

Solve Design Challenges for Cardiac Products at Advanced Energy's Customer Experience Center (CEC)

INDUSTRY

Medical – Patient Care

SOLUTION

Customized SL Power™
MB65

EQUIPMENT

Cardiac monitoring
and assist device

CHALLENGE

A leading medical manufacturer recently partnered with AE to create a custom solution for their cardiac monitoring and assist device. Their current design exhibited erratic operation when integrated to the device so the manufacturer reached out to AE to solve this critical issue. The customer visited Advanced Energy's Medical CEC in Sharon, MA, United States to conduct analysis and testing. Analyses of the system load showed that while the normal quiescent power draw was less than half of the power supply rating, peak currents caused erratic operation.

SOLUTION

The CEC team recommended a power supply with lower power rating and additional peak current capability. This solution is less costly while providing the steady state and peak currents required by the system. AE's CEC experts worked with the customer to customize our standard Advanced Energy SL Power MB120 AC-DC medical power supply.

Modifications included:

- Peak current capability,
- CF Isolation rating,
- $10\mu\text{A}$ patient leakage current,
- Added cables to allow easy integration to the device.



RESULT

During the qualification phase, the customer visited AE's Customer Experience Centre numerous times to test and troubleshoot EMI performance, conduct thermal analysis and test leakage current at the system level. Due to the technical knowledge and application expertise of the design engineering team, the customized product was quickly documented and readied for production. This gave the customer the confidence in the solution and matched the timelines required to complete their project deadlines.



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