Fatek FBs-24MAT2-AC (FBs-24MAT)

Fatek FBs-24MAT2-AC PLC Controller User Manual

Model: FBs-24MAT2-AC (FBs-24MAT)

PRODUCT OVERVIEW

The Fatek FBs-24MAT2-AC is a compact and powerful Programmable Logic Controller (PLC) designed for industrial automation applications. It features a robust set of digital inputs and outputs, communication capabilities, and a wide operating voltage range, making it suitable for various control tasks.

Figure 1: Fatek FBs-24MAT2-AC Programmable Logic Controller. This image displays the Fatek FBs-24MAT2-AC Programmable Logic Controller. It features various input (X) and output (Y) terminals, power input (AC100-240V), and communication ports (RS-232). Status indicator LEDs for Power (POW), Run (RUN), and Error (ERR) are visible on the front panel. The model number FBs-24MA is also clearly marked.

SETUP AND INSTALLATION

Proper installation is crucial for the reliable operation of the PLC. Follow these guidelines for setup:

1. Power Supply Connection

- Connect the AC power source (100-240VAC) to the **IN (L)** and **N** terminals. Ensure the power supply is stable and within the specified voltage range.
- The unit is UL Certified, ensuring compliance with safety standards.

2. Input and Output Wiring

- **Digital Inputs (X0-X13):** The PLC provides 14 points of 24VDC digital input. Up to 4 points support high-speed input (up to 10KHz). Connect your sensors and input devices to these terminals.
- **Digital Outputs (Y0-Y9):** The PLC features 10 points of Sink (NPN) transistor digital output. 4 points support high-speed

output (10KHz). Connect your actuators and output devices to these terminals.

- Refer to the wiring diagram on the unit for specific terminal assignments.

3. Communication Port

- The PLC has 1 built-in RS-232 port (labeled **PORT0**). This port is used for programming and communication with other devices. Additional RS-232 ports can be expanded if needed.

OPERATING INSTRUCTIONS

Once the PLC is powered and wired, its operation is controlled by the loaded program. Monitor the status indicators for operational feedback.

Status Indicators:

- **POW (Power):** Illuminates when the PLC is receiving power.
- **RUN (Run):** Illuminates when the PLC is executing its program.
- **ERR (Error):** Illuminates when an error or fault condition is detected within the PLC or its program. Refer to the programming software for detailed error codes.

Programming of the PLC is performed using compatible software (not included) via the RS-232 communication port. Consult the software's documentation for programming procedures.

MAINTENANCE

The Fatek FBs-24MAT2-AC PLC is designed for robust industrial use and requires minimal maintenance. Adhere to the following for optimal performance:

- **Cleaning:** Keep the unit free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or solvents.
- **Environment:** Ensure the operating environment is within the specified temperature and humidity ranges to prevent damage. Avoid exposure to excessive vibration, moisture, or corrosive gases.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.

TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, consult the manufacturer's technical support.

Problem	Possible Cause	Solution
No Power (POW LED Off)	No power supply, incorrect wiring, blown fuse.	Check power connections (L, N terminals). Verify power source voltage. Inspect internal fuses if accessible (consult manual).
ERR LED On	Program error, hardware fault, communication error.	Connect to PLC with programming software to read error codes. Check for wiring faults on I/O. Restart PLC.
PLC Not Responding	Program halted, communication issue, hardware malfunction.	Check RUN LED status. Verify communication cable and settings. Power cycle the PLC.

SPECIFICATIONS

Feature	Detail

Feature	Detail
Model Number	FBs-24MAT2-AC (FBs-24MAT)
Manufacturer	Fatek
Input Points	14 points 24VDC digital input (up to 10KHz in 4 points)
Output Points	10 Points Sink (NPN) transistor digital output (4 points 10KHz output)
Power Supply	100~240VAC
Communication Ports	1 built-in RS-232 (expandable up to 3)
Certifications	UL Certified
Package Dimensions	4.5 x 4 x 4 inches
Item Weight	1.06 Pounds
Display Type	LED Indicators (for POW, RUN, ERR)
UPC	687965401075

WARRANTY AND SUPPORT

For information regarding product warranty, please refer to the documentation provided with your purchase or contact the authorized Fatek distributor or seller from whom the product was acquired. Specific warranty terms and conditions may vary by region and seller.

For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact the manufacturer, Fatek, or your product supplier directly. Contact information can typically be found on the manufacturer's official website or your purchase invoice.