



## Case Study: MPD CR2032 Coin Cell GLIDER™ Battery Holder

### Business situation

Mars International client MPD Memory Protection Devices of Farmingdale, New York needed an innovative coin cell battery holder for their medical device, handheld consumer product, electronic card, electronic toll tag, single-use device, alarm system, main board, PND and RFID customers. The market called for a hybrid design that could include a retainer and a holder. The finished product needed to offer the price competitiveness of a coin cell retainer, while at the same time giving a better and more reliable connection than the standard battery holder under the most demanding conditions that medical devices and other products experience under normal use.

### Technical situation

Mars engineers were challenged to develop a 3 sided coin cell battery holder that could be easily soldered and installed in the simplest and quickest method possible. The holder must provide an extremely positive fit and secure connection without having polarity issues if improperly inserted. The product needed to be manufactured for durability, shock/drop/vibration resistant, ease of installation and at the right price.

### Solution & Benefits

The Mars MPD Glider utilizes a special plastic tray that secures the coin cell and glides easily into the nickel-plated, non-magnetic, phosphor bronze retainer. The unique "built-in circuitry protection" design prevents the battery from polarity reversal problems (installed upside down) while ensuring uninterrupted contact in an ultra-lightweight yet durable design. Retainers come with PC pins or can be surface mounted while accommodating solder requirements. The special Glider retainer provides a secure fit and results in a shock and vibration resistant installation.

**Range:** Gliders are available in 30 styles, ranging from 10mm diameter (CR1025) to 24mm diameter (CR2430). These devices are offered with through-hole or surface-mount leads, 15 versions of each, accommodating most assembly configurations. Variations that hold more than one battery for 6V applications are also available.

The retainer has specially engineered pressure contacts that result in low electrical resistance and are optimized to maintain the best connection with the battery possible.

Due to the Glider's intuitive design, the battery is easily changed without tools or instructions. It accommodates retainer mounting on PCB in an automated reflow solder process resulting in reduced labor costs to the customer. It is available in Tape & Reel (automation) format; allows for reflow soldering at 260°C without damage to battery (installed after oven processing.); and, is lighter than other options.

The coin cell battery can be loaded into the matching plastic tray and inserted into the retainer at any time during the assembly process. Once the battery has been installed into the tray, it simply glides into the retainer and clicks into place to provide a secure connection. The gliding tray insulates the cells, allowing for multiple coin cells to be installed in a series connection for higher voltage applications.

The Gliders family of coin cell holders is quickly becoming a popular product among medical and RFID products, where reliability, durability and ease of use are of paramount importance.

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GLIDER™ Battery Holder