Modular Computers®

CPCI
Power Supply
Manual

PRODUCT DOCUMENTATION

PD12
CP3-SVE-M75AC

Reference ID: 24139 PD12
Revision: 01
Issued: February 01, 2004

The product described in this manual is in compliance with all applied CE standards.

Revision History

Manual/Product Title:	CPCI Power Supply Manual: Product Documentation: CP3-SVE-M75AC
Reference ID:	24139 PD12

Rev. Index	Brief Description of Changes	Date of Issue
01	Initial Issue	Feb. 01, 2004

Imprint

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PEP Modular Computers GmbH rejects any liability for the correctness and completeness of this manual as well as its suitability for any particular purpose.

This manual was realized by: **TPD/Engineering, PEP Modular Computers GmbH**.

1. Introduction

The specific product description provided with this product documentation is part of the PEP's CPCI Power Supply manual. For further information, in particular regarding general details as well as safety and warranty statements, refer to the CPCI Power Supply Manual, ID 24139. This power supply is designed for use with the CP-Pocket.

2. 75W M-Type Power Supply Unit

The main features of the 3U M-type, 75 W output AC/DC power supply unit CP3-SVE-M75AC are described in the following table:

Table 1: Distinctive Features of Power Supply Unit CP3-SVE-M75AC

Feature	Specification
Form Factor	3U
Front Panel Size	60.96 mm x 133.35 mm
Height of Power Supply Unit	3 U (128 mm)
Width of Power Supply Unit	8 HP (40 mm)
Depth of Power Supply Unit	171.9 mm (without connector and handle)
Mechanics	19" rack
Plug-In Compatibility	Yes
Power Supply Connector	DIN M24/8 connector
Input Voltage	90 ... 264 VAC
Input Frequency	47 ... 63 Hz
Output Voltages / Currents	V_1 = +5.1 V, max. 12 A V_2 = +3.3 V, max. 10 A V_3 = +12 V, max. 5.0 A V_4 = -12 V, max. 0.5 A
Output Power	75 W
Total Minimum Output Load	5 W
Cooling	Forced air cooling, 1m/s recommended
Redundant Supply Capability	—
Status Indication	Separate LEDs for V_1 and V_2
Special Feature(s)	None

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2.1 Mechanical Specifications

Figure 1: View of Power Supply Unit CP3-SVE-M75AC



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2.2 Power Supply Connectors

2.2.1 DIN M24/8 Power Supply Connector

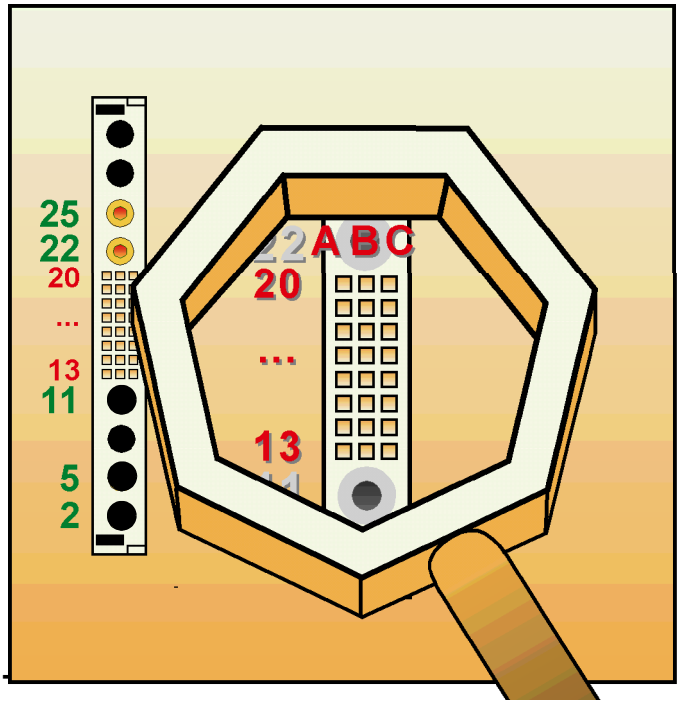


Figure 2: Orientation of the DIN M24/8 Power Supply Connector

The AC power input is via the front panel connector. The V_1 ... V_4 output voltages from the power supply unit to the backplane are connected via a 32-pole DIN 24/8 male power supply connector.

For the pinouts of the DIN M24/8 power supply connector please refer to the following table.

Pin	Function	Pin	Function
2	NC	B.17	+3.3VL
5	NC	B.18	+3.3VL
11	PE	B.19	+12VL
A.13	NC	B.20	-12VL
A.14	NC	C.13	NC
A.15	NC	C.14	NC
A.16	NC	C.15	NC
A.17	+5VF	C.16	+3.3VL
A.18	+3.3VL	C.17	+3.3VL
A.19	+12VL	C.18	+3.3VL
A.20	-12VL	C.19	+12VL
B.13	+3.3VL	C.20	-12VL
B.14	+3.3VL	22	+5VL
B.15	+3.3VL	25	OVL
B.16	+3.3VL		

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2.2.2 Front Panel AC Input Power Connector

This connector is available for applications requiring input power from the front of the chassis. If required, this connector must be specified when ordering. This is a Phoenix, 3-contact connector (GMSTB 2,5/ 3-GF-7,62). The following figure and table provide pinout information.

Figure 3: Front Panel AC Input Power Connector

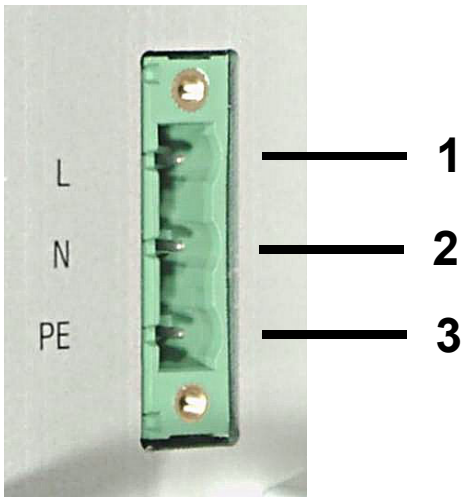


Table 4-3: Pinout of CONn

PIN	SIGNAL
1	L
2	N
3	PE

2.2.3 Line Input Connector

This connector is the complementary connector for the application side for connecting to this power supply and is delivered with the power supply. This is a Phoenix, 3-contact plug type connector (GMSTB 2,5/ 3-STF-7,62). The following figure and table provide pinout information.

Figure 4: Line Input Connector

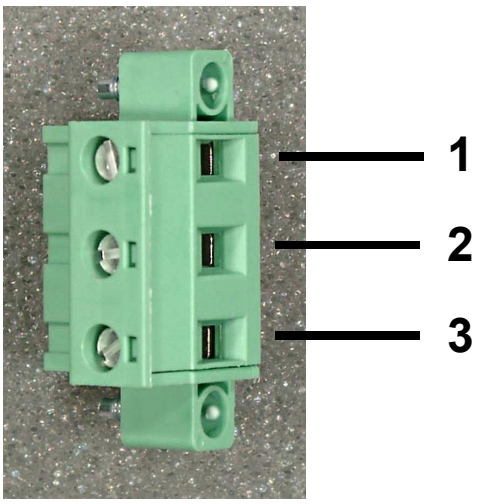


Table 4-4: Pinout of CONn

PIN	SIGNAL
1	L
2	N
3	PE

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2.3 Installation

Thanks to its plug-in compatibility this DIN M-type power supply unit allows for an easy installation, by which the power supply unit's male DIN M24/8 power connector is inserted into the backplane's mating female connector without the need of any intermediate adaptation.

2.4 Electrical Specifications

Input

Input voltage ranges	90 ... 264 VAC
Efficiency	> 90 %
Input current limitation	24 A @ 115 VAC
Fuse	3.15 A
Hold-up time	> 28 ms / 100 % load with input voltage within the above indicated range

Output

Output power V_1 (5.1 V)	max. 12 A ± 4 %
Output power V_2 (3.3 V)	max. 10 A ± 3 %
Output power V_3 (12 V)	max. 5.0 A ± 5%
Output power V_4 (-12 V)	max. 0.5 A ± 5 %
Ripple	V_1, V_2 < 50 mV_{pp}, V_3, V_4 < 120 mV_{pp}
Total output loads	max. 75 W for all outputs
Status indication	Green LEDs for V_1, V_2
Rise-delay time	< 0.5 s
Start-up time	≤ 5 ms



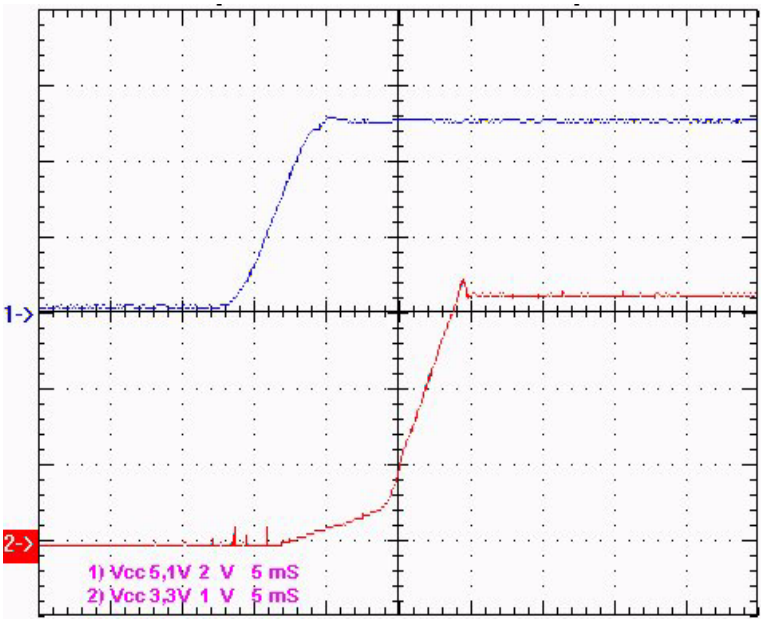
Warning!

Operation of this power supply with no load will result in improper operation of the power supply!

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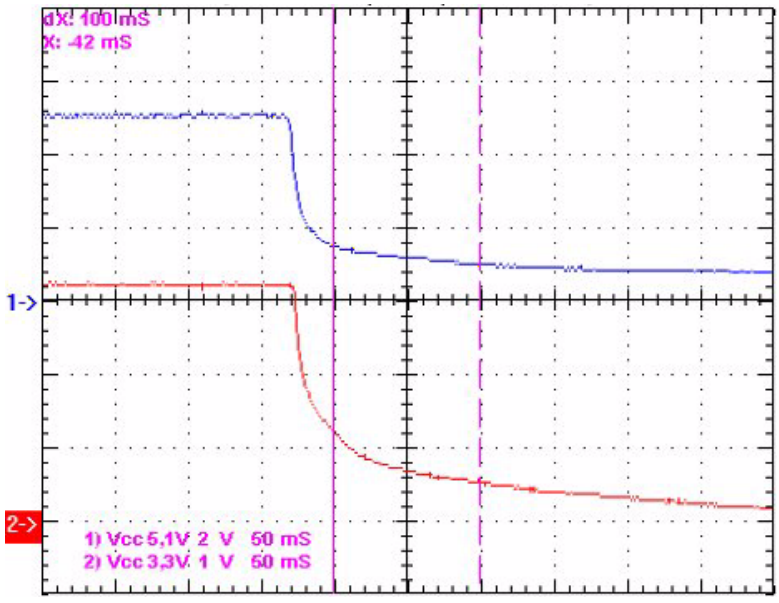
Output Power Diagrams

Figure 5: Signal when Switched On



Load: CP302

Figure 6: Signal when Switched Off



Load: CP302

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Regulation

Line regulation	< 0.2 % for V_1, V_2 at a load of 7.5 A each
Load regulation	< 0.5 % for V_1, V_2

Protection and Control

Overload protection	Thermal shutdown with auto-restart

Environment

Operating ambient temperature	-25 °C to + 70 °C
Derating	2.5 % / °C between 50 °C and 70 °C
Climatic humidity	93 % RH at 40 °C, non-condensing (acc. to IEC 60068-2-78)
Recommended airflow	1 m/s

EMC

Interference suppression/immunity	EN 61000-6-2 EN 55024
Interference emission	EN 50081-1/EN 55022: interference transmission depends on assembly

Safety

IEC 60950

CB Scheme Test Report



Warning!

Adequate thermal cooling of the power supply must be ensured. Therefore do not obstruct or hinder cooling air circulation or heat conduction within the power supply or surrounding equipment.

Failure to comply with this warning may result in damage to your equipment.

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