

Baxnore WS2N-20MR-232-Z-S

Baxnore WS2N-20MR-232-Z-S Programmable Controller Module

USER MANUAL

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the Baxnore WS2N-20MR-232-Z-S Programmable Controller Module. This compact electrical control module is designed for industrial control applications, offering stable and dependable performance with good adaptability.

The WS2N-20MR-232-Z-S is a Programmable Logic Controller (PLC) featuring 12 input points, 8 relay output points, and a 232 interface type. Its streamlined structure ensures efficient performance in various systems.

2. SAFETY INFORMATION

Please read and understand all safety instructions before installing, operating, or maintaining the module. Failure to follow these instructions may result in personal injury or equipment damage.

- **Electrical Hazard:** Ensure all power sources are disconnected before making any connections or performing maintenance. Only qualified personnel should perform electrical work.
- **Proper Grounding:** Always ensure the module and associated equipment are properly grounded to prevent electrical shock.
- **Environmental Conditions:** Operate the module within its specified environmental limits (temperature, humidity) to prevent malfunction.
- **Component Handling:** Handle the module with care to avoid damage to sensitive electronic components. Avoid static discharge.
- **Intended Use:** Use the module only for its intended purpose as a programmable logic controller in industrial control systems.

3. PRODUCT OVERVIEW

The Baxnore WS2N-20MR-232-Z-S is a compact and lightweight PLC module designed for ease of integration and reliable performance.

Electrical Parts

Stable and reliable Streamline PLC Programmable Controller Module
Small ,Light weight,Analog input

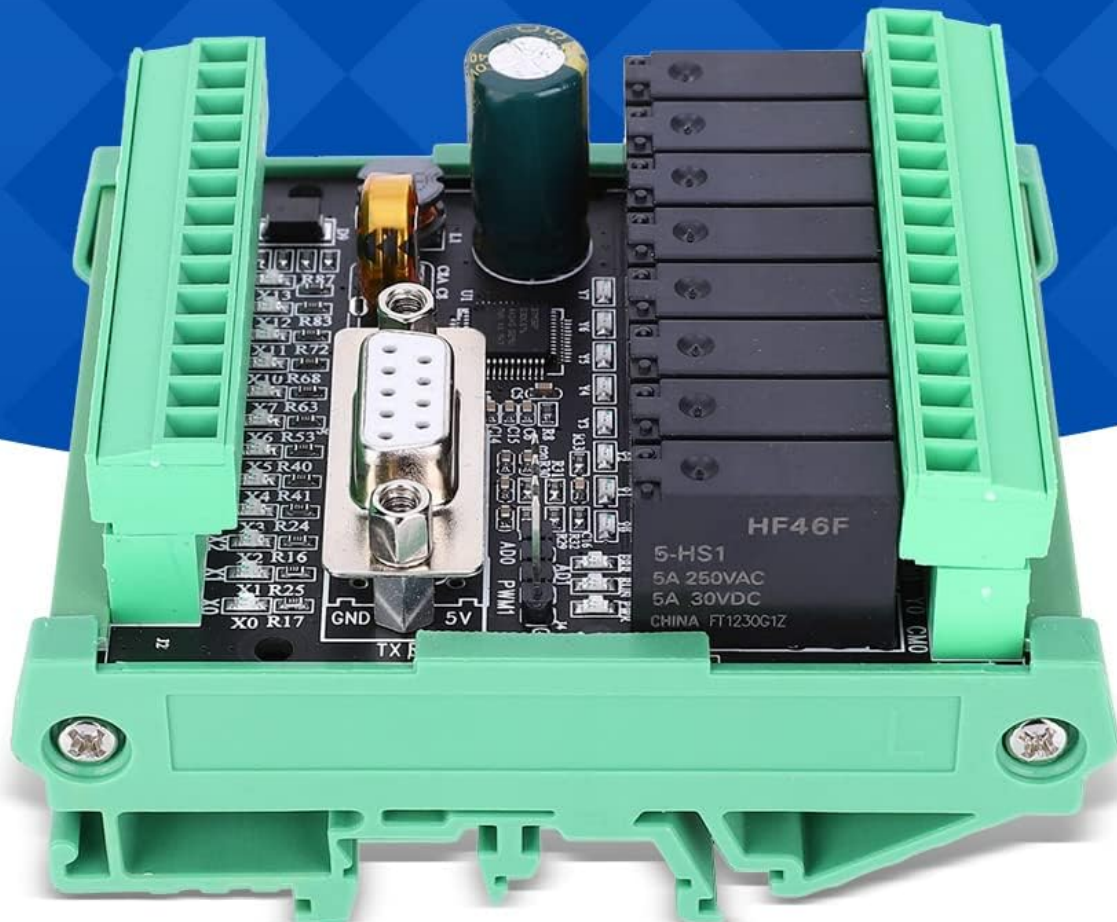


Figure 3.1: Top-down view of the Baxnore WS2N-20MR-232-Z-S Programmable Controller Module, showing the main board, relays, and terminal blocks.

Key Features:

- **Dependable Performance:** Streamlined structure for stable and reliable operation in various applications.
- **Compact and Lightweight:** Small footprint for easy integration into diverse systems without occupying excessive space.
- **Easy Installation:** Designed for quick and straightforward setup, minimizing complex procedures.
- **Versatile Usage:** Suitable for a wide range of applications, from home automation to industrial systems.
- **Reliability:** Maintains consistent performance over extended periods, especially for analog input applications.

Component Identification:

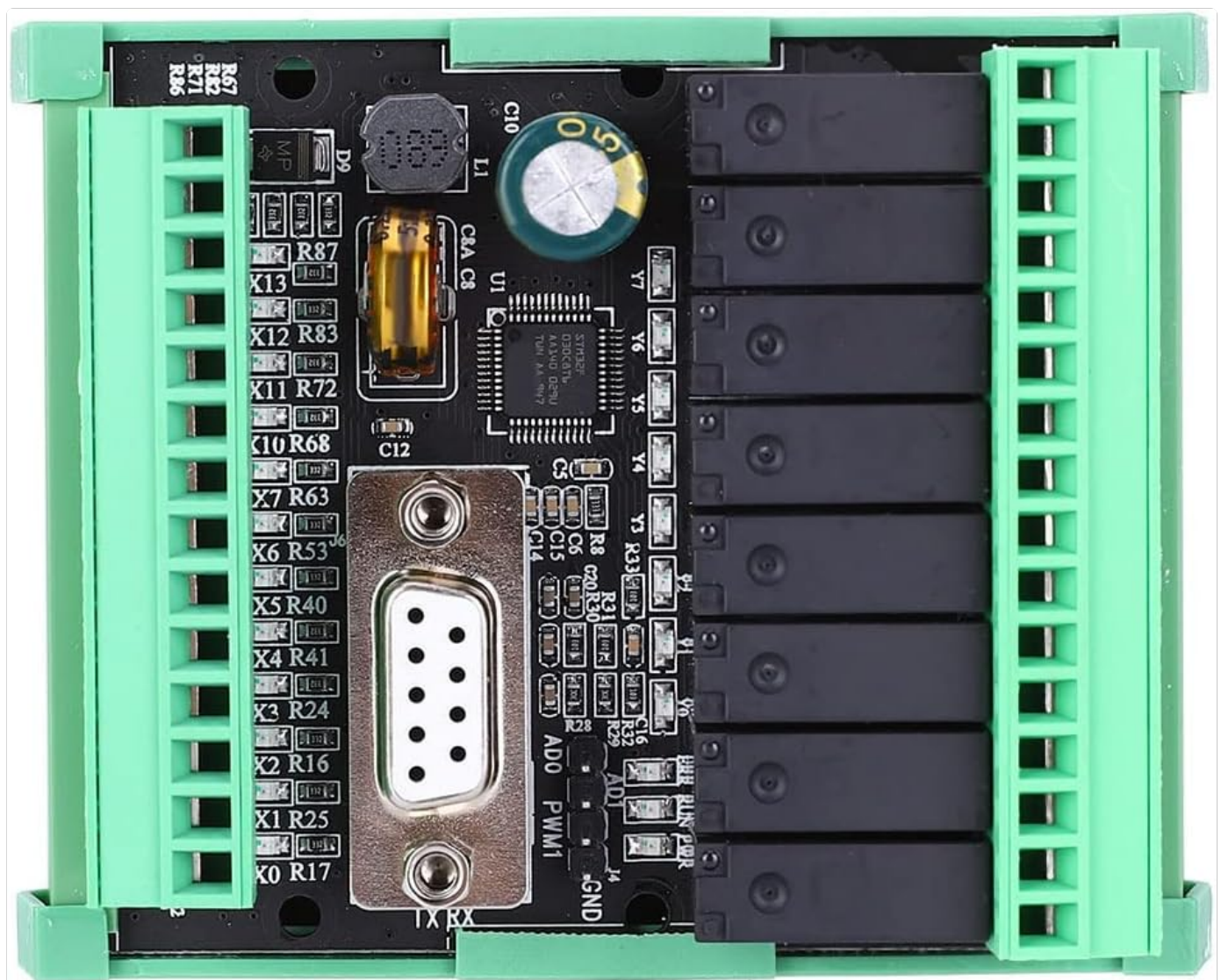


Figure 3.2: Detailed view of the module's components, including input (X0-X11) and output (Y0-Y7) terminals, and the RS232 communication port.

The module features clearly labeled terminal blocks for inputs (X0-X11) and outputs (Y0-Y7), a DB9 connector for RS232 communication, and power input terminals (5V, GND).

4. SPECIFICATIONS

The following table outlines the technical specifications of the WS2N-20MR-232-Z-S Programmable Controller Module:

Parameter	Value
Model	WS2N-20MR-232-Z-S
Input Points	12
Output Points	8
Output Type	Relay
Interface Type	RS232
Brand	Baxnore

5. SETUP

5.1. Installation

The module is designed for easy installation. It typically mounts on a standard DIN rail or can be secured using screws through the mounting holes on its base.

1. Select a suitable mounting location within an enclosure that provides adequate ventilation and protection from environmental factors.
2. Secure the module firmly to the chosen surface or DIN rail.

5.2. Wiring Connections

Ensure all power is disconnected before making any wiring connections. Refer to the module's labels for correct terminal assignments.

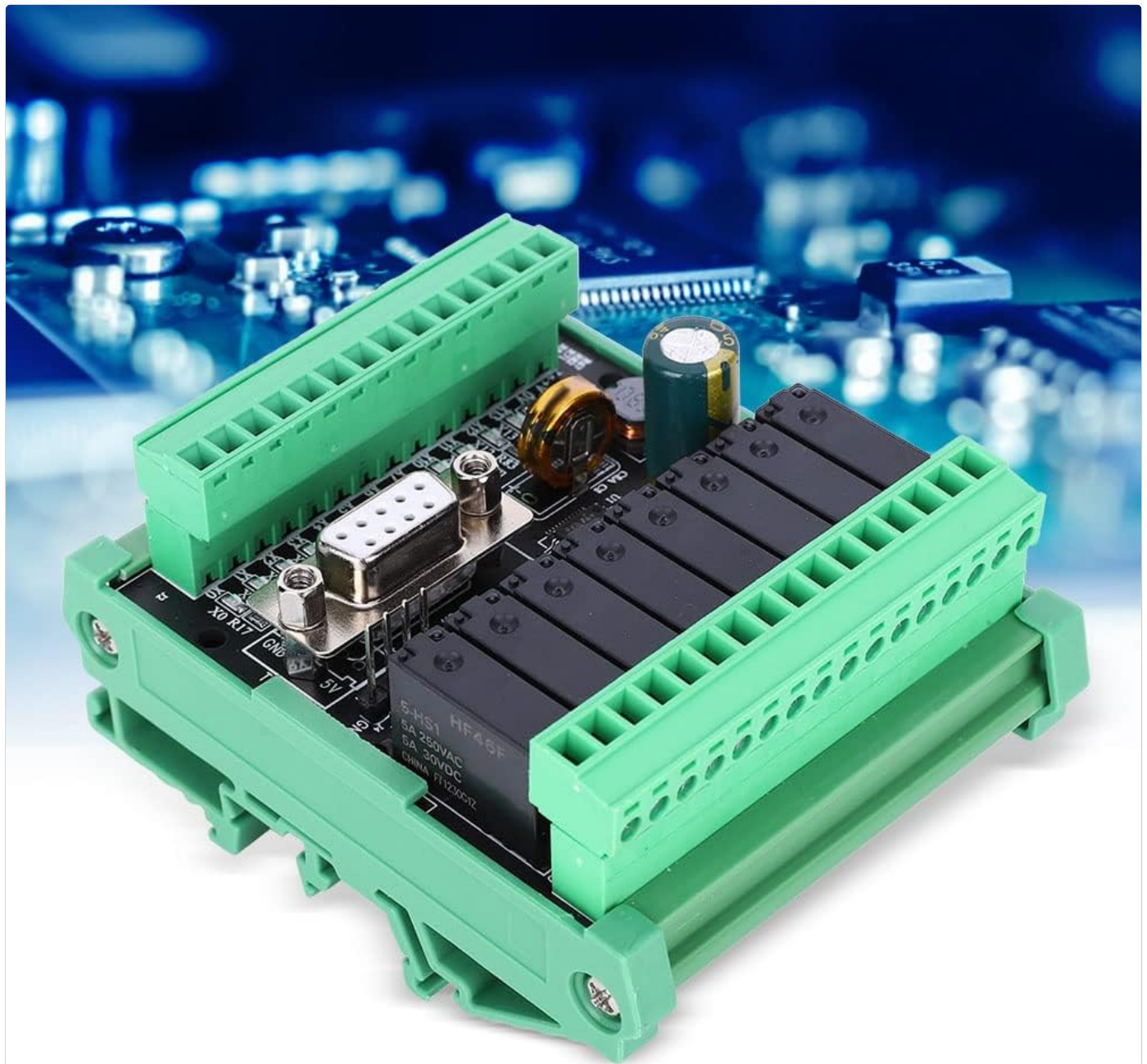


Figure 5.1: Side view illustrating the terminal blocks for power, input, and output wiring connections.

1. **Power Supply:** Connect a stable 5V DC power supply to the designated **5V** and **GND** terminals. Verify polarity before applying power.

2. **Input Wiring:** Connect your input devices (e.g., sensors, switches) to the **X0** through **X11** terminals. Ensure common ground connections are correctly established.
3. **Output Wiring:** Connect your output loads (e.g., relays, indicators) to the **Y0** through **Y7** relay output terminals. Each relay output can switch AC or DC loads within its specified ratings (e.g., 5A 250VAC, 5A 30VDC).
4. **Communication (RS232):** Connect your programming device or HMI to the DB9 **RS232** port using a compatible serial cable.

6. OPERATING INSTRUCTIONS

6.1. Programming the Module

The WS2N-20MR-232-Z-S module is programmable using compatible PLC programming software via its RS232 interface. Consult the software documentation for detailed programming instructions.

1. Install the appropriate programming software on your computer.
2. Connect the computer to the module's RS232 port using a serial cable.
3. Configure the communication settings in the software to match the module's default or configured settings (e.g., baud rate, data bits, stop bits, parity).
4. Develop your control logic using the software's programming environment (e.g., ladder logic).
5. Download the compiled program to the PLC module.
6. Monitor the module's status and I/O in real-time through the software for debugging and verification.

6.2. Basic Operation

Once programmed, the module operates autonomously based on the loaded logic. Observe the status indicators (if present) for power and operational status.

- **Power On:** Apply 5V DC power to the module. A power indicator LED should illuminate.
- **Input Monitoring:** When an input signal is applied to an X-terminal, the corresponding input status should be reflected in the PLC's internal memory and potentially by an indicator LED.
- **Output Control:** Based on the programmed logic, the PLC will activate or deactivate its relay outputs (Y-terminals) to control connected devices.

7. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your PLC module.

- **Cleaning:** Periodically clean the module and its enclosure to prevent dust and debris accumulation, which can lead to overheating or short circuits. Use a soft, dry cloth. Do not use liquid cleaners.
- **Inspection:** Regularly inspect wiring connections for looseness or damage. Check for any signs of overheating, discoloration, or unusual odors.
- **Environmental Control:** Ensure the operating environment remains within the specified temperature and humidity ranges. Avoid exposure to corrosive gases or excessive vibration.
- **Firmware Updates:** If available, periodically check for and apply firmware updates to ensure optimal performance and security.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with the WS2N-20MR-232-Z-S module.

Problem	Possible Cause	Solution
Module does not power on	No power supply, incorrect voltage, reversed polarity, faulty wiring.	Verify 5V DC power supply connection and voltage. Check wiring for correct polarity and secure connections.
Inputs not responding	Incorrect input wiring, faulty sensor, incorrect programming logic.	Check input device connections and functionality. Review PLC program logic for correct input handling.
Outputs not activating	Incorrect output wiring, faulty load, incorrect programming logic, overloaded relay.	Verify output device connections and functionality. Ensure load current does not exceed relay ratings. Review PLC program logic for correct output control.
Communication errors via RS232	Incorrect cable, wrong communication settings, driver issues.	Ensure correct RS232 cable is used. Verify baud rate, data bits, stop bits, and parity settings in software match the module. Install or update serial port drivers.

9. WARRANTY AND SUPPORT

9.1. Warranty Information

The Baxnore WS2N-20MR-232-Z-S Programmable Controller Module is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please refer to your purchase documentation or contact your retailer for specific warranty terms and conditions.

9.2. Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty claims, please contact Baxnore customer support or your authorized distributor. Have your product model number and purchase details ready when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question