

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Amikon cover with selected official ABB pages

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S4C DC2 RECTIFIER

DSQC345C 3HAB8101-3

DC2 RECTIFIER POWER MODULE

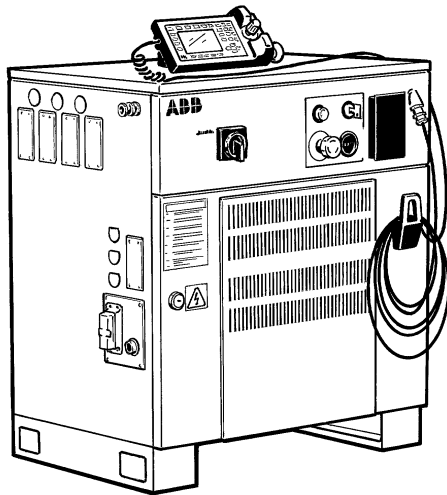
OFFICIAL SOURCES

ABB IRB 6400R Product Manual 3HAC 6264-1 M99. Selected S4C/DC2 identification, ratings, electrical safety and fault-tracing pages. Selected pages retain their original content, color and aspect ratio.

Product On-line Manual

IRB 6400R

3HAC 6264-1
M99



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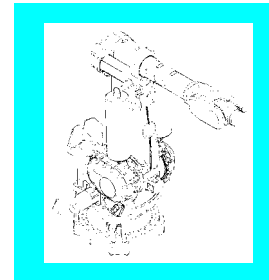


ABB Flexible Automation

11 The following standards are of interest when the robot is parts of a cell

EN 294	Safety of machinery - Safety distance to prevent danger zones being reached by the upper limbs.
EN 349	Safety of machinery - Minimum gaps to avoid crushing of parts of the human body.
EN 811	Safety of machinery - Safety distance to prevent danger zones being reached by the lower limbs.
Pr EN 999	Safety of machinery - The positioning of protective equipment in respect of approach speeds of the human body.
EN 1088	Safety of machinery - Inter locking device associated with guards principles for design and selection.

12 Risks Associated with Live Electric Parts

Controller

A danger of high voltage is associated with the following parts:

- The mains supply/mains switch
- The power unit
- The power supply unit for the computer system (55 V AC)
- The rectifier unit (260 V AC and 370 V DC. NB: Capacitors!)
- The drive unit (370 V DC)
- The service outlets (115/230 VAC)
- The power supply unit for tools, or special power supply units for the machining process
- The external voltage connected to the control cabinet remains live even when the robot is disconnected from the mains.
- Additional connections

Manipulator

A danger of high voltage is associated with the manipulator in:

- The power supply for the motors (up to 370 V DC)
- The user connections for tools or other parts of the installation (see *Installation*, max. 230 V AC)

Tools, material handling devices, etc.

Tools, material handling devices, etc., may be live even if the robot system is in the OFF position. Power supply cables which are in motion during the working process may be damaged.



If Query is selected, make sure that all required options are installed. Note that some of these options also require installation of other options. Rejecting of proposed options during installation may cause an incomplete robot installation.

4. The robot performs a warm start when installation is finished.



Wait until the welcome window appears on the display before doing anything. The warm start can take up to 2 minutes after the installation display ready.

5. Load the specific installation parameters from the Controller Parameter disk or corresponding.



After the control program has been installed, the diskettes should be stored in a safe place in accordance with the general rules for diskette storage. Do not store the diskettes inside the controller to avoid damaged from heat and magnetic fields.

6. Conclude the installation with updating the revolution counters according to section 2.13.2.

4.1.2 Query mode questions about used DC-links and balancing units

If query installation is selected, you will get a question about used DC-link. You will find the article number for the DC-link on the unit inside the controller.

Type	Art. no.	Config id	Description
DSQC 345A	3HAB 8101-1	DC0	DC-link
DSQC 345B	3HAB 8101-2	DC1	DC-link
DSQC 345C	3HAB 8101-3	DC2	DC-link
DSQC 345D	3HAB 8101-4	DC3	DC-link, step down
DSQC 358C	3HAB 8101-10	DC2T	DC-link + single drive unit
DSQC 358E	3HAB 8101-12	DC2C	DC-link + single drive unit

For IRB 6400R you will also get a question on what type of balancing units that is used. For identification, please see label attached at the top of the units.

Drive system configuration with one external axis at Drive System 1 and two or three axes at Drive system 2, all installed in the S4C robot cabinet.

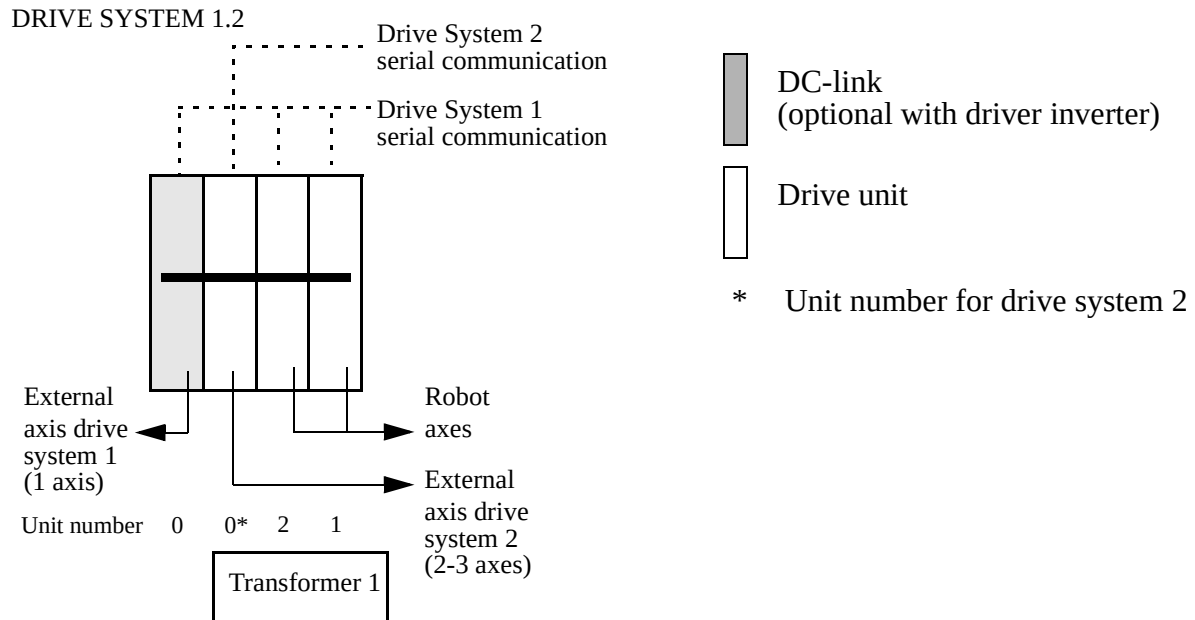


Figure 68 Drive system installed in the S4C cabinet.

Technical data Drive System

	Max current (A)	Rated current (A)	Max bleeder power (kW)	Rated bleeder power (kW)	Min voltage (V)
DSQC 345C / DC2 DSQC 358C / DC2T DSQC 358E / DC2C	80	14.6	15.3	0.9	275
DSQC 345D / DC3	70	16.7	15.3	0.9	370

Figure 69 Rectifier units.

1.7 Serial Communication

The most common causes of errors in serial communication are faulty cables (e.g. mixed-up send and receive signals) and transfer rates (baud rates), or data widths that are incorrectly set. If there is a problem, check the cables and the connected equipment before doing anything else.

The communication can be tested using the integral test-program, after strapping the input to the output. See chapter 9.

1.8 Drive System and Motors

The drive system, which consists of rectifier, drive unit and motor, is controlled by the axis computer, located on the robot computer board.

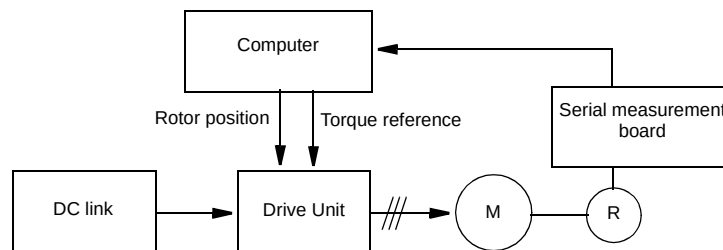


Figure 1 A schematic description of the drive system.

The drive system is equipped with internal error supervision. An error is sent on via the robot computer and can be read on the teach pendant display as an error message. An explanation of the available error messages can be found in the User's Guide, System and error messages, section 3, error no. 39XXX.

If a drive unit or rectifier is faulty, the unit should be replaced. Internal troubleshooting cannot be performed in the operating environment.