Molex provides a complete off-the-shelf cable solution, saving customers tooling costs, expediting development cycles and adding convenience to the purchasing process.

**BUSINESS CHALLENGE**

High tooling investments and one-off custom builds lead to costly, time-intensive development cycles for cable assemblies.

The time and cost investments associated with prototyping cable assemblies for UL testing can be quite significant, extending several weeks in total and costing thousands of dollars. Prototyping cable assemblies requires tooling to crimp terminals, which could lead to prototype failure if improperly crimped. Various connector challenges can also lead to end-product failure, such as mis-mated connectors, terminal backout and other assembly errors.

Once prototyping is complete, customers typically would then need to create drawings and find a supplier to build cable assemblies for end products. This design time would typically add three to five days to the development cycle.

With heavy reliance on custom cables, a clear need existed in the marketplace for a complete, off-the-shelf cable solution that could eliminate tooling costs and the typical four to six weeks it takes to set up the tooling, while also preventing end-product failure. With customers no longer needing to specify their design requirements, companies can benefit from the enhanced convenience of working with one vendor and are able to negotiate high-volume discounts on a single component and achieve significant cost savings.

**SOLUTION**

Molex delivers a complete cable solution with a broad offering of connectors and a variety of lengths, facilitating both prototyping and global production.

Conversations with customers led Molex to consider ways of simplifying the process for purchasing and prototyping cable assemblies. By delivering a complete cable solution with off-the-shelf-availability; the power, small form factor and premium housing features of its most popular connectors; along with a terminal position assurance (TPA) retainer, Molex Off-the-Shelf (OTS) Cable Assemblies could reduce costs associated with tooling, ease design requirements, expedite time to market and provide the convenience of using one vendor for the entire cable solution.

After overwhelming initial success in use with Molex’s most popular connector family, Molex OTS Cable Assemblies have been expanded to CLIK-Mate, PicoBlade, Pico-Clasp, Pico-Lock, Mega-Fit, MicroClasp, Micro-Fit, Micro-Lock, Mini-Fit, Nano-Fit, Ultra-Fit, MultiCat and Mega-Fit connector systems. These connectors offer premium housing features to prevent mis-mating, avoid terminal backout and reduce operator fatigue during assembly. Because Molex cables are crimped using an industry-standard applicator and verified to meet all full-force and continuity tests, crimp-related failures can also be avoided. Backed by that assurance, customers do not have to question if their prototype or production failure mode stems from the cable. Molex OTS Cable Assemblies also use all UL-rated components and are assembled in ISO/TS16949-certified facilities to ensure high quality and meet current automotive industry standards.

Molex OTS Cable Assemblies are ideal for customers with limited PCB space, those using multiple headers of the same circuit size, and those customers who have issues with terminal backout. Markets and applications include consumer electronics, industrial automation, medical devices, and drones.

Off-the-shelf lengths are available in a variety of lengths, wire gauges and current ratings. Custom assemblies for production are also available to meet design needs after prototyping is complete.
KEY BENEFITS

Off-the-shelf cable assemblies solve tooling start-up costs and expedite development cycles:

• Enables designers to build prototypes faster and focus on other sections of their design
• Helps prevent assembly errors and terminal back-outs, avoiding end-product failure
• Provides the convenience of using one vendor for the entire cable solution
• Single component allows customers to negotiate high-volume discounts