MICROPOWER DIRECT

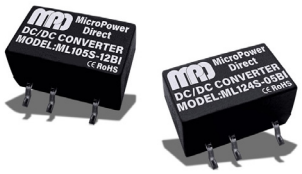
Category
Industrial Electronics & Computing

Application Area
I/O Interface Module

Product
MD100, ML100BI

Project Overview
A rugged I/O system required compact, high-isolation DC/DC converters to protect sensitive interfaces across industrial environments.

DATASHEET



DATASHEET

MPD supplies high-performance AC/DC power supplies and DC/DC power converters for demanding industrial and medical applications. With a focus on reliability, size efficiency, and responsive support, our solutions help engineers design with confidence.

A manufacturer of rugged computing and I/O systems was developing a compact interface module designed to connect with a wide range of industrial sensors and control devices. The design required ultra-reliable DC/DC converters to provide isolated power to sensitive signal conditioning circuits—while maintaining a small form factor and high performance in the field.

Key Design Goals:

- Multiple isolated low-power outputs
- 1,000 to 3,000 VDC isolation to prevent ground loops
- Compact SIP and SMT form factors
- Wide temperature tolerance for embedded use
- Low EMI performance to protect signal integrity

The team selected a combination of models from MicroPower Direct's MD100 and ML100BI series. Both families offer 1W output, up to 6 kVDC isolation, and strong EMI characteristics in miniature SIP and SMT packages. With efficiencies up to 88% and rugged construction, the converters were ideal for protecting isolated channels within tight PCB constraints.

The MD100 and ML100BI converters helped deliver compact, noise-resistant power for distributed I/O across industrial environments. Their small size and high isolation allowed for modular design flexibility while meeting long-term reliability expectations in the field.

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