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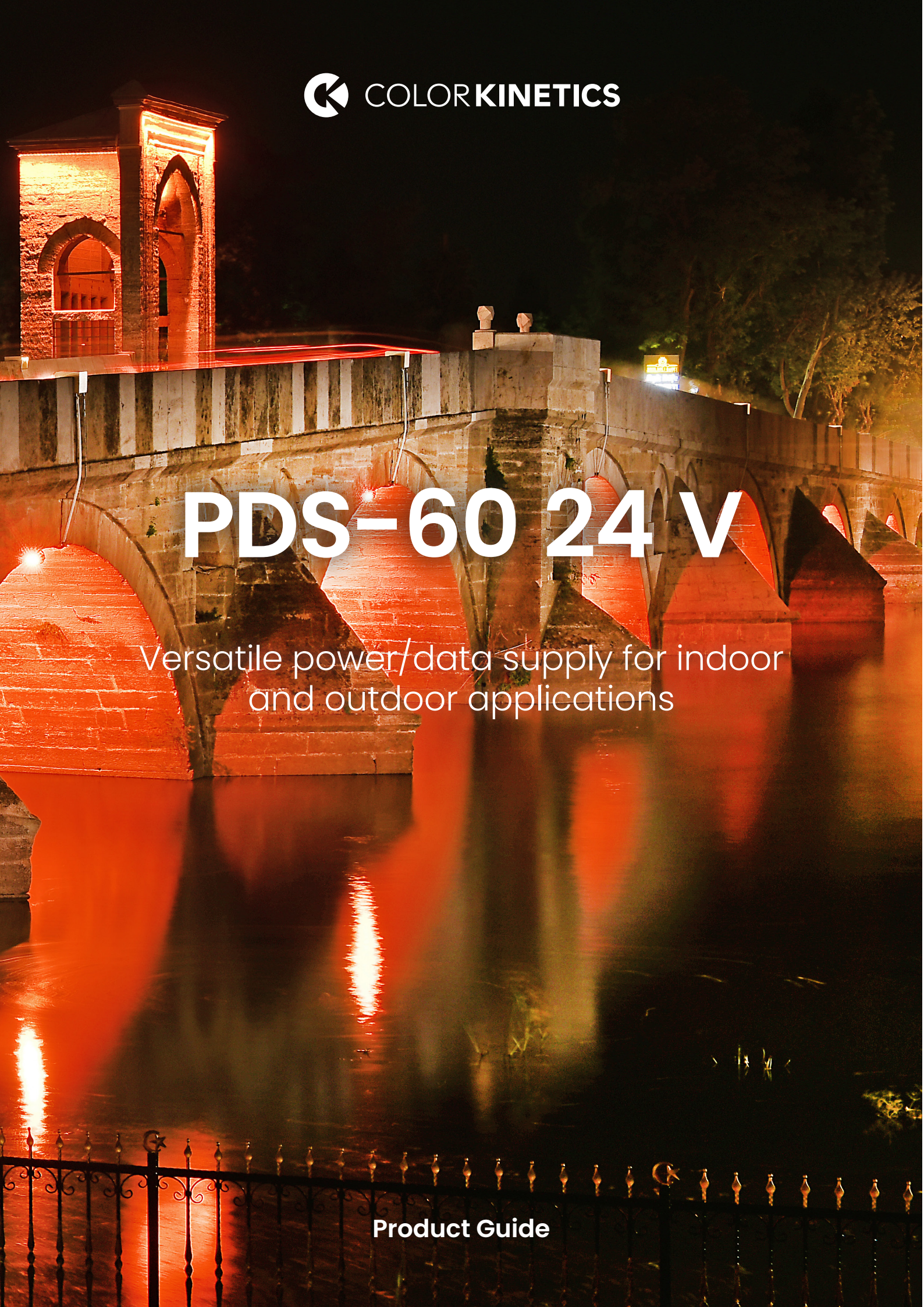


PDS-60 24 V

Versatile power/data supply for indoor and outdoor applications

Product Guide

PDS-60 24 V

Versatile power/data supply for indoor and outdoor applications

PDS-60 24 V Pre-programmed is a versatile power/data supply designed for indoor and outdoor LED lighting installations using Color Kinetics luminaires.

Take a closer look

- PDS-60 24 V accommodates input voltages ranging from 100 VAC to 240 VAC. Short-circuit protection prevents device failure due to incorrectly wired luminaires.
- Features a NEMA 4 (IP66) enclosure, PDS-60 24 V installs in dry, damp, and wet locations.
- **PDS-60 24 V DMX/Ethernet** is compatible with both DMX and Ethernet controllers.
- **PDS-60 24 V Pre-programmed** features built-in visual effects, allowing configurations without a separate controller.
- PDS-60 24 V offers multiple standard-size conduit entries to accommodate 1/2 in and 3/4 in US trade-sized conduit.
- PDS-60 24 V Pre-Programmed functions as a master controller, delivering data to the other power/data supplies in the run. Use one PDS-60 24 V Pre-Programmed unit per run, and standard DMX units for all additional power/data supplies. A downstream power/data supply does not have to be a PDS-60 24 V, but can be any DMX-based power/data supply.
- Instead of attaching luminaires to a Pre-Programmed PDS-60 24 V, you could opt to use it as an outdoor-rated light show controller for downstream power/data supplies and luminaires.

Compatible luminaires

Luminaire	Max. Quantity Per PDS-60 24 V
C-Splash 2	2

Specifications and information

Due to continuous improvements and innovations, specifications may change without notice.

General information

Electrical

Input Voltage	100 to 240 VAC, auto-ranging, 50/60 Hz
Power Consumption	1.7 A at 100 VAC, 1.5 A at 120 VAC, 0.75 A at 240 VAC
Power Output	24 VDC, 62 W maximum
Fuse Rating	(2) 4 A, 5 x 20 fast blow fuses

Connections

Threaded Openings	19 mm (0.75 in), 13 mm (0.5 in) NPT
Data Input Source	PDS-60 24 V DMX/Ethernet[§] PDS-60 24 V Pre-Programmed (Internal)
Data Output	RJ-45 input and output connectors (PDS-60 24 V DMX/Ethernet only)
Power Input	Line-neutral-ground cable, flying leads
Power Output	2-pin spring terminal

Physical

Dimensions *(Height x Width x Depth)*	91 x 140 x 224 mm (3.6 x 5.5 x 8.8 in)
Weight	2 kg (4.5 lb)
Finish	Cast aluminium enclosure
Housing	Powder-coated gray matte
Mounting	Slots for surface mounting
Startup Temperature **Operating Temperature** **Storage Temperature**	-10 to 50 °C (14 to 122 °F) -10 to 40 °C (14 to 104 °F) -40 to 80 °C (-40 to 176 °F)
Humidity	0 to 95%, non-condensing
Cooling	Convection
Airflow	Front panel input, back panel output
Heat Dissipation	25% of total power input at maximum load

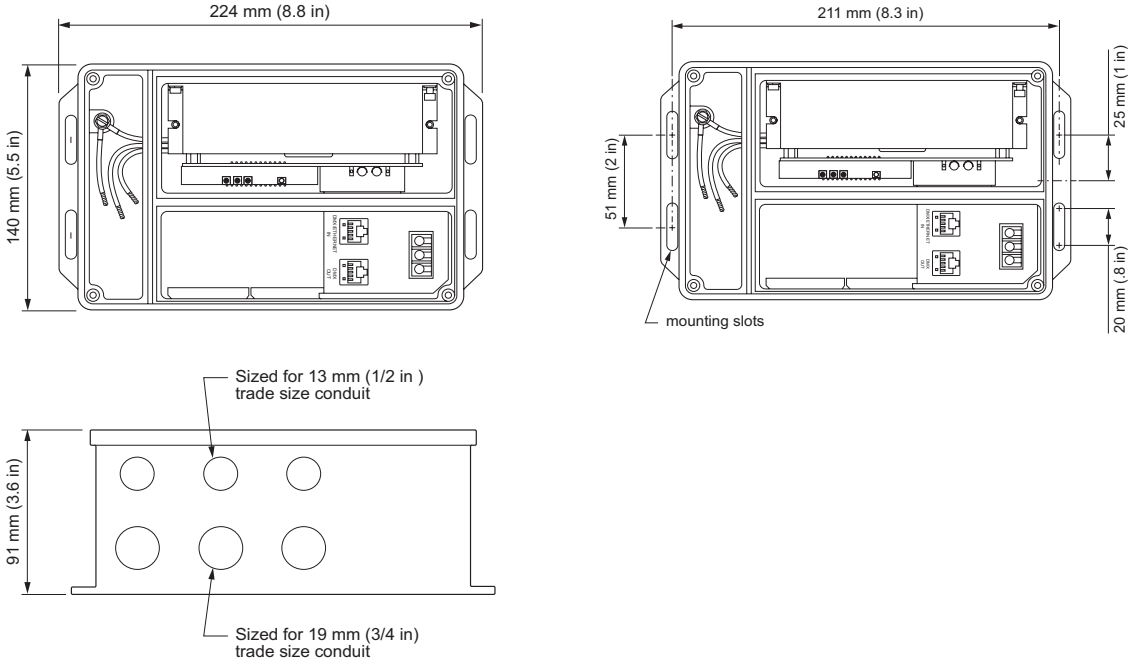
Certification and Safety

Certification	UL/cUL, CE, PSE, C-Tick, SAA
Classification	UL Class 2 power supply
Environment	Dry/Damp/Wet Location, IP66

[§] Color Kinetics full range of controllers, third-party DMX controllers, or KiNET-compatible* third-party Ethernet controllers.

Dimensions

PDS-60 24 V



Part Numbers

Use Item Number when ordering in North America.

	Item Number	Item 12NC
PDS-60 24 V DMX/Ethernet	109-000017-03	910503700097
PDS-60 24 V Pre-programmed	109-000017-00	910503700096

For further information

PDS-60 24 V details including Installation Instructions, Specification Sheets, and product drawings, can be found at:
www.colorkinetics.com/global/products/pds/pds60

PDS-60 24 V
Power/Data Supply

Configuration and planning

Multi-language installation instructions can be found at: **www.colorkinetics.com/global/products/pds/pds60**

Installation

PDS-60 24 V is a power/data supply designed for indoor and outdoor DMX and Ethernet lighting installations. PDS-60 24 V supplies power and data to low-voltage luminaires from Color Kinetics and delivers 62 watts of low-voltage output via two ports. It features a NEMA 4 (IP66) enclosure, allowing for installation in dry, damp, and wet locations. It automatically accommodates input voltages ranging from 100 VAC to 240 VAC.

Owner / User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate PDS-60 24 V in such a manner as to comply with all applicable codes, state and local laws, ordinances, and regulations. Consult with the appropriate electrical inspector to ensure compliance.

Plan the Installation

To streamline installation and ensure accurate configuration, start with a layout or a lighting design plan that shows the physical layout of the installation and identifies the locations of all lighting luminaires, power/data supplies, controllers, switches, and cables.

DMX and Ethernet Configurations

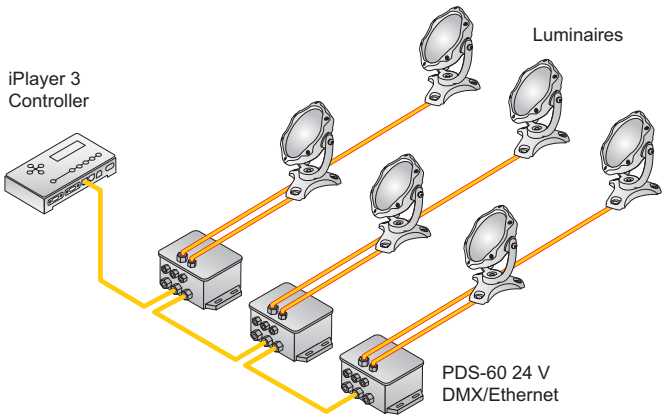
PDS-60 24 V DMX/Ethernet can be used in either DMX or Ethernet networks. PDS-60 24 V Pre-Programmed versions can be used only in DMX environments and cannot receive incoming signals from controllers. However, they can connect to DMX power/data supplies and connected luminaires via their DMX OUT ports.

DMX is appropriate for relatively simple installations, or for installations in which groups of lights operate in unison (for example, for accent lighting, perimeter lighting, or cove lighting applications). Typical DMX installations with luminaires from Color Kinetics use a controller such as iPlayer 3, a Controller Keypad for turning lights on and off and triggering light shows, and one or more PDS-60 24 V devices. PDS-60 24 V devices can be connected in series to deliver DMX data from a single controller to all connected lights. Note that the maximum for DMX data run lengths is 305 m (1,000 ft).

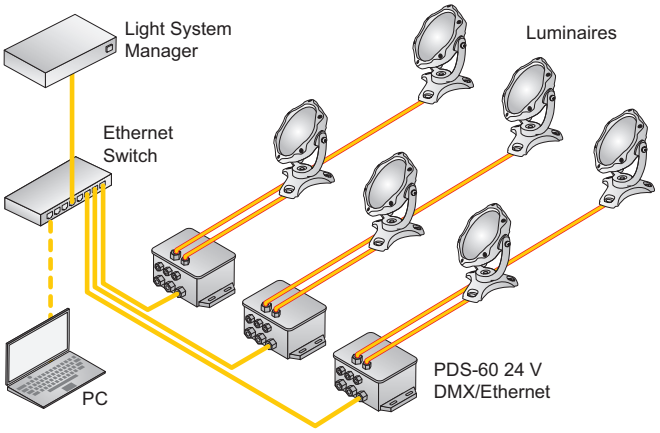
Because it is not subject to the DMX addressing limitations, Ethernet is the preferred environment for large-scale, color-changing light shows and video displays, both of which require large numbers of unique addresses.

Typical Ethernet installations with LED lighting luminaires from Color Kinetics use an Ethernet switch, an Ethernet controller (such as ColorDial Pro, or Light System Manager), one or more Ethernet Controller Keypads (for light show triggering), and one or more PDS-60 24 V devices. For additional devices in a network, use additional Ethernet switch ports.

DMX Installation



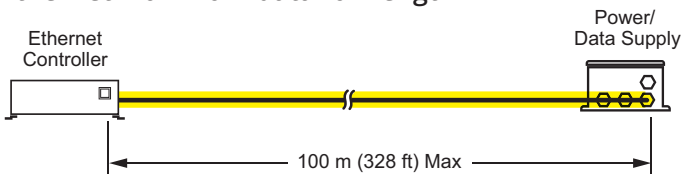
Ethernet Installation



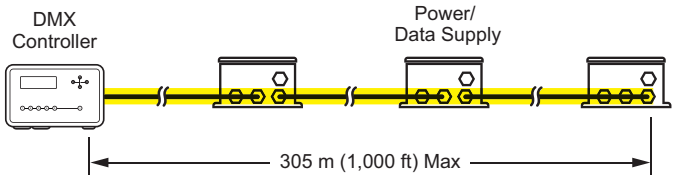
In an Ethernet environment, each Color Kinetics power/data supply has a unique IP address. Each luminaire connected to the device is automatically assigned unique identifiers that controllers use to identify and manage each luminaire.

Maximum data cable lengths are 100 m (328 ft) between Ethernet devices without a repeater.

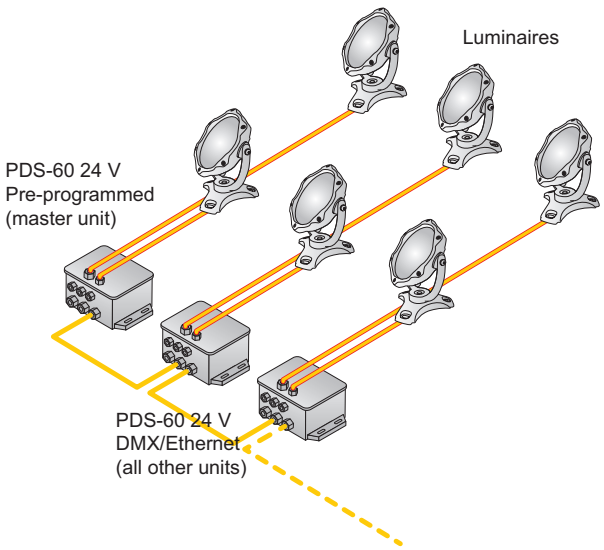
Ethernet maximum data run length



DMX maximum data run length



Typical Pre-Programmed Installation



Electrical Configuration Guidelines

The number of luminaires that each PDS-60 24 V unit can support depends on the power requirements of the specific luminaires that you are using. Refer to the table on the left for quantities of each luminaire that you can connect per PDS-60 24 V device. Refer to the luminaire product guides for information on electrical configuration for luminaires.

When installing in damp or wet locations, seal all points of possible moisture ingress with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate.

Assemble Additional Items

The following items are required to mount and connect the PDS-60 24 V:

- 3-conductor copper wire for power connections, as required.
- Luminaire connections require 4-conductor wire. Standard 3.31 mm^2 (12 AWG) stranded wire is recommended.
- One insulated ring or spade crimp terminal, one 203 mm (8 in) connecting wire and one wire nut per C-Splash 2 luminaire
- The included three push wire connectors CAT 5e or better data cable, as required
- The included black magnetic EMI suppression core (for the power cable)
- The included two white magnetic EMI suppression cores (for luminaire leader cables)
- Power screwdriver (for mounting)
- Three screws suitable for the mounting surface
- Phillips screwdriver
- An 8 mm hex wrench or adjustable wrench
- The included four 1/2 and 3/4 NPT sealing plugs and rings
- Electronics-grade RTV silicone for installations in damp and wet locations
- Cable strain relief and other connectors as needed (water tight, if required)
- Wire strippers and other tools as needed

Configuration

QuickPlay Pro 2 enables discovery, configuration, testing and demonstration of all luminaires and devices, including sPDS-480ca Control Modules, on your lighting network.

You can commission PDS-60 24 V devices using **QuickPlay Pro 2 software.** Automatically discover luminaires, PDS-60 24 V devices, and power supplies using QuickPlay Pro 2 with a computer connected to your lighting network.

The **Quick Start Guide** is a comprehensive guide to help you start using QuickPlay Pro 2. It contains everything from Device Configuration through to Live Demonstration.

Updating Firmware PDS-60 24 V firmware is periodically updated to improve system performance and functionality. We recommend confirming that your devices are running the most recent firmware version at:
www.colorkinetics.com/global/support/downloads/firmware

After downloading firmware, you can use **QuickPlay Pro 2** to update your PDS-60 24 V devices.

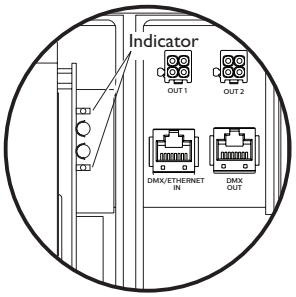
Addressing and Controlling Luminaires
PDS-60 24 V devices use DMX addresses to communicate with connected luminaires. Each node receives three sequential DMX addresses, one for the red channel, one for the green channel, and one for the blue channel. When using a PDS-60 24 V device in a DMX or an Ethernet network, you assign luminaires start DMX addresses using QuickPlay Pro 2.

Ethernet is the preferred environment for installations requiring large numbers of individually controllable nodes, such as video displays and dynamic light shows with intricate effects. In Ethernet networks, each PDS-60 24 V device comes pre-programmed with a unique IP address, so it effectively functions as its own DMX universe. In an Ethernet network, you can discover all PDS-60 24 V devices in an installation using QuickPlay Pro 2, then you can assign them start DMX addresses.

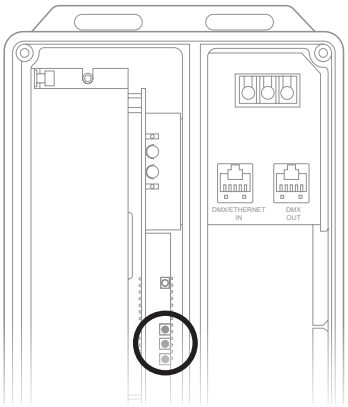
In DMX network, you address PDS-60 24 V devices by assigning start DMX addresses to luminaire serial numbers in QuickPlay Pro 2.

Pre-programmed PDS-60 24 V devices cannot receive input from controllers, but they can send light show data to other DMX power/data supplies connected to the Pre-Programmed device's DMX OUT port. No address programming is required for a PDS-60 24 V Pre-Programmed device. However, you will need to address luminaires connected to downstream PDS-60 24 V devices in the same way you would address luminaires in an ordinary DMX network.

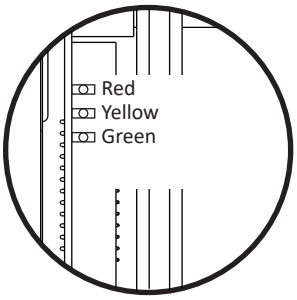
Power Indicators (All Devices)
Both versions of the PDS-60 24 V have two power indicators, one for each luminaire port. If a port fails for any reason (for instance, if a fuse blows), the red indicator light will be off.



Status Indicators
Each PDS-60 24 V has between two and five status indicators, depending on the version of the device. All indicators are located inside the luminaire's housing.



PDS-60 24 V Ethernet/DMX
The PDS-60 24 V Ethernet/DMX power/data supply listens for data on both the DMX and Ethernet input ports. When a valid connection is detected, PDS-60 24 V Ethernet/DMX switches to the appropriate mode. Three indicator lights show the mode (Ethernet or DMX) and if applicable, the status of the Ethernet connection:



Status Indicators: PDS-60 24 V Ethernet / DMX

Color	Indicator	Mode	Meaning
Red	DMX/ Ethernet Mode Status	Continuous Red	PDS-60 24 V is operating in DMX mode
		Blinking Red (once per second)	PDS-60 24 V is operating in Ethernet mode
Yellow	Ethernet Data Status	Flickering Yellow	Blinks for every Ethernet packet received
Green	Ethernet Link Status	Continuous Green	A valid Ethernet link is detected
		Off	No Ethernet link is detected

Display Light Effects Pre-Programmed PDS-60 24 V
If you have the pre-programmed version of the PDS-60 24 V, you are able to display effects on your luminaires without a controller. Pre-programmed devices cannot receive signals from external controllers, but they can send light show data to other downstream DMX-based power/data supplies via the DMX OUT port.

This means PDS-60 24 V Pre-Programmed devices can effectively play the role of controllers. (Refer to the Make Data Input Connections section for instructions on how to link power/data supplies via DMX OUT ports.)

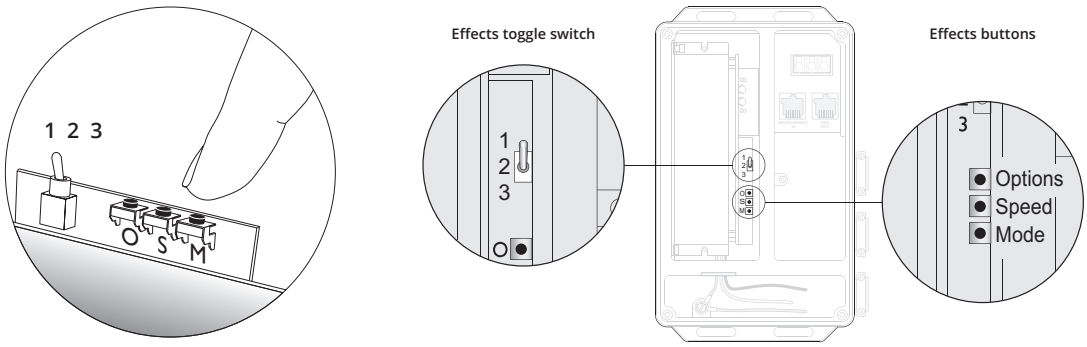
To achieve the effects you want, you use the controls inside the device, which consists of a toggle switch and three buttons. Once you have set the mode, speed, and options for effects using the control button, PDS-60 24 V stores your settings and records them, even after you have cycled the power on the device.

To display effects:

1. With the PDS-60 24 V cover removed and the power off, set the toggle switch inside the device's housing to position 1.
2. Power the PDS-60 24 V on.
3. Use the Mode button to select an effect. Press and release the Mode button to cycle through the effects described in the Light Effect Settings table opposite.
4. If desired, use the Options button to modify the effect you chose with the mode button.
5. Use the Speed button to change the speed of effect. Hold down the Speed button to change the color for Fixed Color effect.

Effect setting changes are immediate.

Pre-programmed effects buttons and toggle switch



PDS-60 24 V Pre-Programmed has four controls located inside the device's housing:

- The toggle switch selects the luminaire type. On the PDS-60 24 V, this should be set to position 1 as postion 2 and 3 are not used.
- The lowest button (farthest from the toggle switch) sets the Mode, which cycles through the different available effects
- The middle button sets the Speed for most effects, and sets the color for Fixed Color effects (hold the button down to cycle through the spectrum)
- The highest button (nearest to the toggle switch) sets the Options, which cycles through effect properties

Light Effect Settings (Switch Position 1 Only)

Mode Button		Description	Speed Button	Options Button
1. Rainbow		Produces a smooth transition through the color spectrum. Colors appear to follow each other from luminaire to luminaire	Cycles through four effect speed settings	Cycles through four width settings, then reverses direction and decreases widths
2. Random		Produces a sequence of randomly generated solid colors simultaneously on all luminaires		Toggles between immediate and fade changes
3. Colorwash		Produces a smooth hue transition on all luminaires simultaneously, progressing through the color spectrum		Reverses effect direction
4. Fixed Color		A static display of one solid color, with a configured color and intensity level	Press and hold the speed button to change the color	Not Applicable

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