4.4 Trouble shooting power supply

4.4.1. Trouble shooting DSQC 604

Required test equipment

Equipment needed for trouble shooting:

- Ohmmeter
- Resistive load (e.g. Main Computer DSQC 639 on +24V_PC)
- Voltmeter

Preparations

	Action	Note
1.	Check the FlexPendant for errors and warnings.	

Trouble shooting procedure, DSQC 604

The trouble shooting table is supposed to be used as a detailed instruction together with the trouble shooting flowchart, see *Trouble shooting flowchart, DSQC 604 on page 58*.

	Test	Note	Action
1.	Check the indicator LED on DSQC 604.	The indicator LED is labelled DCOK.	If the LED is GREEN, the power supply should be working properly. If the LED is PULSING GREEN, the DC outputs are probably not connected to any units or there may be a short circuit on an output. Proceed with step 2. If the LED is OFF, either the power supply is faulty or it does not have sufficient input voltage. Proceed with step 4.
2.	Check connections between DC outputs and connected units.	Make sure that the power supply is connected to its proper units. A minimum load of 0.5-1A is required on at least one DC output for the 604 to work properly.	If the connections are OK, proceed with step 3. If the connections are faulty or the power supply is not connected to any units at all, repair connections/ connect units. Verify that the fault has been fixed and restart this guide if necessary.
3.	Check for short circuits on DC outputs.	Check both the DC outputs on DSQC 604 and the inputs on surrounding units. Measure the resistance between voltage pins and ground. The resistance should NOT be zero. The DC outputs are shown in the Circuit Diagram in *Product manual - IRC5*.	If no short circuit is found, proceed with step 4. If a short circuit is found on DSQC 604, proceed with step 10. If a short circuit is found on any surrounding unit, get that unit working. Verify that the fault has been fixed and restart this guide if necessary.

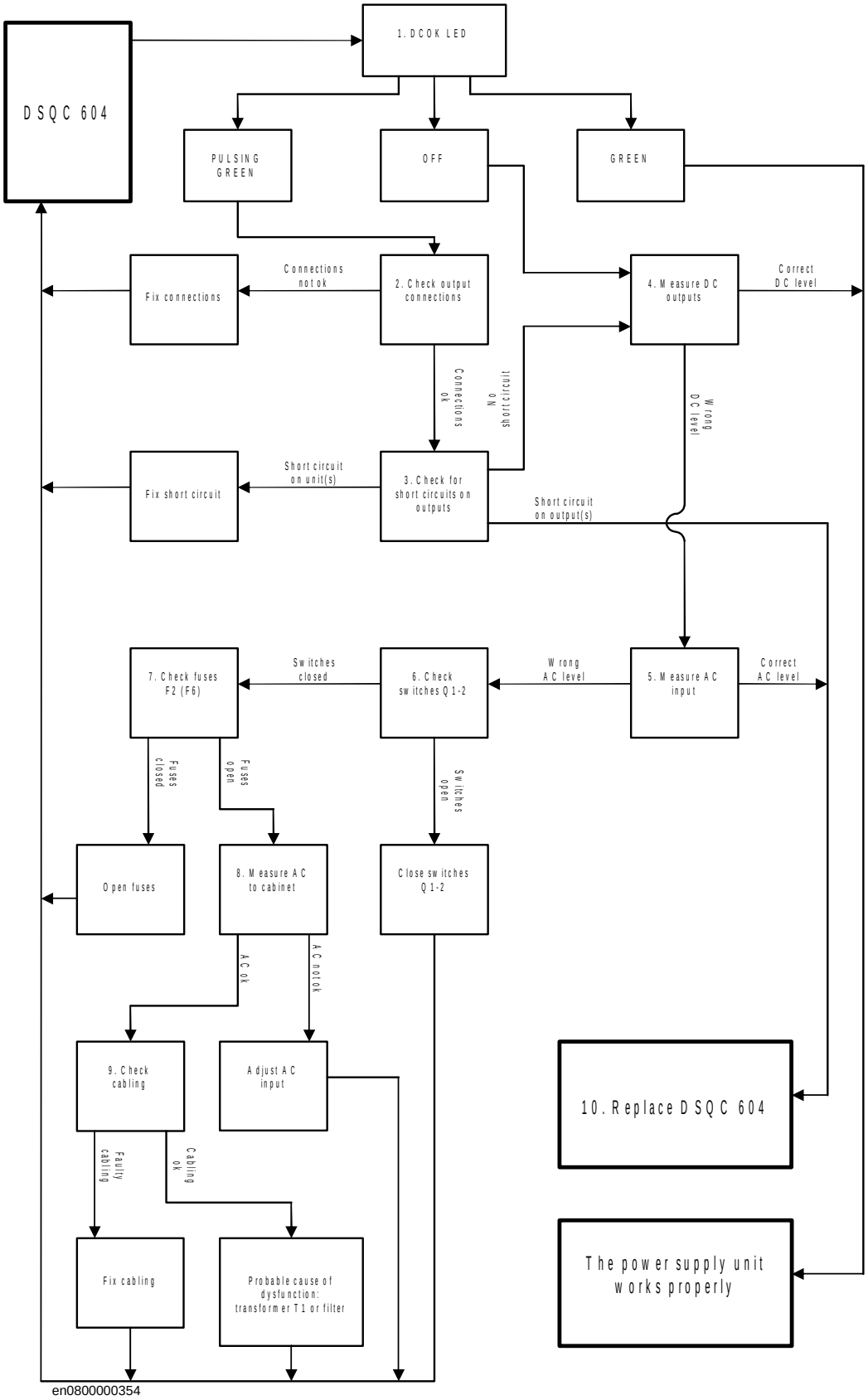
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	Test	Note	Action
4.	Disconnect one DC output at a time and measure its voltage.	Make sure that at least one unit is connected at all times. A minimum load of 0.5- 1A is required on at least one output for the 604 to work properly. Measure the voltage using a voltmeter. The voltage should be: +24V < U < +27V. The DC outputs are shown in the Circuit Diagram in *Product manual - IRC5*.	If the correct voltage is detected on all outputs and the DCOK LED is green, the power supply is working properly. If the correct voltage is detected on all outputs and the DCOK LED is off, the power supply is regarded as faulty but does not have to be replaced instantly. If no or the wrong voltage is detected, proceed with step 5.
5.	Measure the input voltage to the 604.	Measure the voltage using a voltmeter. Voltage should be: 172 < U < 276V. The AC input is shown in the Circuit Diagram in *Product manual - IRC5*.	If the input voltage is correct, proceed with step 10. If no or the wrong input voltage is detected, proceed with step 6.
6.	Check switches Q1-2.	Make sure that they are closed. Their physical location is shown in the Circuit Diagram in *Product manual - IRC5*.	If the switches are closed, proceed with step 7. If the switches are open, close them. Verify that the fault has been fixed and restart this guide if necessary.
7.	Check main fuse F2 and optional fuse F6 if used.	Make sure that they are open. Their physical location is shown in the Circuit Diagram in *Product manual - IRC5*.	If the fuses are open, proceed with step 8. If the fuses are closed, open them. Verify that the fault has been fixed and restart this guide if necessary.
8.	Make sure that the input voltage to the cabinet is the correct one for that particular cabinet.		If the input voltage is correct, proceed with step 9. If the input voltage is incorrect, adjust it. Verify that the fault has been fixed and restart this guide if necessary.
9.	Check the cabling.	Make sure that the cabling is correctly connected and not faulty.	If the cabling is OK, the problem is likely to be the transformer T1 or the input filter. Try to get this part of the supply working. Verify that the fault has been fixed and restart this guide if necessary. If the cabling is found unconnected or faulty, connect/replace it. Verify that the fault has been fixed and restart this guide if necessary.

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4.4.1. Trouble shooting DSQC 604

Trouble shooting flowchart, DSQC 604



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