Ethernet Controller Keypad

Wall-mounted keypad for triggering LED light shows on Ethernet networks

PHILIPS

COLOR KINETICS

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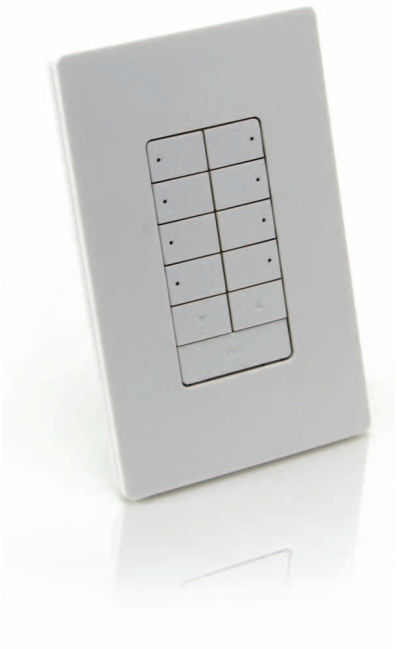
Designed for use with the Philips Light System Manager and ColorDial Pro controllers, Ethernet Controller Keypad is a wall-mounted keypad that triggers up to eight light shows at the touch of a button. Ethernet Controller Keypad is the ideal solution for lighting installations that include multiple shows in multiple zones or locations. Ethernet Controller Keypad uses Power over Ethernet (PoE) technology to eliminate the need for a separate power source, affording greater freedom of placement, higher reliability, and easy installation.

- Power over Ethernet for increased flexibility — The IEEE 802.3af standard for Power over Ethernet (PoE) enables both electrical power and data to be transmitted over a single twisted-pair cable. Shared cabling reduces installation costs, decreases the space required for wires, and affords freedom of placement by eliminating wiring to a power source. Ethernet Controller Keypad works with any PoE-compliant switch or PoE injector.
- Simple installation with a single Ethernet connection — Mounts in a standard U.S. single-gang wall box. Uses a single CAT 5e cable for data and power with no additional wiring required.
- Full set of lighting controls — Each keypad instantly and conveniently triggers up to eight Light System Manager or ColorDial Pro light shows. Onboard indicator lamps identify the current show. Dimmer controls and a master OFF switch adjust the brightness of the light fixtures during playback.
- Compact design with sleek Decora-style faceplate — Compact design uses wall space efficiently. Decora faceplate hides mounting hardware for a clean look that blends with a variety of architectural styles.



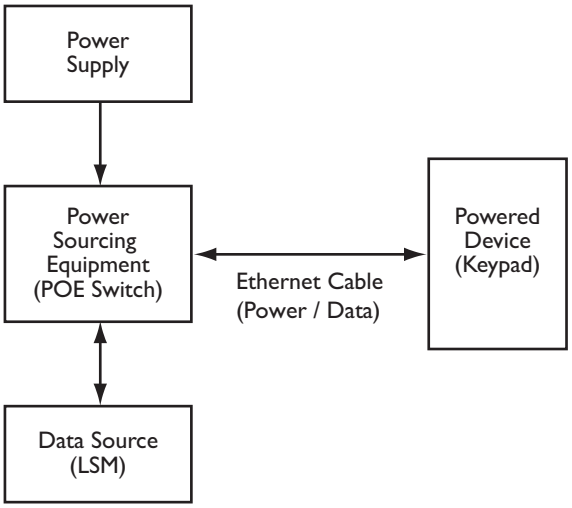
Multiple Keypads in Light System Manager Installations
With Light System Manager, you can install up to 16 Ethernet Controller Keypads to control as many as 128 light shows in a single installation spanning multiple zones or locations.

The Power of Power over Ethernet

The IEEE 802.3af standard for Power over Ethernet (PoE) enables both electrical power and data to be transmitted over a single twisted-pair cable. Ethernet Controller Keypad is a PoE-compliant powered device that offers you convenience, increased flexibility, and simplified and inexpensive installation,

A New Standard of Flexibility

You can use Ethernet Controller Keypad two ways: with a PoE-compliant Ethernet switch, or with a standard Ethernet switch and PoE injector. Regardless of which method you use, you can position each Ethernet Controller Keypad up to 328 ft (100 m) from the switch. Since power is delivered over the same wire as the data, you do not need to use additional wiring or position the keypad near an external power source.



If you're using a PoE switch, you can install up to 16 keypads in a single lighting installation simply by connecting each keypad to an available port on the switch using a standard Ethernet cable. If you're using a non-PoE switch, you must also attach a PoE injector to the Ethernet cable for each keypad in the installation, You can position the PoE injectors near the switch to keep all power and data sources together in the same location, and to give you maximum flexibility in positioning the keypads in convenient locations throughout your installation.

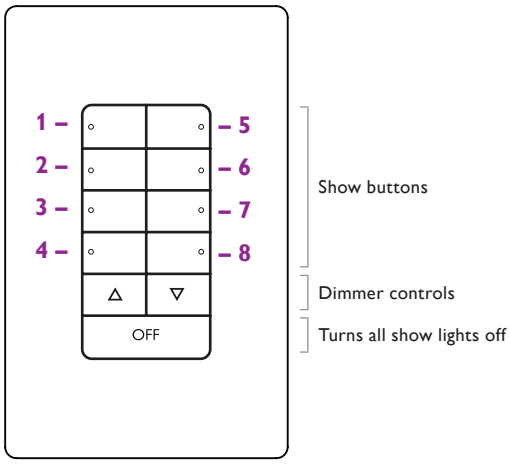
Ethernet Powered Keypad and Light System Manager

Ethernet Controller Keypad is designed for use with ColorDial Pro and Light System Manager controllers from Philips Color Kinetics. Light System Manager, an integrated software / hardware solution, cost-effectively enables large-scale and intricately designed Ethernet-based LED lighting installations. Together, Ethernet Controller Keypad and Light System Manager can store, trigger, and control up to 128 light shows in 16 separate zones or locations within a single lighting installation.

By taking advantage of the communication capabilities of Ethernet, Ethernet Controller Keypad and Light System Manager give you unprecedented control over the configuration of your lighting system. Using Light System Composer, the software component of Light System Manager, you can easily discover the Ethernet Controller Keypads installed in your lighting system, name them, and assign light shows to each keypad's set of eight buttons.

Once you've configured the Ethernet Controller Keypads in your installation, you can trigger your light shows and adjust the brightness of your show lights at the touch of a button.

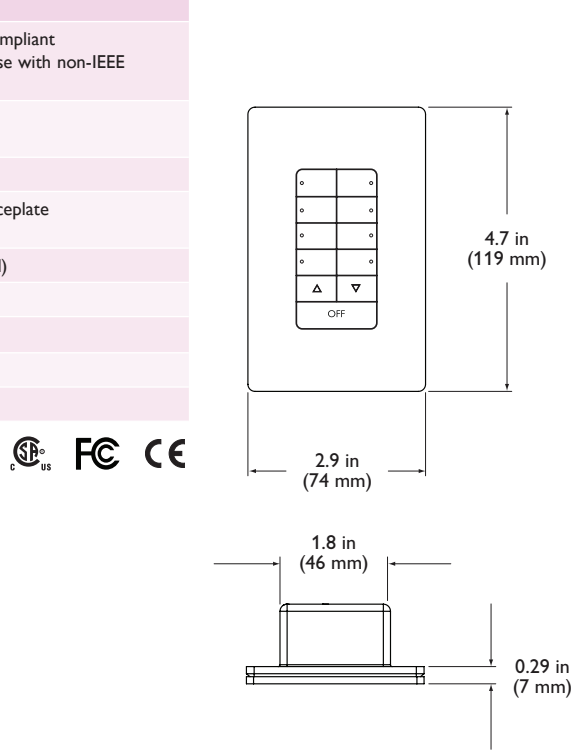
Ethernet Controller Keypad buttons



Specifications

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

Item	Specification	Details
Control	Ethernet	10BASE-T from any PoE- or IEEE 802.3af-compliant Ethernet switch. PoE injector required for use with non-IEEE 802.3af-compliant switches
Physical	Dimensions *(Height x Width x Depth)*	4.7 x 2.9 x 1.31 in (119 x 74 x 33 mm)
	Weight	4.23 oz (120 g)
	Housing	Medium matte white plastic Decora-style faceplate Mounts in single-gang wall box
	Connector / Cable	RJ45 Port, CAT 5e Data Cable (not included)
	Operating Temperature	14° – 104° F (-10° – 40° C)
	Humidity	0 – 95%, non-condensing
Certification and Safety	Certification	CSA, FCC Class B, CE, RoHS
	Environment	Indoor rated, IP40



Included in the box

Ethernet Controller Keypad
Standard single-gang wall box for use outside of North America
(2) self-threading flathead countersunk M2.5 screws

Keypad and Accessories

Ethernet Controller Keypad is part of a complete system that includes:

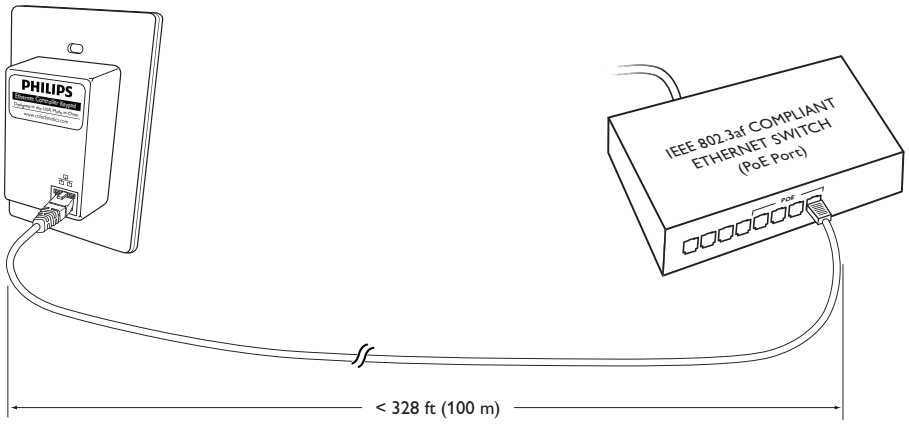
- ColorDial Pro or Light System Manager controllers.
- A PoE-compliant switch to supply data and power to the keypad, or a non-PoE switch with one PoE-compliant power injector per keypad.
- CAT 5e data cable to connect the keypad to switch or PoE injector.

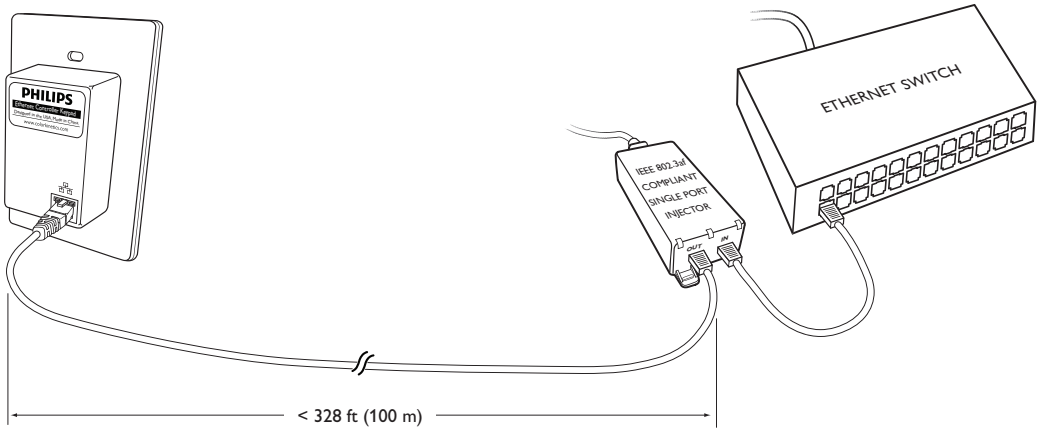
Item		Item Number	Philips 12NC
Ethernet Controller Keypad		103-000023-00	910503700326
Power over Ethernet Switch	4 Power over Ethernet ports, 8 ports total	120-000084-00	910503700789
Power over Ethernet Injector	North America Power Cord	109-000029-00	910503700383
	Europe Power Cord	109-000029-01	910503700384

Use Item Number when ordering in North America.

Connect to IEEE 802.3af compliant PoE switch or PoE Injector and Ethernet switch

For detailed wiring diagrams visit www.colorkinetics.com/support/wiring/ls_prod.html





Installation

Ethernet Controller Keypad is installed in lighting installations managed by Light System Manager and ColorDial Pro. With Light System Manager, you can discover and configure up to 16 keypads within a single installation. Typically, each keypad is installed in a separate zone or location to control the set of shows assigned to that zone.

Ethernet Controller Keypad requires data and power over a single Ethernet connection. A PoE-compliant Ethernet switch delivers both data and power over a standard CAT 5e data cable. Installations with non-PoE switches require a PoE-compliant power source, such as the PoE Injector.

Owner/User Responsibilities

It is the responsibility of the contractor, installer, purchaser, owner, and user to install, maintain, and operate Ethernet Controller Keypad 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.

Refer to the Ethernet Controller Keypad Installation Instructions for specific warning and caution statements.

Prepare for the Installation

Each Ethernet Controller Keypad can trigger up to eight ColorDial Pro scenes, or up to eight shows assigned to a zone or location within an installation managed by Light System Manager. The positioning of each keypad is generally determined by the installation configuration: the locations of fixtures, power sources, and controllers, and the zone configuration for complex Light System Manager installations. Because Ethernet Controller Keypad does not need to be wired to a power source, it can be installed in a convenient but unobtrusive location.

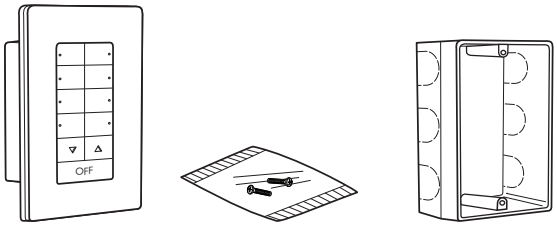
Ensure that a PoE-compliant Ethernet switch with the necessary number of available ports is installed in the lighting system. For networks with non-PoE switches, ensure that a PoE-compliant power injector is installed for each keypad. Make sure that additional components, such as mounting screws and CAT 5e data cables of the appropriate length, are also available.

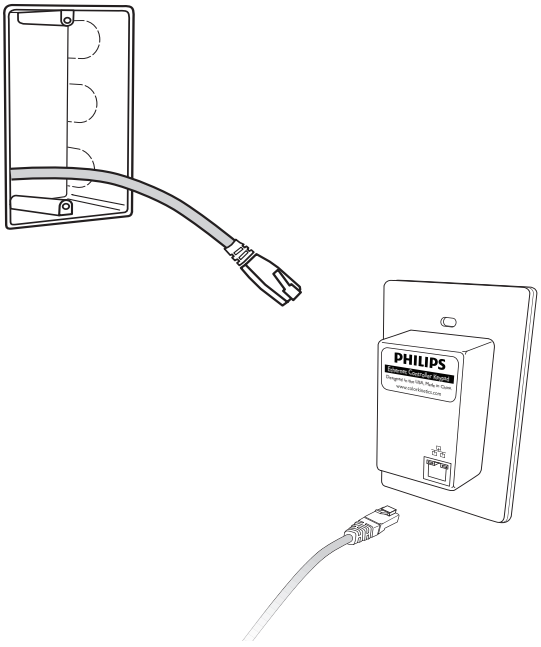
Consider these guidelines when planning the installation:

- Ethernet Controller Keypad is designed for indoor use only.
- Create a layout plan that starts with the location of the Ethernet switch and, if applicable, the PoE injector(s), and includes all leader cables, CAT 5e data cables, and fixtures.
- In ColorDial Pro installations, the Ethernet Controller Keypad keys trigger scenes 1 through 8 stored on ColorDial Pro. For convenience, you can install multiple keypads in a ColorDial Pro network, but each keypad triggers the same set of eight stored scenes.
- As many as 16 keypads can be installed in a network controlled by Light System Manager, to trigger a total of 128 shows. Ensure that the number of free Ethernet switch ports is adequate. Installations with non-PoE Ethernet switches require the use of one PoE-compliant power injector per keypad.
- In Light System Manager installations, Light System Manager can discover and map the keypad, configure each keypad button, and control the installation's light fixtures. In these situtations, ensure that Light System Manager is programmed with the set of shows the keypad will trigger, and that all required power / data supplies and light fixtures are connected properly.
- Multiple keypads can be ganged together with a multi-gang Decora-style faceplate. Refer to the faceplate's dimensional diagram for measurements and clearances.
- If using a non-PoE Ethernet switch, plan to install the required PoE injector(s) near the switch.

Included in the box

Ethernet Controller Keypad
Standard single-gang wall box for use outside of North America
(2) self-threading flathead countersunk M2.5 screws
Decora-style faceplate





Assemble Additional Items

The following additional items are required to mount and connect an Ethernet Controller Keypad.

Wiring and Power Supplies

One CAT 5e Data Cable (unshielded twisted pair with an RJ45 connector, to a maximum length of 328 ft or 100 m) is required to connect each keypad to an available port on a PoE-compliant Ethernet switch or to a PoE injector. A PoE injector also requires an additional cable to connect the injector to the Ethernet switch, and a power cord to connect the injector to a power source. Refer to the PoE injector's installation or user guide for complete installation instructions.

Junction Boxes and Mounting Screws

A standard US junction box may be used in North America. The junction box included with the keypad can also be used outside of North America. You will need the provided flat-head screws for securing the keypad housing to the junction box.

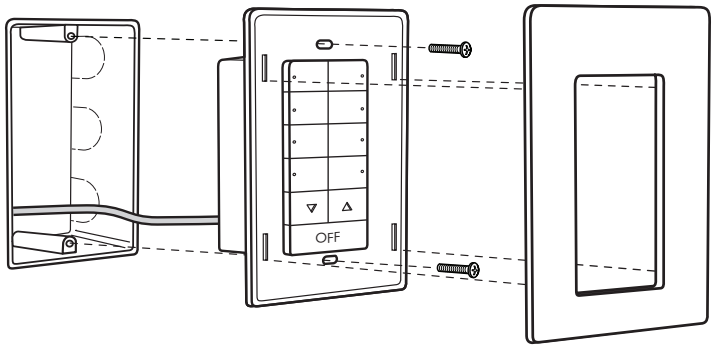
Inspect the Keypad and Accessories

Carefully inspect the box containing Ethernet Controller Keypad and the contents for any damage that may have occurred in transit.

Mount and Connect the Keypad

Make sure the power is OFF before mounting and connecting Ethernet Controller Keypad.

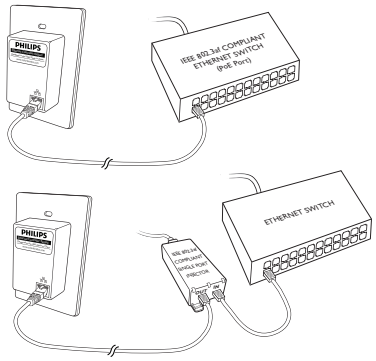
1. A standard US junction box may be used in North America. If using the provided junction box outside of North America, snap out a knock-out on a side that will not be mounted to the structural component.
2. Thread the CAT 5e data cable through the knock-out.
3. Insert the RJ45 connector into the port on the back of the keypad. When the keypad is active, two indicator lamps indicate Ethernet link (green) and Ethernet activity (yellow).
4. Remove the faceplate from the keypad by grasping the top or bottom edge of the faceplate and prying it gently away from the keypad.
5. Align the screw holes in the keypad with the screw holes in the wall box.
6. Use the two provided mounting screws to attach the keypad to the junction box and into the structural component.
7. Replace the faceplate by pressing it gently onto the keypad until it snaps into place.



Make Cable Connections

Connect the CAT 5e data cable to an available port on a PoE-compliant Ethernet switch installed in the network.

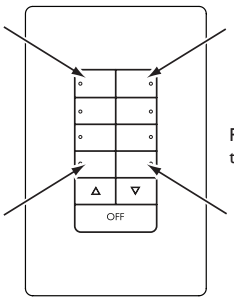
If using a non-PoE Ethernet switch, connect the CAT 5e data cable to the output port on a PoE injector. The PoE injector must be connected to the Ethernet switch and AC outlet in accordance with the manufacturer's installation instructions.



Discover and Configure Keypads in Light System Manager Installations (Optional)

Before you can use Ethernet Controller Keypads in Light System Manager Installations, you must discover each keypad and configure them with the Config Maker within Light System Composer.

1. Add keypads and assign actions to each keypad button, as described in the Config Maker Chapter of the Light System Composer User Guide (www.colorkinetics.com/ls/controllers/lsm). Make sure you set the keypad type to Ethernet.
2. To discover an Ethernet Controller Keypad, press the keypad's four corner show buttons simultaneously. A Discovered Keypad dialog box opens in Light System Composer, with the keypad's IP address (Ethernet Interface) and a unique keypad ID automatically assigned.
3. Click Associate Keypad, select a keypad name from the list, and click OK.
4. Repeat steps 2 and 3 for each Ethernet Controller Keypad in your installation.

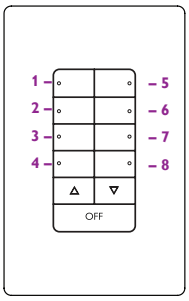


Press the four corner buttons to discover the keypad

Using Ethernet Controller Keypad

To trigger the shows assigned to the Ethernet Controller Keypad buttons.

- Press a show button to trigger the ColorDial Pro or Light System Manager show assigned to that trigger. By default, shows play from the beginning at 100% brightness.
- If you press a keypad button that does not have a valid show assigned to it, the show lights blink.
- Use the dimmer controls to adjust the brightness of the show lights from 10% – 100%. Press and hold the dimmer controls to fade up or down.
- Press the OFF button to turn all show lights off.



Show buttons

Dimmer controls

Turns all show lights off

Maintenance

Clean the keypad faceplate and buttons with a soft, damp cloth.

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