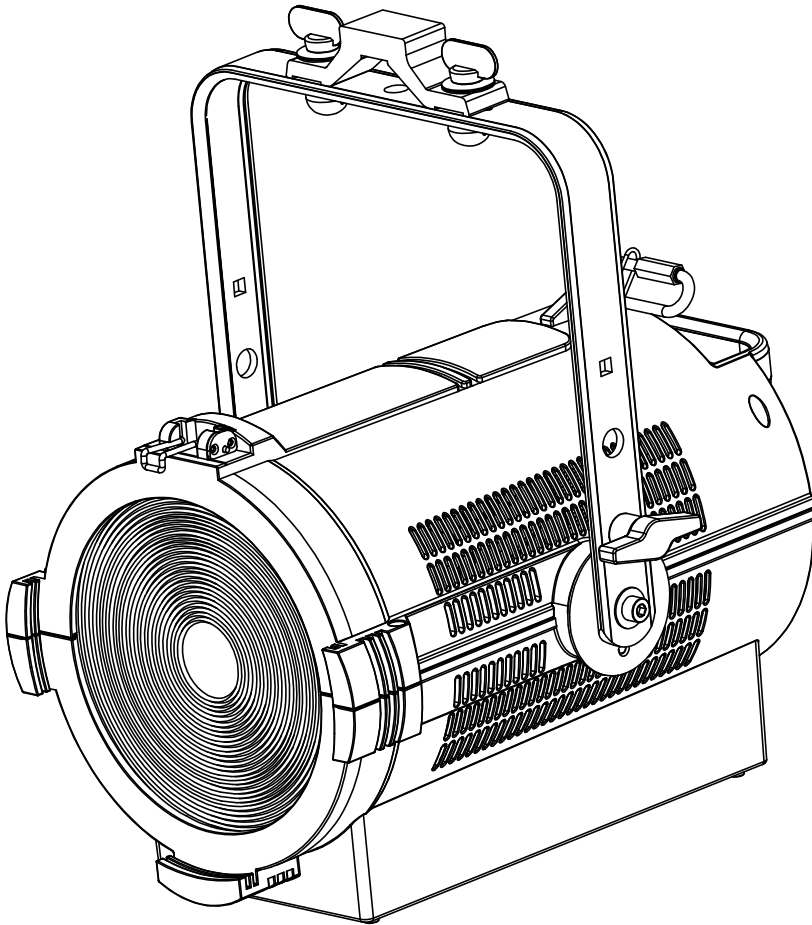




# SPECTRUM F-350 FC

# MANUAL

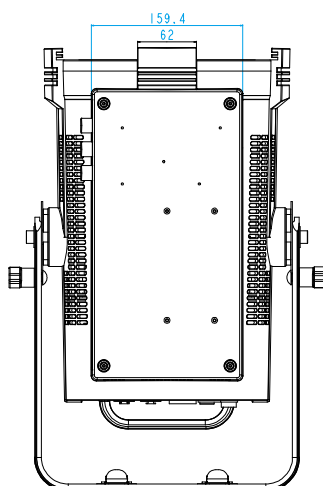
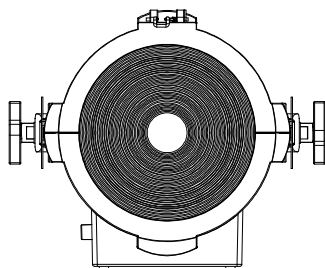
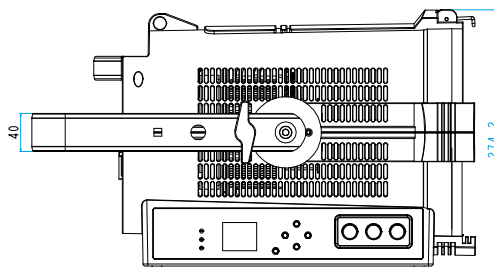
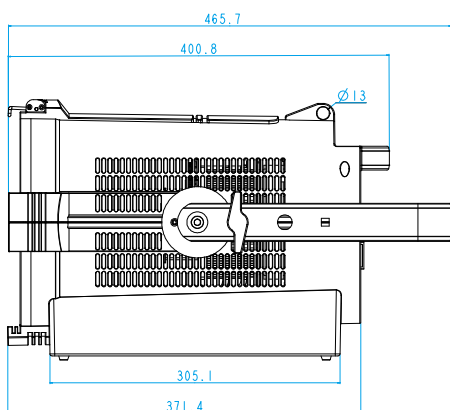
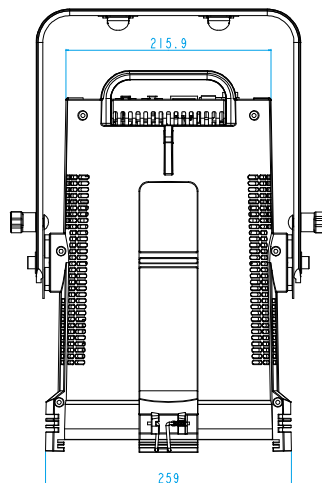
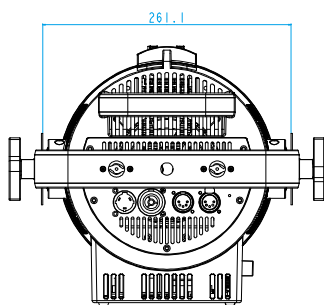


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# DIMENSIONS

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.



Do not look into the beam at short distance of the 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.
- 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 20A 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® cable connectors to connect to power input sockets. Use only PowerCON TRUE1® cable connectors to connect to power throughput 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 300 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 300 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 3 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 3 meters and above, light output is harmless to the naked eye provided that the eye's natural aversion response is not overcome.

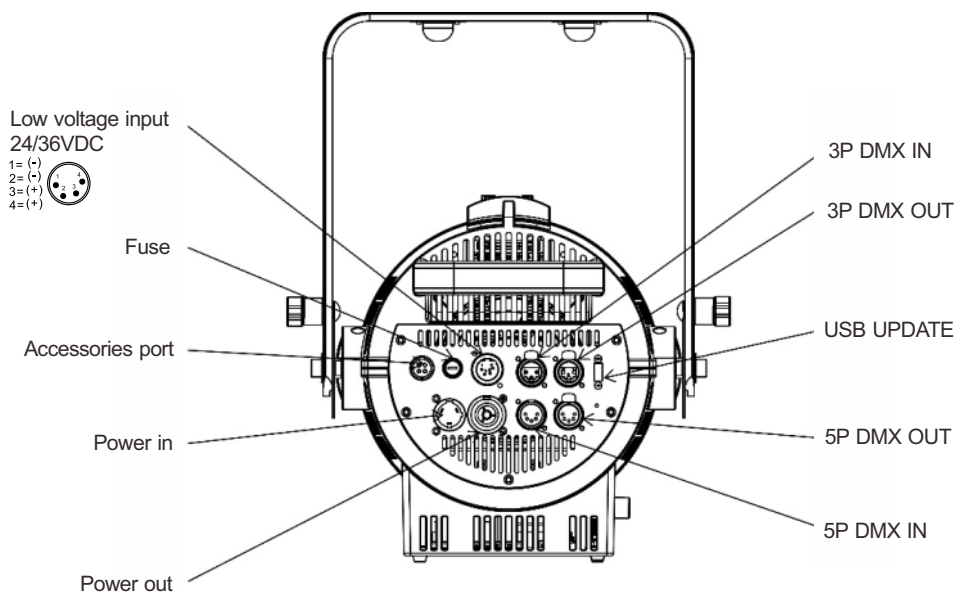
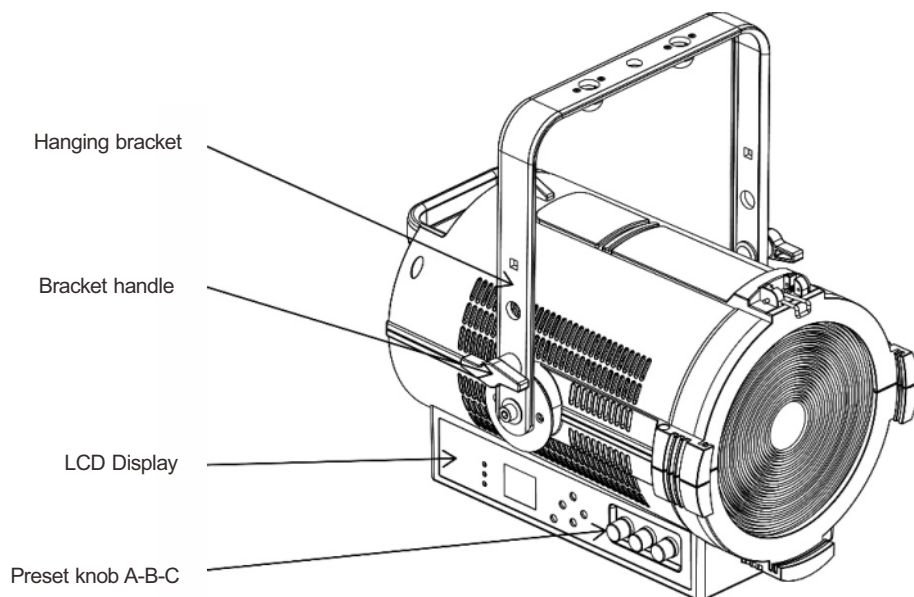


- Do not look at LEDs with magnifiers, telescopes, binoculars or similar optical instruments that may concentrate the light output.



- Ensure that persons are not looking at the LEDs from within 2 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



# INTRODUCTION

- 350W RGB-WW LED ENGINE
- 11° TO 64° WIDE MOTORIZED ZOOM
- EASY USER FRIENDLY MANUAL PRESETS VIA ENCODERS
- 11,189LM (5600K) TOTAL FIXTURE LUMEN OUTPUT
- EXCELLENT PERFORMANCE CRI 95.7 AND TLCI 96 (5600K)
- FLICKER FREE OPERATION
- SMART CONTROLLED FANS FOR OPTIMIZED LOW NOISE OPERATION

## 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 TRUE1 ® 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 a 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 fixture serial number label matches the local AC main power voltage before applying power to the fixture.

The fixtures accepts AC mains power at 100-240V 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



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 four fixtures in total 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 TRUE1 ® connectors must be used to draw AC mains power from the fixtures power throughput socket and yellow PowerCON TRUE 1 ® connectors must be used to supply power at the fixture's power input sockets.

# DATA LINK

A DMX 512 data link is required in order to control a fixture via DMX.

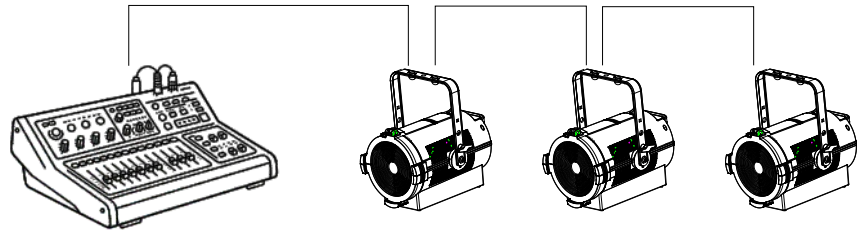
The fixture has 3 & 5-pin XLR connectors for DMX data input and output.

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 in use.

# 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 first fixture to the DMX input of the next fixture and continue connecting fixtures.



# 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! Always attach an approved safety cable to one of the safety cable attachment points off the base.

Do not illuminate surfaces within 3 meters of the fixture. Ensure that flammable materials (wood, fabric, paper, etc.) are minimum 1 meters from the fixture and allow a free airflow around the fixture.

## 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.



Warning! The supporting surface must be hard and flat or cooling may be blocked, which will cause overheating. Fasten the fixture securely. Do not place it on unstable surfaces. Always attach a securely anchored safety cable to the safety cable attachment point.

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.

The installation of the fixture has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the fixture staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.

The fixture should be installed outside areas where persons may walk by or be seated.

**IMPORTANT! OVERHEAD RIGGING REQUIRES EXTENSIVE EXPERIENCE**, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the projector. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury or damage to property. The fixture has to be installed out of the reach of people.

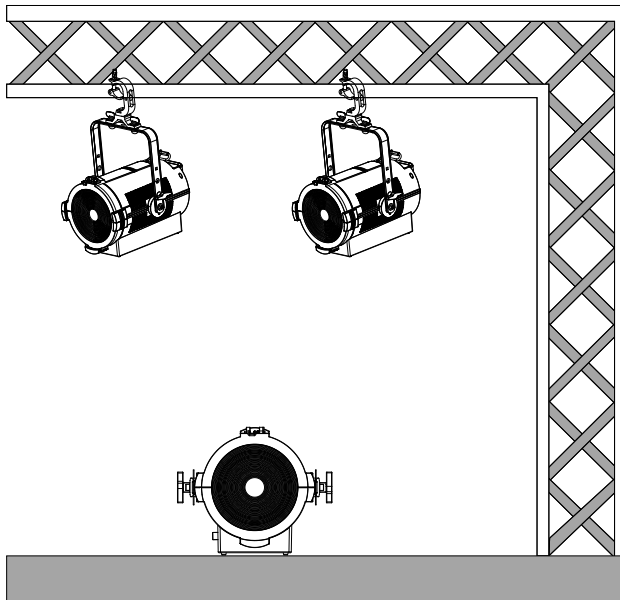


If the fixture shall be lowered from the ceiling or high joists, professional trussing systems have to be used. The fixture must never be fixed swinging freely in the room.

Caution: Fixture may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do not install the fixture!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the fixture's weight.

## RIGGING VIA OMEGA BRACKET:

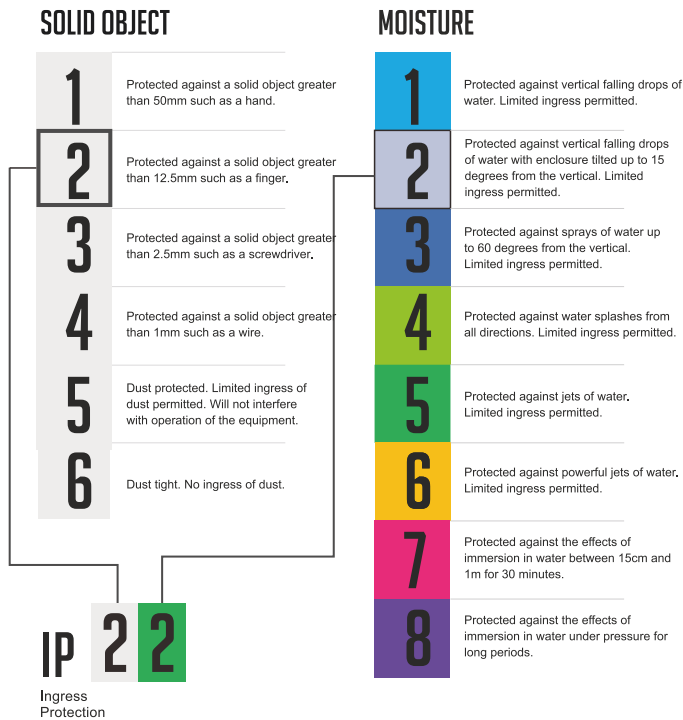


# OUTDOOR IP-RATED FIXTURES

CLF products are certified according to official IP standards. The specific IP rating of this product is shown in the figure below. When a product has classification IP65 is:

- **Dust-tight:** fully protected against dust ingress.
- **Water-jet resistant:** protected against pressurized water jets from any direction, provided that the rubber covers are correctly in place.

Note: Exposure to heavy rain or water pressure exceeding the IP65 standard may reduce the level of protection.



## 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. 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 adjust the DMX address, fixture settings (personality), service utilities. See "Onboard control menus" for a complete list of menus and commands.

Using the CONTROL buttons:

- To enter the menu select [ENTER].
- Press [UP], [DOWN],[MENU], and [ENTER], 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[MENU].

Using the PRESET functions:

- To toggle between the possible preset functions press [PRESET].
- Rotate potentiometer [A], [B], [C] scroll within a menu or adjust preset values.
- Potentiometer [A], [B], [C] have a double function; when press once value go to 0 and press double and go to 100.

## DMX ADDRESS SETTING

The DMX address is the first channel used to receive instructions from the controller. For independent control, each fixture must be assigned to a separate channel. The DMX address can be configured by using the DMX ADDRESS menu in the control panel.

- NO DMX: Display flashes and shows at 'DMX: X'.
- DMX: Display backlight turns off and shows 'DMX: V'.
- The fixture is fully RDM ready. For RDM functions please refer to the ANSI/ESTA E1.37-1 standard.

# ONBOARD CONTROL MENU

Main menu	Menu level 1	Menu level 2	Menu level 3	Menu level 4
DMX Address	Address:001 - 512	Address (***-***)		(001 default)
Control Mode	1 CH DIMM (Presets)			
	3 CH CCT			
	6 CH DIM COLOR			
	10 CH RGBW 16BIT			
	14 CH STANDARD			(default)
	22 CH STANDARD +			
	9 CH XY			
	15 CH CMY + menu (ESC)			
Personality	Fans	Regulated		(default)
		Full		
		Silent		
	Zoom Motor Speed	Normal		(default)
		Slow		
	Encoder On/Off	On		(default)
		Off		
	Accessoires Port	Off		(default)
		Pan tilt joke		
		Automated barndoor		
	Tungsten	On		(default)
		Off		(default)
		Normal		
		Theatre		
		TV		
	Dimmer Speed	Smooth 1		
		Smooth 2		
		Smooth 3		
		Smooth 4		
	Dimmer Curve	Linear		(default)
		Square Law		
		INV Square Law		
		S-curve 1		
	Led Power	50%		
		60%		
		70%		
		80%		
		90%		
		100%		(default)
		Factory	White CCT	2800K
				3200K
				4000K
				5600K
				6000K
				6500K
				7000K
				8000K
				9000K
				10000K
	Calibration	RAW color	RAW color (no calibration)	
		Manual	Red (CIE 1931 xy coordinates)	
			Green (CIE 1931 xy coordinates)	
			Blue (CIE 1931 xy coordinates)	
			White (CIE 1931 xy coordinates)	

Main menu	Menu level 1	Menu level 2	Menu level 3	Menu level 4
Personality	Signal Led	On Off		(default)
	CRI	High Low		(default)
				(default)
	Refresh rate	20K 25K 50K		(default)
	DMX Hold	DMX Hold No DMX Hold Fade to Black Static Color		(default)
	Update Software	Update Fixture Update Fixture group		
	Key-Lock	Off On unlock = (MENU+UP+MENU+DOWN+MENU+UP+MENU+DOWN+ENTER)		(default)
				(default)
	Font Selection	Arial Helvetica Tahoma		
	Font Size	14px 15px 16px		(default)
Editor	Program 1 Program 2 Program 3	Scene 1 Scene 2 Scene 3 ..... Max Scene 30	Dimmer	0 - 255
			Red	0 - 255
			Green	0 - 255
			Blue	0 - 255
			White	0 - 255
			Strobe	0 - 255
			Zoom	0 - 255
			Fade Time (m)	0 ~ 10
			Fade Time (s)	0 ~ 59
			Fade Time (ms)	0 ~ 99
			Wait Time (m)	0 ~ 10
			Wait Time (s)	0 ~ 59
			Wait Time (ms)	0 ~ 99
	Startup	Normal Preset Mode (Hold down ENTER during startup to switch back to normal mode)		
	Preset	1 - 4		
	Preset 1 Preset 2 Preset 3 Preset 4	Dimmer Zoom CCT Tint LEE Color Led Power Tint Mode Lee Mode	0% - 100%	
			11° - 42°	
			2500K - 10000K	
			-0.02 - 0.02	
			0 - 144	
			50, 60, 70, 80, 90, 100%	
			On / Off	
			On / Off	
	Load default option ?	Yes / No		
Static color	HSV Control	H S V	0° ~ 360°	
			0% ~ 100%	
			0% ~ 100%	
	XY Control	CIE x CIE y DIMMER (0% - 100%) / Zoom (11° - 42°)	0 ~ 360	
			0 ~ 100	
	Fixed Color	R, G, B, W, RG, RB, GB, RGB, RGBW		

Main menu	Menu level 1	Menu level 2	Menu level 3	Menu level 4
Static Color	CCT	CCT	2500K - 10000 K	
		Tint	-0.02 - 0.02	
		Dimmer/Zoom	Dimmer 0% -100% / Zoom 11° - 42°	
	Manual Color	Red	0 - 255	
		Green	0 - 255	
		Blue	0 - 255	
		White	0 - 255	
		Strobe	0 - 255	
	Zoom	11° - 42°		
	Dimmer	0% - 100%		
Auto	Auto	0	Off	
		1	Color Chase	
		2	Police car	
		3	Firetruck	
		4	Fire	
		5	Clouds	
		6	Fireworks	
		7	Paparazzi	
		8	Lightning	
	Speed	0 ~ 100%		
	Fade	0 ~ 100%		
	Dimmer	0 ~ 100%		
	Zoom	11° ~ 42°		
Info	Software type	Display Board:	VX.X.XX	
		Led Board:	VX.X.XX	
		IAP for D.B	VX.X.XX	
		Color Code:	XXXX - XXXX - XXXX - XXXX	
			XXXX - XXXX - XXXX - XXXX	
	Usage time	Total:	XXX.XXX Hour	
		Led Total:	XXX.XXX Hour	
		Power Cycle:	XXX.XXX Times	
	Temperature	LED:	xxx°C	
		Drive:	xxx°C	
		Power:	xxx°C	
	Fans	Led Output:	0 - 100%	Bar will show the real output off the led source
		XXXX RPM	Fan RPM	
		XXX %		
	RDM/UID	0x02E2xxxxxxx		
	DMX Live	This displays all received DMX data for each channel according to the selected control mode.		
	Error information	This function shows all registered errors off the fixture		

#### Shortcut keys:

- 1: Press and hold the MENU key for more than 3 seconds to activate test mode.
- 2: Press and hold the ENTER key for more than 5 seconds to show fixture RDM UID QR code.
- 3: Press and hold the UP and DOWN key for more than 3 seconds to rotate the display.
- 4: Press and hold the ENTER and UP and DOWN key for more than 3 seconds to go to system menu:
  - Clear usagetime (password protected)
  - Temperature information reset (password protected)
  - Error sensor: ALL or only important
  - Maximal protection temperature
  - Zoom motor calibration
  - CCT correct for factory calibration
  - LED min
  - RDM UID
  - FAN Max

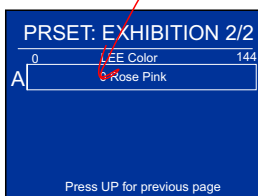
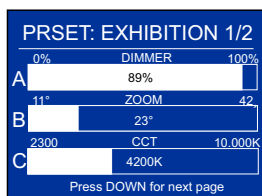
# LED FUNCTIONS & PRESETS:



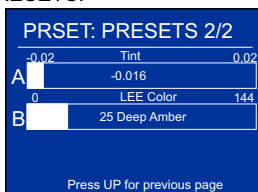
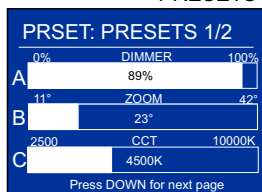
LED functions

- Power: ● AC power  
 ● Battery power  
 Signal: ● No DMX  
 ● DMX  
 Temp: ● No issues  
 ● Out off temperature range

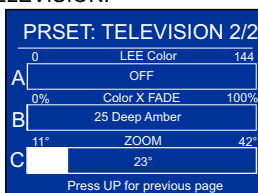
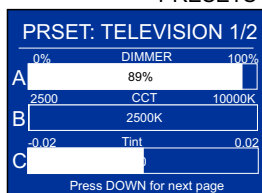
## PRESETS EXHIBITION:



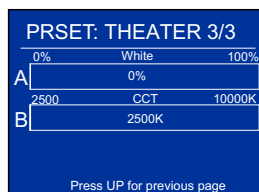
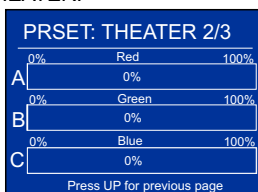
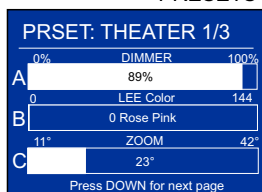
## PRESETS PRESETS:



## PRESETS TELEVISION:



## PRESETS THEATER:



# DMX PROTOCOL

1 CH DIMM (Presets)	3 CH CCT	6 CH DIM color	10 CH RGBW 16BIT	14 CH STANDARD	22 CH STANDARD +	9 CH XY	15 CH CMT +	Function:	Function:	DMX MIN	DMX MAX
1	1	1	1	1	1	1	1	Dimmer	Dimmer(0->100%)	0	255
		2		2	2	2	2	Dimmer Fine	Dimmer Fine(0->100%)	0	255
									Close	0	1
									Strobe From Slow To Fast	2	62
									Open	63	64
									Pulse In From Slow To Fast	65	125
									Open	126	127
									Pulse Out From Slow To Fast	128	188
									Open	189	190
									Randon From Slow To Fast	191	251
									Open	252	255
									No Function	0	5
									Fans - Regulated	6	7
									Fans - Full	8	9
									Fans - Silent	10	11
									Zoom Motor Speed - Normal	12	13
									Zoom Motor Speed - Slow	14	15
									Encoder On/Off - On	16	17
									Encoder On/Off - Off	18	19
									Accessoires Port - Off	20	21
									Accessoires Port - Pan Tilt Joke	22	23
									Accessoires Port - Automated Barndoor	24	25
									Tungsten - On	26	27
									Tungsten - Off	28	29
									Dimmer Speed - Normal	30	31
									Dimmer Speed - Theatre	32	33
									Dimmer Speed - TV	34	35
									Dimmer Speed - Smooth 1	36	37
									Dimmer Speed - Smooth 2	38	39
									Dimmer Speed - Smooth 3	40	41
									Dimmer Speed - Smooth 4	42	43
									Dimmer Curve - Linear	44	45
									Dimmer Curve - Square Law	46	47
									Dimmer Curve - INV Square Law	48	49
									Dimmer Curve - S-Curve	40	51
									Led Power - 50%	52	53
									Led Power - 60%	54	55
									Led Power - 70%	56	57
									Led Power - 80%	58	59
									Led Power - 90%	60	61
									Led Power - 100%	62	63
									Calibration - Factory	64	65
									Calibration - Raw Color	66	67
									Calibration - Manual	68	69
									Signal Led - On	70	71
									Signal Led - Off	72	73
									CRI - High	74	75
									CRI - Low	76	77
									Refresh rate - 20K Hz	78	79
									Refresh rate - 25K Hz	80	81
									Refresh rate - 50K Hz	82	83
									DMX Hold - DMX Hold	84	85
									DMX Hold - No DMX Hold	86	87
									DMX Hold - Fade to Black	88	89
									DMX Hold - Static Color	90	91
									BackLight - Always On	92	93
									BackLight - Auto Off (15S)	94	95
									BL DMX - On	96	97
									BL DMX - Off	98	99
									KeyLock - Off	100	101
									KeyLock - On	102	103
									FontSelection - Arial	104	105
									FontSelection - Helvetica	106	107
									FontSelection - Tahoma	108	109
									FontSize - 14px	100	101
									FontSize - 15px	110	111
									FontSize - 16px	112	113
									Factory reset	114	115

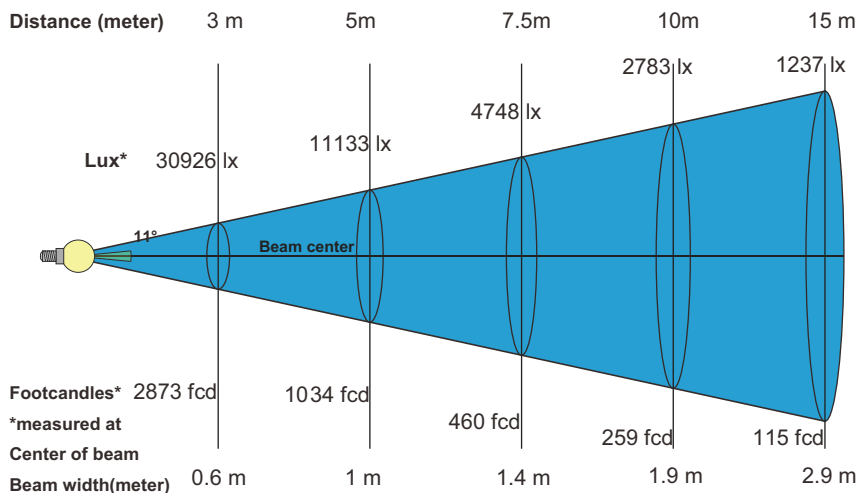
1 CH DIMM (Presets)	3 CH CCT	6 CH DIM color	10 CH RGBW 16BIT	14 CH STANDARD	22 CH STANDARD +	9 CH XY	15 CH CMT +	Function:	Function:	DMX MIN	DMX MAX
									No Function	0	4
									LEE 002 Rose Pink	5	5
									LEE 004 Medium Bastard Amber	6	6
									LEE 007 Pale Yellow	7	7
									LEE 008 Dark Salmon	8	8
									LEE 009 Pale Amber Gold	9	9
									LEE 013 Straw Tint	10	10
									LEE 017 Surprise Peach	11	11
									LEE 020 Medium Amber	12	12
									LEE 025 Sunset Red	13	13
									LEE 036 Medium Pink	14	14
									LEE 048 Rose Purple	15	15
									LEE 058 Lavender	16	16
									LEE 063 Pale Blue	17	17
									LEE 075 Evening Blue	18	18
									LEE 088 Lime Green	19	19
									LEE 089 Moss Green	20	20
									LEE 090 Dark Yellow Green	21	21
									LEE 103 Straw	22	22
									LEE 106 Primary Red	23	23
									LEE 107 Light Rose	24	24
									LEE 108 English Rose	25	25
									LEE 109 Light Salmon	26	26
									LEE 110 Middle Rose	27	27
									LEE 111 Dark Pink	28	28
									LEE 117 Steel Blue	29	29
									LEE 121 LEE Green	30	30
									LEE 122 Fern Green	31	31
									LEE 127 Smokey Pink	32	32
									LEE 128 Bright Pink	33	33
									LEE 131 Marine Blue	34	34
									LEE 134 Golden Amber	35	35
									LEE 137 Special Lavender	36	36
									LEE 138 Pale Green	37	37
									LEE 140 Summer Blue	38	38
									LEE 142 Pale Violet	39	39
									LEE 143 Pale Navy Blue	40	40
									LEE 144 No Colour Blue	41	41
		4		5	5			Color Macro	LEE 147 Apricot	42	42
									LEE 148 Bright Rose	43	43
									LEE 151 Gold Tint	44	44
									LEE 152 Pale Gold	45	45
									LEE 153 Pale Salmon	46	46
									LEE 154 Pale Rose	47	47
									LEE 156 Chocolate	48	48
									LEE 157 Pink	49	49
									LEE 161 Slate Blue	50	50
									LEE 162 Bastard Amber	51	51
									LEE 164 Flame Red	52	52
									LEE 165 Daylight Blue	53	53
									LEE 170 Deep Lavender	54	54
									LEE 174 Dark Steel Blue	55	55
									LEE 176 Loving Amber	56	56
									LEE 180 Dark Lavender	57	57
									LEE 192 Flesh Pink	58	58
									LEE 194 Surprise Pink	59	59
									LEE 196 True Blue	60	60
									LEE 197 Alice Blue	61	61
									LEE 198 Palace Blue	62	62
									LEE 199 Regal Blue	63	63
									LEE 200 Double CTB	64	64
									LEE 201 Full CTB	65	65
									LEE 202 Half CTB	66	66
									LEE 203 Quarter CTB	67	67
									LEE 204 Full CTO	68	68
									LEE 205 Half CTO	69	69
									LEE 206 Quarter CTO	70	70
									LEE 207 Full CTO + .3 ND	71	71
									LEE 208 Full CTO + .6 ND	72	72
									LEE 212 LCT Yellow (Y1)	73	73
									LEE 213 White Flame Green	74	74
									LEE 219 LEE Fluorescent Green	75	75
									LEE 230 Super Correction LCT Yellow	76	76
									LEE 232 Super Correction W.F. Green	77	77
									LEE 236 HMI (to Tungsten)	78	78
									LEE 237 CID (to Tungsten)	79	79
									LEE 238 CSI (to Tungsten)	80	80
									LEE 241 LEE Fluorescent 5700 Kelvin	81	81
									LEE 242 LEE Fluorescent 4300 Kelvin	82	82

1 CH DIMM (Presets)	3 CH CCT	6 CH DIM color	10 CH RGBW 16BIT	14 CH STANDARD	22 CH STANDARD +	9 CH XY	15 CH CMT +	Function:	Function:	DMX MIN	DMX MAX
									LEE 243 LEE Fluorescent 3600 Kelvin	83	83
									LEE 244 LEE Plus Green	84	84
									LEE 245 Half Plus Green	85	85
									LEE 247 LEE Minus Green	86	86
									LEE 248 Half Minus Green	87	87
									LEE 249 Quarter Minus Green	88	88
									LEE 281 Three Quarter CTB	89	89
									LEE 283 One and a Half CTB	90	90
									LEE 285 Three Quarter CTO	91	91
									LEE 286 One and Half CTO	92	92
									LEE 287 Double CTO	93	93
									LEE 322 Soft Green	94	94
									LEE 323 Jade	95	95
									LEE 327 Forest Green	96	96
									LEE 328 Follies Pink	97	97
									LEE 332 Special Rose Pink	98	98
									LEE 343 Special Medium Lavender	99	99
									LEE 345 Fuchsia Pink	100	100
									LEE 352 Glacier Blue	101	101
									LEE 353 Lighter Blue	102	102
									LEE 354 Special Steel Blue	103	103
									LEE 366 Cornflower	104	104
									LEE 441 Full CT Straw	105	105
									LEE 442 Half CT Straw	106	106
									LEE 444 Eighth CT Straw	107	107
									LEE 500 Double New Colour Blue	108	108
									LEE 501 New Colour Blue (Robertson Blue)	109	109
									LEE 502 Half New Colour Blue	110	110
									LEE 504 Waterfront Green	111	111
									LEE 505 Sally Green	112	112
									LEE 506 Marlene	113	113
									LEE 508 Midnight Maya	114	114
									LEE 525 Argent Blue	115	115
									LEE 550 ALD Gold	116	116
									LEE 604 Full CT Eight Five	117	117
									LEE 650 Industry Sodium	118	118
									LEE 651 Hi Sodium	119	119
									LEE 652 Urban Sodium	120	120
									LEE 700 Perfect Lavender	121	121
									LEE 701 Provence	122	122
									LEE 702 Special Pale Lavender	123	123
									LEE 703 Cold Lavender	124	124
									LEE 704 Lily	125	125
									LEE 706 King Fals Lavender	126	126
									LEE 708 Cool Lavender	127	127
									LEE 709 Electric Lilac	128	128
									LEE 710 Spir Special Blue	129	129
									LEE 711 Cold Blue	130	130
									LEE 712 Bedford Blue	131	131
									LEE 719 Colour Wash Blue	132	132
									LEE 723 Virgin Blue	133	133
									LEE 724 Ocean Blue	134	134
									LEE 725 Old Steel Blue	135	135
									LEE 728 Steel Green	136	136
									LEE 742 Bram Brown	137	137
									LEE 744 Dirty White	138	138
									LEE 747 Easy White	139	139
									LEE 748 Seedy Pink	140	140
									LEE 763 Wheat	141	141
									LEE 764 Sun Colour Straw	142	142
									LEE 765 LEE Yellow	143	143
									LEE 779 Bastard Pink	144	144
									LEE 790 Moroccan Pink	145	145
									LEE 793 Vanity Fair	146	146
									LEE 794 Pretty 'n Pink	147	147
									LEE 795 Magical Magenta	148	148
									2500K	149	149
									2800K	150	150
									3200K	151	151
									4000K	152	152
									5000K	153	153
									5600K	154	154
									6000K	155	155
									7000K	156	156
									8000K	157	157
									9000K	158	158
									10000K	159	159
									All color	160	255

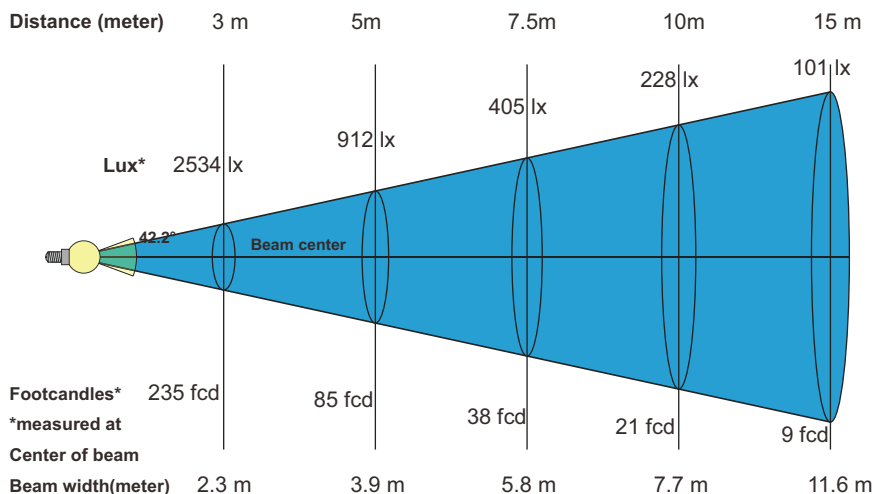
1 CH DIMM (Presets)	3 CH CCT	6 CH DIM color	10 CH RGBW 16BIT	14 CH STANDARD	22 CH STANDARD +	9 CH XY	15 CH CMT +	Function:	Function:	DMX MIN	DMX MAX
	2	5	2	6	6	5	5	Zoom	0 - 100%	0	255
			3	7	7			Red	Red	0	255
			4		8			Red Fine	Red Fine	0	255
			5	8	9			Green	Green	0	255
			6		10			Green Fine	Green Fine	0	255
			7	9	11			Blue	Blue	0	255
			8		12			Blue Fine	Blue Fine	0	255
			9	10	13			White	White	0	255
			10		14			White Fine	White Fine	0	255
	3	6		11	15		6	CCT	No Function	0	5
									2500K-10000K	6	255
									0	0	0
				12	16		7	Tint	-0.02	1	127
									0	128	128
									+0.02	129	255
						6		X Coordinate	CIE1931 x = (0 - 0.85)	0	255
						7		X Coordinate Fine	CIE1931 x = (0 - 0.85) Fine	0	255
						8		Y Coordinate	CIE1931 y = (0 - 0.85)	0	255
						9		Y Coordinate Fine	CIE1931 y = (0 - 0.85) Fine	0	255
							8	Cyan	Cyan	0	255
							9	Cyan Fine	Cyan Fine	0	255
							10	Magenta	Magenta	0	255
							11	Magenta Fine	Magenta Fine	0	255
							12	Yellow	Yellow	0	255
							13	Yellow Fine	Yellow Fine	0	255
									No Function	0	10
									Color Chase	11	39
									Police Car	40	68
									Firetruck	69	96
									Fire	97	125
									Clouds	126	154
									Fireworks	155	182
									Paparazzi	183	211
									Lightning	212	240
									No Function	241	255
					18		15	Effect Macro Speed	Speed Fast to Slow	0	255
				13	19			Pan	Pan Coarse	0	255
					20			Pan Fine	Pan Fine	0	255
				14	21			Tilt	Tilt Coarse	0	255
					22			Tilt Fine	Tilt Fine	0	255

# PHOTOMETRICS

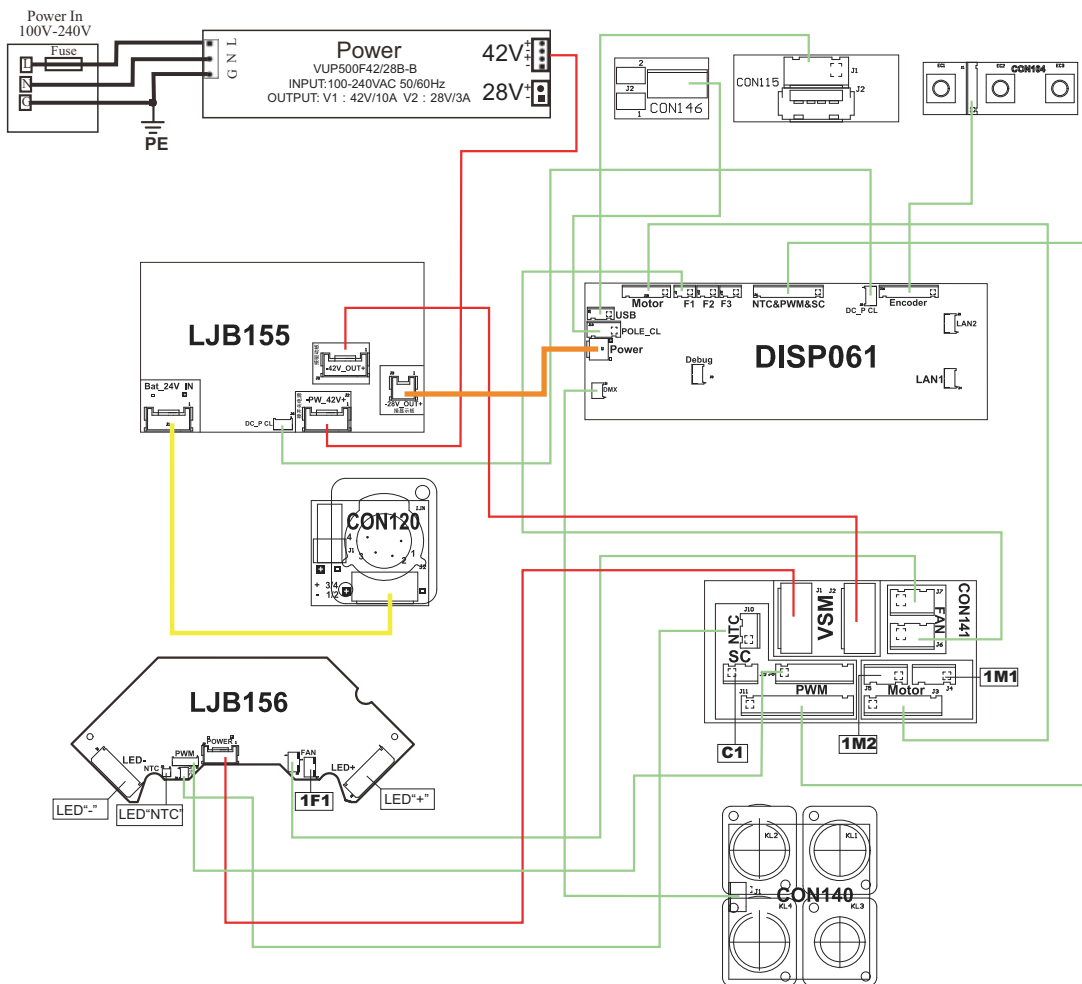
Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120°	Intensity ratio in 90°
11°	17°	20.1°	99.5%	99.5%



Beam angle 50%	Field angle 10%	Cutoff angle 2,5%	Intensity ratio in 120°	Intensity ratio in 90°
42.2°	64°	79.9°	99.5%	99.1%



# CIRCUIT CONNECTION DIAGRAM



Remark: 24V = Yellow  
 28V = Orange  
 42V = Red  
 DMX = Green

# SPECIFICATIONS:

Power	
Input voltage & rate	AC100-240V~50/60Hz
Standby power	12W
Total power consumption(at nominal voltage 230V)	353W
Typical current (at nominal voltage 230V)	1,48A
Cos $\phi$	0.973
Power plug type	Seetronic Powercon TRUE 1
Configuration	
LED Source	350W RGB + Warm White led engine
Expected lifetime	50.000 hours
Color temperature	Advanced, variable CCT (calibrated) WW led processing.
CRI level	> 96 CRI (2 modes; High / Low)
Light Output	11189 lm
Dimming frequency	20.000 Hz/25.000 Hz/50.000Hz
Dimmer resolution	65535 (16Bit)
Optical	
50% Beam Angle	11° to 42°
10% Field Angle	17° to 64°
Photometric	
Output @5M 11° beam	11133 lux
Output @5M 64° beam	912 lux
Color Mixing	RGB WW
CCT	2500 to 10000 Kelvin
DMX Channels	1 / 3 / 6 / 10 / 14 / 22 / 9 / 15 Channels
Input	DMX 512 3 and 5 pin / RDM
Tungsten mode	Yes
Dimmer curve	Linear / s-curve / square law / inverse square law
Update mode	Via USB drive
Housing	
	Sturdy black aluminium lightweight body
Cooling type	
	Forced ventilation with fan. Automatically
MAX ambient temp (Ta max)	Ta max=45° C
MIN ambient temp (Ta min)	Ta min=-20°C
MAX housing temp. (ta=25°C)	Tc= 10°C
MAX housing temp. (ta=45°C)	Tc= 50.5°C
Installation	
IP rating	IP 22
Orientation	Any
Housing	
Net product weight	8.5 Kg (9.8Kg with barndoor and filterframe)
Fixture dimensions – length	465.6 mm
Fixture dimensions – depth	332 mm
Fixture dimensions – height	274.3 mm
Carton size	545 x 360 x 360 mm
Gross weight	10.3 Kg
Accessories	Barndoor, filterframe
Included items	Manual, Power cable
Approvals certifications	CE and RoHS

# SPECTRUM F-350 FC

