

BIC-5K Series

5kW AC↔DC Grid-Tied Bidirectional Energy Conversion Power Supply

In recent years, rising energy costs have driven enterprises and end users to pursue green energy solutions and reduce electricity expenses. As a result, demand for AC↔DC bidirectional energy conversion power supplies have continued to grow. The MEAN WELL BIC-2200 Series has been widely recognized in the market for many years. To meet increasing power requirements, MEAN WELL now introduces the new 5,000W — BIC-5K series.

The BIC-5K is designed for bidirectional energy conversion. It can convert AC power to DC power to charge batteries, and recover DC energy, converting it back to AC power and feeding it into the grid. Through this energy recovery and reuse mechanism, enterprises and users can effectively reduce electricity costs while improving energy efficiency and lowering carbon emissions.

Key specifications and features include high efficiency and energy savings, <1ms seamless bidirectional switching, parallel operation up to 30 kW, built-in communication interfaces, a 5-year warranty, and comprehensive global certifications. Typical applications include battery cell formation and grading, battery test systems, power supply burn-in systems, energy storage systems, and V2G (Vehicle-to-Grid) applications.

Key Features

- 180~305 Vac input range
- Fully digital design with efficiency up to 93.5%
- Fast bidirectional switching < 1ms (AC/DC ↔ DC/AC)
- Low THDi <3% and high power factor up to 0.99
- Parallel operation supported, expandable up to 30 kW (5+1 units)
- Built-in CANBus or MODBus communication interface
- Supports multi-unit configuration for three-phase (3Ø) systems
- Comprehensive protection functions: anti-islanding, AC abnormality, DC over-voltage, overload, short circuit, and over-temperature protection
- Wide operating temperature range of -30 to +70°C
- Low-noise cooling fan (<43~54dB)
- PCB conformal coating for enhanced durability
- Certified to CB / UL / TÜV / RCM / EAC / CE / UKCA, including 62368-1, 62477-1, and grid-connection standard 50549-1
- 5-year warranty