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ITEM# 106-000003-04 (DMX)  
106-000003-05 (ETHERNET)

For use under one or more of the following patents:  
U.S. Patent Nos. 6,016,038, 6,150,774 and other patents listed at  
<http://colorkinetics.com/patents/>. Other patents pending.

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Specifications subject to change without notice. Refer to [www.colorkinetics.com](http://www.colorkinetics.com) for the most recent version.



## Scope of This User Guide

The goal of this user guide is to explain the steps necessary to install the Data Enabler 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.

**WARNING:** The Data Enabler 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 until you read and understand the installation instructions and safety labels.

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

**CAUTION:** When sealing the Data Enabler, 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 is off before connecting or disconnecting fixtures.

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

**CAUTION:** Do not exceed the specified voltage input.

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

**CAUTION:** For outdoor installations, use appropriate material and methods to ensure the Data Enabler 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 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

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

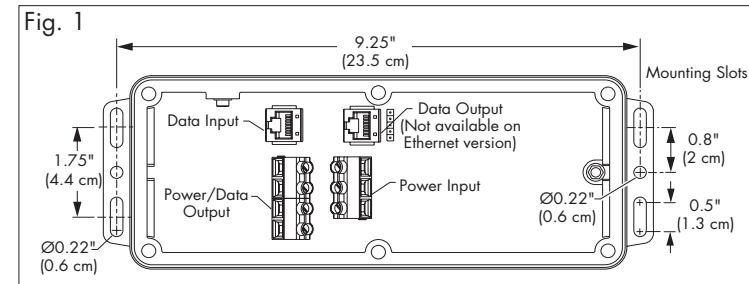
**CAUTION:** Ensure proper installation for outdoor applications to maintain NEMA 4 ratings. Failure to do so may result in minor or moderate injury or property damage and will void the warranty.

## Mounting the Housing

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

**CAUTION:** The Data Enabler 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.)



## WIRING THE DATA ENABLER

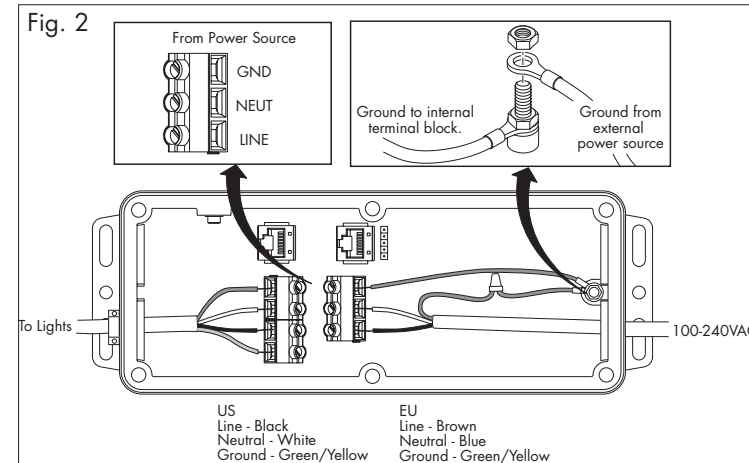
After mounting the Data Enabler, you are ready to connect power, lights, and data.

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

## Connecting Power to the Data Enabler

### Indoor Installation

- Pull power cable into the Data Enabler.
- Using a wire nut connect the ground wire to the chassis ground wire.
- Insert the Line and Neutral 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.)

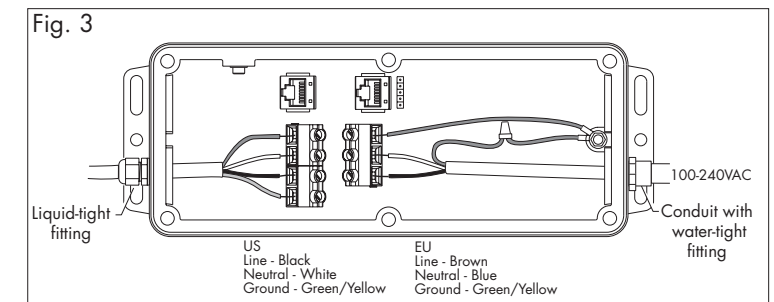


## Outdoor Installation

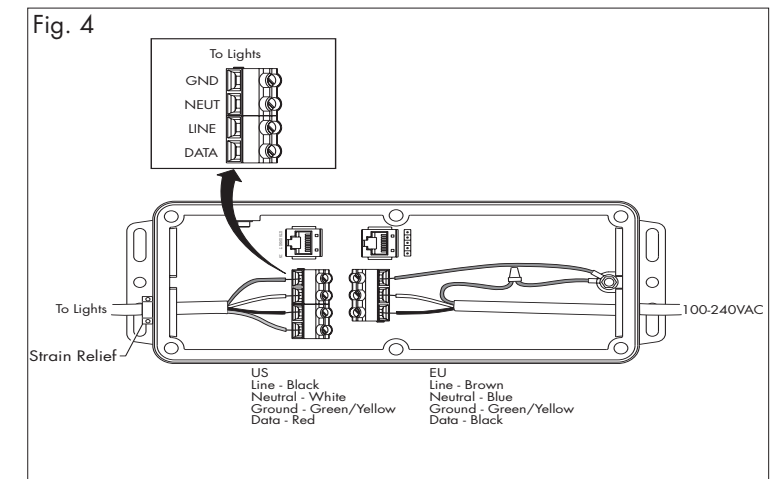
- Pull power cable through outdoor rated conduit and into the Data Enabler. Use liquid-tight fittings, sealed with RTV Silicone, to ensure Data Enabler is water-tight. (See Fig. 3.)
- Using a wire nut connect the ground wire to the chassis ground wire (green/yellow).
- Insert the Line (black) and Neutral (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

- Insert the fixture leader cable into the Data Enabler.
- NOTE:** Outdoor rated lights require water-tight, strain-relief couplers, sealed with RTV Silicone, on the cable to ensure NEMA 4 protection. Refer to the user guide for your lights for instructions. These couplers also provide strain relief. (See Fig. 3.)



- The Data Enabler is designed to drive data for a single run of lights. Insert the Line (black), Neutral (white), Ground (green), and Data (red) into the proper terminals of the data output terminal block and tighten with a small flat head screw driver. Follow local electrical codes for internal wire bending.
- For indoor rated lights, use a standard screw connector strain relief to hold the cable. (See Fig. 4.)



- For outdoor installations, use a water-tight fitting on the leader cable to the lights. (See Fig. 3.)
- Refer to the user guide for your lights to determine maximum number of lights per power/data supply and specific wiring requirements.

## Connecting Data to the Data Enabler

### Ethernet

In an Ethernet application, the Data Enabler 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. The VSM consists of Video Management Tool software and Video System Engine hardware.

A dedicated network and one or more Ethernet switches are required for your installation. (See Fig. 5 for an LSM example.) Refer to the LSM User Guide or the VSM User Guide for setup and configuration information.

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

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

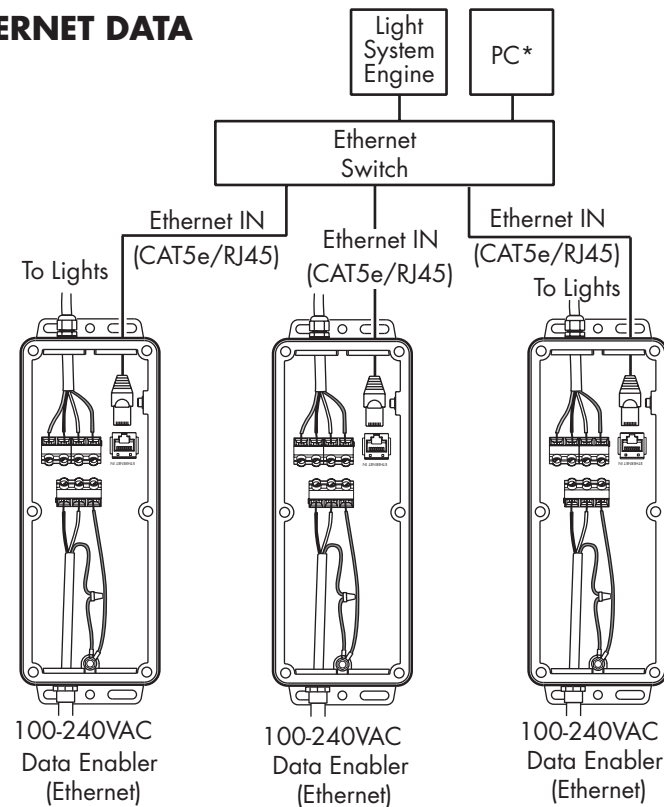
**NOTE:** For outdoor applications, pull data cable through outdoor rated conduit and ensure that the conduit connection is water-tight.

- Plug the data RJ45 connector into the Ethernet IN port.

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

Fig. 5

### ETHERNET DATA



\* PC used for show authoring and show control.

### Mapping the Lights for Ethernet Applications

- Once the Data Enabler installation is complete, use the Color Kinetics Light System Manager to map the light installation.
- Light System Composer can discover the lights via the network.
- Once the Data Enablers and lights have been mapped, then you are ready to begin designing shows. No addressing is required.

### DMX

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

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

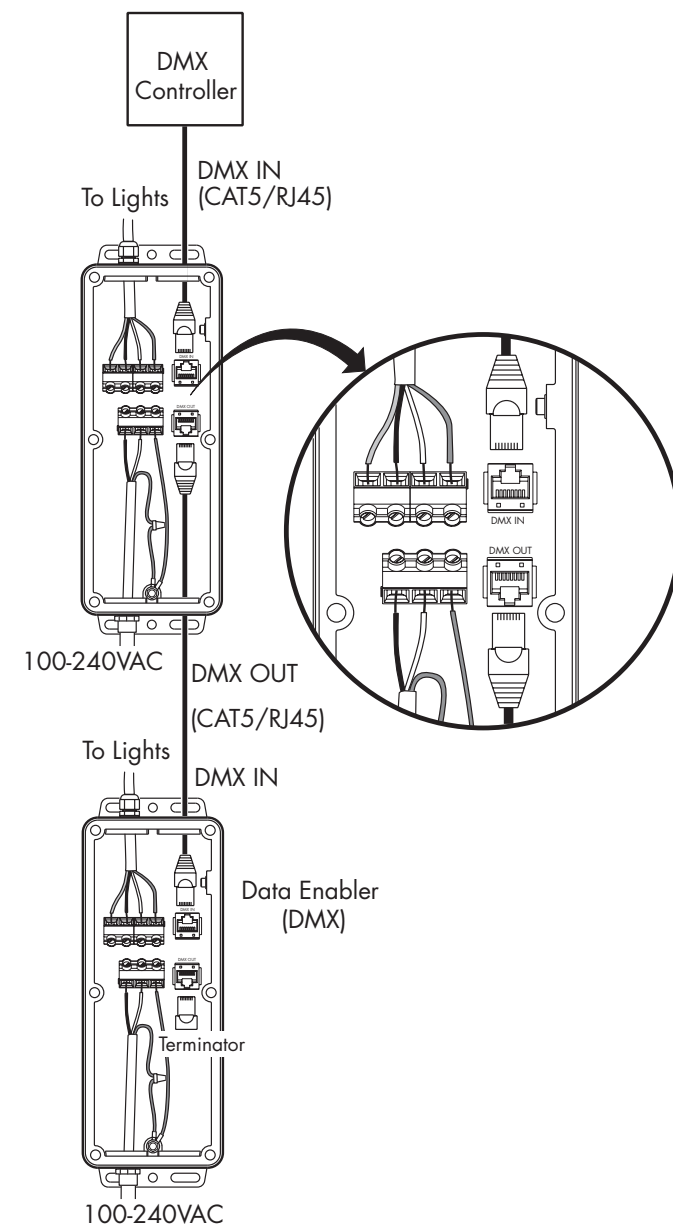
**NOTE:** For outdoor applications, pull data cable through outdoor rated conduit and ensure that the conduit connection is water-tight.

- Plug the data RJ45 connector into the DMX IN port.

- To send data to another Data Enabler, 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

### DMX DATA



## Addressing the Lights

- Lights attached to a DMX Data Enabler must be assigned a DMX address. All Color Kinetics lights are addressed to DMX number one at the factory. If your application requires other addresses, set the DMX addresses using one of the following methods.

**ZAPI:** Use Color Kinetics Zapi to set the DMX address for each fixture. Refer to the Zapi User Guide for step-by-step addressing instructions.

**SAS:** Use a PC with iPlayer 2, or a PC with Smart Jack 3 to address the fixtures. Download the Serial Addressing Software and instructions from [www.colorkinetics.com/support/downloads](http://www.colorkinetics.com/support/downloads).

**NOTE:** Refer to the user guide for your lights for more information on setting DMX addresses.

## Sealing the Data Enabler

- 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 SPECIFICATIONS

<b>POWER INPUT/OUTPUT</b>	100-240VAC, 50-60 Hz Max. connected load should not exceed 20 Amps
<b>INTERNAL LOAD</b>	10 Watts
<b>HEAT DISSIPATION</b>	10 Watts Max.
<b>AMBIENT OPERATING TEMP</b>	-4°F to 122°F (-20°C to 50°C)
<b>HOUSING</b>	NEMA 4 enclosure, suitable for wet locations 9.7" (24.6 cm) X 3.5" (8.9 cm) X 3.2" (8.1 cm)
<b>CONNECTORS</b>	Power In: 3-wire terminal block connector Power/Data Out: 4-wire terminal block connector
<b>DATA INPUT INTERFACE</b>	<b>ETHERNET:</b> Color Kinetics Light System Manager, Video System Manager <b>DMX:</b> Color Kinetics DMX controllers or DMX512 compatible
<b>PROTECTION RATING</b>	IP66
<b>CLASSIFICATION</b>	Class 1
<b>LISTINGS</b>	UL/cUL, CE

## Warranty

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