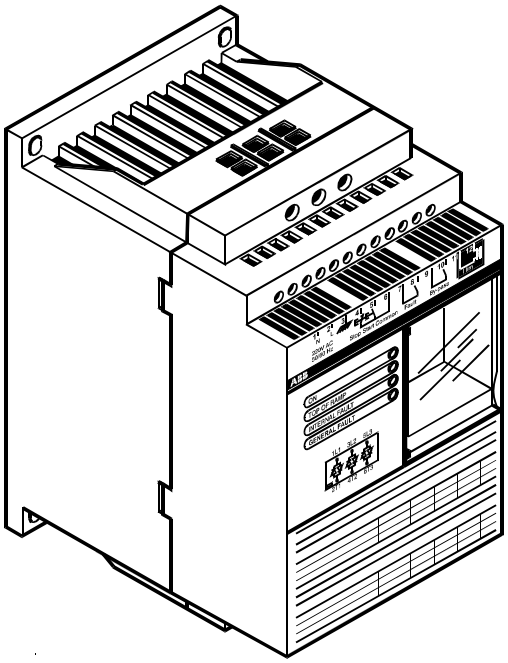
Softstart

Changing of Printed Circuit Board PS S18 - 300

5309 704-1 Rev E Juli-06



General

Please note!

The life span of electronics can be affected by damage caused by electrostatic discharge. This can happen if a charged tool or person touches a component.
Therefore it is very important that all tools and personnel are discharged, by touching an earthed point, before handling the printed circuit boards or any of the components. It is equally important to discharge the package with the new printed circuit board before opening it.

A person walking on a carpet can be charged with up to fifteen thousand volt (15000V). Compare this with the fact that some sensitive components can be destroyed when discharged on a much lower level (about 100V). We kindly ask you to pay notice to this, as this is a vital point in order to ensure the life span of the product.

Identify the Printed Circuit Board that is going to be replaced

Please take a look on the backside of PCB. It can be two different type of markings. See examples, figure 1 and 2
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Fig 1. Old marking including Rev 11

Fig 2. Newer revisions from Rev 12 and forward

When the existing PCB (the one to be replaced) is identified, please look for where to start to read this instruction

Start here if

Replacing an older PCB marked Rev 10 or older (for 690V Rev H or older).

These PCB have tabs (see Fig 3) as connectors for the gate wires and other internal connections.
This chapter is valid if replacing the broken PCB it with the newest revision (rev I or later) of PCB. Then all the internal cable connectors have to be converted to fit on the new PCB. The needed connectors are enclosed in the new PCB package. Please note that the gate wires are connected differently on the new PCB.

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Step by step.

1. Disconnect the voltage from terminals 1L1, 3L2 and 5L3 (main supply).
2. Disconnect all cables from the terminals 1 to
3. Remove the front cover.
4. Discharge the tools and yourself by touching earth (if you are not earthed).
5. Remove the old PCB.
6. Disconnect the cable on the PCB from the thyristors, fans and thermal switch.
7. Cut the old wires, and exchange the terminals for the gate wires, fan wires, and thermal switch to the new ones included in the package.
8. Discharge the package with the new PCB by moving it to earth.
9. Mount the cable on the PCB from the thyristors, fans and thermal switch. Mount also the connector for Supply Voltage. **Please note that the gate wires have a new connection position** - **See colour marking Fig. 4.**
10. Mount the new PCB.
11. Mount the front cover.
12. Connect the voltage and the other cable.

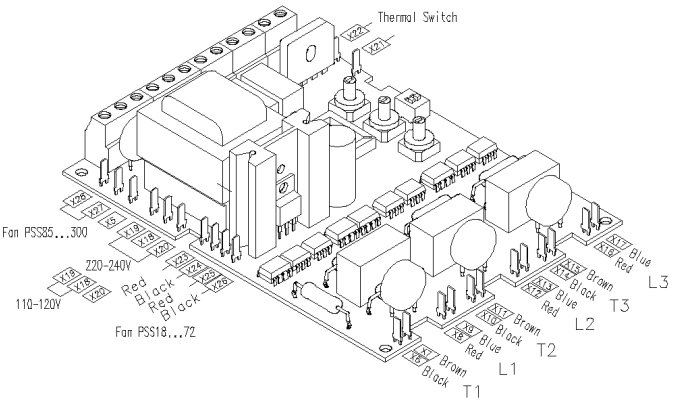

Fig. 3. PCB with tabs.

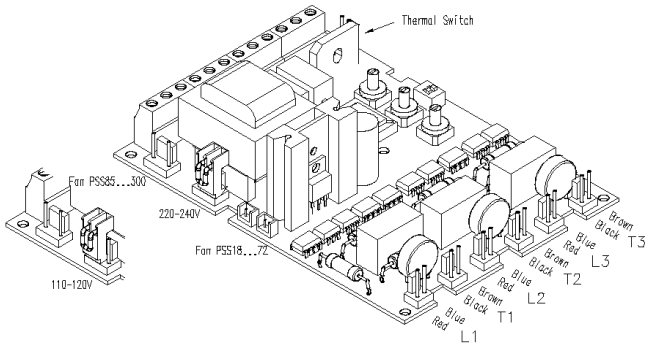

Fig. 4. New PCB rev I or later.

PS – make sure that you are placing the jumper for supply voltage in the correct position, 110 – 120V or 220 – 240V.
Make also sure that you have connect the cable from the thyristors correct DS

Ready for start!!

Start here if

Replacing a PCB marked Rev 11 up to revision H (Not valid for 690V).

These PCB have white colored connectors (see Fig.5) for the gate wires and other internal connections. This chapter is valid if replacing a broken PCB with a newer revision (rev I or later) of PCB. Please note that the gate cable connections are different on the new PCB, Check this following the cable colors in figure 6 below..

Step by step.

1. Disconnect the voltage from terminals 1L1, 3L2 and 5L3 (main supply).
2. Disconnect all cables from the terminals 1 to.12.
3. Remove the front cover.
4. Discharge the tools and yourself by touching earth (if you are not earthed).
5. Remove the old PCB.
6. Disconnect the cable on the PCB from the thyristors, fans and thermal switch.
7. Discharge the package with the new PCB by moving it to earth.
8. Mount the cable on the PCB from the thyristors, fans and thermal switch.

13. Mount also the connector for Supply Voltage.
    Please note that the gate wires have a new connection position -
    See colour marking Fig. 6.
9. Mount the new PCB.
10. Mount the front cover.
11. Connect the voltage and the other cable.

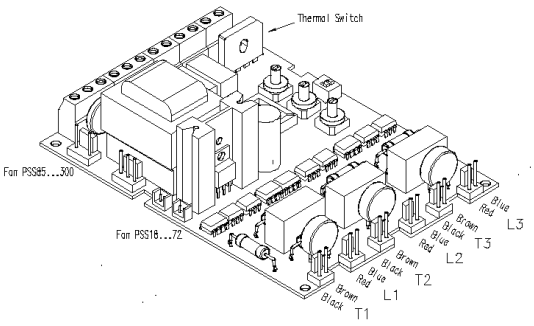

Fig. 5. Older PCB with connectors.

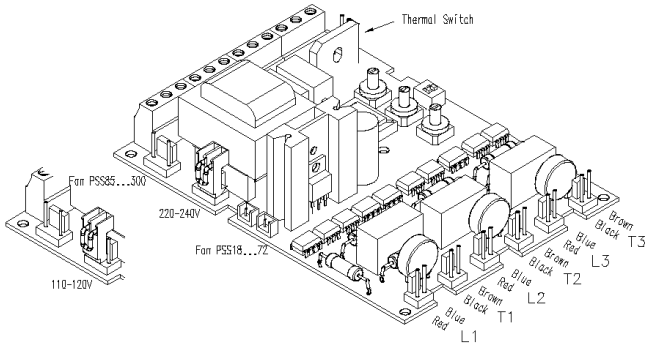

Fig. 6. New PCB rev I or later

PS – make sure that you are placing the jumper for supply voltage in the correct position, 110 – 120V or 220 – 240V.
Also make sure that you have connected the cables from the thyristors in the correct position as it differ from the old PCB DS

Ready for start!!

Start here if

Replacing a PCB marked Rev I or later (also for 690V Rev I**)**
These PCB have white colored connectors (see Fig.7) for the gate wires and other internal connections.
This part is valid if replacing a broken PCB with a new of PCB with the same revision or newer,

Step by step.

1. Disconnect the voltage from terminals 1L1, 3L2 and 5L3 (main supply).
2. Disconnect all cables from the terminals 1 to.12.
3. Remove the front cover.
4. Discharge the tools and yourself by touching earth (if you are not earthed).
5. Remove the old PCB.
6. Disconnect the cable on the PCB from the thyristors, fans and thermal switch.
7. Discharge the package with the new PCB by moving it to earth.
8. Mount the cable on the PCB from the thyristors, fans and thermal switch. Mount also the connector for Supply Voltage.
   See Fig 6

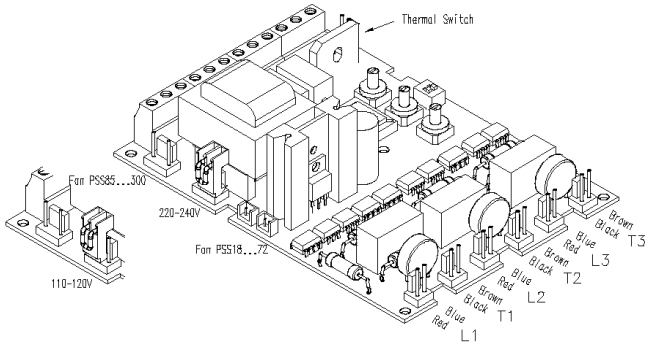

Fig. 7. New PCB rev I or later.

9. Mount the new PCB.
10. Mount the front cover.
11. Connect the voltage and the other cable.

PS – make sure that you are placing the jumper for supply voltage in the correct position, 110 – 120V or 220 – 240V. DS

Ready for start!!

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