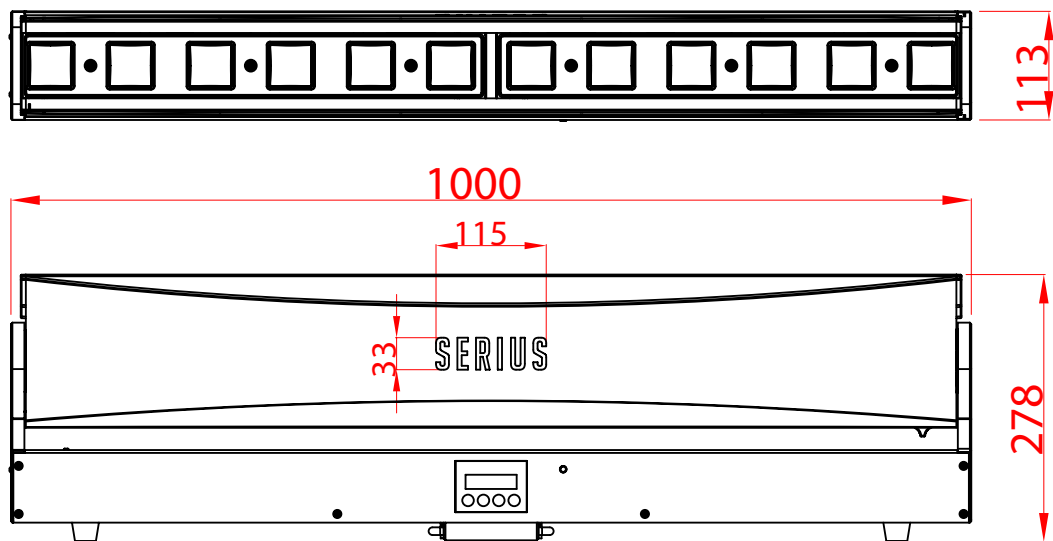


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# DIMENSIONS

ALL DIMENSIONS ARE IN MILLIMETERS



# SAFETY INSTRUCTION



## WARNING!

Read the safety precautions in this section before installing, powering, operating or servicing this product.

The following symbols are used to identify important safety information on the product and in this manual:



**DANGER!**  
Safety hazard.  
Risk of severe injury or death.



**DANGER!**  
Hazardous voltage. Risk of lethal or severe electric shock.



**WARNING!**  
Fire hazard.



**WARNING!**  
LED light emission. Risk of eye injury.



**WARNING!**  
Burn hazard. Hot surface. Do not touch.



**WARNING!**  
Wear protective eyewear.



**WARNING!**  
Refer to user manual.



**Warning! Risk Group 2 (high risk) LED product according to EN 62471. Do not look into the beam at a distance of less than 0.5 meters from the front surface of the product. Do not view the light output with optical instruments or any device that may concentrate the beam.**

This product is for professional use only. It is not for household use.



This product presents risks of severe injury or death due to fire and burn hazards, electric shock and falls.

Read this manual before installing, powering or servicing the fixture, follow the safety precautions listed below and observe all warnings in this manual and printed on the fixture. If you have questions about how to operate the fixture safely, please contact your supplier.



### PROTECTION FROM ELECTRIC SHOCK

- Disconnect the fixture from AC power before removing or installing any cover or part and when not in use.
- Always ground (earth) the fixture electrically.
- 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.
- Power input and throughput cables must be rated 20 A minimum, have three conductors 1.5 mm<sup>2</sup> (16 AWG) minimum conductor size and an outer cable diameter of 5 - 15 mm. Cables must be hard usage type (SJT or equivalent) and heat-resistant to 90° C minimum.
- Use only PowerCON TRUE 1<sup>®</sup> cable connectors to connect to power input sockets. Use only PowerCON TRUE 1<sup>®</sup> cable connectors to connect to power through put sockets.
- Isolate the fixture from power immediately if the power plug or any seal, cover, cable, or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reapply power until repairs have been completed.
- Refer any service operation not described in this manual to a qualified technician.
- Socket outlets used to supply fixture fixtures with power or external power switches must be located near the fixtures and easily accessible so that the fixtures can easily be disconnected from power.



## PROTECTION FROM BURNS AND FIRE



- The exterior of the fixture becomes hot during use. Avoid contact by persons and materials. Allow the fixture to cool for at least 5 minutes before handling.
- Keep all combustible materials (e.g. fabric, wood, paper) at least 100 mm away from the fixture.
- Keep flammable materials well away from the fixture.
- Ensure that there is free and unobstructed airflow around the fixture.



- Do not illuminate surfaces within 200 mm of the fixture.
- Do not attempt to bypass thermostatic switches or fuses.
- If you relay power from one fixture to another using power throughput sockets, do not connect more than ten fixture fixtures in total to each other in an interconnected chain.
- Connect only other fixture fixtures to fixture power throughput sockets.
- Do not connect any other type of device to these sockets.
- Do not stick filters, masks or other materials onto any optical component.
- Do not modify the fixture in any way not described in this manual.

## PROTECTION FROM INJURY



- Do not look continuously at LEDs from a distance of less than 0.5 meters from the front surface of the fixture without protective eyewear such as shade 4-5 welding goggles. At less than this distance, the LED emission can cause eye injury or irritation. At distances of 0.5 meters and above, light output is harmless to the naked eye provided that the eye's natural aversion response is not overcome.
- Do not look at LEDs with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.

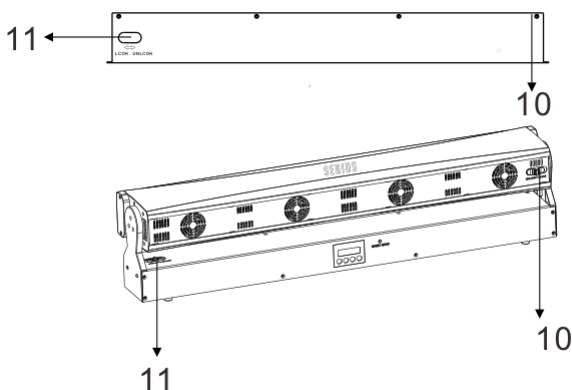
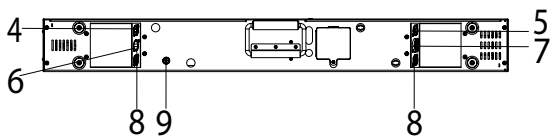
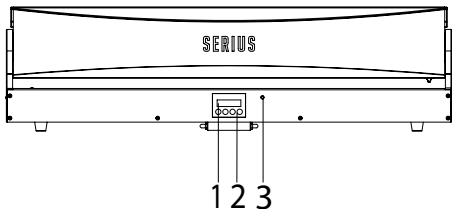


- Ensure that persons are not looking at the LEDs from within 0.5 meters when the product lights up suddenly. This can happen when power is applied, when the product receives a DMX signal, or when SERVICE menu items are selected.
- Fasten the fixture securely to a fixed surface or structure when in use. The fixture is not portable when installed.
- Ensure that any supporting structure and/or hardware used can hold at least 10 times the weight of all the devices they support.



- Allow enough clearance around the head to ensure that it cannot collide with an object or another fixture when it moves.
- Check that all external covers and rigging hardware are securely fastened.
- Block access below the work area and work from a stable platform whenever installing, servicing or moving the fixture.
- Do not operate the fixture with missing or damaged covers, shields or any optical component.

# FIXTURE OVERVIEW



1	Button	MENU	To select the programming functions
		DOWN	To go backward in the selected functions
		UP	To go forward in the selected functions
		ENTER	To confirm the selected functions
2	Function Display	Show the various menus and the selected functions	
3	Battery Display	Acces menu without power	
4	DMX IN	5 pin DMX input	
5	DMX OUT	5 pin DMX output	
6	POWER IN	To connect to the mains supply	
7	POWER OUT	power out for daisy chain	
8	ETHERNET	Artnet	
9	FUSE(T10A)	Protect the unit from damage overcurrent	
10	PUSH BUTTON 1 (Head lock button)	Before the fixture is powered on, please "UNLOCK" the head	
11	PUSH BUTTON 2	When the fixture is inline with others this locks the position	

# INTRODUCTION

## AFFORDABLE LIGHTING ESSENTIAL

- Unique bracket design
- Touring proof
- Smooth RGBW color mixing
- Fast zoom
- PowerCON TRUE 1 @ in & out
- RDM ready
- Art NET

## USING FOR THE FIRST TIME

**Warning! Read “Safety Information” before installing, powering, operating or servicing the fixture. Before applying power to the fixture:**

Check that the local AC mains power source is within the fixture’s power voltage and frequency ranges.

See “Power cables and power plug” on page 6. Install a PowerCON TRUE 1 @ power input connector power cable.

# AC POWER



**Warning! Read “Safety Information” starting on before connecting the fixtures to AC mains power.**

**Warning! For protection from electric shock, the fixture must be grounded (earthed). The power distribution circuit must be equipped with a fuse or circuit breaker and ground-fault (earth-fault) protection.**

**Warning! Socket outlets or external power switches used to supply the fixture with power must be located near the fixture and easily accessible so that the fixtures can easily be disconnected from power.**



**Important! Do not insert or remove live PowerCON TRUE 1 @ connectors to apply or cut power, as this may cause arcing at the terminals that will damage the connectors.**

**Important! Do not use an external dimming system to supply power to the fixture, as this may cause damage to the fixture that is not covered by the product warranty.**

The fixture can be hard-wired to an electrical installation if you want to install it permanently, or a power plug that is suitable for the local power outlets can be installed on the power cable.



## POWER VOLTAGE

**Warning! Check that the voltage range specified on the fixtures serial number label matches the local AC mains power voltage before applying power to the fixture.**

The fixtures accepts AC mains power at 100-240 V nominal, 50/60 Hz. Do not apply AC mains power to the fixture at any other voltage than specified.

# POWER CABLES

Power input and throughput cables must be rated 16A minimum, have three conductors 1.5 mm<sup>2</sup> (16 AWG) minimum conductor size and an outer cable diameter of 5 - 15 mm. Cables must be hard usage type (SJT or equivalent) and heat-resistant to 90°C minimum. In the EU the cable must be HAR approved or equivalent.

If you install a power plug on the power cable, install a grounding-type (earthed) plug that is rated 16A minimum. Follow the plug manufacturer's instructions. Table 1 shows standard wire color-coding schemes and some possible pin identification schemes; if pins are not clearly identified.




Wire Color (EU models)	Wire Color (US models)	Conductor	Symbol
Brown	Black	Live	L
Blue	White	Neutral	N
Yellow/Green	Green	Ground (earth)	 or 



Table 1 : Wire color-coding and power connections

# RELAYING POWER TO OTHER DEVICES

Warning! Do not connect more than 7 fixtures in total to AC mains power in one interconnected chain. Power can be relayed to another device via the PowerCON TRUE 1  throughput socket.

If you daisy chain the fixtures in a chain so that they all draw AC mains power via the first fixture, certain points must be respected:

A heavy duty, three-conductor, 16 AWG or 1.5 mm<sup>2</sup> cable with SJT or equivalent cable jacket must be used to connect the first fixture to AC mains power.

- PowerCON TRUE 1  connectors must be used to draw AC mains power from the fixtures power throughput sockets and yellow PowerCON TRUE 1  connectors must be used to supply power at the fixture's power input sockets.
- No matter what the AC mains power voltage is, do not connect more than 7 fixture in total ( including the first fixture) to AC mains power in one interconnected daisy chain using power input and through out connectors.

# DATA LINK

A DMX 512 data link is required in order to control a fixture via DMX. The fixture has 5-pin XLR connectors for DMX data input and output. The pin-out on all connectors is pin 1 = shield, pin 2 = cold (-), and pin 3 = hot (+) Pins 4 and 5 in the 5-pin XLR connectors are not used.

# TIPS FOR RELIABLE DATA TRANSMISSION

To connect the fixture to data:

1. Connect the DMX data output from the controller to the 5-pin XLR connector of the nearest fixture.
2. Connect the DMX output of the fixture closest to the controller to the DMX input of the next fixture and continue connecting fixtures output to input.



# PHYSICAL INSTALLATION



Warning! The fixture must be either fastened to a flat surface such as a stage or wall, or clamped to a truss or similar structure in any orientation using a rigging clamp.

Warning! If the fixture can cause injury or damage if it falls, attach an approved safety cable to one of the safety cable attachment points on the base (see "Fixture overview").

Check that all surfaces to be illuminated are minimum 200 mm. from the fixture, that combustible materials (wood, fabric, paper, etc.) are minimum 100 mm. from the fixture, that there is free airflow around the fixture and that there are no flammable materials nearby.

## FASTENING THE FIXTURE TO A FLAT SURFACE

The fixture can be fastened to a fixed flat surface that is oriented at any angle. Check that the surface can support at least 10 times the weight of all fixtures and equipment to be installed on it.

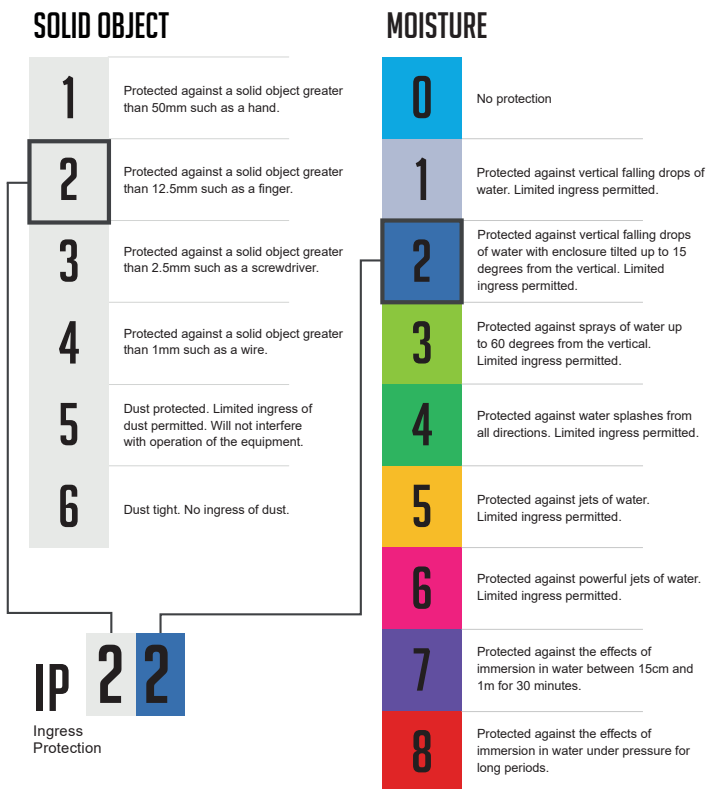


Warning! The supporting surface must be hard and flat or cooling may be blocked, which will cause overheating. Fasten the fixture securely. Do not stand it on a surface or leave it where it can be moved or can fall over. Attach a securely anchored safety cable to the safety cable attachment point (see "Fixture overview") if the fixture is to be installed in any location where it may fall and cause injury or damage if the primary attachment fails.

1. Block access under the work area. Working from a stable platform, hang the fixture on the truss with the arrow on the base towards the area to be illuminated. Tighten the rigging clamp.
2. Secure the fixture against clamp failure with a secondary attachment such as an approved safety cable that is rated for the weight of the fixture using one of the attachment points at the edges of the base (see "Fixture overview"). Do not use any other part of the fixture as a safety cable attachment point.

## OUTDOOR IP-RATED FIXTURES

CLF products are applied to official classified IP norm levels. For this product the IP rate is IP22 when using the covers for the chassis parts. Typical use for outdoor rated stage events with normal weather acceptance. So no heavy rain, because then the water pressure over exceeds the IP norm.



## CONDENSATION/MOISTURE INSIDE HOUSING

Because of high humidity levels during production condensation can occur inside the housing. This is mostly visible on the coldest parts of the fixture, like the front glass or display. To prevent this problem we work with special conditioned areas for outdoor fixtures. Because of the breathing air valves it is still possible to get humidity inside the fixture. This will evaporate slowly. Do not put wet fixtures in a flightcase, this will help humidity enter the fixture.

## FIXTURES TEMPERATURE SPECIFICATION

Make sure the fixture is used within its working temperature range of 0° - 40°. Outside this range we cannot guarantee correct operation.

## TEMPORARY USAGE:

Stage event equipment is designed with temporary use in mind. Our product purpose is for theatre, festival, (disco) clubs and indoor & outdoor concerts. Long term use is possible but keep in mind that it can bring damage to aging materials and affect the coated surface (i.e. stainless steel). Rubber sealings will be negatively affected after long-term UV exposure and should be checked by qualified service technicians over time.

Tighten screws too hard will also affect the IP-rating.

# SETUP

Warning! Read "Safety Information" before installing, powering, operating the fixture.

## CONTROL PANEL AND MENU NAVIGATION

The onboard control panel and backlit graphic display are used to set the fixture's DMX address, configure individual fixture settings (personality), read out data and execute service utilities. See "Onboard control menus" for a complete list of menus and commands.

Using the control buttons

- To enter the menu select [MENU].
- Press [UP] and [DOWN] to scroll within a menu or adjust values.
- To enter a menu, select a function or apply a selection, press [ENTER].
- To escape a function or move back one level in the menu structure, press [MODE].

## DMX ADDRESS

The DMX address, also known as the start channel, is the first channel used to receive instructions for the controller. For independent control, each fixture must be assigned its to a separate channel. The DMX address can be configured by using the DMX ADDRESS menu in the control panel. For setting the DMX address press [ENTER] before you can change the address.

- The fixture is fully RDM ready. So when you are using a RDM ready console you can address the unit and read out its complete status. For RDM functions please refer to the ANSI/ESTAE1.20-2006 standard

# CONTROL PANEL

Here you can set all functions for the fixture.

## PERSONALITY

Dimmer speed	To select Dimmer Speed, press the ENTER button to confirm. Use the UP/DOWN button to select Smooth or Fast, press the ENTER button to store. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.
Dimmer curve	To select Dimmer Curve, press the ENTER button to show the DIMMER CURVE on the display. Use the DOWN/UP button to select the Optically Linear or Square Law or Inverse Square Law or S-Curve. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Press and hold the MENU button about one second or wait for one minute to exit the menu mode.

## ART-NET

ArtNet Setup	To select ArtNet Setup, press the ENTER button to confirm. Use the UP/DOWN button to select Ethernet IP Setup or ArtNet Port Setup channels mode, press the ENTER button to store. When choose Ethernet IP Setup, use the UP/DOWN button to select IP Address or Subnet Mask. When choose Art-Net Port Setup, use the UP/DOWN button to select Net, Subnet or Universe. Press the MENU button back to the last menu or let the unit idle one minute to exit menu mode.
ArtNet to DMX	To select Artnet to DMX, press the ENTER button to show the DIMMER CURVE on the display. Use the DOWN/UP button to select the Disable or Enable. Once the mode has been selected, press the ENTER button to setup, to go back to the functions without any change press the MENU button again. Press and hold the MENU button about one second or wait for one minute to exit the menu

## INFORMATION

Software type	Shows software version (Vx.x)
Usage time	Use of time and use time reset (password)
Temperature	Current temperature
RDM.UID	Shows the unique ID for the RMD protocoll

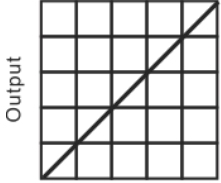
## FACTORY RESET

Resets the fixture to its factory default settings.

# DIMMER CURVE

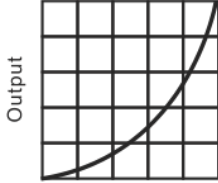
provides five dimming options (see picture below):

## Dimmer Modes



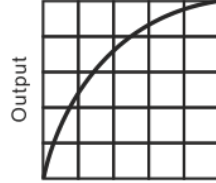
DMX %

Optically Linear



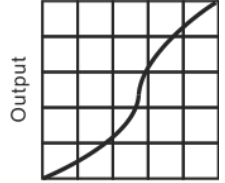
DMX %

Square Law



DMX %

Inverse Square Law



DMX %

S-curve

- **Optically Linear** - The increase in light intensity appears to be linear as DMX value is increased.
- **Square Law** - Light intensity control is finer at low levels and coarser at high levels.
- **Inverse Square Law** - Light intensity control is coarser at low levels and finer at high levels.
- **S-curve** - Light intensity control is finer at low levels and high levels and coarser at medium levels.

# ONBOARD CONTROL MENUS

DMX Settings	ArtNetSetup	Ethernet IP Setup				
		ArtnetPortSetup				
	DMX Address	1				
		512				
	DMX Channel Mode	57 CH				
		14 CH				
DMX Last State	RDM Device ID					
	Black Out					
	Hold					
	Manual					
Fixture Settings	Invert Pixel Order	Disable				
		Enable				
	Artnet to DMX	Disable				
		Enable				
	Light Mode	Color Calibration	Disable			
			Enable			
		Max	White Balance	Red		
				Green		
				Blue		
	Dimmer Curve	Optically linear				
		Square Law				
		Inverse Square Law				
		S-Curve				
		Dimmer Speed	Smooth			
	Fast					
Invert Tilt	Disable					
	Enable					
Tilt Feedback	Disable					
	Enable					
Bl. O. Tilt Moving	Disable					
	Enable					
Fan Mode	Silent					
	Auto					
Auto Test						
Manual Mode	Tilt					
	Dimmer					
	Strobe					
	Red					

# ONBOARD CONTROL MENUS

Manual Mode	Green	
	Blue	
	White	
	Zoom	
Display Settings	Inverse	No/Yes
	Lanugage	English Chinese
	Temperature Unit	°C/°F
	Display Warning	Disable Enable
Fixture Information	LED Temperature	-40°C - 125°C
	Fixture Usage Time	0 99999
	LED Light Time	0 99999
	Firmware Version	APP: 1.0 Boot: 1.0
Reset Functions	All	No Yes
	Tilt	No Yes
	Zoom	No Yes
	Factory Setting	Yes No

# DMX PROTOCOL

14 CH	Function	Values	Description
1	Tilt	000-255	Tilt
2	Tilt Fine	000-255	Tilt Fine
3	Zoom	000-255	Zoom
4	Dimmer	000-255	Dimmer
5	Dimmer Fine	000-255	Dimmer Fine
6	Strobe	000-031	Shutter closed
		032-063	Shutter open
		064-095	Strobe effect fast to slow
		096-127	Shutter open
		128-159	Pulse-effect in sequences
		160-191	Shutter open
		192-223	Random strobe effect slow to fast
7	Macro	224-255	Shutter open
		000-008	No function
		009-038	Macro 1
		039-068	Macro 2
		069-098	Macro 3
		099-128	Macro 4
		129-158	Macro 5
8	Foreground Color	159-187	Macro 6
		188-255	Macro 7
		000-255	Foreground Color
		000-255	Background Color
		000-255	RED
		000-255	GREEN
		000-255	BLUE
000-255	WHITE		
14	Special Function	000-060	No function
		061-080	Black out when Tilt moving
		081-100	Disable Black out when Tilt moving
		101-120	Reset All Motor
		121-140	Reset Tilt Motor
		141-160	Reset Zoom Motor
		161-180	Dimmer Speed: Smooth
		181-200	Dimmer Speed: Fast
		201-225	No Function



# DMX PROTOCOL

57 CH	Function	Values	Description
1	Tilt	000-255	Tilt
2	Tilt Fine	000-255	Tilt Fine
3	Tilt Speed	000-007	auto speed
		008-247	slow-fast
		248-255	auto speed
4	Zoom1	000-255	Zoom1
5	Zoom2	000-255	Zoom2
6	Dimmer	000-255	Dimmer
7	Dimmer Fine	000-255	Dimmer Fine
8	Strobe	000-031	Shutter closed
		032-063	Shutter open
		064-095	Strobe effect fast to slow
		096-127	Shutter open
		128-159	Pulse-effect in sequences
		160-191	Shutter open
9	LED1 RED	192-223	Random strobe effect slow to fast
		224-255	Shutter open
		000-255	0% ~ 100%
		000-255	0% ~ 100%
		000-255	0% ~ 100%
		000-255	0% ~ 100%
10	LED1 GREEN	000-255	0% ~ 100%
11	LED1 BLUE	000-255	0% ~ 100%
12	LED1 WHITE	000-255	0% ~ 100%
13	LED2 RED	000-255	0% ~ 100%
14	LED2 GREEN	000-255	0% ~ 100%
15	LED2 BLUE	000-255	0% ~ 100%
16	LED2 WHITE	000-255	0% ~ 100%
17	LED3 RED	000-255	0% ~ 100%
18	LED3 GREEN	000-255	0% ~ 100%
19	LED3 BLUE	000-255	0% ~ 100%
20	LED3 WHITE	000-255	0% ~ 100%
21	LED4 RED	000-255	0% ~ 100%
22	LED4 GREEN	000-255	0% ~ 100%
23	LED4 BLUE	000-255	0% ~ 100%
24	LED4 WHITE	000-255	0% ~ 100%
25	LED5 RED	000-255	0% ~ 100%
26	LED5 GREEN	000-255	0% ~ 100%
27	LED5 BLUE	000-255	0% ~ 100%
28	LED5 WHITE	000-255	0% ~ 100%
29	LED6 RED	000-255	0% ~ 100%

# DMX PROTOCOL

57 CH	Function	Values	Description
30	LED6 GREEN	000-255	0% ~ 100%
31	LED6 BLUE	000-255	0% ~ 100%
32	LED6 WHITE	000-255	0% ~ 100%
33	LED7 RED	000-255	0% ~ 100%
34	LED7 GREEN	000-255	0% ~ 100%
35	LED7 BLUE	000-255	0% ~ 100%
36	LED7 WHITE	000-255	0% ~ 100%
37	LED8 RED	000-255	0% ~ 100%
38	LED8 GREEN	000-255	0% ~ 100%
39	LED8 BLUE	000-255	0% ~ 100%
40	LED8 WHITE	000-255	0% ~ 100%
41	LED9 RED	000-255	0% ~ 100%
42	LED9 GREEN	000-255	0% ~ 100%
43	LED9 BLUE	000-255	0% ~ 100%
44	LED9 WHITE	000-255	0% ~ 100%
45	LED10 RED	000-255	0% ~ 100%
46	LED10 GREEN	000-255	0% ~ 100%
47	LED10 BLUE	000-255	0% ~ 100%
48	LED10 WHITE	000-255	0% ~ 100%
49	LED11 RED	000-255	0% ~ 100%
50	LED11 GREEN	000-255	0% ~ 100%
51	LED11 BLUE	000-255	0% ~ 100%
52	LED11 WHITE	000-255	0% ~ 100%
53	LED12 RED	000-255	0% ~ 100%
54	LED12 GREEN	000-255	0% ~ 100%
55	LED12 BLUE	000-255	0% ~ 100%
56	LED12 WHITE	000-255	0% ~ 100%
57	Special function	000-060	No function
		061-080	Black out when Tilt moving
		081-100	Disable Black out when Tilt moving
		101-120	Reset All Motor
		121-140	Reset Tilt Motor
		141-160	Reset Zoom Motor
		161-180	Dimmer Speed: Smooth
		181-200	Dimmer Speed: Fast
201-255	No Function		

# SPECIFICATIONS

## Power

Input voltage & rate	AC 100 ~ 240V, 50/60Hz
Standby power	31W
*Nominal total power consumption (at nominal voltage 230V)	450W
Typical current (at nominal voltage 230V)	1,9A

Cos  $\phi$

Power plug type

## Configuration

LED color	RGBW
LED color temperature	
LED CRI level	
Quantity of LED	12
Dimming frequency	
Dimmer resolution	16bit

## Optical

Beam angle

Zoom	3.5° – 38°
------	------------

## Photometric

Output @5M	11009 LUX (3,5°) 2752 LUX (3,5°)
Output @10M	553 LUX (38°) 61 LUX (38°)

## Heat management

Cooling type	Regulated fans
MAX ambient temp (Ta max)	40°
MIN ambient temp (Ta min)	0°
MAX Surface temperature	65°

## Menu

Auto program	Yes
Static color	Yes
Manual calibration	
Factory calibration	
Strobe speed	
Random strobe	

# SPECIFICATIONS

## Control

Control protocol	Artnett, RDM ready and DMX 512
DMX channel range	14 and 57 CH
RDM	YES
RDM compliance	USIT
WDMX	NO
ACN	NO
DMX input connection	3 & 5 Pin XLR
Data input (artnet, SACN)	RJ45

## Hardware

Interface	OLED display with battery backup
Software upload method	Via DMX input

## Installation

IP rating	IP22
-----------	------

## Housing

Safety attachment point	yes
-------------------------	-----

## Physical

Net product weight	17 KG
Machine dimensions - length	1000 mm
Machine dimensions - depth	113 mm
Machine dimensions - height	278 mm

## Accessories

included items	User manual, power cord
----------------	-------------------------

## Approvals

Approved certifications	CE / ROHS
-------------------------	-----------

# **SERIUS**