

PWR-246E

Industrial DC to DC Converter

User Manual

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Product Warranty (2 years)

Advantech warrants to you, the original purchaser, that each of its products will be free from defects in materials and workmanship for two years from the date of purchase.

This warranty does not apply to any products which have been repaired or altered by persons other than repair personnel authorized by Advantech, or which have been subject to misuse, abuse, accident or improper installation. Advantech assumes no liability under the terms of this warranty as a consequence of such events.

Because of Advantech's high quality-control standards and rigorous testing, most of our customers never need to use our repair service. If an Advantech product is defective, it will be repaired or replaced at no charge during the warranty period. For out-of-warranty repairs, you will be billed according to the cost of replacement materials, service time and freight. Please consult your dealer for more details.

If you think you have a defective product, follow these steps:

1. Collect all the information about the problem encountered. (For example, CPU speed, Advantech products used, other hardware and software used, etc.) Note anything abnormal and list any onscreen messages you get when the problem occurs.
2. Call your dealer and describe the problem. Please have your manual, product, and any helpful information readily available.
3. If your product is diagnosed as defective, obtain an RMA (return merchandize authorization) number from your dealer. This allows us to process your return more quickly.
4. Carefully pack the defective product, a fully-completed Repair and Replacement Order Card and a photocopy proof of purchase date (such as your sales receipt) in a shippable container. A product returned without proof of the purchase date is not eligible for warranty service.
5. Write the RMA number visibly on the outside of the package and ship it prepaid to your dealer.

Declaration of Conformity

FCC Class B

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Technical Support and Assistance

1. Visit the Advantech web site at **www.advantech.com/support** where you can find the latest information about the product.
2. Contact your distributor, sales rep, or Advantech's customer service center for technical support if you need additional assistance. Please have the following information ready before you call:
 - Product name and serial number
 - Description of your peripheral attachments
 - Description of your software (OS, version, software, etc.)
 - A complete description of the problem
 - The exact wording of any error messages

Safety Instructions

1. Read these safety instructions carefully.
2. Keep this User Manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Use a damp cloth. Do not use liquid or spray detergents for cleaning.
4. For plug-in equipment, the power outlet socket must be located near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall may cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient overvoltage.
12. Never pour any liquid into an opening. This may cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If one of the following situations arises, get the equipment checked by service personnel:
 - The power cord or plug is damaged.
 - Liquid has penetrated into the equipment.
 - The equipment has been exposed to moisture.
 - The equipment does not work well, or you cannot get it to work according to the user's manual.
 - The equipment has been dropped and damaged.
 - The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS COULD DAM-**

AGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

16. CAUTION: DANGER OF EXPLOSION IF BATTERY IS INCORRECTLY REPLACED. REPLACE ONLY WITH THE SAME OR EQUIVALENT TYPE RECOMMENDED BY THE MANUFACTURER, DISCARD USED BATTERIES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

The sound pressure level at the operator's position according to IEC 704-1:1982 is no more than 70 dB (A).

DISCLAIMER: This set of instructions is given according to IEC 704-1. Advantech disclaims all responsibility for the accuracy of any statements contained herein.

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Introduction

Sections include:

- Specifications
- Connectors
- Pin Assignments
- Dimensions

Chapter 1 Introduction

1.1 Specifications

1.1.1 General Specifications

- **Input Voltage :** 24~48V_{DC} ± 10%
- **Operating Temperature:** -10 ~ 50° C
- **Storage Temperature:** -40 ~ 85° C
- **Operating Humidity :** 5 ~95%
- **Storage Humidity :** 5 ~95%
- **Voltage Tolerance (Output Voltage) :** 5%
- **Over Load Protection (OLP):** 110 ~ 160%
- **Min Load:** 0A
- **Max Load:** 5A
- **Over Voltage Protection (OVP):** 115 ~ 165%
- **Safety Standards:** UL EN60950-1, CB EN60950-1 2001, EMC
- **Input connector spec:** DECA MC211-F103
- **Output connector spec:** GOAL RAY EH003-157
- **Dimension: (WxHxD) :** 61 x 35.4 x 168.5 mm (2.4”x1.39”x 6.63”)
- **Weight:** Net (0.35kg), Gross (0.38kg)

1.1.2 Output Specifications

Model	O/P Volts Adj.±%	Load (current)			Ripple & Noise	Line REG.	Load REG.	Efficiency	O.V.P. Trip point
		Min	Rated	Max					
PWR-246E	12V±5%	0A	5A	5A	N/A	±5%@ 10% full load		80% min.	N/A

1.2 Connectors

The following connectors are situated on the box of PWR-246E :

Plug-In Block 3P Male (ME050-50803)

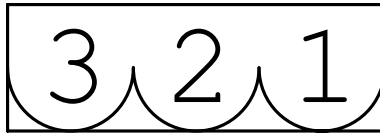
This block connector can be connected via the external plug-in block 3P with flanges Female MC211-F103 connector

12V_{DC} Power Output Cable

This cable with 12V_{DC} output will be connected to the FPM series products with 12V_{DC} input

1.3 Pin Assignments

1. GND 2. Vin 3. Chassis Gnd



1.4 Dimensions

PWR-246

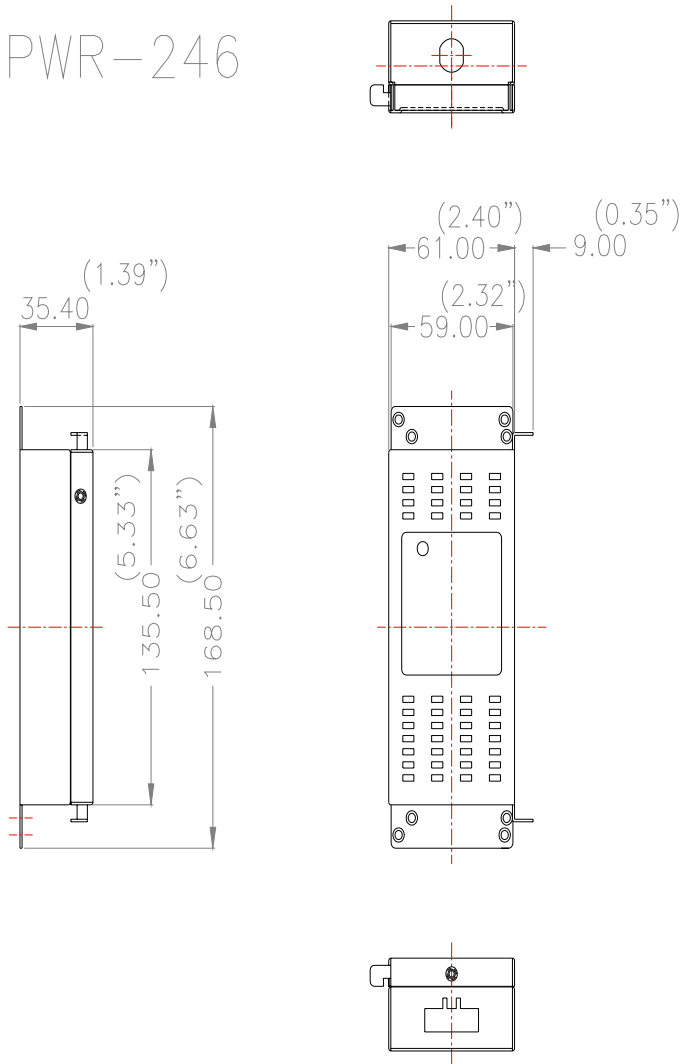


Figure 1.1: PWR-246 Dimensions

Mounting Methods

Sections include:

- FPM-3060G
- FPM-3120G/3121G
- FPM-3150G
- FPM-2150G
- FPM-3170G
- FPM-3171G
- FPM-3190G
- FPM-3191G

Chapter 2 Mounting Methods

2.1 Mounting to FPM Series Monitors

PWR-246E is designed for 12V_{DC} input to FPM products in Advantech. You can mounted in FPM products by using separately location or existing mount hole in the products.

2.1.1 FPM-3060G



2.1.2 FPM-3120G/3121G



2.1.3 FPM-3150G



2.1.4 FPM-2150G



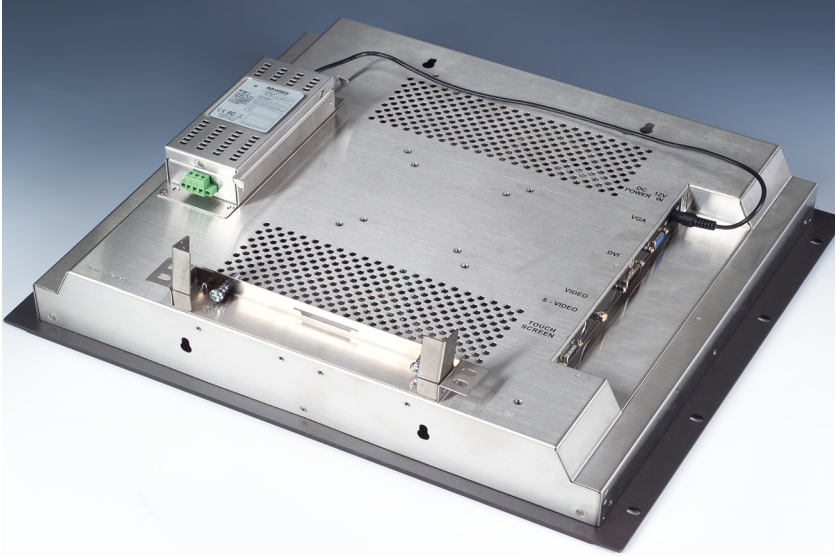
2.1.5 FPM-3170G



2.1.6 FPM-3171G



2.1.7 FPM-3190G



2.1.8 FPM-3191G

