COLORKINETICS

PDS-80 CK2 24V

PDS-80 CK2 24V Power/data supply engineered for Flex Compact Pro luminaires

Product Guide

PDS-80 CK2 24V

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The PDS-80 CK2 24V is the power/data supply engineered specifically for Flex Compact Pro luminaires delivering integrated power and data in a robust, IP66-rated enclosure.

With up to 80 W total power output and default 3-channel control via DMX or Ethernet, it is designed to make installation fast and commissioning straightforward. A tethered cover, clearly labeled terminals, and a built-in test button simplify installation and speed up commissioning.

Take a closer look

Purpose-built for Flex Compact Pro
The PDS-80 CK2 24V integrates a power supply and control module in a single rugged housing delivering up to 80 W of total power output and default 3-channel control to luminaires such as Flex Compact Pro. Also supports legacy CKDMX luminaires such as C-Splash 2, protecting your existing investment.

Fast, straightforward installation
An IP66-rated enclosure with tethered cover and captive screws keeps everything secure and accessible. Clearly labeled terminal block connectors for DMX, Ethernet, line voltage, and luminaires take the guesswork out of wiring. Cables route through the narrow end of the housing for a clean, streamlined footprint.

Seamless connectivity
Inputs and outputs for both DMX and Ethernet (KiNET and sACN) allow you to daisy-chain multiple units in series. Dual 100 MB IDC connectors and a high-speed 1 GB RJ45 connector ensure fast, reliable Ethernet connections across a wide range of networking environments.

Rugged housing
Cast aluminium IP66-rated enclosure built for long-term reliability. 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).

Know it's working before you leave the site
A built-in test button instantly confirms luminaire connection and triggers a color wash light show before the control system is connected. On-board indicators provide visual feedback for normal operation, DMX and Ethernet connection detection, and data transmission. Press again to resume normal operation.

Surge protection
Built-in 6 kV protection guards against electrical surge transients coupled on power input side of L, N, G, keeping your installation safe and running.

Complete control
Works seamlessly with the full Color Kinetics controller ecosystem including iPlayer 4, iPlayer 3, Antumbra iColor Keypad, and ColorDial Pro, as well as third-party DMX or Ethernet (KiNET, sACN) controllers. Also compatible with Interact Landmark for remote monitoring and management.

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*
Fuse Rating	(2) 4A, fast blow fuses
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/sACN-compatible third-party Ethernet controllers.§
Power Input	Power input via 3-pole terminal block that accepts 18 to 8 AWG (1 – 10 mm2) wires
Power/Data Output	Luminaire output via 3-pole terminal block that accepts 18 to 14 AWG (1 – 2.5 mm^2) wires
DMX Input/Output	DMX input and loop-thru via 4-pole terminal block connectors that accept 24 to 16 AWG (0.2 to 1.5 mm^2) wires
Ethernet Input/Output	1x Gigabit Ethernet via 8P8C (RJ45) connector. 2x 100 Mbit Ethernet via 2-pair single-entry IDC connectors that accept 26 AWG-22AWG (0.22 mm^2 - 0.34 mm^2) wires
Compatible Luminaires	Flex Compact Pro, C-Splash 2

Physical

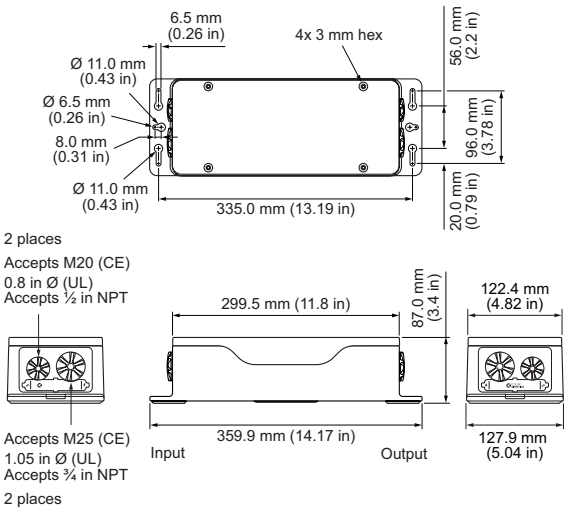
Dimensions *(Height x Width x Depth)*	87.0 x 359.9 x 127.9 mm (3.4 x 14.17 x 5.04 in)
Weight	3.0 kg (6.6 lb)
Housing	Cast aluminium enclosure with slots for surface mounting. Powder-coated industrial gray matte.
Startup Temperature **Operating Temperature** **Storage Temperature**	-20 to 50° C (-4 to 122° F) -20 to 50° C (-4 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
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 CK2 24V, Three-Wire Terminal, 4A 24V, IP66, UL, for Flex Compact Pro	109-000202-00	912400138371
PDS-80 CK2 24V, Three-Wire Terminal, 4A 24V, IP66, CE/RCM/CQC, for Flex Compact Pro	109-000202-01	912400138372

For further information

PDS-80 CK2 24V details including Installation Instructions, Specification Sheets, and product drawings, can be found at: www.colorkinetics.com/global/products/pds/pds80-ck2

PDS-80 CK2 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 CK2 24V integrates data and power transmission for Flex Compact Pro luminaires. Installation specifics will vary depending on node count, 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 CK2 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.

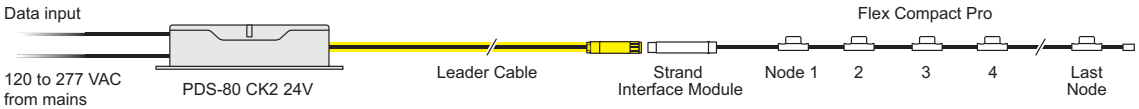
You must use suitable outdoor-rated junction boxes when installing in wet or damp locations. Additionally, you must use gaskets, clamps, and other parts required for installation to comply with all applicable local and national codes.

Plan the Installation

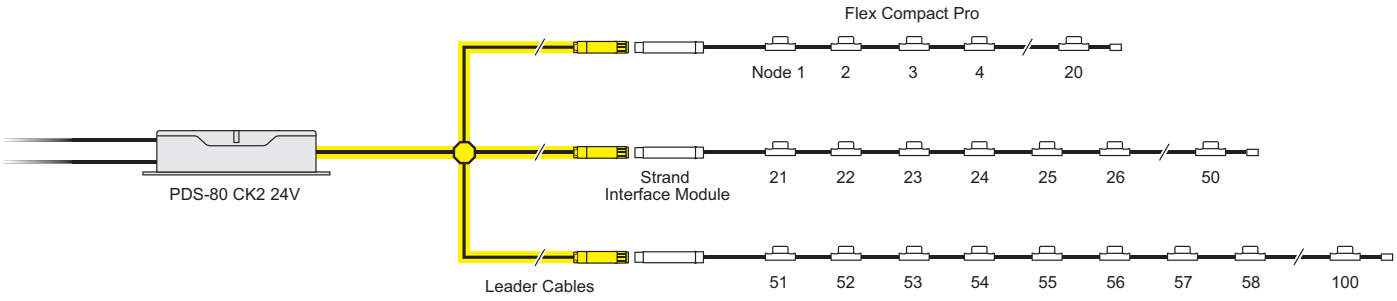
To streamline installation and ensure accurate configuration, start with a layout or a lighting design plan that shows the physical layout of the installation and identifies the locations of all luminaires, PDS-80 CK2 24V devices, power supplies, controllers, switches, and cables.

For the latest power and data supply options for Flex Compact Pro, see the Power/Data Supplies section of the **Color Kinetics Product Guide**.

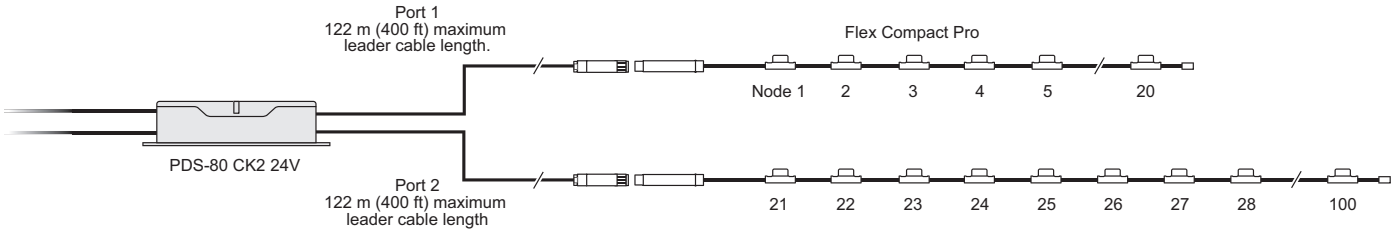
One string up to 100 nodes, **OR** 122 m (400 ft) maximum leader cable length.



Numerous branches with up to 100 nodes total, **OR** 122 m (400 ft) maximum leader cable length.



Two strings up to 100 nodes total, **OR** 122 m (400 ft) maximum leader cable length for each output port (2).



DMX and Ethernet Configurations

PDS-80 CK2 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 CK2 24V devices. PDS-80 CK2 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 CK2 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 CK2 24V devices. For additional PDS-80 CK2 24V devices in a network, use additional Ethernet switch ports.

Electrical Configuration Guidelines

Each PDS-80 CK2 can support a maximum of 100 Flex Compact nodes or a maximum total run length (including branches) of 141.7 m (465 ft). To calculate luminaire run lengths including leader cables, node count, node spacing, and total power consumption for your specific installation, see the Flex Compact Pro Configurator.

PDS-80 CK2 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 leader cable run length should not exceed 122m (400 ft), and the total number of daisy chained Power/Data supplies should not exceed 15.

PDS-80 CK2 Status Indicators

The PDS-80 CK2 features eight status indicators that give you an instant read on system performance and make troubleshooting fast and straightforward. Visit the **PDS-80 CK2 Status Indicator** article for more information.

Installation

Multi-language installation instructions can be found at:
www.colorkinetics.com/global/products/pds/pds80-ck2

In addition to the PDS-80 CK2 24V and associated parts found in the box, the following items are required to mount and connect PDS-80 CK2 24V:

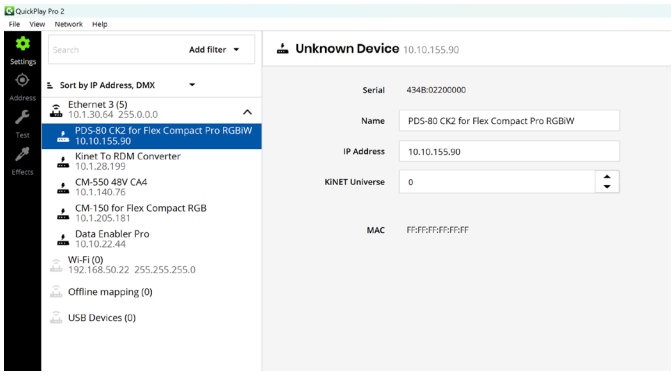
- Four mounting screws suitable for the mounting surface
- Cat. 5e or better data cable, as required
- 1 leader cable per string
- Additional 3 conductor 18 – 14 AWG (1.0 – 2.5 mm2 Stranded / Solid wire as required
- Electronics-grade RTV silicone for installations in damp and wet locations
- Screwdrivers, 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 CK2 24V devices, on your lighting network.

You can commission PDS-80 CK2 24V devices using **QuickPlay Pro 2 software**. Automatically discover luminaires, PDS-80 CK2 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 CK2 24V Firmware

PDS-80 CK2 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 CK2 24V devices.

Cover photography: Savaş Keskiner, İstavrit Görsel Çözümler

www.colorkinetics.com

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