

ABB DSQC608 3HAC12934-1

01 Scope and system boundary

Installed function

ABB DSQC608 3HAC12934-1 is the customer I/O power-supply unit used in the applicable IRC5 controller arrangement. It supplies the customer I/O section as a separate cabinet component. The IRC5 cabinet contains several distinct power functions. The customer I/O supply serves a different path from the control power supply and the drive-system power supply. In a dual-cabinet installation it is in the Control Module. Correct circuit identification prevents a field-I/O fault from being misdiagnosed as a robot-drive fault.

Functional sequence

01	Customer I/O feed
02	DSQC608 supply
03	Customer I/O circuits
04	Field-device response

Before work starts

Check	Technical purpose
Locate the customer I/O circuit	Identify the customer I/O supply on the cabinet arrangement before starting work. The control power supply and drive-system power supply are separate components; their proximity in the cabinet does not make the harnesses interchangeable.
Prepare cabinet access	Isolate the controller and any separately supplied circuits. If the optional flange-disconnect assembly obstructs the power-supply position, follow the controller access procedure before reaching the unit.

Isolation and handling

Identify the customer I/O supply by its cabinet position and harness before removal. Restore optional access hardware after reconnecting the unit.



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02 Connections and readiness

Interface preparation

Interface	Function	Check
Customer I/O circuit	The field-I/O supply service function.	Keep this circuit separate from control and drive-system supplies.
Harness connectors	All supply connectors are disconnected during removal.	Record each original connection before separation.
Upper/lower screws	The two mechanical retention points.	Support the unit while releasing and refitting both screws.
Optional flange disconnect	May obstruct access to the service position.	Refit it after the supply connections are restored.

Engineering considerations

The specific replacement sequence has two access branches: a cabinet with the optional flange disconnect and a cabinet without that obstruction. In both cases, identify every connector before disconnection, support the unit while removing its two screws, and secure the replacement before reconnecting the harness. Restore the optional access assembly last.

Relevant setup data

Item	Value or condition
Service function	Customer I/O power supply
Single-cabinet location	Designated internal customer-I/O supply position
Dual-cabinet location	Control Module
Retention	One upper and one lower attachment screw



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03 Installation and replacement

Work sequence

01	Locate the customer I/O circuit
02	Prepare cabinet access
03	Disconnect the harness
04	Release and refit the unit
05	Restore the access arrangement
06	Check customer I/O operation

Execution details

Stage	Action and reason
Disconnect the harness	Record the connector destinations and then disconnect the supply connections. Keep loose harnesses supported and identifiable so that the customer I/O path can be restored without swapping it with another power circuit.
Release and refit the unit	Remove the upper and lower attachment screws while supporting the supply. Fit the replacement in the original position, reinstall both screws and secure the unit before reconnecting the harness.
Restore the access arrangement	Reconnect all original supply connectors, then reinstall the optional flange-disconnect assembly. Confirm that the mechanical access work has not trapped a harness or obstructed the cabinet components.
Check customer I/O operation	Re-energize under the approved test procedure and verify the field I/O powered by this unit. Confirm the original supply symptom has cleared and that the customer circuits operate correctly before enabling the robot cell.

Before energization

Isolate all relevant supplies before working inside the IRC5 cabinet. Locate the customer I/O supply separately from the control and drive-system supplies. Remove the optional flange-disconnect assembly when it obstructs the service position. Identify each connector before disconnection.



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04 Commissioning and fault isolation

Functional acceptance

Test	Action	Expected result
Mechanical seating	Inspect both upper and lower retention points.	The supply is seated and secured in its designated position.
Harness assignment	Compare restored connections with the pre-work record.	Every connector returns to the intended customer-I/O path.
Access restoration	Check the fitted flange-disconnect assembly where applicable.	Access hardware is restored without trapping cables.
Field function	Test the affected customer-I/O devices in the controlled cell state.	The original field symptom is cleared before motion is enabled.

Interpret the symptom

Observation	Investigation	Decision boundary
Controller runs, customer I/O does not	Identify the field-I/O power path separately.	Controller startup does not establish that this separate circuit is healthy.
Access blocked by flange-disconnect option	Follow the access sequence before touching the supply.	Do not force the unit through obstructing hardware.
Connector destination uncertain	Stop reassembly and resolve the original harness map.	Do not select a destination merely because a connector fits.
Supply exchanged, field symptom remains	Trace the affected customer-I/O circuit and device.	A mechanical exchange is not a functional acceptance test.

Controlled return to service

Retain the cabinet arrangement, the presence or absence of the flange-disconnect option, connector destinations and the field circuits tested. Keep the acceptance record tied to the actual customer-I/O devices, not simply to a successful controller restart. Electrical ratings must follow the installed unit and matching circuit design.



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05 Technical checks and handover

Questions that affect the work

Where is ABB DSQC608 3HAC12934-1 installed in a dual-cabinet IRC5 system?

The customer I/O power supply is located in the Control Module.

Which optional assembly affects access to ABB DSQC608 3HAC12934-1?

The flange-disconnect assembly, when fitted, is removed as part of the access sequence and refitted after the replacement supply is connected.

How is ABB DSQC608 3HAC12934-1 retained mechanically?

An upper and a lower attachment screw secure the power-supply unit.

Is ABB DSQC608 3HAC12934-1 the same cabinet component as the control supply?

No. The customer I/O supply, control supply and drive-system supply occupy distinct functions and positions in the IRC5 arrangement.

Final checks

Check	Requirement
1	Release both upper and lower attachment screws.
2	Seat the replacement correctly before tightening its two retaining screws.
3	Reconnect the harness and restore the optional flange-disconnect assembly.
4	Verify the powered customer I/O circuits before returning the robot cell to operation.

Related catalogue pages

ABB DSQC 352A

ABB DSQC354 3HNE00065-1

ABB DSQC104 6369901-104

Technical basis

ABB 3HAC021313-001 Rev. P, customer I/O power-supply replacement, PDF pages 280-282

