

# How to spot a counterfeit breaker

Siemens Energy & Automation, Inc.

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Counterfeiting is a significant problem, and it's growing exponentially as counterfeiters become more sophisticated and more brazen.

According to the FBI and other authorities, counterfeits – fake products that look so much like the original that they will fool a buyer – cost businesses close to \$250 billion annually in the U.S. and more than \$500 billion globally. The problem is especially troubling in the residential and commercial construction markets, as electrical components such as circuit breakers are among the easiest to fake. Circuit breakers are critical safety devices found in buildings and homes across America.

Counterfeit circuit breakers pose serious safety issues. They put lives at risk. "A residential circuit breaker that fails to trip as intended can explode, ignite fires, and lead to injury or even death. Every time a counterfeit product is used, safety is compromised", says John Young, Manager for Standards and Industry Relations at Siemens Energy & Automation. In addition, no warranties or guarantees back them up. Counterfeits can also damage the integrity of your business. Buying or distributing fake products, even inadvertently, hurts your reputation and can leave you vulnerable to legal action.

The quality of counterfeit circuit breakers can vary widely. Previously, the lower quality of fakes was immediately evident. Recently, however, the problem has grown enormously, both in the quantity and sophistication of the fakes. Recently, the scope of counterfeiting has enlarged and counterfeits are becoming harder to detect. At first glance, some appear to be identical to the genuine product.

A recent survey by Electrical Contractor magazine showed that almost 86 percent of respondents couldn't tell the difference between real or fake breakers.

68 percent said they did not realize that circuit breakers marketed as "surplus", "overstock" or "refurbished" may be counterfeits. That's why Siemens has joined forces with other manufacturers as well as NEMA and UL in an industry effort to create more awareness of the issue in the industry.

## How can you spot a counterfeit circuit breaker?

Experts say a number of indicators can tell you if a product is counterfeit. Look for these suspicious characteristics:

- Markings and other features on the packaging or the product look different or are missing, including:
  - Missing certification marks.
  - Incorrect colors on labels or packaging.
  - Incorrect shape or design of the product.
  - Missing components or product features.
- Words on the product or package are misspelled.
- The country of origin is different from the genuine source.
- The manufacturing locations or ports of entry are incorrect.
- Product defects or product performance are different from your typical experience.
- The price is unusually low.



"Typically, we find that counterfeit products sell at much lower prices because they are missing parts or they are cheating on raw materials in some way, like copper. So if the price is too good to be true, there is a possibility that the product could be counterfeit," says Young. To be certain that products are authentic, distributors should only purchase directly from authorized sources. At the same time, they should be suspicious of products purchased from unauthorized third parties or over the internet.

### Features of Siemens and Murray Residential Circuit Breakers

There are distinctive features of Siemens Residential breakers that will help you identify whether you have a genuine product. Siemens has two brands in the residential circuit breaker market: Murray and Siemens. Residential circuit breakers are used as main, feeder, and branch circuit breakers. They are intended for use in Siemens, Murray, Crouse Hinds and I.T.E. load centers and panelboards, in residential and light commercial applications. Siemens or Murray residential breakers are always black in color. They are made as 1, 2, and 3-pole devices.

### Residential Siemens Type QP and Murray Type MP-T 1 & 2 Pole 15 & 20 Amp Circuit Breakers

Residential 1 & 2 Pole 15 & 20 Amp circuit breakers are likely to be the most prominent victims of counterfeiters. Therefore this paper will show some of the unique product features of the Residential Siemens Type QP and Murray Type MP-T 1 & 2 Pole 15 & 20 Amp circuit breakers. Residential circuit breakers for both the Murray and the Siemens brand have these distinctive features. The breakers' handle designations "ON" and "OFF" are molded on the front surface of the breaker. The breaker handle has white amperage numbers printed on it. Wire connector screws are already backed out, ready to wire. They are combination slots/Robertson.



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The front face of the breaker is either pad printed or it has a label. It includes a U/L mark and a CSA mark. The CSA mark always stands on its own.

The breaker side label is an adhesive paper label on the left side of the breaker. The breaker side label includes the manufacturing location as well as the manufacturer's name and address, a bar code, dual language and both NOM and ANCE marks.

### Know your supply base

"The source of counterfeit product in the U.S. cannot be isolated to one region or one country. Counterfeiting is a global issue. Furthermore, the channel to market for these products is also diverse," says Kevin Yates, Vice President of Siemens Residential Products Division. He adds: "While the internet is certainly one way to distribute counterfeit products, there is evidence that would suggest more traditional methods to market are also viable outlets for counterfeit products."

Therefore anyone purchasing circuit breakers should know their supply base. Manufacturers, such as Siemens sell products only through certified channels. Products purchased through unauthorized sources, such as third party breaker brokers or the internet may very well be counterfeit. Yates adds: "First and foremost, distributors and contractors need to remember that choosing to sell or install counterfeit products, even unwittingly, could cost them their license, but more importantly it could cost their customers their homes, or worse, their lives."

**If you suspect that a product you purchased is counterfeit, Siemens can help. Just contact us at 1-800-964-4114 or send an e-mail to [realbreakers.sea@siemens.com](mailto:realbreakers.sea@siemens.com).**

### Innovation at Siemens

Siemens sets trends with its innovations. In fiscal 2007, the company invested €3.4 billion in Research & Development and registered 7,900 new inventions, which brings the number of active patents to 50,700. The new Combination Type Arc Fault Circuit Interrupter (AFCI) is a good example of how Siemens has used the most cutting edge technology, with more than 30 patents, to ensure form, fit and function for our customers. It detects hidden causes of electrical fires and provides maximum electrical fire safety protection. The Combination Type AFCI features unique LED trip indicators, providing a valuable analysis tool to help electricians pinpoint the type of trip and reduce the time spent troubleshooting.

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