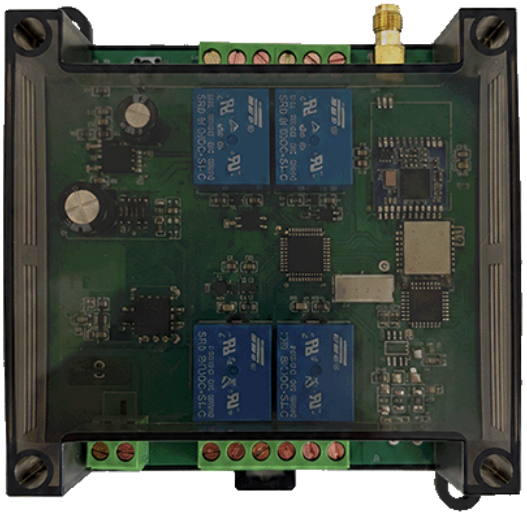
Y406-22/44/66/88/GG-L LoRa Wireless Controller Specification





- User Manual

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1. Overview

Y406 is a LoRa wireless controller series for handheld operation of relay-controlled equipment. It offers 2, 4, 6, 8, or 16 control circuits for applications such as pumps, fans, lighting, and valves. RS485 functions depend on the supplied hardware and firmware; compatible PLC expansion-board firmware reports remote key states over Modbus RTU.

2. Ordering Information

2.1 Model Selection

Model	Control circuits	DI / DO model code
Y406-22-L	2	2 / 2
Y406-44-L	4	4 / 4
Y406-66-L	6	6 / 6
Y406-88-L	8	8 / 8
Y406-GG-L	16	16 / 16

In `Y406-XX-L`, the two code positions represent DI / DO counts; each `G` means 16, and `L` means LoRa. Use the supplied terminal diagram for physical input and output connections.

2.2 Power Supply and Remote Selection

Controller supply: **9–72 V DC**. Specify the controller model when ordering.

Order the remote model, key layout, antenna, and accessories with the controller. Custom key labels identify the operator's actions; use the key configuration supplied with the controller.

3. Key Features

- Handheld LoRa operation for relay-controlled equipment.
- Local relay contacts for load switching.
- Modbus RTU key-state reads over RS485 with compatible PLC expansion-board firmware.
- Handheld remote setup through Remote Configurator requires a compatible BLE configuration module and firmware.

4. Technical Specifications

4.1 Wireless

Parameter	Specification
Wireless technology	LoRa
Operating frequency	433 MHz reference radio version; use the frequency specified for the ordered unit
Antenna	External antenna
Remote range	Up to 3 km without obstruction; actual range depends on site conditions

4.2 Electrical and I/O

Parameter	Specification
Controller power supply	9–72 V DC
Control circuits	2 / 4 / 6 / 8 / 16, depending on model
Local relay outputs	Relay contacts rated at 10 A / 250 V AC

For PLC communication parameters, register mapping, and complete Modbus RTU read examples, see the User Manual.

5. Interfaces and Indicators

Interface / indicator	Description
Power	9–72 V DC input; follow the unit's wiring diagram and polarity markings
Relay contacts	10 A / 250 V AC; follow the unit's wiring diagram
RS485	Use the supplied model's terminal drawing for A/B connections
Antenna	External antenna connection
Remote TX / RX indicators	Transmit/receive indicators on Y406T-44-L

A remote acknowledgement means the module received the command. Verify relay and equipment operation directly.

6. Dimensions and Mounting

6.1 Dimensions

Dimensions use **width × height × depth**.

Model	Controller dimensions (W × H × D)
Y406-22-L	95 × 110 × 45 mm
Y406-44-L	95 × 110 × 45 mm
Y406-66-L	95 × 110 × 45 mm
Y406-88-L	125 × 110 × 45 mm
Y406-GG-L	180 × 100 × 50 mm

6.2 Mounting

Allow access to the antenna connector and terminals. Use the production drawing for mounting holes and installation clearances.

7. Installation and Wiring

See the User Manual for antenna placement, power wiring, and relay connections.

8. Important Notes

- Do not use Y406 for safety-rated emergency stops or control that requires guaranteed timing.
- Check communication-loss and power-recovery behavior before operating equipment.
- Use the protocol supplied for the controller model and firmware for RS485 commands.

- Y406 does not include 4G, Wi-Fi, Ethernet, cloud services, or LoRaWAN gateway connectivity.