

LED Driver

EUACO ARENA SPORT 1200W RGBW Series

EUACO ARENA SPORT

Highlights & Features



Standards & Marks



Model Number: EUACO-1K2120RCA□□

Unit Weight: ~5.1kg

Dimensions (L x W x H): 500x152x77 mm

- 4 independent programmable output channels
- Configurable channel address mode (1*DT6 / 1*DMX or 4*DT6 or 4*DMX)
- Max. output power 1200W (4x300W/channel)
- Input voltage range: 187~528VAC
- High Efficiency up to 97%
- Programmable output current range 150-1200 mA
- Output voltage range of 50-370Vdc per channel
- Built-in 2 in 1: DALI-2 & D4i and DMX/RDM communication protocols
- Wide dimming range 0.1-100%
- Flicker-free for HDTV broadcasting
- Strobe effects up to 33 fps
- After-glow effect free
- Constant lumen output(CLO)
- Smart timer dimming(STD)
- High-accuracy integrated power metering
- Max remote distance 300 meters
- Input surge protection: DM 10KV / CM 10KV

General Description

The EUACO-1K2120RCA series is a constant current IP66 LED driver with 4 independent programmable channels, that operates with an input voltage range of 187~528Vac. This driver is intended for constant current high power RGBW & Tunable White LED luminaires. It is specially designed for sports lighting and industrial lighting applications, including architectural, stage, areas, and horticulture, etc. The dimming control supports two-way communication via DALI-2 & D4i, and it also incorporates DMX/RDM dimming function. This driver was specifically conceived and intended to offer remarkably high efficiency to achieve substantial energy savings. Additionally, a wide dimming range, advanced control, and autonomous timer dimming ensure adaptability for dynamic atmospheres and seamless scenes. The EUACO-1K2120RCA driver offers a remote-control function, allowing the driver to be installed up to 300 meters from the luminaire, which provides greater flexibility in installation, operation, and easy maintenance.

Model Information

Model Number	Input Voltage Range	Rated Output Power	Output Channel ¹	Control Interface ²
EUACO-1K2120RCA	208~480Vac (nominal) 187~528Vac (range)	1200W	4	DALI-2 & D4i and DMX/RDM

1. The driver has been configured in a single address mode by default, which further assigns four consecutive 8-bit channel addresses for RDM control and reserves the same channel addresses for DALI applications. The user can also switch to other channel address modes through the GUI and programming tools.
2. The split DALI and DMX interface terminals are mounted in the junction box.

Model Numbering

EU	C	O	1K2	120	R	C	A
Europe	Constant Current	Outdoor	Max. Output Power 1K2:1200W	Max. Output Current 120:1200mA	RGBW	Dimming Function C: DALI-2 & D4i and DMX/RDM	Version code

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Specifications

Input Ratings / Characteristics (test @ T_{ambient} 25°C)

Specification	Min.	Typ.	Max.	Test Conditions / Notes
Nominal Input Voltage	208Vac	-	480Vac	
Input Voltage Range	187Vac	-	528Vac	
Nominal Input Frequency	-	50/60Hz	-	
Input Frequency Range	47Hz	-	63Hz	
Nominal Input Current	-	5.7A	5.9A	1-ph L/N 220Vac, 1.2A* 250V=300W per channel, total 1200W
	-	3.1A	3.3A	2-ph L1/L2 400Vac, 1.2A* 250V=300W per channel, total 1200W
Efficiency ³	95%	96%	-	1-ph L/N 220Vac, 1.2A* 250V=300W per channel, total 1200W
	92%	94%	-	1-ph L/N 220Vac, 0.36A* 250V=90W per channel, total 360W (30% Pmax)
	96%	97.2%	-	2-ph L1/L2 400Vac, 1.2A* 250V=300W per channel, total 1200W
	92%	95%	-	2-ph L1/L2 400Vac, 0.36A* 250V=90W per channel, total 360W (30% Pmax)
Standby Power Consumption	-	-	0.5W	At 220Vac/50Hz, Dim OFF, in compliance with Erp(EU) 2019/2020
Power Factor	0.95	0.99	-	1-ph L/N 220Vac, Full load
	0.9	0.96	-	1-ph L/N 220Vac, >= 30%*Full load
	0.95	0.99	-	2-ph L1/L2 400Vac, Full load
	0.9	0.95	-	2-ph L1/L2 400Vac, >= 30%*Full load
Total Harmonic Distortion(THD) ⁴	-	6%	10%	1-ph L/N 220Vac, total Pout=1200W Load
	-	-	20%	1-ph L/N 220Vac, >= 30%*Full load
	-	12%	15%	2-ph L1/L2 400Vac, total Pout=1200W Load
	-	-	20%	2-ph L1/L2 400Vac, >= 30%*Full load
Inrush Current	-	-	12A	At 220Vac, 50%Apk to 50%Apk time: <2 ms
	-	-	20A	At 400Vac, 50%Apk to 50%Apk time: < 2ms
Power metering accuracy	-	±1%	±2%	At 208Vac~480Vac, Voltage, current, PF, frequency, active power, apparent power, etc. on the AC side, Full load

3. Tested after 30 minutes warming up at full load.

4. Complies with EN IEC 61000-3-2, Class C, maximum load range from 360W~1200W.

Output Ratings / Characteristics

Specification	Min.	Typ.	Max.	Test Conditions / Notes
Output Channels	-	4	-	Single address mode by default, 4 consecutive 8-bit channel addresses for RDM control and 4 identical channel addresses for DALI applications.
Total Output Power	-	-	1200W	All channel
Single Channel Output Power	-	-	300W	Per Output Channel
Default Output Current	-	850mA	-	
Programmable Output Current Range	150mA	-	1200mA	Operation range refer to Appendix 1
Dimming current range	1.2mA		1200mA	
Output Current Tolerance	-	-	±3%	Range from 700mA to 1200mA
Output Voltage Range	50V	-	370V	All operating conditions shall not exceed this voltage range
Max. No Load Output Voltage	-	-	450Vrms	Peak voltage at open load condition

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Output Voltage to PE		-	-	450Vrms	Working voltage of output port to PE
Output Current Ripple ⁵		-	1%	2%	ripple = (pk-pk)/avg, at low frequency(<8kHz)
		-	5%	20%	ripple = (pk-pk)/avg, at high frequency(>15kHz)
Strobe Effects ⁶		-	-	33 fps	Supports continuous sequence as fast as 30ms-ON and 30ms-OFF (fps means frame per second)
Output Remote Distance		-	-	300m	The distance is related to the actual application conditions, but the voltage in the driver side shall not exceed 370V.
Turn on Delay Time	DALI version	-	0.7s	1s	Compliant with clause 9.13 of IEC 62386-102:2014
	DMX-RDM version	-	0.7s	1s	Connecting to the controller correctly.
		1.25s	-	-	No controller or incorrect connection to the controller, compliant with clause 3.5 of ANSI E1.37-1:2012.

5. Output current ripple could be affected by the parasitic capacitance of LED fixture, and complies with IEEE 1789-2015.

6. In the Strobe mode, the OFF period should be within 5s in general, otherwise please refer to "LNA/EUCO Series Programming Tool User Manual" for more details to make a requisite configuration.

Auxiliary Power Supply Ratings / Characteristics

Specification	Min.	Typ.	Max.	Test Conditions / Notes
Integrated 24V Auxiliary Power Supply				
Operating Voltage	21.6V	24.0V	26.4V	0.1W~6.0W, the ground is "DA-".
High frequency ripple of operating voltage	-	-	1.0 V _{pp}	21.6V~26.4V, fripple > 10kHz
Voltage in no-load condition	-	-	30.0V	Output power < 0.1W
Average output power capability	-	3.0W	-	CC mode load: 4.0mA~125mA (0.1W~3W).
Pulsed output power capability	-	6.0W	-	Dynamic CC mode load: peak load = 250mA/2.2ms and avg load = 4.0mA~125mA/3.8ms.
Start-up time	-	-	0.6s	From AC power on to Vaux increases and reaches 21.6 V, Mains applied at any phase angle.
Integrated DALI-2 Bus Power Supply				
DALI-2 Bus voltage	12V	16V	22.5V	CC load: 0~50mA, integrated bus power supply is pre-configured to a disabled state, and it can be activated via GUI or DALI controller.
Over Current Protection	50mA	-	62.5mA	Auto recovery and no component damaged. Limits output current to 50~62.5mA when output is short-circuited.

Dimming Control

Specification	Test Conditions / Notes	
Control interface	DALI-2 & D4i	DMX/RDM ⁷
Dimming curve	Logarithmic	0.1%-100% (1.2mA~1200mA)
		default
	Linear	0.4%-100% (4.8mA~1200mA)
		configurable
		default

7. For DMX-RDM, a higher dimming resolution can be set to 10bit via GUI, which means 1024 steps for output, more details please refer to "LNA/EUCO Series Programming Tool User Manual".

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Control Interface Standards

Specification	Standards
DALI Control interface standards	DALI-2 & D4i IEC 62386-101 Ed 2.0 IEC 62386-102 Ed 2.0 IEC 62386-207 Ed 2.0 IEC 62386 part 150: Integrated 24Vdc auxiliary power supply IEC 62386 part 250: Integrated bus power supply for sensor and radios IEC 62386 part 251: Memory bank 1 extension (luminaire data) IEC 62386 part 252: Energy report IEC 62386 part 253: Diagnostics and maintenance
DMX/RDM Control interface standards	DMX/RDM ANSI E1.11 DMX512A ANSI E1.20 RDM – Remote Device Management ANSI E1.37-1 Additional message sets for dimmer

Additional Dimming Features

Specification	Description
Smart Timer Dimming(STD)	3 different configurable autonomous dimming profiles (fixed timer, midnight centric timer, and ratio rescale timer) over the night are available for users to select and set in GUI. This function is not activated by default. For more details, please refer to "LNA/EUCO Series Programming Tool User Manual".
Constant lumen output(CLO)	CLO is a function to make the brightness consistent by compensating the ageing of the light source over the lifetime. It's available in GUI to set starting dimming level (for example 90%) and end of life of the product (for example 50khrs), so that the driver by counting its functioning hours can do a linear interpolation in between starting dimming level at t=0hrs, and go to 100% at t=end of life. This function is not activated by default. For more details, please refer to "LNA/EUCO Series Programming Tool User Manual".

Mechanical Characteristics

Specification	Test Conditions / Notes
Housing	Aluminum case, dark gray, compliance with C5 environment (ISO 9223)
Dimensions (L x W x H)	500x152x77 mm
Mounting hole dimension	Mounting hole dimension 480*134mm, M8 SCREW*4 pcs
Unit Weight	~5.1 kg
Cooling System	Natural Convection
Input	L1, L2, PE
Output ⁸	LED Load
	PE, NTC, V+, V4-, V3-, V2-, V1-
Control	DALI
	DA+, DA-, +24V (" DA-" is the ground of "+24V")
	DMX/RDM
	D1+, D1-, COM

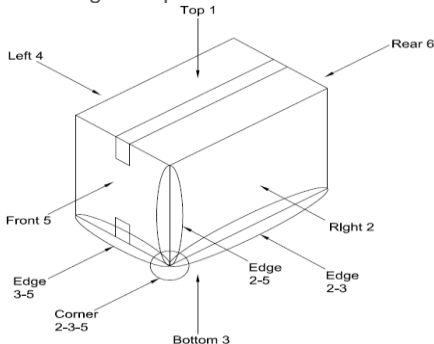
8. This is a common "Output +" design that shares equal connections between R, G, B and W.

Environment & Package

Specification	Test Conditions / Notes
Ambient Temperature	Operating
	Storage
Maximum Case Temperature	+85°C
Lifetime Case Temperature	+80°C

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Relative Humidity	Operating	10% to 95% RH (Non-Condensing)
	Storage	5% to 95% RH (Non-Condensing)
Audible Noise (30cm distance)		Sound Pressure Level (SPL) < 24dBA
Ingress Protection classification		IP66 (EN 60529)
Impact Protection classification		IK08 (EN 62262)
Drop Test (Non-Operating)		<p>According to ASTM D-775, 40cm height drop to concrete floor as below drawing, total 10 times.</p> 
Vibration (Non-Operating)		IEC 60068-2-6, Random: 5 Hz to 10 Hz (1G); 30 min per axis for all X, Y, Z direction
Packing		1pcs per carton

Protections

Specification		Min.	Typ.	Max.	Test Conditions / Notes
Input Under Voltage Protection (IUVP)	Protection	165Vac	170 Vac	175 Vac	Shuts down and then restarts to normal status when the fault condition is cleared.
	Recovery	175 Vac	180 Vac	185 Vac	
Input Over Voltage Protection (IOVP)	Protection	540 Vac	545 Vac	550 Vac	
	Recovery	530 Vac	535 Vac	540 Vac	
Open Load & Output Over Voltage Protection	Protection	-	-	450Vrms	Hiccup mode. The output voltage shall not exceed 450Vrms under no load, open load or other over voltage conditions.
Constant Output Power Protection		305W	310 W	315 W	Output power limited. The driver shall come back to its original programmed current after the fault condition is cleared.
Output Short Circuit Protection		YES			Hiccup mode. Restarts automatically after fault condition is removed.
Internal Over Temperature Protection		YES			Driver OTP, decrease the output current to 20%*I _o when T _c ≥ 90 ± 3°C, auto recovery when T _c ≤ 80 ± 3°C
Programmable External Over Temperature Protection		YES			Luminary OTP, output power derating. Refer to Appendix 8 "Programmable External Over Temperature Protection" for more details.

Electro-Magnetic Compatibility (EMC)

Specification	Standards
EMC-Emission Characteristics	
Radiated Emission	EN55015, FCC Part 15, Subpart B
Conducted Emission	EN55015, FCC Part 15, Subpart B
Harmonic Current Emission	IEC/EN 61000-3-2, GB 17625.1

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Voltage Fluctuation & Flicker	IEC/EN 61000-3-3
EMC-Immunity Characteristics	
Electrostatic Discharge (ESD)	IEC/EN 61000-4-2
Radio Frequency Electro-magnetic Fields	IEC/EN 61000-4-3
Electrical Fast Transient (EFT)	IEC/EN 61000-4-4
Surge (AC Mains) ⁹	IEC/EN 61000-4-5 - Common Mode: 10kV (L1 to Earth, L2 to Earth) - Differential Mode: 10kV (L1 to L2)
Conducted Disturbance	IEC/EN 61000-4-6
Voltage Dip & Interruptions	IEC/EN 61000-4-11

9. Level B, the maximum peak pulse of residual common mode voltage from output+/- to Earth is around 3.0kV.

Reliability Data

Specification	Test Conditions / Notes
Lifetime	50,000 hours applicable for 220Vac to 480Vac(50/60Hz)@100% of load, Ta=50°C (Tcase=80°C), 100,000 hours applicable @ 100% of load, Tcase≤70°C. Appendix 3 "Life Time versus Case Temperature Curve" for more details.
MTBF	475khrs. at Ta=+45°C Telcordia SR-332
Warranty	5 years

Safety & Other Approvals

Safety Category		Standards
ENEC	MARK	EN 61347-1:2015, EN 61347-1:2015/A1:2021 EN 61347-2-13:2014, EN 61347-2-13/A1:2017 IEC/EN 62384:2020
CB	REPORT	EN 61347-1:2015, EN 61347-1:2015/A1:2021 EN 61347-2-13:2014, EN 61347-2-13/A1:2017
CE	MARK	CE Declaration of Conformity.
UKCA	MARK	BS EN 61347-2-13: 2014+A1:2017
RCM	MARK	AS/NZS 61347-1: 2016+A1 AS 61347-2-13: 2018
UL	MARK	UL Compliant ANSI / UL8750 2nd Ed. CSA C22.2 No.250.13, 4th Ed.
CCC	Compliant	GB 19510.1 GB 19510.14
BIS	Compliant	IS 15885(Part 2/Sec 13)
KC	Compliant	K 61347-1 K 61347-2-13
PSE	Compliant	J 61347-1 J 61347-2-13
Isolation		Class I, input to output: non-isolation, DMX/RDM and DALI to input/output reinforced isolation.
RoHS		RoHS 2.0 Directive(EU) 2015/863
REACH		In compliance

LED Driver

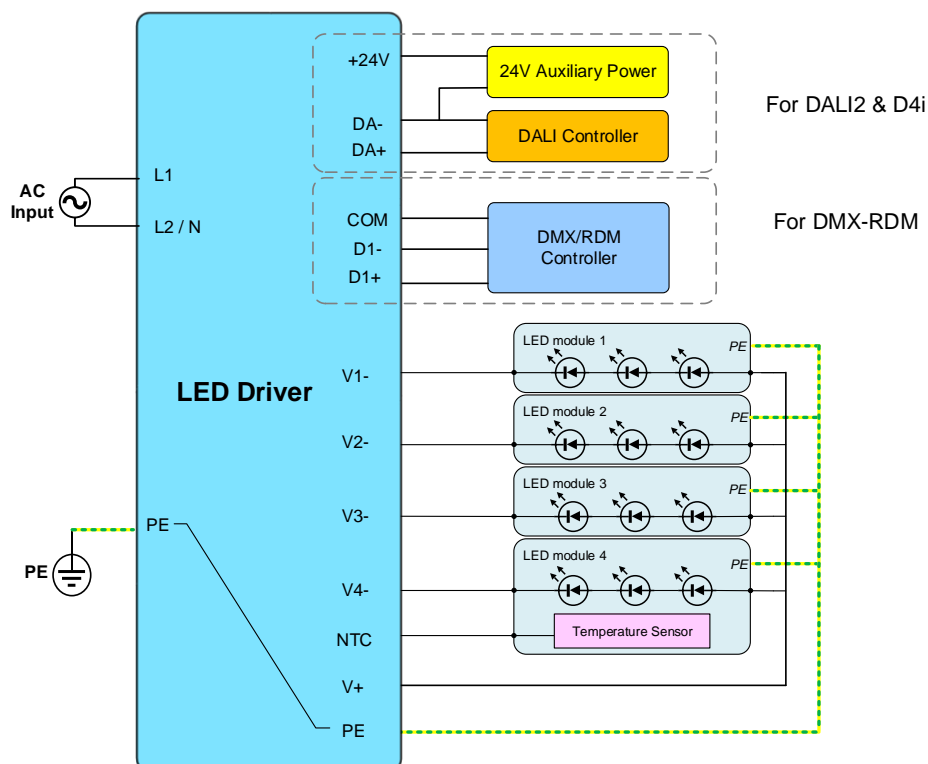
EUCO ARENA SPORT 1200W RGBW Series

Miniature Circuit Breaker Configuration

The maximum number of LED drivers connectable to a single MCB is recommended in the following table for maximum 1200W and each nominal input voltage. Due to the differences in application conditions and the different kinds of circuit breakers available on the market, this table is just for reference.

Input Voltage	MCB Type	10A	16A	20A	25A	32A	40A	63A
208 Vac	B/C	1	2	2	3	4	5	7
220 Vac	B/C	1	2	2	3	4	5	8
277 Vac	B/C	2	2	3	4	5	6	10
400 Vac	B/C	2	4	4	5	7	9	14
480 Vac	B/C	3	4	5	6	8	10	16

Electrical Connection



Note:

1. This is a common "OUTPUT +" (V+) design for the output channels, but V1-, V2-, V3- and V4 should not be connected together during installation.
2. Simply connect the controller to the appropriate terminals to fulfill the control requirements without additional configuration.
3. The maximum permissible voltage on the control interface terminals should not exceed 60Vrms, otherwise damage may occur and reliability may be compromised.

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Programming Configuration

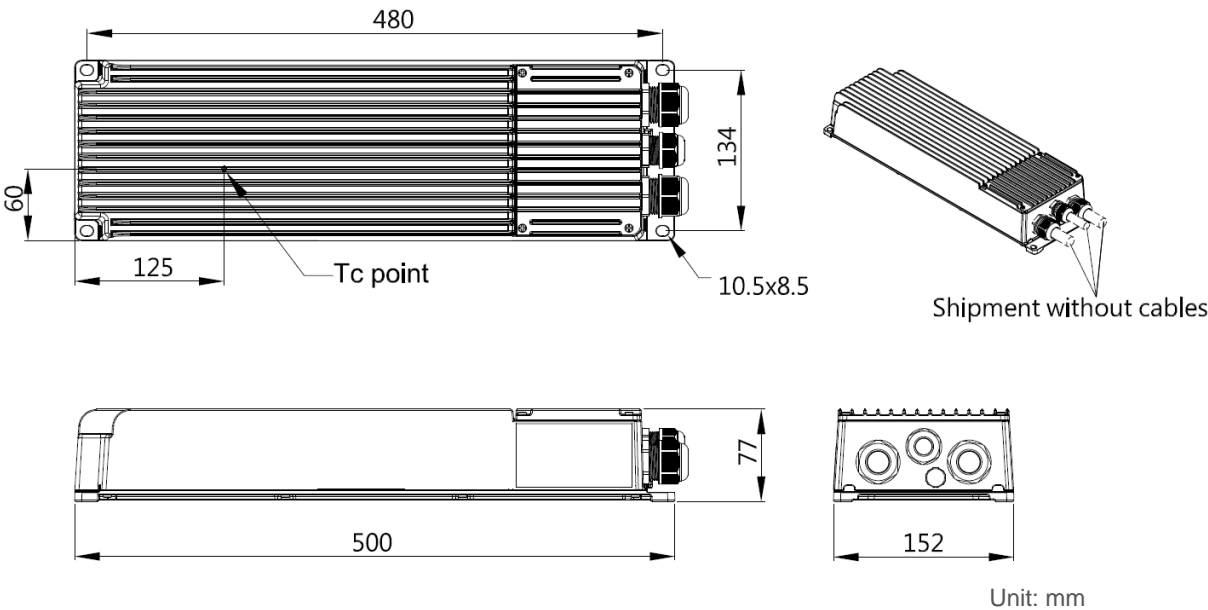
1. LNA/EUCO Series Programming Tool
- Common setting functions and implementation methods/conditions are shown in the following table, more functions and details please refer to the LNA/EUCO Series Programming Tool User Manual.

Item		DALI-2	DMX/RDM
Setup	Tool Connection	DA+,DA-	D1+,D1-
	AC power supply	■	■
	Load Connection	○	○
Tool	Programming Tool	SDPTDV05UAB, SDDV1505UAB, SDDV1505UAC	
Configurable Parameters and Functions	Max. current programming	√	√
	Default output current	√	√
	Luminaire OTP setting	√	√
	Constant lumen output setting	√	√
	Smart timer dimming	√	√
	Address mode	√	√
	Software update	√	√

Note: ■ Required, ○ Optional, √ Available.

2. DALI & RDM Data Management and Configuration
- This driver is compatible with D4i and RDM functions, providing a variety of free configuration options and rich monitoring data, such as personalized assignment of addresses, access to output status information. Customers can configure it flexibly according to their own usage requirements. Please refer to the “**D4i & RDM Data Management User Manual**” for the relevant configuration instructions.

Physical Dimensions



LED Driver

EUACO ARENA SPORT 1200W RGBW Series

Cable Gland

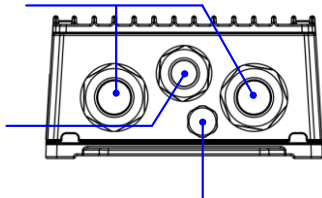
M25 cable gland to housing: 3.43Nm

M20 cable gland to housing: 3.43Nm

Vent to housing: 0.6~0.8 Nm



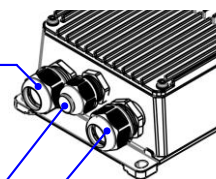
Do not loosen the Protective Vent



Input: M25 cable gland (5 Nm)
Clamping cable: 10.0~16.3mm
1.0~2.5□ AWG 17~12

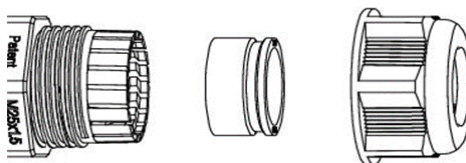
Control: M20 cable gland, plug
by default (1 Nm)

Output: M25 cable gland (5 Nm)
Clamping cable: 10.0~16.3mm
0.75~2.5□ AWG 18~12



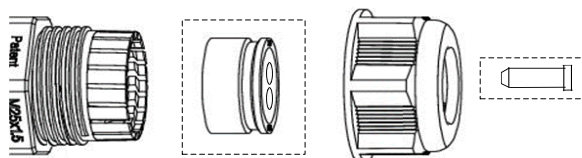
Option A:

Clamping cable (3.5 Nm)
6.3~11.3mm(1 hole seal)
0.3~2.5□ AWG 22~12



Option B:

Clamping cable (3.5 Nm)
5.0~6.5mm(2 holes seal)
0.3~2.5□ AWG 22~12



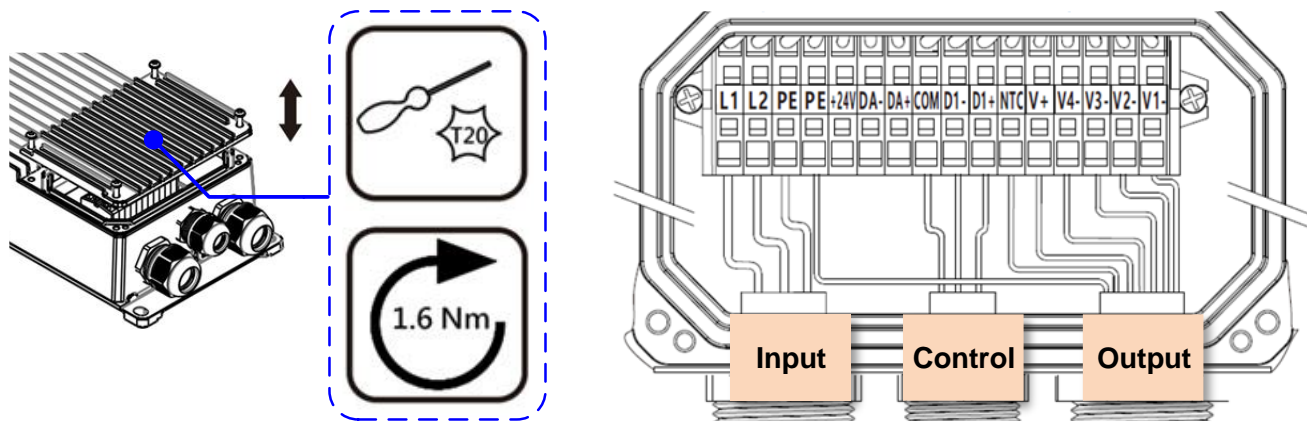
The 2 holes seal and plug are in the plastic bag.

Note: More details about cable selection information, please refer to the **Installation User Manual**.

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

Junction Box



Note: The cap and fastening 4 screws all have the function of anti-falling off.

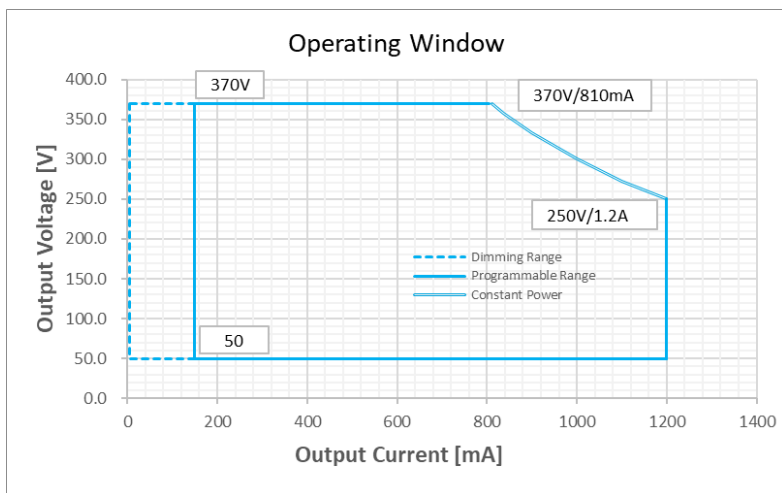
Number	Label	Description
1	L1	AC input
2	L2	AC input
3	PE	Protective Earth
4	PE	Protective Earth for luminaire
5	+24V	24V auxiliary power supply ,and the ground of "+24V" is "DA-".
6	DA-	DALI input -, and the ground of "+24V"
7	DA+	DALI input +
8	COM	DMX Shield / Common port
9	D1-	DMX input -
10	D1+	DMX input +
11	NTC	LED module temperature sensor
12	V+	Output + for all channel
13	V4-	Channel 4 output -
14	V3-	Channel 3 output -
15	V2-	Channel 2 output -
16	V1-	Channel 1 output -

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

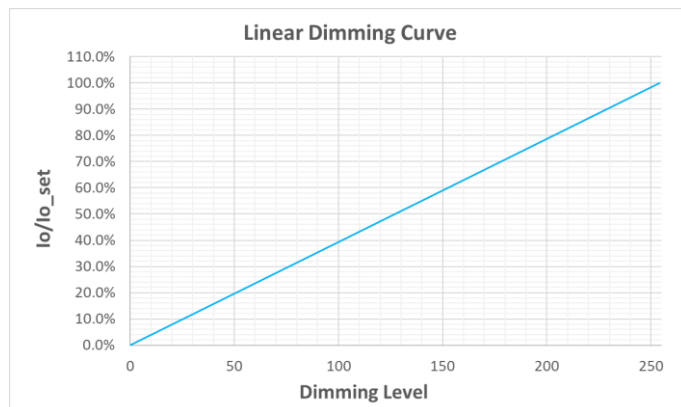
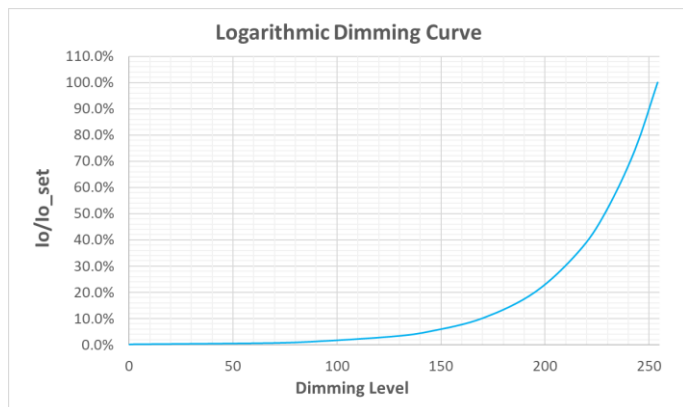
Appendix

1. Operating Range Curve



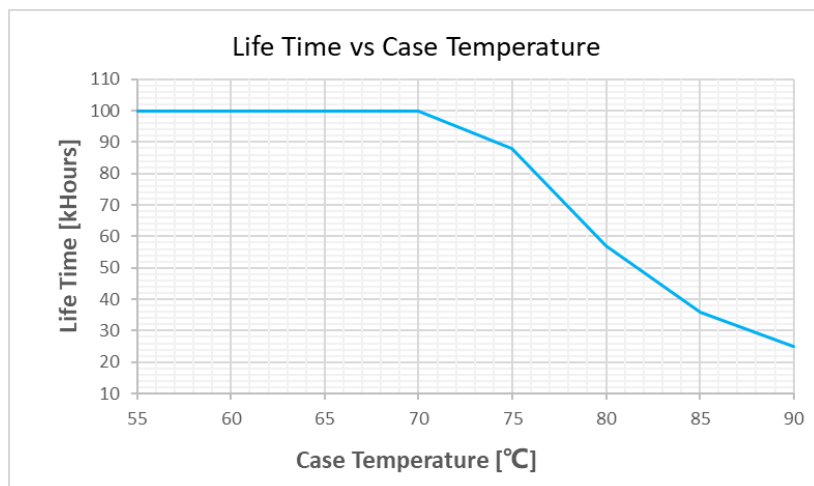
Note: EUCO ARENA SPORT 1.2kW series can be programmed with wide output current through computer and programming tool. For more details, please refer to **LNA/EUCO Series Programming Tool User Manual**.

2. Dimming Curve



DALI/DMX

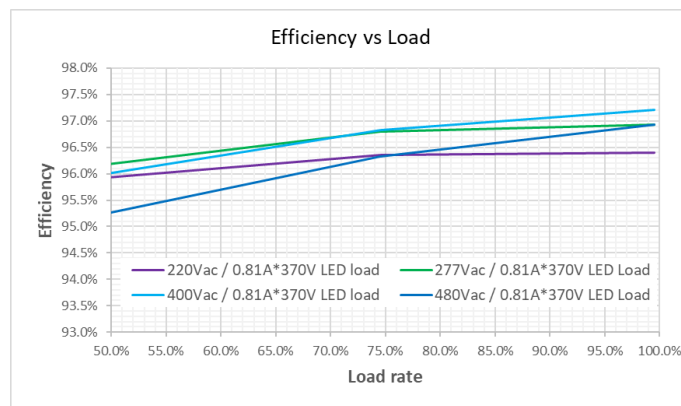
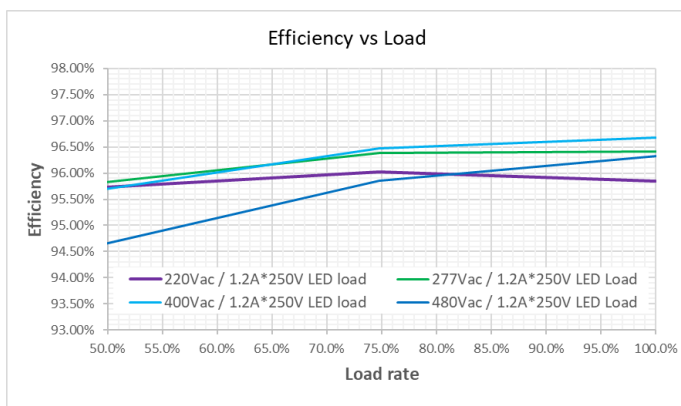
3. Life Time versus Case Temperature Curve



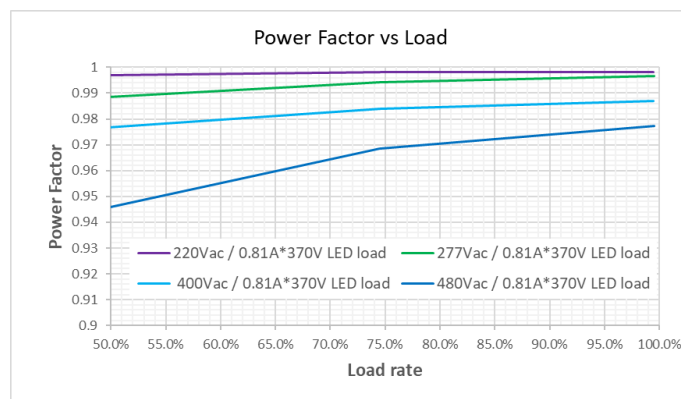
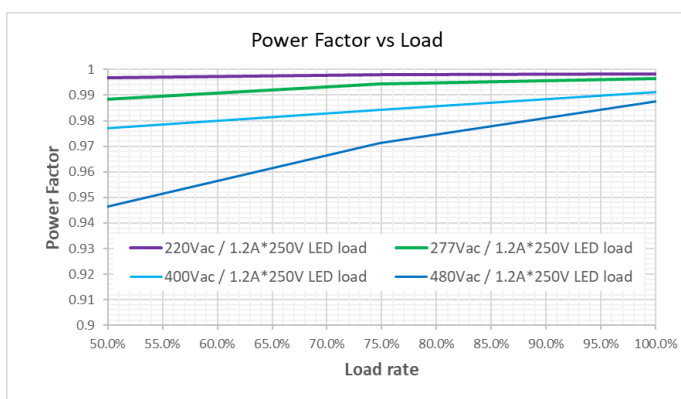
LED Driver

EUCO ARENA SPORT 1200W RGBW Series

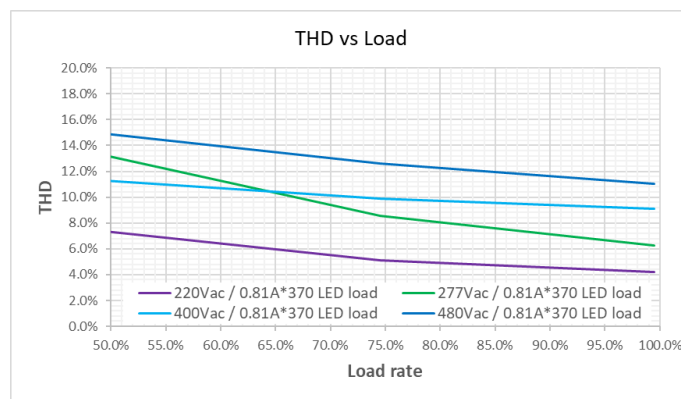
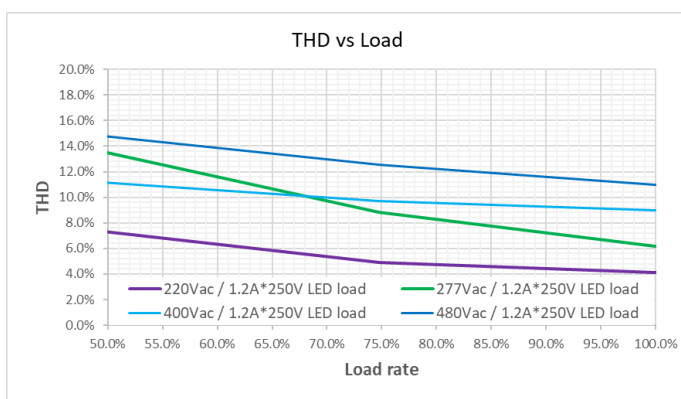
4. Efficiency versus Load



5. Power Factor versus Load



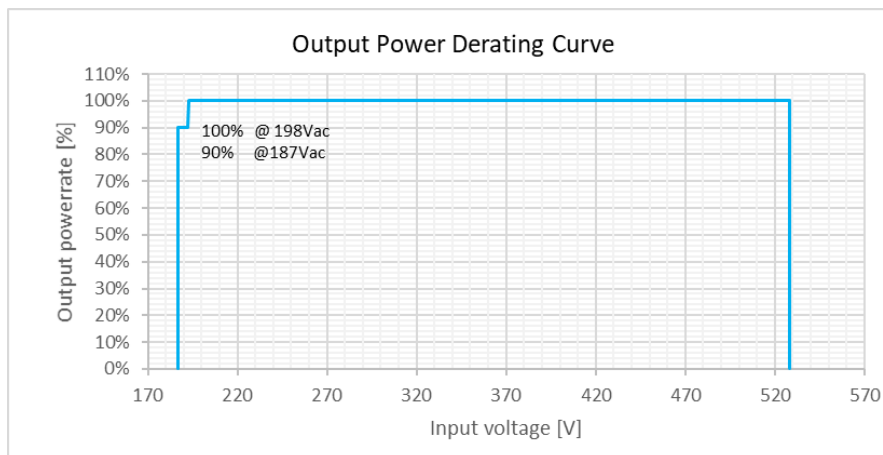
6. THD versus Load



7. Output Power Derating

LED Driver

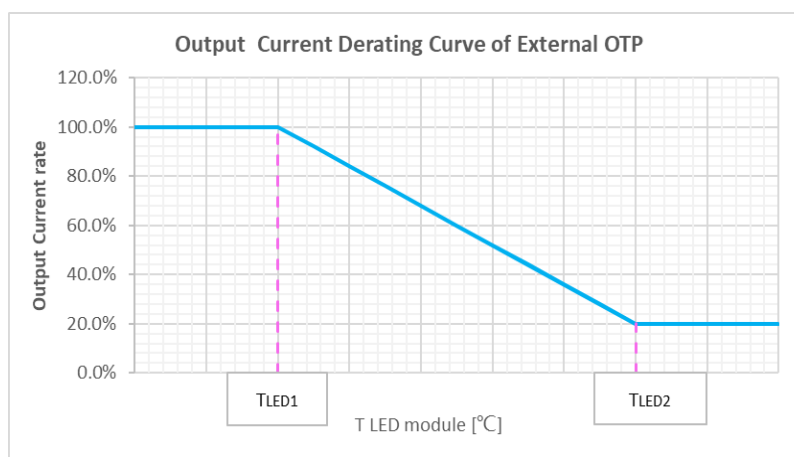
EUCO ARENA SPORT 1200W RGBW Series



When input range falls from 198Vac to 187Vac · the maximum output power would be limited to 1080W by reducing the output current automatically. Hysteresis control logic is applied in triggering/recovering process.

8. Programmable External Over Temperature Protection

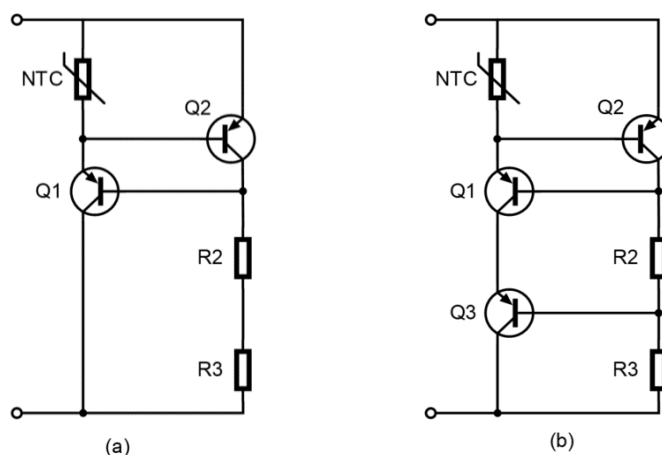
This protection is an optional feature and user can ignore it without connecting to NTC connector in the junction box. The driver monitors the temperature of the LED module through NTC terminal. The output current will be reduced smoothly and linearly at OTP status and return to normal when the fault condition is removed.



The trigger point of this protection can be set easily according to the actual conditions of the LED fixtures, the user can set the trigger point between 90 °C and 120 °C by the Delta programming tool, and the default value is 110 °C. When the temperature exceeds the triggering point, the output current will decrease automatically to bring the temperature of the LED module back to safe value. More details about parameter setting please refer to User Manual DALI programming or DMX-RDM programming. An external temperature sensing circuit is required to achieve the NTC terminal function to prevent the LED fixture from overheating. The default setting is for a 33Kohm NTC, the circuits shown as both (a) and (b) below are acceptable.

LED Driver

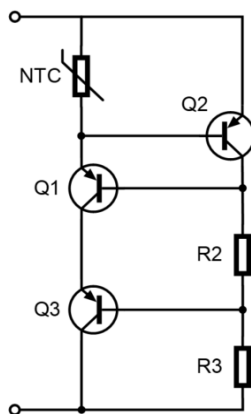
EUCO ARENA SPORT 1200W RGBW Series



Parameter	Part	Manufacturer	Description
NTC	TSM1A333F3952RZA	THINKING	RES NTC 33Kohm F 3950K +/-1% SMD 0603 TP
R2/R3	RC1206FR-07 5M1L	YAGEO	RES SMD 1/4W 5.1Mohm F 1206
Q1/Q2/Q3	PBHV9050T	NEXPERIA	500V 150 mA PNP high-voltage low VCEsat transistor

Note: The circuits of above (a) and (b) have same OTP performance by using the same parts listed in the table, and to achieve good accuracy of OTP, Q2 should be placed close to NTC to make them have same temperature.

This product is also compatible with the circuitry for a 10Kohm NTC, this version could be selected and activated by "OTP on Fixture" section of GUI (Select "10K" in this section). The circuit and BOM table are shown as below.



Parameter	Part	Manufacturer	Description
NTC	NTCG163JH103JT1	TDK	RES NTC 10Kohm F 3380K +/-1% SMD 0603
R2/R3	RC1206FR-07 1ML	YAGEO	RES SMD 1/4W 1Mohm F 1206
Q1/Q2/Q3	PBHV9050T	NEXPERIA	500V 150 mA PNP high-voltage low VCEsat transistor

Note:

- The recommended temperature detection circuit should be on the LED module.
- NTC should be placed as close to Q2 as possible.
- Do not make any change to the temperature detection circuit of LED module.
- The specifications of alternative components should be the same as the recommended sources. Especially, the NTC is a key and thermos-sensitive component and DO NOT change to other types, like B value = 4480K.

LED Driver

EUCO ARENA SPORT 1200W RGBW Series

9. External SPD requirement for extra LED fixture common mode surge protection

The EUCO series driver has been designed with a built-in surge absorber which protects against lightning up to CM/DM 10kV level. The built-in surge absorber activates once a common mode surge intrusion occurring, which offers a protection against any unexpected voltage surge to the LED module of $\leq 3\text{kV}$.

Even though, EUCO Arena driver series do not require the installation of an additional SPD protect the driver and LED module against any unexpected surge voltage, it would allow to further strength the robustness protection capability against surge residual voltage of LED modules which allows the fixtures to be marketed globally by attributing different surge protector device (SPD) to meet differing surge levels.

However, Delta Electronics proposes not to install an external SPD at LED module side because it would be unsafe attributable to when this device would be triggered, a high common mode current will generate through driver and SPD that will cause some unexpected and irreversible damage to the driver.

10. Warranty Policy

Please reach out our [Warranty Policy](#) should you require any further clarification.

11. Attention

Delta provides all information in the datasheets on an "AS IS" basis and does not offer any kind of warranty through the information for using the product. In the event of any discrepancy between the information in the catalog and datasheets, the datasheets shall prevail (please refer to <http://www.DeltaPSU.com> for the latest datasheets information). Delta shall have no liability of indemnification for any claim or action arising from any error for the provided information in the datasheets. Customer shall take its responsibility for evaluation of using the product before placing an order with Delta.

Delta reserves the right to make changes to the information described in the datasheets without notice.