

BEFORE SETTING THE POWER SUPPLY ON

INSTALLATION OF THE POWER SUPPLY

- 1) During the setting up of the console, check for free circulation of the air under the apparatus and respect a minimum distance of 20 cm to the walls.
- 2) Connect the water cooling tubes respecting the indicated way to the inlets : "WATER" (a)
- 3) Connect the magnet to the terminals  $\pm/\text{---}$  (I fig. 2) located in the middle part behind the rear panel (use the delivered cable via the cable tie "DC OUTPUT") (b)
- 4) Connect the delivered local supply cable through the cable tie "LINE" (h) to the terminals of the main circuit breaker RST + earth + (MP) located in the lower part behind the rear panel. (II fig. 2)

CAUTION !!

Respect the line voltage which is specified under the main circuit breaker (II fig. 2)

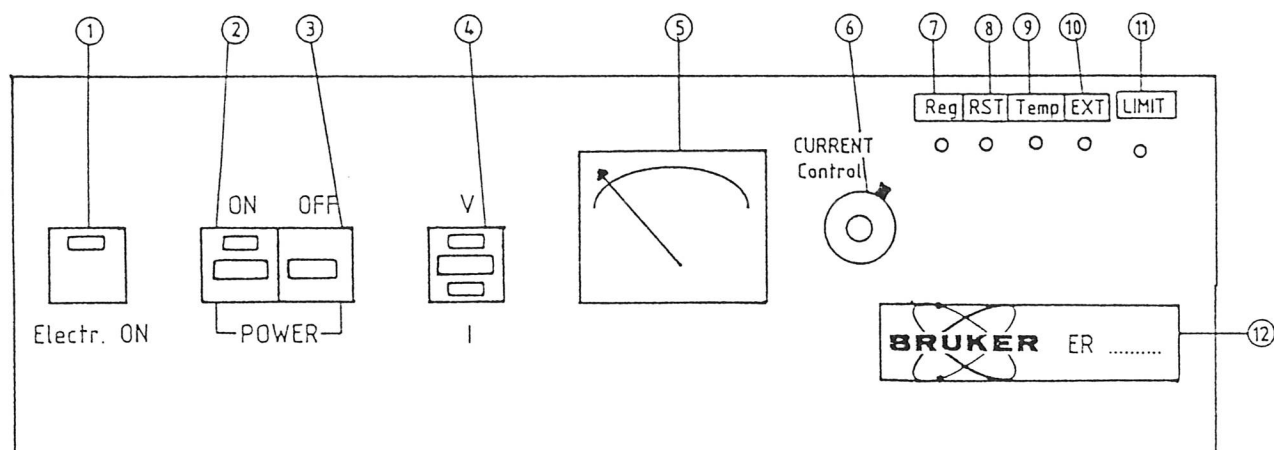
- 5) Connect the security cables :
  - a) From the magnet to Socket "MAGNET" (d)
  - b) From the Heat exchanger to Socket "HEAT EXCHANGER" (c)  
If the Heat Exchanger is not needed, use the delivered plug.

CAUTION !!

Don't apply any voltage an this sockets.

- 6) Connect the control cable from the Field stabiliger to the socket "HALL" (e)
- 7) Put the display selection in position "I" (pushed position).
- 8) Set Potentiometer "CURRENT CONTROL" (6) to zero.

## DESCRIPTION OF THE CONTROL PANEL



- ① Electronic ON/OFF switch
- ② Power ON switch
- ③ Power OFF switch
- ④ Display selector : pushed position "I" output current  
pulled position "V" output voltage
- ⑤ Galvanometer for current or voltage display
- ⑥ Potentiometer for current control in current Mode
- ⑦-⑪ Led's for interlock display
- ⑫ Type label

## OPERATING INSTRUCTIONS

### A. CURRENT MODE : for local current operation.

#### I. Setting on the power supply

- 1) Push switch "ELECTR. ON" ① to energize the electronic. Included led lights on.  
Simultaneously all the leds located on the control panel lights on for a few seconds (automatic Lamptest).
- 2) Push the "POWER ON" switch ②  
Included led lights on (status of the main relay) if all the interlock leds lights off.  
This switch permits also the "Reset" function of the memorized interlocks.
- 3) To cut off the Power, push the "POWER OFF" switch ③

#### II. Display

The galvanometer must indicate zero.

If led "I" lights on : the output current is displayed.

If led "V" lights on : the output voltage is displayed.

Switch ④ selects current or voltage display.

#### III. Current control

Adjust the output current with potentiometer. ⑥

### B. FIELD MODE : Operation with field stabilizer (O Mode)

Nota : To return in current Mode, push switch "RESET" from the Field stabilizer.

## DESCRIPTION OF THE INTERLOCKS

### I. GENERALITIES

The Power Supply cuts off automatically as soon as an Interlock signal appears. The defect "POWER OFF" is kept in memory and the corresponding warning led lights on.

All the auxiliary supplies are protected by fuses. (III Fig. 1)

### II. LIST OF THE DIFFERENT SECURITIES

1) RST Three phase control (8)

The phase control unit (IV) gives alarm in case of phase failure (longer than 2 seconds) and phase asymetry (greater than 5 %).

2) TEMP Overtemperature (9)

A thermoswitch gives alarm in case of overtemperature of the rectifier or transistor bank or of the zero crossing unit (option).

3) EXT External Interlock (10)

This interlock is composed of two informations :

- a) Overtemperature or water cooling of the magnet defect.
- b) Pressure in the cooling system too low (only if a heat exchanger is used).

NOTA : This security loop is doubled (electronic loop + relay loop) to ensure a total safeguard of the load.

4) LIMIT Current limitation (11)

This interlock does not cut off the Power Supply but indicates that the Power Supply does not regulate correctly and the output current is limited to about 2 % higher than nominal.

5) REG Regulation defects 7

This interlock is composed of 4 different informations :  
(to separate the defects detect the plating leds (fig 1)).

- a) > I Overcurrent  
Led 6 Board W4P2 771 (fig 1).
- b) U x I Over power dissipation on the transistor banks  
Led 5 Board W4P2 771 (fig 1).
- c) OSC Oscillations in regulation loop  
Led 4 Board W4P2 831 (fig 1).
- d) Auxiliary Power Supply defect +/- 15V / + 15V  
Led 1-2-3 Board W4P2 769 (fig 1).

NOTA : These leds must light on in normal operation.

CAUTION !!

1. Don't work without cooling water.
2. Don't short circuit of the output terminals while the unit is working.
3. Don't disconnect the output cables while the unit is working.

## MAINTENANCE

### I. GENERALITIES

1. Before checking the system, disconnect it from the local Power Supply.
2. Check the water cooling circuit every 3 months.
3. Every three months, check the connections of the cables between the apparatus and the transformer.  
If necessary, lock up them again.
4. Check all the fuses of the output stages (emitter connection of the transistors).
5. Never start the Power Supply without connecting the load.

### II. LIST OF THE TEST POINTS (Fig. 1)

#### A. Auxiliary Power Supply Board Nr. W4P2 769

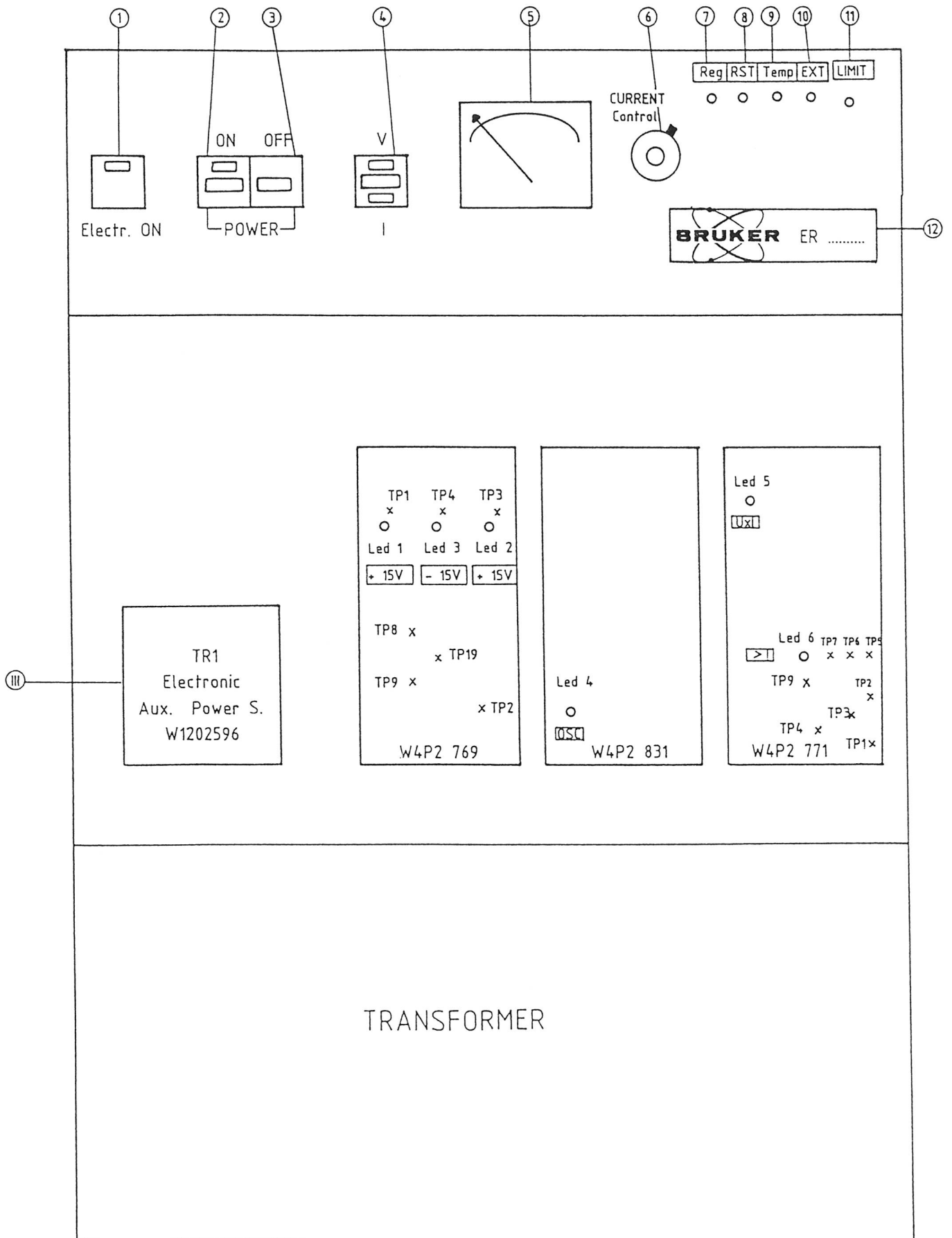
-	TP1	+ 15V	Security
-	TP4	- 15V	Regulation
-	TP3	+ 15V	Regulation
-	TP2	0V	Security + regulation
-	TP8	- 15V	
-	TP9	+ 15V	To driver power stage
-	TP19	0V	

#### B. Regulation Board Nr. W4P2 771

-	TP4	+ 15V	Security
-	TP1	+ 15V	Regulation
-	TP3	- 15V	Regulation
-	TP2	0V	Security + regulation
-	TP5		Ref. Interne
-	TP6		Ref. Hall
-	TP7		U Shunt
-	TP9		Base power stage

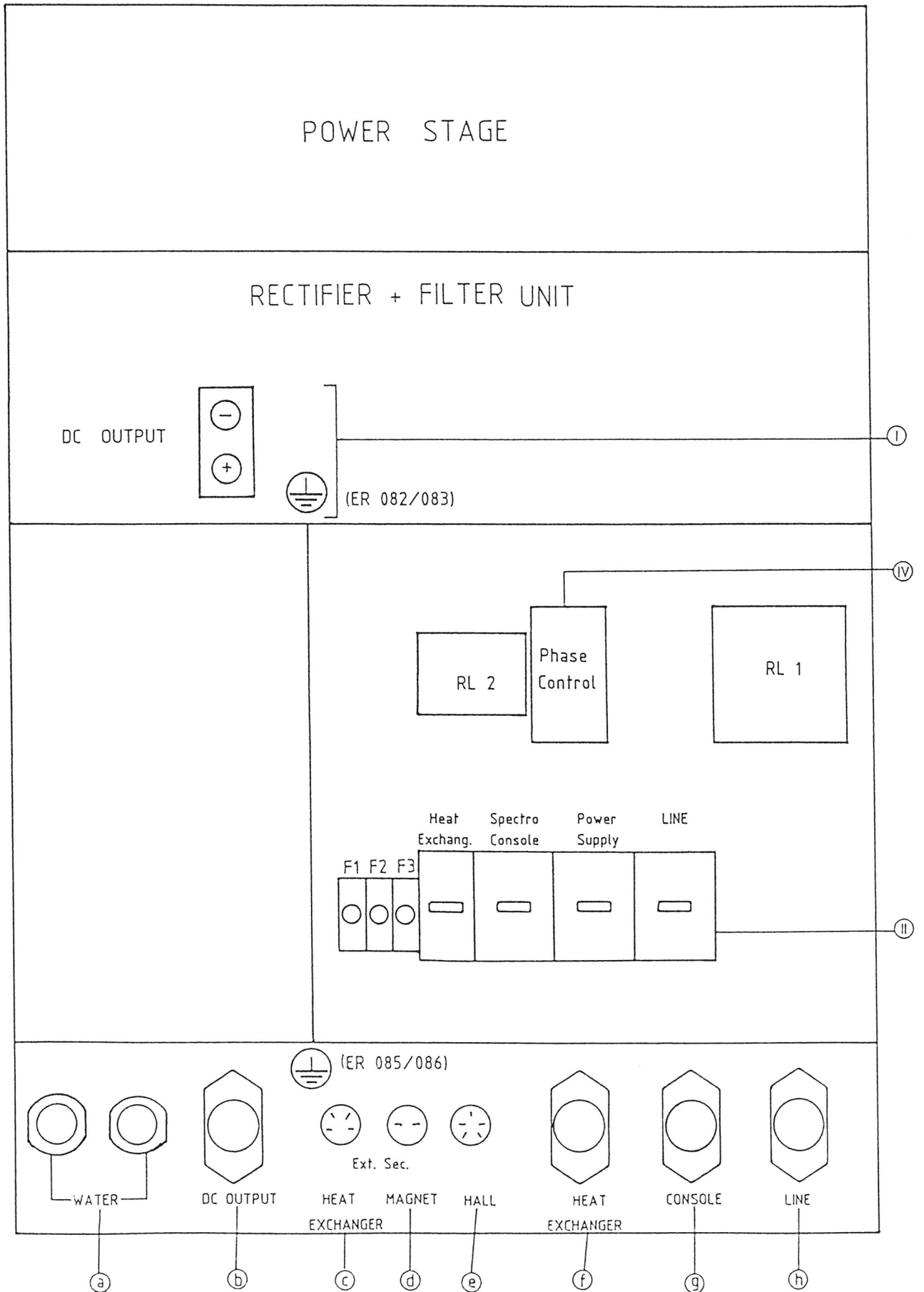
# FRONT VIEW

Fig. Nr. 1



# REAR VIEW

Fig. Nr. 2





\*\*\*\*\*

ER 082C

(1) \*\*\*\*\*240

1	W2S22259	SCHEMA	POWER SUPPLY	
2	W4S22318	SCHEMA	CONTROL KEY BOARD ER082	W4P2824
3	W3S22288	SCHEMA	POWER SUPPLY WITH PROTECTION	W4P2769
4	W2S22289	SCHEMA	P.S.I.C.R.	W4P2771
5	W4S22310	SCHEMA	OSCILLATION	W4P2831
6	W4S22250	SCHEMA	UNIVERSAL PHASE CONTROL CIRCUI	W4P2832
7	W3S22290	SCHEMA	TRANSFORMER 155/45-200/60C	
8	W4S22132	SCHEMA	SLAVE POWER STAGE DRIVER	W4P2768
9	W4S22257	SCHEMA	POWER STAGE WATER NPN PNP 72TR	