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FOR IMMEDIATE RELEASE

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[MHP-TAC Series Resettable Over-temperature Protection Devices](#)

Resettable Over-temperature Protection Devices Boost LiP and Prismatic Battery Safety, Save Space

Simplify creating smaller, safer battery-powered devices with longer battery life

CHICAGO, September 10, 2018 — [Littelfuse, Inc.](http://www.littelfuse.com) today introduced MHP–TAC (Metal Hybrid PPTC – Thermal Activated Compact) Series Resettable Over-temperature Protection Devices, the latest addition to its line of battery mini-breakers. These devices connect a PPTC (Polymeric Positive Temperature Coefficient) device in parallel with a bimetal protector (a resettable thermal cut-off device) to protect the high-capacity lithium-ion polymer (LiP) and prismatic battery cells used in mobile devices and consumer electronics from damage caused by overheating and overcurrents.

In normal operation, current passes through the bimetal contact because of its low contact resistance. During an abnormal event, the device reacts to the rise in cell temperature, causing the bimetal contact to open at the specified temperature and its contact resistance to increase. At this point, the current shunts to the lower resistance PPTC, which acts as a heater and helps keep the bimetal protector open and in a latched position until the fault is removed.

The combination of small form factors, high cell capacities and high battery discharge rates typical of LiP and prismatic battery protection applications demands a circuit protection device with low thermal cut-off temperatures (<90°C), high hold current ratings (>6A) and a compact size. When compared with other devices of this type, the MHP–TAC Series offers higher voltage ratings, higher hold currents, more

temperature rating options, and a thinner, smaller form factor, which reduces battery pack design space requirements.

Typical applications for MHP-TAC Series Resettable Over-temperature Protection Devices include LiP and prismatic battery cells intended for use in battery-powered devices such as notebook PCs, ultra-books, tablets, smart phones and e-cigarettes

“At just 4.75mm x 2.80mm x 0.80mm, the MHP-TAC Series is the smallest overtemperature protection device available for lithium-ion battery cells used in today’s mobile devices and consumer electronics,” said Amy Chu, Product Manager, Electronics Business Unit at Littelfuse. “Not only can it help our battery manufacturer customers save valuable design space and weight, but it helps their products meet today’s heightened battery safety requirements.”

MHP-TAC Series Resettable Over-temperature Protection Devices offer these key benefits:

- High voltage and high current ratings and low resistance ensures the MHP-TAC Series is capable of handling the battery voltages and battery charge/discharge currents common in high-capacity lithium-ion polymer and prismatic cells
- The thin, compact form factor saves space, simplifying circuit protection in ultra-thin battery pack designs.
- Welding extension leads can be customized, which can facilitate matching them to the battery design.

Availability

MHP-TAC Over-temperature Protection Devices are available in bulk in quantities of 1,000. Sample requests may be placed through authorized Littelfuse distributors worldwide. For a listing of Littelfuse distributors, please visit Littelfuse.com.

For More Information

Additional information is available on the [MHP-TAC Over-temperature Protection Device product page](#). For technical questions, please contact: Amy Chu, Product Manager, Electronics Business Unit at Littelfuse, Achu2@littelfuse.com.

About Littelfuse

Founded in 1927, Littelfuse is the global leader in circuit protection with advancing platforms in power control and sensor technologies. The company serves customers in the electronics, automotive and industrial markets with products that include fuses, semiconductors, polymers, ceramics, relays and sensors. Littelfuse has more than 11,000 employees in more than 50 locations worldwide. For more information, please visit Littelfuse.com.

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