INSTALLATION INSTRUCTION

M Series

50 W DC-DC & AC-DC Converters

OPERATION RANGE

Refer to product rating label for input and output ratings.

INSTALLATION

Connection to the system shall be made via the female connector H11; see Accessories datasheet: *Cassette Style Mating Connectors*.
Other installation methods may not meet the safety requirements.

Notes:

- Whenever the inhibit function is not in use, pin 2 (i) should be connected to pin 23 (Vo–) to enable the output(s).
- Do not open the converters, or warranty will be invalidated.

For more details refer to M Series datasheet / Application notes at belfuse.com and go to the respective product or family part number listing.

PROTECTION DEGREE AND CLEANING LIQUIDS

Condition: Female connector fitted to the converter.

- IP 40: All models, except those with options P or A, and except those with option D/V with potentiometer.
- IP 30: All models fitted with options A or option D/V without potentiometer.
- IP 20: All models fitted with option P or with option D/V with potentiometer.

In order to avoid possible damage, any penetration of liquids (e.g., cleaning fluids) has to be avoided.

CAUTIONS

All M Series converters are components, intended exclusively for inclusion within other equipment by professional installers. Installation must strictly follow the national safety regulations in compliance with the enclosure, mounting, creepage, clearance, casualty, markings and segregation requirements of the end-use application.

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

SAFETY OF OPERATOR-ACCESSIBLE OUTPUT CIRCUITS

If the output circuit of a DC-DC converter is operator accessible, it shall be a ES1 circuit according to the standard IEC 62368-1.
It is the sole responsibility of the installer to assure the compliance with the applicable safety regulations.

ISOLATION AND PROTECTIVE EARTHING

The converters are provided with the leading pin 26 (⏚), which is reliably connected with the case. For safety reasons, it is essential to connect pin 26 with the protective earth of the supply system.

The electric strength test is performed in the factory as routine test in accordance with EN 62911 and IEC/EN 62368-1. The company will not honor any warranty claims resulting from incorrectly executed electric strength field tests. The resistance between earth connection and case (<0.1 Ω) is tested as well.

FUSING

A fuse holder containing a slow-blow type fuse (size: 5 × 20 mm) is mounted in the back plate of the converter. The fuse protects the converter against severe defects. It may not fully protect it at input voltages exceeding 200 VDC. In applications, where the converters operate at DC source voltages above 200 VDC, an external fuse or a circuit breaker at system level should be installed.

The fuse and a VDR form together with the input filter an effective protection against high input transients.

Note: For applications, where the fuse should not be accessible; see Option F.

Fuse types (slow-blow):

Series	Schurter type	Part number
AM1000 – 3000	SPT 10 A / 250 V	0001.2514
BM1000 – 3000	SPT 8 A / 250 V	0001.2513
FM1000 – 3000	SPT 5 A / 250 V	0001.2511
CM1000 – 3000	SPT 3.15 A / 250 V	0001.2509
DM1000 – 3000 EM1000 – 3000 LM1000 – 3000	SPT 2.5 A / 250 V	0001.2508

SERVICING

The product(s) must be returned to the Authorized Bel Service Center for repair with a pre-assigned RMA number.

LIMITED WARRANTY

For models with -9 and RoHS (suffix G) the company warrants each power supply of its manufacture for a period of five years from the date of original shipment. This warranty applies to defects in materials and workmanship that result in non-performance to published specifications. The product(s) must be returned to the Authorized Service Center for repair with a pre-assigned RMA number.
The company assumes no liabilities for consequential damages of any kind through the use or misuse of its products by any user. No other obligations are expressed or implied.
Please note that the specifications, terms, and conditions stated are subject to change without notice.

INPUT AND OUTPUT CONNECTOR DETAILS

Refer to the to M Series datasheet at belfuse.com.

MECHANICAL DIMENSIONS AND MOUNTING REQUIREMENTS

Refer to the M Series datasheet at belfuse.com.

ALLOWED MOUNTING POSITION

Make sure that there is sufficient airflow available for convection cooling and verify it by measuring the case temperature T_C, when the converter is installed and operated in the end-use application; see Thermal Considerations in the datasheet at belfuse.com/power-solutions.

NUCLEAR AND MEDICAL APPLICATIONS

These products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS

The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.

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