



# Certificate of Compliance

Certificate: 70027614

Master Contract: 170351

Project: 70027614

Date Issued: April 08, 2015

Issued to: **Bel Fuse Inc.**  
206 Van Vorst St  
Jersey City, New Jersey 07302  
USA  
Attention: Editha S. Vergara

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*



Issued by: *Juan-Carlos Olivera*  
Juan-Carlos Olivera,  
MSc.

## PRODUCTS

CLASS - C531111 - POWER SUPPLIES-Component Type (CSA 60950-1-07-2nd Ed)

CLASS - C531191 - POWER SUPPLIES-Component Type (UL 60950-1-2nd Ed) Certified to U.S. Stds

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

Component type power supplies intended for use with Information Technology and Business Equipment, where the suitability of the combination is to be determined by CSA Group.

DC-DC Power Supply, Model 70/110 IMX and KMX series; specified as follows:

Typical Model designation:

I-	70	IMX	35	D05	D05	- 9Z
	I	II	III	IV	V	VI

Input Voltage Ratings: 70 = 40-121 V dc  
110 = 60-150 V dc

II- Model Series: IMX, or KMX



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III- Maximum Output Power: 35 = 35 Watts.

IV- Output Voltage Rating: <sup>1)</sup> -03 = 3 Volts dc  
<sup>1)</sup> -05 = 5 Volts dc  
<sup>2)</sup> D05 = 5 Volts dc  
<sup>2)</sup> D12 = 12 Volts dc  
<sup>2)</sup> D15 = 15 Volts dc

V- Output Voltage rating: <sup>3)</sup> D05 = 5 Volts dc  
<sup>3)</sup> D12 = 12 Volts dc  
<sup>3)</sup> D15 = 15 Volts dc

VI - Options Suffix: (May Be Combined) 8 = -40 110°C (Operating ambient temperature range)  
9 = -40 71°C (Operating ambient temperature range)  
i = Inhibit  
Z = Open Frame

- <sup>1)</sup> Output No. 1 for models with triple output.
- <sup>2)</sup> Output No. 1 and 4 for models with quad outputs.
- <sup>3)</sup> Output No. 2 and 3 for models with quad outputs.

Notes:

1. X suffix may be followed by a dash (-) and suffix letters and/or numbers denoting non-safety-critical options (unless described otherwise in the report) such as, but not limited to, open frame, positive or negative shut down, non-standard pin configuration, increased electric strength, etc.
2. Any combination of input voltage and output voltages shown above creates a valid model number.

**APPLICABLE REQUIREMENTS**

- CAN/CSA-C22.2 No 60950-1-07, +Am.1:2011 +Am.2:2014 – Information Technology Equipment - Safety - Part 1: General Requirements
- ANSI/UL 60950-1-2014 – Information Technology Equipment - Safety - Part 1: General Requirements

**CONDITIONS OF ACCEPTABILITY**

1. All models are intended to be supplied from an isolated secondary circuit. For the purpose of applying insulation requirements, the input to this DC to DC converter is identified as Hazardous Voltage Secondary Circuit, therefore, basic insulation is provided between the input and output of the converter.
2. Output circuits are ELV. Output circuits may be considered SELV only if one side of the circuit is reliably connected to protective earth. Outputs are below hazardous energy levels.



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3. The input/output connectors are not acceptable for field wiring and are only intended for connection to mating connectors of the internal wiring inside the end-use product. The acceptability of these and the mating connectors relative to secureness, insulation materials, and temperatures shall be considered.
4. A suitable Electrical, Fire and Mechanical enclosure shall be provided.
5. All models were submitted and tested for a maximum manufacturer's recommended ambient operating temperature of 110°C for -8 models and 71°C for -9 models. Consideration should be given to measure the temperatures on the unit when the converter is installed in the end-use equipment.
6. The maximum working voltage present for model 110IMX35D15D15-8Z is 169 V rms, 200 Vpk, The Electric Strength Tests in the end product shall be based on these values.
7. The units were tested for an input voltage range per the tables in the General Product Information section of this report with zero tolerance. If used outside these voltage ranges, additional testing may be required.
8. Special enclosure consideration should be given to the end-use installation. Hazardous voltage is available on the surface of the PWB for the "Z" option only. The end-use product should be reviewed to determine whether accessibility requirements are met for the end-use product.
9. Special spacing consideration should be given to the end-use product as the spacings between the unit and mounting surface have not been evaluated.
10. Abnormal and Component Failure tests were conducted with the power supply input protected by certified fuse, manufactured by Littelfuse, Cat. No. 451-005, rated F, 125 V dc, 5 A. If a fuse rated greater than 5A is used, additional testing may be required.



## *Supplement to Certificate of Compliance*

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*The products listed, including the latest revision described below,  
are eligible to be marked in accordance with the referenced Certificate.*

### **Product Certification History**

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<b>Project</b>	<b>Date</b>	<b>Description</b>
70027614	Apr 8 2015	DC-DC Power Supply, Models 70/110 IMX and KMX series. (C/US) (transferred from 173688 - 2262750 and upgraded to include Am1 and Am2)