCRIPTION	Product Information	0x0080	x			
MANUFACTURER_LABEL	Product Information	0x0081	x			
DEVICE_LABEL	Product Information	0x0082	x	x		
FACTORY_DEFAULTS	Product Information	0x0090	x	x		
SOFTWARE_VERSION_LABEL	Product Information	0x00C0	x			
BOOT_SOFTWARE_VERSION_ID	Product Information	0x00C1	x			
BOOT_SOFTWARE_VERSION_LABEL	Product Information	0x00C2	x			
DMX_PERSONALITY	DMX512 Setup	0x00E0	x	x		
DMX_PERSONALITY_DESCRIPTION	DMX512 Setup	0x00E1	x			
DMX_START_ADDRESS	DMX512 Setup	0x00F0	x	x		
SLOT_INFO	DMX512 Setup	0x0120	x			
SLOT_DESCRIPTION	DMX512 Setup	0x0121	x			
DEFAULT_SLOT_VALUE	DMX512 Setup	0x0122	x			
DMX_BLOCK_ADDRESS	DMX512 Setup	0x0140	x	x		

RDM PIDs						
Parameter	Category	PID Address	GET	SET	Value	Description
DMX_FAIL_MODE	DMX512 Setup	0x0141	x	x		
DMX_STARTUP_MODE	DMX512 Setup	0x0142	x	x		
DIMMER_INFO	Dimmer Settings	0x0340	x			
MINIMUM_LEVEL	Dimmer Settings	0x0341	x	x		
MAXIMUM_LEVEL	Dimmer Settings	0x0342	x	x		
CURVE	Dimmer Settings	0x0343	x	x		
CURVE_DESCRIPTION	Dimmer Settings	0x0344	x	x		
OUTPUT_RESPONSE_TIME	Dimmer Settings	0x0345	x	x		
OUTPUT_RESPONSE_TIME_DESCRIPTION	Dimmer Settings	0x0346	x			
MODULATION_FREQUENCY	Dimmer Settings	0x0347	x	x		
MODULATION_FREQUENCY_DESCRIPTION	Dimmer Settings	0x0348	x			
SENSOR_DEFINITION	Sensors	0x0200	x			
SENSOR_VALUE	Sensors	0x0201	x	x		
RECORD_SENSORS	Sensors	0x0202		x		
BURN_IN	Sensors	0x0440	x	x		
DEVICE_HOURS	Power/ Lamp Settings	0x0400	x	x		
LAMP_HOURS	Power/ Lamp Settings	0x0401	x	x		
LAMP_STRIKES	Power/ Lamp Settings	0x0402	x	x		
LAMP_STATE	Power/ Lamp Settings	0x0403	x	x		
LAMP_ON_MODE	Power/ Lamp Settings	0x0404	x	x		
DEVICE_POWER_CYCLES	Power/ Lamp Settings	0x0405	x	x		
DISPLAY_INVERT	Display Settings	0x0500	x	x		
DISPLAY_LEVEL	Display Settings	0x0501	x	x		

RDM PIDs						
Parameter	Category	PID Address	GET	SET	Value	Description
LOCK_PIN	Configuration	0x0640	x	x		
LOCK_STATE	Configuration	0x0641	x	x		
LOCK_STATE_DESCRIPTION	Configuration	0x0642	x			
IDENTIFY_DEVICE	Control	0x1000	x	x		
RESET_DEVICE	Control	0x1001		x		
POWER_STATE	Control	0x1010	x	x		
PERFORM_SELFTEST	Control	0x1020	x	x		
SELF_TEST_DESCRIPTION	Control	0x1021	x			
CAPTURE_PRESET	Control	0x1030	x	x		
PRESET_PLAYBACK	Control	0x1031	x	x		
IDENTIFY_MODE	Control	0x1040	x	x		
PRESET_INFO	Control	0x1041	x			
PRESET_STATUS	Control	0x1042	x	x		
POWER_ON_SELF_TEST	Control	0x1044	x	x		
DMX FAULT	Manufacturer PIDs	TBD	x	x	0-2	0: HOLD 1: BLCK 2:STANDALONE
MASTER/SLAVE	Manufacturer PIDs	TBD	x	x	0-2	0:MST DMX 1:MST NO DMX 2:SLAVE
ST. AL. MODE	Manufacturer PIDs	TBD	x	x	0-3	0:FIXED COLORS; 1:WHITE PRESETS; 2:MACRO; 3:RGBW;
FIXED COLORS	Manufacturer PIDs	TBD	x	x	0-15	Refer to menu section
WHITE PRESETS	Manufacturer PIDs	TBD	x	x	0-13	Refer to menu section
COLOR MACROS	Manufacturer PIDs	TBD	x	x	0-64	Refer to menu section
MANUAL RED	Manufacturer PIDs	TBD	x	x	0-255	Refer to menu section
MANUAL GREEN	Manufacturer PIDs	TBD	x	x	0-255	Refer to menu section
MANUAL BLUE	Manufacturer PIDs	TBD	x	x	0-255	Refer to menu section
MANUAL WHITE	Manufacturer PIDs	TBD	x	x	0-255	Refer to menu section
STATIC DIMMER	Manufacturer PIDs	TBD	x	x	0-255	Set Dimmer on Standalone Mode - Value Shared with Encoder Setting
M1 WHEEL TYPE	Manufacturer PIDs	TBD	x		0-1	0: Animation Wheel 1: Color/Gobo Wheel - Reset Ok

RDM PIDs						
Parameter	Category	PID Address	GET	SET	Value	Description
M1 WHEEL OFFSET	Manufacturer PIDs	TBD	x	x	0- 255	Offset calibration for Motor1 from home position of sensor.
M2 WHEEL TYPE	Manufacturer PIDs	TBD	x		0-1	0: Animation Wheel 1: Color/Gobo Wheel - Reset Ok
M2 WHEEL OFFSET	Manufacturer PIDs	TBD	x	x	0- 255	Offset calibration for Motor2 from home position of sensor.
STATIC MOTOR 1	Manufacturer PIDs	TBD	x	x	0-255	Set Motor 1 behaviour on Standalone Mode - Value shared with Encoder Setting
STATIC MOTOR 2	Manufacturer PIDs	TBD	x	x	0-255	Set Motor 2 behaviour on Standalone Mode - Value shared with Encoder Setting
KEY LOCK	Manufacturer PIDs	TBD	x	x	0-1	Inhibites encoder functionality - Same as per the Shortcut via Encoder press. 0:OFF 1:ON
FAN MODE	Manufacturer PIDs	TBD	x	x	0-2 (Def. 1)	0: AUTO 1: HIGH 2: SILENT 3: OFF
INVERT ROTATION	Manufacturer PIDs	TBD	x	x	0-1	0:OFF 1:ON
CURRENT HOURS	Manufacturer PIDs	TBD	x		---	
MAINTENANCE TIME:ALERT PERIOD	Manufacturer PIDs	TBD	x	x	10-1000 (Def. 300)	
MAINTENANCE TIME:ELAPSED TIME	Manufacturer PIDs	TBD	x	x	---	
CRMX POWER	Manufacturer PIDs	TBD	x	x	0- 1	0:OFF 1:ON
CRMX RESET	Manufacturer PIDs	TBD	x	x	0-1	0:OFF 1:ON
CRMX TO DMX	Manufacturer PIDs	TBD	x	x	0- 1	0:OFF 1:ON
CRMX LINK RESET	Manufacturer PIDs	TBD	x	x	0-1	0:OFF 1:ON
WIRELESS QUALITY	Manufacturer PIDs	TBD	x		---	***%
ERROR MESSAGE	Manufacturer PIDs	TBD	x		---	

RDM PIDs						
Parameter	Category	PID Address	GET	SET	Value	Description
POWER CONSUMPTION	Manufacturer PIDs	TBD	x		---	**W
CURRENT HOURS	Manufacturer PIDs	TBD	x		---	**h

13 - DMX CHARTS

	MODE
PARAMETER	STANDARD
DIMMER	1
DIMMER FINE	2
STROBE	3
RED	4
GREEN	5
BLUE	6
WARM WHITE	7
COLOR MACRO	8
MOTOR 1 ROT	9
MOTOR 1 ROT FINE	10
MOTOR 2 ROT	11
MOTOR 2 ROT FINE	12
CONTROL	13

RDM Model ID
0xA022

Dimmer					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
Dimmer	0	255	0	65535	Default @ 0

Strobe					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
Open	0	1	-	-	Default @ 255
Strobe from Slow to Fast	2	62	-	-	
Open	63	64	-	-	
Pulse In from slow to fast	65	125	-	-	
Close	126	127	-	-	
Pulse Out from slow to fast	128	188	-	-	
Open	189	190	-	-	
Random from slow to fast	191	251	-	-	
Open	252	255	-	-	

Motor 1

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Indexed 0 to 360°	0	127	0	32767	Default @ 0
Forward Spin (fast to slow)	128	190	32768	48895	
Stop	191	192	48896	49407	
Reverse spin (slow to fast)	193	255	49408	65535	

Motor 2

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Indexed 0 to 360°	0	127	0	32767	Default @ 0
Forward Spin (fast to slow)	128	190	32768	48895	
Stop	191	192	48896	49407	
Reverse spin (slow to fast)	193	255	49408	65535	

Red

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 100%	0	255	0	65535	Default @ 255 / 65535

Green

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 100%	0	255	0	65535	Default @ 255 / 65535

Blue

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 100%	0	255	0	65535	Default @ 255 / 65535

White

Function	8 bit value		16 bit value		Note
	From	To	From	To	
0 - 100%	0	255	0	65535	Default @ 255 / 65535

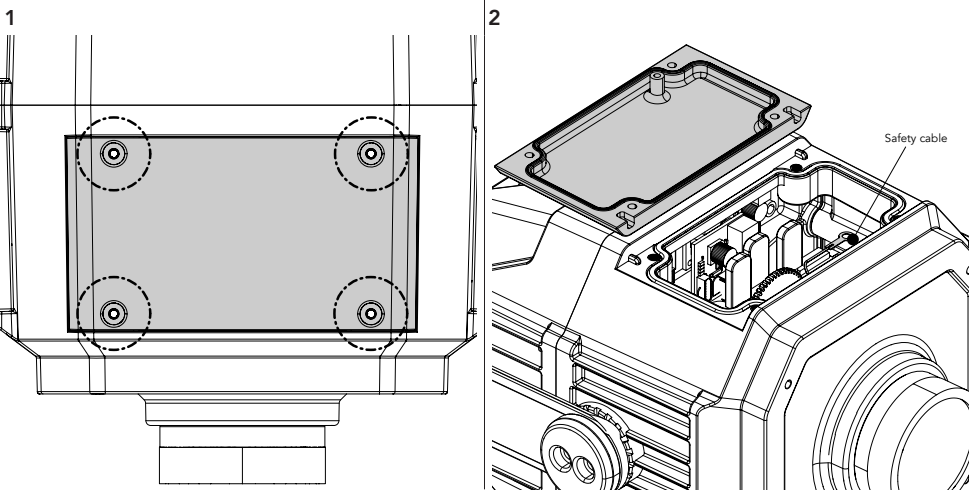
Color Macro					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
No Function	0	1	-	-	Default @ 0
Red	2	3	-	-	
Green	4	5	-	-	
Blue	6	7	-	-	
Cyan	8	9	-	-	
Magenta	10	11	-	-	
Yellow	12	13	-	-	
Dirty White	14	15	-	-	
Alice Blue	16	17	-	-	
Congo Blue	18	19	-	-	
Dark Steel Blue	20	21	-	-	
Deep Lavender	22	23	-	-	
Lilac Ting	24	25	-	-	
Daylight Blue	26	27	-	-	
Flame Red	28	29	-	-	
Bastard Amber	30	31	-	-	
Deep Orange	32	33	-	-	
Pale Gold	34	35	-	-	
Apricot	36	37	-	-	
Bright Blue	38	39	-	-	
Primary Green	40	41	-	-	
Special Lavender	42	43	-	-	
Pale Lavender	44	45	-	-	
Deep Golden Amber	46	47	-	-	
Medium Blue	48	49	-	-	
Bright Pink	50	51	-	-	
Mauve	52	53	-	-	
Dark Green	54	55	-	-	
Lee Green	56	57	-	-	
Dark Blue	58	59	-	-	
Light Blue	60	61	-	-	
Steel Blue	62	63	-	-	
Medium Blue-Green	64	65	-	-	
Peacock Blue	66	67	-	-	
Magenta	68	69	-	-	
Dark Pink	70	71	-	-	
Middle Rose	72	73	-	-	
Light Salmon	74	75	-	-	
English Rose	76	77	-	-	
Light Rose	78	79	-	-	
Orange	80	81	-	-	
Deep Amber	82	83	-	-	
Straw	84	85	-	-	
Light Amber	86	87	-	-	
Spring Yellow	88	89	-	-	
Dark Yellow Green	90	91	-	-	

Color Macro

Function	8 bit value		16 bit value		Note
	From	To	From	To	
Just Blue	92	93	-	-	
Sky Blue	94	95	-	-	
Lavender	96	97	-	-	
Light Lavender	98	99	-	-	
Pink Carnation	100	101	-	-	
Medium Pink	102	103	-	-	
Light Pink	104	105	-	-	
Sunset Red	106	107	-	-	
Dark Amber	108	109	-	-	
Gold Amber	110	111	-	-	
Medium Amber	112	113	-	-	
Fire	114	115	-	-	
Surprise Peach	116	117	-	-	
Straw Tint	118	119	-	-	
Medium Yellow	120	121	-	-	
Lee Minus Green	122	123	-	-	
Pale Gold	124	125	-	-	
Orange	126	127	-	-	
Deep Straw	128	129	-	-	
Rose Purple	130	131	-	-	
Deep Purple	132	133	-	-	
Soft Green	134	135	-	-	
Reserved for future use	136	211	-	-	
2800K	212	213	-	-	
3000K	214	215	-	-	
3200K	216	217	-	-	
3400K	218	219	-	-	
3600K	220	221	-	-	
3800K	222	223	-	-	
4000K	224	225	-	-	
4200K	226	227	-	-	
4400K	228	229	-	-	
4600K	230	231	-	-	
4800K	232	233	-	-	
5000K	234	235	-	-	
5200K	236	237	-	-	
5400K	238	239	-	-	
5600K	240	241	-	-	
6000K	242	243	-	-	
6500K	244	245	-	-	
7000K	246	247	-	-	
8000K	248	249	-	-	
9000K	250	251	-	-	
10000K	252	253	-	-	
Full On	254	255	-	-	

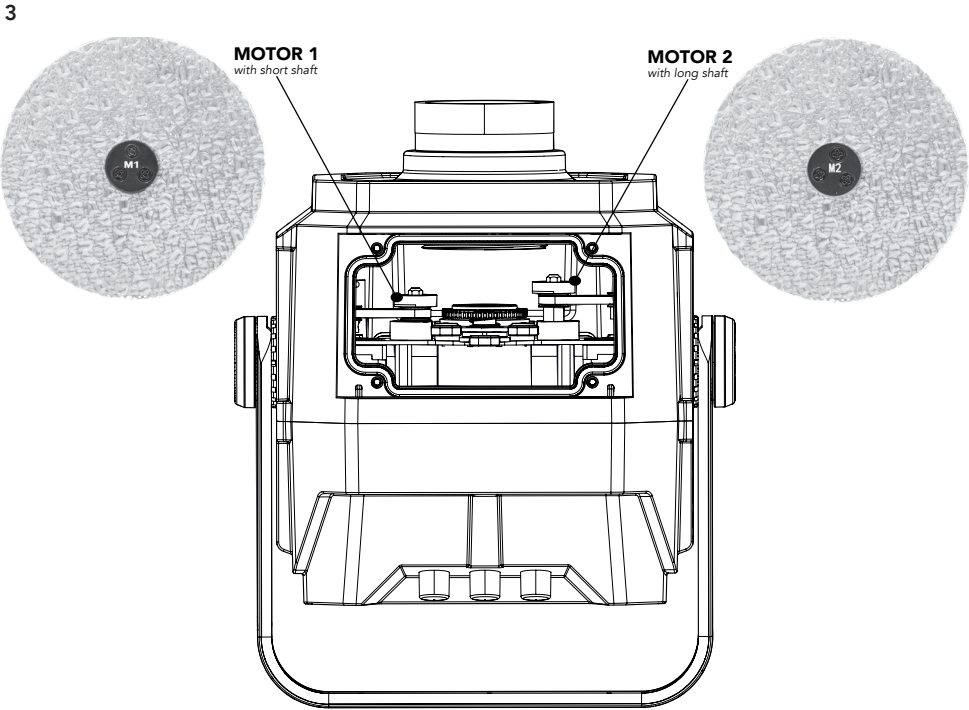
Control Channel					
Function	8 bit value		16 bit value		Note
	From	To	From	To	
No Function	0	1	-	-	Default @ 0
DIMMER CURVE LINEAR	2	3	-	-	Hold 3s to take function
DIMMER CURVE S-CURVE	4	5	-	-	
DIMMER CURVE SQUARE LAW	6	7	-	-	
DIMMER CURVE INVERSE SQUARE LAW	8	9	-	-	
DIMMER SPEED AUTO	10	11	-	-	
DIMMER SPEED FAST	12	13	-	-	
DIMMER SPEED MEDIUM	14	15	-	-	
DIMMER SPEED SLOW	16	17	-	-	
LED FREQUENCY 600HZ	18	19	-	-	
LED FREQUENCY 1200HZ	20	21	-	-	
LED FREQUENCY 2000HZ	22	23	-	-	
LED FREQUENCY 4000HZ	24	25	-	-	
LED FREQUENCY 6000HZ	26	27	-	-	
LED FREQUENCY 25KHZ	28	29	-	-	
DMX FAULT HOLD	30	31	-	-	
DMX FAULT BLACKOUT	32	33	-	-	
DMX FAULT STAND ALONE	34	35	-	-	
STAND ALONE MASTER DMX	36	37	-	-	
STAND ALONE MASTER NO DMX	38	39	-	-	
STAND ALONE SLAVE	40	41	-	-	
Reserved	42	43	-	-	
STAND ALONE FIXED COLORS	44	45	-	-	
STAND ALONE WHITE PRESETS	46	47	-	-	
STAND ALONE COLOR MACROS	48	49	-	-	
STAND ALONE MANUAL COLORS	50	51	-	-	
INVERT ROTATION OFF	52	53	-	-	
INVERT ROTATION ON	54	55	-	-	
FAN MODE AUTO	56	57	-	-	
FAN MODE HIGH	58	59	-	-	
FAN MODE SILENT	60	61	-	-	
FAN MODE OFF	62	63	-	-	
KEY LOCK OFF	64	65	-	-	
KEY LOCK ON	66	67	-	-	
Reserved	68	251	-	-	
Reset all channel controlled	252	253	-	-	
Reserved	254	255	-	-	

14 - ANIMATION WHEEL / WATER EFFECT REPLACEMENT



Remove the marked four screws of the top protective cover following the order 1-4 (1). Lift the top cover off the fixture. For ease of access, and if it is safe to do so, you can unclip the safety cable and remove the cover completely from the fixture (2).

NOTE: When closing the top cover, first lightly tighten all the screws, then fully tighten them in the order of 1-4 (1), ensuring that the rubber gasket is properly compressed.



Insert the Water Effect Wheel with M1 mark on the short motor shaft (MOTOR 1) and Effect Wheel with M2 on the long motor shaft (MOTOR 2).

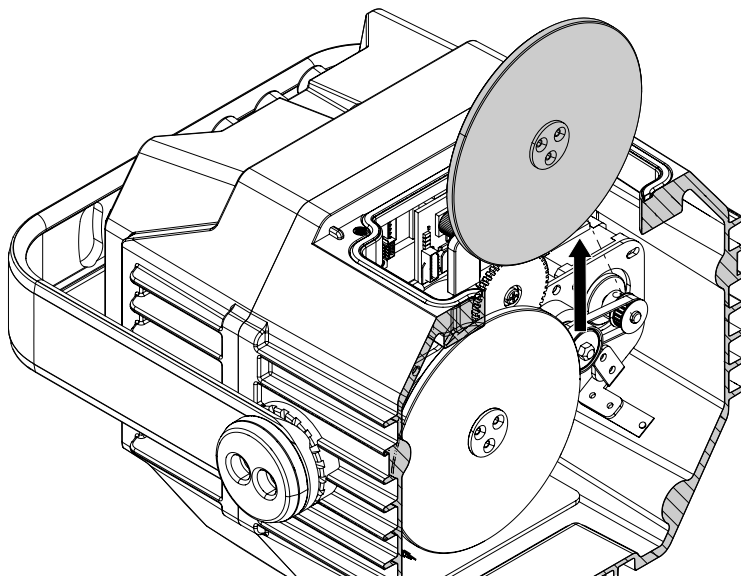
Water Effect Wheel are included with the projector package, but can also be ordered separately with the following codes:

- MFX100WE1: Standard structured glass effect wheel, short shaft 1 (M1);
- MFX100WE2: Standard structured glass effect wheel, long shaft 2 (M2).

Color and gobo wheels can be ordered separately with the following codes:

- MFX100CW: Color wheel, short shaft 1 (M1);
- MFX100GW: Fix gobo wheel, long shaft 2 (M2).

4

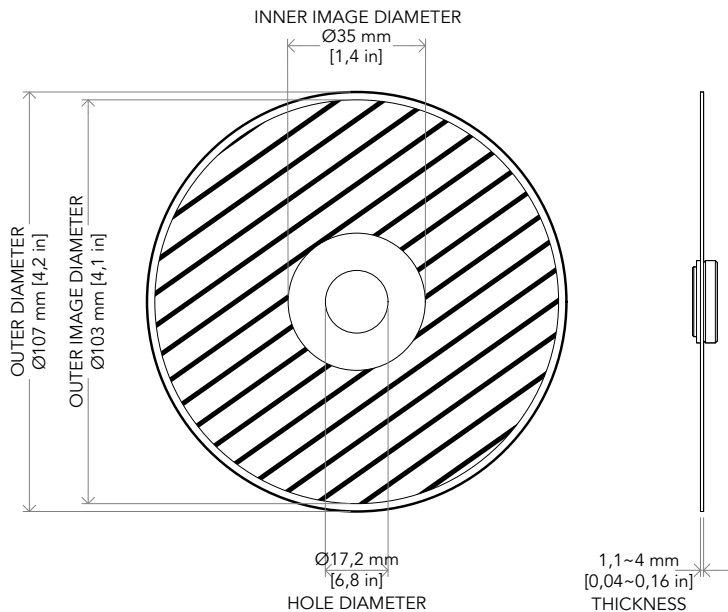


The coupling between the surface washer of the animation wheel (A) and the seat face (B) is magnetic. Then simply detach the accessory from its seat and slide it out from above.

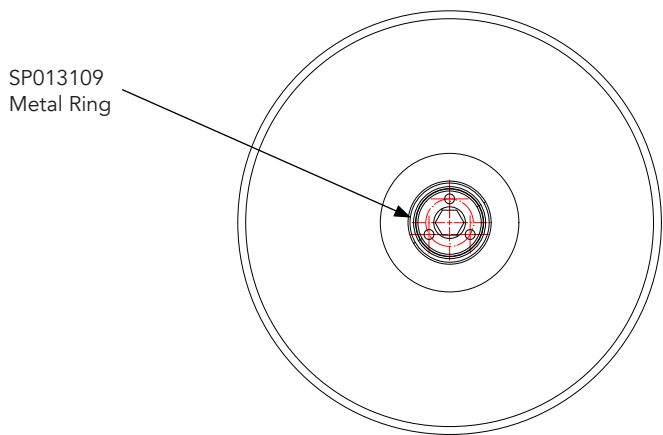
Fig. 11

15 - CUSTOM ANIMATION WHEEL

Below the measurements to make a custom animation wheel:



Below the drawing of metal ring for animation wheel:

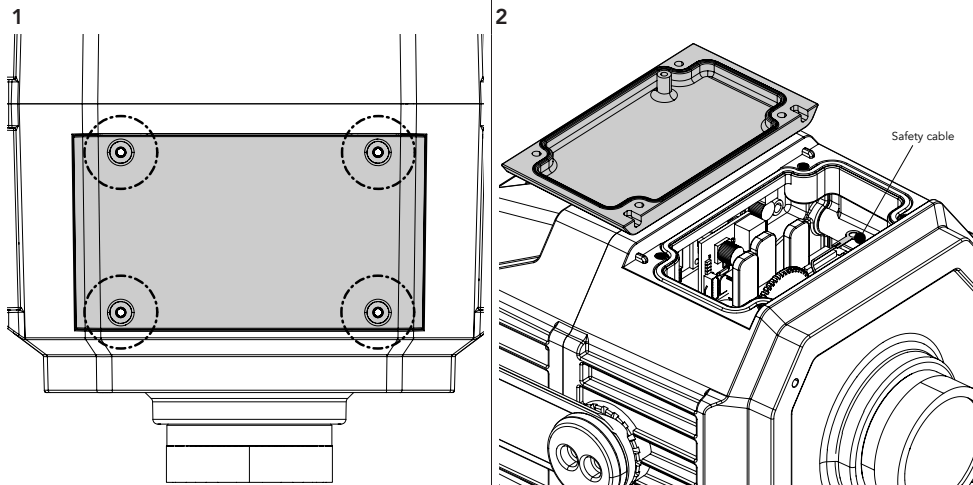


NOTE: The metal ring can be ordered from us as a spare part with code SP013109.

Fig. 12

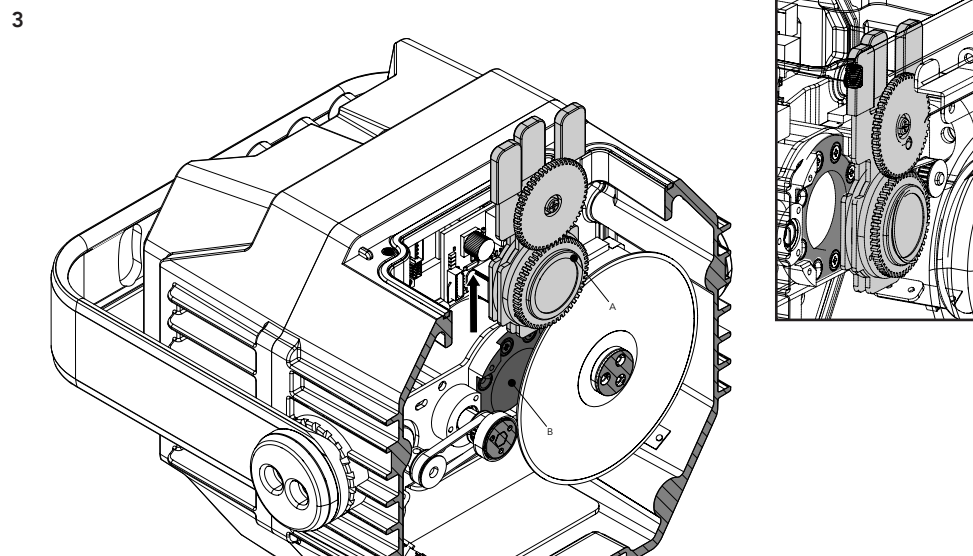
16 - COLOR FILTER AND GOBO MOUNTING

COLOR HOLDER / GOBO HOLDER (CODE MFX100CH - MFX100GH)



Remove the marked four screws of the top protective cover following the order 1-4 (1). Lift the top cover off the fixture. For ease of access, and if it is safe to do so, you can unclip the safety cable and remove the cover completely from the fixture (2).

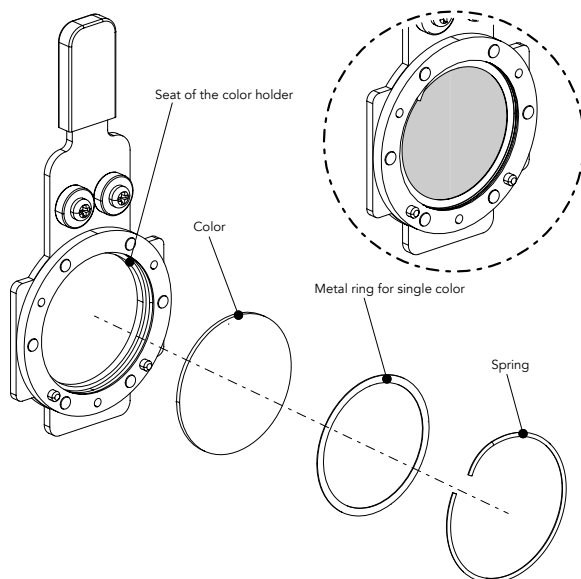
NOTE: When closing the top cover, first lightly tighten all the screws, then fully tighten them in the order of 1-4 (1), ensuring that the rubber gasket is properly compressed.



The coupling between the surface accessory (A) and the seat face (B) is magnetic. Then simply detach the accessory from its seat and slide it out from above.

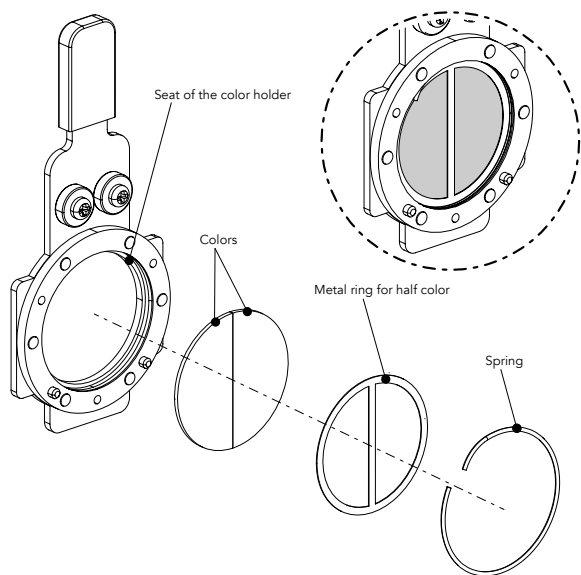
Please turn! →

4 - COLOR HOLDER FOR SINGLE COLOR



Insert the color filter, the metal ring for single color and the spring in sequence in the seat of the color holder accessory.

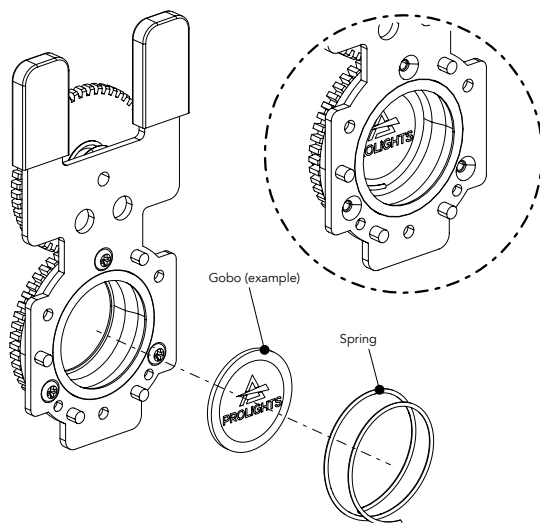
5 - COLOR HOLDER FOR HALF COLOR



Insert the colors filter, the metal ring for half color and the spring in sequence in the seat of the color holder accessory.

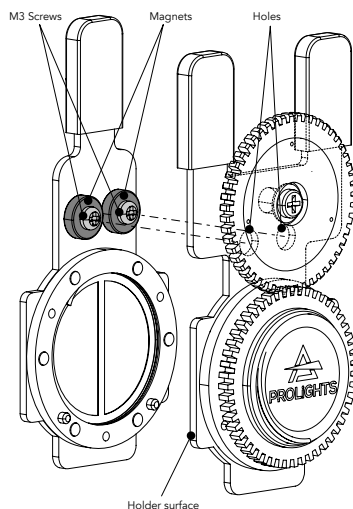
Please turn! →

6 - GOBO HOLDER



Insert the spring and the gobo in sequence in the seat of the gobo holder accessory.

7 - COLOR HOLDER AND GOBO HOLDER COUPLING



To couple the color holder accessory and the gobo holder, center the screws of the magnets in the two holes on the surface of the gobo holder. The magnets on the surface of the color holder and the surface of the gobo holder will magnetically snap together.

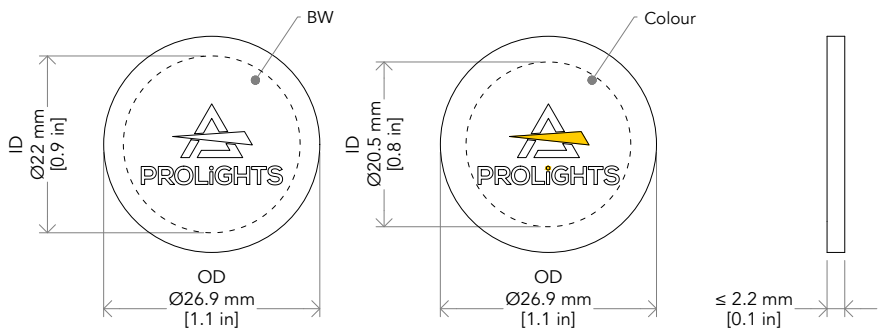
The color and gobo holder accessory must be inserted from above and positioned in the marked projector seat to hook to the fixture. The coupling will take place magnetically between the surface of the seat and of the accessory.

NOTE: Color holder and gobo holder must always be coupled together even if the color filter is not used.

Fig. 14

WARNING: Is recommended to unhook all accessories (color and gobo holder, animation wheels) during transport operations in order to prevent them unhooking and breaking it or breaking parts of the fixture.

17 - GOBO SIZE



ATTENTION! Insert gobos with mirror surface toward the light source.

Fig. 15

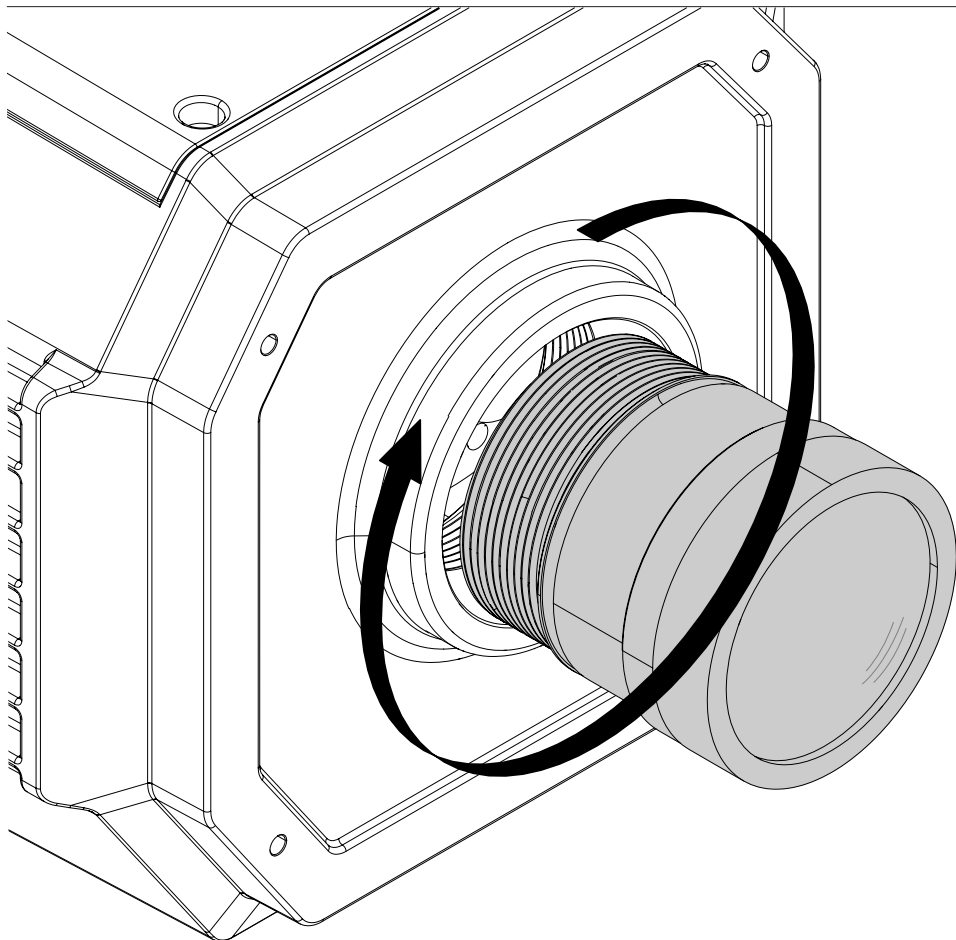
18 - ERROR MESSAGES

The error is shown on the unit display. In the table below, the "ERROR SHOWED ON SCREEN" column lists the possible errors, accompanied by a possible cause ("POSSIBLE" CAUSES "column).

ERROR SHOWED ON SCREEN	POSSIBLE CAUSES
[LED ERROR]	This error message is displayed when the LED is switched OFF without a command from the product control system
[LED TEMPERATURE ERROR]	This error message indicates that an overheating on the LED has occurred and the lamp has been switched OFF by the product protection system.
[LED TEMPERATURE SENSOR ERROR]	LED sensor damaged (open or in short circuit)
[LED DRIVER TEMPERATURE ERROR]	This error message indicates that an overheating on the LED DRIVER has occurred and the lamp has been switched OFF by the product protection system.
[LED DRIVER TEMPERATURE SENSOR ERROR]	LED DRIVER sensor damaged (open or in short circuit)
[LED AIR IN (LOWER) FAN ERROR]	Air in blower for cooling the lamp failed, the lamp has been switched OFF.
[LED AIR OUT (UPPER) FAN ERROR]	Air out blower for cooling the lamp failed, the lamp has been switched OFF.
[MOTOR PCB ERROR]	Motor pcb not detected

19 - ACCESSORIES INSTALLATION

LENS ACCESSORY



To mount the lens accessory, screw the threaded part of the optics with the threaded hole on the projector.

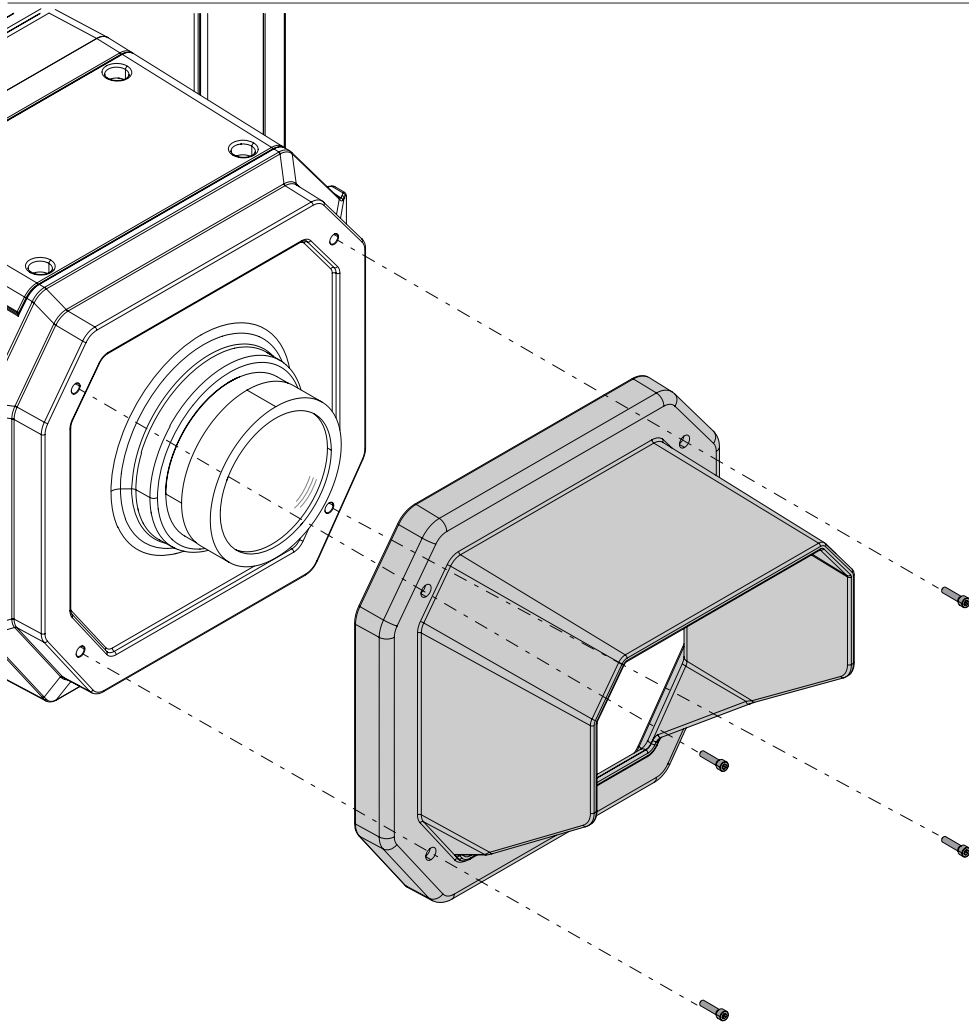
Lenses are an optional accessory and can be chosen according to the application with the following codes: MFX100LWGN / MFX100LWTM / MFX100LWTW / MFX100LWGVW / MFX100LGBM / MFX-100LGBW.

NOTE 1: Pay attention when you screw the 50° and 70° optics into the device there is unfortunately no end stop. The optics will hit the animation wheel and can destroy it.

NOTE 2: Pay attention when screwing the optic into the fixture the ring seal is present on the lens. otherwise the IP rating is lost and water may enter in the fixture.

To help yourself with lens installation, spread the supplied grease on the smooth part of the fixing hole to make the lens seal slide better.

Fig. 16



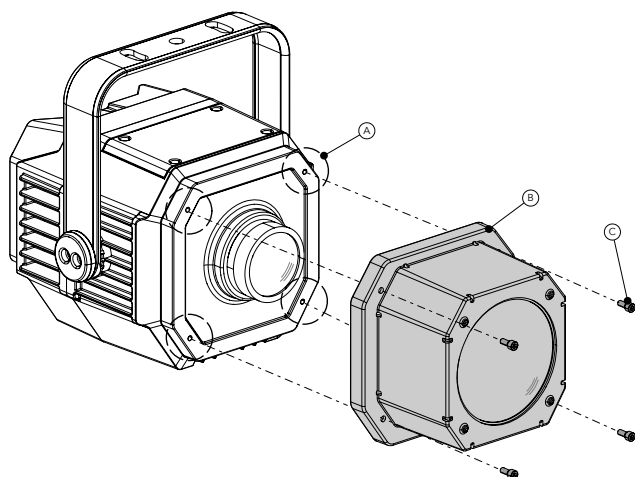
The snoot is an accessory used to protect the lens from rain. To mount the snoot accessory, screw the screws through the four holes present.

Can be ordered with the following codes:

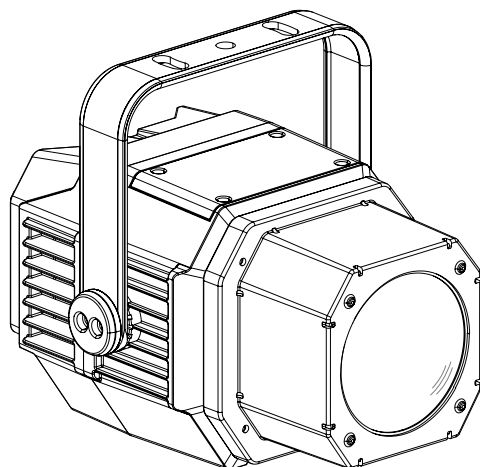
- MFX100SNOOTBK: Snoot for MOSAICOFX100FCBK series, black;
- MFX100SNOOTGY: Snoot for MOSAICOFX100FCGY series, gray.

Fig. 17

1



2



Mount the front cover closed with glass accessory (B) in the four holes on the projector hardware (A) using the four screws supplied (C).

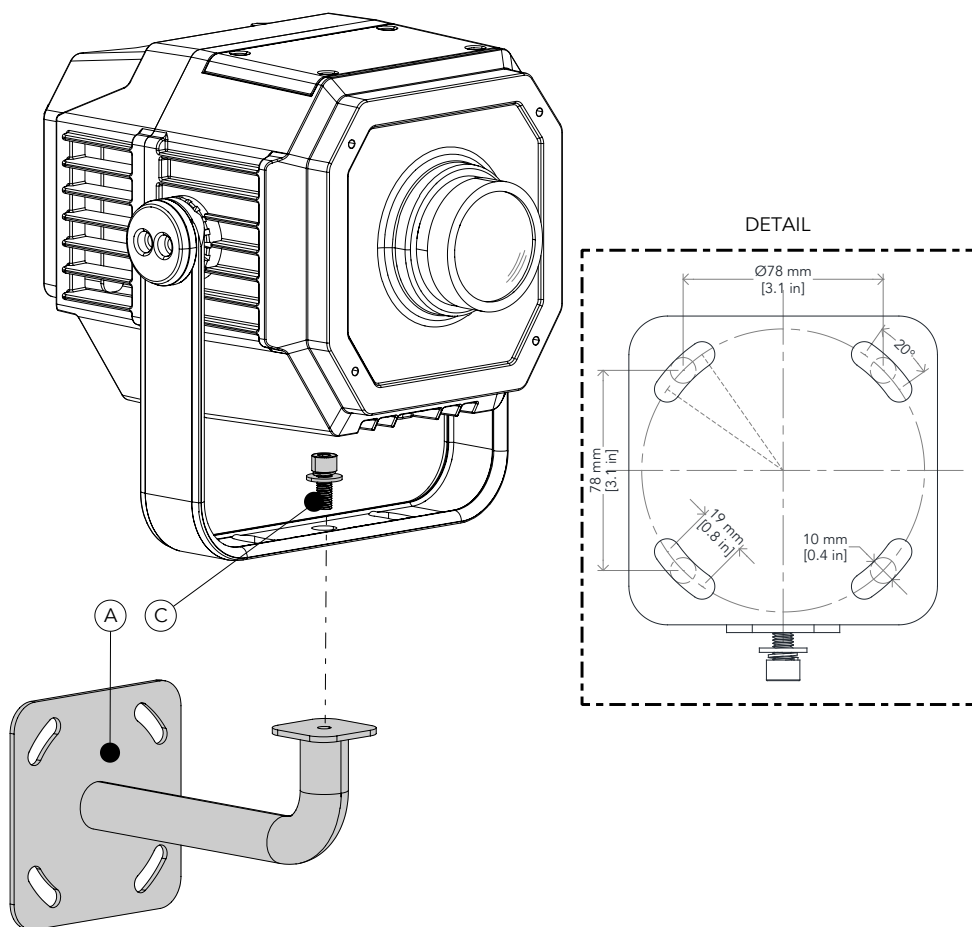
Anti tampering full snoot with front glass is a useful accessory to prevent tampering by outsiders with the lens and also to protect it from the weather.

Can be ordered with the following codes:

- MFX100SNOOTPROTGY: Anti tampering full snoot with front glass, gray;
- MFX100SNOOTPROTBK: Anti tampering full snoot with front glass, black.

Fig. 18

WALL BRACKET

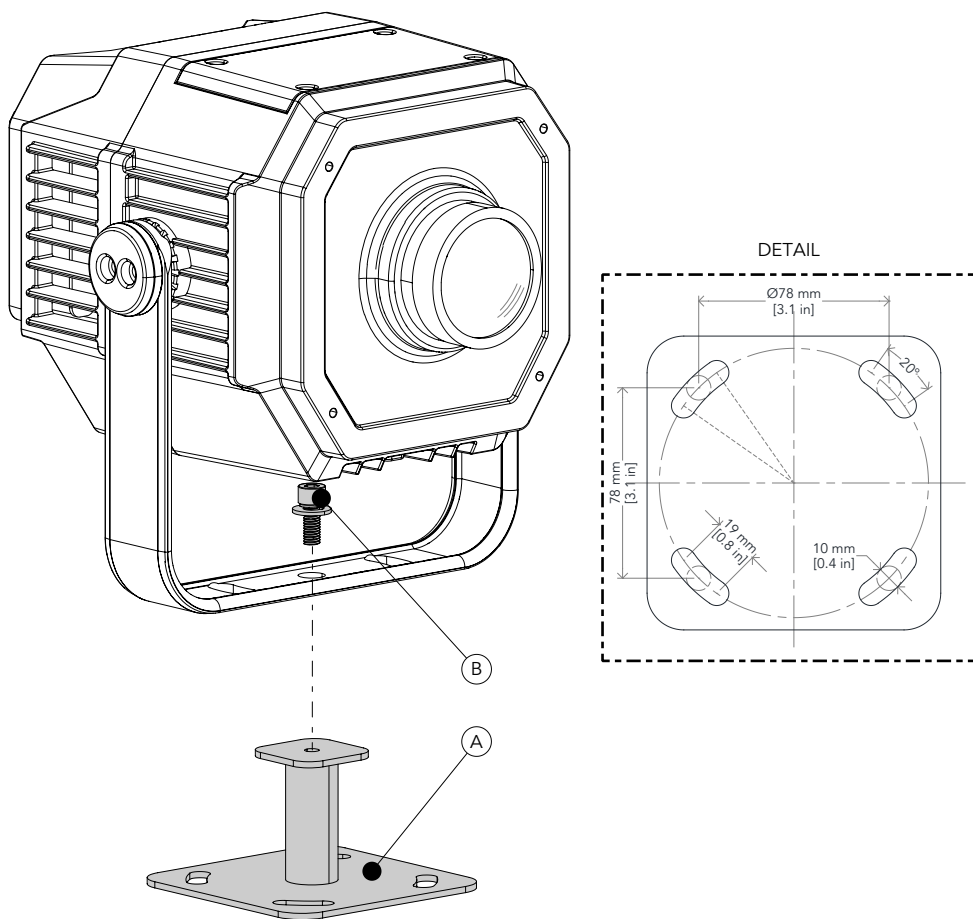


To mount the marked wall bracket accessory (A), screw the bracket to the wall using four screws. Please refer to the measurements in the illustration (DETAIL). Then the projector bracket must be mounted on the accessory arm using the M8x20 and washer screw provided (C).

Can be ordered with the following codes:

- MFX100WBRAKGY: Wall bracket for MOSAICOFX100FC, gray;
- MFX100WBRAKBK: Wall bracket for MOSAICOFX100FC, black.

Fig. 19

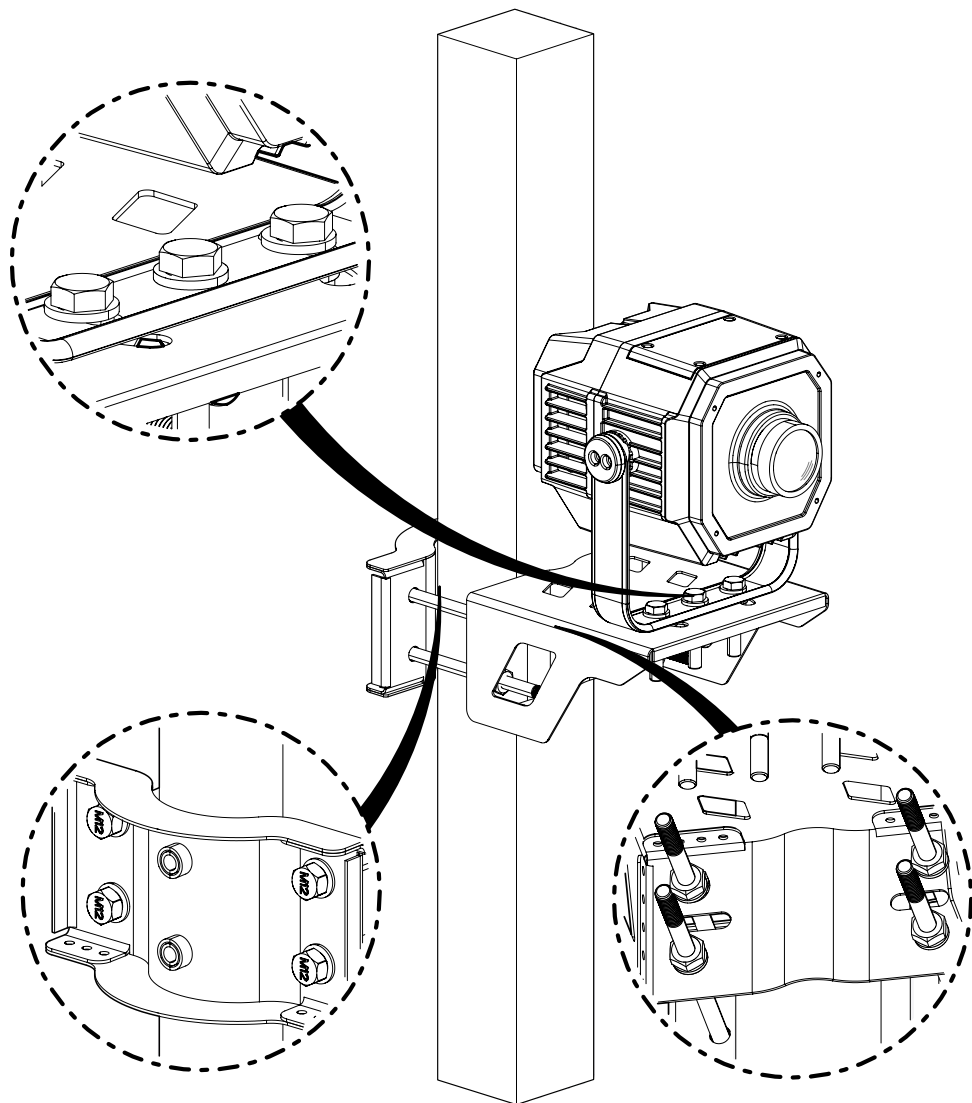


To mount the marked surface bracket accessory (A), screw the bracket to the wall or surface using four screws. Please refer to the measurements in the illustration (DETAIL). Then the projector bracket must be mounted on the accessory arm using the M8x20 and washer screw provided (C).

Can be ordered with the following codes:

- MFX100WBRAKGY: Wall bracket for MOSAICOFX100FC, gray;
- MFX100WBRAKBK: Wall bracket for MOSAICOFX100FC, black.

Fig. 20



NOTE

Do not mount the bracket on a support whose surface shows deformations, injuries, crushing, etc. Both the bracket and the unit must be secured with a safety cable.

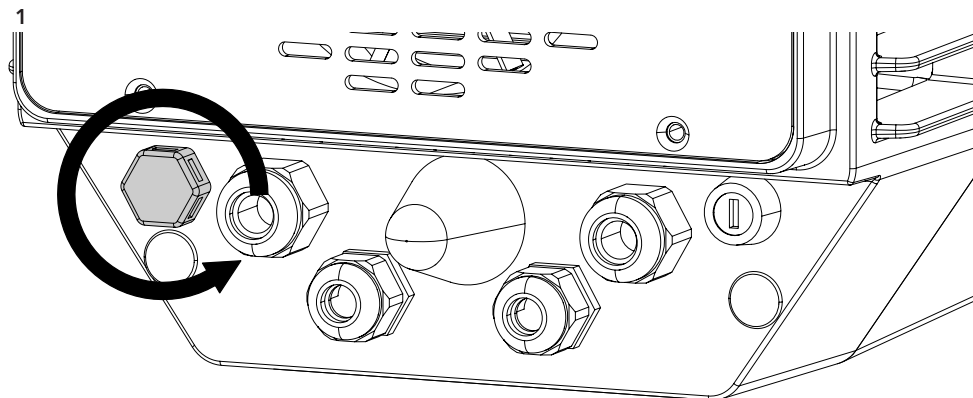
Can be ordered with the following codes:

- MOSUNIBRACKJR: Bracket for MOSAICOJR for wall mounting and suspension on poles.

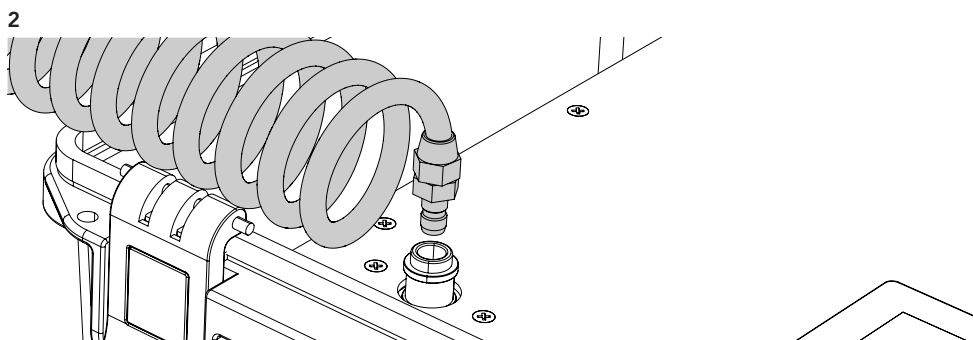
Fig. 21

20 - TEST OF IP66 RATING

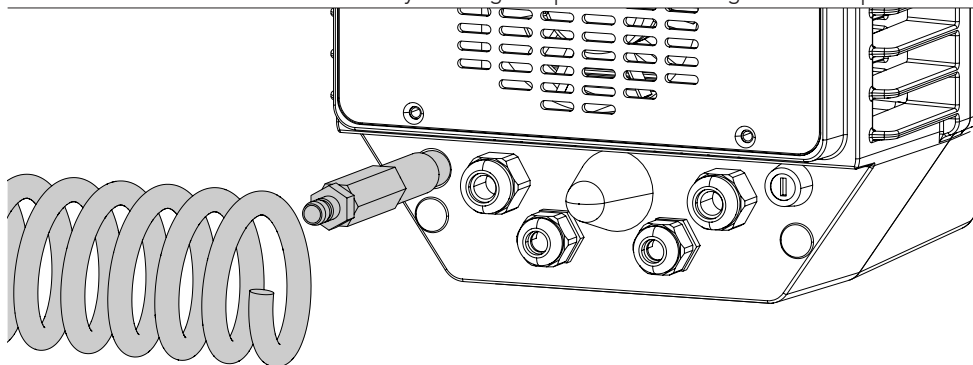
To check sealing after servicing use the IPTESTBOX.



After installing any lens, remove the gore valve from the connections panel.



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.

Fig. 22

21 - MAINTENANCE

MAINTENANCE AND CLEANING THE PRODUCT

WARNING: Disconnect from the mains before starting any maintenance work

It is recommended to clean the front at regular intervals, from impurities caused by dust, smoke, or other particles to ensure that the light is radiated at maximum brightness.

- For cleaning, disconnect the main plug from the socket. Use a soft, clean cloth moistened with a mild detergent. Then carefully wipe the part dry. For cleaning other housing parts use only a soft, clean cloth. Never use a liquid, it might penetrate the unit and cause damage to it.
- The user must clean the product periodically to maintain optimum performance and cooling. The user may also upload firmware (product software) to the fixture via the DMX signal input port or USB port using firmware and instructions from PROLIGHTS.
- The frequency of such maintenance operations is to be performed according to various factors, such as the amount of the use and the condition of the installation environment (air humidity, presence of dust, salinity, etc.). It is recommended that the product is subject to annual service by a qualified technician for special maintenance involving at least the following procedures:
 - General cleaning of internal parts.
 - For all the parts subject to friction, using lubricants specifically supplied by PROLIGHTS.
 - General visual check of the internal components, cabling, mechanical parts, etc.
 - Electrical, photometric and functional checks; eventual repairs.
 - Cleaning the lenses. Only use neutral soap and water to clean the lenses, then dry it carefully with a soft, non-abrasive cloth.

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

- 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 the strictest possible calibration procedures and use the best quality materials available to ensure optimum performance and the longest possible component lifetimes. However, optical components are subject to wear and tear over the life of the product, resulting in gradual changes in colours over many thousands of hours of use. 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 optical components if their characteristics are affected by wear and tear after an extended period of use and if you require fixtures to perform within very precise optical and colour parameters.
- Do not apply filters, lenses or other materials on lenses or other optical components. Use only accessories approved by PROLIGHTS.

REPLACING THE FUSE

WARNING: Before replacing the fuse, unplug the product from the mains.

- Remove the old fuse from the housing with a suitable screwdriver (anticlockwise) and replace it with one of the same type and of the same classification (T2A 250V).

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. In addition, especially the parts of the front lens holder have to be checked mechanically (by means of movement by the part) if it is firmly fastened to the fixture. 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.
- This checking is necessary for both fixed installations and preparing product for renting. Any free moving parts inside of the product, cracked cover/housing or any part of front lens not sitting properly in place need to be immediately replaced.

TROUBLESHOOTING

Problems	Possible causes	Checks and remedies
Product doesn't power ON	No power to the product.	Check that power is switched ON and cables are plugged in.
	Fuse blown or internal fault.	- Check if the Fuse is intact and eventually replace it if necessary. - 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.
Product reset correctly but does not respond correctly to the controller.	Bad signal connection.	Inspect connections and cables. Fix eventual bad connections. Repair or replace damaged cables.
	Signal connection not terminated.	Insert DMX termination plug in signal output socket of the last product on the signal line.
	Incorrect addressing of the product.	Check the product address and control settings
	One of the product is defective and is corrupting the signal transmission on the signal line.	Unplug the XLR in and out connectors and connect them directly together to bypass one product at a time until normal operation is regained. Once found the error, have that fixture serviced by a qualified technician.
Timeout error after fixture reset.	One or more hardware components requires mechanical adjustments.	Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Mechanical effect loses position	Mechanical hardware require cleaning, adjustment or lubrication.	Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
Light output turn OFF Intermittently	Fixture is too hot.	- Check product stored error messages. - Allow product to cool. - Clean the product and airflow filters. - Reduce ambient temperature.
	Hardware failure (temperature sensor, fans, Light source...).	Check product stored error messages for more information. Contact PROLIGHTS Service or an authorized service partner.
General low light intensity	Dirty lens assembly.	Clean the fixture regularly.
	Dirty or damaged filters.	Install lens assembly properly.

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.

[illegible]

