

Mechanical Systems

Part III – Electrical

Homeowner Care & Warranty Guide

Congratulations on the purchase of your new home! Your new home is decorated with fixtures from Kichler, a leader in residential lighting since 1938. The beauty of Kichler® products is the result of tasteful design, advanced engineering, careful craftsmanship and a commitment to customer satisfaction.

Kichler's dedication doesn't stop with decorative fixtures. You'll discover ceiling fans, under cabinet lighting, landscape lighting, LED tape lighting, lamps and accessories to enhance your home. Look for Kichler products at your local lighting showroom or visit www.kichler.com and click the 'Where to buy' tab.



Homeowner Care & Warranty Guide

PROPER CARE & CLEANING

Your Kichler® lighting products will provide you with years of enjoyment by following a few simple guidelines and product care suggestions:

- Be sure the electric current is turned off before cleaning or re-lamping your fixture.
- Do not exceed the maximum wattage per bulb as indicated.
- Clean metal parts with a soft cloth moistened with a mild dish washing detergent solution. Wipe clean and buff with a very soft, dry cloth.
- Most metal finishes feature a protective coating that can be damaged by chemicals in glass cleaners. Do not use glass cleaners or other cleaning solutions on metal surfaces. Whenever possible, remove the glass from the fixture before cleaning. If the glass is attached to the fixture, apply glass cleaner to a cloth and carefully wipe the glass without touching the metal surfaces.
- Under no circumstances should any metal polish be used, as its abrasive nature could damage the protective finish on the metal parts.
- One of the benefits of solid brass lanterns is the beautiful character it achieves as it patinas over time. Solid brass fixtures are shipped with a thin protective layer of clear coat to prevent scratching during transit. This layer will gradually dissipate to allow for the natural oxidation process to begin. When this natural process occurs, the finish begins to darken into a rich patina.

- Certain glass styles have a decorative textured finish. Textured finishes should be gently cleaned with a mild, non-abrasive cleaning solution. Textured glass has a tendency to “pick and pull” soft cloth materials and paper towels, leaving material on the glass. For best results, glass shades should be carefully removed, washed and allowed to air dry.
- Never wash glass globes in an automatic dishwasher. Line a sink with a towel and fill with warm water and a mild liquid detergent. Wash the glass with a soft cloth, rinse and allow to dry.
- Wood components may be polished with a fine furniture polish, taking care to avoid getting the polish on metal and glass surfaces.
- The finishes and glass of your ceiling fans should be cleaned in the same manner as noted above for light fixtures. However, use extreme caution not to allow cleaning chemicals to enter the vent openings of the fan motor housing in order to avoid an electrical problem. For optimal performance, the blades should be dusted on a routine basis.

KEY WARRANTY CLAIM

INFORMATION & INSTRUCTIONS

When properly installed and operated under normal conditions of use, including but not limited to compliance with the specified wattage limitations, Kichler interior / exterior decorative lighting products and ceiling fans are subject to a limited warranty and are to be free from defects in material and workmanship for one (1) year from the original date of purchase by the original purchaser.

To report a defect within the warranty period, please contact your builder’s warranty service representative.

Warranty is subject to change. Certain exclusions apply. For complete warranty information including exclusions and limitations on Kichler products, including but not limited to, decorative lighting fixtures, ceiling fans, landscape lights, under cabinet lighting, LED tape, lamps and accessories, please visit: kichler.com/customer-service/warranty-information

kichler.com/customer-service/warranty-information

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AFCIs and Heat Rise

Application Data

New Information

Introduction

Arc Fault Circuit Interrupter (AFCI) breakers are listed to UL® 489 and UL 1699. UL 489 covers overload, endurance and short circuit (including temperature). UL 1699 covers arc fault test requirements.

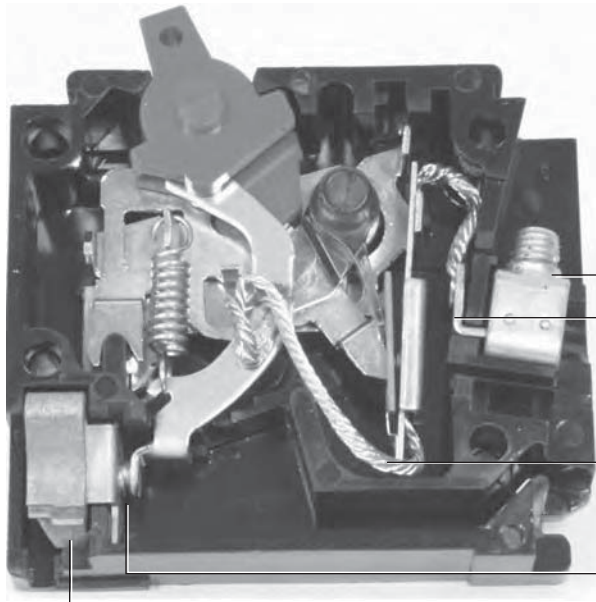
Per UL standard 489 for molded case circuit breakers, the breaker is required to pass an overload test (50 operations at 600% rated current, not less than 150 amperes) followed by 100% rated current in open air with a temperature not to exceed 50°C rise over ambient at both line and load terminals.

This temperature test may also be performed in an enclosure at 80% rated current and temperature not to exceed 65°C rise over ambient. (The handle shall not exceed 60°C.)

What this means is that in a loadcenter with a 70°F ambient temperature, the temperature rise can be as high as 187°F and still meet UL operating parameters for the breaker. While the breaker functions properly to this temperature, it will normally be in the 80 – 120°F range due to the electronics in the breaker.

The heat from a normal thermal/magnetic circuit breaker is generated by five sources. See photo on **Page 2**.





Resistance of the load terminal connection

Resistance of the bimetal

Resistance of the wire braids that carries current to/from the self-heated bimetal

Resistance across the breaker's contacts

Resistance at the breaker bus bar connection (in a residential application this is a plug-in connection; commercial breakers have a bolt-on connection).

Standard Circuit Breaker with Case Opened

You will notice that all of the metal current-carrying components are un-insulated, as the breaker case is an insulator. The case is made of a very high temperature thermal-set plastic material, as the case must survive the extreme temperatures that occur during the interruption of short circuit currents as high as 10 kA. The circuit breaker designer and UL are not concerned about the temperature of the internal metal parts or the case, but rather the temperature of the load terminal. The temperature of the load terminal determines the maximum temperature of the insulation on the wire connected to the terminal. On residential circuit breakers, the temperature rise of this terminal must be 50°C or less above ambient when

carrying rated current, or 65°C or less above ambient in an enclosure.

The AFCI construction differs from the standard breaker shown above, as it must not only house a breaker mechanism but also circuitry to perform the arc sensing and interruption function. This circuitry is located near the load terminals. It has additional conductors that carry both the load and neutral currents through a ground-sensing differential transformer. These conductors have resistance and thus contribute to a slight increase in temperature. The biggest temperature rise effect comes from the bimetal adjustment screw that is located under the push-to-test button adjacent to the hot spot. This screw runs at the

bimetal temperature and can be very hot. The internal construction of the AFCI breaker, including electronics, is nearly identical to our GFCI breaker constructions. The temperatures are essentially the same. We've been selling these breakers for nearly 30 years with no issues.

Due to the fact that AFCIs are becoming more prevalent in consumers' homes, there is more potential for this to be perceived as a problem. By being knowledgeable about why there is greater heat rise in electronic breakers, you can help prevent these misconceptions and communicate why this occurs.

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Manassas, Va 20109

Dear NVHomes Customer:

Congratulations on your new home. If you have any problems or questions with any of our phone, cable, home theater, or other options feel free to call us at (703) 257-9403.

To NV Homes Corporation:

February 19, 2014

RE: Five Year Extended Warranty Covering Legrand / Pass & Seymour Catalog Number 663 Three Way Light Switches

Reason for Warranty.

NV Homes Corporation and Legrand / Pass & Seymour have become aware of an issue involving a very small number of Legrand / Pass & Seymour's catalog number 663 three way wall switches. The issue causes the plastic toggle to crack inside the switch rendering the switch inoperable. This is not a safety issue.



Warranty Period.

These devices are normally covered under our limited one year warranty. We have extended our warranty on any switches that lose continuity due to a cracked toggle to a period of five years from the date of sale to the home buyer. This warranty covers replacement product as well as reimbursement for all reasonable service charges.

LIMITED FIVE YEAR WARRANTY

Pass & Seymour will remedy any defect in workmanship or material in Pass & Seymour products which may develop under proper and normal use within five years from date of purchase by a consumer:

(1) by repair or replacement, or, at Pass & Seymour's option, (2) by return of an amount equal to consumer's purchase price. Such remedy is IN LIEU OF ANY AND ALL EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Such remedy by Pass & Seymour does not include or cover cost of labor for removal or reinstallation of the product. ALL OTHER

FURTHER ELEMENTS OF DAMAGE (INCIDENTAL OR CONSEQUENTIAL DAMAGES) FOR BREACH OF ANY AND ALL EXPRESSED OR IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED HEREBY. (Some states do not allow disclaimers or exclusion or limitation of incidental or consequential damages, so the above disclaimer and limitation or exclusion may not apply to you.) ANY IMPLIED WARRANTIES INCLUDING WHERE REQUIRED WARRANTIES

OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED TO THE ONE YEAR PERIOD SET FORTH ABOVE. (Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.)

To insure safety, all repairs to Pass & Seymour products must be made by Pass & Seymour, or under its specific direction. Procedure to obtain performance of any warranty obligation is as follows: (1) Contact Pass & Seymour, Syracuse, New York 13221, for instructions concerning return or repair; (2) return the product to Pass & Seymour, postage paid, with your name and address and a written description of the installation or use of the Pass & Seymour product, and the observed defects or failure to operate, or other claimed basis for dissatisfaction. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Legrand / Pass & Seymour