Reparation Manual
UWI-230TP AC/DC

CAUTION!

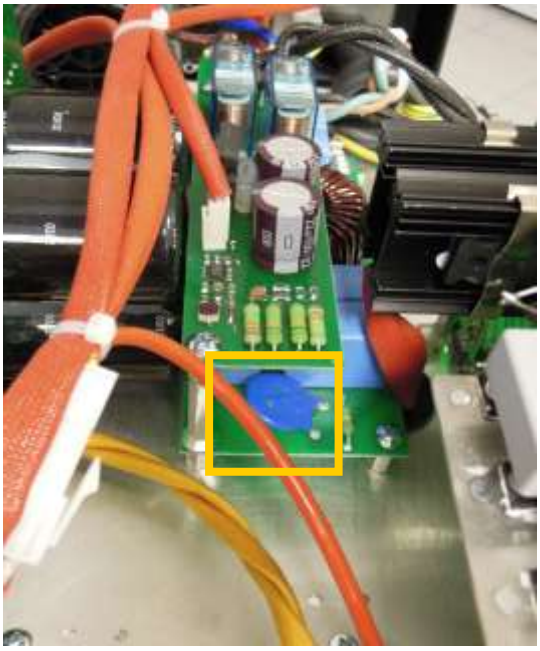
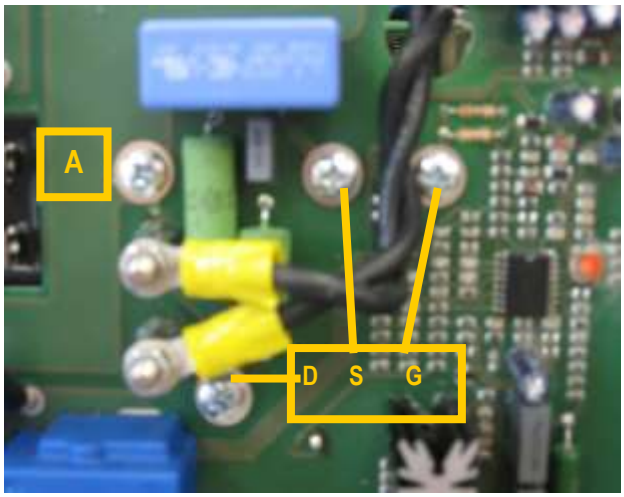
Before carrying out any work on the machine make sure it is off and the plug has been disconnected.

PROBLEM	CASE	SOLUTION
The machine does not switch on.	Lack of power supply	Make sure the line switch is closed, the protection devices (fuses) are not enabled and that the power supply cable is in good condition (Picture 3).
	Voltage reaches the machine switch but there is no voltage after the contacts.	Switch the machine off and disconnect the plug. Make sure that when the switch is closed, there is continuity between the contact input and output (Picture 3) and the varistor is not broken. If broken, replace board 0074. (Picture 1).
	There is voltage after the disconnecting switch but the machine does not go on.	Switch the machine off and disconnect the plug. Check the PFC Module on the power board, if it is damaged, replace the power board (Picture 2)
	There is voltage after the disconnecting switch but the machine does not go on. The LED L1 is on.	You have to check if the LED on rear panel is on. (Picture 4).You have to check the value of the main power supply.
The protection devices of the line set off when the switch is activated and the machine does not go on.	Damaged power supply cable with short-circuited wires. Inverter is damaged.	Switch off the machine and disconnect the plug. Make sure that there are no short circuits between the poles of the plug caused by a damaged power supply cable. Switch off the machine and disconnect the plug, then check : - varistor (Picture 1); if it is damaged, replace the board 0074; - check the PFC Module and Inverter (Picture 2,6) if they are damaged, replace the power board 0070; Input bridge rectifier (Picture 5); if it is damaged, verify also inverter and PFC module. If they are working then replace only the Input rectifier, otherwise both.

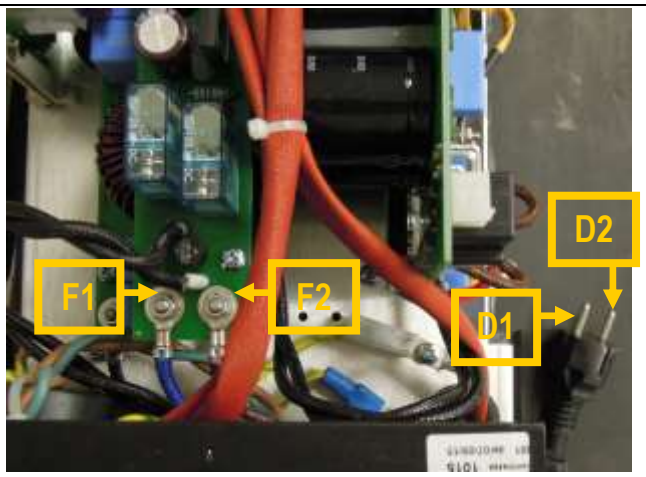
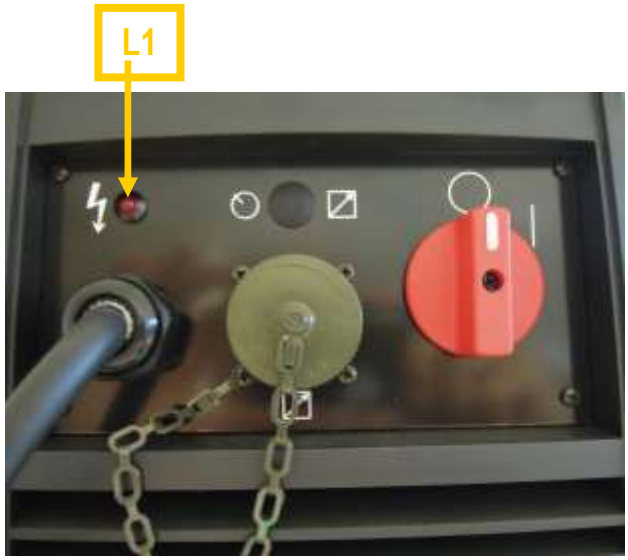
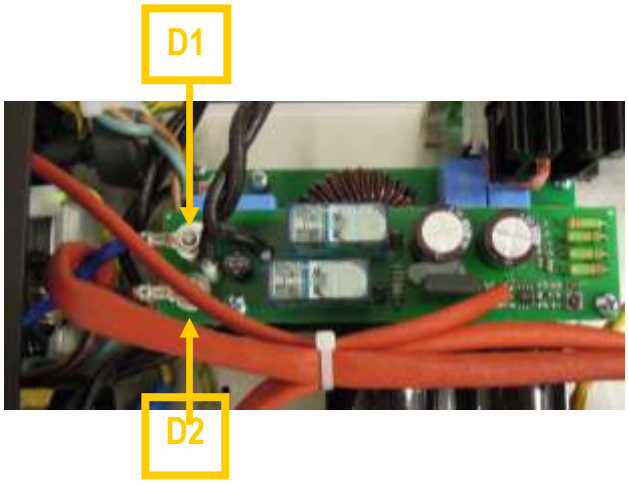
PROBLEM	CASE	SOLUTION
The front panel does not switch on.	The fan works but the front panel does not go on.	Switch off the machine and disconnect the plug. Make sure the flat cable that connects the front panel to the power board is inserted correctly. If it is correctly inserted, replace the front panel, 050.0001.0015. If the front panel does not go on, check PFC Module. If it is damaged, replace the power board (Picture 2,6,15)
The Machine works and weld but the fan doesn't work (too short thermal cycle).	The cable that connects the Power Board (0070) to the Fan is not correctly inserted or damaged. (Picture 8)The fan is damagedFan speed doesn't increase/decrease	Connect the cable or eventually replace it (Picture 8). Replace it and if it is still not working, replace the Power Board. Replace Power Board 0070
The output voltage in MMA/TIG is about 13.5V and the Machine doesn't weld.	The wires that connect the output filter board 0075 to the front panel (0015) are not correctly connected or damaged. The cable that connects the inversion board 0071 to the module board 0047 is not correctly connected or is damaged. Front panel 0015 cable connected to the Inversion Board 0071 could be disconnected Check the follow pieces:Front panel board 0015 and/orPower board 0070 and/orInversion board 0071 are damaged.	Switch off the machine and disconnect the plug: Connect the cables 0075 or if they are damaged replace them (Picture 7). Connect board 71 cable to board 0047, if damaged replace it. Connect board 15 cable to board 0071, if damaged replace it. Replace damaged Board. Replace damaged Board Replace damaged Board

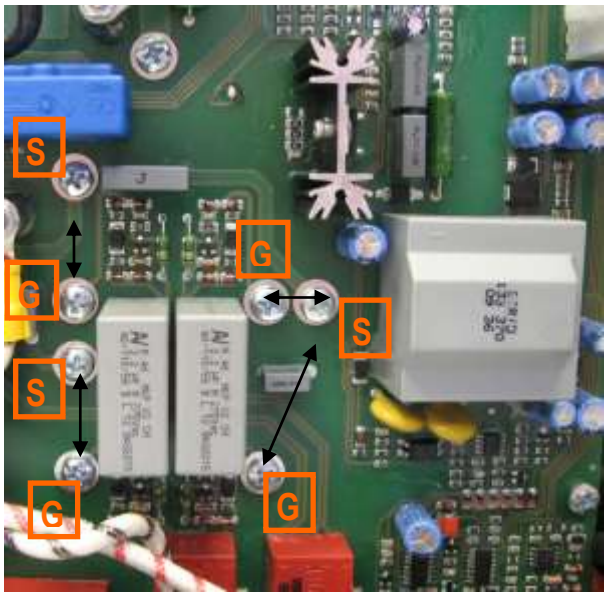
PROBLEM	CASE	SOLUTION
Yellow led on. Output voltage in each procedure is about 13.5V. Thermal protection device enabled.	Yellow led onThermal protection device keeps onUsing a continuity tester verify if::Protectors are openProtectors are closedNone of the above mentioned cases	Leave the machine on for few minutes to allow the cooling of the inverter. Switch the machine off and disconnect the plug. Remove the hood and make sure:the temperature of the heat sink tool is less than 40°C;If it is less than 40°C, check if the thermal protection connectors are closed. (Picture 7)They are defective, replace themCheck that the wires are properly connected to the weld lead connectors (Picture 7).Erratic feeding in the power board 0070, replace it.
When welding the protection devices of the line set off.	Make sure the welding current does not require greater power than the one supplied by the line.	Decrease the welding current.
The remote control is damaged.	Check that the 4-pin connector (picture 13) is correctly inserted on the front panel.The Front Panel could be damaged.	Insert the wires into the connectors correctly and insert the connectors into their housings. Should this not be sufficient, replace the front panel board 0015 (Picture 12,13)
The machine always welds at maximum current.	The Front Panel 0015 is damaged.The Power Board 0070 is damaged.The Hall Effect is damaged or the cable is disconnected.	Switch off the machine and disconnect the plug:The Front Panel 0015 must be replaced.The Power Board 0070 must be replaced.Connect the cable in the right way, or if damaged, the Hall Effect must be replaced.
The output voltage in MMA/TIG is zero and the welding procedure is blocked in MMA.	ISOTOP diodes are in short circuit. The Inversion Module is damaged.. Board 0065 transils damaged TF POT inductive value is null Wires Vout damaged	Turn off the machine and remove PCB 0065 (check the ISOTOP diodes): Replace them (Picture 10) Replace Module and Board 0071; Replace Board 0065; Replace TF POT if damaged. Checking the wires (Picture 9)

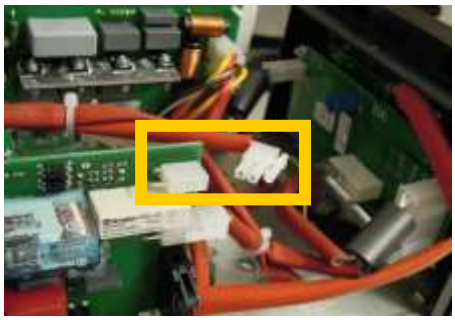
PROBLEM	CASE	SOLUTION
Poor welding quality	Spattering occurs during MMA welding.	Make sure welding polarity is correct, the earth clamp is fixed correctly and check the hot-start and arc-force values that have to be decreased if they are too high.
	The arc switches off while welding AC	The inversion board 0071 or the front panel 0015 must be replaced.
Other problems	-	You have to reset the front panel.

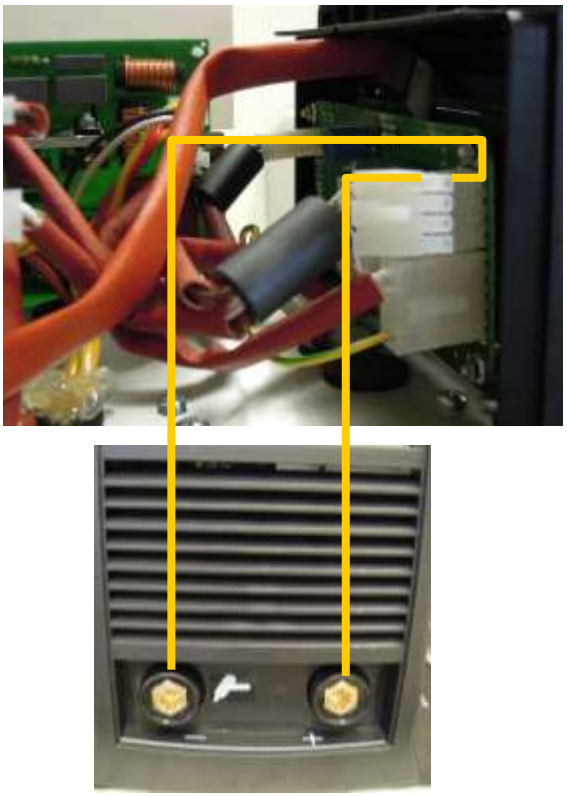
		EXPLANATION
Picture 1		The varistor is a blue disc. This device is for protecting the board from input overvoltage. When there is overvoltage they “explode” causing a short circuit most of the times. If the extent of the short circuit is very high, they become an open circuit.
Picture 2		To check the PFC of the switching power supply unit, carry the following measurements with a diode tester: Should there be a short-circuit on one of these measurements or an “OL” instead of a numeric value, the power board must be replaced.

Red Probe	Black Probe	Measure
D	S	“OL”
S	D	0.38
G	S	1.02
S	G	1.05
G	D	“OL”
D	G	“OL”
A	D	“OL”
D	A	0.34

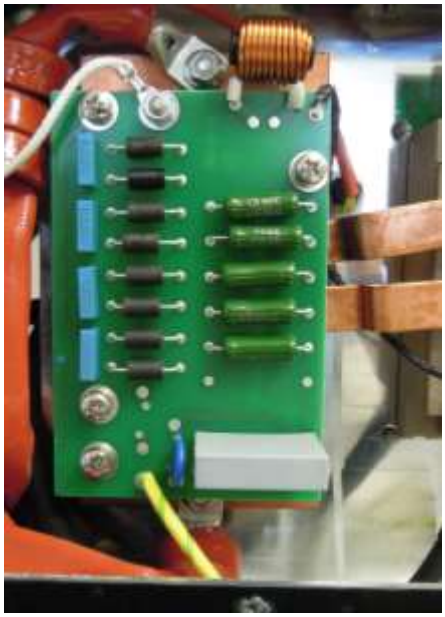
		EXPLANATION
Picture 3		Check the power supply cable and the mains switch. You have to disconnect the machine to the main power supply and switch on the main switch (position "I"). Now you have to check the continuity, with a diode tester, between points D1-F1 and D2—F2. If there is no continuity, you have to check the single parts
Picture 4	 	If you see L1 ON, the OVERCAT is working. Check the main power line. Open the machine, switch on the power and check between D1 and D2. If there will be more then 275Vac, you have to check the main power line.

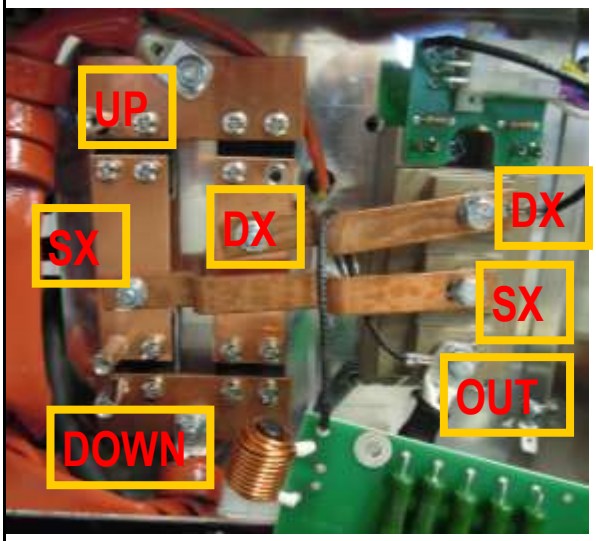
		EXPLANATION
Picture 5		Input bridge rectifier. To check the Input bridge rectifier , carry out the following measurements with a diode tester: **Rheofore / Probe / Rheofore / Probe** F+ / Rosso / D1-D2 / Nero F- / Rosso / D1-D2 / Nero F+ / Nero / D1-D2 / Rosso F- / Nero / D1-D2 / Rosso Should there be a short circuit on one of these measurements, the input bridge rectifier must be replaced.
Picture 6		To check the inverter, carry out the following measurements with a diode tester: **Red Probe / Black Probe / Measure** S / G / >2.00 G / S / >2.00 Should there be a short-circuit on one of these measurements or an “OL” instead of a numeric value, the power board must be replaced.

		EXPLANATION
Picture 7		Make sure the two terminals of the thermal devices are well inserted in the 8-pin white connector on the power board 0070.
Picture 8	 	Make sure that the fan cables +24 V are correctly inserted: 2-pin connector on the power board; 2-pin connector on the fan.

		EXPLANATION
Picture 9		You have to check the Vout cable. **Red Probe** / **Black Probe** / **Measure** **Pin 4 of the amphenol** / **Negative Socket** / **"OL"** **Pin 8 of the amphenol** / **Positive shocket** / **"OL"** Make sure that the output filter board 0074 cables are correctly inserted in the front panel connectors (board 0015).

Picture 10





EXPLANATION

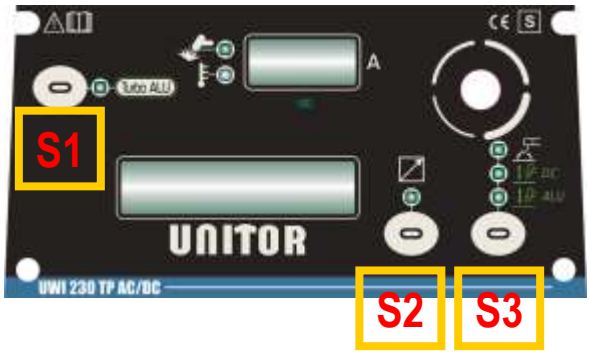
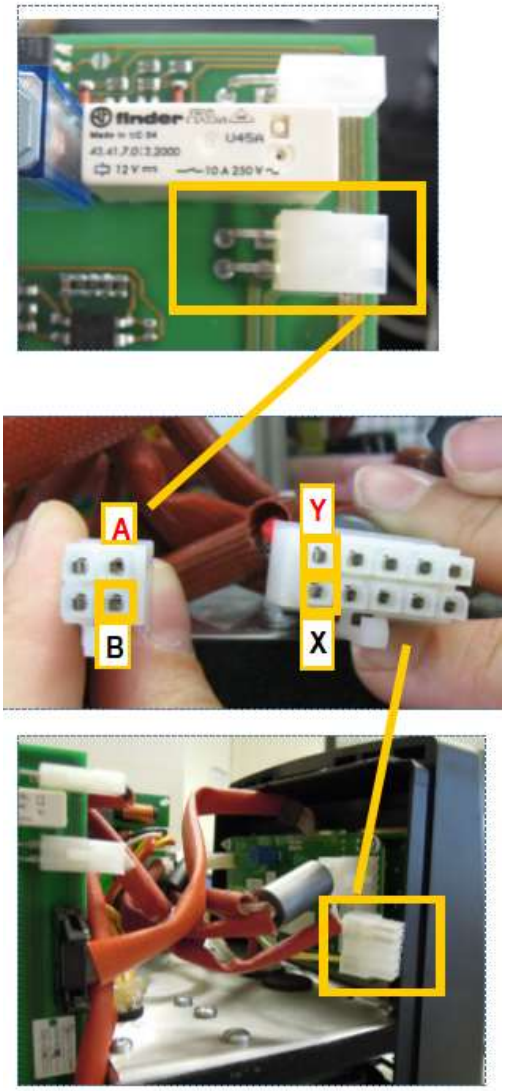
To check diodes remove the snubber board and carry out the following measures with a diode tester:

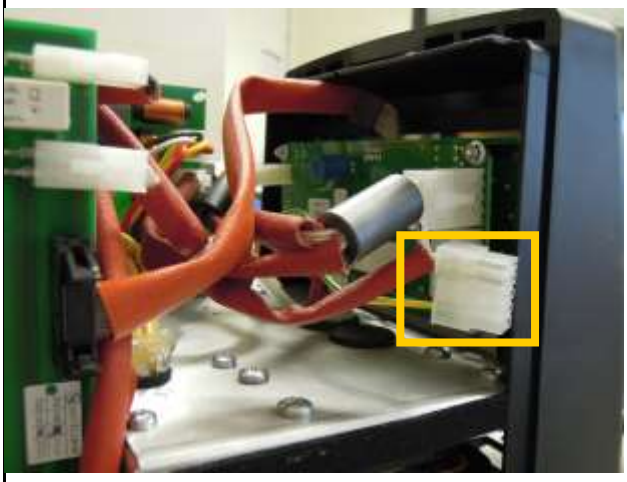
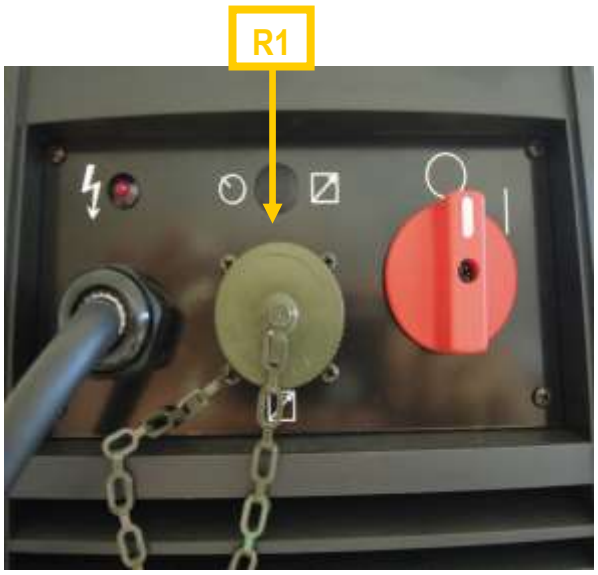
Copper bar	Probe	Copper bar	Probe	Measure
SX	red	UP/DOWN	black	0.3
SX	black	UP/DOWN	red	"OL"
DX	red	UP/DOWN	black	"OL"
DX	black	UP/DOWN	red	0.3

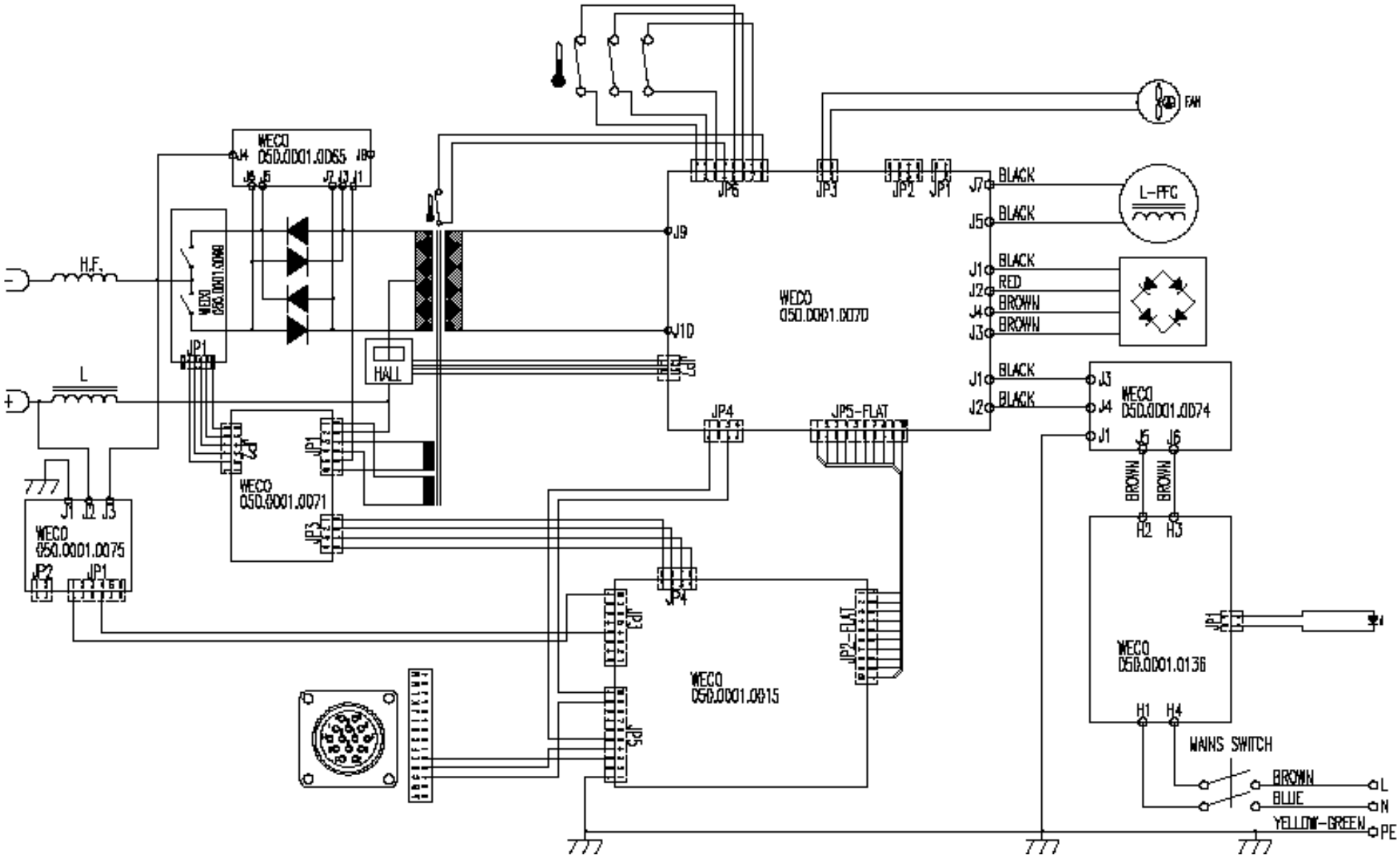
At the ends of the two transils (see below) positioned on the snubber board, "OL" must always be measured.

Check the diodes

Copper bar	Probe	Copper bar	Probe	Measure
SX	red	OUT	black	0.3
SX	black	OUT	red	"OL"
DX	red	OUT	black	"OL"
DX	black	OUT	red	0.3

		EXPLANATION
Picture 11		Press S1 and S3 while switching on the machine until appears MEMORY RESETTING.
Picture 12		Check continuity, with a diode tester, between points **A**-**Y** of the power board and **B-X** poles of the connector that goes to the front panel. Connect the MINIFIT 4 PINS at the power board, switch on the machine and check between **Y**-**X** if there is +24Vdc.

		EXPLANATION
Picture 13	 	Checking the remote cable. With a tester (diode mode) check the data table follow. Probe red / Probe black / Misura C / 9 / "OL" D / 4 / "OL" E / 3 / "OL"
Picture 14		Check if the flat cable has a good connection in the power board.


FAN
L-PFC
WECO
050.0001.0065
WECO
050.0001.0070
WECO
050.0001.0071
WECO
050.0001.0074
WECO
050.0001.0075
WECO
050.0001.0136
WECO
050.0001.0915
HALL
H.F.
L
WAHS SWITCH
BROWN
BLUE
YELLOW-GREEN
L
N
PE
BLACK
RED
BROWN
JP1
JP2
JP3
JP4
JP5
JP5-FLAT
JP6