



DIGITAL WARD TROLLEY

FANLESS POWER SUPPLY FOR MEDICAL TECHNOLOGY

Project description

The company JÜKE Systemtechnik develops and produces for Integriion a digital ward trolleys for patient visits in hospitals, which offers a mobile and fully-fledged PC workstation. For an ultra-compact energy system with a Li-ion battery and charging electronics JÜKE was looking for a long-lasting and fanless AC/DC switching power supply that meets international medical safety and EMC standards. With Bicker Elektronik, the individual requirements could be implemented in a tailor-made power supply solution.

The Challenge

A special requirement for the power supply was the output voltage of 33 V DC. Initially it was considered to use a standard power supply with a 36 V DC output to be down-regulated using a trim potentiometer. However, in order to optimally reflect the high quality standards and internal processes at JÜKE, a customer-specific power supply with preconfigured output voltage of 33V DC had to be supplied. Fanless operation in hospitals also required thermal analyzes and lifetime calculations for the mobile energy supply unit. For JÜKE and Integriion, medical technology conformity and electromagnetic compatibility are also of particular importance.

Ultra-Line

Height-adjustable IT ward trolley with an ultra-compact, mobile energy system for use during patient visits in hospitals. Developed by Jüke Systemtechnik GmbH for Integriion GmbH, which specializes in IT infrastructure for the healthcare sector.

JÜKE
Ideas in Technology
www.jueke.de

Integriion
SYSTEMINTEGRATION
www.integriion.de



"In Bicker Elektronik we have found a power supply specialist who has become a valuable partner for us both in terms of products and in terms of professional development support."

Steffen Hovestadt, JÜKE Systemtechnik GmbH

The solution

As a result of intensive collaboration, the special power supply version BICKER BEO-3036M-B1 was created – a compact AC/DC switching PSU with a precisely regulated 33VDC output and medical approval for the fanless power supply unit. The high quality and longevity of the BEO-3036M-B1 was confirmed both in the series and in the previous temperature measurements and lifetime calculations, including for the electrolytic capacitors of the power supply. The highly efficient power supply also impressed in terms of electromagnetic compatibility. The strict EMC limits could be met without additional filters, making system design and approval easier.

Advantages & customer benefits

Digitalisation is very important in modern healthcare. IT solutions such as the Integrion ward trolley offer the necessary mobility and flexibility for clinic staff. When it comes to safety, efficiency and longevity in the medical technology environment, the power supply plays a crucial role. Thanks to the customer-specific solution from Bicker Elektronik, reliable operation of the system is ensured for many years. The successful cooperation between the three companies thus contributes to improving the quality of daily patient care.



BEO-3036M-B1

Fanless AC/DC medical power supply 3x5"

- Precisely regulated 33V DC output
- 250 W continuous power fanless
- IEC/EN/ANSI/AAMI 60601-1 certified
- High efficiency up to 94%
- Wide temperature range -40...+70°C
- Designed for 24/7 continuous operation



More information & pictures
<https://bit.ly/3u3JIE0>

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