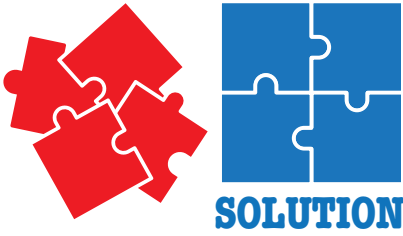


PROBLEM



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PROBLEM

Providing Worldwide Capabilities for Cost Effective Circuit Breaker Designs

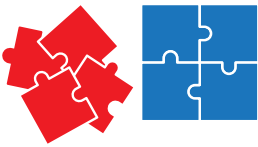
The global circuit breaker market size in 2017 was valued in excess of \$13 billion USD and is anticipated to surpass an annual installation of over 40 million units by 2024. The rising demand for replacement of mechanical and electromechanical devices across manufacturing and industry is expected to drive this demand even further. Maintaining a stock of required circuit breakers can be costly, particularly when you have to keep multiple types on the shelf.



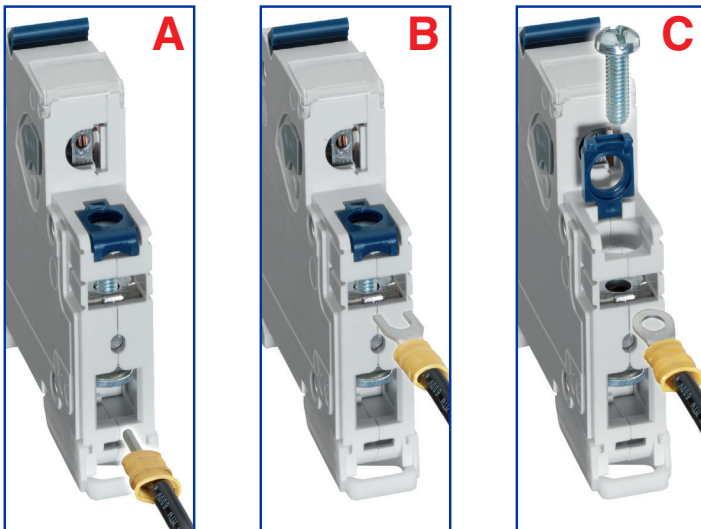
Problem:

Staying ahead by designing and manufacturing the right product for the multi-billion-dollar circuit breaker market is key to maintaining a strong grasp on your market share. In a worldwide market, original equipment manufacturers (OEMs) are particularly concerned about how many individual components they need to stock for particular pieces of equipment being built and delivered for overseas use. This particularly holds true when countries don't always share the same requirements and standards.





Unique Standard Dual Connection Terminals



- A** Box terminal for solid conductors or flexible conductors with or without cable lug.
- B** Screw terminal for forked cable lug.
- C** Screw terminal for ring tongue connection.

The above illustration shows the three unique standard dual connection terminals available on the series UL489 circuit breaker.

In addition, maintaining a wide variety of stocked circuit breakers to meet the needs of maintenance, repair, and replacement can become costly. This is particularly the case when considering how different countries want their wiring to interface within a single machine, as well as with their factory in general. Purchasing different circuit breakers simply because the system requirement is either a box terminal or screw terminal, creates headaches from design through manufacturing and beyond. There had to be a solution.



Solution:

After years of supplying OEMs and end-users with a wide variety of circuit breaker designs, Altech found it was continually required to deliver a similar circuit breaker product with differing connection terminals, such as box terminals and screw terminals able to handle either forked or ring-type connectors, as explained here.

Screw terminations are specifically designed to mount the connecting wires using either a forked connector or ring connector. In a general sense, screw terminals are composed of a

terminal with a threaded hold and a specifically sized screw based on the current and voltage specifications of the circuit breaker. Most screw terminals are available with the corners of the bus terminal bent slightly upward to offer a more secured connection for fork or ring connectors. Box wire connector terminals, on the other hand, are typically used for high-current applications and consist of a box lug and screw. These terminals are designed for direct wire connections.

Because of the variety of terminal connections needed, Altech designed its UL489 series circuit breaker with a unique *standard* dual connection terminal. These circuit breakers are offered for use with three types of terminal connections (*see figure*).

Of course, each circuit breaker manufactured is designed to deliver high reliability through the company's standard high-quality manufacturing, with technically correct specifications for each different application it might fit into.

The company is a proven leader in DIN rail mounted breakers with ratings up to 63A that meet UL489, UL508 or UL1077 approvals, with short circuit interrupt capacity of up to 10kA. Some of the relevant features offered through the UL489 series dual terminal circuit breakers include Altech's molded case design with hinged terminal cover for access to terminal screws using a broad range of screwdrivers, a clear-hinged cover to protect the designated marking area, and flexible replaceable terminal barriers to reduce the possibility of breakage if accidentally dropped.

The dual terminal breakers also provide a DIN clip which can be released when necessary, as well as individual part numbers shown on each circuit breaker that are legible when installed in the panel.

The greatest value a company can offer is to focus on its customers' needs and innovate in a way to solve their challenges. The creation of the dual terminal circuit breaker is just one more reason Altech has held its superior position in the industrial marketplace. The UL489 will not only save OEMs and end users money in stocking, but will provide easy replacement of systems already in the field.

<https://www.altechcorp.com/>

ALTECH CORPORATION is an established United States supplier of components and devices used in industrial control, instrumentation, medical and automation applications. Altech provides a very broad line of products that meet UL and international standards and are RoHS and REACH compliant. Altech's commitment to continuous quality management has been recognized since 1999 when they were awarded ISO 9001 certification.