



ETHERNET RELAY CONTROLLER

Technical Document v1.1

Model Series: NXG-RL102 Series

Nex-G Automation LLP

www.nexgautomation.com



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1. Product Overview

The Nex-G Ethernet Relay Controller is an industrial-grade 8-channel relay control unit designed for reliable remote switching of electrical loads over an Ethernet network. It features single-contact relays with inbuilt noise suppressors, 24V DC operation, and IP configuration via Wi-Fi Access Point (AP) mode, eliminating the need for external configuration tools.

This product is ideal for industrial automation, building management systems (BMS), infrastructure control, and remote equipment switching.



2. Key Features

- 8 × Single-Contact Industrial Relays
 - Suitable for controlling lights, motors, hooters, valves, contactors, and alarms
- Inbuilt Noise Suppression
 - Protects relays and connected loads from EMI, spikes, and inductive kickback
- Ethernet-Based Control
 - Static or DHCP IP addressing
 - Supports LAN-based control and integration
- Wi-Fi Access Point Configuration
 - No software required
 - Configure IP address, subnet, gateway, ports, and credentials via mobile or laptop
- 24V DC Industrial Power Input
 - Wide input tolerance
 - Reverse polarity and surge protection (recommended)
- Status Indication
 - Individual relay ON/OFF LEDs
 - Power and network status indicators
- Robust Industrial Design
 - DIN-rail or wall-mount enclosure
 - Designed for continuous 24×7 operation



3. Technical Specifications (Indicative)

Parameter	Specification
Relay Channels	8
Relay Type	Single contact (NO/NC configurable)
Relay Rating	Up to 10A @ 250VAC / 30VDC (configurable)
Control Interface	Ethernet (RJ45)
Configuration	Wi-Fi Access Point (AP Mode)
Power Supply	24V DC
Protection	Noise suppressor, surge & reverse protection
Indicators	Power, Ethernet, Relay Status LEDs
Mounting	DIN Rail / Wall Mount
Operating Temp	-10°C to +60°C

4. Control & Integration

- Web-based control dashboard (optional)
- REST API / TCP / UDP / Modbus TCP support (customizable)
- Compatible with:
 - SCADA systems
 - PLCs
 - BMS platforms
 - Custom software applications
- Can be integrated with IoT dashboards or cloud platforms if required

5. Use Cases & Applications

- Industrial automation relay switching
- Remote control of hooters, alarms, and sirens
- Building lighting and power control
- Machine start/stop control
- Energy management systems
- Infrastructure and utility control panels
- Factory retrofitting projects

6. Competitive Advantages

- No external software needed for IP configuration
- Inbuilt noise suppression (higher relay life)
- Industrial 24V DC operation
- Compact, scalable, and cost-effective
- Custom firmware and branding available
- Designed & manufactured in India by Nex-G Automation LLP



7. Target Customers

- System Integrators
- Industrial Automation Companies
- Panel Builders
- Smart Building Solution Providers
- OEM Equipment Manufacturers
- Infrastructure & Utility Operators

8. Optional Enhancements (Future Roadmap)

- MQTT / Cloud connectivity
- Secure HTTPS / Authentication
- Mobile app control
- Relay scheduling & logic control
- Feedback inputs / dry contact sensing
- GSM / LTE backup communication

9. Commercial Positioning

- Product Type: Standardized Industrial IoT Hardware
- Business Model: One-time hardware sale + customization / AMC
- Ideal Pricing Band: (To be finalized based on BOM & volume)
- MOQ Friendly for Integrators

10. How to send commands:

To send command to Ethernet relay device follow the following steps,

Step1: Connect RJ45 cable to the Ethernet device

Step2: Power on the device with 24V DC

Step3: Open any browser and type the following command in URL,

Syntax: http://IP/output_relay_number_ON/OFF Example:

http://192.168.1.74/OUT1_ON

To turn on the first relay

http://192.168.1.74/OUT2_ON

To turn on the second relay

http://192.168.1.74/OUT3_ON

To turn on the third relay

http://192.168.1.74/OUT4_ON

To turn on the fourth relay

http://192.168.1.74/OUT1_OFF

To turn off the first relay

http://192.168.1.74/OUT2_OFF

To turn off the second relay

http://192.168.1.74/OUT3_OFF

To turn off the third relay

http://192.168.1.74/OUT4_OFF

To turn off the fourth relay

Note: Default IP is 192.168.1.74. To change this IP, follow the configuration steps.



11. How to configure the IP, Gateway and Sub-net:

Step1: Switch on the device

Step2: Turn on the wifi of mobile/laptop

Step3: Find the device number which you want configure

Step4: Enter the password

12. WiFi Password Example

Device Name	Password
NEX25DC01	NEX00000001
NEX25DC02	NEX00000010
NEX25DC03	NEX00000011

Step5: Once connected, go to the any browser and type in the URL as <http://192.168.4.1>

Note: <http://192.168.4.1> is static IP address to configure the device

Step6: Once you enter a page will display, which shows previous configured IP, Gateway, Sub-net and Time delay.

Step7: Change all the parameters according the needs and then click on the submit button

Step8: Upon submit the new configure details are shown on the same page.

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