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.

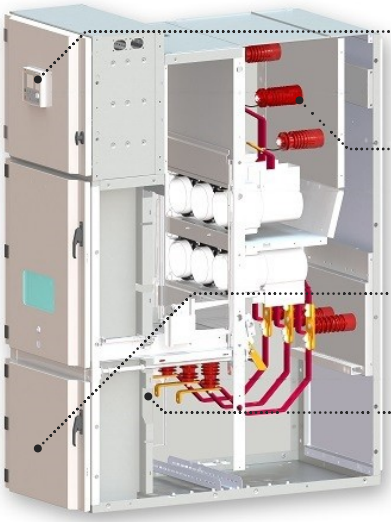
Blue Jay's power distribution safety-related products include Arc flash protection relays, Motor protection relays, WSK series , DH series switchgear temperature and humidity control equipment, etc. Products have miniature intelligence, high integration, high sensitivity and high precision, and has higher 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

SCM-W3000 SWITCHGEAR THERMAL MONITOR

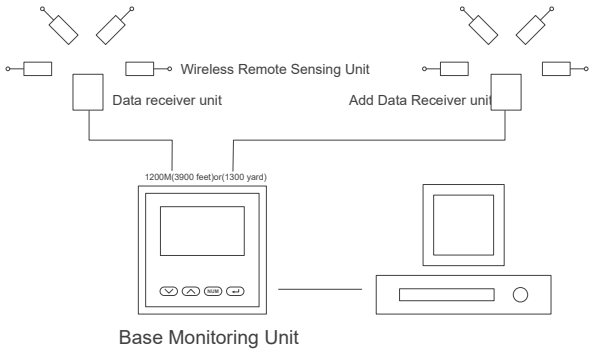
BUSBAR PROTECTION RELAY

Introduction

SCM-W3000 switchgear thermal monitor designed can enhance safety by enabling operators and maintenance engineers to proactively manage temperature variations in switchgear components, minimizing the risk of sudden temperature increases.

SCM-W3000 provides continuous 24/7 monitoring for critical busbar joints with support for up to 32 monitoring nodes per switchgear. featuring panel mount HMI units with acousto-optic alarms and DO ports, users can integrate it into automatic alarm/control systems. Additionally, the equipped RS485 port allows seamless connection to existing SCADA systems for remote sensing control.

Working Principle

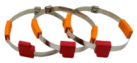


Base Monitoring Unit

Main Features

- Alarm output (indication through a lighting led).
- Pre-defined high or low temperature conditions.
- Low-size (144 x 144 mm), panel-mounting base unit.
- RS-485 or Ethernet communication to PC (optional).
- Instantaneous, maximum and minimum values of each measured parameter.
- Real-time data 24*7 / 365 Days monitor LV switchgear incomers and feeder, line, and load side.
- Two-level alarm parameter setting. provide 2*DO NC & NO contact for external alarm trig.
- Battery-free design, permanently installed sensors and zero maintenance.

Related Accessories



SCM-SAW-S Remote wireless node

- 0-65°C, accuracy 0.5°C
- Maintenance free during life cycle
- Suitable for flat surfaces or VCB contacts

SCM-SAW-W Remote wireless node

- Surface acoustic wave (SAW)
- Maintenance free during life cycle
- External wiring probe for irregular surface

SCM-BAT-S Remote wireless node

- Battery powered, 2000mAh for 2~4 years
- Green/Yellow/Red for three phase
- Suitable for flat surfaces or VCB contacts (test under 2min data transmit interval)

Technical Characteristics

Electrical characteristics	
Power supply	AC / DC 80-270V, 45-65Hz ,DC 20-60V (optional)
Maximum power consumption	6W
Wireless remote sensing unit	Standard type 3-12
Temperature monitor range	From 0°C ~ 99 °C
Wireless communication frequency	433Mhz / 460Mhz / 869Mhz
Transmit power	Less than 20mw
Distance of the receiver and monitor	Up to 80m (260 foot)
Others	
Battery life	3-5 years (every fifteen minutes to send a data)
Working environment	Temperature: -20℃~+125℃ Humidity: RH 20%~95%（No condensation）
Storage conditions	Temperature: -25℃~+60℃ Humidity: RH 20%~95%
Protection	Panel: IP40
Dimensions	Base monitoring unit: 144mm×144mm×110mm Data receiver unit: 65mm×50mm×30mm Wireless remote sensing unit: 65mm×50mm×25mm