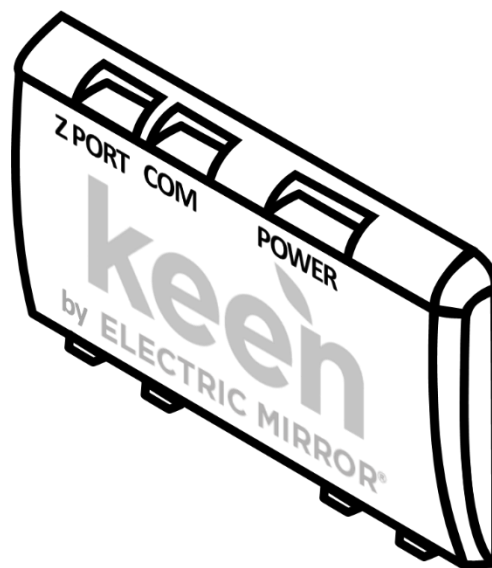


KEEN™ TECHNOLOGY

Energy Savings with a Touch



IMPORTANT

Read this document completely before you begin. Carefully consider your level of expertise in installing this product. Make sure you have the necessary tool. Follow all precautions referred to in this document.

We recommend this product be installed and configured by a trained installation expert.


Warning: Installation shall be in accordance with the applicable section of the National Electrical Code, ANSI/NFPA 70, and/or the national Fire Alarm Code, ANSI/NFPA 72, as applicable.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions fully prior to installation.
2. Keep these instructions for future reference.
3. Install and operate in accordance with the manufacturer's instructions.
4. Adhere to all warnings related to this guide and the product.
5. All accessories and included hardware should be considered the only options for installation.
6. Only the included hardware or related accessories available in this package or from Electric Mirror are specified as a genuine for the purpose of installation or operations. No substitutes are considered acceptable.
7. Do not place anything over the unit that blocks its

ventilation. Make sure the bottom of the unit is free of obstructions.

8. Keep away from heat sources including open flame.

9.  Mirror glass can be very heavy. If dropped or broken, it may crack or shatter, exposing sharp edges that can inflict bodily harm if proper care is not taken. At least two people are recommended for installation.
10. This product requires an electrical earth ground for proper electrical performance and safety.
11. Keep liquids away from the electronics components or mirrored substrates.

Accessory installation of all accessories or related products should be completed according to their relative installation guidelines.



CAUTION
FOLLOW THESE
INSTALLATION
INSTRUCTIONS
COMPLETELY

Operation

KEEN DIMMING

The Keen unit uses exclusive and 0-10V control dimming technology. The unit is affixed to the back face of the mirror. Select models of Keen are controlled internally inside the unit, making the need for re-wiring from/to a wall switch unnecessary. Other

models may require connection to an external switch.

External dimmers are not supported. Use of external dimmers may damage the Keen electronics.

Keen has 3 or 4 button configurations, dependent on the type of lighting system in use. (Fig. 1, 2)

Power Up On every power up, the Keen unit will dim the lamps to about 80% of total brightness. The unit can be dimmed up or down after initial start.

Energy Saving Mode If no interaction occurs within 60 minutes, the unit will dim down to an approximate 33% brightness level to conserve energy.

Night Glow This Keen unit may include Night Mode operation. When the Night Mode button is pressed, the buttons will glow with a warm white. In this mode the lighted mirror lamps will be turned completely off. Any button will wake the unit from the Night Mode and return to its last state (with exception of the power button which will turn the unit off).

Power Button Some models of the Keen may include a separate power button. This is not required when the lighted mirror is the only light source in the room, and controlled by a wall switch. (Fig. 2)

Fig. 1
3 Button (KA)



Fig. 2
4 Button (KB)



When the power button is pressed, it will turn off all power to the lamping for the unit. The Keen unit will be continuously on during this cycle.

In switched circumstances, when power is turned back on to the unit it will reset itself and start at 80% of total brightness.

Installation



CAUTION: WIRING INTO THE LIGHTING FIXTURE

Turn power off to the location. Use 12-18 AWG wire for the following instructions:

Fig. 3. Bring in the Line (black), Neutral (white), and grounding wire into the chassis knockout. Contact Electric Mirror for wiring knockout location information for your specific mirror model

Fig. 4. Strip wires (0.375") and Insert the power wiring into the Luminaire Disconnect (yellow in color) and the grounding connector (green in color). The connectors are a push wire style, you will not require any tooling to insert.

Fig. 5. Once properly inserted, connect the Luminaire Disconnect together.

CONNECTING THE KEEN UNIT

The Keen unit is pre-installed on the mirror at the factory.

Do not remove the circuit board component.

There are 3 connection ports on the Keen unit:

A 5 Port Connection for future upgrades

B 6 Port Connection for standard dimming

C 8 Port Connector for 0-10V dimming

Fig. 7. Keen is powered from either the standard dimming connection or a 0-10 dimming connection included in the lighted unit. Connect the appropriate plug into the port on the Keen unit.

Fig. 3

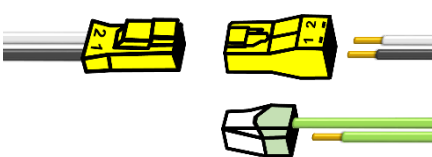


Fig. 4

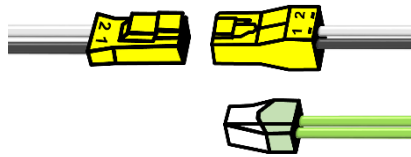


Fig. 5

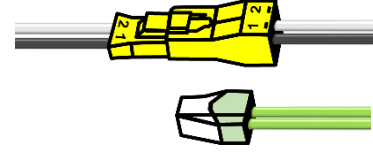


Fig. 6

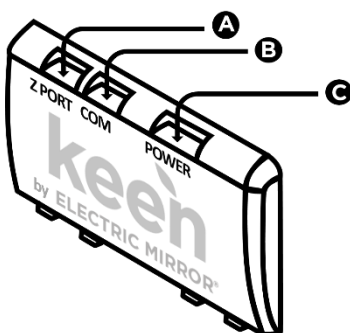


Fig. 7

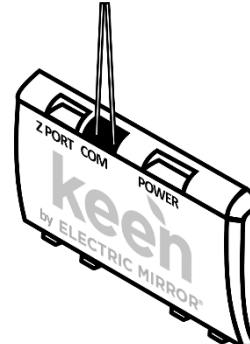
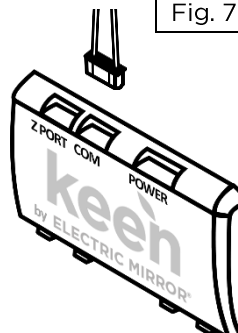


Fig. 9. There is only one set of output wiring coming off of the unit. The version of Keen you have selected will indicate what sets of wiring will be provided exiting the unit. These sets should be color coordinated to assist with final assembly.

Fig. 10. Below is an example of a 0-10V dimming connection.

Fig. 11. An example of a 0-10V dimming cable connection.

Fig. 9

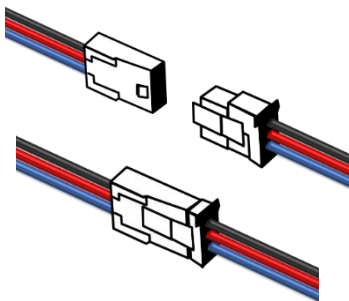


Fig. 10

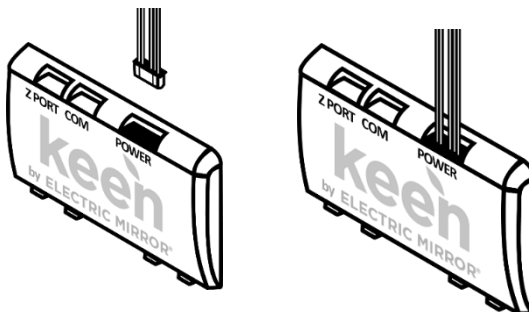
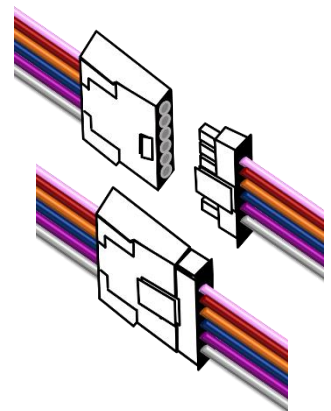


Fig. 11



**TROUBLESHOOTING****Wiring****Unit will not turn on/off easily.**

Check harness connections.
Turn off mains power, wait 12-15 seconds, reapply power.

Buttons are difficult to press and connection between buttons seems sluggish

Check mounting bracket for broken or inoperable clips.

Check for debris between board and mounting bracket.
Clean out through holes with compressed air.

Button LED stays on after touch.

Make sure button sticker is applied to the mirror

Power**Unit is not receiving power.**

Check cable connections

Check green light on Power Supply to confirm power supply is receiving power.

Unit has power, but buttons are inoperable.

Check grounding path and grounding connection to board.

Switch mains power off to unit, wait 12-15 seconds, and reapply power

The unit has intermittent function (Lights flash on and off).

Make sure the unit is connected to earth ground. If using a plug in receptacle, use a ground fault tester to indicate faulty circuit. If it's not connected to ground, it will not function properly.

SUPPORT

Customer Service
425.776.4946
electricmirror.com

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