

Idec FC2A-C16A1

IDEC FC2A-C16A1 Micro Programmable Logic Controller User Manual

Model: FC2A-C16A1

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of the IDEC FC2A-C16A1 Micro Programmable Logic Controller (PLC). The FC2A-C16A1 Micro3 is designed for industrial automation applications, offering reliable control over various processes. Please read this manual thoroughly before using the product to ensure safe and correct operation.

2. PRODUCT OVERVIEW

The IDEC FC2A-C16A1 is a compact programmable logic controller featuring integrated inputs and outputs, designed for small to medium-scale automation tasks. It includes various terminals for power, digital inputs, digital outputs, and data communication.



Figure 2.1: Front view of the FC2A-C16A1 Micro PLC. This image displays the various connection terminals, including power input (100-240 VAC), DC output (24V), DC input, digital inputs (IN 0-10), digital outputs (OUT 0-6), relay outputs (Ry OUT COM0, COM1, COM2), and data link terminals (A, B, SG). Indicator lights for Power (POW), Run (RUN), Error (E, R1, ERR2) are also visible.

3. SETUP AND INSTALLATION

3.1 Mounting

The FC2A-C16A1 is typically mounted on a DIN rail within an industrial control panel. Ensure adequate ventilation space around the unit to prevent overheating.

3.2 Wiring

All wiring should be performed by qualified personnel and in accordance with local electrical codes and regulations. Refer to the terminal markings on the device for correct connections.

- **Power Supply:** Connect 100-240 VAC to the designated "100-240 VAC" terminals (N and L). The unit also provides a "DC OUT 24V" terminal for auxiliary power to sensors or other low-power devices.
- **DC Input:** Connect external DC power to the "DC IN COM" terminals if required for specific functionalities.
- **Digital Inputs:** Connect input signals to terminals labeled "IN 0" through "IN 10". These inputs are typically used for sensors, switches, and other control signals.
- **Digital Outputs:** Connect controlled devices to terminals labeled "OUT 0" through "OUT 6". These are typically transistor outputs.
- **Relay Outputs:** Connect higher current loads to the "Ry OUT" terminals (COM0, COM1, COM2, and associated numbered terminals 0-6). These are relay contacts for switching AC or DC loads.
- **Data Link:** Use the "DATA LINK" terminals (A, B, SG) for communication with other devices or programming tools.

Ensure all connections are secure and properly insulated to prevent short circuits or electrical hazards.

4. OPERATING INSTRUCTIONS

4.1 Power-Up and Indicator Lights

Upon applying power, observe the indicator lights on the front panel:

- **POW (Power):** Illuminates when the unit is receiving power.
- **RUN:** Illuminates when the PLC is in run mode and executing the programmed logic.
- **E (Error):** Indicates a general error. Refer to the programming software for specific error codes.
- **R1 (Error 1):** Specific error indicator.
- **ERR2 (Error 2):** Specific error indicator.
- **IN 0-10:** Individual indicators for each digital input, illuminating when the corresponding input is active.
- **OUT 0-6:** Individual indicators for each digital/relay output, illuminating when the corresponding output is active.

4.2 Programming

The FC2A-C16A1 is programmed using IDEC's proprietary software (e.g., WindLDR). Connect the PLC to a computer via the data link port. Refer to the software's user manual for detailed programming instructions, ladder logic development, and program transfer procedures.

4.3 Operation Modes

The PLC typically operates in different modes (e.g., RUN, STOP, PROGRAM). These modes are usually controlled via the programming software or a physical switch/button if available on the specific model variant. Ensure the PLC is in RUN mode for automated control.

5. MAINTENANCE

Regular maintenance helps ensure the longevity and reliable operation of the FC2A-C16A1.

- **Cleaning:** Periodically clean the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure ventilation openings are free from dust and debris.
- **Inspection:** Regularly inspect wiring connections for looseness or signs of damage. Check for any unusual odors or sounds during operation.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent damage to internal components.
- **Firmware Updates:** Check the IDEC website for any available firmware updates that may improve performance or address known issues.

6. TROUBLESHOOTING

This section provides basic troubleshooting steps for common issues. For complex problems, consult the detailed programming manual or contact technical support.

Symptom	Possible Cause	Solution
POW light off	No power supply or incorrect wiring.	Check power connections (100-240 VAC). Verify power source is active.
RUN light off, E/R1/ERR2 light on	PLC in STOP mode or internal error.	Check PLC mode via programming software. Consult software for specific error codes and remedies.
Input indicator (IN) not illuminating	Sensor/switch not active or wiring issue.	Verify sensor/switch operation. Check input wiring for continuity and correct connection.
Output indicator (OUT/Ry OUT) not illuminating	Output not activated by program or wiring issue.	Verify program logic for output activation. Check output wiring and load device.

7. SPECIFICATIONS

- **Model:** FC2A-C16A1 Micro3
- **Brand:** IDEC
- **Power Supply:** 100-240 VAC
- **Inputs:** Digital Inputs (IN 0-10)
- **Outputs:** Digital Outputs (OUT 0-6), Relay Outputs (Ry OUT COM0, COM1, COM2 with associated terminals)
- **Communication:** Data Link (A, B, SG)

- **Manufacturer:** IDEC
- **ASIN:** B075ZFNVLB
- *Note: For detailed electrical and environmental specifications, refer to the official IDEC datasheet for the FC2A-C16A1.*

8. WARRANTY AND SUPPORT

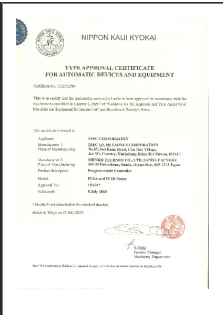
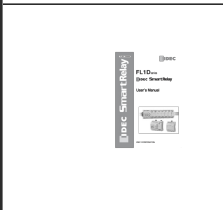

For warranty information, please refer to the documentation provided with your purchase or contact your authorized IDEC distributor. Warranty terms and conditions may vary by region and seller.

For technical support, programming assistance, or advanced troubleshooting, please contact IDEC technical support or visit the official IDEC website for resources and contact information. Ensure you have your product model number (FC2A-C16A1) and any relevant error codes ready when seeking support.

IDEC Official Website: <https://us.idec.com/>

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Related Documents

	<p>Nippon Kaiji Kyokai Type Approval Certificate for IDEC Programmable Controllers</p> <p>Type Approval Certificate issued by Nippon Kaiji Kyokai for IDEC CORPORATION's Programmable Controllers, including models FC6A and FC6B series, manufactured by IDEC IZUMI TAIWAN CORPORATION and SHINKO TECHNOS CO., LTD.</p>
	<p>IDEC SmartRelay FL1D Series User's Manual: Installation, Programming, and Applications</p> <p>Comprehensive user's manual for the IDEC SmartRelay FL1D series, detailing installation, wiring, programming, functions, special functions, and application examples for industrial automation. Covers setup, operation, and technical specifications.</p>
	<p>IDEC FC6A and FC6B Series Programmable Controllers Type Approval Certificate</p> <p>Type Approval Certificate for IDEC Corporation's FC6A and FC6B Series Programmable Controllers, detailing their suitability for marine and offshore applications.</p>



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Discontinued Products and Replacements

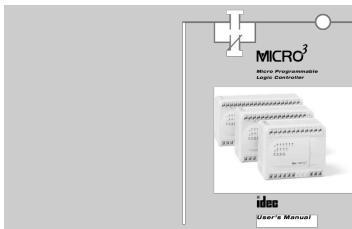
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FC2A-C10A4	FC2A-C10A1	FC2A-C16A4	FC2A-C16A1
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FC2A-C16A1	FC2A-C16A4	FC2A-C16A4	FC2A-C16A1
FC2A-C16B1	FC2A-C16B4	FC2A-C16B4	FC2A-C16B1
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FC2A-C16B4	FC2A-C16B1	FC2A-C16D4	FC2A-C16D1
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FC2A-C24A4	FC2A-C24A1	FC2A-C24B4	FC2A-C24B1
FC2A-C24B1	FC2A-C24B4	FC2A-C24D4	FC2A-C24D1
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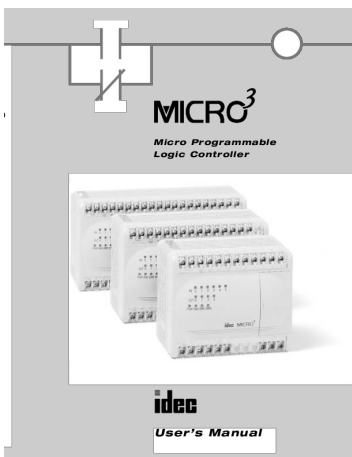


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User s Manual The figures above and at right illustrate the 16 I O type MICRO3 base unit with DC input relay output x For MICRO3C see MICRO3Manual 1844594 mouser cn datasheet 2 650

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