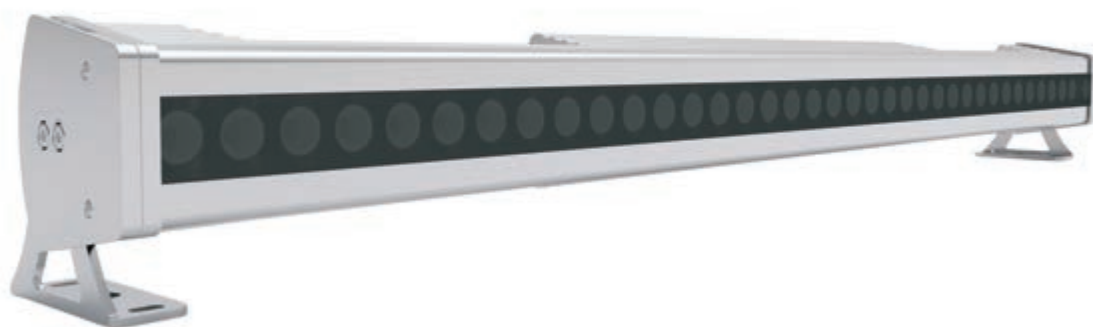


Showline

SL STRIP 400 TW LED Luminaires



IP65 Rated Models

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Document Number: **SL STRIP 400 TW User's Manual**

Version as of: 24-004-3449-00 Rev1.0

SL STRIP 400 TW Installation & User's Manual

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IMPORTANT INFORMATION

Warnings and Notices

When using electrical equipment, basic safety precautions should always be followed including the following:



- a. **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- b. Do not use outdoors.
- c. Do not mount near gas or electric heaters.
- d. Equipment should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
- e. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- f. Do not use this equipment for other than intended use.
- g. Refer service to qualified personnel.

SAVE THESE INSTRUCTIONS.



WARNING: You must have access to a main circuit breaker or other power disconnect device before installing any wiring. Be sure that power is disconnected by removing fuses or turning the main circuit breaker off before installation. Installing the device with power on may expose you to dangerous voltages and damage the device. A qualified electrician must perform this installation.

WARNING: Refer to National Electrical Code® and local codes for cable specifications. Failure to use proper cable can result in damage to equipment or danger to personnel.

WARNING: This equipment is intended for installation in accordance with the National Electric Code® and local regulations. It is also intended for installation in indoor applications only. Before any electrical work is performed, disconnect power at the circuit breaker or remove the fuse to avoid shock or damage to the control. It is recommended that a qualified electrician perform this installation.

Additional Resources for DMX512

For more information on installing DMX512 control systems, the following publication is available for purchase from the United States Institute for Theatre Technology (USITT), "Recommended Practice for DMX512: A Guide for Users and Installers, 2nd edition" (ISBN: 9780955703522). USITT Contact Information:

USITT
315 South Crouse Avenue, Suite 200
Syracuse, NY 13210-1844
Phone: 1.800.938.7488 or 1.315.463.6463
www.usitt.org

Showline Limited Two-Year Warranty

Showline offers a two-year limited warranty of its luminaires against defects in materials or workmanship from the date of delivery. A copy of Showline two-year limited warranty containing specific terms and conditions can be obtained by contacting your local Showline office.

TABLE OF CONTENTS

Showline Offices.....	Inside Front Cover
IMPORTANT INFORMATION	
Warnings and Notices.....	1
Additional Resources for DMX512	1
Showline Limited Two-Year Warranty	1
TABLE OF CONTENTS	
PREFACE	
About this Manual	3
Included Items.....	3
SL STRIP 400 TW LED Luminaire Power Input Cables(North American Models Only)	3
SL STRIP 400 TW LED Luminaire Accessories	3
SL STRIP 400 TW LED LUMINAIRE OVERVIEW	
SL STRIP 400 TW LED Luminaire Components	4
Major Luminaire Components.....	4
LCD Display / Menu System.....	5
INSTALLATION AND SET UP	
Power Requirements	6
AC Power Operation.....	6
Connecting Power.....	6
Connecting SL STRIP 400 TW LED Luminaire to AC Power	7
Connecting to the DMX512 Network	8
Mounting Luminaire	9
OPERATION AND PROGRAMMING	
LCD Display and Menu System	11
LCD Display and Menu System Operation	12
Quick Selection Buttons	14
Edit a Preset Button	14
Edit a Chase Button	14
DMX Address Button	14
Dimming Curve Selection	15
Master / Slave Operational Mode	15
DMX CONTROL	
SL STRIP 400 TW LED Luminaire DMX Mapping	17
16-Bit Mode(CCT)	17
16-Bit Mode(WW + CW)	19
8-Bit Mode(CCT)	17
8-Bit Mode(WW + CW)	19
DMX Timing Channel Detail	21
SL STRIP 400 TW LED Luminaire RDM Parameter IDs	27
CLEANING AND CARE	
Special Cleaning and Care Instructions	30
Front Lens Cleaning.....	30
Service and Maintenance	30
TECHNICAL SPECIFICATIONS	
SL STRIP 400 TW LED Luminaire Operational Specifications	31
SL STRIP 400 TW LED Luminaire Dimensions	31

PREFACE

1. About this Manual

The document provides installation and operation instructions for the following products:

- SL STRIP 400 TW LED Luminaire (IP65 rated)

Please read all instructions before installing or using this product. *Retain this manual for future reference*. Additional product information and descriptions may be found on the product specification sheet.

Note: The SL STRIP 400 TW LED Luminaire is universal voltage 100 to 240 VAC (auto-ranging).

2. Included Items



Each SL STRIP 400 TW LED Luminaire includes the following items:

- SL STRIP 400 TW LED Luminaire
- PC1BE - AC Power Input Cable (39 inches / 1 meter), Powercon with Bare End* (*Note, user supplies and installs own AC input connector)
- Installation and User's Manual (*this document*)

SL STRIP 400 TW LED Luminaire Power Input Cables (North American Models Only)

Part Number	Description
PC1BE	SL STRIP 400 TW LED Luminaire AC Power Input Cable (39 inches / 1 meter), Powercon with Bare End* (*Note, user supplies and installs own AC input connector)
PC1GP	SL STRIP 400 TW LED Luminaire AC Power Input Cable (39 inches / 1 meter), Powercon with Stagepin Connector
PC1GTL	SL STRIP 400 TW LED Luminaire AC Power Input Cable (39 inches / 1 meter), Powercon with Twistlock Connector
PC1GR	SL STRIP 400 TW LED Luminaire AC Power Input Cable (39 inches / 1 meter), Powercon with Edison Connector
PC3BE	SL STRIP 400 TW LED Luminaire AC Power Input Cable (9.8 Feet / 3 meter), Powercon with Bare End* (*Note, user supplies and installs own AC input connector)
PC8BE	SL STRIP 400 TW LED Luminaire AC Power Input Cable (26 Feet / 8 meter), Powercon with Bare End* (*Note, user supplies and installs own AC input connector)
PC8GR	SL STRIP 400 TW LED Luminaire AC Power Input Cable (26 Feet / 8 meter), Powercon with Edison Connector

SL STRIP 400 TW LED Luminaire Accessories

Part Number	Description
MC	Mega Claw, Black, Anodized
SC	Molded Yoke C-Clamp
HC	Light Weight Half Coupler
82003	Safety Cable

SL STRIP 400 TW LED LUMINAIRE OVERVIEW

1. SL STRIP 400 TW LED Luminaire Components

Major Luminaire Components

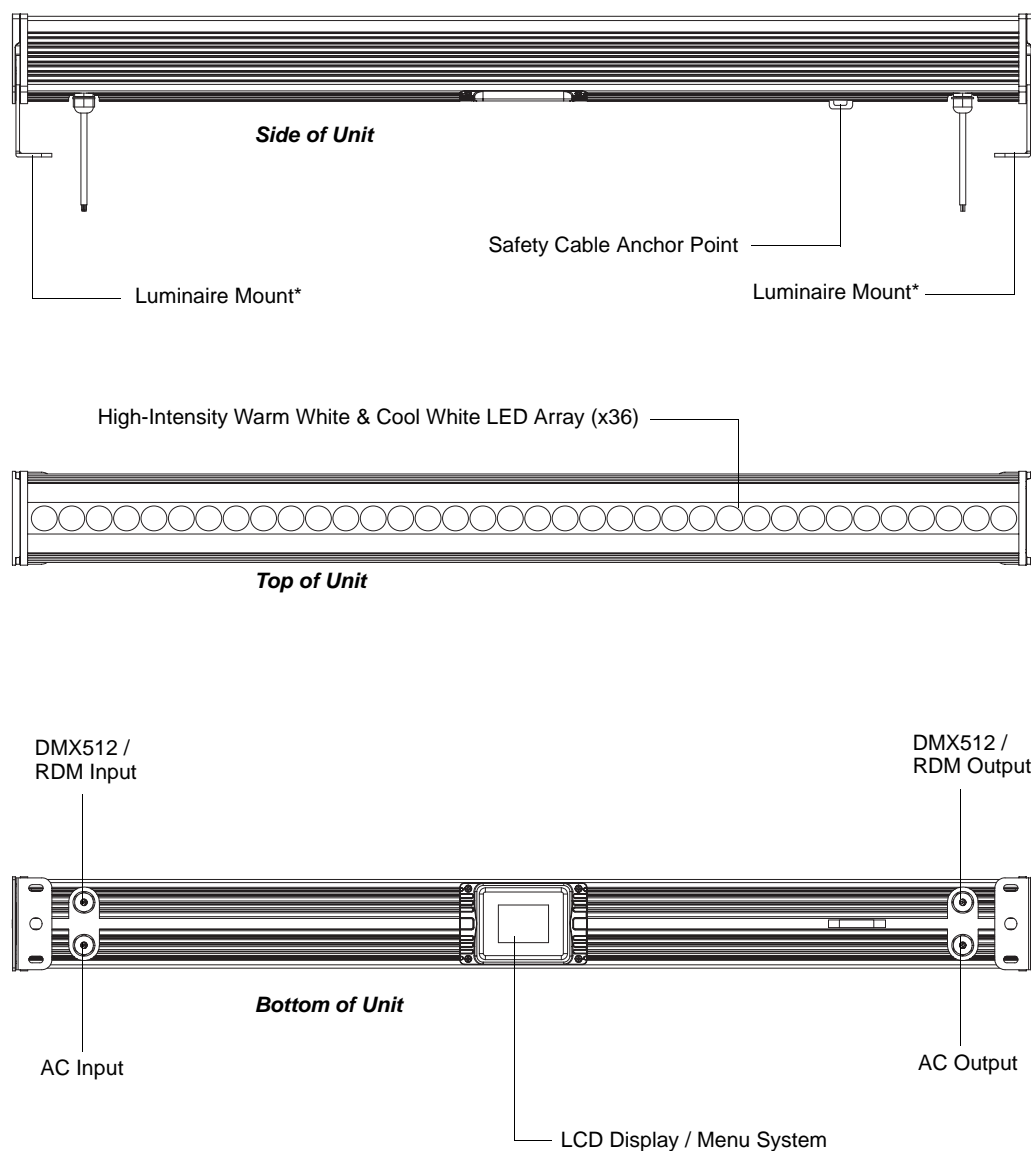


Figure 1: SL STRIP 400 TW LED Luminaire Components

Note: *Mounts can be removed and reversed. See ["Mounting Luminaire" on page 9](#) for more information

LCD Display / Menu System

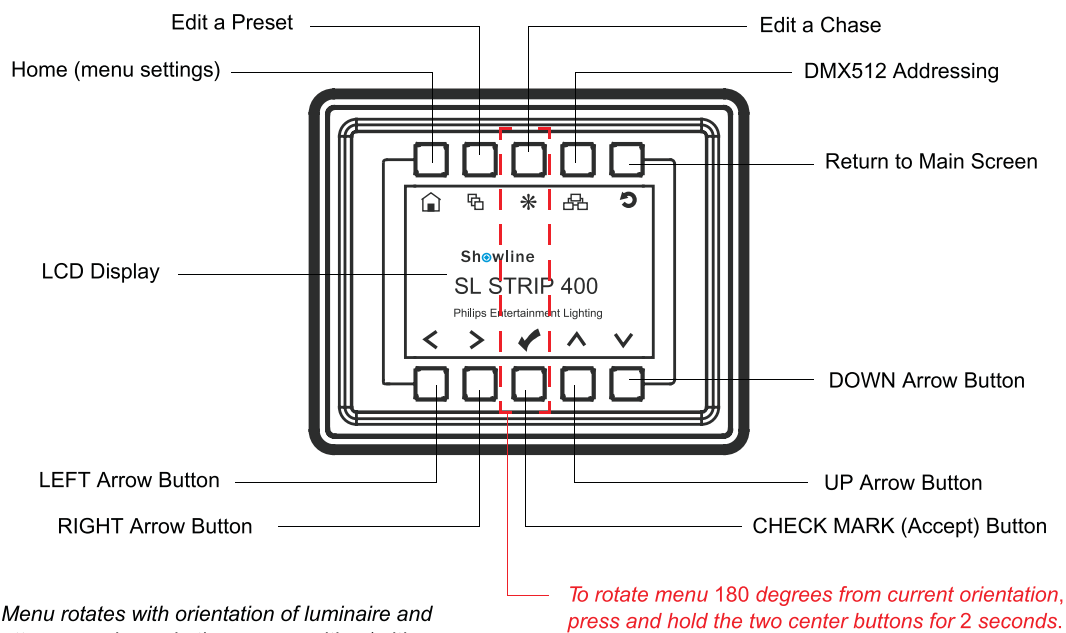


Figure 2: LCD Display & Menu System

Note: For Menu operation and programming details, refer to “LCD Display and Menu System” on page 11.

INSTALLATION AND SET UP

1. Power Requirements

The SL STRIP 400 TW LED Luminaire operates on AC input voltages from 100 to 240 VAC. The unit is supplied with an AC input cable without an input connector. Input connector is a user-supplied accessory to fit your application.



WARNING! This unit does not contain an ON/OFF switch. Always disconnect power input cable to completely remove power from unit when not in use.

AC Power Operation

When connected to an AC source, the unit operates on 100 to 240 volts AC(+/- 10%, auto-ranging). The luminaire contains an auto-ranging power supply. Each luminaire can draw up to 95 Watts.



WARNING! Maximum amount of units that may be daisy-chained is (A) 17 units 100 ~ 120VAC or (B) 32 units 230 ~ 240VAC(10 Amps).

Table 1: SL STRIP 400 TW LED Luminaire Voltage (VAC) vs. Current*

Voltage (AC)	Total Current (A)	Voltage (AC)	Total Current (A)
100	0.95	180	0.53
110	0.86	190	0.50
120	0.79	200	0.48
130	0.73	210	0.45
140	0.67	220	0.43
150	0.63	230	0.41
160	0.59	240	0.40
170	0.56		

Note: For wiring of AC input connector, refer to [“Connecting SL STRIP 400 TW LED Luminaires to AC Power”](#) on page 7.

2. Connecting Power

Units can be powered in one of two ways:

- Direct connection to a AC power source using an AC input cable. For wiring of AC input connector, refer to [“Connecting SL STRIP 400 TW LED Luminaires to AC Power”](#) on page 7.
- Connection from the AC output of another SL STRIP 400 TW LED Luminaire. When using this method, it is very important not to connect any other type of equipment device.



WARNING! Only connect other SL STRIP 400 TW LED Luminaires to the AC Output (Thru) connector of a SL STRIP 400 TW LED Luminaire.

Connecting SL STRIP 400 TW LED Luminaires to AC Power

If the unit is supplied with an AC input cable without an input connector installed. The input connector is a user-supplied accessory.

Table 2 describes how to connect power to your SL STRIP 400 TW LED Luminaire. Field wiring of the SL STRIP 400 TW LED Luminaire is straight forward. A total of 3 wires/conductors is supplied from the unit. The following wiring scheme is used:

Table 2: SL STRIP 400 TW LED Luminaire (IP65 Rated Models) AC Input Connections

Wire Color	Purpose
Brown	Main / Line (100 to 240VAC)
Blue	Neutral
Green/Yellow	Ground (Earth)

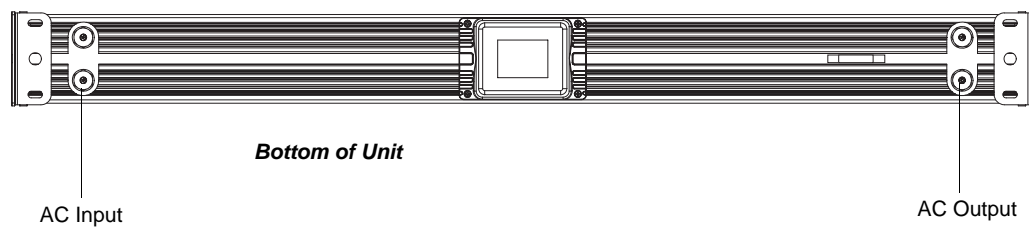


Figure 3: SL STRIP 400 TW LED Luminaire AC Input & Output Connections

CAUTION: In the event the AC input cable of this luminaire is damaged, it must be replaced, by the user, with an approved cable through an Authorized Showline Dealer or Service Center.

3. Connecting to the DMX512 Network

Basic DMX512 installation consists of connecting multiple SL STRIP 400 TW LED Luminaires together (up to 32 luminaires) in "daisy-chain" fashion. A cable runs from the control console (or DMX512 control source) to the DMX connector on the first SL STRIP 400 TW LED Luminaire. Another cable runs from the other DMX connector on the first unit to a DMX connector on the next SL STRIP 400 TW LED Luminaire (or DMX512 device to be controlled).

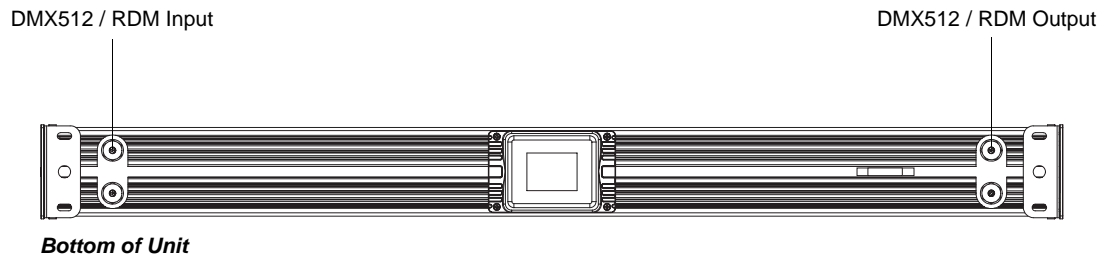


Figure 4: SL STRIP 400 TW LED Luminaire DMX512 Input / Output Connections

Note: For more information on DMX512 networking and systems, refer to ["Additional Resources for DMX512"](#) on page 1. For SL STRIP 400 TW LED Luminaire DMX Mapping, refer to ["DMX CONTROL"](#) on page 17.

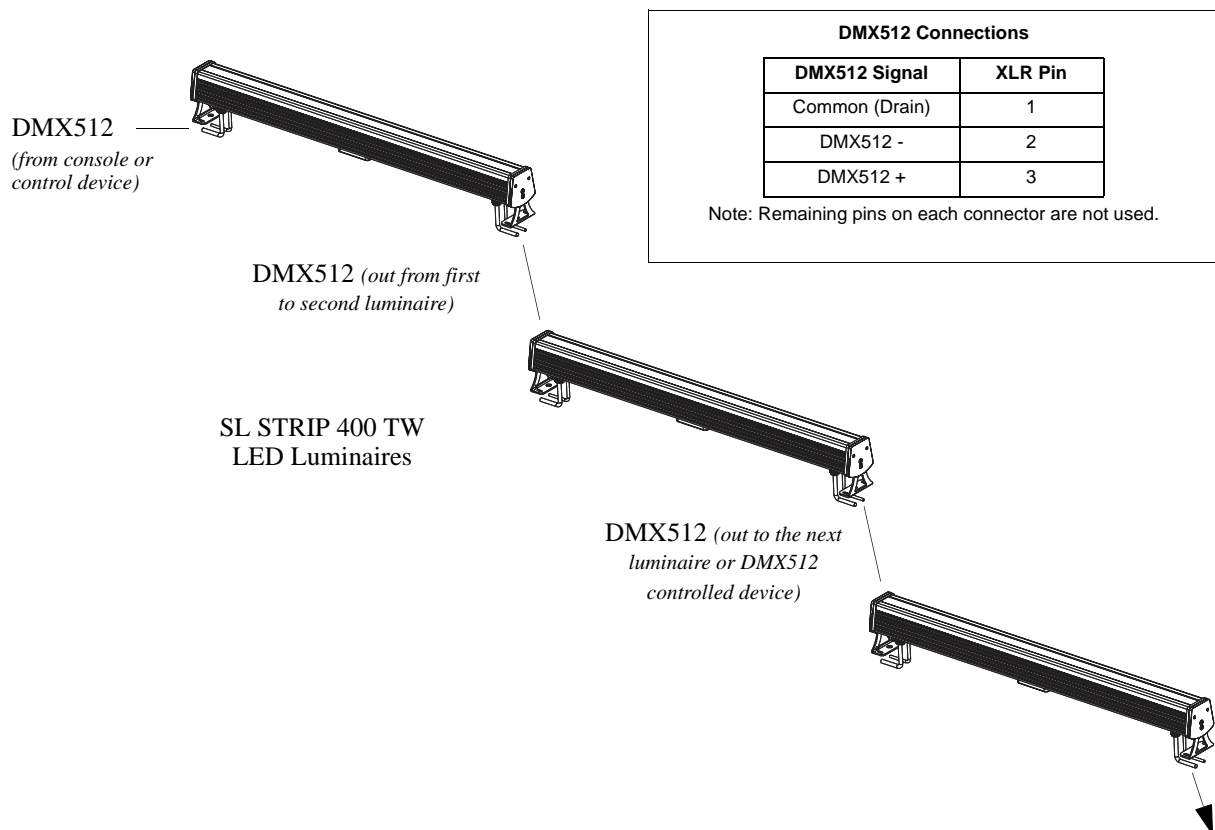


Figure 5: SL STRIP 400 TW LED Luminaire - DMX512 Connections

4. Mounting Luminaire

The SL STRIP 400 TW LED Luminaire is provided with two mounts and a safety cable anchor point (as described in ["Major Luminaire Components" on page 4](#)).

The two mounts are easily removed and reversed as required (as illustrated in **Figure 6**). These mounts are designed to accept a variety of mounting hooks, clamps, etc. for hanging applications or can be set on the mounts for floor applications. Refer to **Figure 7** for additional information.

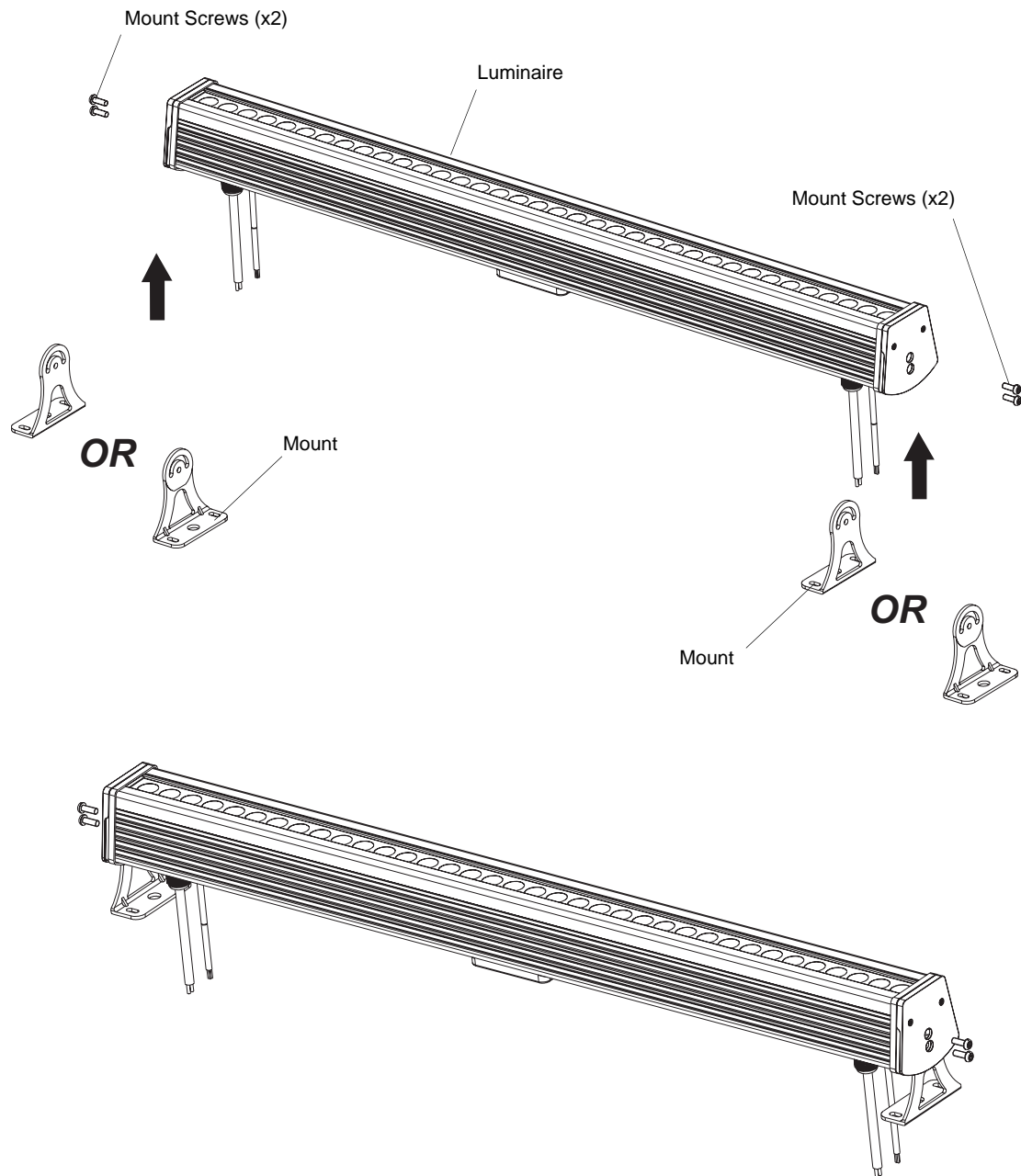


Figure 6: Mount Removal and Installation

Simply attach hook, clamp, etc. to the SL STRIP 400 TW LED Luminaire mount assembly in the M10 hole.

Note: Mounting hooks, clamps, etc. are sold separately or by others. For available mounting accessories refer to "[SL STRIP 400 TW LED Luminaire Accessories](#)" on page 3.

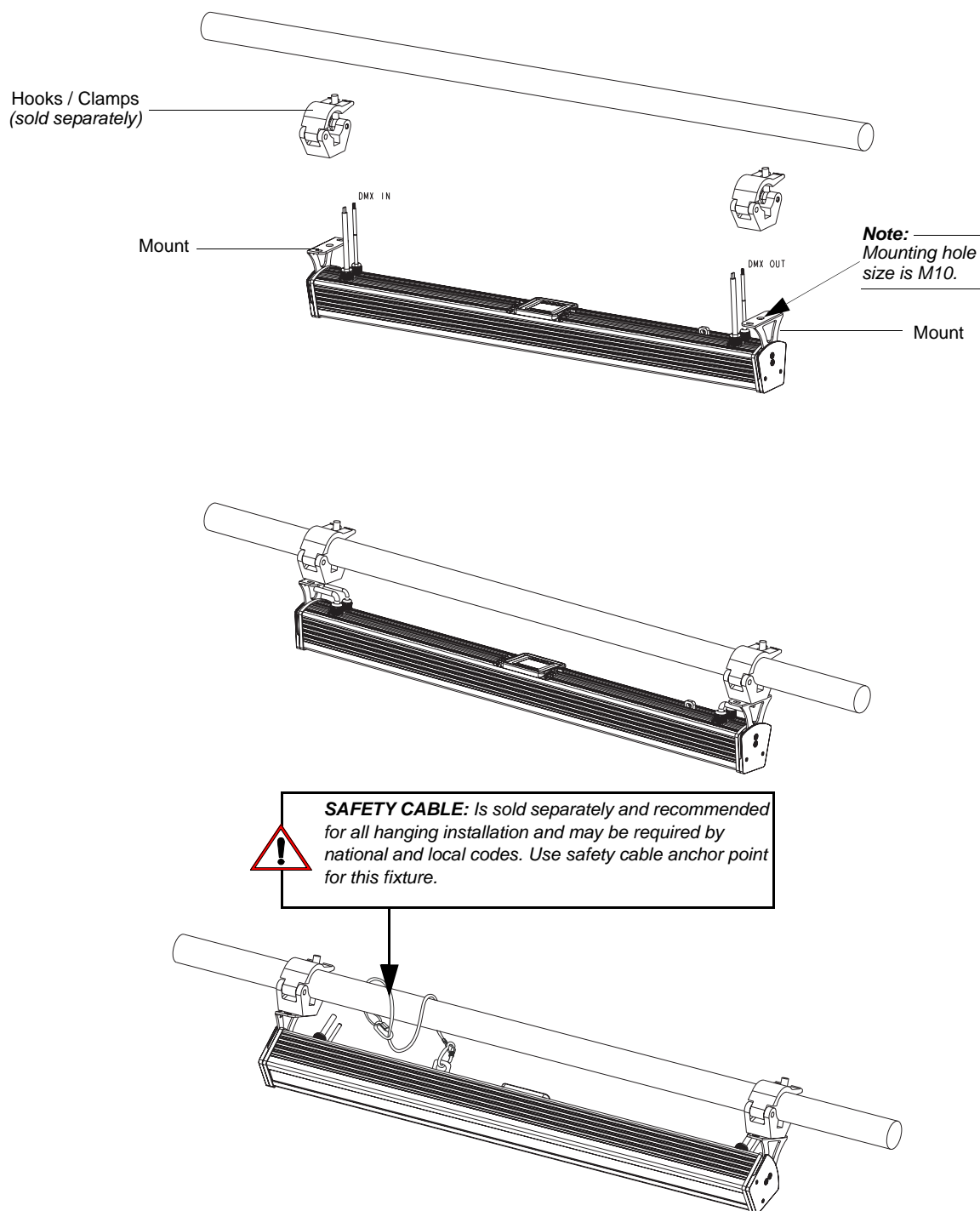


Figure 7: Mounting Luminaire - Hanging Applications

OPERATION AND PROGRAMMING

1. LCD Display and Menu System

The SL STRIP 400 TW LED Luminaire's LCD Display and Menu System provides local control for accessing the following fixture's setting:

- Presets (Standard and User Defined)
- Effects (Chases - preloaded and user defined)
- Strobe / Timing
- Fixture Settings
- Fixture Lockout (to prevent changes)
- Password Setting
- Current Fixture Operational Status
- Setting the DMX512 Address

Note: If there are multiple luminaires in a system, changes would need to be made at each LCD Menu as desired.

Upon power up, the LCD will display the main screen showing the product type/name. If DMX is enabled, the programmed address will appear after power up.

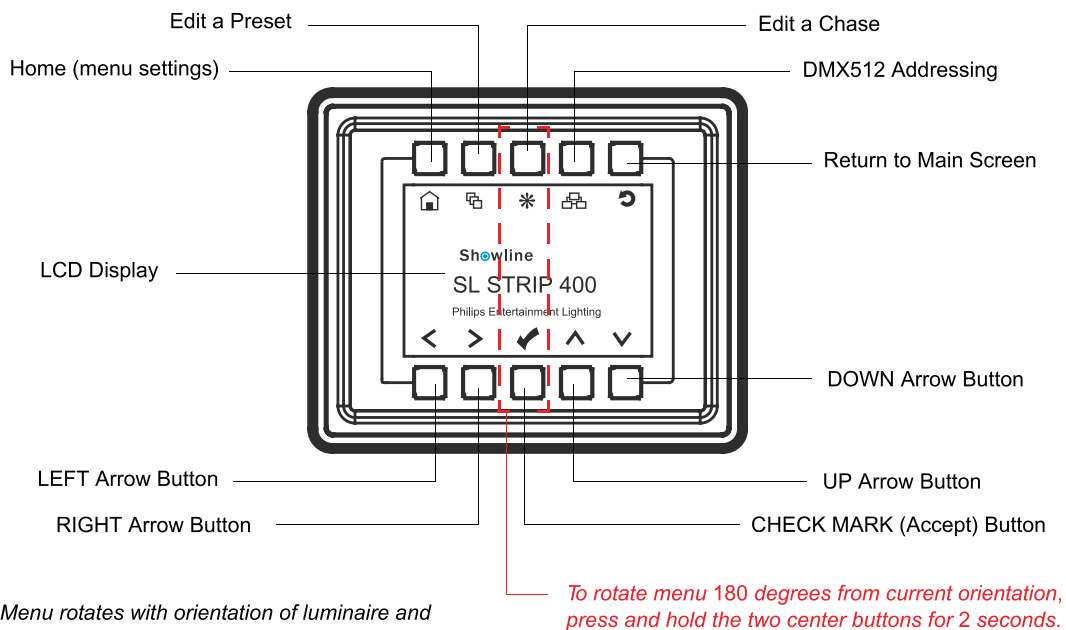


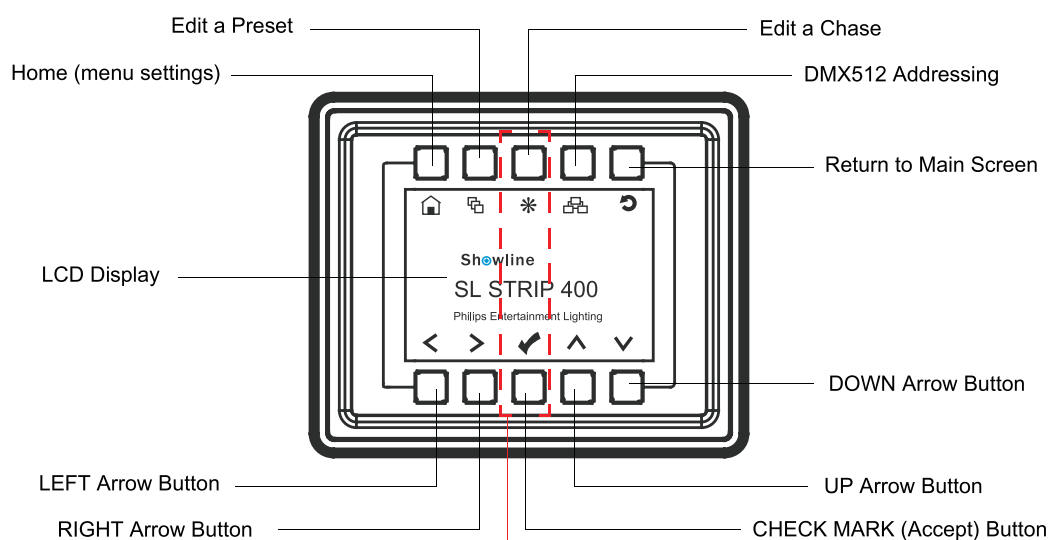
Figure 8: LCD Display and Menu System

2. LCD Display and Menu System Operation

The LCD Display Menu system consists of several categories. Use the Menu Buttons to access and make changes to the menu items. When the desired menu item is reached, press the desired Menu Button to display the menu options and to navigate and configure the menu options as required.

To navigate and access menu settings / selections:

- Step 1. Make sure unit is powered and turned on.
- Step 2. Press the desired button (as shown in **Figure 9**) to access menu categories.
- Step 3. Use UP |DOWN |LEFT |RIGHT arrow buttons to navigate through the various options and settings.
- Step 4. Make changes as desired.
- Step 5. Press CHECK MSRK (OK) button to accept changes.



NOTE: Menu rotates with orientation of luminaire and menu buttons are always in the same position (with rotation of menu)

To rotate menu 180 degrees from current orientation, press and hold the two center buttons for 2 seconds.

Figure 9: LCD Display and Menu System

SL STRIP 400 TW LED Luminaire Menu Tree

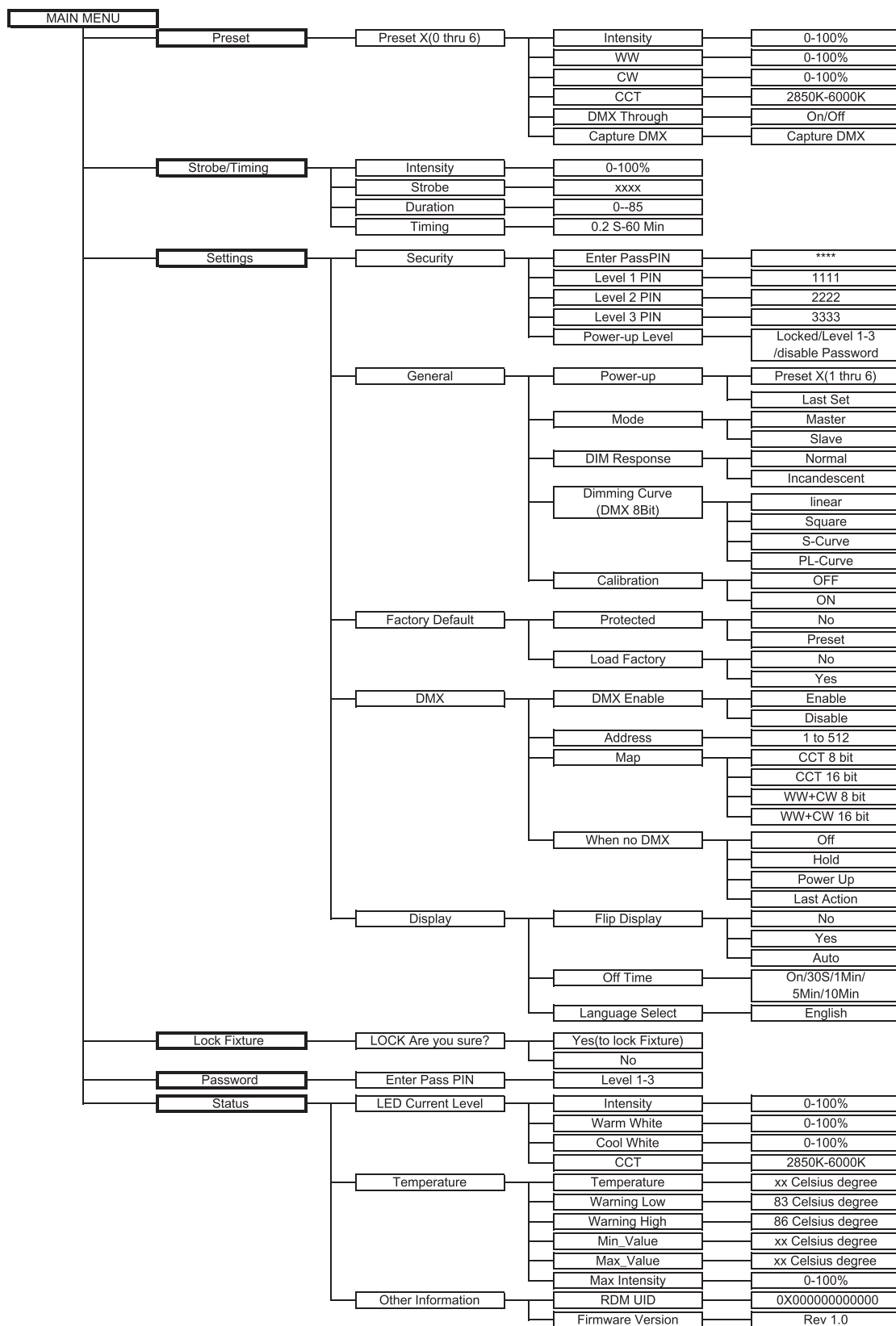


Figure 10: SL STRIP 400 TW LED Luminaire Menu Tree

3. Quick Selection Buttons

When in Manual Mode, the SL STRIP 400 TW's features can be accessed via the on-board LCD menu system or via three quick select buttons:

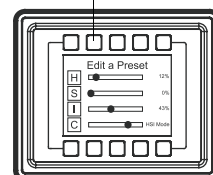
- Edit a Preset Button
- Edit a Chase Button
- DMX Address Button

Edit a Preset Button

To edit and save a preset:

- Step 1. Press Edit a Preset button. Current preset will be shown.
- Step 2. Use LEFT and RIGHT arrow buttons to scroll through all presets.
- Step 3. Once at desired preset, use UP and DOWN arrows to access (highlight) preset parameters. Once in desired parameter, use LEFT and RIGHT arrow buttons to adjust parameter value as desired.
- Step 4. Once all values are adjusted as desired, press OK (Check Mark) button.
- Step 5. Save preset menu option will appear. Use LEFT and RIGHT arrow buttons to select preset number.
- Step 6. If saving preset, press OK (Check Mark) button. Confirm choice.
- Step 7. Preset is now saved.

Edit a Preset

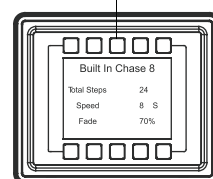


Edit a Chase Button

To edit and save a chase:

- Step 1. Press Edit a Chase button. Current chase will be shown.
- Step 2. Use LEFT and RIGHT arrow buttons to scroll through all chases (Built In and User Chases).

Edit a Chase



Note: For Built In Chases, only the Speed and Fade parameters may be changed and saved. For User Chases, Chase Number, Total Steps, Speed, and Fade Parameters may be changed and saved.

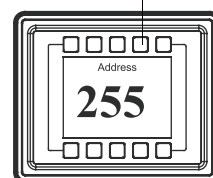
- Step 3. Once at desired chase, use UP and DOWN arrows to access (highlight) chase parameters. Once in desired parameter, use LEFT and RIGHT arrow buttons to adjust parameter value as desired.
- Step 4. Once all values are adjusted as desired, press OK (Check Mark) button.
- Step 5. Save chase menu option will appear. Use LEFT and RIGHT arrow buttons to select chase number.
- Step 6. If saving chase, press OK (Check Mark) button. Confirm choice.
- Step 7. Chase is now saved.

DMX Address Button

To edit and save a DMX address:

- Step 1. Press DMX Address button. Current DMX Address will be shown.
- Step 2. Press OK (Check Mark) button to highlight a digit in the DMX address.
- Step 3. Use LEFT and RIGHT arrow buttons to scroll through all digits.
- Step 4. Once at desired digit, use UP and DOWN arrows to change highlighted digit. Once digit is set, use LEFT and RIGHT arrow buttons to set other digits in DMX address.
- Step 5. Once all digits are set in DMX address, press OK (Check Mark) button.
- Step 6. DMX will display and is saved.

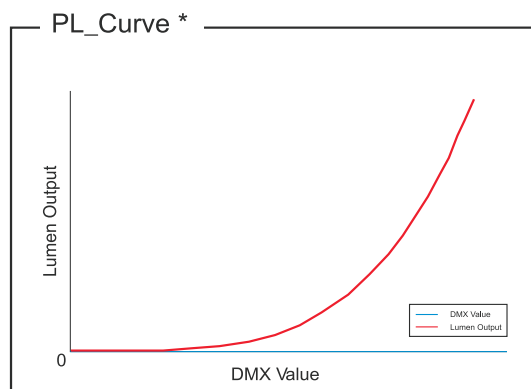
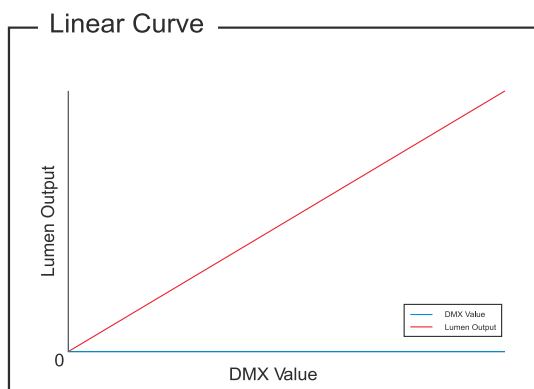
DMX Address



4. Dimming Curve Selection

Through the menu, you are able to select one of four dimming curves:

- Linear Curve
- PL_Curve
- S_Curve
- Square Curve



*PL Curve follows the dimming curve of Philips Selecon PL series LED luminaires.

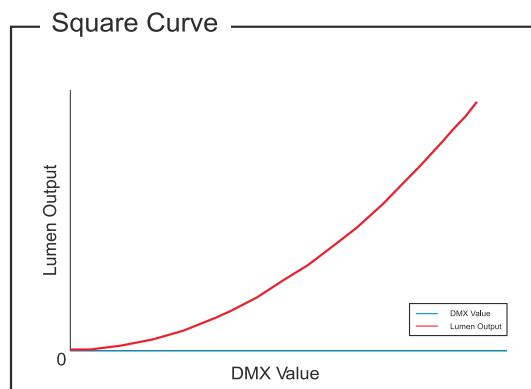
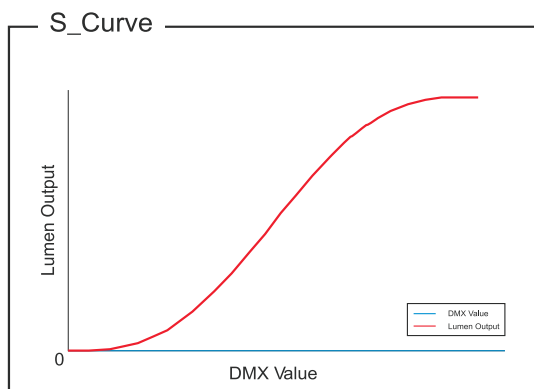


Figure 11: SL STRIP 400 TW LED Luminaire Dimmer Curves

5. Master / Slave Operational Mode

The Master / Slave Operational Mode allows one SL STRIP 400 TW LED Luminaire to act as the “Master” unit and all other connected units are controlled by this unit. When a unit is set to “Slave” mode, it will only listen to and follow any commands sent from a “Master” unit. Only one “Master” unit is allowed in this type of operation.

To setup a master / slave network:

- Step 1. Set the first device in the DMX512 chain to **Master Mode** through the unit's menu system.
- Step 2. Set all other connected units to **Slave Mode**.
- Step 3. The master unit can be controlled via DMX512, RDM or through standalone operation (self-contained network utilizing on-board effects). The slave units will mimic the master unit's operation in all cases.

Note: For more information on DMX512 networking and systems, refer to [“Additional Resources for DMX512” on page 1](#). For SL STRIP 400 TW LED Luminaire DMX Mapping, refer to [“DMX CONTROL” on page 17](#).

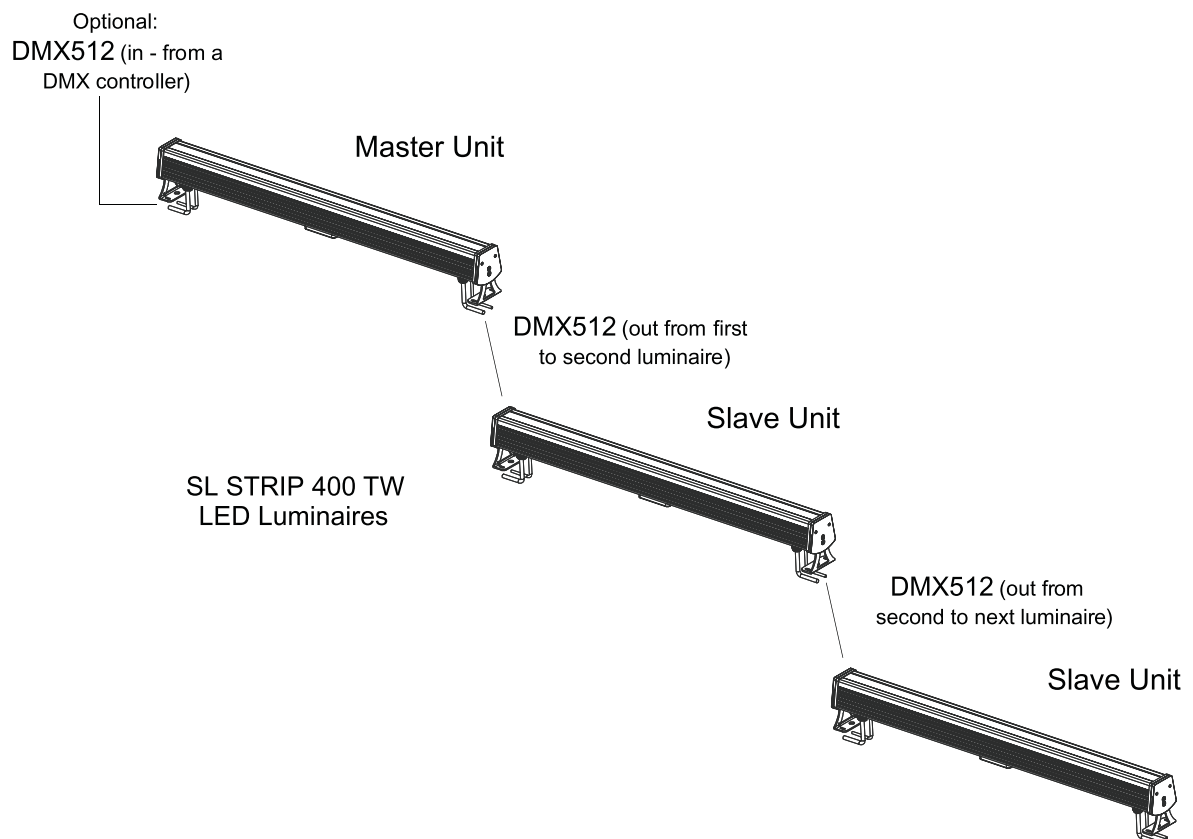


Figure 12: SL STRIP 400 TW LED Luminaire - Master / Slave Configuration

DMX CONTROL

This section contains information for operating the luminaire using DMX control in 16-bit, 8-bit modes. For Menu Options and detailed information, see “LCD Display and Menu System” on page 11.

Note: These tables assume a DMX start address of 1. When a different starting address is used, this address becomes channel 1 function and other functions follow in sequence.

1. SL STRIP 400 TW LED Luminaire DMX Mapping

SL STRIP 400 TW LED Luminaires offer multiple types of DMX mapping as set at the luminaire's menu system. Please make sure you have set your luminaire to and are following the desired DMX mapping for your application.

Table 3: Available DMX Mapping Selections

DMX Maps (Correlated Color Temperature)	DMX Maps (Warm White + Cool White)
CCT 16-Bit	WW + CW 16-Bit
CCT 8-Bit	WW + CW 8-Bit

16-Bit Mode (CCT)

Table 4 provides DMX channel mapping of all DMX512 control values when the SL STRIP 400 TW LED Luminaire is in CCT 16-bit DMX512 mode (as set by the luminaire's menu system).

Table 4: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (CCT 16-Bit Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - recommended console default values	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Strobe(Effect)	0-255	0-100%		Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
4	Duration	0 - 255	0 - 100%	0	Strobe Duration is 0 - 85 0 = DMX 0 1 = DMX 1 - 3 $x = (DMX\ Value - 1) / 3 + 1$ 85 = DMX 253-255
5	Timing	0-255	0-100%	255	Allows for timing control of intensity, Color parameters. Channel should default to 255 for smoothest actions using console and / or , manual fades.

Table 4: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (CCT 16-Bit Mode)

6	Control	0 - 255	0 - 100%	255	<p><i>Control Channel functions of the SL Series products. Set control channel value from 0 then turn to desired action. Hold value for at least 5 seconds. Set control channel value to 0 without any scaling.</i></p> <p>Default Setting on Console = DMX 0-4 DIM Response_Normal = DMX 5 - 9 DIM Response_Incandescent = DMX 10 - 14 Dimming Curve_linear = DMX 30 - 34 Dimming Curve_Square = DMX 35- 39 Dimming Curve_S-Curve = DMX 40 - 44 Dimming Curve_PL-Curve = DMX 45 - 49 Calibration_OFF = DMX 70 - 74 Calibration_ON = DMX 75 - 79 Reserves(Future use) = DMX 80 - 250</p>
7	CCT_High	0 -65535	0 - 100%	0	Variable control of correlated color temperature 2850K-6000K
8	CCT_Low				

16-Bit Mode (WW + CW)

Table 5 provides DMX channel mapping of all DMX512 control values when the SL STRIP 400 TW LED Luminaire is in WW + CW 16-bit DMX512 mode (as set by the luminaire's menu system).

Table 5: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (WW + CW 16-Bit Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - recommended console default values	Description
1	Intensity - High	0 - 65535	0 - 100%	0	16-bit control for Intensity of LED settings.
2	Intensity - Low				
3	Strobe	0 - 255	0 - 100%	0	<p><i>Controls strobe operations as follows:</i></p> <p>Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255</p>
4	Duration	0 - 255	0 - 100%	0	<p>Strobe Duration is 0 - 85 0 = DMX 0 1 = DMX 1 - 3 $x = (DMX\ Value - 1) / 3 + 1$ 85 = DMX 253-255</p>
5	Timing	0 - 255	0 - 100%	255	Allows for timing control of intensity and color parameters. Channel should default to 255 for smoothest actions using console and/or manual fades.

Table 5: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (WW + CW 16-Bit Mode)

6	Control	0 - 255	0 - 100%	0	
7	WW - High Byte	0 - 65535	0 - 100%	0	16-bit control for of Warm White LEDs 0 to full.
8	WW -Low Byte				
9	CW - High Byte	0 - 65535	0 - 100%	0	16-bit control for of Cool White LEDs 0 to full.
10	CW -Low Byte				

8-Bit Mode (CCT)

Table 6 provides DMX channel mapping of all DMX512 control values when the SL STRIP 400 TW LED Luminaire is in CCT 8-bit DMX512 mode (as set by the luminaire's menu system).

Table 6: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (CCT 8-Bit Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - recommended console default values	Description
1	Intensity	0 - 255	0 - 100%	0	8-bit control for Intensity of LED settings.
2	Strobe(Effect)	0 - 255	0 - 100%	0	Controls strobe operations as follows: Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255
3	Duration	0 - 255	0 - 100%	0	Strobe Duration is 0 - 85 0 = DMX 0 1 = DMX 1 - 3 $x = (DMX\ Value - 1) / 3 + 1$ 85 = DMX 253-255
4	Timing	0 - 255	0 - 100%	255	Allows for timing control of intensity and color parameters. Channel should default to 255 for smoothest actions using console and/or manual fades.

Table 6: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (CCT 8-Bit Mode)

5	Control	0 - 255	0 - 100%	0	<p><i>Control Channel functions of the SL Series products. Set control channel value from 0 then turn to desired action. Hold value for at least 5 seconds. Set control channel value to 0 without any scaling.</i></p> <p>Default Setting on Console = DMX 0-4 DIM Response_Normal = DMX 5 - 9 DIM Response_Incandescent = DMX 10 - 14 Dimming Curve_linear = DMX 30 - 34 Dimming Curve_Square = DMX 35- 39 Dimming Curve_S-Curve = DMX 40 - 44 Dimming Curve_PL-Curve = DMX 45 - 49 Calibration_OFF = DMX 70 - 74 Calibration_ON = DMX 75 - 79 Reserves(Future use) = DMX 80 - 250</p>
6	CCT	0 - 255	0 - 100%	0	Variable control of correlated color temperature 2850K-6000K

8-Bit Mode (WW + CW)

Table 7 provides DMX channel mapping of all DMX512 control values when the SL STRIP 400 TW LED Luminaire is in WW + CW 8-bit DMX512 mode (as set by the luminaire's menu system).

Table 7: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (WW + CW 8-Bit Mode)

DMX Channel	Parameter	Range DMX	Range%	Default - recommended console default values	Description
1	Intensity	0 - 255	0 - 100%	0	8-bit control for Intensity of LED settings.
2	Strobe(Effect)	0 - 255	0 - 100%	0	<p><i>Controls strobe operations as follows:</i></p> <p>Open = DMX 0 - 2 Closed = DMX 3 - 5 Slow Rand = DMX 6 - 7 Med Rand = DMX 8 - 10 Fast Rand = DMX 11 - 12 Strobe Range = DMX 13 - 127 (fastest) Pulse + Slow Rand = DMX 128 - 129 Pulse + Med Rand = DMX 130 - 131 Pulse + Fast Rand = DMX 132 - 133 Pulse + Range = DMX 134 - 191 Pulse - Slow Rand = DMX 192 - 193 Pulse - Med Rand = DMX 194 - 195 Pulse - Fast Rand = DMX 196 - 197 Pulse - Range = DMX 198 - 255</p>
3	Duration	0 - 255	0 - 100%	0	<p>Strobe Duration is 0 - 85 0 = DMX 0 1 = DMX 1 - 3 $x = (DMX\ Value - 1) / 3 + 1$ 85 = DMX 253-255</p>
4	Timing	0 - 255	0 - 100%	255	Allows for timing control of intensity and color parameters. Channel should default to 255 for smoothest actions using console and/or manual fades.

Table 7: SL STRIP 400 TW LED Luminaire DMX Channel Mapping (WW + CW 8-Bit Mode)

5	Control	0 - 255	0 - 100%	0	<i>Control Channel functions of the SL Series products. Set control channel value from 0 then turn to desired action. Hold value for at least 5 seconds. Set control channel value to 0 without any scaling.</i> Default Setting on Console = DMX 0-4 DIM Response _Normal = DMX 5 - 9 DIM Response _Incandescent = DMX 10 - 14 Dimming Curve_linear = DMX 30 - 34 Dimming Curve_Square = DMX 35- 39 Dimming Curve_S-Curve = DMX 40 - 44 Dimming Curve_PL-Curve = DMX 45 - 49 Calibration_OFF = DMX 70 - 74 Calibration_ON = DMX 75 - 79 Reserves(Future use) = DMX 80 - 250
6	Warm White	0 - 255	0 - 100%	0	8-bit control of Warm White LEDs from 0 to full.
7	Cool White	0 - 255	0 - 100%	0	8-bit control of Cool White LEDs from 0 to full.

2. DMX Timing channel Detail

Timing channel control improves the timed moves of certain groups of parameters. The SL STRIP 400 TW LED Luminaire provides timing channels in 16-bit mode (one for intensity time and one for color time) and one timing channel in 8-bit (color and intensity timing combined). The luminaire uses its timing channel value to calculate a smooth continuous operation for a given time and transition.

Guidelines:

- Timing channels support time values from zero to 60 minutes.
- To use a timing channel instead of console timing, it is recommended to set the timing channel to the desired value and set cue and/ or console cue fade time to zero. A combination of time controls can produce unexpected results.
- The default value setting in the profile should be 255 (proportional control) to allow smooth operation when using console timing.
- The timing channel data should change as a snap. A zero value will give the fastest operation, however, without any smoothing this can appear “steppy” in console timed moves.

Refer to "[SL STRIP 400 TW LED Luminaire DMX Timing Channel Detail](#)" for more information.

Table 8: SL STRIP 400 TW LED Luminaire Timing Channel Detail

% Value	DMX	= Seconds (unless noted)
0	0	0 (Full Speed)
	1	0.2
	2	0.4
1	3	0.6
	4	0.8
2	5	1
	6	1.2
	7	1.4
3	8	1.6
	9	1.8
4	10	2
	11	2.2
	12	2.4
5	13	2.6
	14	2.8
6	15	3
	16	3.2

Table 8: SL STRIP 400 TW LED Luminaire Timing Channel Detail

% Value	DMX	= Seconds (unless noted)
	17	3.4
7	18	3.6
	19	3.8
8	20	4
	21	4.2
	22	4.4
9	23	4.6
	24	4.8
10	25	5
	26	5.2
	27	5.4
11	28	5.6
	29	5.8
	30	6
12	31	6.2
	32	6.4
13	33	6.6
	34	6.8
	35	7.0
14	36	7.2
	37	7.4
15	38	7.6
	39	7.8
	40	8
16	41	8.2
	42	8.4
17	43	8.6
	44	8.8
	45	9
18	46	9.2
	47	9.4
19	48	9.6
	49	9.8
	50	10
20	51	10.2
	52	10.4
	53	10.6
21	54	10.8
	55	11
22	56	11.2
	57	11.4
	58	11.6
23	59	11.8
	60	12
24	61	12.2
	62	12.4
	63	12.6
25	64	12.8
	65	13
26	66	13.2
	67	13.4

Table 8: SL STRIP 400 TW LED Luminaire Timing Channel Detail

% Value	DMX	= Seconds (unless noted)
	68	13.6
27	69	13.8
	70	14
28	71	14.2
	72	14.4
	73	14.6
29	74	14.8
	75	15
30	76	15.2
	77	15.4
	78	15.6
31	79	15.8
	80	16
	81	16.2
32	82	16.4
	83	16.6
33	84	16.8
	85	17
	86	17.2
34	87	17.4
	88	17.6
35	89	17.8
	90	18
	91	18.2
36	92	18.4
	93	18.6
37	94	18.8
	95	19
	96	19.2
38	97	19.4
	98	19.6
39	99	19.8
	100	20
	101	21
40	102	22
	103	23
	104	24
41	105	25
	106	26
42	107	27
	108	28
	109	29
43	110	30
	111	31
44	112	32
	113	33
	114	34
45	115	35
	116	36
46	117	37
	118	38

Table 8: SL STRIP 400 TW LED Luminaire Timing Channel Detail

% Value	DMX	= Seconds (unless noted)
	119	39
47	100	40
	121	41
48	122	42
	123	43
	124	44
49	125	45
	126	46
	127	47
50	128	48
	129	49
51	130	50
	131	51
	132	52
52	133	53
	134	54
53	135	55
	136	56
	137	57
54	138	58
	139	59
55	140	60
	141	61
	142	62
56	143	63
	144	64
57	145	65
	146	66
	147	67
58	148	68
	149	69
59	150	70
	151	71
	152	72
60	153	73
	154	74
	155	75
61	156	76
	157	77
62	158	78
	159	79
	160	80
63	161	81
	162	82
64	163	83
	164	84
	165	85
65	166	86
	167	87
66	168	88
	169	89

Table 8: SL STRIP 400 TW LED Luminaire Timing Channel Detail

% Value	DMX	= Seconds (unless noted)
	170	90
67	171	91
	172	92
68	173	93
	174	94
	175	95
69	176	96
	177	97
	178	98
70	179	99
	180	100
71	181	101
	182	102
	183	103
72	184	104
	185	105
73	186	106
	187	107
	188	108
74	189	109
	190	110
75	191	111
	192	112
	193	113
76	194	114
	195	115
77	196	116
	197	117
	198	118
78	199	119
	200	120
79	201	121
	202	122
	203	123
80	204	124
	205	125
81	206	126
	207	127
	208	128
82	209	129
	210	130
	211	131
83	212	132
	213	133
84	214	134
	215	135
	216	136
85	217	137
	218	138
86	219	139
	220	140

Table 8: SL STRIP 400 TW LED Luminaire Timing Channel Detail

% Value	DMX	= Seconds (unless noted)
	221	141
87	222	142
	223	143
88	224	144
	225	145
	226	146
89	227	147
	228	148
	229	149
90	230	150
	231	151
91	232	152
	233	153
	234	154
92	235	155
	236	156
93	237	157
	238	158
	239	159
94	240	160
	241	161
95	242	162
	243	163
	244	164
96	245	165
	246	5 Minutes
97	247	15 Minutes
	248	30 Minutes
	249	60 Minutes
98	250*	60mS
	251*	80mS
99	252*	100mS
	253*	120mS
	254*	140mS
100	255* (default)	160mS

Note: *DMX values 250 to 255 provide smoothing when using console fade timing. DMX value 255 (recommended default) will provide the smoothest timing.

3. SL STRIP 400 TW LED Luminaire RDM Parameter IDs

The following tables outline and describe all the RDM parameters IDs associated with SL STRIP 400 TW LED Luminaires.

- Table 9, “SL STRIP 400 TW LED Luminaire RDM Product Parameters IDs,” on page 27
- Table 10, “SL STRIP 400 TW LED Luminaire RDM UID,” on page 27
- Table 11, “SL STRIP 400 TW LED Luminaire RDM Parameter IDs,” on page 27
- Table 12, “SL STRIP 400 TW LED Luminaire RDM Manufacturer Status IDs,” on page 29
- Table 13, “SL STRIP 400 TW LED Luminaire RDM Manufacturer Specific PIDs,” on page 29

Table 9: SL STRIP 400 TW LED Luminaire RDM Product Parameters IDs

Model ID	Manufacturer	Model Description	Product Category
0x1101	Philips Entertain. Lighting Asia	SL STRIP 400 (TW)	0x0509

Table 10: SL STRIP 400 TW LED Luminaire RDM UID

UID					
MSB of ESTA 50H	LSB of ESTA 41H	1st of Unique Seq.	2nd of Unique Seq.	3rd of Unique Seq.	4th of Unique Seq.

Table 11: SL STRIP 400 TW LED Luminaire RDM Parameters IDs

Get Allowed	Set Allowed	RDM Parameter IDs	Value	Comment	Implemented
Category - Network Management					
		DISC_UNIQUE_BRANCH	0x0001		■
		DISC_MUTE	0x0002		■
		DISC_UN_MUTE	0x0003		■
■		PROXIED_DEVICES	0x0010		
■		PROXIED_DEVICES_COUNT	0x0011		
■	■	COMMS_STATUS	0x0015		
Category - Status Collection					
■		QUEUED_MESSAGE	0x0020		■
■		STATUS_MESSAGES	0x0030		■
■		STATUS_ID_DESCRIPTION	0x0031		■
	■	CLEAR_STATUS_ID	0x0032		■
■	■	SUB_DEVICE_STATUS_REPORT_THRESHOLD	0x0033		
Category - RDM Information					
■		SUPPORTED_PARAMETERS	0x0050	Support required only if supporting Parameters beyond the minimum required set.	■
■		PARAMETER_DESCRIPTION	0x0051	Support required for Manufacturer-Specific PIDs exposed in SUPPORTED_PARAMETERS message.	■
Category - Product Information					
■		DEVICE_INFO	0x0060		■
■		PRODUCT_DETAIL_ID_LIST	0x0070		

Table 11: SL STRIP 400 TW LED Luminaire RDM Parameters IDs

Get Allowed	Set Allowed	RDM Parameter IDs	Value	Comment	Implemented
■		DEVICE_MODEL_DESCRIPTION	0x0080		■
■		MANUFACTURER_LABEL	0x0081		■
■	■	DEVICE_LABEL	0x0082		■
■	■	FACTORY_DEFAULTS	0x0090		
■		LANGUAGE_CAPABILITIES	0x00A0		
■	■	LANGUAGE	0x00B0		
■		SOFTWARE_VERSION_LABEL	0x00C0		■
■		BOOT_SOFTWARE_VERSION_ID	0x00C1		
■		BOOT_SOFTWARE_VERSION_LABEL	0x00C2		
Category - DMX512 Setup					
■	■	DMX_PERSONALITY	0x00E0		■
■		DMX_PERSONALITY_DESCRIPTION	0x00E1		■
■	■	DMX_START_ADDRESS	0x00F0	Required if device uses a DMX Slot	■
■		SLOT_INFO	0x0120		■
■		SLOT_DESCRIPTION	0x0121		■
■		DEFAULT_SLOT_VALUE	0x0122		
Category - Sensors 0x02xx					
■		SENSOR_DEFINITION	0x0200		■
■	■	SENSOR_VALUE	0x0201		■
	■	RECORD_SENSORS	0x0202		
Category - Dimmer Settings 0x03xx - FUTURE USE					
Category - Power / Lamp Settings 0x04xx					
■	■	DEVICE_HOURS	0x0400		
■	■	LAMP_HOURS	0x0401		
■	■	LAMP_STRIKES	0x0402		
■	■	LAMP_STATE	0x0403		
■	■	LAMP_ON_MODE	0x0404		
■	■	DEVICE_POWER_CYCLES	0x0405		
Category - Display Settings 0x05xx					
■	■	DISPLAY_INVERT	0x0500		■
■	■	DISPLAY_LEVEL	0x0501		
Category - Configuration 0x06xx					
■	■	PAN_INVERT	0x0600		
■	■	TILT_INVERT	0x0601		
■	■	PAN_TILT_SWAP	0x0602		
■	■	REAL_TIME_CLOCK	0x0603		
Category - Control 0x10xx					
■	■	IDENTIFY_DEVICE	0x1000		■
	■	RESET_DEVICE	0x1001		
■	■	POWER_STATE	0x1010		
■	■	PERFORM_SELFTEST	0x1020		
■		SELF_TEST_DESCRIPTION	0x1021		

Table 11: SL STRIP 400 TW LED Luminaire RDM Parameters IDs

Get Allowed	Set Allowed	RDM Parameter IDs	Value	Comment	Implemented
	■	CAPTURE_PRESET	0x1030		
■	■	PRESET_PLAYBACK	0x1031		

Table 12: SL STRIP 400 TW LED Luminaire RDM Manufacturer Status IDs

Manufacturer Specific messages are in the range of 0x8000 - 0xFFDF. Each Manufacturer-specific Status ID shall have a unique meaning, which shall be consistent across all products having a given Manufacturer ID. See Table B-2, ANSI E1.20-2010.				
Status ID Message	Value	Data Value 1	Data Value 2	Status ID Description
8100H		00H	00H	ALL OK

Table 13: SL STRIP 400 TW LED Luminaire RDM Manufacturer Specific PIDs

Get Allowed	Set Allowed	RDM Parameter IDs	Type	Length	Unit	Prefix	Min	Max	Default	Description
<i>Category - Manufacturer Defined PIDs - Range is 0x8000-0xffdf (See ANSI E1.20-2010 Standard, Table A-3)</i>										
■	■	8A00H	U8	1	None	None	0	100	100	DIMMER
■	■	8A03H	U16	2	None	None	2700	6000	4350	CCT
■	■	8A0FH	U8	1	None	None	0	100	100	Dimmer Warm White
■	■	8A10H	U8	1	None	None	0	100	100	Dimmer Cool White
■	■	8AB1H	U8	1	None	None	0	31	0	Preset
■	■	8A92H	U8	1	None	None	0	255	0	Strobe
■	■	8A94H	U8	1	None	None	0	255	0	Duration
■	■	8AC0H	U8	1	None	None	0	255	255	Intensity Timing
■	■	8A40H	U8	1	None	None	0	1	0	Link Mode
■	■	8A42H	U8	1	None	None	0	1	0	Incandescent Effect
■	■	8AA1H	U8	1	None	None	0	3	0	Dimming Curve
■	■	8A0CH	U8	1	None	None	0	3	0	DMX Fail Mode
■	■	8AA0H	U8	1	None	None	0	4	0	Backlight Off Time
■	■	8AA2H	U8	1	None	None	0	94	0	Power Up Setup
■	■	8A44H	U8	1	None	None	0	1	0	Calibration ON/OFF Setup
■	■	8A41H	U8	1	None	None	0	1	0	Lock Fixture

CLEANING AND CARE



WARNING! All cleaning should be performed with power completely removed from the luminaire. Never remove protective covers when luminaire is powered. Wear appropriate protective eye wear and gloves when cleaning the fixture. All service and maintenance, other than described herein, should be performed by a qualified technician or Authorized Service Center.

1. Special Cleaning and Care Instructions

Being a solid-state fixture, and unlike most fixtures, the SL STRIP 400 TW LED Luminaire requires very little routine maintenance by the user. This section covers portions of the luminaire that can be removed for cleaning.

The SL STRIP 400 TW LED Luminaire special care when it comes to cleaning front lens assembly. Additional care needs to be taken with the plastic components because they are much easier to scratch or damage than glass.

The following is a list of cleaning materials required to care for your SL STRIP 400 TW LED Luminaire:

- Lint free lens tissue
- Lint or powder free gloves
- Reagent grade isopropyl alcohol*
- A mild soap solution.

Note: *Reagent grade isopropyl alcohol is good to use on the SL STRIP 400 TW LED Luminaire plastic optics with anti-reflection coatings.

If the lens is still dirty after using isopropyl alcohol, for instance if fingerprints or oil is just redistributed and not cleaned off the optic, then a mild soap and water solution can be used to gently wash the lens. Repeat the cleaning with isopropyl alcohol to eliminate streaks and soap residue.



WARNING! Under no circumstances should ammonia-based cleaners, acetone, or other harsh solvents be used on or near the SL STRIP 400 TW LED Luminaire. These types of cleaners or solvents can permanently damage the optics or housings of the fixture.

If you have any questions regarding the use or care of your SL STRIP 400 TW LED Luminaire, please contact Showline technical support or your local Authorized Dealer.

2. Front Lens Cleaning

To clean the front lens:

- Step 1. Turn off luminaire and allow to cool completely.
- Step 2. Apply a small amount of reagent grade isopropyl alcohol to lint-free lens tissue.
- Step 3. Wipe all debris, dirt, fingerprints, etc. from lens.
- Step 4. Using a second lint-free lens tissue, wipe off any alcohol residue.

3. Service and Maintenance

For all other service and maintenance issues, please contact your local Showline office or an Authorized Service Center.



WARNING! Disassembly (other than as described herein), alterations, unauthorized service, etc. will void the product warranty. Contact your local Showline office or an Authorized Service Center for technical support and service.

TECHNICAL SPECIFICATIONS

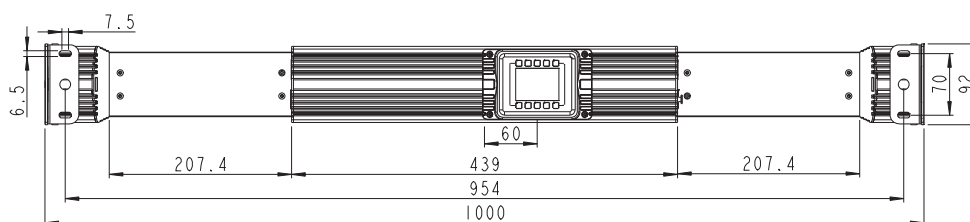
1. SL STRIP 400 TW LED Luminaire Operational Specifications

Source:	Cool White and Warm White LED Array(x36)
Beam Angle:	10 Degrees
Light Output:	> 2,300 lumens
Color Temperature:	2700 - 10000K (user adjustable)
Input Voltage (AC):	100V to 240V (+/- 10%, auto-ranging)
Current (AC):	0.95Amps (100V) / 0.40 Amps (240V)
Frequency:	50/60Hz
Power Consumption:	95W(max)
Control Protocols:	DMX512 (1990) / DMX512A (RDM) / On-Board Menu
Ambient Temperature:	-20 to 40 Degrees C (-4 to 104 Degrees F)
Humidity:	5%-95% Non condensing
Cooling:	Natural Convection
Weight:	14.96lbs(6.8 kg) - Luminaire only (no mount, AC input cable or accessories)
Housing:	Die Cast Aluminium with Powder Coating
Compliance:	CE Marked (International models)
IP Rating:	IP65

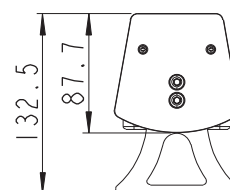
Note: Common model specifications shown. For specific model specifications, features, and accessories, refer to the product specification sheet for more details.

2. SL STRIP 400 TW LED Luminaire Dimensions

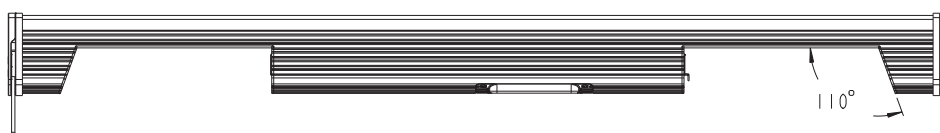
Bottom View



End View



Side View



Showline

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