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December 03, 1985

Specification of Power Supply for AMIGA "European Version"

(Shindengen Model Name CA1000PS/EC)

1. Scope

This specification defines the power supply to be used in the AMIGA personal computer "European Version".

2. General

55 Watts power output.
Metal enclosure type.
Cooling fan built-in.
Designed to meet IEC 300 class 1, and FTZ class B.

3. Electrical Requirement

**** Input**

198 - 264 VAC (220 VAC $\pm$ 10 %, 240 VAC $\pm$ 10%)
50 Hz $\pm$ 10 %
Input current surge limited to 32 amperes (0-Peak, 240VAC)

**** Output**

Voltage	Current Min. Max.	Stability	Ripple & Noise
+ 5VDC	2.0 - 8.0 A	$\pm$ 5 %	150 mV P-P
+ 12VDC	0 - 1.0 A	$\pm$ 5 %	150 mV P-P
- 5VDC	0 - 0.25 A	$\pm$ 5 %	150 mV P-P

Hold-Up Time	More than 20 mS (At 240VAC, Max. Load)
Turn on delay	100 mS (Typical)
Start up time	500 mS or less

**** Short Circuit Protection**

Short circuit protection has been adjusted the following current limit range.

+ 5 VDC output	: 8.2 - 11.0 A
+ 12 VDC output	: 1.2 - 2.0 A
- 5 VDC output	: 0.3 - 2.5 A

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**** Withstand Voltage**

3,750 VAC

Between primary circuit and secondary circuit.

1,250 VAC for 1 minute.

Between primary circuit and ground.

At 25°C, R.H. 65 %, Set current for shut off is 30mA.
Eliminate capacitors inserted between primary and ground,
between secondary and ground at testing.

**** Isolation**

More than 50 M at 500 Vdc.

Between primary circuit and secondary circuit.
Between primary circuit and ground.

At 25°C, R.H. 65 %.

**** Leakage Current**

0.75 mA or less.

At 240 VAC, Maximum load, Conformed to IEC.

4. Efficiency

More than 65 %

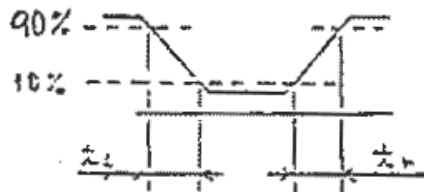
At 240 VAC, Maximum load.

5. 50 Hz " Tick " signal

at TTL drive 1 TTL load



Input Voltage Wave
(50Hz $\pm$ 10%)



Rise Time $t_r \leq 250\text{ns}$

Fall Time $t_f \leq 250\text{ns}$

6. Enviromental Ranges

** Temperature
Operating 0°C - 60°C
Storage -20°C - 75°C

** Relative Humidity
Operating 30 % - 85 %
Storage 30 % - 85 %

Note. Non-condensing.

** Vibration

10 - 55 Hz of 2G for one hour in each of three orthagonal axes.

** Shock

Three impacts of 20G in each of three orthagonal axes.

7. Applicable Safety Standard

Designed to meet IEC 380 class 1.

8. Applicable Noise Standard

Designed to meet FTZ class B.

Parts List
for
Power Supply for AMIGA " European Version "

(Shindengen Model Name : CA1000PS/EC)

Symbol on Schematic	Name	Model Name	Q'ty	Remarks
F40	Fuse	EAK3.15A-T or S506	1	EAK3.15A-T : 3.15 Amps, DIN 41661 Olvis Co.
	Fuse Clip	85PN0819	2	
THY40	Thyristor	5P6M	1	
RF40	Bridge Diode	S4VB60	1	
Q40	Transistor	2SC3376	1	S506 : 3.15 Amps, IEC127 Kenneth Beswick Ltd
		or 2SC2792		
Q41	do.	2SC1173	1	
D40	Silicon Diode	EU2Z or V19C	1	
D41	do.	1S2075K	1	
D46	do.	DFG1A8	1	
D51, D52	do.	1S2075K	2	
D60	do.	V06E	1	
DZ41	Zener Diode	HZ16-1	1	
DZ42	do.	HZ5A-3	1	
DZ60-64	do.	HZ20-2L	5	
PC01	Opto-Coupler	TLP581	1	PC01, and PC02. VDE Certificate No.37411
PC02	do.	do.	1	
T40	Transformer	60 VA	1	
L40, L41	Choking Coil	SF-T10-50-02	2	Toshiba Co., Ltd.
L42, L43	do.	EL-18D602	1	
C40, C41	Capacitor	DE7090B102KVA1	2	C40, C41, and C47. VDE Certificate 19764/19765/19766 35029/35030. Murata Co., Ltd.
C47	do.	DE7100FZ472PVA1	1	
C80	do.	DE0910R221K	1	
C42	do.	ECQ-E2A 474MW	1	
C43	do.	ECQ-E2A 103MW	1	C42 and C43. VDE File No. 4811.6-4670-1035/ Panasonic Co., Ltd.
C45	do.	TDY1H/2A	1	
C46	do.	TDXM2J 473KD	1	
C51, C53	do.	TDY1H/2A 683K	2	
C52	do.	TDY1H/2A 333	1	
C54	do.	TDY1H/2A 104K	1	
C55	do.	TDY1H/2A 222K	1	
C49	do.	CE0SM 1V 100	1	
C50	do.	LHS2G181MHSABV	1	
R42	Resistor	MPC70 0.47Ω	1	
R43	do.	L53K100JF 5W 10Ω	1	
R49	do.	MNS05N 390KΩ	1	
R39, R40	do.	RSX1 or RSP1BL 82KΩ	2	
R46, R47	do.	RSX1 or RSP1BL 82KΩ	2	
R80	do.	RSX1 or RSP1BL 82Ω	1	
R61	do.	RSX2 or RSP2BL 33KΩ	1	
R62	do.	RSX1 or RSP1BL 100KΩ	1	
R41	do.	1/4 W 10KΩ	1	
R44	do.	1/4 W 680Ω	1	
R45	do.	1/4 W 68Ω	1	
R50	do.	1/4 W 820Ω	1	
R51	do.	1/4 W 220Ω	1	
R52	do.	1/4 W 330Ω	1	
R53, R56	do.	1/4 W 15Ω	2	
R54	do.	1/4 W 1.5KΩ	1	
R55	do.	1/4 W 820Ω	1	

Parts List
for
Power Supply for AMIGA " European Version "

(Shindengen Model Name : CA1000PS/EC)

Symbol on Schematic	Name	Model Name	Q'ty	Remarks
R60	Resistor	1/4 W 560K Σ	1	
D01	Silicon Diode	S30C4M	1	
D02	do.	5CH2M or ESAC25-02	1	
D03	do.	EU2A or 1S2675	1	
IC01	Integrates cct.	1R9431	1	
IC02	do.	SI-3122V	1	
IC03	do.	μ PC-7805A	1	
IC04	do.	HD74LS14P or SN74LS14P	1	
L01	Choking Coil	RD1113A 3J	1	
C09	Capacitor	CEUSM 1H 4R7	1	
C10	do.	CEUSM 1H 010	1	
C15	do.	CEUSM 101	1	
C17,C19	do.	CEUSM 101	2	
C11-C13	do.	SXA 10VB 2200 F	3	
C16	do.	SXA 35VB 470 F	1	
C18	do.	SXA 25VB 330 F	1	
C22	do.	THY1H/2A	1	
C21	do.	ECK F1H 221KB	1	
R14	Resistor	RSX2 or RSF2BL 33	1	
R10	do.	1/4 W 68	1	
R11	do.	1/4 W 560	1	
R12	do.	1/4 W 390	1	
R15	do.	1/4 W 470	1	
R17	do.	1/4 W 5.6K	1	
R21	do.	1/4 W 1K	1	
R22	do.	1/4 W 220	1	
RV01,02	Variable R.	EVM38GA 00B 52	2	
FAN	Fan Motor	126LH2181 023	1	FAN : VDE Approval
CN01	AC Inlet	Type 0307	1	No.1717
SW1	AC Switch	EST-15	1	Etri Co.,Ltd.
				AC Inlet : VDE File No. 9412-1550-1003/A3K Hori Electric Co., Ltd
				AC Switch ; VDE File No. 4811.6-1-4401-1013/A8: Panasonic Co., Ltd.

