Why is power protection important?
Smartphones, PCs, servers, and the Internet of Things (IoT) have been driving the demand for semiconductor chips for decades. This trend has driven the demand for more chips, particularly memory chips, which in turn has spurred memory chip manufacturers to invest quickly in new chip fabrication plants.

Companies in China have also increased their investment in chip fabrication and back-end packaging plants, in line with China’s ‘Made in China 2025’ plan. These newly built leading edge technology plants cannot afford to lose time, money, and market share through production losses due to power quality events such as voltage sags and power outages. Power protection is required to ensure these investments are protected.

Semiconductor industry
The semiconductor industry is important for many products used in our daily life, including memory, processors, sensors, power devices, optoelectronics, and displays. Facilities can be split broadly into three categories: silicon wafer plants that produce bare wafers, fabrication plants (FABs), which produce the chips, and packaging plants, which package and test the chips.

Lost production, poor quality, and downtime, eventually equate to profit loss and loss of market share for semiconductor FABs that are not sufficiently protected from power quality events. Every day semiconductor facilities face a potential risk from voltage events. Often we do not read about them in the news, except when a major event occurs. However, a major event that was recorded in March 2018, when there was a brief outage at Samsung’s Pyeongtaek NAND memory fabrication plant. An analyst estimated that 3.5 percent of the global NAND flash supply for March was affected by this event.
Instantaneous prevention of power interruptions

ABB offers low-voltage and medium-voltage power protection systems to protect the semiconductor industry against voltage sags and interruptions. This equipment is designed for various voltage inputs, power ranges and can be fitted for outdoor and indoor conditions.

- The PCS100 AVC-40 is an active voltage conditioner for large industrial and commercial applications. It uses no energy storage to correct sags and swells to ensure the critical facilities receive clean, premium power.
- PCS100 UPS-I is a high performance, high efficiency industrial UPS that ensures protection from power quality events, such as deep sags or short-term outages. It enables continuous power supply to modern industrial processes.

- The PCS120 MV UPS is the next generation of medium-voltage UPS intended for multi mega-watt power protection. Based on the revolutionary ZISC architecture, the PCS120 MV UPS introduces a flexible solution for higher reliability and higher efficiency in critical power facilities.

To find out more about ABB’s power protection solutions:
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