DATA ENABLER EO

USER GUIDE

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GETTING STARTED

Color Kinetics® Data Enabler EO is a compact, indoor/outdoor data supply for use with iColor® Accent Powercore fixtures, and is available for DMX and Ethernet control.

This guide contains important information on installing and using your new Data Enabler EO. Please read it carefully and save it for future reference.

Included In This Box

- Data Enabler EO with cover, gasket, attaching cover screws, and NPT threaded seal plugs
- User Guide

Additional Items Needed

- #10 (M5) Mounting hardware and tools
- Wire nuts
- Various electrical conduit wire and accessories as required based on wiring method
- 3/4" NPT watertight conduit and fittings (as required per local codes)
- Electronic grade RTV Silicone (UL recognized) to seal conduit connections as required
- 5/16" hex wrench or adjustable wrench for seal plugs
- Phillips and flat head screw drivers

Scope of This User Guide

The goal of this user guide is to explain the steps necessary to install the Data Enabler EO and 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 of identifying the severity of the hazards associated with the products is used:

"**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.

DANGER: Ensure that main power supply is off before installing, wiring, or servicing the Data Enabler EO.

WARNING: The Data Enabler EO must be installed by a qualified professional in accordance with NEC and relevant local codes.

WARNING: Do not attempt to install or use the Data Enabler EO until you read and understand the installation instructions and safety labels.

WARNING: Do not use the Data Enabler EO 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 the Data Enabler EO is securely attached, properly mounted, and free of excessive vibration.

CAUTION: When sealing the Data Enabler EO, ensure that the gasket is seated properly, that no wires are pinched, and that the housing is free of foreign material and debris.

CAUTION: Do not hot swap. Ensure the power to the Data Enabler EO is off before connecting or disconnecting fixtures.

CAUTION: Do not modify or alter the Data Enabler EO.

CAUTION: Do not exceed the specified voltage input.

CAUTION: Do not exceed the maximum number of specified lights attached to the Data Enabler EO. Doing so will result in current overload.

CAUTION: For outdoor installations, use appropriate material and methods to ensure the Data Enabler EO is water resistant.

NOTE: The instructions and precautions set forth in this user guide are not necessarily all-inclusive, all conceivable, 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 the Data Enabler EO in such a manner as to comply with all state and local laws, ordinances, regulations, and the American National Standard Institute Safety Code.

INSTALLING THE DATA ENABLER EO

The Data Enabler EO shall be installed by a qualified electrician in accordance with NEC and relevant local codes for power supplies.

CAUTION: Ensure proper installation for outdoor applications to maintain NEMA 4 ratings. Failure to do so may result in minor or moderate injury or property damage and will void the warranty.

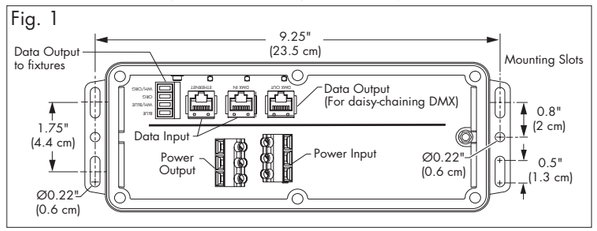
Mounting the Housing

- Select the location to mount the housing, keeping the Data Enabler EO within the maximum distance specified for your fixture. Refer to your fixture user guide for the cable run information.

CAUTION: The Data Enabler EO must be installed in a location that allows air to move freely. Packing insulation around the housing or mounting it in a sealed location that raises ambient temperature above 122° F (50° C) may result in minor or moderate injury or property damage and will void the warranty.

- Using the seal plugs and gaskets provided, seal all conduit holes not needed for the installation. Tighten plugs until gaskets are slightly compressed. Do not over tighten.
- Mount the housing to a flat surface using four screws suitable for the mounting surface. Mounting slots are located on the flanges at each end of the housing. (See mounting details, Fig. 1.)

Fig. 1



WIRING THE DATA ENABLER EO

After mounting the Data Enabler EO, you are ready to connect power, lights, and data.

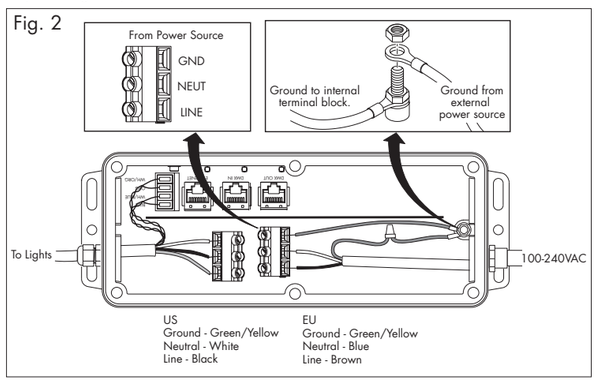
DANGER: Turn off main power supply before wiring the Data Enabler EO. Failure to do so will result in death or serious injury.

Connecting Power to the Data Enabler EO

Indoor Installation

- Pull power cable into the Data Enabler EO.
- Using a wire nut connect the Ground wire to the chassis ground wire (green/yellow).
- Insert the Line (black) and Neutral (white) into the proper terminals of the power input terminal block and tighten with a small flat head screw driver. Follow local electrical codes for internal wire bending. (See Fig. 2.)

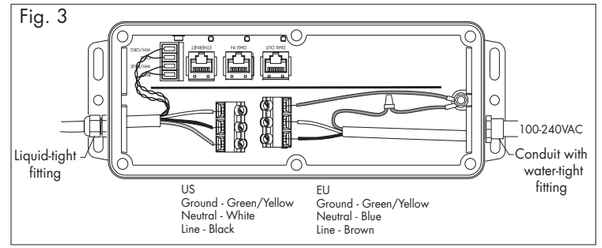
Fig. 2



Outdoor Installation

- Pull power cable through outdoor rated conduit and into the Data Enabler EO. Use liquid-tight fittings, sealed with RTV Silicone, to ensure Data Enabler EO is water-tight. (See Fig. 3.)

Fig. 3



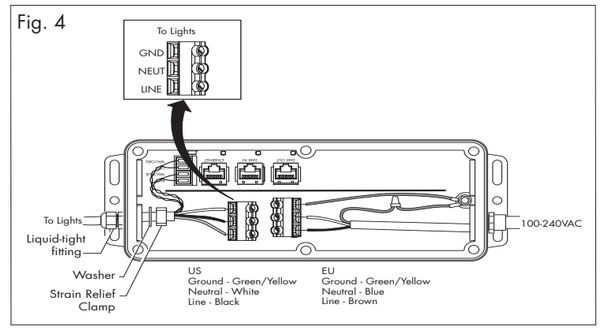
- Using a wire nut, connect the ground wire to the chassis ground wire (green/yellow).
- Insert the Line (black) and Neutral (white) into the proper terminals of the power input terminal block and tighten with a small flat head screw driver. Follow local electrical codes for internal wire bending. (See Fig. 2.)
  NOTE: It is the installers responsibility to use the proper conductors to permanently connect the incoming facility power, and to provide means for disconnecting the system.

Connecting Lights to the Data Enabler EO

- Insert the fixture leader cable into the Data Enabler EO as described below. (See Fig. 4 for details.)
  - To ensure NEMA-4 protection, the fixtures require a liquid-tight fitting, sealed with RTV silicone. Insert the liquid-tight fitting into the opening, then use the silicon around the opening on the inside of the Data Enabler EO.
  - Insert the leader cable.
  - For strain relief, slide the washer, then the clamp over the free end of the cable inside the enclosure. Crimp both ears of the clamp around the cable jacket using pliers or a pinch tool.

  NOTE: The liquid-tight fitting, washer, and clamp are included with the leader cable.

Fig. 4



- The Data Enabler EO is designed to drive data for a single run of lights. To connect the lights:
  - Connect the fixture power by inserting the Line (black), Neutral (white), and Ground (green/yellow) into the proper terminals of the data output terminal block. Tighten with a small flat head screw driver. Follow local electrical codes for internal wire bending. (See Fig. 4.)
  - Connect the fixture data by inserting the two twisted pairs into the data output terminal block. The wires should remain twisted as close to the block as possible.
  - Insert the wires into the corresponding terminal and lock in place by pressing the terminal block button on the connector. DO NOT STRIP THE WIRES.

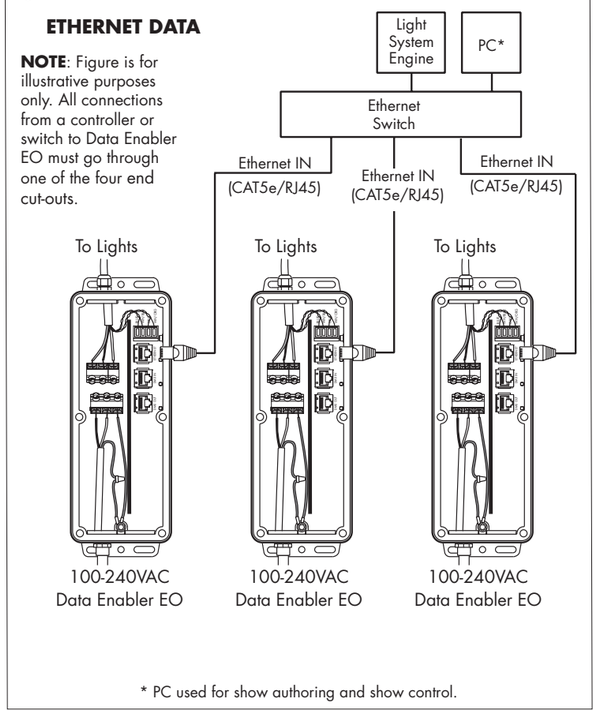
- Refer to the iColor Accent Powercore User Guide to determine maximum number of lights per Data Enabler EO and specific wiring requirements.

Connecting Data to the Data Enabler EO

Ethernet

In an Ethernet application, the Data Enabler EO receives data from Color Kinetics Light System Manager (LSM) or Video System Manager (VSM). The LSM consists of Light System Composer software and Light System Engine hardware. A dedicated network and one or more Ethernet switches are required for your installation. (See Fig. 5.)

Fig. 5



- Pull CAT 5E data cable, with RJ45 connectors, from the Ethernet switch into the Data Enabler EO. Secure cable with standard screw connection strain relief.

  NOTE: For outdoor installation, use provided plugs to seal all unused conduit holes.

  NOTE: For outdoor applications, pull data cable through outdoor rated conduit and ensure that the conduit connection is water-tight.
- Plug the data RJ45 connector into the Ethernet IN port.

  NOTE: End-run Ethernet data to each Data Enabler EO. Ethernet cannot be daisy chained between Data Enablers. (See Fig. 5.)

Mapping the Lights for Ethernet Applications

- Once the Data Enabler EO installation is complete, use the Color Kinetics Light System Manager to map the light installation.
- Light System Composer lets you query the Light System Engine to discover all Data Enabler EOs and lights attached.
- Once the Data Enabler EOs and lights have been mapped, then you are ready to begin designing shows. No addressing is required.

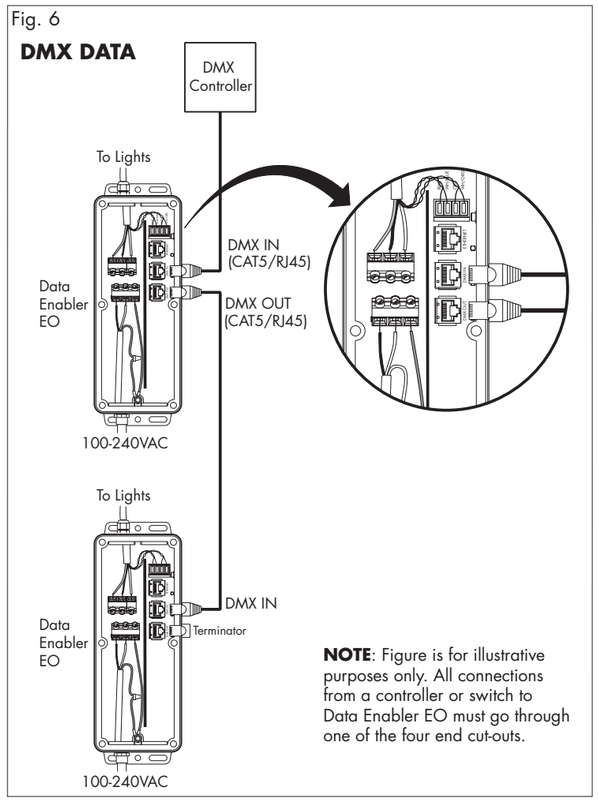
DMX

The Data Enabler EO for DMX receives data from a DMX controller.

- Pull CAT 5 data cable, with RJ45 connector, into the Data Enabler EO. Secure cable with standard screw connection strain relief.

  NOTE: For outdoor applications, pull data cable through outdoor rated conduit and ensure that the conduit connection is water-tight.
- Plug the data RJ45 connector into the DMX IN port.
- To send data to another Data Enabler EO, connect a CAT5 cable between the DMX OUT port of the sending unit and the DMX IN port of the receiving unit. Plug a terminator into the DMX OUT port of the last power supply in a data chain. (See Fig. 6.)

Fig. 6



Addressing the Lights

Refer to the iColor Accent Powercore User Guide for more information on setting DMX addresses.

Sealing the Data Enabler EO

- After all the power, lights, and data connections have been made, and all conduit holes are water-tight, replace the cover and attach with provided screws. Tighten screws to 8 to 10 in-lbs.

  NOTE: Before attaching cover, ensure gasket is seated properly and that no wires are pinched.

DATA ENABLER EO SPECIFICATIONS

Power Output	100-240VAC, 50-60 Hz, 20A Max.
Power Input	100-240VAC, 50-60 Hz, 20A Max.
Power Consumption	10W
Heat Dissipation	10W Max.
Ambient Temp	-4˚F to 122˚F (-20˚C to 50˚C)
Packaging	NEMA 4, suitable for wet locations 9.7" X 3.5" X 3.2" (24.6 cm X 8.9 cm X 8.1 cm)
Connectors	Power In: 3-wire terminal block connector Power Out: 3-wire terminal block connector Data Out: 4-wire terminal block connector
Data Input Interface	**ETHERNET**: Color Kinetics Light System Manager, Color Kinetics Video System Manager **DMX**: Color Kinetics DMX controllers or DMX512 compatible
Protection Rating	IP66
Listings	UL/cUL, CE
Classification	Class 1

Warranty

This product is sold pursuant to CK's Standard Terms and Conditions (the "T&Cs") which may be found at http://colorkinetics.com/howtobuy/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.