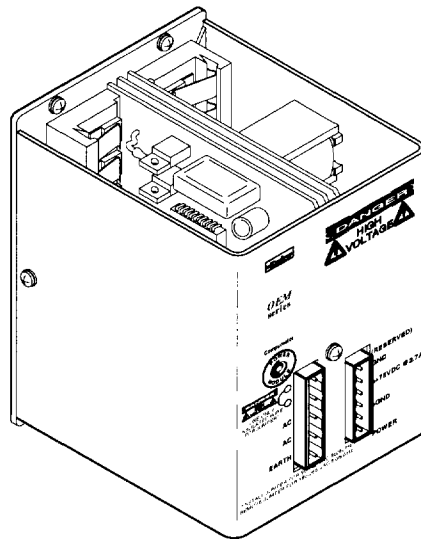


Compumotor

OEM300 Power Module User Guide



Compumotor Division
Parker Hannifin Corporation
p/n 88-013513-01 C



Important User Information

Installation & Operation of Compumotor Equipment

It is important that Compumotor motion control equipment is installed and operated in such a way that all applicable safety requirements are met. It is your responsibility as a user to ensure that you identify the relevant standards and comply with them. Failure to do so may result in damage to equipment and personal injury. In particular, you should review the contents of the user guide carefully before installing or operating the equipment.

Under no circumstances will the suppliers of the equipment be liable for any incidental, consequential, or special damages of any kind whatsoever, including but not limited to lost profits arising from or in any way associated with the use of the equipment or this user guide.

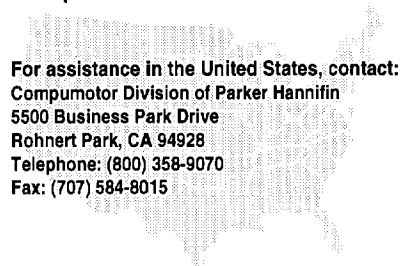
Safety Warning

High-performance motion control equipment is capable of producing rapid movement and very high forces. Unexpected motion may occur especially during the development of controller programs. KEEP CLEAR of any machinery driven by stepper or servo motors and never touch them while they are in operation.

High voltages exist within enclosed units, on rack system backplanes, and on transformer terminals. KEEP CLEAR of these areas when power is applied to the equipment.

Parker Compumotor constantly strives to improve all of its products. We reserve the right to modify equipment and user guides without prior notice. No part of this user guide may be reproduced in any form without prior consent from Parker Compumotor.

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88-013513-01 C

OEM300 Power Module User Guide

Revision C Change Summary

The following is a summary of the primary technical changes to this user guide since the last version was released. This user guide, p/n 88-013513-01 **C** (released on January 3, 1995), supersedes 88-013513-01 **B**.

JUMPER SELECTABLE AC INPUT VOLTAGE RANGE (PG. 11)

The OEM300 Power Module AC power input circuitry is no longer auto-ranging. A jumper on the AC power connector will now configure the OEM300 for 120VAC or 240VAC operation, as follows:

120VAC Operation – Jumper must be installed

240VAC Operation – Jumper must be removed

The OEM300 ships from the factory pre-configured for 120VAC operation, with a jumper installed on the connector. You must remove the jumper if you operate the OEM300 at 240VAC.

SYSTEM SIZING (PG. 45)

Chapter ⑥ explains how to determine how many step motor drives you can connect to one OEM300. A reference has been added to *Chapter ⑥* that says similar information about servo motor drives can be found in Compumotor's *OEM670T Torque Servo Drive User Guide*.

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P R E F A C E

MAYBE YOU SHOULDN'T READ THIS MANUAL!

Perhaps you are wondering, "How hard can it be to operate this Power Module? Why do I need a manual? Can't I just hook up AC power, plug in some output cables, and power up my system?"

You may be right! If you have experience designing motion control systems, then perhaps the only information you need can be found in *Chapter 2 Installation & Operation*. You may already know how to cool power supplies. You will have calculated the power your system requires, and you will connect the right number of drives to the Power Module. You will know about the hazards of load regeneration, and improper equipment grounding. And, you will probably take the proper steps to ensure electrical noise is not a problem in your system. So, if you are confident in your preparations, go ahead and plug away! And best of luck with the OEM300!

The rest of the information in this manual gives details about the issues mentioned above. Special benefits of using the OEM300 are also discussed, such as the protective circuits that guard equipment from damage by short circuits, load regeneration, or high temperatures. A troubleshooting section will help you locate problems. So, browse through the manual; you might find other topics of interest, too!

FOR THOSE WHO NEVER READ MANUALS

At least look at the next illustration. We have attempted to put all the critical information you need in this drawing. It is also shown on the back cover. Use it for quick reference. Consult the rest of the manual for detailed information.

OEM300 POWER MODULE

The OEM300 is *NOT* a general purpose power supply. Use it only with Compumotor OEM Series Microstepping or Servo Drives.

WARNING
NO USER SERVICEABLE PARTS INSIDE
 The OEM300 contains potentially lethal voltages! Do not attempt to repair it. Return the OEM300 to Compumotor for repairs.

HEATSINK

Attach Power Module's heatplate to a heatsink or heat sinking surface

HEATPLATE COOLING

- You must provide a Thermal Interface to cool the heatplate
- Use silicone thermal joint compound or thermal gasket
- Maximum Temp 60°C (140°F)

AMBIENT AIR COOLING

- Keep 2" clearance around top, bottom, and sides
- AIR TEMP LIMITS:**
- STILL AIR:
 35°C (95°F) @ 200W
 40°C (104°F) @ 170W
 - MOVING AIR
 45°C (113°F) @ 200W
 50°C (122°F) @ 170W

INPUT POWER

- 90-132VAC with Jumper Installed
 - 180-265VAC with Jumper Removed
 - **DO NOT USE 132-180VAC**
- INPUT CONNECTOR:**
- 5 Pin Removable Connector
 - 16 AWG Recommended

You must connect the EARTH terminal to EARTH GROUND!
 (Chassis, cover, EARTH, GND pins are connected internally)

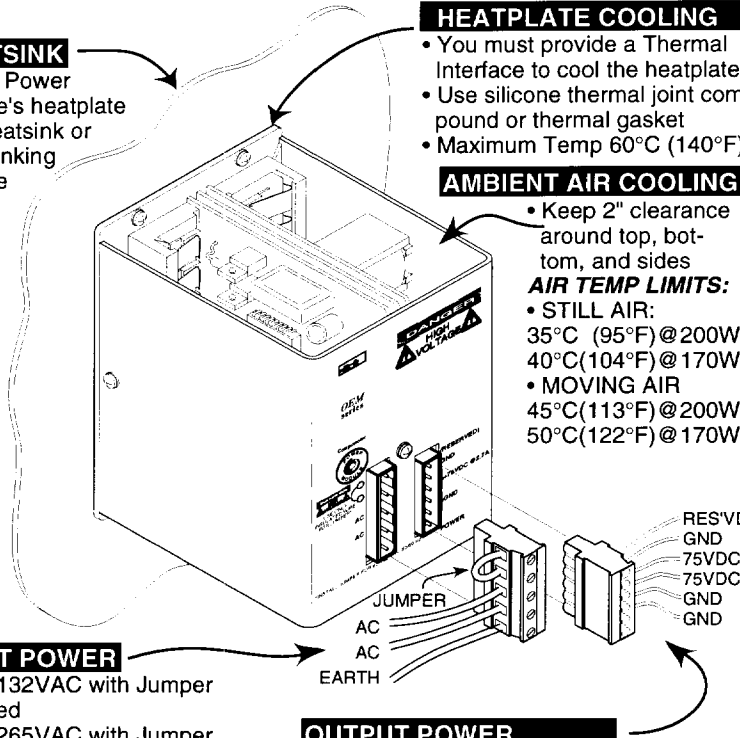
OUTPUT POWER

- 75VDC ± 5%
 - 2.7A/200W Continuous
 - 4.0A/300W Peak (30 sec., 10% Duty Cycle at Peak)
 - Two 75VDC pins, internally connected
- OUTPUT CONNECTOR:**
- 6 Pin Removable Connector
 - Use 16 AWG if < 10 ft., 14 AWG if > 10 ft.

DO NOT CONNECT MULTIPLE OEM300s IN PARALLEL! They will not share the load.

PROTECTIVE CIRCUITS

- SHORT CIRCUIT PROTECTION — Latched
- POWER DUMP — Turns on at 85VDC
- OVER-TEMPERATURE — Unit shuts down @ 60°C; Latched; Cool to 30°C
- OVERVOLTAGE — Shuts down output after 0.5 sec overvoltage; Latched



WARNINGS & CAUTIONS

Warning and caution notes alert you to problems that may occur if you do not follow the instructions correctly. Situations that may cause bodily injury are presented as warnings.

WARNING

NO USER SERVICEABLE PARTS INSIDE THE OEM300!
The OEM300 contains potentially lethal voltages. Do not attempt to repair it.
Return it to Compumotor for any repairs.

Situations that may cause system damage are presented as cautions.

CAUTION

Do not use AC input voltage in the range of 132-180VAC. AC voltage in this range can cause excessive voltages to be generated within the OEM300, and may damage the unit.
