



INDUSTRIAL SWITCH

Industrial Electrical Control Leader Leverages Molex Turn-Key User Interface Manufacturing Expertise



BUSINESS CHALLENGE

A leading electrical components manufacturer headquartered in the U.S. was seeking a manufacturer supplier to partner in the design and production of industrial control switch pads.

To expedite project planning, they wanted a partner that could provide frontline engineering support in their time zone and language. Their design plans called for multiple versions of an industrial user interface incorporating a rubber keypad and LEDs intended for use in multiple end product platforms. They needed an experienced team to streamline the design process, and help avoid redundant design and manufacturing processes.

They found Molex to be a partner with global manufacturing capabilities that could deliver the local engineering and design support in the same time zone and language, while providing the economies of scale of a global supply chain solution. Cost containment was critically important to ensure competitive pricing and value to their end users.

SOLUTION

Molex delivered on all counts.

The U.S. switch engineering team worked closely with the customer to ensure a successful design and smooth transition to manufacturing locations in Asia. Molex design and manufacturing operations worldwide share the same global engineering design platform, so the user interface specifications and design integrity remained consistent throughout the process.

Molex ensured a smooth production process, while providing the real-time and face-to-face communication the customer's design engineers needed. Molex was able to deliver manufacturing savings and reduce shipping costs by utilizing its flex-manufacturing facilities in Asia. The switch pad components were produced at a lower cost in east Asia, then fully assembled into the user interface before being shipped for integration into the finished product in the customer's southern Asia-based facility.

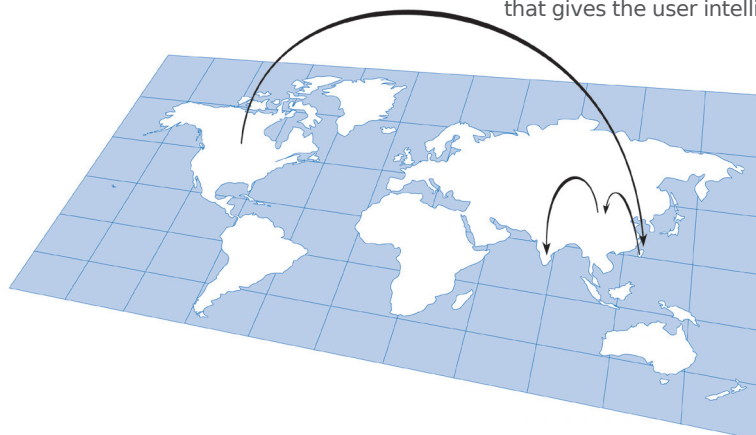
From a design standpoint, Molex was able to help standardize the overall user interface design for optimal compatibility with the customer's current and future industrial control product offerings. By focusing on standardizing materials

and parts, Molex delivered sourcing and manufacturing savings, while also reducing the number of different SKUs required, which is a value-add for not only the customer but the end users.

As the project design phase transitioned into production, the customer made a last minute request for the design of a UL (Underwriters Laboratories) version of the switch pad, which would be required by approximately 20 percent of end users. Experienced in UL third-party certified electrical component and product design, Molex engineered a second version of the electrical control pad using higher grade adhesives and graphic materials.

As a one-source supplier of vertically integrated components, the Molex team's in-depth knowledge of EU Restriction of Hazardous Substances (RoHS) directives for industrial monitoring and control instruments helped ensure the user interface met necessary requirements. Molex electrical and electronic equipment (EEE) components met RoHS directives.

The industrial switch pad comprises a robust user interface pad that can be dropped into multiple variations of the customer's product offerings. The Molex user interface controls the 3-phase energy and power measurement with data logging, power quality analysis, alarm and I/O functionality in a compact industrial meter that gives the user intelligent power control.





KEY BENEFITS

Vertically-Integrated Global Design and Supply Chain

- Streamlined communications and engineering integrity
- Rapid response to customer's dynamic specifications
- Expertise in designing to UL certification standards
- Single source for RoHS compliant cable, electrical and user interface components
- Flex-manufacturing efficiencies and cost savings

Vertically integrated switch engineering and manufacturing capabilities deliver significant cost savings. Customers have the peace of mind knowing that they can connect with us anytime—and somewhere in the world their Molex team is working collaboratively to design and deliver the right solution.

INTEGRATED SWITCH FEATURES – RUGGEDIZED FOR INDUSTRIAL SETTINGS

- Rugged, water-resistant switch gasket designs prevent moisture ingress in outdoor applications
- UV-protected user interfaces to safeguard against direct sunlight exposure
- Manufacturing and assembly specifically designed for unique LCD coating process
- Industrial environment aesthetics are high value as part of Molex device design and manufacturing processes

To learn more visit www.molex.com/ab/membraneswitchproducts.html