



DMPS-10CE Power Supply User Manual

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Revision History

ISSUE	DATE	REASON FOR CHANGE
Issue 1	06/96	Original
Issue 2	11/98	Update Customer Information and Assistance section.

Admonishments

Important safety admonishments are used throughout this manual to warn of possible hazards to persons or equipment. An admonishment identifies a possible hazard and then explains what may happen if the hazard is not avoided. The admonishments — in the form of Dangers, Warnings, and Cautions — must be followed at all times. These warnings are flagged by use of the triangular safety icon (seen below), and are listed in descending order of severity of injury or damage and likelihood of occurrence.



Danger: *Danger is used to indicate the presence of a hazard which **will** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



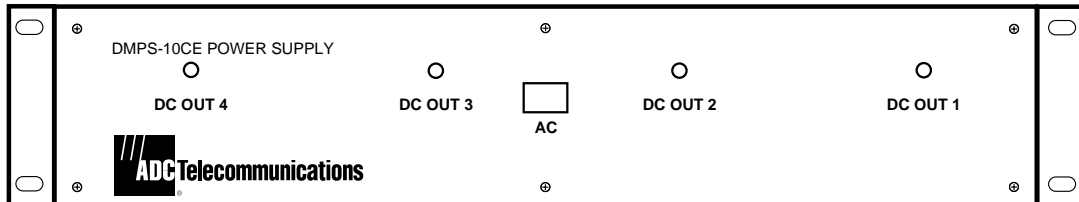
Warning: *Warning is used to indicate the presence of a hazard that **can** cause severe personal injury, death, or substantial property damage if the hazard is not avoided.*



Caution: *Caution is used to indicate the presence of a hazard that **will** or **can** cause minor personal injury or property damage if the hazard is not avoided.*

1. GENERAL

The DMPS-10CE Power Supply, as shown in **Figure 1**, is a rack mounted power supply providing +5, +12, and –12 Volts dc. It is expandable (with the basic power supply and up to three DMPS-10EXP/CE expansion modules) to a total of four dc power sources each providing + 5, + 12 and –12 volts.



8257-A

Figure 1. DMPS-10CE Power Supply

The power supply including the basic unit measures 3.5 × 19 × 11 inches (8.9 × 48.3 × 27.94 cm). Each DMPS-10EXP/CE expansion module measures 3.5 × 3.9 × 9.22 inches (8.9 × 9.91 × 23.5 cm) and fits into the basic power supply.

The DMPS-10CE has EN 60950 classification for use in Europe.

2. DETAILED DESCRIPTION

2.1 DMPS-10CE Power Supply (Basic)

The DMPS-10CE power supply is designed for the ADC Telecommunications PatchSwitch system but will work well with other applications. It will operate with any input voltage between 190 and 240 volts ac and any frequency between 48 and 62 Hz. Manual adjustments are not necessary. Only one ac input is necessary per shelf for up to four dc power sources (the basic unit plus three expansion modules).

Input ac power is supplied via a six-foot, three-conductor power cord equipped with a standard three prong with ground plug on one end and a special IEC 3-pin connector on the other. The special IEC 3-pin connector plugs into the back of the basic DMPS-10CE power supply. Fuses are installed at the factory as described in “Power-Up of the DMPS-10CE Power Supply” section, page 6 of this manual.

There are four LED indicator lights on the front of the unit to indicate whether the power supply and expansion modules are operating. The right-most LED (marked “DC OUT 1”) is for the basic unit. Each of the three others (marked DC OUT 2, 3 & 4) displays the condition of the expansion modules.

3. DMPS-10EXP/CE EXPANSION MODULE

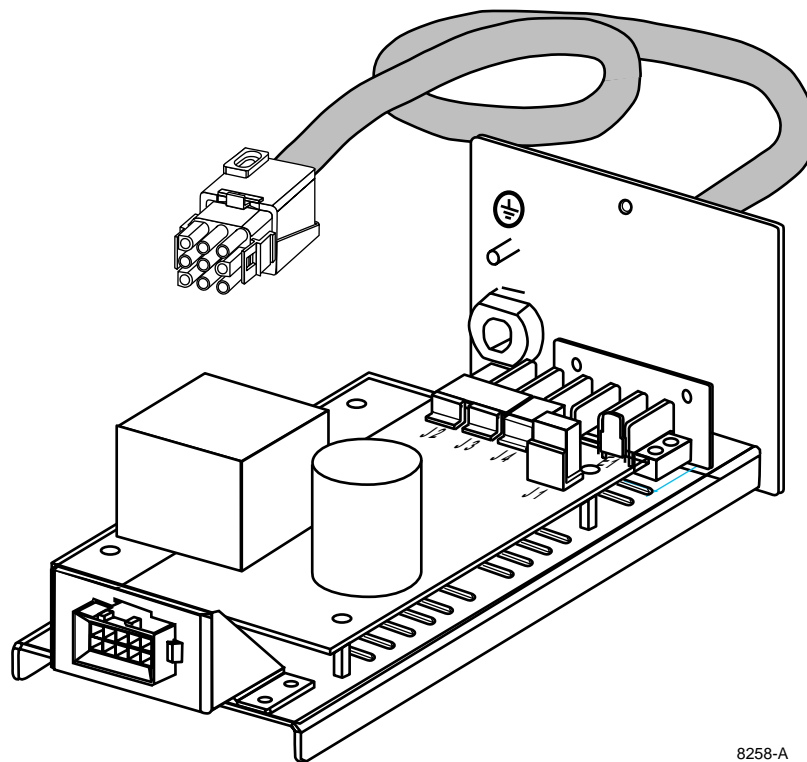
The DMPS-10EXP/CE Expansion Module, as shown in **Figure 2**, is designed to be installed into the DMPS-10CE Basic Power Supply as dc power requirements expand at an installation. The expansion module receives ac power from the basic shelf and is a completely self-contained power supply in all other respects.

Up to three expansion modules can be mounted into the DMPS-10CE Power Supply shelf. The shelf requires a single ac power source (190 to 240 Vac, 48 to 62 Hz) to deliver up to 4 dc outputs (via 9-pin cable connectors), each output supplying +5 Vdc, +12 Vdc and -12 Vdc. Any input voltage between 190 and 240 volts ac can be accommodated without adjustment to the power supply.

Outputs available from each of the modules (basic plus expansion modules) are +5 Vdc at up to 4.5 Amps, +12 Vdc at up to 1.0 Amp, and -12 Vdc at up to 0.5 Amp.

Regulation is maintained on the respective voltages, keeping them constant to the tolerances shown for the given current ranges:

- +5 Vdc \pm 5.0% for 0 to 4.5 Amps
- +12 Vdc \pm 10% for 0 to 1.0 Amps
- 12 Vdc \pm 10% for 0 to 0.5 Amps



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Figure 2. DMPS-10EXP/CE Expansion Module

Ripple voltage* is held to the following limits:

- +5 Vdc, at or below 50 Millivolts, Peak-to-Peak
- +12 Vdc, at or below 120 Millivolts, Peak-to-Peak
- 12 Vdc, at or below 120 Millivolts, Peak-to-Peak

* Measured with a device having a 50 MHz bandwidth.

4. SPECIFICATIONS

PARAMETER	SPECIFICATION
Input	
Voltage	190/240 Vac
Current	2 Amps Maximum (4 Modules)
Frequency	48 to 62 Hz
Fusing (On rear of basic unit)	220 Vac: 4-Amp, Dual, Time Delay
Output Each Module	
Voltage	+5 Vdc \pm 5% +12 Vdc \pm 10% -12 Vdc \pm 10%
Current	4.5 Amp DC Max. @ +5 V 1.0 Amp DC Max. @ +12 V 0.5 Amp DC Max. @ -12 V
Physical	
Chassis	3.5 \times 19 \times 11 inches (8.9 \times 48.3 \times 27.94 cm)
Expansion Module	3.5 \times 3.9 \times 9.22 inches (8.9 \times 9.91 \times 23.5 cm)
Environmental	
Operating Temperature	0° to 50° C (32° to 122° F)
Storage Temperature	-40° to +70° C (-40° to 158° F)
Operating Humidity	10 to 80% non-condensing
Storage Humidity	5 to 90% non-condensing
Electromagnetic Compatibility	Meets CISPR22 Class B radiated and conducted emissions.

5. OUTPUT CABLE ASSIGNMENTS

Output from the DMPS-10CE Power Supply is delivered via a 6 foot, 16 gauge cable, terminated in a 9-pin connector. Pin assignments on the connector are as follows:

Pin 1 — +5 Volts	Pin 6 — Earth Ground
Pin 2 — +5 Volts	Pin 7 — Common Ground for +5 and ± 12 V
Pin 3 — +12 Volts	Pin 8 — Common Ground for +5 and ± 12 V
Pin 4 — No Connection	Pin 9 — -12 Volts
Pin 5 — No Connection	

See [Figure 3](#) for sketch of the 9-pin connector.

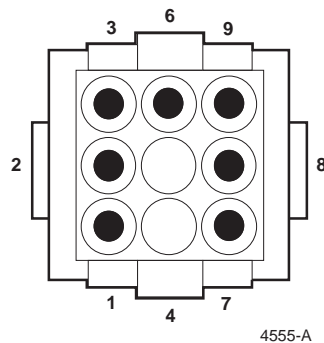


Figure 3. 9-Pin Connector

6. INSTALLATION

6.1 DMPS-10CE Power Supply Installation

Remove each item from its shipping container and inspect the units for signs of damage. If there are any damaged or missing parts, immediately file a claim with the commercial common carrier or its agent, and notify ADC Telecommunications, Inc.

Normally, the ADC DMPS-10CE Power Supply is shipped with the standard single power unit installed. Additional DMPS-10EXP/CE expansion modules are shipped in separate containers. Occasionally, a power supply may be shipped with expansion modules installed. In either case, installation of the power supply involves positioning the unit in the desired rack space, near an ac utility outlet, and securing it with the mounting hardware normally used on the mounting rack.

- **Note:** The DMPS-10CE Power Supply requires air for convection cooling. Air holes in the top cover and bottom cover allow air to flow through the power supply chassis. For this reason, be sure to mount the DMPS-10CE Power Supply in such a fashion as to leave at least half of the top and bottom surfaces open to air movement.

7. DMPS-10EXP/CE EXPANSION MODULE INSTALLATION

Remove the DMPS-10EXP/CE expansion module from its shipping container and inspect it for signs of damage or missing parts. If there are any damaged or missing parts, immediately file a claim with the common carrier or its agent, and notify ADC Telecommunications, Inc.

Notice the connector plug on the front of the expansion module and also notice the one extra-long pin on the plug. This pin is for chassis ground, and is extra long to assure that the ground connection is made first and broken last for your protection when installing or removing the unit.



Caution: *It is recommended that the expansion module not be installed or removed while power is connected to the power supply shelf.*

Proceed with the installation as follows:

- (a) Set the ac switch at the front of the power supply to off (down position), and unplug the power cord of the supply from its ac utility outlet.
- (b) Remove and dispose of one of the four by four inch metal covers on the back of the power supply by taking off the two screws holding it in place. Save the screws for use in step (e) below.
- (c) Notice the crimped sheet metal slots to the left hand side on the base of the power supply shelf. The left-hand side of the “U” shaped base of the expansion module must slide into these slots.
- (d) Holding the expansion module with the “U” shaped base down and the 5-pin connector plug forward, slide the module into the power supply, as shown in [Figure 4](#), until the connector pins engage the connector socket on the forward edge of the power supply. Push in firmly to ensure proper connection of all pins in the plug.

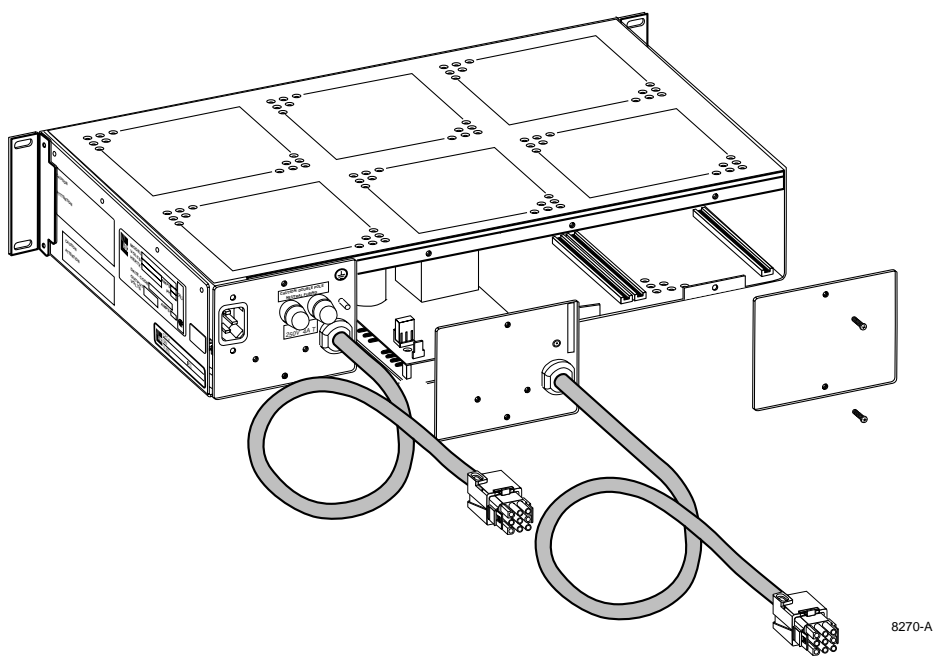


Figure 4. DMPS-10 EXP/CE Module Installation

- (e) Install the two screws removed in step (b) above to hold the expansion module in place.
 - (f) Connect the output power cable to the unit requiring the dc power. Pin assignments on the cable connector are defined earlier in this manual.
- **Note:** It is recommended that the DMPS-10CE Power Supply or the DMPS-10EXP/CE expansion modules be connected to a load before ac power is applied.

8. POWER-UP OF THE DMPS-10CE POWER SUPPLY

The DMPS-10CE Power Supply has dual panel-mount fuse holders (located on the rear) to provide over current protection in each leg of the ac input source. As shipped, the power supply is fused with two 4-amp, time-delay fuses. To power the DMPS-10CE power supply proceed as follows:

- (a) Turn the power switch located on the front panel to the OFF (“0”) position.
- (b) Connect the 220 Vac power cord provided to the power supply shelf.
- (c) Cut the plug off the other end of the power cord. Replace the plug with a plug that matches your utility outlet.
- (d) Connect the other end of the power cord to the utility outlet.
- (e) Set the ac switch at the front of the DMPS-10CE Power Supply to the on (“I”) position.
- (f) Verify that power LED is lit on the front of the power supply for the basic power supply and any expansion modules installed.

9. REPLACING THE LINE FUSE

The line fuses are located in dual panel-mount fuse holders on the back of the unit. To replace a line fuse/fuses:

- (a) Set the ac switch to OFF (“0”) position.
- (b) Remove the line cord from its utility outlet.
- (c) Disconnect the line cord from the socket in back of the DMPS-10CE Power Supply.
- (d) Turn fuse holder carrier in a counter-clockwise direction and remove fuse carrier from fuse holder. Fuse location is shown in [Figure 5](#).
- (e) Use an Ohm meter to check fuses for opens.
- (f) Replace the bad fuse/fuses and reinsert the fuse carrier back into its socket. Turn fuse carrier clockwise until fully seated.
- (g) Repeat Steps d – f for the other fuse.
- (h) Reconnect the power cord to the Power Supply and its utility outlet.
- (i) Set the ac switch to ON (“I”) position.

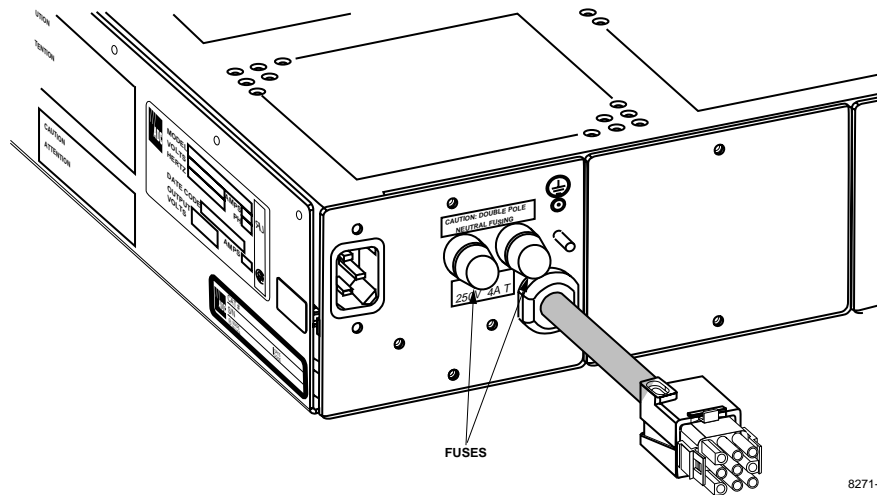


Figure 5. DMPS-10CE Fuse Location

10. CUSTOMER INFORMATION AND ASSISTANCE

For customers wanting information on ADC products or help in using them, ADC offers the services listed below. To obtain any of these services by telephone, first dial the central ADC telephone number, then dial the extension provided below.

The central number for calls originating in the U.S.A. or Canada is **1-800-366-3891**. For calls originating outside the U.S.A. or Canada, dial country code "1" then dial **612-946-3000**.

<p>Sales Assistance Extension 3000</p>	<ul style="list-style-type: none"> • Quotation Proposals • Ordering and Delivery • General Product Information
<p>Systems Integration Extension 3000</p>	<ul style="list-style-type: none"> • Complete Solutions (from Concept to Installation) • Network Design and Integration Testing • System Turn-Up and Testing • Network Monitoring (Upstream or Downstream) • Power Monitoring and Remote Surveillance • Service/Maintenance Agreements • Systems Operation
<p>BBG Technical Assistance Center Extension 3223 E-Mail: technical@adc.com</p>	<ul style="list-style-type: none"> • Technical Information • System/Network Configuration • Product Specification and Application • Training (Product-Specific) • Installation and Operation Assistance • Troubleshooting and Repair/Field Assistance
<p>Product Return Department Extension 3748 E-Mail: repair&return@adc.com</p>	<ul style="list-style-type: none"> • ADC Return Authorization number and instructions must be obtained before returning products.

Product information may also be obtained using the ADC web site at **www.adc.com** or by writing ADC Telecommunications, Inc., P.O. Box 1101, Minneapolis, MN 55440-1101, U.S.A.

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