

Infusion Pump Power Supply: Rugged, Reliable, Low leakage, Customized to Match Customers End System

INDUSTRY

Medical – Infusion Devices

SOLUTION

Customized ME20A12V

EQUIPMENT

Infusion Pump

CHALLENGE

The end-customer was using an adapter specified by another division in their company which was failing in the field. These continuous failures were costing them thousands of dollars, and more importantly damaging their reputation with their customers. Infusion pumps require a reliable and consistent source of power, making the selection of a suitable power supply an essential consideration. The Advanced Energy team was presented with the opportunity to replace the existing product by providing a more robust, mechanical design, while also meeting their stringent leakage current and other critical specifications.

SOLUTION

The proposed solution by the AE engineering team was a customized ME20A12V external adapter. This product was able to satisfy the enhanced ruggedness that was desired for the end system and provide the required electrical performance needed to operate the infusion pumps.

Advanced Energy customized the adapter:

1. A custom white colour enclosure
2. Designed into the enclosure is a moulded-in “clip” to mount the adapter on the pole holding the pump.
3. Enclosure was designed to meet IP67 (waterproof) testing, which was essential.
4. Input and output cabling were a custom white to match the enclosure This creates consistency across the system.
5. AE designed all strain reliefs to be smooth, to precipitate cleaning as required by hospitals, etc.
6. Patient Leakage current less than 10uA was also required and provided with margin.



RESULT

The customer was able to qualify the AE solution quickly with the help of the AE Customer Experience Center (CEC) where they were able to perform EMI and EMC testing with their end device onsite, ensuring their external lab certification was obtained the first (and only) time they submitted. Advanced Energy was able to facilitate shipping the product so that the customer could maintain compliance and keep and obtain new government contracts. Choosing a customized AE product saved the customer time as they were able to implement an improved power solution, quickly, and saved on costs by avoiding numerous submissions to their outside lab for certifications.



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