

ABB DSQC662

IRC5 Power Distribution Unit

Manufacturer	ABB
Model / order number	DSQC662 / 3HAC026254-001
Product identification	Power distribution unit
System / family context	ABB IRC5 robot controller

Verified scope

ABB identifies DSQC 662 as power distribution unit 3HAC026254-001. The attached IRC5 troubleshooting section covers its DC checks, USB communication and Status LED indications.

The manual uses $24\text{ V} < U < 27\text{ V}$ as a diagnostic check and requires a 0.5-1 A minimum load on at least one output. These are not maximum output-current or AC-input ratings.

Engineering checks before replacement

- Match 3HAC026254-001 and distinguish the PDU from the separate DSQC 661 supply.
- Record Status LED behavior after the documented one-minute startup interval.
- Verify the X1 DC input, X2 ACOK_N connection and USB cable against cabinet drawings.
- Use qualified personnel; preserve the specified load and account for stored backup energy.

Official ABB source reference

ABB Operating manual - Trouble shooting, IRC5
3HAC020738-001, Revision K; original printed pages 62-64 follow.

Open original ABB manufacturer manual

This cover is an independent Sales PLC reference, not a manufacturer-issued datasheet. The following manufacturer pages retain their original text, layout and page numbering.

Request model verification or a quotation

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4 Trouble shooting by Unit

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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.	
2.	Make sure that the power distribution board is in run-time mode. Do this by waiting 1 minute after power-on.	When the AC power has been cut off, the indicator LED (Status LED) on DSQC 662 will turn red and stay red until UltraCAP is empty. This may take a long time and is completely normal. It does not mean that there is something wrong with the 662.

Trouble shooting procedure, DSQC 662

The trouble shooting table is supposed to be used as a detailed instruction together with the trouble shooting flowchart, see [Trouble shooting flowchart, DSQC 662 on page 64](#).

	Test	Note	Action
1.	Check the indicator LED on DSQC 662.	The indicator LED is labelled Status LED.	If the LED is GREEN, the 662 should be working properly. If the LED is PULSING GREEN, a USB communication error has occurred. Proceed with step 2. If the LED is RED, the input/output voltage is low, and/or the logic signal ACOK_N is high. Proceed with step 4. If the LED is PULSING RED, one or more DC outputs are under specified voltage level. Make sure cables are properly connected to its respective units. Proceed with step 4. If the LED is PULSING REDGREEN, a firmware upgrade error has occurred. This is not supposed to happen during runtime mode, proceed with step 6. If the LED is OFF, either the 662 is faulty or it does not have sufficient input voltage. Proceed with step 4.

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	Test	Note	Action
2.	Check USB connection on both ends.		If the connection seems OK, proceed with step 6. If there is a problem with the connection, proceed with step 3.
3.	Try to fix the communication between the power supply and the computer by reconnecting the cable.	Make sure that the USB cable is properly connected on both ends.	If the communication comes back up, verify that the fault has been fixed and restart this guide if necessary. If unable to fix the communication, proceed with step 6.
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 662 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 <i>Product manual - IRC5</i> .	If the correct voltage is detected on all outputs and the Status LED is green, the power supply is working properly. If the correct voltage is detected on all outputs and the Status LED is NOT green, 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 662 and the ACOK_N signal.	Measure the voltage using a voltmeter. Input voltage should be: $24 < U < 27V$ and ACOK_N should be 0V. Make sure that connectors X1 and X2 are connected properly on both ends. The DC input X1 and ACOK_N connector X2 are shown in the Circuit Diagram in <i>Product manual - IRC5</i> .	If the input voltage is correct, proceed with step 6. If no or the wrong input voltage is detected, troubleshoot DSQC 661.
6.	The 662 may be faulty, replace it and verify that the fault has been fixed.	How to replace the unit is detailed in <i>Product manual - IRC5</i> .	

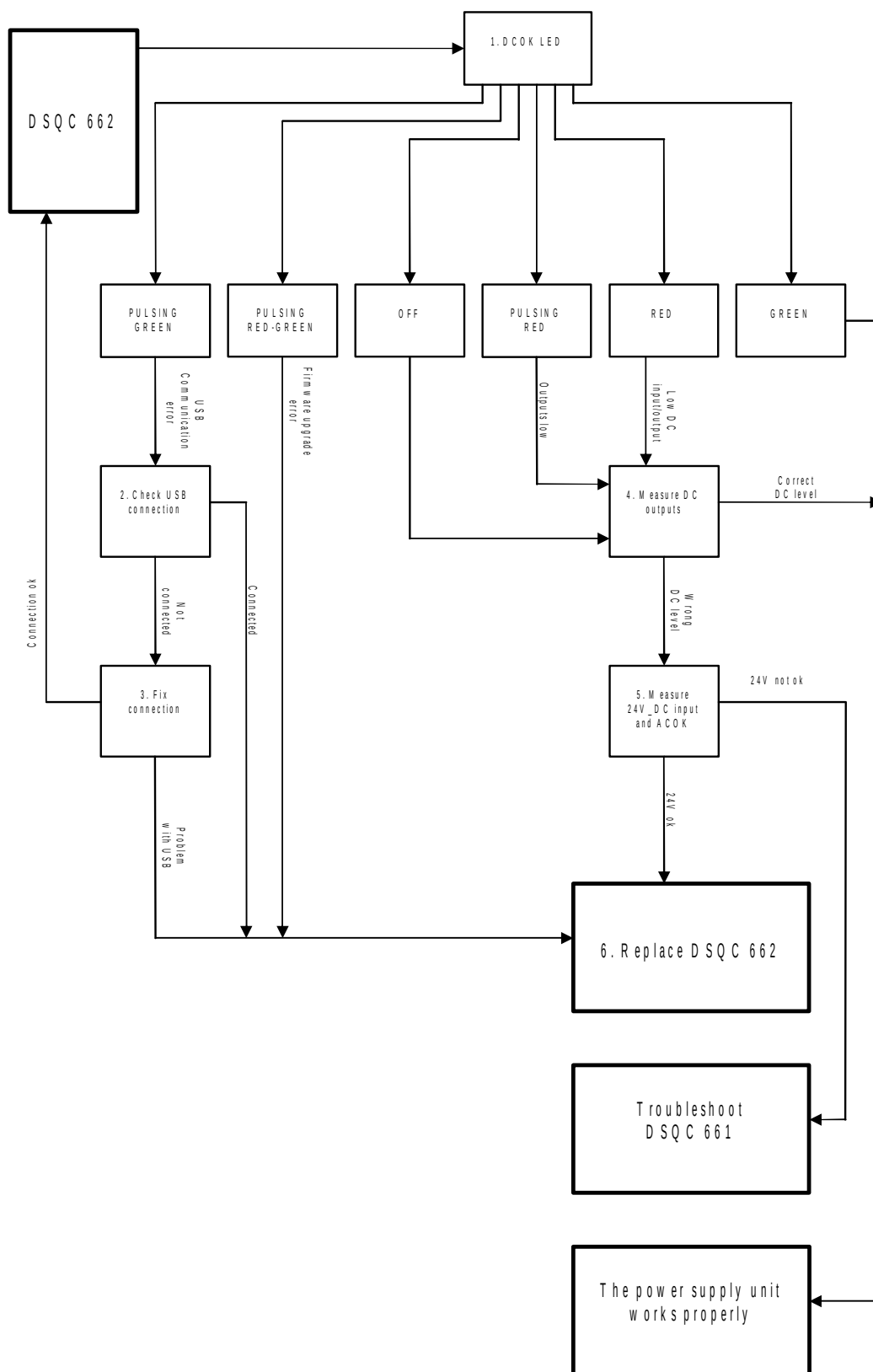
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Trouble shooting flowchart, DSQC 662



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