

Off-The-Shelf Cable Solutions Soar in Popularity



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Cables are a critical part of a growing number of consumer and commercial systems in a variety of industry segments.

In today's rapidly growing and changing markets, designers for applications used in industries such as automotive, medical and computing, have less time to build out concepts. The challenges involved in identifying and testing out the appropriate cable solution for a new design or concept—particularly tooling, crimping and other cable assembly actions – cost the engineer valuable time.

TTI has collaborated with Molex to offer a wide variety of off-the-shelf power and signal cable solutions, providing design engineers with [pre-crimped leads](#) and [cable assemblies](#) that they can use during concept, prototyping and pre-production phases and beyond. This one-stop-shop approach gives engineers the ability to try out several Molex



connector and cabling solutions without having to worry about tooling and crimping. These off-the-shelf cable assemblies are cost-effective and reduce the time it takes to get a product from the concept phase to production.

CUSTOM CABLING CHALLENGES

When an engineer is looking for a cabling solution for a new prototype they often encounter the difficulty of accessing a variety of samples to assess how the products work with the equipment. When engineers purchase small quantities of cables to determine fit, function, flexibility and sizing, they are often challenged to create the assemblies and crimp contacts themselves. Hand tools are required to



build out samples, and engineers either need to purchase tools or use a third-party service to cut and assemble the wires. This do-it-yourself approach may result in poor crimping or broken terminals, in addition to adding lead times to the pre-production process. When off-the-shelf cable assemblies and pre-crimped leads can be purchased engineers can bypass these challenges and focus on testing products instead of constructing them.



STANDARD AND ON DEMAND

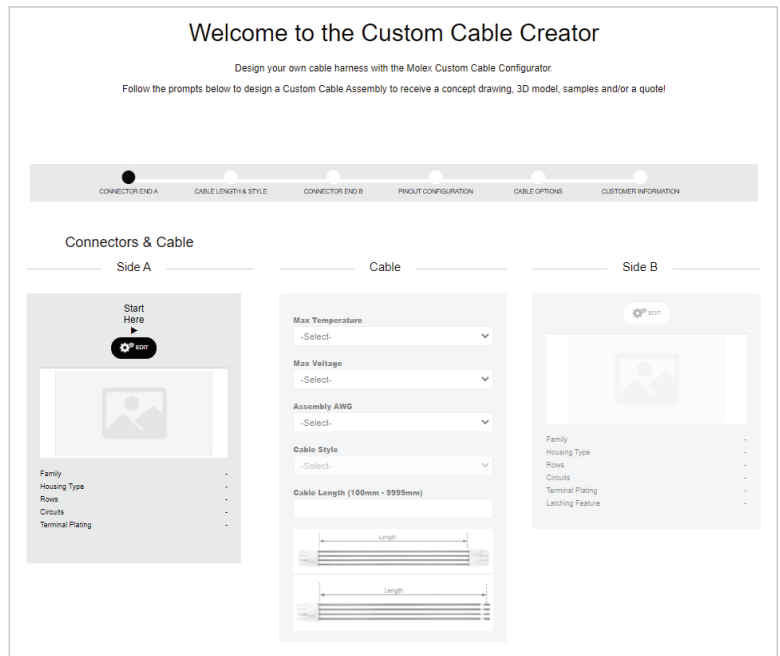
While many applications ultimately require a custom connector, the pre-production process can often be completed with standard, off-the-shelf products. This streamlined approach allows design engineers to order any variety of standard cable set, test them at a high level and then customize them if needed for full production. It has also made the off-the-shelf cable assemblies a realistic solution to prototyping with speed and ease.

TTI offers many product families of Molex's cable assemblies off-the-shelf and pre-crimped, so engineers can order any variety of solutions they'd like to try and completely bypass the need to handle the assembly themselves.

The benefits of this solution don't stop at the prototyping phase—once the engineer has found a product that will meet the application's needs, they can easily customize the Molex cable through a custom configurator, streamlining the transition to initial production. An additional order of pre-crimped cables can also be sent to the customer for feedback, eliminating months of lead time. If the off-the-shelf cable assembly works for the application and does not need to be customized, the procurement manager can order additional small quantities to get the product line up and running before putting in a larger order.

A GROWING TREND

Molex began offering OTS cable assemblies a few years ago and its popularity with engineers has led to expansion across nearly all their standard Signal and Power products. Tooling and assembly for prototype and test samples was a significant challenge which led to the same range of products being offered as pre-crimped leads to enable a customized assembly exactly to the customer's needs. With no required tooling or crimping, demand has elevated for these parts and cable assemblies. Molex and TTI continue to develop this range, and TTI stocks all of them to support the customer base accordingly. Needless to say, this service delivering already-assembled solutions has become even more important as design houses have implemented remote or flexible work environments due to the pandemic.



More customers are also using the off-the-shelf cable assemblies in production due to the ease and quality of the product. But if they want a customized product based on a sample they designed-in, Molex's [custom cable configurator](#) enables engineers to specify the length, pinout, housing type and other factors of the off-the-shelf cable used in the prototyping phase.

The relationship between TTI and Molex has resulted in this unique and cost-effective solution, creating a one-stop shop that allows engineers to focus on the design, not do-it-yourself assembly or third-party cable houses. This approach has proven to be cost effective, reducing time to market and providing best-in-class products and support.



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