

Industrial Solutions



Tecate Group offers a comprehensive range of ultracapacitor, lithium-ion capacitor, and capacitor components engineered to meet the demanding requirements of industrial applications across diverse markets. Designed for durability and performance, Tecate's compact cells, modules, and assemblies withstand extreme temperatures and harsh conditions, delivering reliable power solutions for the toughest industrial challenges.



Material Handling

Ultracapacitors offer significant advantages in material-handling applications such as automatic guided vehicles (AGVs) and autonomous mobile robots (AMRs). Unlike traditional batteries, ultracapacitors can charge and discharge rapidly, enabling quick energy top-ups during short downtimes or brief docking periods. This minimizes downtime and increases operational efficiency, especially in 24/7 logistics environments. Ultracapacitors also have a much longer cycle life—often exceeding one million cycles—making them ideal for frequent start-stop operations without the degradation seen in batteries. Ultracapacitors perform reliably in extreme temperatures and require minimal maintenance, reducing overall system costs. Additionally, their high power density supports strong acceleration and lifting capabilities, enhancing performance in dynamic warehouse and manufacturing settings.

Uninterruptible Power Supply

Ultracapacitors are increasingly used as uninterruptible power supplies (UPS) in industrial equipment to ensure seamless operation during power interruptions or voltage drops. Their ability to deliver immediate, high-power energy makes them ideal for bridging short outages or safely shutting down sensitive systems. Unlike batteries, ultracapacitors recharge quickly, have a much longer service life, and require minimal maintenance, reducing total cost of ownership. They also perform reliably in harsh environments, making them a robust and efficient backup-power solution for critical industrial processes.

Electric Valves

Ultracapacitors and lithium-ion capacitors are ideal energy-storage solutions for electric valve actuators, especially in applications requiring quick, reliable bursts of power. Their ability to deliver high power instantly ensures fast and efficient valve operation, especially in emergency or fail-safe scenarios. Unlike batteries, ultracapacitors have a long cycle life and operate effectively across a wide temperature range, reducing maintenance needs and increasing system reliability. Their compact size and high power density make them well suited for space-constrained environments where consistent performance is critical.

Barcode Scanners/POS Systems

Ultracapacitors and lithium-ion capacitors enhance the performance of handheld barcode scanners and POS systems by providing quick, reliable bursts of power for peak energy demands such as wireless transmission and rapid scanning. Their fast charging capability and long cycle life reduce downtime and maintenance compared to traditional batteries. A key advantage is their ability to support hot-swap functionality, allowing batteries to be replaced without shutting down the device, ensuring uninterrupted operation in busy retail or warehouse environments. Ultracapacitors also perform well in a wide range of temperatures, making them a dependable power solution in both indoor and outdoor settings.

