

PDS-80 CA 24V

Integrated data and power for all Flex Compact, Flex Micro eW, and Vaya Tube luminaires

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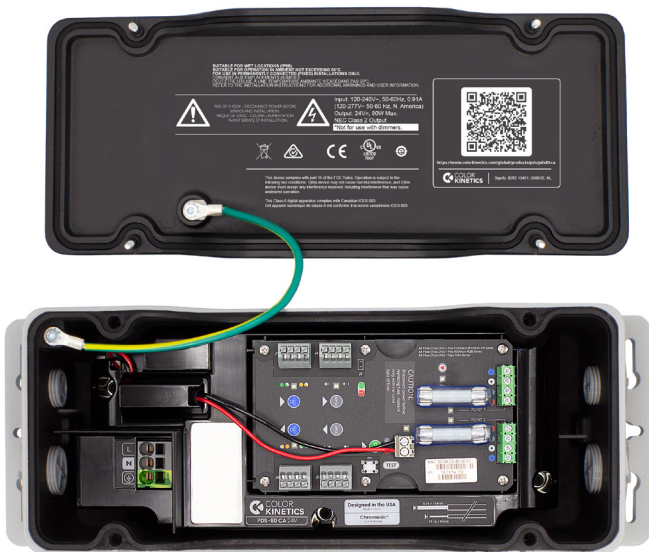
Integrated data and power for all Flex Compact, Flex Micro eW, and Vaya Tube luminaires from Color Kinetics

PDS-80 CA 24V features a power supply and CM-150 CA gen2 controller all within its rugged IP66 rated enclosure. Simple wiring, a tethered cover, and a test button which instantly confirms proper functioning of your devices, saves time and simplifies installation.

PDS-80 CA 24V supports up to 80 W total power output, and both 3 channel control (Flex RGB), and 4 channel control (Vaya Tube G2, RGBW).



Take a closer look



Supported luminaires

PDS-80 CA 24V supports 3 channel control of all Flex Compact luminaires and Flex Micro eW luminaires, up to 2 individual strings. Also, PDS-80 CA 24V supports 4 channel control of Vaya Tube, RGBW luminaires via standard 3-wire connection (UL only).

Easy Installation

Accessible, clearly labeled terminal block connectors for DMX and Ethernet, line voltage, and luminaires make installation easy. Tethered cover with captive screws ensures convenient removal and replacement. Cables route through the narrow end of the housing providing a streamlined footprint.

DMX and Ethernet (KiNET) input and output

Provides inputs and outputs for both DMX and Ethernet (KiNET) allowing you to daisy-chain multiple PDS-80 CA 24V in series.

Surge protection

Built-in 6 kV protection from electrical surge transients coupled on power input side of L, N, G.

Integrated test button and on-board diagnostics

Test luminaire connection confirming everything is working as expected before the control system is connected. On-board indicators provide visual feedback for normal operation, DMX and Ethernet connection detection, and Ethernet data transmission. Press the test button to show a color wash light show, press again to resume normal operation.

Rugged housing

The PDS-80 CA 24V cast aluminium IP66-rated enclosure provides rock-solid reliability. Its conduit entries accommodate NPT conduit in US trade sizes of 1/2 in (data) and 3/4 in (power), or metric sizes of M20 (data) and M25 (power).

Specifications and information

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

General information

Electrical

Input Voltage	UL: 120 to 277 VAC, auto-ranging, 50/60 Hz* CE, RCM, CQC: 120 to 240 VAC, auto-ranging, 50/60 Hz* PSE: 100 to 200 VAC, auto-ranging, 50/60 Hz*
Fuse Rating	Two 4 A, fast blow fuses - for 24 V Flex Compact family and Flex Micro, eW Two 8 A, fast blow fuses - for 24 V Vaya Tube family
Output Voltage	24 VDC
Power Consumption	20 W maximum
Power Output	80 W maximum
Surge Protection	6 kV maximum differential (L to N) 6 kV maximum common (L to Gnd or N to Gnd) For additional Surge Protection Requirements for LED Lighting Systems, please refer to www.colorkinetics.com/KB/surge-protection .

Connections

Threaded Openings	3/4 in NPT for power, 1/2 in NPT for data (US trade) UL M25 for power, M20 for data CE, RCM, CQC, PSE
Data Input Source	Color Kinetics full range of controllers, third-party DMX controllers, or KiNET-compatible [§] third-party Ethernet controllers
Power Input	Power input via 3-pole terminal block that accepts 18 to 8 AWG (1 – 10 mm ²) wires
Power/Data Output	Luminaire output via 4-pole terminal block that accepts 20 to 14 AWG (0.5 – 2.5 mm ²) wires.
Data Input/Output	Quad-entry terminal block connectors that accept 24 to 16 AWG (0.2 to 1.5 mm ²) wires
Compatible Luminaires	Flex Compact RGB/iW/eW Flex Micro eW (4A) Vaya Tube G2 RGBW (8A)

Physical

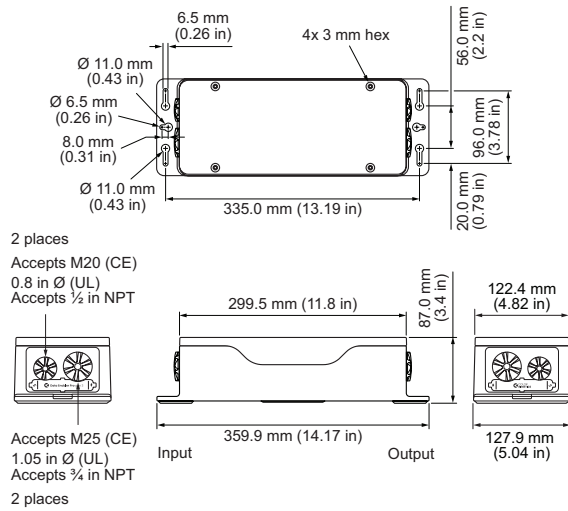
Dimensions <i>(Height x Width x Depth)</i>	87.0 x 359.9 x 127.9 mm (3.4 x 14.17 x 5.04 in)
Weight	3.0 kg (6.6 lb)
Housing	Cast aluminium enclosure with slots for surface mounting. Powder-coated industrial gray matte.
Startup Temperature Operating Temperature Storage Temperature	-20 to 50° C (-4 to 122° F), PSE: -10 to 50° C (14 to 122° F) -20 to 50° C (-4 to 122° F), PSE: -10 to 50° C (14 to 122° F) -40 to 80° C (-40 to 176° F)
Humidity	0 to 95%, non-condensing
Cooling	Convection
Heat Dissipation	20 W

Certification and Safety

Certification	UL/cUL, FCC Class A, CE, RCM, CQC, PSE
Environment	Dry/Damp/Wet Location, IP66

* Verify that the line voltage is appropriate for the lighting luminaires in your installation. See a specific luminaire's documentation for supported line voltages.
§ KiNET is the Ethernet lighting protocol from Color Kinetics.

Dimensions



Part Numbers

	Item Number	Item 12NC
PDS-80 CA 24V, Three-Wire Terminal, 4A 24V, IP66, UL, for Vaya Tube G2, RGBW	109-000201-00	912400138367
PDS-80 CA 24V, Four-Wire Terminal, 4A 24V, IP66, UL, for Flex Compact, and Flex Micro, eW	109-000201-01	912400138368
PDS-80 CA 24V, Four-Wire Terminal, 4A 24V, IP66, CE, for Flex Compact, and Flex Micro, eW	109-000201-02	912400138369

For further information

PDS-80 CA 24V details including Installation Instructions, Specification Sheets, and product drawings, can be found at: www.colorkinetics.com/global/products/pds/pds80-ca



PDS-80 CA 24V

Configuration and planning

Regardless of the size and complexity of your installation, the planning time you spend up front can help streamline the installation and configuration of your luminaires. Keep these points in mind as you plan your installation:

Installation

PDS-80 CA 24V integrates data and power transmission for the Flex family of luminaires. Installation specifics will vary depending on luminaire types, controller, environment (dry or damp/wet).

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate PDS-80 CA 24V 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.

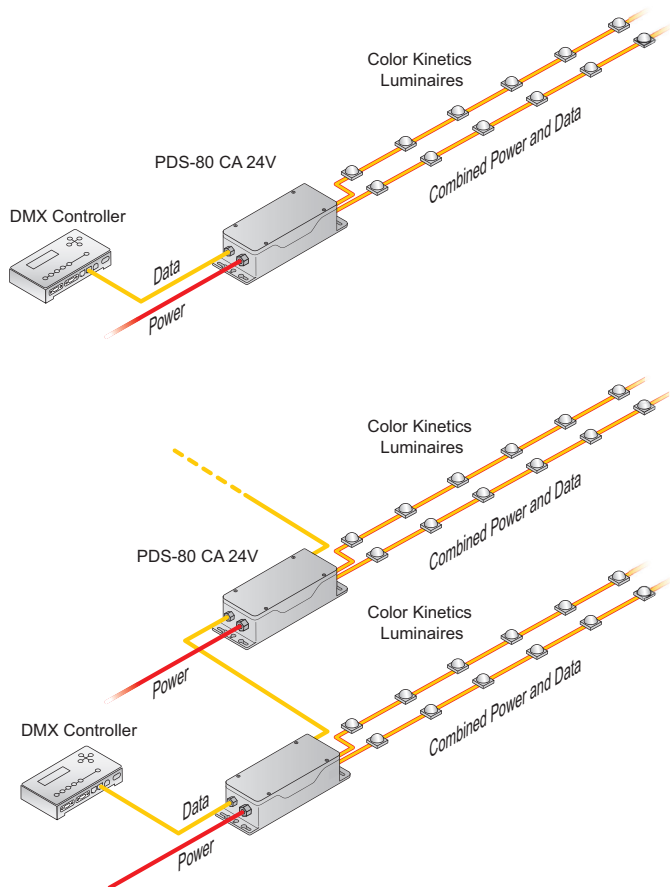
Installing in Damp or Wet Locations

When installing in damp or wet locations, seal all junction boxes, power supplies, and other devices with electronics-grade RTV silicone sealant so that water or moisture cannot enter or accumulate in any wiring compartments, cables, luminaires, or other electrical parts. You must use suitable outdoor-rated junction boxes when installing in wet or damp locations. Additionally, you must use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes.

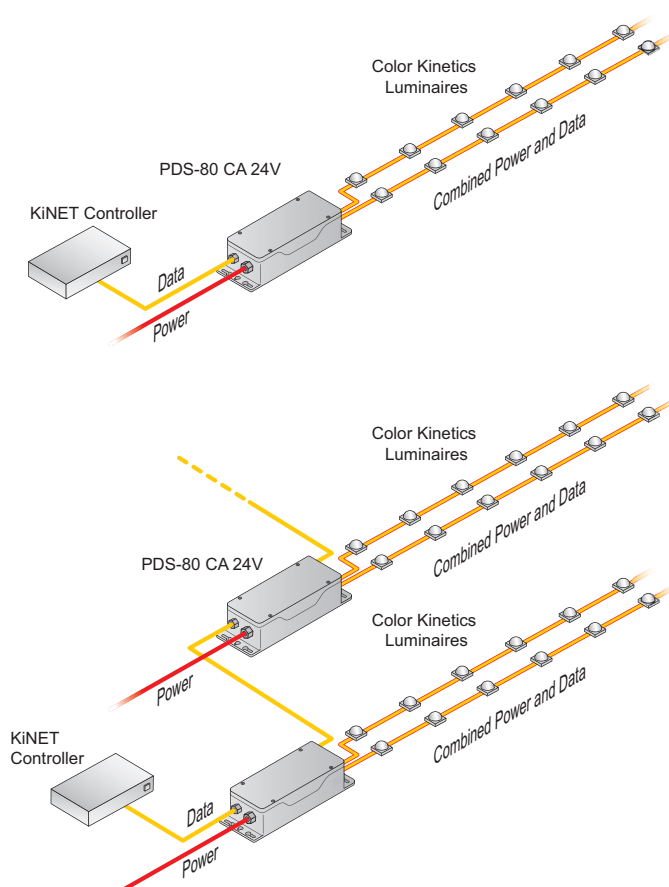
Plan the Installation

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 luminaires, PDS-80 CA 24V devices, power supplies, controllers, switches, and cables.

DMX Configuration



Ethernet Configuration



DMX and Ethernet Configurations

PDS-80 CA 24V can be used in either DMX or Ethernet networks. DMX is appropriate for relatively simple installations, or for installations in which groups of lights operate in unison—for example, for accent lighting.

Typical DMX installations with intelligent LED luminaires from Color Kinetics use a controller such as iPlayer 3, a Controller Keypad for turning the lighting system on and off and for triggering light shows, and one or more PDS-80 CA 24V devices. PDS-80 CA 24V devices can be connected in series to deliver DMX data from a single controller to all connected lights.

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 Color Kinetics LED luminaires use an Ethernet switch, an Ethernet controller such as iPlayer 4, Antumbra Ethernet Keypads for push-button light show triggering, and one or more PDS-80 CA 24V devices. While your specific lighting network configuration may allow for additional devices, we recommend that you limit individual Ethernet runs to 15 or fewer PDS-80 CA 24V devices. For additional PDS-80 CA 24V devices in a network, use additional Ethernet switch ports.

Electrical Configuration Guidelines

The maximum luminaires each PDS-80 CA 24V can support depends on the luminaire type, as well as on additional configuration details such as node spacing and leader cable length. The table below lists the maximum number of luminaires each PDS-80 CA 24V can support, assuming a 15.2 M (50 ft) leader cable.

Download the Power / Data Supply Compatibility Chart for the latest guidelines.

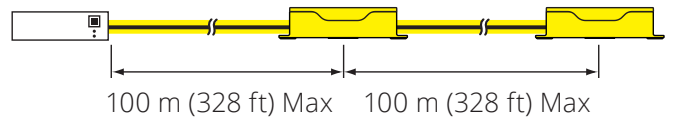
Luminaire	Per port	Per PDS-80 CA 24V
Flex Compact gen3, RGB	75 nodes	80 nodes max
Flex Compact, iW, eW		
Flex Micro, eW	75 nodes	150 nodes max
Vaya Tube, RGBW	6.6 m (22 ft) max over one or two ports	

PDS-80 CA 24V must be installed in a location that allows air to move freely around the device. Exceeding startup and operating temperature limits may cause device damage or failure.

Data Configuration Guidelines

In addition to maximum luminaire run lengths determined by the electrical configuration, each power supply imposes maximum run lengths based on data integrity. To ensure data integrity, maximum individual run length should not exceed 100m (328 ft), and the total number of daisy chained power supplies should not exceed 15.

NOTE: Do not mix 3 channel and 4 channel luminaires on the same PDS-80 CA 24V unit as this can cause unpredictable results.



Ethernet maximum data cable length between PDS-80 CA 24V devices.

Leader Cables

The type of leader cable you select depends on the luminaire type, distance from the PDS to the first luminaire, and whether your PDS-80 CA 24V has three-wire or four-wire output.

Installation

Multi-language installation instructions can be found at:
www.colorkinetics.com/global/products/pds/pds80-ca

In addition to the PDS-80 CA 24V and associated parts found in the box, the following items are required to mount and connect PDS-80 CA 24V:

- Four mounting screws suitable for the mounting surface
- Cat. 5e or better data cable, as required
- Associated cables as listed in Leader Cable Part Numbers table
- Electronics-grade RTV silicone for installations in damp and wet locations
- Screwdrivers, wire strippers, and other tools as needed.

Configuration

QuickPlay Pro 2 enables discovery, configuration, testing and demonstration of all luminaires and devices, including PDS-80 CA 24V devices, on your lighting network.

You can commission PDS-80 CA 24V devices using **QuickPlay Pro 2 software**. Automatically discover luminaires, PDS-80 CA 24V, and other devices using QuickPlay Pro 2 with a computer connected to your lighting network.

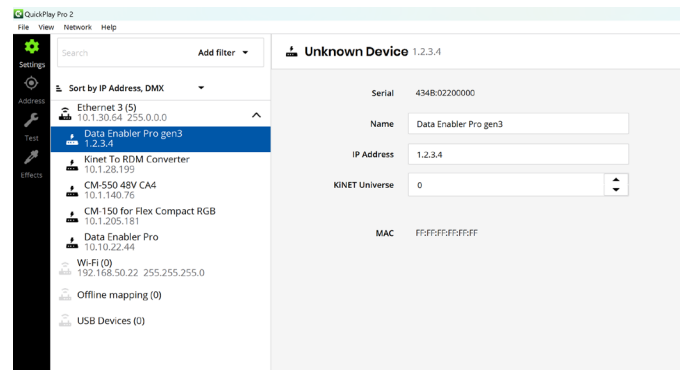
The **Quick Start Guide** is a comprehensive guide to help you start using QuickPlay Pro2. It contains everything from Device Configuration through to Live Demonstration.

Updating PDS-80 CA 24V Firmware

PDS-80 CA 24V 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-80 CA 24V devices.



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