Data Enabler Pro

Integrated data and power for intelligent LED luminaires employing
Powercore technology

PHILIPS

COLOR KINETICS

Data Enabler Pro

Integrated data and power for intelligent LED luminaires employing Powercore technology

Data Enabler Pro delivers integrated data and power to intelligent color and tunable white LED luminaires employing Powercore technology from Philips Color Kinetics. Data Enabler Pro integrates many of the features of the previous generation of Data Enablers, including Data Enabler DMX, Data Enabler Ethernet, and Data Enabler EO. Data Enabler Pro is the single solution for all intelligent Powercore-based installations, whether DMX or Ethernet, color or white, indoors or outdoors.

- Easy installation—Accessible, clearly labeled terminal block connectors for DMX, Ethernet, line voltage, and luminaires make installation easy. Tethered cover with captive screws ensures convenient removal and replacement.

- Supports luminaires employing Powercore technology—Powercore technology rapidly, efficiently, and accurately controls power output to LED luminaires directly from line voltage. Philips Data Enabler Pro merges line voltage and control data and delivers them to Powercore luminaires over a single cable, dramatically simplifying installation and lowering total system cost.

- On-board diagnostics—On-board indicator LEDs provide visual feedback for normal operation, Ethernet connection detection, and Ethernet and DMX data transmission.

- Full support for DMX and Ethernet—Provides inputs and outputs for both DMX and Ethernet, allowing you to connect multiple Data Enabler Pro devices in series. Also provides an Ethernet output terminal for eW Accent MX Powercore and iColor Accent MX Powercore support.

- Outdoor-rated for use in damp and wet environments—Data Enabler Pro offers superior leakage protection in a cast aluminum, IP66-rated enclosure.

- Multiple conduit entries—Data Enabler Pro conduit entries accommodate NPT conduit in metric sizes of PG13 and PG21 or US trade sizes of 1/2 in and 3/4 in.

- Universal power input range—Data Enabler Pro automatically senses mains voltages ranging from 100 to 277 VAC, and passes mains voltages through to all connected lights.
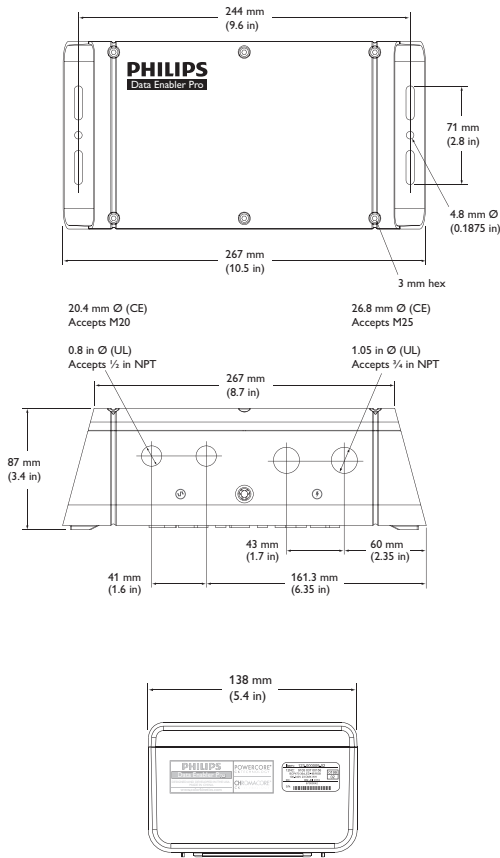
Designed for Maximum Energy Efficiency

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.

Specifications

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

Item	Specification	Details
Electrical	Input Voltage	100 to 277 VAC*, auto-ranging, 50/60 Hz
	Maximum Input Current	16.5 A maximum
	Power Consumption	20 W maximum
	Load Current	16 A maximum
Connections	Power Input	3-wire PC terminal block connector†
	Power/Data Output (To luminaire)	4-wire PC terminal block connector† 4-wire IDC terminal block connector (eW Accent MX Powercore and iColor Accent MX Powercore only)‡
	DMX Input/Output	Double-pair, double-entry IDC connectors‡
	Ethernet Input/Output	Double-pair, double-entry IDC connectors‡
Physical	Dimensions (Height x Width x Depth)	87 x 267 x 138 mm (3.4 x 10.5 x 5.4 in)
	Weight	2.4 kg (5.4 lb)
	Construction	Cast aluminum enclosure with slots for surface mounting
	Finish	Powder-coated industrial gray matte
	Threaded Openings	PG21 for power, PG13 for data (metric) 3/4 in NPT for power, 1/2 in NPT for data (US trade)
	Temperature Ranges	-40 to 122 °F (-40 to 50 °C) Operating -20 to 122 °F (-20 to 50 °C) Startup -40 to 176 °F (-40 to 80 °C) Storage
	Humidity	0 to 95%, non-condensing
	Cooling	Convection
	Heat Dissipation	20 W
	Data Input Source	Philips Color Kinetics full range of controllers, including Light System Manager, Video System Manager Pro, iPlayer 3, Antumbra iColor Keypad, and ColorDial Pro, or third-party controllers.
Certification and Safety	Certification	UL/cUL, FCC Class A, CE, C-Tick
	Environment	Dry/Damp/Wet Location, IP66

* Verify that the line voltage is appropriate for the luminaires in your installation. See a specific luminaire's documentation for supported line voltages.

† PC terminal block connectors accept recommended wire sizes from 8.37 to 0.823 mm² (8 to 18 AWG).

‡ IDC connectors accept wire sizes from 0.326 to 0.129 mm² (22 to 26 AWG).

Ordering Information

Item	Type	Item Number	Philips 12NC
Data Enabler Pro	3/4 in/1/2 in NPT (US trade size conduit)	106-000004-00	910503701210
	PG21/PG13 (metric size conduit)	106-000004-01	910503701211

Use Item Number when ordering in North America.

Installation

Data Enabler Pro integrates data and power transmission for all intelligent color and tunable white LED luminaires employing Powercore technology from Philips 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 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.

✴ *Refer to the Data Enabler Pro Installation Instructions for specific warning and caution statements.*

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 devices, controllers, switches, and cables.

DMX and Ethernet Configurations

Data Enabler Pro 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.
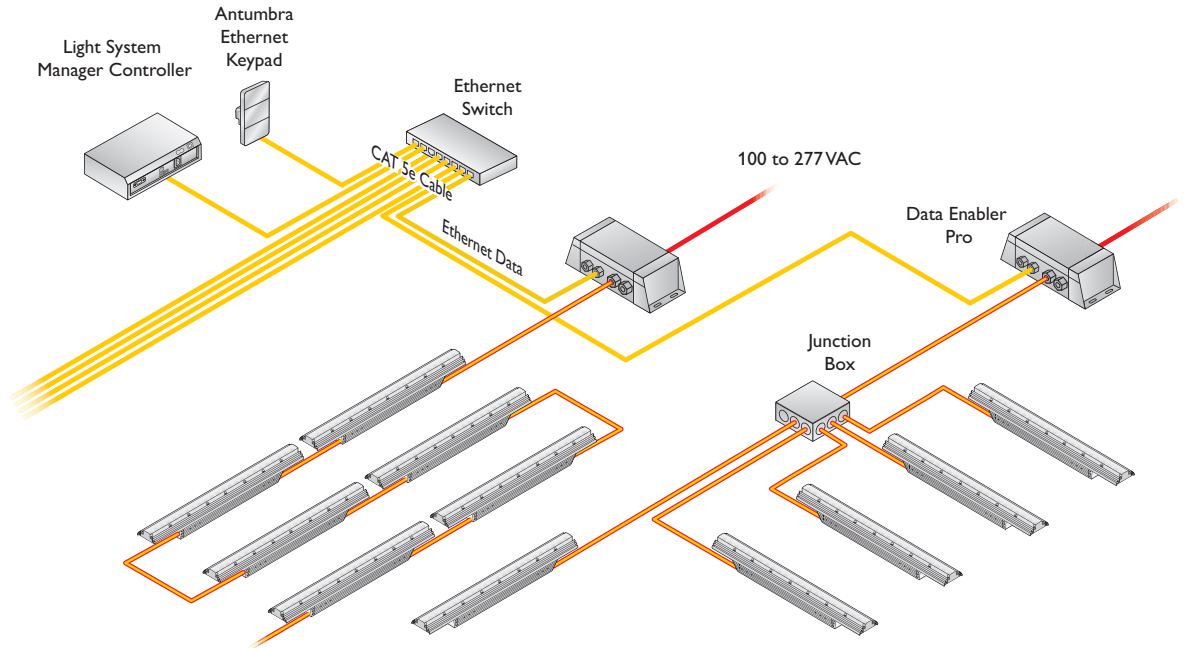
Typical DMX installations with intelligent LED luminaires from Philips Color Kinetics use a controller such as iPlayer 3, a Controller Keypad for turning the lighting system on and off and for triggering light shows, and one or more Data Enabler Pro devices. Data Enabler Pro devices can be connected in series to deliver DMX data from a single controller to all connected lights.
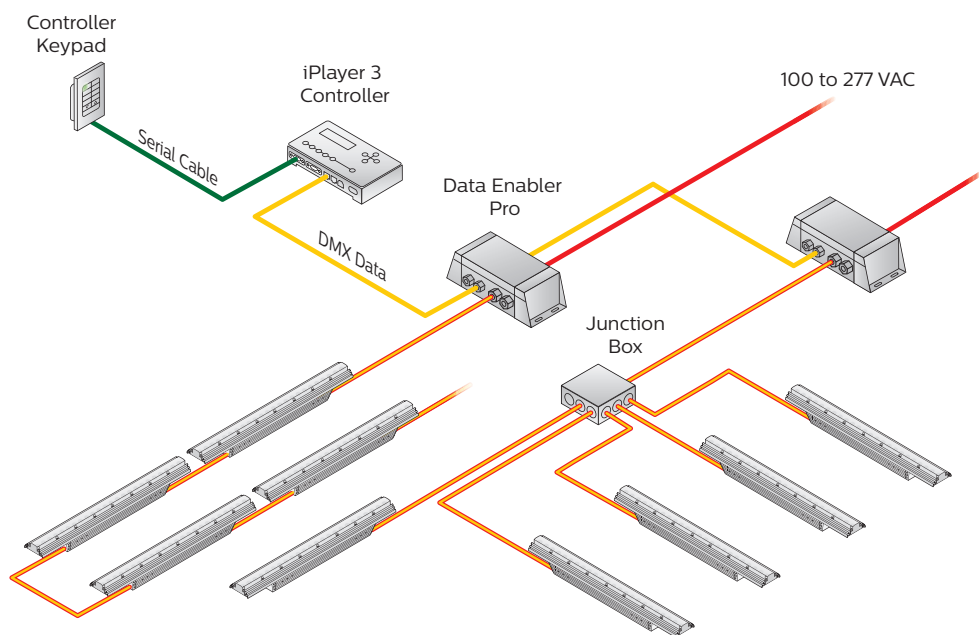
Because it is not subject to the DMX addressing limitations, Ethernet is the preferred environment for large-scale, color-changing light shows and video displays, both of which require large numbers of unique addresses.

Typical Ethernet installations with Philips Color Kinetics LED luminaires use an Ethernet switch, an Ethernet controller such as Light System Manager or Video System Manager Pro, Ethernet Controller Keypads for push-button light show triggering, and one or more Data Enabler Pro 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 devices. For additional Data Enabler Pro devices in a network, use additional Ethernet switch ports.

ColorBlast Powercore
luminaire run length example

30 @ 110 VAC
36 @ 120 VAC
66 @ 220 VAC
72 @ 240 VAC

*Assuming luminaires installed on a 20 A circuit, using 1.5 m (5 ft) jumper cables*

✿ *Verify that the line voltage is appropriate for the luminaires in your installation. See a specific luminaire's documentation for supported line voltages.*

Electrical Configuration Guidelines

Linear Powercore luminaires, such as iColor Cove MX Powercore, iColor Accent Powercore, and iW Cove MX 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, such as ColorReach Powercore, ColorBlast Powercore, and ColorBurst Powercore, 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 can support depends on the luminaire type and method of connection, as well as on additional configuration details such as luminaire spacing, circuit size, wire gauge, and line voltage. As an example, the table to the left lists the maximum number of ColorBlast Powercore luminaires each Data Enabler Pro can support at various voltages, assuming a 20 A circuit and 1.5 m (5 ft) jumper cables between luminaires. Keep in mind that these figures, provided as a guideline, are accurate for the specified configuration only, and that changing the configuration can affect the number of luminaires per Data Enabler Pro.

Philips Color Kinetics offers a Configuration Calculator to help calculate the number of luminaires a specific installation can support. You can download the Configuration Calculator from www.colorkinetics.com/support/install_tool/. For further help, please consult Application Engineering Services at support@colorkinetics.com.

Data Enabler Pro 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 imposes maximum run lengths based on data integrity. To ensure data integrity, maximum individual run length should not exceed 53.3 m (175 ft), and the total cable length per Data Enabler Pro should not exceed 122 m (400 ft).
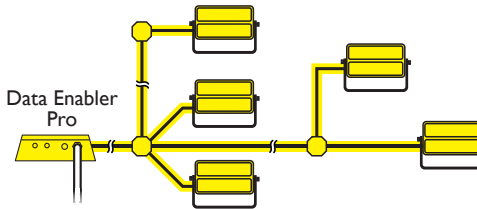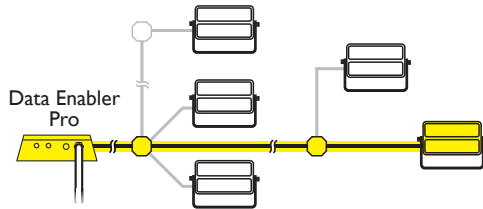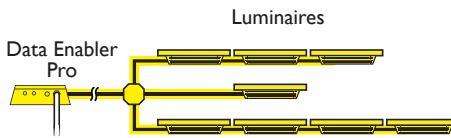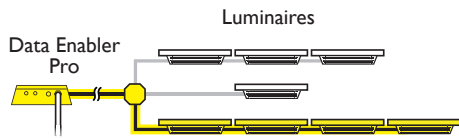
Data Integrity – maximum individual length 53.3 m (175 ft)

Data Integrity – total length 122 m (400 ft)

When selecting mounting locations for the Data Enabler Pro 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 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 devices connected in series.
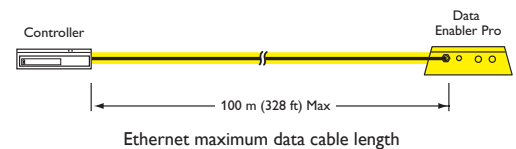
Ethernet maximum data cable length
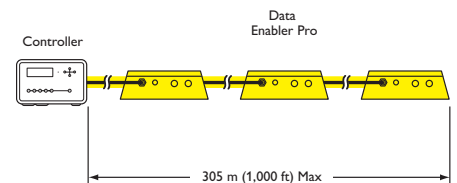
DMX maximum data run length

Assemble Additional Items

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

- 4 mounting screws suitable for the mounting surface

- For installations using metric size conduit, PG21 watertight conduit and fittings for power, and PG13.5 watertight conduit and fittings for data, as required by local codes

- For installations using US trade size conduit, 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 5e or better data cable, as required

- 4-conductor copper wire for luminaire connections, as required. Standard 3.31 mm^2 (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

Included in the box

Data Enabler Pro
8 mm hex wrench
3 mm hex wrench
Flat blade screwdriver
Installation Instructions

8 mm hex

3 mm hex

Inspect Data Enabler Pro and Accessories
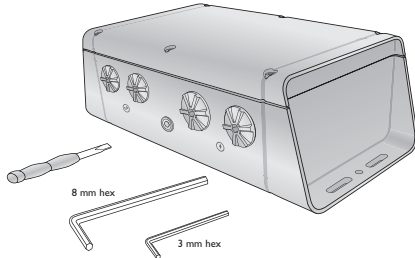
Carefully inspect the box containing Data Enabler Pro and the contents for any damage that may have occurred in transit.

We recommend that you ensure your Data Enabler Pro devices are running the latest version of the firmware, and update the firmware if necessary, before positioning and mounting the devices. See pp. 20 to 23 of this guide for complete information.

Position and Mount Data Enabler Pro

Make sure the power is OFF before mounting and connecting Data Enabler Pro.

1. Each Data Enabler Pro device is identified by a unique serial number and IP address. The serial number and default IP addresses are located on a label inside the Data Enabler Pro housing. If your installation requires multiple Data Enabler Pro devices, record the serial numbers (DMX) or IP addresses (Ethernet) in a layout grid (typically a spreadsheet or list) for easy reference.

2. Assign each device to a position in the lighting design plan.

3. Position each Data Enabler Pro device in its designated mounting location. Make sure the mounting surface is flat, suitable for the mounting hardware, and clear of debris and other obstructions.

   The overall dimensions of each Data Enabler Pro device are 267 mm (10.5 in) wide x 138 mm (5.4 in) deep x 87 mm (3.4 in) high. Make sure the mounting location allows enough space around the housing for air to move freely around the device. Be careful not to obstruct or submerge the vents on either side of the Data Enabler Pro housing.

Input side

Output side

Data   Power

Power   Data

   We recommend orienting Data Enabler Pro so that power and data cables enter the input side of the housing (the side with four threaded openings), and luminaire cables exit the output side (the side with two threaded openings).

4. Use four suitable mounting screws to secure Data Enabler Pro to the mounting location.

Do not obstruct or submerge the vents
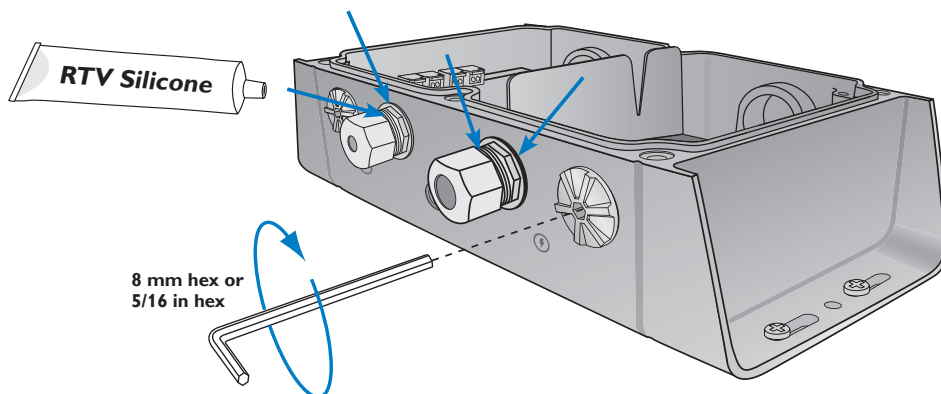
Output side

Input side
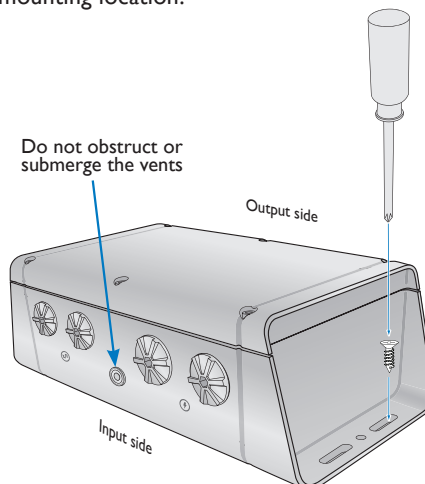
Prepare for Cable Connections

1. Using the included 3 mm hex wrench, loosen the housing cover's six captive screws to open the Data Enabler Pro housing.
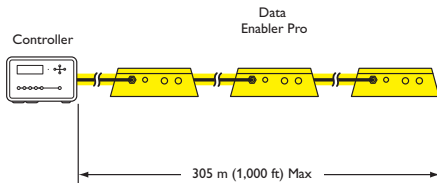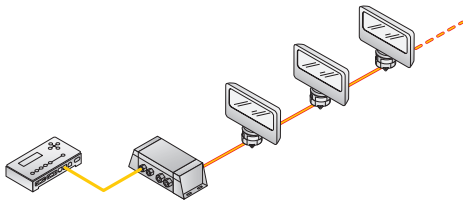

3 mm hex
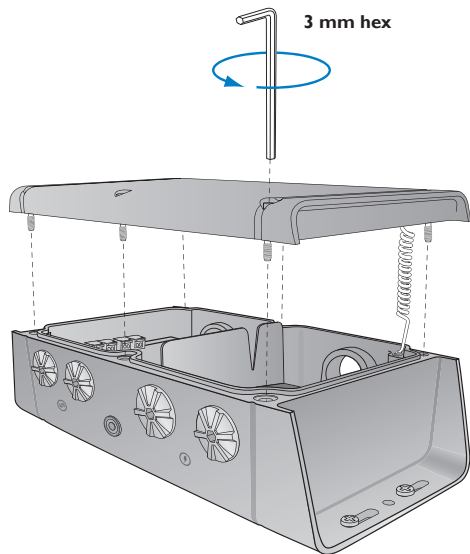
2. Identify which openings to use for power and data cables, and remove the seal plugs from the openings.

   • For installations using metric size conduit, the larger openings accommodate PG21 cable connectors for power, and the smaller openings accommodate PG13.5 cable connectors for data.

   • For installations using US trade size conduit, the larger openings accommodate 3/4 in NPT cable connectors for power, and the smaller openings accommodate 1/2 in NPT cable connectors for data.

3. Install and tighten cable connectors to manufacturer's specs. Do not overtighten.

4. Torque remaining seal plugs to approximately 2.2 Nm (19 in-lb).

✳ *In wet or damp locations, use electronics-grade RTV silicone to seal all points of entry in all Data Enabler Pro devices and all connected junction boxes to prevent water infiltration.*

RTV Silicone

8 mm hex or 5/16 in hex

Make Data Input Connections

Data Enabler Pro has different connectors for DMX and Ethernet data inputs. Instead of RJ45 connectors, Data Enabler Pro uses double-pair, double-entry IDC connectors, which accept unstripped cable wire strands.
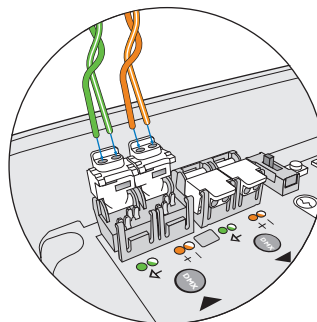
Philips Color Kinetics uses a DMX scheme that differs slightly from the popular DMX scheme maintained by the Entertainment Services and Technology Association (ESTA). You use the CK DMX scheme with Philips Color Kinetics DMX controllers, and the ESTA DMX scheme with many common third-party DMX controllers.

1. Run CAT 5e or better cable from the data output port of a Philips Color Kinetics DMX controller, such as iPlayer 3.

2. If necessary, cut the cable jacket to expose the wire pairs. Do not strip the wire pairs.

3. Locate the DMX input pivot connectors inside the Data Enabler Pro housing. Open both pivot connectors.

4. Insert the wires into the IDC connector's wire entry holes from right to left as follows:
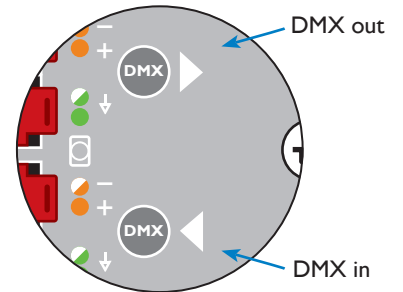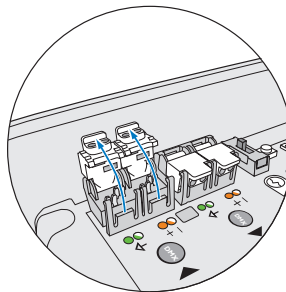
- For CK DMX, Orange/White, Orange, Green/White, and Green.
- For ESTA DMX, Orange/White, Orange, Brown/White, and Brown.

The unused wires should be capped and turned back.
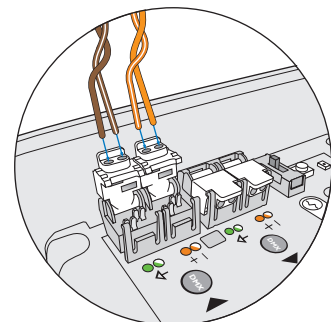
DMX maximum data run length

305 m (1,000 ft) Max

Controller

Data Enabler Pro

✿ *IDC connectors accept wire sizes from 0.326 to 0.129 mm² (22 to 26 AWG).*

CK RJ45 Pinouts

RJ45 Pin #	CK DMX Signal	Wire Color
1	DMX_DATAto	Orange/White
2	DMX_DATA+	Orange
3	GND	Green/White
6	GND	Green

ESTA RJ45 Pinouts

RJ45 Pin #	DMX512-A Signal	Wire Color
1	DMX_DATA+	Orange/White
2	DMX_DATAto	Orange
7	GND	Brown/White
8	GND	Brown

CK DMX wiring

ESTA DMX wiring

5. While holding the wires firmly in place, push down on the pivot connectors until they click shut.
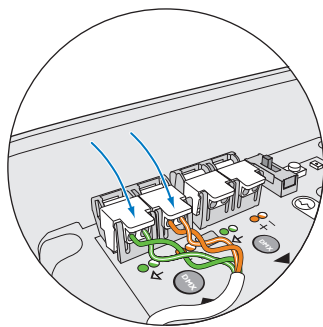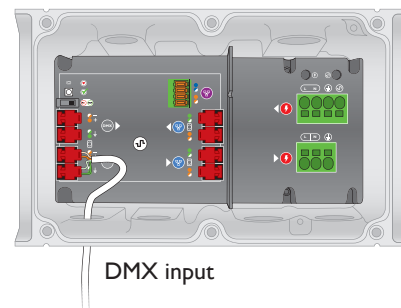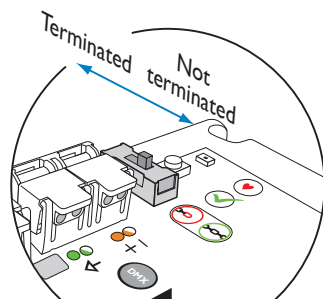

CK DMX wiring   **ESTA DMX** wiring
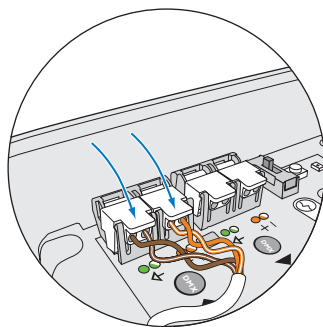
6. Unless you're connecting additional devices in series, use the termination switch to terminate the series.
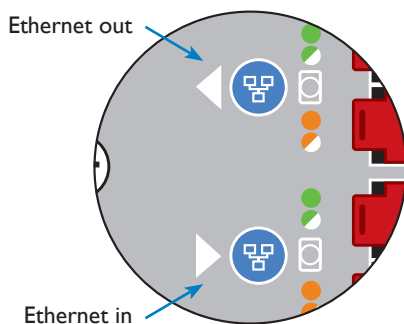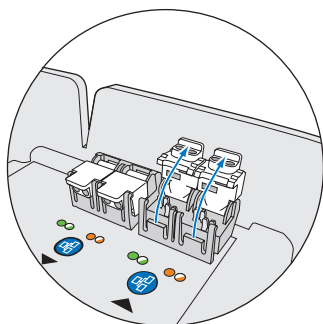

Terminated   Not terminated

DMX input

Ethernet Data Input Connections

1. Run CAT 5e or better cable from the data output port of a Philips Color Kinetics Ethernet controller, such as Light System Manager or Video System Manager Pro.

2. If necessary, cut the cable jacket to expose the wire pairs. Do not strip the wire pairs.

   The Brown, Brown/White, Blue, and Blue/White wires are not used and should be capped and turned back.

3. Locate the Ethernet input pivot connectors inside the Data Enabler Pro housing. Open both pivot connectors.

Ethernet out

Ethernet in

Controller   Data Enabler Pro

100 m (328 ft) Max

Ethernet maximum data cable length
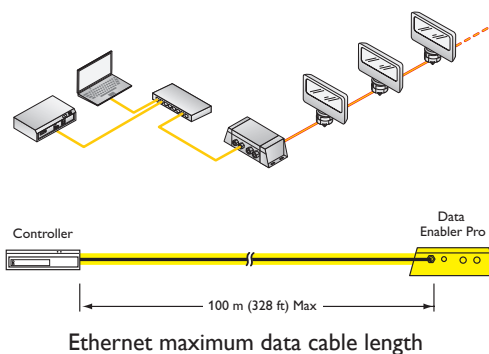
✷ *IDC connectors accept wire sizes from 0.326 to 0.129 mm^2 (22 to 26 AWG).*

Ethernet Pinouts

RJ45 Pin #	Ethernet Signal	Wire Color
1	RxD+	Orange/White
2	RxDto	Orange
3	TxD+	Green/White
6	TxDto	Green
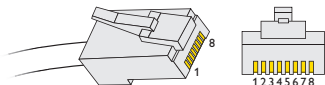
Ethernet input

4. From right to left, following the wire color codes printed on the data board, insert the Orange/White, Orange, Green/White, and Green wires into the pivot connector's wire entry holes.
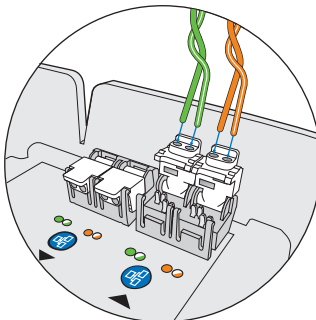
5. While holding the wires firmly in place, push down on the pivot connectors until they click shut.
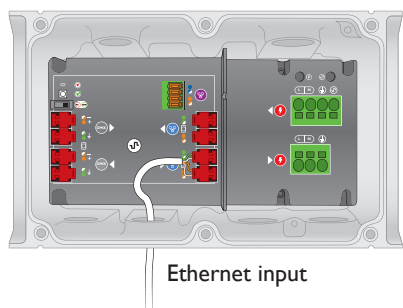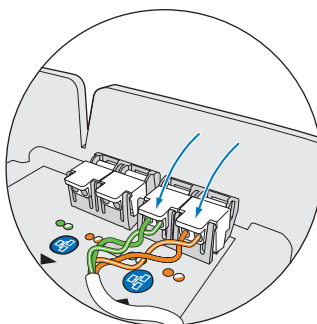
Connecting Data Enabler Pro Devices
in Series (Optional)

Installations with large numbers of luminaires may require multiple Data Enabler Pro devices. Data Enabler Pro affords DMX and Ethernet output connectors, which you can use to connect two or more Data Enabler Pro devices in series.

Series Connection Using DMX

In DMX networks, you should use DMX repeaters for run lengths of over 325 m (1000 ft). Also use a DMX repeater for runs of more than 32 Data Enabler Pro devices connected in series.
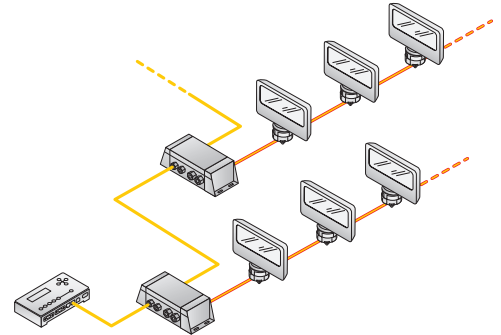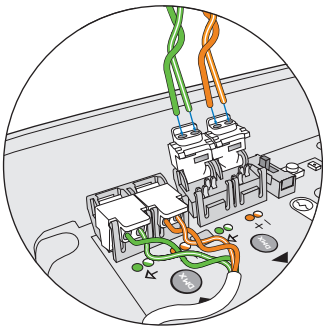
1. Cut a sufficient length of CAT 5e or better cable to connect the first Data Enabler Pro device in a series with the next.

2. If necessary, cut both ends of the cable jacket to expose the wire pairs. Do not strip the wire pairs.

   The Brown, Brown/White, Blue, and Blue/White wires are not used and should be capped and turned back.
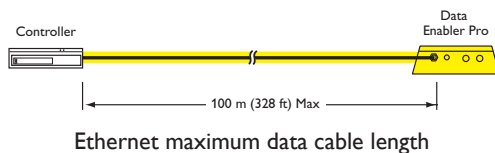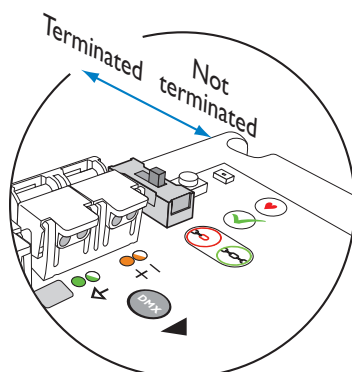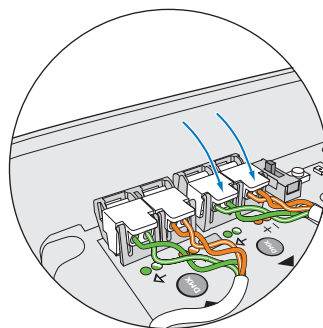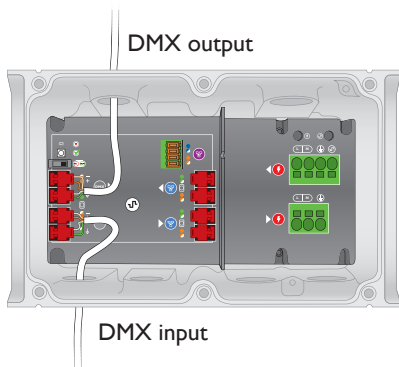
3. Run one end of the cable through a cable connector installed on the output side of the first Data Enabler Pro device in the series (the side with two openings).

4. Locate the DMX output pivot connectors inside the Data Enabler Pro housing. Open both pivot connectors.
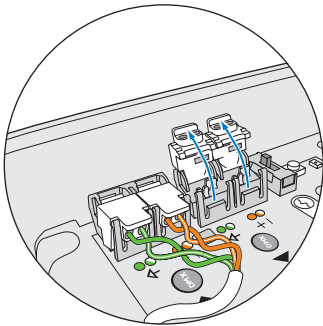
✷ IDC connectors accept wire sizes from 0.326 to 0.129 mm^2 (22 to 26 AWG).

5. From right to left, following the wire color codes printed on the data board, insert the Orange/White, Orange, Green/White, and Green wires into the pivot connector's wire entry holes.

DMX output

DMX input

Terminated   Not terminated

Controller   Data
                                           Enabler Pro

├──────── 100 m (328 ft) Max ────────┤

Ethernet maximum data cable length

6. While holding the wires firmly in place, push down on the pivot connectors until they click shut.

7. Run the free end of the cable to the next Data Enabler Pro device in the series, and make DMX data input connections as described in the previous section.

8. Repeat for each Data Enabler Pro device in the series.

9. Terminate the last Data Enabler Pro device in the series using the termination switch.

Series Connection Using Ethernet

You can connect up to 15 Data Enabler Pro devices in series. Use additional Ethernet switch ports to connect additional Data Enabler Pro devices to your network.

In Ethernet networks, maximum run lengths for data cables are 100 m (328 ft) between Ethernet devices without a repeater.
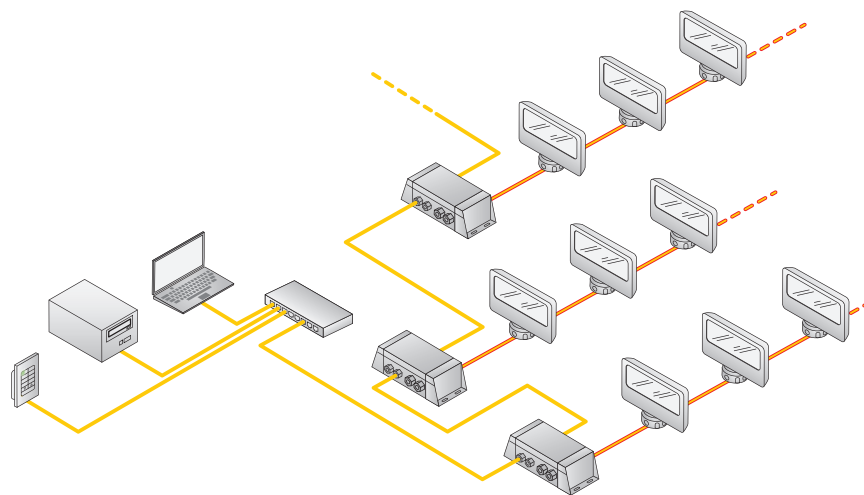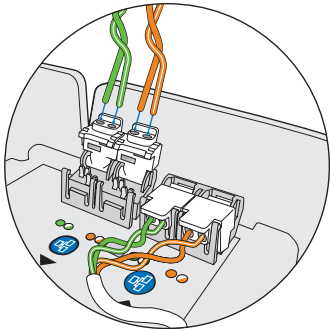

1. Cut a sufficient length of CAT 5e or better cable to connect the first Data Enabler Pro device in a series with the next.

2. If necessary, cut both ends of the cable jacket to expose the wire pairs. Do not strip the wire pairs.

   The Brown, Brown/White, Blue, and Blue/White wires are not used and should be capped and turned back.

3. Run one end of the cable through a cable connector installed on the output side of the first Data Enabler Pro device in the series (the side with two openings).

4. Locate the Ethernet output pivot connectors inside the Data Enabler Pro housing. Open both pivot connectors.
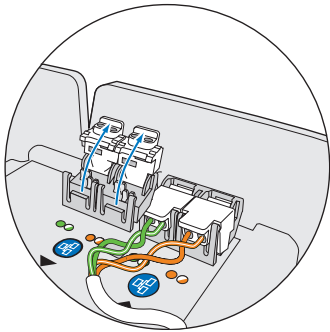

5. From right to left, following the wire codes printed on the data board, insert the Orange/White, Orange, Green/White, and Green wires into the pivot connector's wire entry holes.

6. While holding the wires firmly in place, push down on the pivot connectors until they click shut.


Ethernet output
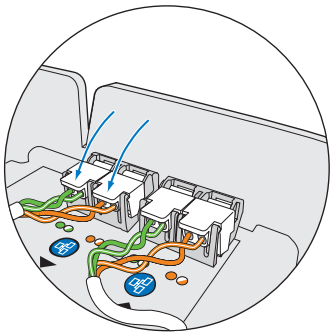
Ethernet input

7. Run the free end of the cable to the next Data Enabler Pro device in the series, and make Ethernet data input connections as described in the previous section.

8. Repeat for each Data Enabler Pro device in the series.
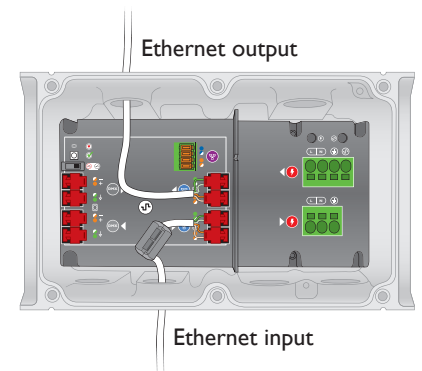
Make Mains Voltage Connections

1. Run the mains voltage power cable through a cable connector installed on the input side of the Data Enabler Pro housing (the side with the four openings). Pull at least 127 mm (5 in) of wire into the housing.

2. Strip 15 mm (0.6 in) of insulation from the wires. If using stranded wire, twist each wire tight to secure the wire threads.

3. Locate the mains voltage 3-wire PC terminal block connector inside the Data Enabler Pro housing.

4. Securely install line, neutral, and ground in the terminal block:

    •   Insert a small flathead screwdriver in the slot above a wire entry hole.

    •   Firmly insert the correct wire in the wire entry hole.

    •   Remove the screwdriver.

15 mm
.6 in

UL / cUL

L   N   ⏚

**CE / CQC
PSE**

L   N   ⏚
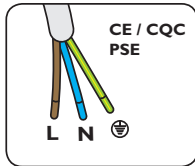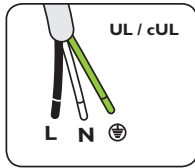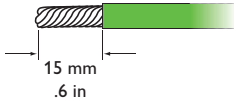
✤ *PC terminal block connectors accept recommended wire sizes from 8.37 to 0.823 mm² (8 to 18 AWG).*

Mains voltage input

L   N   ⏚
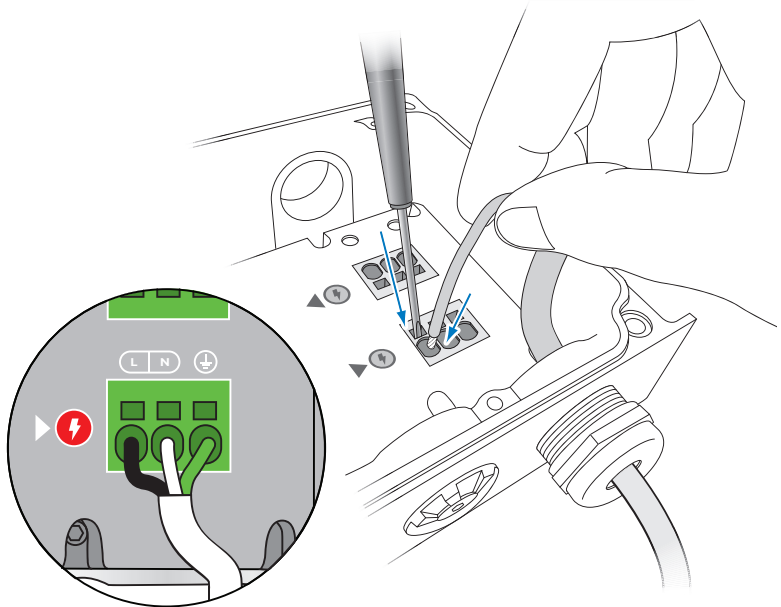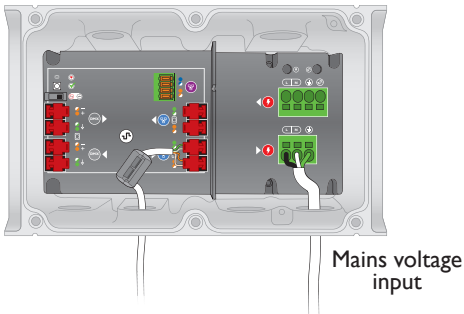
Make Luminaire Cable Connections

Philips Color Kinetics intelligent LED luminaires that use Data Enabler Pro either have a detachable leader cable with flying leads, or an integrated power/data cable. Leader cables range from 3 m (10 ft) to 18.3 m (60 ft), while integrated power/data cables can be as long as 3.7 m (12 ft) or as short as 152 mm (6 in).

Luminaires with integrated cables, such as ColorBlast Powercore and ColorBurst Powercore, are installed to junction boxes. For runs of luminaires installed in series, a lead wire is run from the first junction box to Data Enabler Pro. For luminaires installed in parallel (star configuration), a lead wire is run from a common junction box to Data Enabler Pro.

Luminaires with detachable leader cables, such as ColorGraze Powercore, iColor Cove MX Powercore, and iColor Accent Powercore, can be installed in single runs by connecting the leader cable directly to Data Enabler Pro. Luminaires in the run are connected together by means of integrated end-to-end connectors or jumper cables. Multiple runs of luminaires can also be connected in parallel by connecting a lead wire from a common junction box to a Data Enabler Pro.

For luminaires that do not use leader cables and jumper cables, use a sufficient length of 4-conductor copper wire to connect luminaires to each other and to Data Enabler Pro. Standard 3.31 mm^2 (12 AWG) stranded wire is recommended, but the wiring you use depends on local electrical codes.
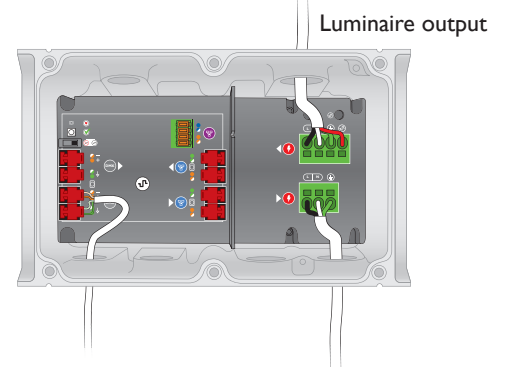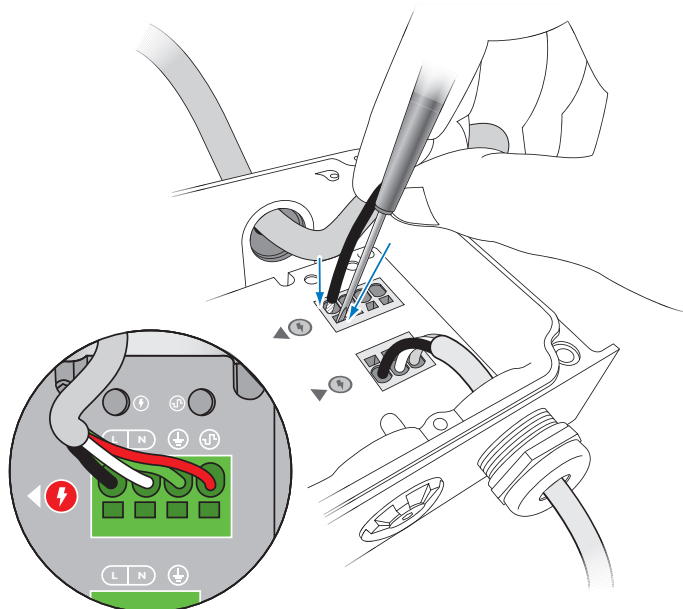
1. Run a leader cable from a run of luminaires, or a lead wire from a junction box, through a cable connector installed on the output side of the Data Enabler Pro housing (the side with two openings). Pull at least 152 mm (6 in) of wire into the housing.

2. Strip 15 mm (0.6 in) of insulation from the wires. If using stranded wire, twist each wire tight to secure the wire threads.

3. Locate the luminaire cable 4-wire PC terminal block connector inside the Data Enabler Pro housing.

4. Securely install line, neutral, ground, and data in the terminal block:

   • Insert a small flathead screwdriver in the slot above a wire entry hole.

   • Firmly insert the correct wire in the wire entry hole.

   • Remove the screwdriver.
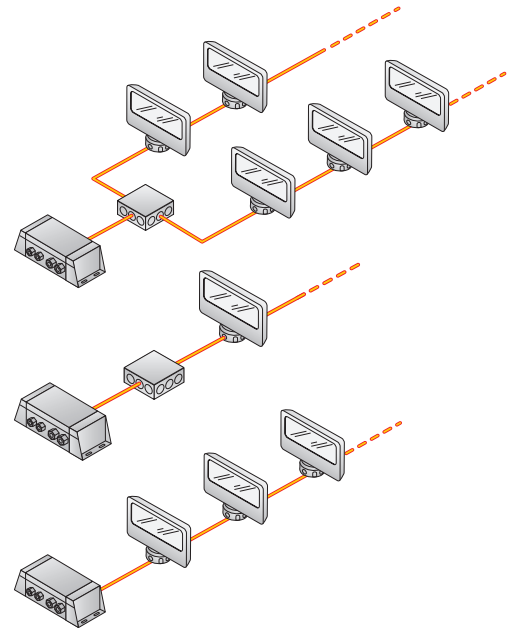
❀ *eW and iColor Accent MX Powercore accept direct Ethernet data input. Use the separate 4-wire IDC terminal block connector for Ethernet data output to eW and iColor Accent MX Powercore, as described in the next section.*


15 mm
.6 in

UL / cUL

L N ⏚ ⏚

CE / PSE

L N ⏚ ⏚
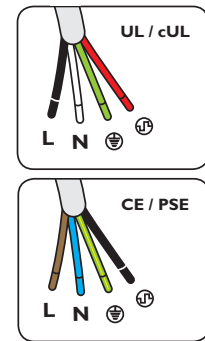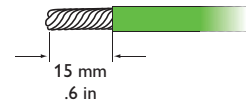
❀ *PC terminal block connectors accept recommended wire sizes from 8.37 to 0.823 mm^2 (8 to 18 AWG).*

Luminaire output

Luminaire Cable Connection for eW Accent MX Powercore and iColor Accent MX Powercore

Data Enabler Pro includes a separate 4-wire IDC terminal block connector for Ethernet data output to eW and iColor Accent Powercore luminaires, which directly accept Ethernet input. Leader cables for eW and iColor Accent Powercore bundle data and power wires within the same wire jacket.
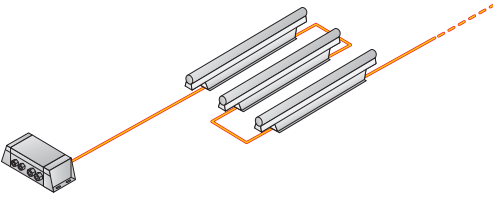
1. Run an eW or iColor Accent Powercore leader cable through a cable connector installed on the output side of the Data Enabler Pro housing (the side with two openings).

2. Strip off a sufficient length of the cable jacket to connect the data wires to the IDC terminal block on the data board and the power wires to the luminaire cable PC terminal block on the power board.

2. Strip 15 mm (0.6 in) of insulation from the power wires. If using stranded wire, twist each wire tight to secure the wire threads.

3. Connect the data wires to the IDC terminal block:

   • Using your fingers or a small tool, lift the four punch-down connectors.

   • From right to left, following the wire codes printed on the data board, insert the Orange/White, Orange, Blue/White, and Blue wires into the wire entry holes on the front of the connector.

   • Push down each punch-down connector until they snap firmly in place.
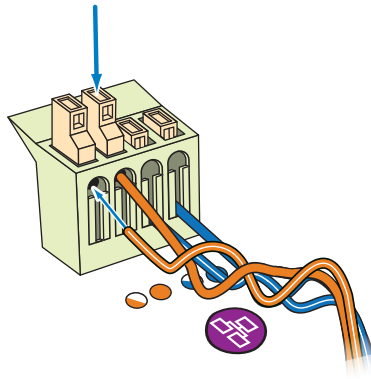
4. Securely install line, neutral, and ground in the luminaire cable 4-wire terminal block:

   • Insert a standard flathead screwdriver in the slot above a wire entry hole.

   • Firmly insert the correct wire in the wire entry hole. (Leave the data position empty.)

   • Remove the screwdriver.

Accent MX Powercore output
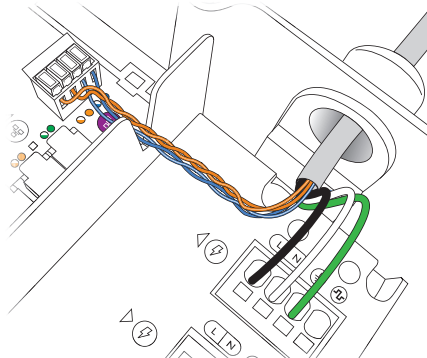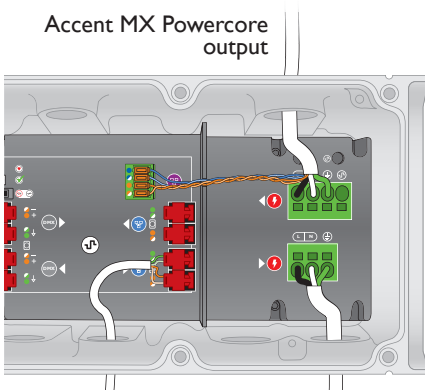
Secure Cover

Once you have finished connecting all data and power inputs and outputs, secure the Data Enabler Pro cover.

1. Seat the cover on the Data Enabler Pro housing.

2. Using the included 3 mm hex wrench, tighten the housing cover's six captured screws, in the order indicated in the diagram in the margin.

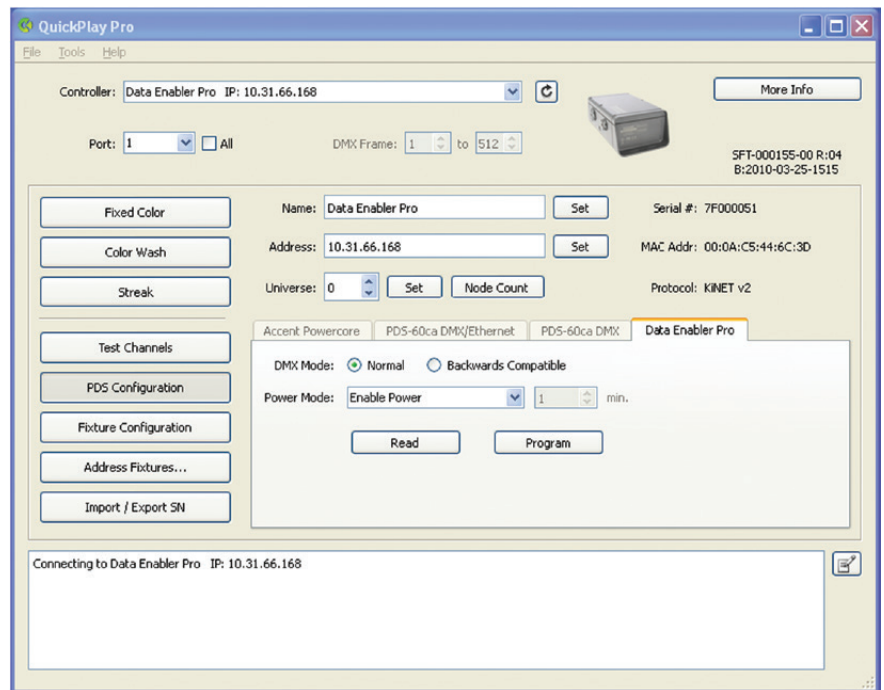3. Torque each screw to approximately 1.8 Nm (16 in-lb).
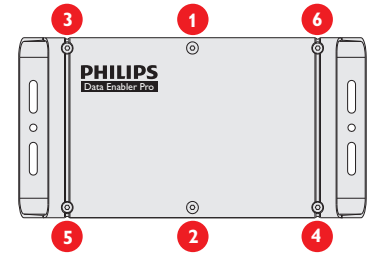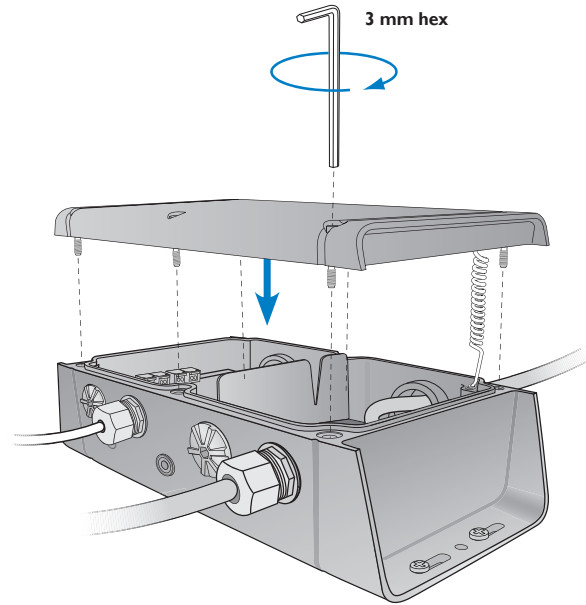
Configuring Data Enabler Pro
with QuickPlay Pro (Optional)

You can configure Data Enabler Pro devices using QuickPlay Pro addressing and configuration software. In Ethernet installations, you can automatically discover all Data Enabler Pro devices using QuickPlay Pro with a computer connected to your lighting installation's network. In DMX installations, you can configure Data Enabler Pro devices with QuickPlay Pro by connecting a computer directly to the Ethernet input terminal block.

When a Data Enabler Pro device is connected to your lighting network, the Data Enabler Pro tab under PDS Configuration becomes active. The Data Enabler Pro tab provides options for setting DMX and power modes.

Setting DMX Mode

Under normal operation, Data Enabler Pro handles data in a slightly different manner than earlier versions of Data Enabler. Different versions, therefore, can be out of sync by one frame when used together in the same lighting network. Though small, the discrepancy could be visible in video displays or other rapidly changing light shows.

• To synchronize Data Enabler Pro with earlier versions of Data Enabler, click Backwards Compatible.

• To set Data Enabler Pro to operate normally, click Normal (the default).

Setting Power Mode

To maximize energy efficiency, optional power-saving modes automatically cut power to attached lights when lights are off for a configurable number of minutes. Use the Power Mode drop-down list to set Data Enabler Pro power mode.

• To send power to connected lights at all times, select Enable Power (the default). (Lights continue to draw power even when receiving no data or black data.)

• To cut power to connected lights at all times, select Disable Power. (Lights remain off even when receiving non-black data.)

- To cut power to connected lights after receiving no data for a period of time, select "Turn off after no data for," and enter a timeout (in minutes) in the text box. Power is automatically restored to connected lights when data flows again.

- To cut power to connected lights after receiving black data (DMX packets with all data fields set to 0) for a period of time, select "Turn off after black data for," and enter a timeout (in minutes) in the text box. Power is automatically restored to connected lights when non-black data flows again.
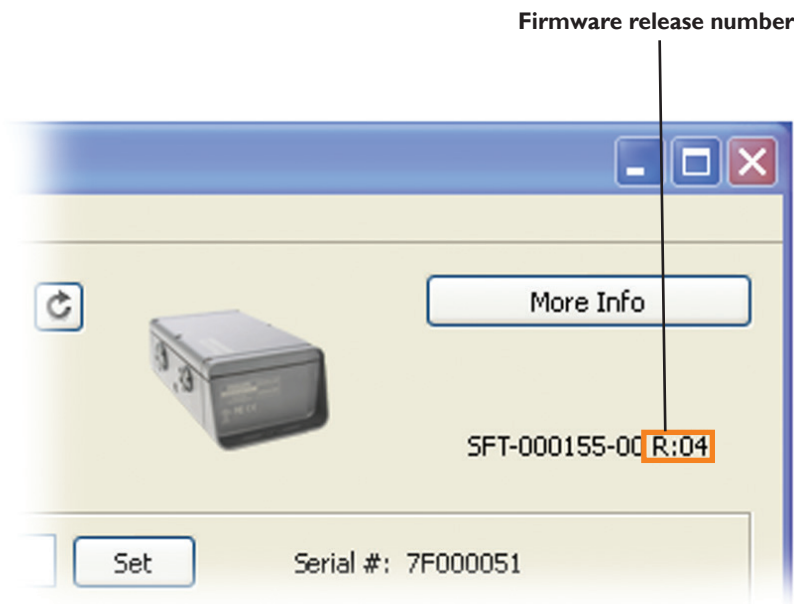
Updating Data Enabler Pro Firmware

The Data Enabler Pro firmware image is periodically updated to improve system performance and functionality. To maximize system performance, make sure your Data Enabler Pro devices are running the most recent version of the firmware. We recommend that you confirm that your Data Enabler Pro devices have the most recent version of the firmware before installing them in your lighting network.

Determine Data Enabler Pro Firmware Version

1. You can determine the firmware version that your Data Enabler Pro devices are running with a computer and QuickPlay Pro:

   - In Ethernet installations, connect a computer to the lighting network and run QuickPlay Pro. QuickPlay Pro automatically discovers all connected Data Enabler Pro devices. Select a device from the Controllers drop-down list.

   - In DMX installations, directly connect a computer to the Ethernet input port inside the Data Enabler Pro housing, and run QuickPlay Pro.

2. If necessary, select a Data Enabler Pro device from the Controllers drop-down list.

   The firmware version for the selected Data Enabler Pro device appears at the top of the QuickPlay Pro window, on the right.

✹ You can download QuickPlay Pro from www.colorkinetics.com/support/addressing.

Firmware release number
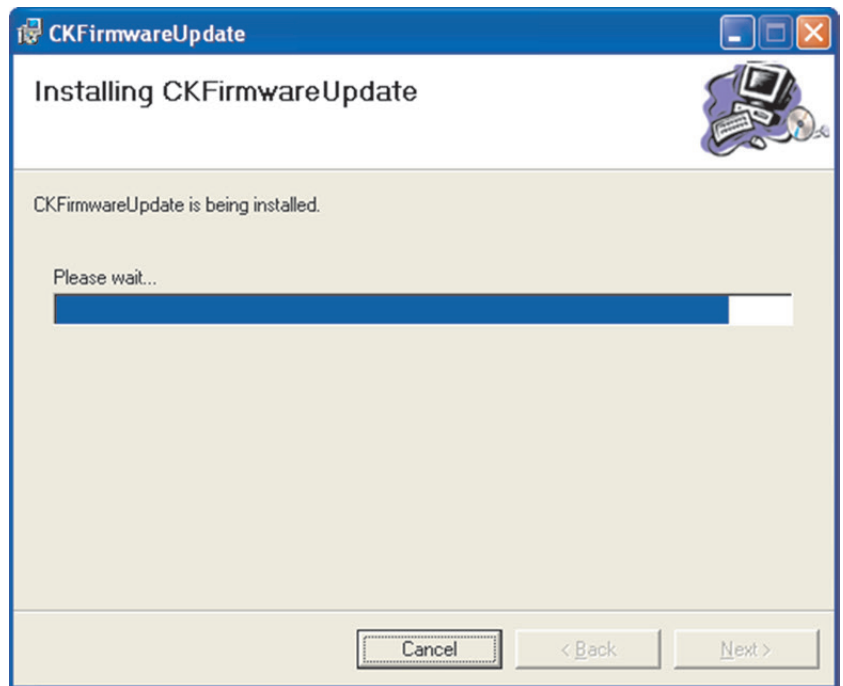
Download Data Enabler Pro Firmware

If a more recent version of the Data Enabler Pro firmware is available, download the firmware file (.hex extension):

1. Visit the Firmware Updater page at www.colorkinetics.com/support/downloads/firmware/ to check for the latest firmware version.

2. If a newer firmware image is available, click the link on the Firmware Updater page to download the firmware file to an accessible location on your computer.
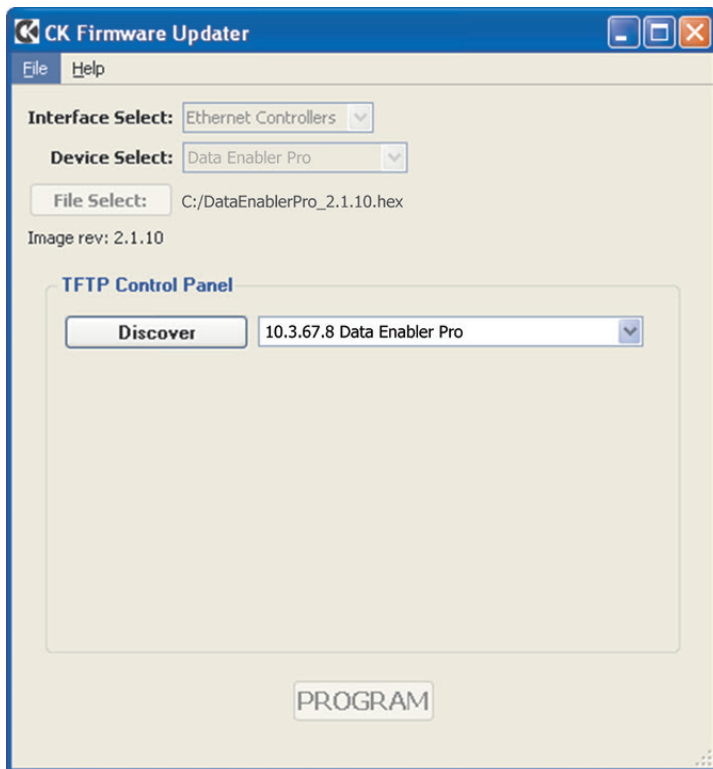
Download CK Firmware Updater

To update the firmware image on a Data Enabler Pro device, you must download and install the CK Firmware Updater application on your computer.

1. Visit the Firmware Updater page at www.colorkinetics.com/support/downloads/firmware/.

2. Download the CK Firmware Updater installer.

3. Decompress the file to an accessible location on your computer and open it.

4. Run the installer, and follow the on-screen instructions.

Running a Data Enabler Pro Firmware Update (Ethernet network)

1. Connect a computer to the lighting network, and run CK Firmware Updater.

2. From the Interface Select drop-down list, select Ethernet Controllers.

3. From Device Select drop-down list, select Data Enabler Pro.

4. Click File Select, navigate to the folder to which you downloaded the firmware file (.hex extension), and click Open.

5. Click Discover. CK Firmware Updater automatically discovers all Data Enabler Pro devices connected to your lighting network.

6. Select a Data Enabler Pro device and click PROGRAM.

7. Repeat step 6 for each Data Enabler Pro device that you want to update.

Running a Data Enabler Pro Firmware Update (DMX network)

1. Directly connect a computer to the Ethernet input port inside the housing of a Data Enabler Pro device that you want to update

2. Run CK Firmware Updater.

3. From the Interface Select drop-down list, select Ethernet Controllers.

4. From the Device Select drop-down list, select Data Enabler Pro.

5. Click File Select, navigate to the folder to which you downloaded the firmware file (.hex extension), and click Open.

6. Click Discover. CK Firmware Updater discovers the Data Enabler Pro device to which your computer is currently connected.

7. Click PROGRAM.

8. Repeat steps 1 to 7 for each Data Enabler Pro device that you want to update.

Recovering from Firmware Update Errors

In rare instances, you may experience power or data loss or interruption during the firmware update process. In such cases, a Data Enabler Pro device may receive an incomplete or corrupt firmware image. You must successfully re-install the firmware image to restore normal Data Enabler Pro operations.

✺ When the firmware is corrupt or incomplete, the DMX and "heartbeat" indicator lights inside the Data Enabler Pro housing blink rapidly.

• In the case of power loss or interruption, the Data Enabler Pro device retains its assigned IP address, but you are temporarily unable to communicate with the device using that address.

  If this happens, enter the reserved IP address 10.1.250.250 in CK Firmware Updater, and re-install the firmware image.

  Once the firmware image is successfully installed, you can again communicate with the Data Enabler Pro device using its assigned IP address.

• In the case of data loss or interruption, you must manually enter the device's IP address in CK Firmware Updater to re-install the firmware image.

  If you don't know the device's assigned IP address, you can cycle power, then use the reserved IP address 10.1.250.250, as described above.

PHILIPS

Philips Color Kinetics
www.philips.com/colorkinetics