

SPDS-60ca 24V DMX/ETHERNET

USER GUIDE



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CHROMACORE[®]
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GETTING STARTED

Color Kinetics[®] sPDS-60ca 24V is a compact power/data supply for indoor installations. sPDS-60ca 24V provides power and data to Color Kinetics' 24VDC Chromasic[®]-driven product lines, and is available for DMX and Ethernet control options.

The "s" type of power supply provides additional features, such as base address and grouping of light fixture addresses, without the need for external components

This guide contains important information on installing and using your new sPDS-60ca 24V. Please read it carefully and save it for future reference.

Included In This Box

- Power/data supply
- US Grounded IEC Cord Set
- RJ-45 Terminator
- User Guide

Additional Items Needed

- Mounting hardware – 4 flat head screws M3.5 or #6

Scope of this User Guide

The goal of this user guide is to explain the steps necessary to install sPDS-60ca 24V for DMX and Ethernet control to assure peak performance. Its intended use is for reference only, by persons who are fully qualified. This document should never be considered a substitute for any provisions of a regulation or state and/or local code.

Identification and Warnings of Safety Hazards

In accordance with ANSI Z535.4-2002, the following system identifies the severity of the hazards associated with the products:

"DANGER" Imminently hazardous situation which, if not avoided, will result in death or serious injury.

"WARNING" Potentially hazardous situation which, if not avoided, could result in death or serious injury.

"CAUTION" Potentially hazardous situation which, if not avoided, may result in minor or moderate injury or property damage. Also used to alert against unsafe practices.

IGNORING A HAZARD WILL VOID ANY WARRANTY.

WARNING: Ensure that power is disconnected before installing, wiring, or servicing the sPDS-60ca 24V power supply.

WARNING: The sPDS-60ca 24V power supply must be installed by a qualified professional in accordance with NEC and relevant local codes.

WARNING: Do not attempt to install or use sPDS-60ca 24V until you read and understand the installation instructions and safety labels.

WARNING: Do not use sPDS-60ca 24V if power cables are damaged.

WARNING: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to take adequate measures.

CAUTION: Ensure that sPDS-60ca 24V is securely attached, properly mounted, and free of excessive vibration.

CAUTION: Do not hot swap. Ensure the power supply is off before connecting or disconnecting fixtures.

CAUTION: Do not modify or alter sPDS-60ca 24V.

NOTE: The instructions and precautions set forth in this installation guide are not necessarily all-inclusive or relevant to all applications as Color Kinetics cannot anticipate all conceivable or unique situations.

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate sPDS-60ca 24V in such a manner as to comply with all state and local laws, ordinances, regulations, and the American National Standards Institute Safety Code.

NOTE: sPDS-60ca 24V is shipped with a US IEC power cable. For international customers, use a country-specific IEC cable meeting the following specifications: 3-conductor, 18AWG (1.00mm²), HAR rating for Europe, and JET rating for Japan. (Hard Service Type ST or equivalent.)

NOTE: Ensure the IEC inlet plug fits in the supplied lock. The lock may not accommodate all plug styles.

INSTALLING sPDS-60ca 24V

sPDS-60ca 24V must be installed by a qualified electrician in accordance with NEC and relevant local codes for power supplies. A power screwdriver is recommended for mounting the unit.

Mounting the Housing

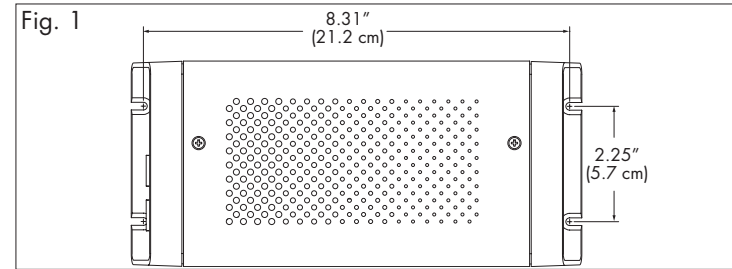
- Select the location to mount the housing, keeping sPDS-60ca 24V within the maximum distance specified for your fixture. Refer to your fixture user guide for the cable run information.

CAUTION: sPDS-60ca 24V must be installed in a location that allows air to move freely. Packing insulation around the housing or mounting in a sealed location that raises ambient temperature above 122°F (50°C) will result in property damage and will void the warranty.

NOTE: Ensure that there is adequate space to make all connections to the front and rear of the unit.

- Mount the housing to a flat surface using four M3.5 or #6 flat head screws suitable for the mounting surface. Mounting slots are located on each end of the housing. (See Fig. 1.)

NOTE: Do not overtighten the mounting screws.



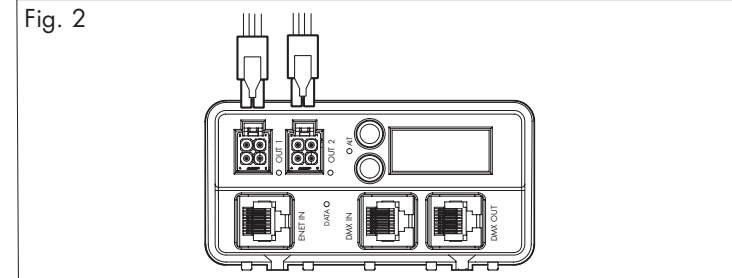
WIRING sPDS-60ca 24V

After mounting the power/data supply, you are ready to connect power, lights, and data to sPDS-60ca 24V.

Connecting Lights to sPDS-60ca 24V

- Plug the leader cable connector into a power output receptacle on the front of sPDS-60ca 24V. Power outputs are labeled Out 1 and Out 2. (See Fig. 2.)

NOTE: When using one light run per sPDS-60ca 24V, use Output 1.

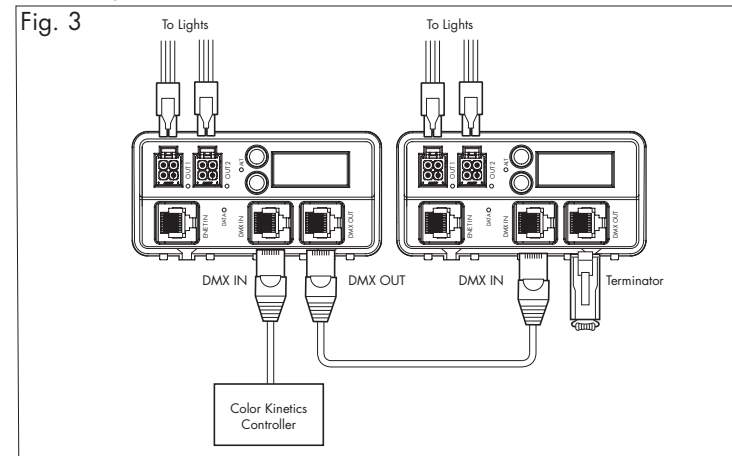


- Refer to the user guide for your lights to determine maximum number of lights per power/data supply and specific wiring requirements.

Connecting DMX Data to sPDS-60ca 24V

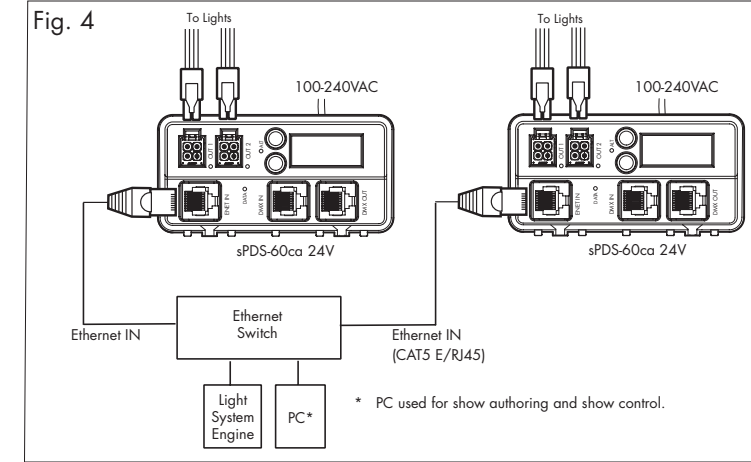
sPDS-60ca 24V receives DMX data from, and can be controlled by, Color Kinetics' full line of DMX512 controllers or any third party DMX512 controller.

- Plug the data RJ-45 connector from the controller into the DMX IN port.
- To daisy-chain DMX data to another sPDS-60ca 24V, connect a CAT5 cable with RJ-45 connectors between the DMX OUT port of the first unit and the DMX IN port of the next unit. Plug a terminator into the DMX OUT port of the last power supply in a data chain. (See Fig. 3.)



Connecting Ethernet Data to sPDS-60ca 24V

sPDS-60ca 24V receives Ethernet data from Color Kinetics' Light System Manager (LSM) or Video System Manager (VSM). LSM consists of Light System Composer software and Light System Engine hardware, and VSM consists of Video System Manager software and Video System Engine hardware. A dedicated network and one or more Ethernet switches are required for your installation. (See Fig. 4.) Refer to the LSM User Guide or VSM User Guide for setup and configuration information.

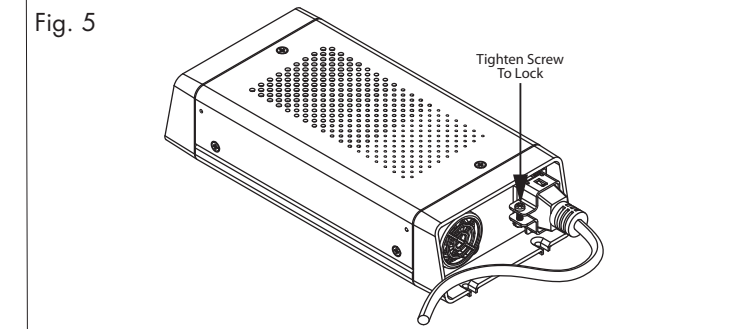


- Connect the CAT 5E data cable, with RJ-45 connectors on both ends, to the Ethernet switch and to the ENET IN port on the sPDS-60ca 24V power/data supply.

NOTE: End-run Ethernet data to each sPDS-60ca 24V in an installation. Ethernet cannot be daisy chained. (See Fig. 4.)

Connecting Power to sPDS-60ca 24V

- Connect the IEC power cable to the back of sPDS-60ca 24V. Plug the IEC power cable into a standard 100-240VAC outlet. Tighten the screw to secure the clamp. (See Fig. 5.)



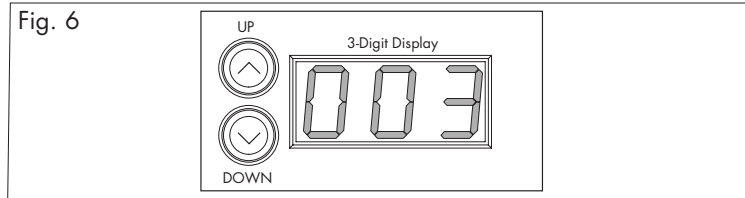
ADDRESSING THE LIGHTS

When using the DMX control input, you are required to set the base address for sPDS-60ca 24V and configure the lights connected to it.

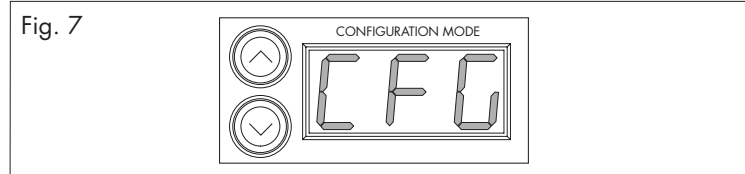
The base address for the supply will be the starting address for the first light connected to Output 1. You can also group more than one fixture to the same address or reverse the addressing sequence of the fixtures on Output 1.

Setting Base Addresses

1. Press and release the UP or DOWN address buttons to step through the base address. The address numbers 1 through 170 will appear in the display. Press and hold either button to rapidly advance to the desired light number. Stop when the desired base number appears on the display. (See Fig. 6.)

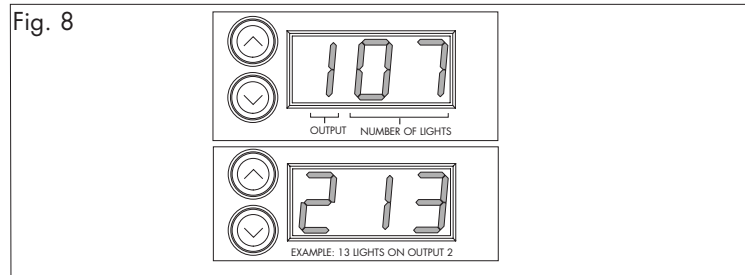


2. After selecting a base address, press and hold the UP and DOWN buttons simultaneously to enter configuration mode. "CFG" appears in the display. (See Fig. 7.)



When entering Configuration mode, sPDS-60ca 24V automatically discovers all lights that are connected and addresses them sequentially, beginning with the base address on the first light on Output 1 through the last light on Output 2. This step ensures that sPDS-60ca 24V correctly identifies all of the lights connected to its outputs.

After the discovery is complete, two 3-digit numbers are briefly displayed. The first digit indicates the output port and the last two digits denote the number of lights connected to that output. For example, the number 107 represents 7 lights on Output 1, while the number 213 indicates 13 lights on Output 2. If there are no lights attached to an output, the last two digits are 00, as in 200. (See Fig. 8.)



3. To exit Configuration mode, press both buttons simultaneously. The base address for sPDS-60ca 24V will appear on the display.

Grouping Light Addresses

sPDS-60ca 24V allows you to conserve the total number of light addresses in an installation by grouping light fixtures together. When you group light addresses, you can assign multiple lights to the same address. The number of lights per group is limited to the maximum number of lights connected to Output 1. (For example, if you have 10 lights connected to Output 1 and 12 lights connected to Output 2, the maximum group number is 10.)

To set grouping of light addresses:

1. Press and hold the UP and DOWN buttons simultaneously to enter configuration mode. "CFG" appears in the display.
2. When entering Configuration mode, sPDS-60ca 24V automatically discovers all lights that are connected.
3. Use the UP button to set a positive group number (the number of lights per group), according to the following table.

Group Address	How Lights Are Addressed
ALL	ALL lights are assigned the selected Base Address. If you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 1 1 1 1 1 1 1 1 ... 1 1 1
1	All lights are addressed sequentially, starting with the Base Address. If you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 1 2 3 4 5 6 7 8 ... 18 19 20
2	Every two lights are assigned the same address. For example, if you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 1 1 2 2 3 3 4 4 ... 9 10 10
3	Every three lights are assigned the same address. For example, if you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 1 1 1 2 2 2 3 3 ... 6 7 7
4 to 20	...

NOTE: It is recommended that you set your group number to a number that evenly divides the number of lights connected to Output 1 and you balance the number of lights on each output. Otherwise, you may have a smaller amount of lights at the end of each output port that would receive the next address.

4. Use the DOWN button to set reverse addressing.

NOTE: sPDS-60ca 24V allows you to reverse the addressing sequence on Output 1 ONLY.

Using reverse addressing, the last light on Output 1 receives the Base Address, and then the addresses are assigned sequentially from the last light to the first.

Reverse addressing is particularly useful if you mount your power supply in the center of a linear feed or if you want to feed an installation that uses multiple power supplies from each side. Use reverse addressing to chase from one end of the light run to the next. (See Fig. 9 for examples.)

Use the DOWN button to set a "negative" group number, according to the following table. Set a negative group number to use reverse addressing.

Group Address	How Lights Are Addressed
-1	All lights are addressed sequentially, starting with the Base Address. If you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 20 19 18 17 16 15 14 13 ... 3 2 1
-2	Every two lights are assigned the same address. For example, if you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 10 10 9 9 8 8 7 7 ... 2 1 1
-3	Every three lights are assigned the same address. For example, if you have 20 lights with a Base Address of 1, they are addressed as follows: Light #: 1 2 3 4 5 6 7 8 ... 18 19 20 Address: 7 7 6 6 6 5 5 5 ... 1 1 1
-4 to -20	...

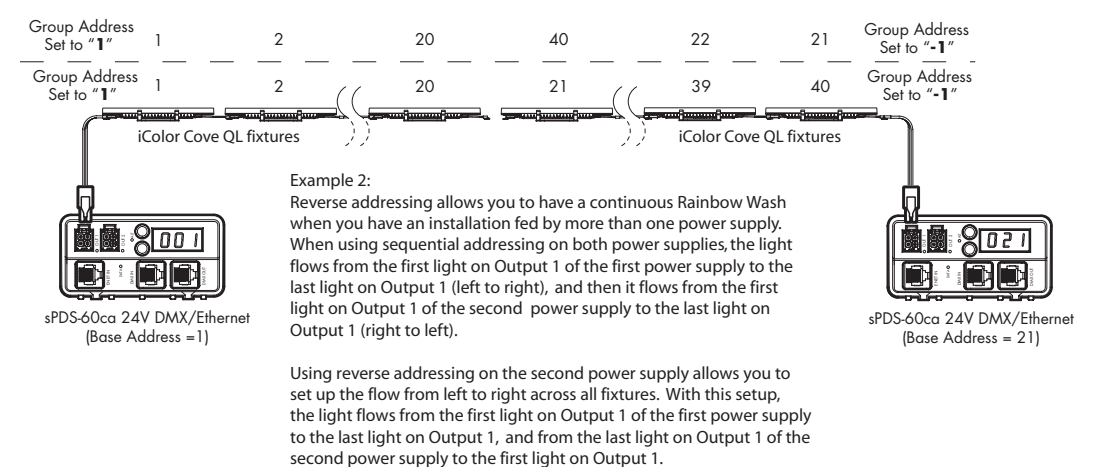
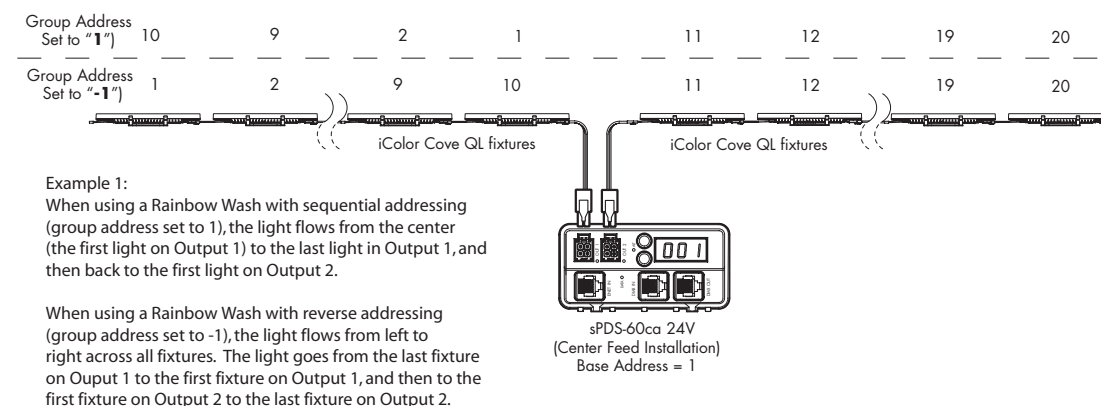
NOTE: It is recommended that you set your group number to a number that evenly divides the number of lights connected to Output 1 and you balance the number of lights on each output. Otherwise, you may have a smaller amount of lights at the end of each output port that would receive the next address.

5. To exit Configuration mode, press both buttons simultaneously. The base address for sPDS-60ca 24V will appear on the display.

Fig. 9

EXAMPLES OF SEQUENTIAL AND REVERSE ADDRESSING

NOTE: Reverse addressing only reverses the addresses on Output 1 of the sPDS-60ca 24V.



sPDS-60ca 24V SPECIFICATIONS

POWER INPUT	100-240VAC, 50Hz-60Hz, 1.1-0.4A
POWER OUTPUT	24VDC (62W Max.)
HEAT DISSIPATION	22% of total power input at maximum load
AMBIENT OPERATING TEMP	14°F to 122°F (-10°C to 50°C)
HOUSING	8.8" (22.4 cm) X 4.0" (10.2 cm) X 2.0" (5.1 cm) Weight: 2.0 lbs (907 g)
CONNECTORS	Data: RJ45 input and output connectors Power: 4-pin output connectors, IEC power connector (Supplied with C13 IEC plug, grounded US outlet plug. UL/CSA rated 18 AWG 3/C ST 90°C Rated.)
DATA INPUT INTERFACE	Color Kinetics DMX Controllers or DMX512 compatible controllers or Color Kinetics Video System Manager or Light System Manager
DATA OUTPUT INTERFACE	Chromatic 24V
CLASSIFICATION	Class 2
LISTINGS	UL/cUL, CE, PSE
MAX. # OF FIXTURES	iColor Cove QL 12": 20; iColor Cove QL 6": 36; iColor Cove EC: 30

Warranty

This product is sold pursuant to CK's Standard Terms and Conditions (the "T&Cs") which may be found at <http://colorkinetics.com/how-tobuy/buy/terms> and which contain important provisions, including, among others, Limited Warranty, exclusions and limitations on CK's liability for damages, and restrictions on the remedies that are available to you.