ABB IRC5 M2004

ABB IRC5 M2004 Control Module User Manual

Model: IRC5 M2004

1. Product Overview

The ABB IRC5 M2004 is a robust control module designed for industrial applications, specifically within robotics systems. This module is critical for managing and controlling various robotic functions, ensuring precise operation and integration. It operates at a rated current of 1A and a voltage of 230V, with a frequency range of 50/60Hz. This manual provides essential information for the proper installation, operation, and maintenance of your IRC5 M2004 control module.

2. Setup and Connections

Proper connection of the IRC5 M2004 control module is crucial for its functionality and safety. Refer to the diagram below for key connection points.

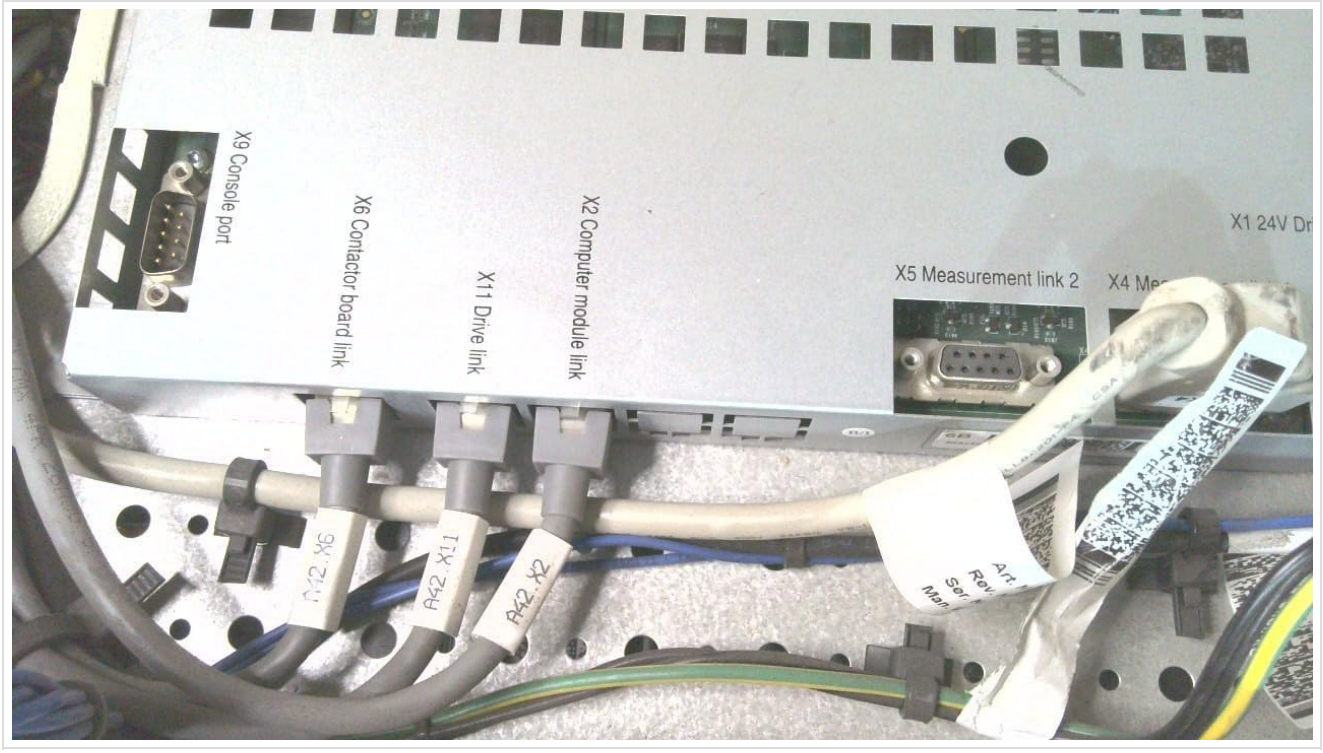


Figure 2.1: Module Connection Ports

This image displays the top panel of the ABB IRC5 M2004 control module, highlighting its various connection ports. Visible ports include the X9 Console port (a D-sub connector), X6 Contactor board link, X11 Drive link, X2 Computer module link, X5 Measurement link 2, and X4 Measurement link. Several cables are shown connected to these ports, indicating typical operational wiring. This view is essential for identifying the correct connection points during installation.

2.1. Port Identification

- **X9 Console port:** Used for direct console access and diagnostics.
- **X6 Contactor board link:** Connects to the contactor board for power control.
- **X11 Drive link:** Interface for connecting to motor drives.
- **X2 Computer module link:** Connects to the main computer or processing unit.
- **X5 Measurement link 2:** For secondary measurement data input.
- **X4 Measurement link:** For primary measurement data input.

2.2. Installation Steps

1. Ensure the power supply is disconnected before making any connections.
2. Mount the IRC5 M2004 module securely in its designated location, ensuring adequate ventilation.
3. Connect the necessary cables to their respective ports as identified in Figure 2.1. Ensure all connections are firm and secure.
4. Verify all cable routing to prevent strain or interference.
5. Once all connections are made, you may proceed to power on the system.

3. Operating Instructions

The IRC5 M2004 control module operates as an integral part of the ABB robotics system. Its primary function is to process control signals and manage power distribution to connected components.

3.1. Powering On/Off

- **Power On:** After all connections are verified, apply 230V AC power to the system. The module will initiate its

boot sequence.

- **Power Off:** To shut down the module, follow the system's standard shutdown procedure. Disconnect power only after the system has fully powered down.

3.2. Status Indicators

Refer to the system's main control panel or software interface for detailed status indicators. The module itself may have LED indicators for power, status, and error conditions. Consult the comprehensive system manual for specific LED patterns and their meanings.

4. Maintenance

Regular maintenance ensures the longevity and reliable operation of your IRC5 M2004 control module.

4.1. Cleaning

- Keep the module free from dust and debris. Use a soft, dry cloth for external cleaning.
- For internal cleaning (if required), ensure power is disconnected and use compressed air to remove dust from cooling vents and internal components. This should only be performed by qualified personnel.

4.2. Environmental Conditions

Ensure the module operates within its specified environmental conditions (temperature, humidity) to prevent damage. Avoid exposure to excessive moisture or extreme temperatures.

4.3. Firmware Updates

Periodically check for firmware updates from ABB to ensure optimal performance and access to the latest features and bug fixes. Refer to the official ABB support portal for update procedures.

5. Troubleshooting

This section provides basic troubleshooting steps for common issues. For complex problems, contact ABB technical support.

5.1. No Power

- Verify the power cable is securely connected to both the module and the power source.
- Check the power supply voltage (230V AC) and frequency (50/60Hz).
- Inspect fuses or circuit breakers in the power distribution system.

5.2. Communication Errors

- Ensure all data cables (e.g., X2 Computer module link, X9 Console port) are properly connected and not damaged.
- Verify network settings and IP configurations if applicable.
- Restart the module and the connected control system.

5.3. Module Overheating

- Check for obstructions around the module's ventilation openings.
- Ensure the ambient temperature is within the specified operating range.
- Clean any dust accumulation from the cooling fins or fans.

6. Specifications

Detailed technical specifications for the ABB IRC5 M2004 control module are provided below. Refer to the product label for specific unit details.

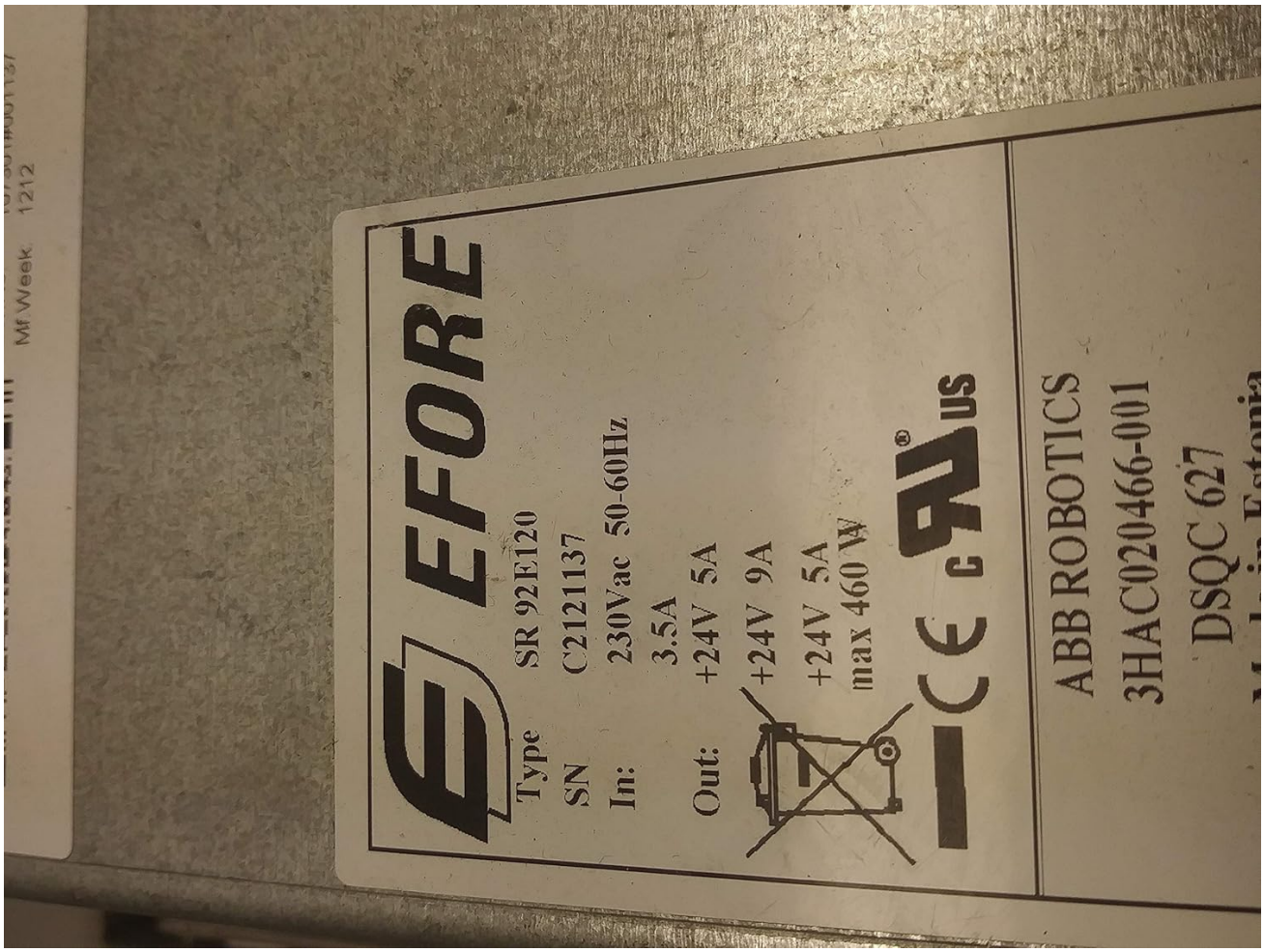


Figure 6.1: Product Rating Label

This image shows the technical specification label for the Efore SR 92E120, which is part of the ABB IRC5 M2004 module. It details the input voltage (230Vac 50-60Hz, 3.5A) and output voltages (+24V 5A, +24V 9A, +24V 5A, max 460W). The label also includes serial number, manufacturing week, and certifications (CE, cURus). This information is crucial for power supply compatibility and electrical safety.

Table 6.1: Technical Specifications

Attribute	Value
Manufacturer	ABB
Part Number	IRC5 M2004
Item Model Number	IRC5 M2004
Rated Current	1A
Voltage	230V
Frequency	50/60Hz
Item Weight	41.7 pounds (approx. 18.9 kg)

Attribute	Value
Product Dimensions	0.75 x 0.39 x 0.59 inches (approx. 1.9 x 1.0 x 1.5 cm)
Item Package Quantity	1
ASIN	B00RY2E1Z2
Date First Available	November 7, 2019

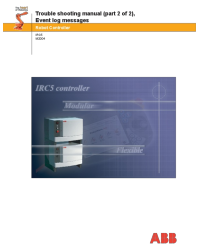
7. Warranty and Support

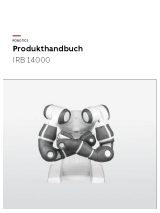
Information regarding the specific warranty terms for the ABB IRC5 M2004 control module was not provided in the available product data. Please refer to your purchase documentation or contact ABB directly for detailed warranty information.

For technical support, service, or further inquiries, please visit the official ABB website or contact their customer service department. Always provide your product model number (IRC5 M2004) and serial number when seeking support.

You can visit the ABB Store on Amazon for more products:ABB Store

Related Documents - IRC5 M2004

	ABB IRC5 Controller Troubleshooting Manual: Event Log Messages This troubleshooting manual (part 2 of 2) details event log messages for the ABB IRC5 Robot Controller, providing comprehensive guidance on understanding error codes, their causes, and recommended solutions for industrial automation systems.
	ABB IRC5 Integrator's Guide: Operating Manual for RobotWare Comprehensive operating manual for ABB's IRC5 robot controller system, detailing integrator's guide for RobotWare 6.16, covering installation, programming, systems, and cybersecurity.
	ABB IRC5 Industrial Robot Controller: Features, Variants, and Specifications Discover the ABB IRC5 Industrial Robot Controller, a leading solution in robotics. This document details its core features, including advanced motion control, safety capabilities, and broad compatibility. It also outlines the various IRC5 controller variants: Single Cabinet, Compact, PMC, and Paint, along with their technical specifications and associated hardware like the FlexPendant and RobotStudio Online.

	[ABB IRB 6650S Product Manual: Installation, Maintenance, and Repair Guide] Comprehensive product manual for the ABB IRB 6650S industrial robot, covering installation, commissioning, maintenance, repair, calibration, safety procedures, and technical specifications. Essential guide for operating and servicing ABB robotics systems.
	[ABB IRB 14000 Produkthandbuch] Umfassendes Handbuch für den ABB IRB 14000 Roboter, das detaillierte Anleitungen zu mechanischer und elektrischer Installation, Wartung, Reparatur und Kalibrierung bietet.
	[ABB IRC5 Compact Product Manual] Comprehensive product manual for the ABB IRC5 Compact controller, detailing installation, maintenance, repair, and safety procedures for robotic systems.