COLORKINETICS

Data Enabler Pro gen3

Integrating power and data for Powercore LED luminaires

Product Guide

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Data Enabler Pro gen3

Integrating power and data for Powercore LED luminaires

This next generation Data Enabler provides many new features including longer single run lengths for luminaires, support for KiNET and DMX protocols, Gigabit ethernet, an integrated test button, a smarter, narrower installation footprint including an easy-access housing, and improved 6 kV surge protection.

But some things have not changed. The cast aluminium IP66-rated enclosure provides rock-solid reliability, and the clearly labeled connectors and smart diagnostic tools make for easier installations. Data Enabler Pro gen3 is compatible with any Powercore luminaire.

Take a closer look

Easy installation

Accessible, clearly labeled terminal block connectors for DMX and Ethernet, line voltage, and luminaires makes 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.

On-board testing and 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.

DMX, KiNET and sACN

Provides inputs and outputs for both DMX and Ethernet (KiNET and sACN*), allowing you to connect multiple Data Enabler Pro devices in series. Also provides an Ethernet output terminal for Accent MX Powercore support.

*sACN available via firmware update.

Supports Powercore luminaires

Powercore merges line voltage with control data and delivers both over a single standard cable—dramatically simplifying installation and lowering total system cost. Combined with Powercore gen2 enabled luminaires gives you longer single run lengths.

Faster connections

Accommodates a variety of networking environments with two 100 MB IDC connectors and one GB RJ45 connector.

Designed for maximum energy efficiency

Data Enabler Pro consumes just 20 W maximum. Optional power-saving modes automatically cut power to attached lights when lights are off for a configurable number of minutes.

Surge Protection

Built-in 6 kV protection from electrical surge transients coupled on L, N, G, data 4-wire cables of Color Kinetics Powercore luminaires.

Specifications and information

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

General information

Electrical

Input Voltage	100 to 277 VAC, auto-ranging, 50/60 Hz (UL)* 100 to 240 VAC, auto-ranging, 50/60 Hz (CE)*
Maximum Input Current	16.5 A maximum
Load Current	16 A maximum
Power Consumption	20 W maximum
Surge Protection	6 kV maximum differential (L to N) 6 kV maximum common (L to Gnd or N to Gnd), up to 4kV protection on data line. 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 (UL) M25 for power / M20 for data (CE)
Control Protocol	DMX / KiNET§ / sACN
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 18 to 8 AWG (1 – 10 mm^2) wires Seperate power and data output for Accent MX Powercore
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 accepts 26 to 22 AWG (0.22 to 0.34 mm^2) wires
Data Input Source	Color Kinetics full range of controllers, third-party DMX controllers, KiNET-compatible§ third-party Ethernet controllers§ or sACN controllers.

Physical

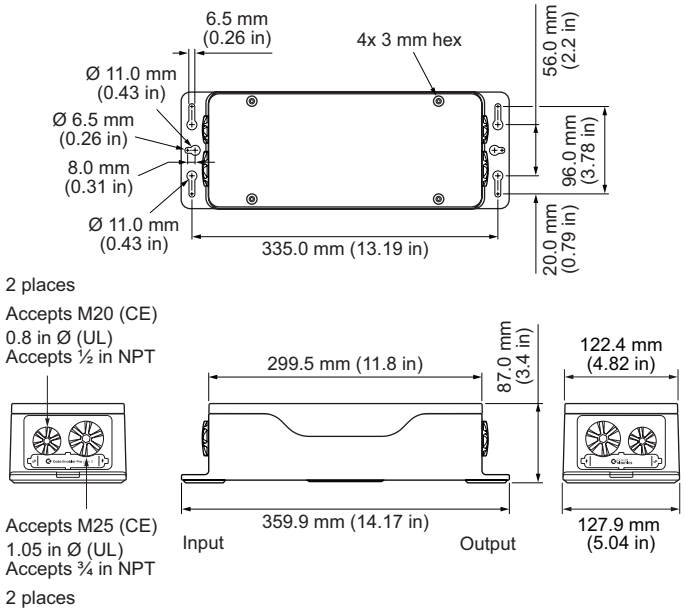
Dimensions *(Height x Width x Depth)*	87 x 359.9 x 127.9 mm (3.4 x 14.17 x 5.04 in)
Weight	3.0 kg (6.6 lb)
Housing	Cast aluminium enclosure with slots for surface mounting. Powder-coated industrial gray matte.
Operating Temperature **Startup Temperature** **Storage Temperature**	-40 to 50 °C (-40 to 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
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
Data Enabler Pro gen3 3/4 in / 1/2 in NPT (U.S. trade size conduit)	106-000004-04	912400138114
Data Enabler Pro gen3 M25 / M20 (metric size conduit)	106-000004-05	912400138115

For further information

Data Enabler Pro gen3 is available in U.S. trade and metric sizes. Complete details including Installation Instructions, Specification Sheets, and product drawings, can be found at:
www.colorkinetics.com/global/products/pds/dataenablerpro3

Data Enabler Pro gen3

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

Data Enabler Pro gen3 integrates data and power transmission for all luminaires employing Powercore technology from Color Kinetics. Installation specifics will vary depending on luminaire types, controller, environment (dry or damp/wet), and network (DMX, Ethernet, or a combination).

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate Data Enabler Pro gen3 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, Data Enabler Pro gen3 devices, controllers, switches, and cables.

DMX and Ethernet Configurations

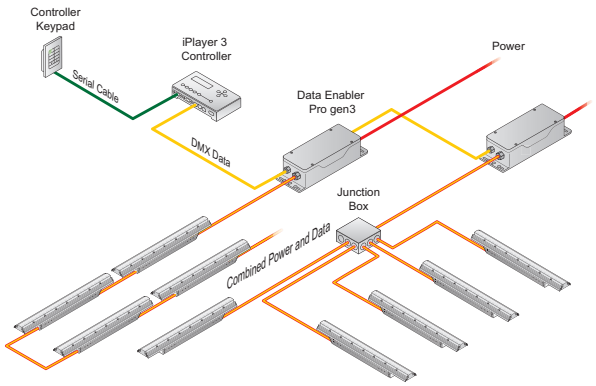
Data Enabler Pro gen3 can be used in either DMX or Ethernet networks. DMX is appropriate for relatively simple installations, or for installations in which groups of lights operate in unison—for example, for accent lighting, perimeter lighting, or cove lighting applications.

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 Data Enabler Pro gen3 devices. Data Enabler Pro gen3 devices can be connected in series to deliver DMX data from a single controller to all connected lights.

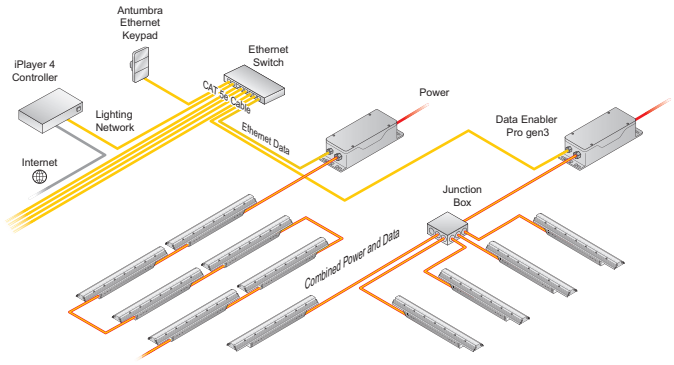
Because it is not subject to the DMX addressing limitations, Ethernet is the preferred environment for large-scale, color-changing light shows and video displays, both of which require large numbers of unique addresses.

Typical Ethernet installations with Color Kinetics LED luminaires use an Ethernet switch, an Ethernet controller such as iPlayer 4 and Antumbra Ethernet Keypads for push-button light show triggering, and one or more Data Enabler Pro gen3 devices. While your specific lighting network configuration may allow for additional devices, we recommend that you limit individual Ethernet runs to 15 or fewer Data Enabler Pro gen3 devices. For additional Data Enabler Pro gen3 devices in a network, use additional Ethernet switch ports.

DMX Configuration



Ethernet Configuration



Electrical Configuration Guidelines

Linear Powercore luminaires, such as **Graze Elite** Powercore are installed in series using the luminaires' end-to-end connectors or jumper cables. Multiple runs are typically installed to a common junction box. Powercore floodlights, wash lights, and spotlights, can be installed in series (each wired to a separate junction box) or in parallel (wired to a common junction box).

The maximum number of luminaires each Data Enabler Pro gen3 can support depends on many installation variables including luminaire type and method of connection, luminaire spacing, circuit size, wire gauge, control channels, and line voltage.

Color Kinetics offers Configuration Calculator a downloadable tool to help calculate the number of luminaires a specific installation can support. Download Configuration Calculator from **www.colorkinetics.com/support/install_tool/.**

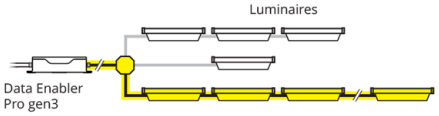
For further help, please consult Application Engineering Services at support@colorkinetics.com.

Data Enabler Pro gen3 must be installed in a location that allows air to move freely around the device. Startup and operating temperatures are rated to 50 °C (122 °F). Exceeding this temperature limit may cause device damage or failure.

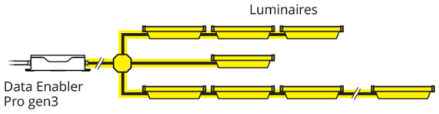
Data Configuration Guidelines

In addition to maximum luminaire run lengths determined by the electrical configuration, each Data Enabler Pro gen3 imposes maximum run lengths based on data integrity. To ensure data integrity, maximum individual run length or the total cable length per Data Enabler Pro gen3 should not exceed 122 m (400 ft) when paired with Powercore gen2 enabled luminaires such as Graze Elite.

Data Enabler Pro gen3 paired with Graze Elite



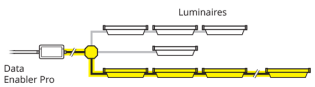
122 m (400 ft) maximum individual run length



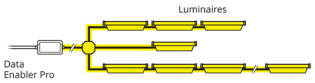
122 m (400 ft) maximum total run length

When using Data Enabler Pro gen3 with traditional Powercore luminaires or Data Enabler Pro with Powercore gen2 enabled luminaires such as Graze Elite the individual run length is 53.3 m (175 ft).

Data Enabler Pro

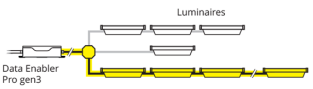


53.3 m (175 ft) maximum individual run length

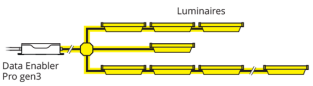


122 m (400 ft) maximum total run length

Data Enabler Pro gen3



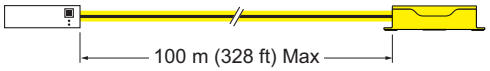
122 m (400 ft) maximum individual run length



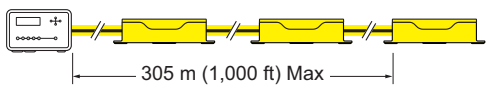
122 m (400 ft) maximum total run length

When selecting mounting locations for the Data Enabler Pro gen3 devices in your installation, keep cable and luminaire run length maximums in mind:

- In Ethernet networks, maximum data cables lengths are 100 m (328 ft) between Ethernet devices without a repeater (for example, controller to switch, or switch to Data Enabler Pro).
- In DMX networks, maximum data run lengths are 305 m (1,000 ft). The maximum number of Data Enabler Pro gen3 devices that can be connected in series is 32. We recommend using DMX repeaters for data run lengths that exceed the maximum length, as well as for runs of more than 32 Data Enabler Pro gen3 devices connected in series.



Ethernet maximum data cable length



Installation

Multi-language installation instructions can be found at:
www.colorkinetics.com/global/products/pds/dataenablerpro3

Assemble Additional Items

Install Data Enabler Pro gen3 in a convenient location, using the Installation Instructions included in the product packaging for step-by-step hardware installation instructions.

The following additional items are required to mount and connect Data Enabler Pro gen3.

- 4 mounting screws suitable for the mounting surface
- For installations using metric size conduit, use M25 watertight conduit and fittings for power, and M20 watertight conduit and fittings for data, as required by local codes
- For installations using US trade size conduit, use 3/4 in NPT watertight conduit and fittings for power, and 1/2 in NPT watertight conduit and fittings for data, as required by local codes
- CAT 6e or better data cable, as required
- 4-conductor copper wire for luminaire connections, as required. Standard 3.31 mm2 (12 AWG) stranded wire is recommended.
- Electronics-grade RTV silicone for installations in damp and wet locations
- Screwdrivers, wire strippers, and other tools as needed

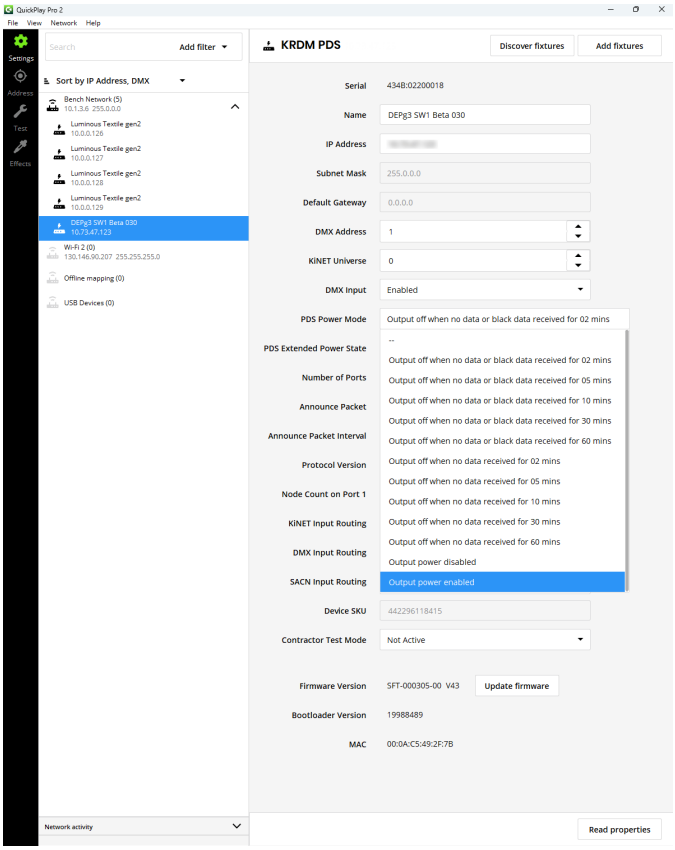
Important multi-language Installation Instructions can be found at:
www.colorkinetics.com/global/products/pds/dataenablerpro3

Configuration

QuickPlay Pro 2 enables discovery, configuration, testing and demonstration of all luminaires and devices, including Data Enabler Pro gen3 on your lighting network.

You can commission Data Enabler Pro gen3 devices using QuickPlay Pro 2 software. Automatically discover luminaires, Data Enabler Pro gen3 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 Data Enabler Pro gen3 Firmware

Data Enabler Pro gen3 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 Data Enabler Pro gen3 devices.

Understanding Data Enabler Pro gen3 on-board Status Indicators

The eight status indicators inside the Data Enabler Pro gen3 offers detailed information helpful in knowing how Data Enabler Pro gen3 is performing, and for troubleshooting issues that may arise. See the Knowledgebase article for more information
https://colorkinetics.helpdocs.io/article/0h76vzbzt5

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