# AUTOMATIC PROTECTION RELAY

## Introduction

Automatic relay protection is a device used in power systems to automatically detect and respond abnormal conditions such as overcurrent, overvoltage, ground faults, etc. Alarms to protect electrical systems and equipment from potential hazards and ensure safe operation of electrical systems.

Blue Jay's power distribution safety-related products include Arc flash protection relays, Motor protection relays, WSK series , DH series switchgear temperature and humidity control equipment, etc. Products have miniature intelligence, high integration, high sensitivity and high precision, and has higher anti-electromagnetic interference performance and higher IP protection level. It is suitable for various monitoring sites to ensure electricity safety.
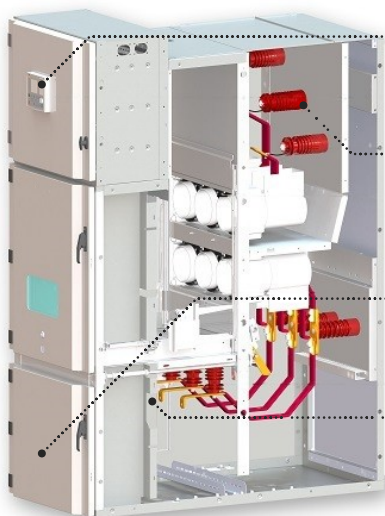
## Main Features

- Automatic control, high reliability.
- Ability to record and analyze failure events.
- Modular design, convenient and quick installation and maintenance.
- Quick response: detect and cut off the faulty circuit in time to effectively prevent accidents.
- High-precision measurement and judgment ability, accurately judge the type and location of the fault.
- Versatility: such as overload protection, short circuit protection, ground fault protection, etc.
- 24 hours real-time monitoring, RS485 remote control.

## Application

- Industrial automation system.
- Large municipal engineering project.
- UPS system, battery system.
- Real-time monitoring and alarm of power system.
- Substations, power plants, transmission lines, distribution lines.
- Protects motors from overloads, short circuits and motor failures.

**Integrated CB control panel**

- CB switch status indicate
- CB switching operation
- Integrate PMD and other functions

**Thermal Monitoring (SCM-W3000)**

- Surface touch or infrared sensor
- Cable terminations
- CB contact fingers
- Busbar joints

**Partial Discharge Monitoring (SCM-PD3000)**

- TV and ultrasonic sensor
- PD detection
- PD localization

**Arc Flash Protective (AFR)**

- High precision fiber probe
- Arc detection
- Arc localization
- Fault protection

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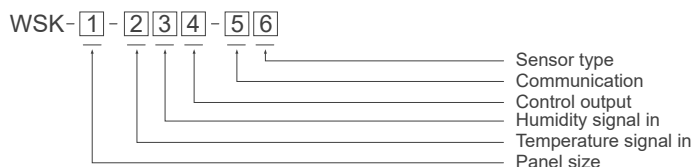
# WSK SERIES CABINET THERMOSTAT

## ▍ Introduction

The WSK Series Cabinet Thermostat is designed for temperature and humidity control. It integrates a humidity control module, collects real-time sensor data, and sends it to the processor for precise, automatic regulation.

Featuring fast-response load relay output, PID auto-tuning, multiple output types, and Modbus communication, it ensures stable, reliable operation even in harsh environments, making it ideal for industrial and electrical cabinet applications requiring continuous, accurate climate control.
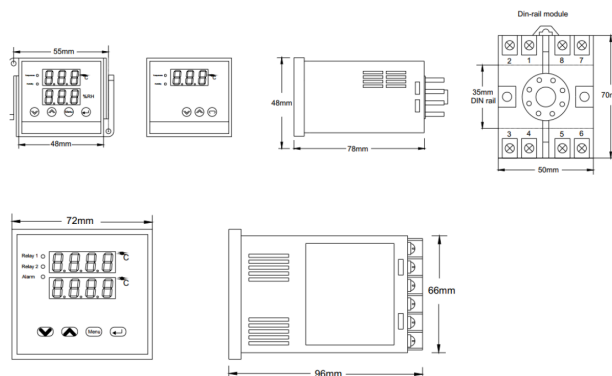
## ▍ Ordering Information

WSK-$\boxed{1}$-$\boxed{2}\boxed{3}\boxed{4}$-$\boxed{5}\boxed{6}$

- Sensor type
- Communication
- Control output
- Humidity signal in
- Temperature signal in
- Panel size

| Num. | Code | Description |
|---|---|---|
| $\boxed{1}$ | Blank | Standard 48(W) x 48(H)mm |
| | 72 | 72(W) x 72(H)mm |
| $\boxed{2}$ | W1 | One channel temperature sensor input |
| | W2 | Two channels temperature sensor input |
| $\boxed{3}$ | S1 | One channel humidity sensor input |
| | S2 | Two channels humidity sensor input |
| $\boxed{4}$ | K1 | One channel output |
| | K2 | Two channels output |
| $\boxed{5}$ | Blank | Without this function |
| | R | One channel RS-485 communication port |
| $\boxed{6}$ | Blank | Default model: WD01, SD01 (Refer to "related accessories") |
| | T | Thermocouple (-K,-J,-T,-E,-N,-R,-S,-B,-L,-U,-YXK) |
| | P | Platinum RTD(-PT100,-PT1000) |
| | L | Linear signal (0~5V,0~10V,0~20mA,4~20mA,0~50mV) |

## ▍ Main Features

- 3 digital or 4 digital LED screens.
- Built-in digital filter reduces interfereence.
- RS485 MODBUS RTU Communication .
- Standard panel size 48x48mm / 72x72mm.
- Optional 35mm DIN rail (only 48X48mm mode).
- Heat/ Fan control mode free to the configuration.
- Sensor length max 10 meters (default 3 meters).
- Accuracy temperature within 1°C & humidity within 5%.

## ▍ Dimension



## ▍ Related Accessories

**Model: WD01**
- 2-pin temperature sensor
- Temperature range: -50~80°C; accuracy ±1°C;
- Dimension: 59*40*19mm

**Model: SD01**
- 3-pin humidity sensor
- Humidity range: 0~80%RH; accuracy ±5%RH;
- Dimension: 59*40*19mm

**Model: WK04-D/ WK05-D**
- 3-pin/4pin temp.+ humid. integrated type
- Temperature: -40~80°C,accuracy ±1°C
- Humidity: 0~99%RH,accuracy ±5%RH

**Model: jly01**
- High-accuracy temp. and humid. Integrated sensor
- Temperature range: -40~120°C, accuracy ±0.3°C
- Humidity range : 0~100%, accuracy ±3%RH

# Technical Characteristics

| Basic parameters | |
|---|---|
| Power supply | 85V~265VAC/DC 50Hz,optional 24/48VDC |
| Power consumption | ≤ 5VA |
| Dimension (W*H) | 48*48mm / 72*72mm |
| **Input** | |
| Temperature | -40~99°C |
| Temp.sensor accuracy | +/-0.2 °C |
| Humidity | 1~98%RH |
| Hum.sensor accuracy | +/-3.0%RH |
| Cable length | 2 m.(3m option) |
| Sampling rate | 400 msec/per scan |
| **Output** | |
| Relay output | 2-chanels, 250VAC, 5A 1PH, resistive load |
| RS485 communication | MODBUS RTU, 4800/9600 baud rates |
| **Display** | |
| Waterproof degree | IP40 |
| Display | 2-line x 3 character 7-segment LED display |
| Keypads | Menu, Enter, Increase, Decrease |
| **Environment** | |
| Protection | Anti-containing acid, alkali, salt gas |
| Storage temperature | -10~55°C |
| Storage humidity | 20 ~ 93%RH, Non-condensing |

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