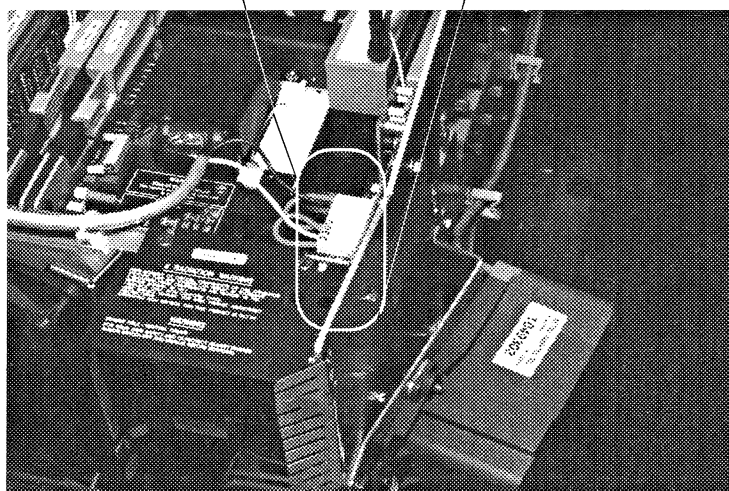
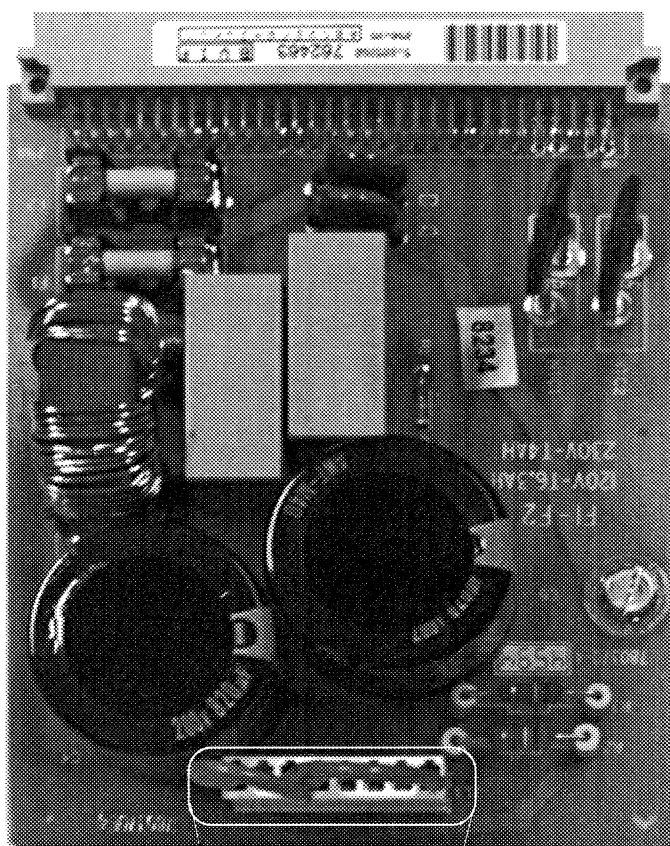
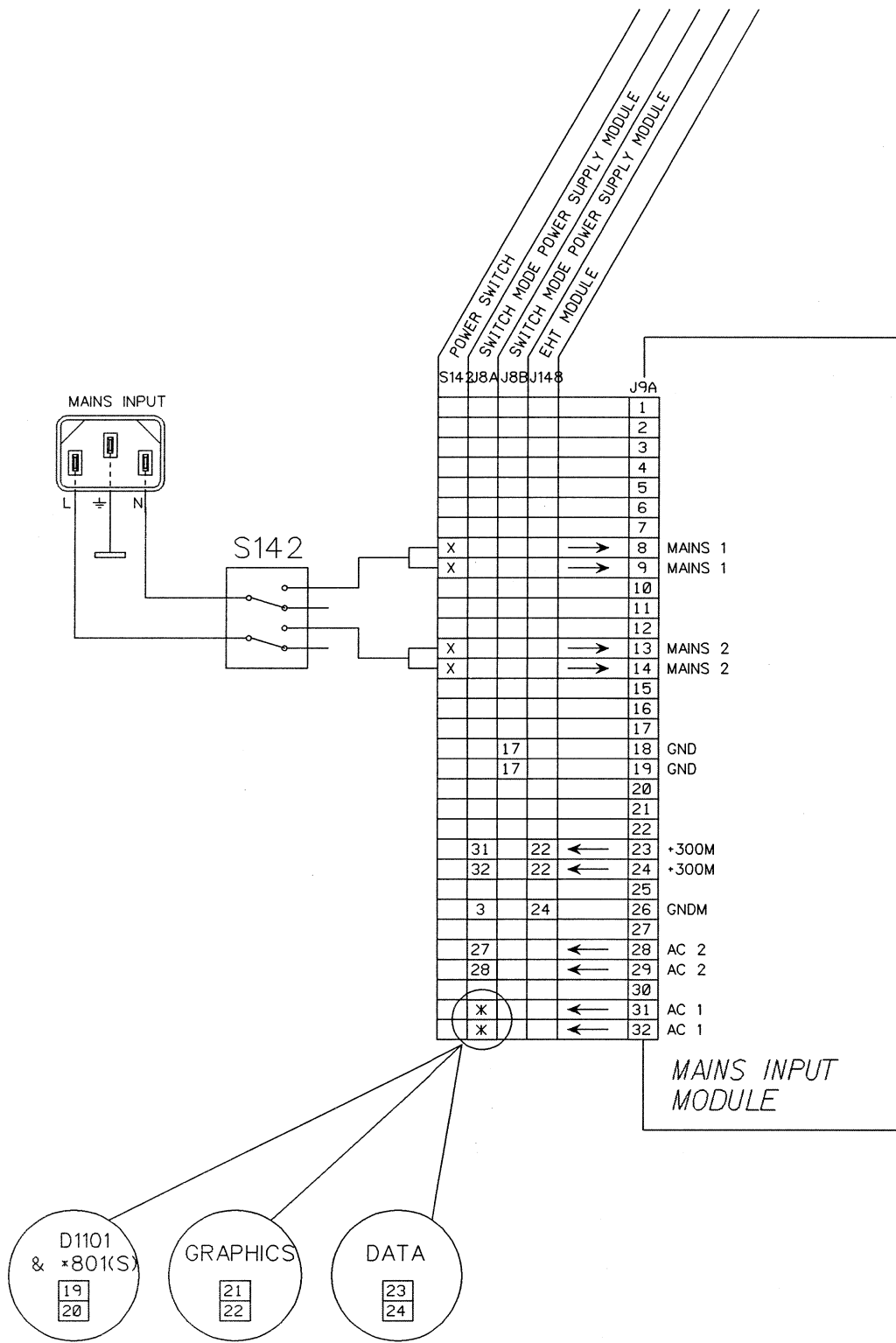


WARNING

THIS CIRCUIT BOARD IS HOT TO AC. THIS POWER INPUT DOES NOT USE A LINE ISOLATION TRANSFORMER, MEANING THE CIRCUITRY IS HOT-TO-LINE AND SHOULD BE TREATED WITH CAUTION.

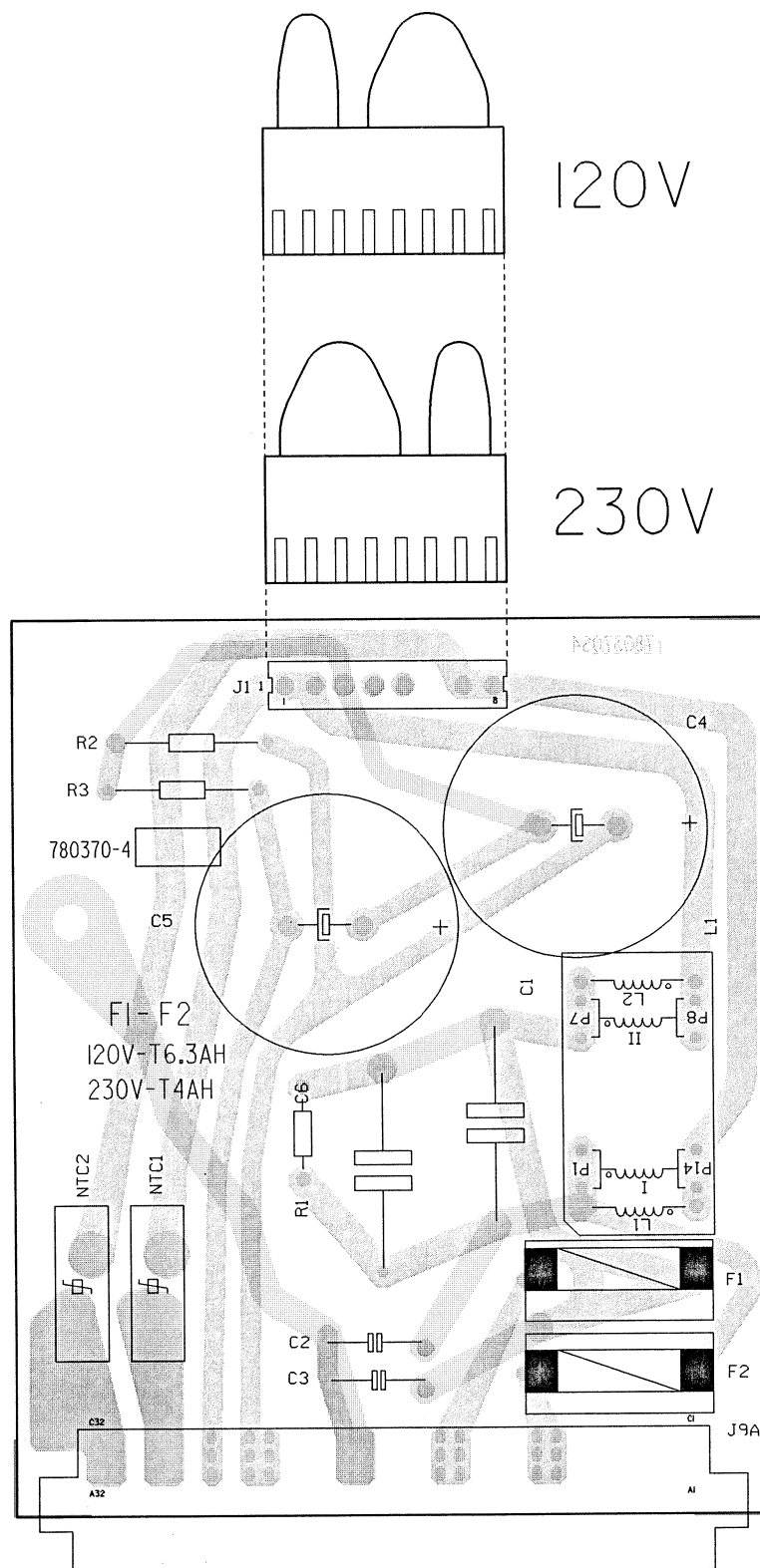




Name Interconnection		Article nr.
MAINS INPUT MODULE		76 2463
Date	Drawn	Checked
31-01-1995	JVDY	PGV

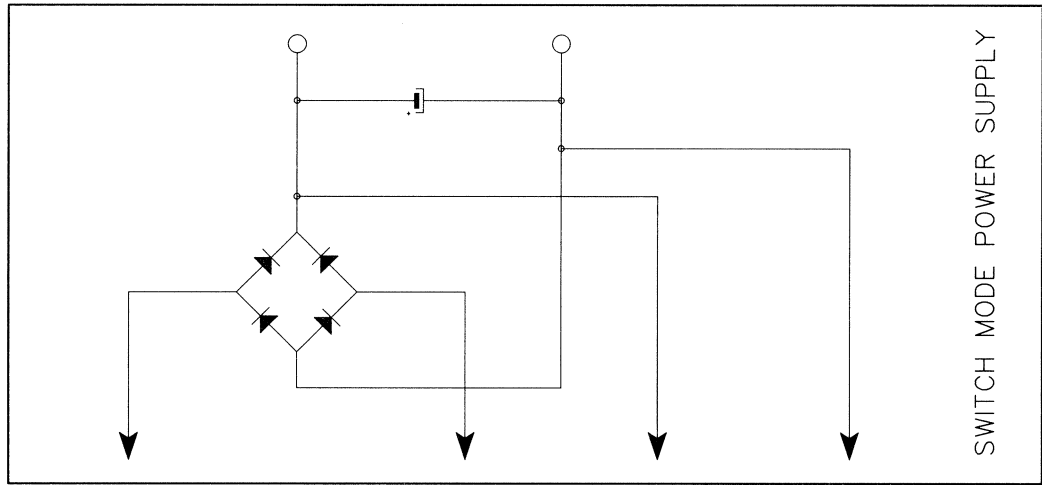
BARCO PROJECTION SYSTEMS

Modifications reserved



Name MAINS INPUT MODULE		Article nr. 76 2463-4	
Date 23-02-1995	Drawn JVDY	Checked PGV	
BARCO PROJECTION SYSTEMS			

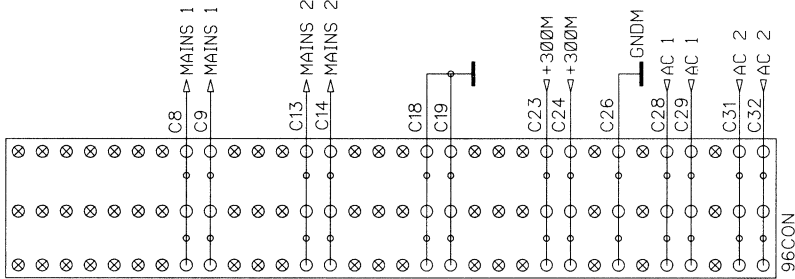
Modifications reserved



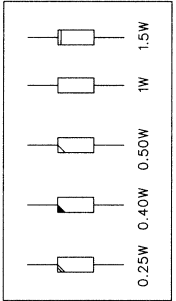
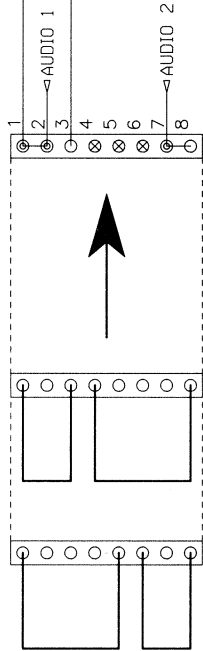
SWITCH MODE POWER SUPPLY

120V : F1, F2 : T 6.3A H
230V : F1, F2 : T 4A H

To FRAME (J9A)



230V 120V



PRODUCT SAFETY NOTICE

COMPONENTS MARKED WITH * OR Δ HAVE SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE SERVICE SAFETY PRECAUTIONS. DO NOT DEGRADE THE SAFETY OF THIS SET THROUGH IMPROPER SERVICING.

Name MAINS INPUT	Article nr. 76 2463-4
Date 31-01-1995	Drawn JVDY
Checked PCV	

BARCO PROJECTION SYSTEMS

modifications reserved

The Power (Mains) Input provides protection against interference when operated in a commercial environment and contains the user setting for 230Vac or 120Vac.

1. Power (Mains) filter

The power filter consists of the coil L1 with four windings, and the capacitors C1-C2-C3. It is a bandpass filter, removing all high and low frequency noises.

NTC-resistors NTC1 and NTC2 limit the start up current. The fuses F1 and F2 prevent damage to the power Input board and the Switched Mode Power Supply in the event of short circuit or wrong 230/120Vac setting.

2. 230 Vac operation

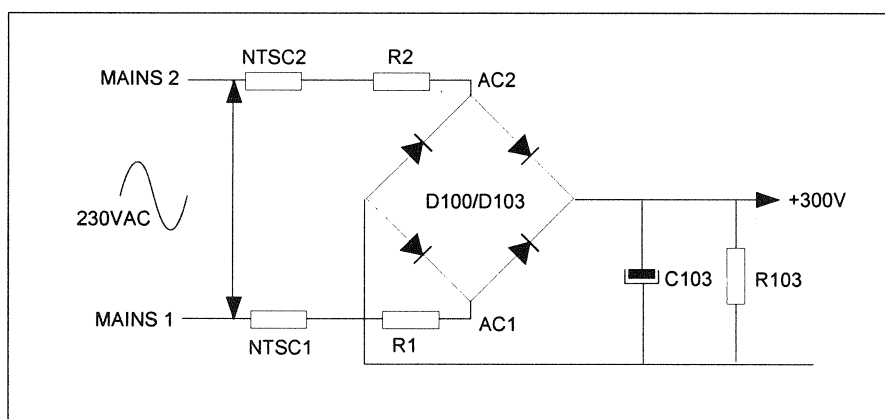


Figure 1. 230 Vac operation of the Power Input module

When we look how the diode bridge D100/D103 of the Switch Mode Power Supply is connected to the power Input board (Figure 1), we can see how the 230Vac operation works.

Diode bridge D100/D103 operates as a bridge rectifier, and we become an output DC-voltage of approximately +300 Volts.

Capacitor C103 forms a capacitive load on the Switch Mode Power Supply, to flatten the AC-ripple on the +300 DC-voltage. Resistor R103 discharges this capacitor quickly when the projector is switched off.

3. 120 Vac operation

When we look again how the diode bridge of the Switch Mode Power Supply is connected to the Mains Input/Output board during 130Vac operation, we can draw the following schematic, figure 2.

To make it more comprehensive, we redraw this figure (Figure 3.), deleting NTC1, NTC2, R1 and R2 that only play a roll during start up, and by deleting R3 and R4 that are only important while switching off.

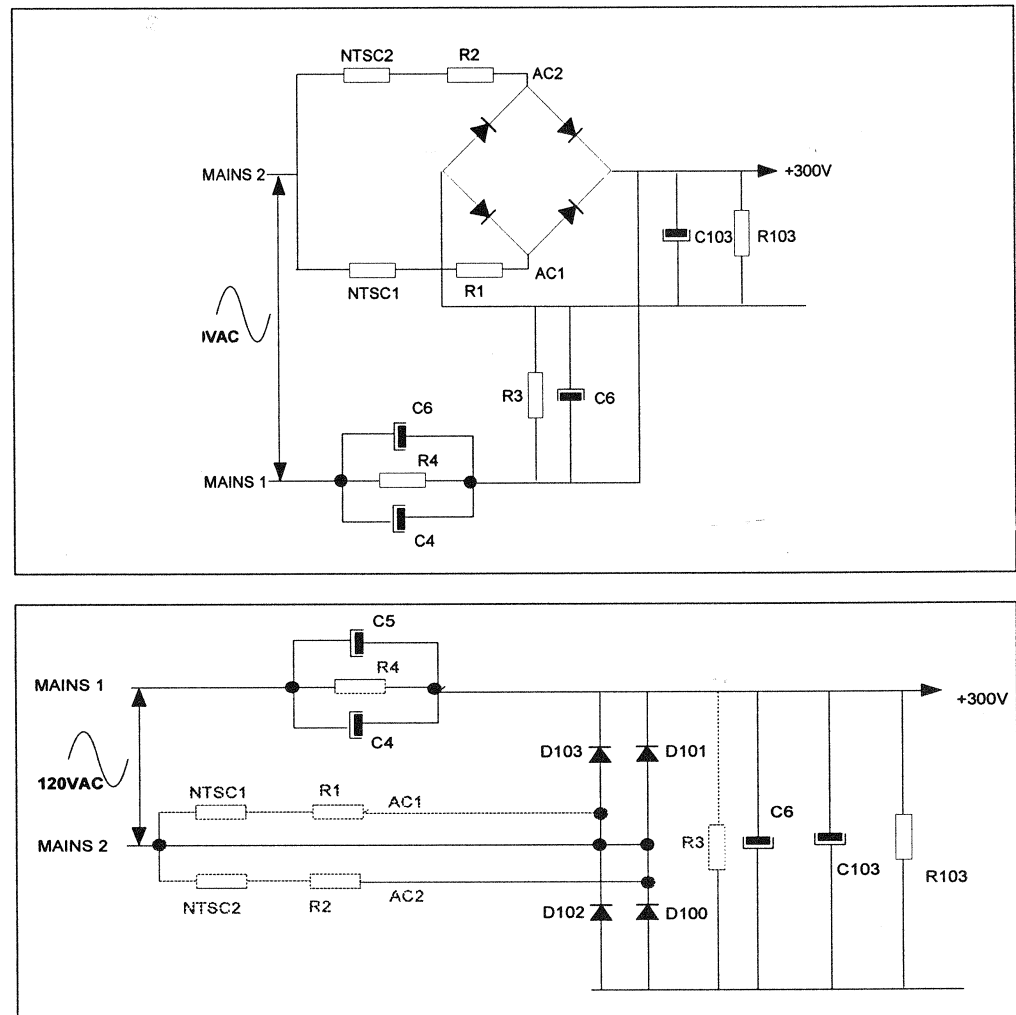


Figure 3. 120Vac operation of the Mains Input/Output board: schematic redraw of figure 2.

Now we see that the diode bridge operates as a voltage multiplier. During the negative half of the power (mains) voltage, capacitors C4-C5 are charged through diodes D101-D103. During the positive half of the power (mains) voltage, capacitors C6-C103 are charged, through diodes D102-D1010, on a voltage which is the input voltage together with the load on the capacitors C5/ C4.

In this way an DC-voltage of again approximately +300 Volts is built across the capacitors C103/C6..

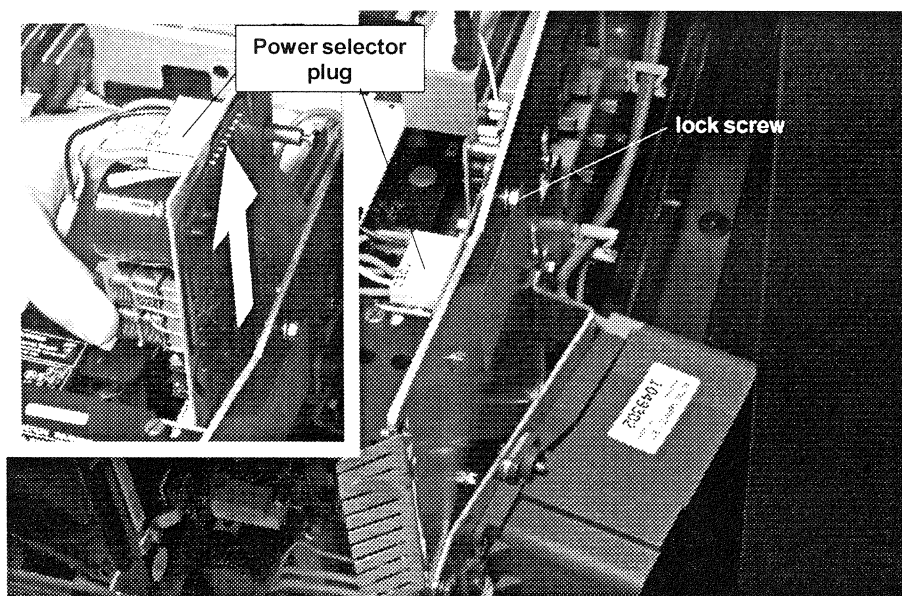
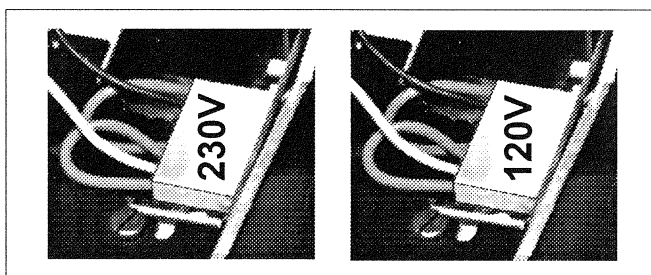
Power (mains) input MODULE

R762463

MAINS (POWER) ADAP-TATION

Procedure :

1. Switch off the projector and unplug the power plug from the wall outlet.
2. Remove rear cover (refer to § Access to chassis for servicing)
3. Loosen the lock screw of the power input module and pull out this module.
4. Pull out the "POWER SELECTOR PLUG" and re-insert it as illustrated below depending of the wall outlet in the room.
5. Replace the fuses. (see table below)
6. Re-insert the power input module and secure it with the lock screw.
7. Reconnect the power cord with the wall outlet and switch on the projector.



FUSES

WARNING

For continued protection against fire hazard:

- Replace with the same type of fuse
- Refer replacement to qualified service personnel

F1, F2

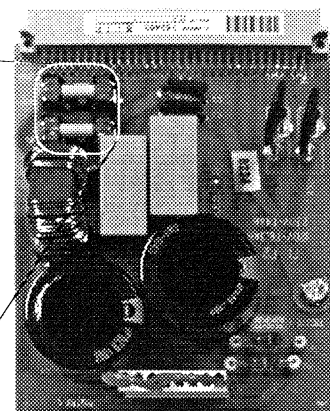
BARCO Ord. No.

For 230Vac (2x) T4A H 250V

31 41041

For 120Vac (2x) T6.3A H 250V










31 4145




Power (mains) input MODULE

R762463

Parts listing Power input module R762463

SIT.	ITEM NO.	DESCRIPTION	QUANTITY	SIT.	ITEM NO.	DESCRIPTION	QUANTITY
20	R133039	SPR L 8 D 4 D 1.2 C	4	F1AC	R314519	F ACC HLDR 5X20 PC/UL	1 
10	R315315	J RVT MBT D 2 L14	4	F2AC	R314519	F ACC HLDR 5X20 PC/UL	1 
40	R348316	CD SL \$FT P 8 SHUNT	1	J 1	R313726	J SL FH MBT P 8 M3,96 RP	1
60	R362668	SCR D921 M 3 X 6 SS Z	1	J9A1	R313525	J EUR2C MBS P64 E1C2S 1,6	1
50	R367504	WSHR D6798 A 5.3 S Z	1	J9A2	R367699	RVT CHB D2.38L6.35 P A	2
30	R802656	SPR RVT L13.75D 7 M3 A	1	L 1	R305916	CH MNS 2X12 MH 10APMF	1
C 1	R114716	C PO RA 1M M250E11 X2	1 	NTC1	R105020	R NTC 4E M	1
C 2	R114722	C CE DI 2N2M400E5 Y	1 	NTC2	R105020	R NTC 4E M	1
C 3	R114722	C CE DI 2N2M400E5 Y	1 	PC	R780370	PCD PJ49R G801 MNS	1
C 4	R111566	C EL RA 820M M200E4 85	1	R 1	R101268	R MF H475K F 0W6 E4	1
C 5	R111566	C EL RA 820M M200E4 85	1	R 2	R1014605	R CF H100K J 1W5	1
C 6	R114716	C PO RA 1M M250E11 X2	1	R 3	R1014605	R CF H100K J 1W5	1
F 1	R3141041	F 5X20 T 4A H RU/VDE (230Vac)	1 				
F 2	R3141041	F 5X20 T 4A H RU/VDE (230Vac)	1 				
F 1	R314145	F 5X20 T 6.3A H RU/S (120Vac)	1 				
F 2	R314145	F 5X20 T 6.3A H RU/S (120Vac)	1 				

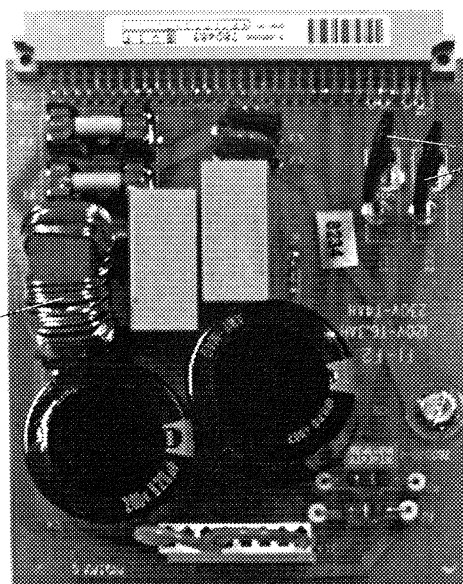
PRODUCT SAFETY NOTICE

Components identified by  have SPECIAL CHARACTERISTICS IMPORTANT TO SAFETY. Before replacing any of these components, read carefully the service safety precautions.



Fuse R314519
(230V)
Fuse R314145
(120V)

R305916



R105020