YIOGEQKWG WS-DMX-RELAY-12CH-10A

YIOGEQKWG WS-DMX-RELAY-12CH-10A DMX512 12-Channel Relay Switch Controller

INSTRUCTION MANUAL

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the YIOGEQKWG WS-DMX-RELAY-12CH-10A DMX512 12-Channel Relay Switch Controller. This device is designed for industrial applications requiring DMX512 control over multiple electrical loads. Please read this manual thoroughly before use to ensure proper function and safety.

2. Safety Information

Always observe the following safety precautions to prevent injury or damage to the device and connected equipment:

- **Power Supply:** Ensure the power supply voltage is DC12V. Connecting an incorrect voltage can damage the unit.
- **Electrical Loads:** Do not exceed the maximum current rating of 10A per relay channel. Overloading can cause overheating and damage.
- **Installation:** Installation should be performed by qualified personnel. Ensure all wiring is secure and correctly connected.
- **Environment:** Operate the device within the specified temperature range (-20°C to 60°C). Avoid exposure to moisture, dust, and corrosive substances.
- **Maintenance:** Disconnect power before performing any maintenance or cleaning.

3. Product Overview

The WS-DMX-RELAY-12CH-10A is a DMX512-controlled relay module featuring 12 independent relay channels. Each channel can switch electrical loads up to 10A. The module includes DMX input/output ports, Ethernet ports (for potential future or alternative control, though primarily DMX512), a DC12V power input, and DIP switches for DMX address configuration.

Figure 1: YIOGEQKWG WS-DMX-RELAY-12CH-10A DMX512 12-Channel Relay Switch Controller. This image displays the blue circuit board with twelve blue relays, green screw terminal blocks for power and relay outputs, two Ethernet ports, two DMX XLR ports, and a red DIP switch block for address setting. The board dimensions and model number are visible on the PCB.

4. Specifications

Parameter	Value
Model	WS-DMX-RELAY-12CH-10A
Control Protocol	DMX512
Number of Channels	12
Relay Current Rating	Maximum 10A per channel
Power Supply Voltage	DC12V
Working Temperature	-20°C to 60°C
Product Dimensions (L x W x H)	140mm x 110mm x 35mm

5. Setup

5.1 Unpacking

Carefully remove the relay controller from its packaging. Inspect the unit for any signs of physical damage. Ensure all components are present.

5.2 Mounting

Mount the controller in a secure location, away from excessive heat, moisture, and vibration. Ensure adequate ventilation around the unit.

5.3 Wiring Connections

Refer to Figure 1 for component locations. Ensure power is disconnected before making any wiring connections.

- **DC12V Power Input:** Connect a stable DC12V power supply to the designated green screw terminal block labeled 'DC12V'. Observe correct polarity (+ and -).
- **DMX512 Input/Output:** Connect your DMX512 controller to the 'DMX IN' XLR port. If daisy-chaining to other DMX devices, use the 'DMX OUT' XLR port.
- **Relay Outputs:** Connect your electrical loads (e.g., lights, motors) to the 12 sets of green screw terminal blocks. Each set corresponds to one relay channel (K1 to K12). Each relay provides normally open (NO) and common (COM) contacts. Wire your load between the COM and NO terminals for switched operation.

5.4 DMX Address Configuration (DIP Switches)

The DMX start address is set using the red DIP switches. Each switch corresponds to a binary value. To calculate the DMX address, sum the values of the switches set to 'ON'.

- Switch 1: 1
- Switch 2: 2
- Switch 3: 4
- Switch 4: 8
- Switch 5: 16
- Switch 6: 32
- Switch 7: 64
- Switch 8: 128
- Switch 9: 256

For example, to set the DMX address to 1, set only Switch 1 to 'ON'. To set the address to 3, set Switch 1 and Switch 2 to 'ON'.

6. Operating Instructions

Once all connections are made and the DMX address is set:

1. Apply DC12V power to the controller.
2. Ensure your DMX512 controller is powered on and transmitting a DMX signal.
3. The WS-DMX-RELAY-12CH-10A will receive the DMX signal. Each of the 12 relay channels corresponds to a DMX channel starting from the configured DMX address.
4. Typically, a DMX value above a certain threshold (e.g., 128 or 50%) will activate the corresponding relay, while a value below the threshold will deactivate it. Consult your DMX controller's manual for specific output values.

7. Maintenance

The WS-DMX-RELAY-12CH-10A is designed for reliable operation with minimal maintenance. However, periodic checks are recommended:

- **Cleaning:** Keep the unit clean and free from dust. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion.
- **Environment:** Ensure the operating environment remains within the specified temperature and humidity limits.

8. Troubleshooting

- **No Power Indicator:**
  - Check the DC12V power supply connection and ensure it is providing the correct voltage.
  - Verify power supply functionality.
- **Relays Not Switching:**
  - Confirm the DMX512 controller is sending a signal.
  - Verify the DMX start address on the DIP switches matches the address configured on your DMX controller.
  - Check DMX cable connections for continuity and correct wiring.
  - Ensure the DMX values for the corresponding channels are above the activation threshold.
- **Incorrect Relay Operation:**
  - Double-check the DMX address setting.
  - Ensure no other DMX devices are using the same address range.

9. Warranty and Support

Information regarding product warranty and customer support is not available in the provided product data. Please refer to the seller or manufacturer's official website for details on warranty terms and technical assistance.