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ASCON X3-3107-0000

ASCON X3-3107-0000 Double Action Controller User Manual

Model: X3-3107-0000

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of the ASCON X3-3107-0000 Double Action Controller. This 1/8DIN (48x96mm) industrial controller features an analogue output, operates on 100-240VAC, and includes Relay and Solid State Relay (SSR) outputs. Please read this manual thoroughly before installation and use.

2. SAFETY INFORMATION

WARNING: Electrical shock hazard. Disconnect all power before installation, maintenance, or servicing.

- Installation and wiring must be performed by qualified personnel in accordance with local and national electrical codes.
- Ensure the power supply voltage matches the controller's specifications (100-240VAC).
- Do not operate the device in environments exceeding its specified temperature and humidity limits.
- Protect the device from moisture, dust, and corrosive gases.

3. PRODUCT OVERVIEW

The ASCON X3-3107-0000 is a compact process controller designed for precise control applications. Its front panel features a clear digital display for process values and setpoints, along with intuitive buttons for configuration and operation. The rear panel provides terminals for power, inputs, and various outputs.



Figure 1: ASCON X3-3107-0000 Double Action Controller. The image shows the front panel with its digital display and control buttons (A/M, arrow keys, function keys). The side panel reveals detailed terminal wiring diagrams, including connections for RS485 communication, various input/output terminals labeled 'NIC' (Not In Use/Connected), and specific terminals for relay and SSR outputs, alongside power input details.

4. SETUP AND INSTALLATION

4.1 Mounting

The X3-3107-0000 controller is designed for 1/8DIN panel mounting (48x96mm cutout). Ensure sufficient space for ventilation and wiring connections at the rear.

1. Cut a panel opening of 45mm x 92mm (H x W).
2. Insert the controller into the opening from the front.
3. Secure the controller using the provided mounting brackets from the rear.

4.2 Wiring

Refer to the wiring diagram on the side of the controller and the detailed instructions below. Use appropriate wire gauges for all connections.

- **Power Supply:** Connect 100-240VAC to the designated power terminals. Observe correct polarity if applicable.
- **Inputs:** Connect process inputs (e.g., sensors) to the specified input terminals.
- **Analogue Output:** Connect to the analogue output terminals for proportional control signals.
- **Relay Outputs:** Connect control loads to the relay output terminals. Note the contact ratings.
- **SSR Outputs:** Connect solid state relay loads to the SSR output terminals.
- **RS485 Communication:** Connect RS485 communication lines (A, B, GND) to the corresponding terminals for data exchange with other devices.

5. OPERATING INSTRUCTIONS

5.1 Power On

After verifying all wiring, apply power to the controller. The display will illuminate, showing the current process value and potentially the setpoint.

5.2 Front Panel Controls

- **Display:** Shows process values, setpoints, and menu parameters.
- **A/M Button:** Toggles between Automatic and Manual control modes.
- **Arrow Keys (Up/Down):** Used to navigate menus and adjust parameter values.
- **Function/Enter Key (*):** Confirms selections and enters menu levels.
- **Escape/Back Key (←):** Exits menus or cancels changes.

5.3 Basic Operation

1. **Viewing Setpoint:** Press the Up or Down arrow key briefly to display the current setpoint.
2. **Adjusting Setpoint:** While the setpoint is displayed, use the Up/Down arrow keys to change its value. Press the Function/Enter key to confirm.
3. **Accessing Menus:** Press and hold the Function/Enter key for a few seconds to enter the parameter menu. Use arrow keys to navigate and the Function/Enter key to select.

6. MAINTENANCE

The ASCON X3-3107-0000 controller is designed for minimal maintenance. Regular inspection and cleaning are recommended.

- **Cleaning:** Gently wipe the front panel with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the device.
- **Inspection:** Periodically check wiring connections for tightness and signs of corrosion. Ensure proper ventilation around the unit.
- **Firmware:** Firmware updates, if available, should only be performed by authorized service personnel.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Controller does not power on.	No power supply or incorrect wiring.	Check power connections (100-240VAC) and ensure power is supplied.

Problem	Possible Cause	Solution
Display shows 'Err' or error code.	Sensor fault, input range error, or internal malfunction.	Refer to the specific error code in the full technical manual. Check sensor wiring and calibration.
Output not responding.	Incorrect parameter settings, wiring issue, or load problem.	Verify output wiring. Check control mode (Auto/Manual) and setpoint. Inspect the connected load.

8. SPECIFICATIONS

Feature	Specification
Model	X3-3107-0000
Type	Double Action Controller
Dimensions	1/8DIN (48mm x 96mm)
Input Voltage	100-240VAC
Outputs	Analogue Output, Relay Output, Solid State Relay (SSR) Output
Communication	RS485
Manufacturer	ASCON

9. WARRANTY AND SUPPORT

For warranty information, please refer to the official ASCON warranty policy provided with your purchase or visit the ASCON website. For technical support, contact your authorized ASCON distributor or ASCON customer service directly.

ASCON Contact Information:

(Please refer to your product packaging or ASCON's official website for the most current contact details.)

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Related Documents - X3-3107-0000



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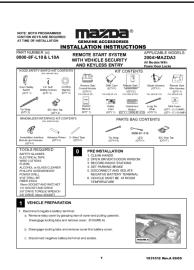
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