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.

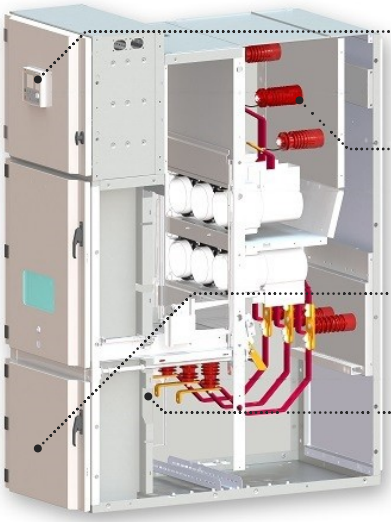
Blue Jay's power distribution safety-related products include Arc flash protection relays, Motor protection relays, WSK series , DH series switchgear temperature and humidity control equipment, etc. Products have miniature intelligence, high integration, high sensitivity and high precision, and has higher 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-PD3000 PARTIAL DISCHARGE MONITOR

BUSBAR PROTECTION RELAY

Introduction

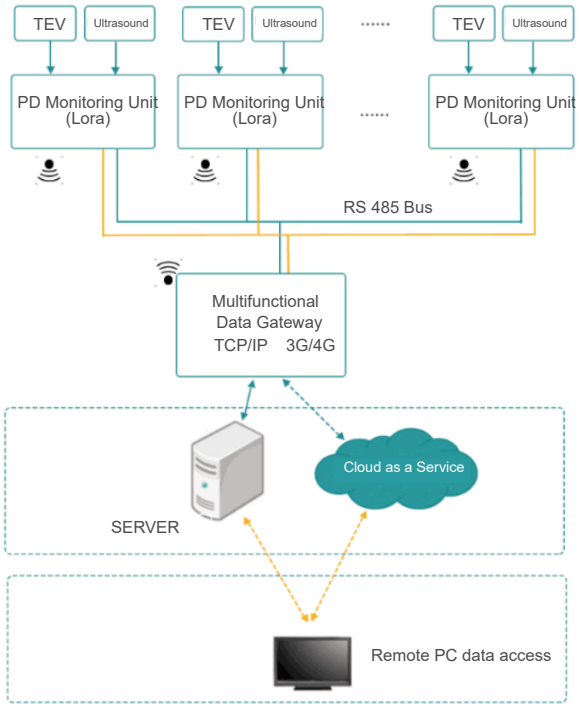
Partial discharge is a kind of pulse discharge, which will produce a series of physical phenomena and chemical changes such as light, sound, electrical and mechanical vibration in the interior and surrounding space of power equipment. When insulation defects appear inside high-voltage electrical equipment, it will be accompanied by the generation of partial discharge signals.

SCM-PD3000 partial discharge monitor can be used with UHF sensor, TEV sensor, Ultrasonic (AA) sensor and online detection of partial discharge of high voltage equipment such as transformers, high voltage switchgear, and cable joints. Easy to carry, fast measurement, strong anti-interference ability, easy to use on site.

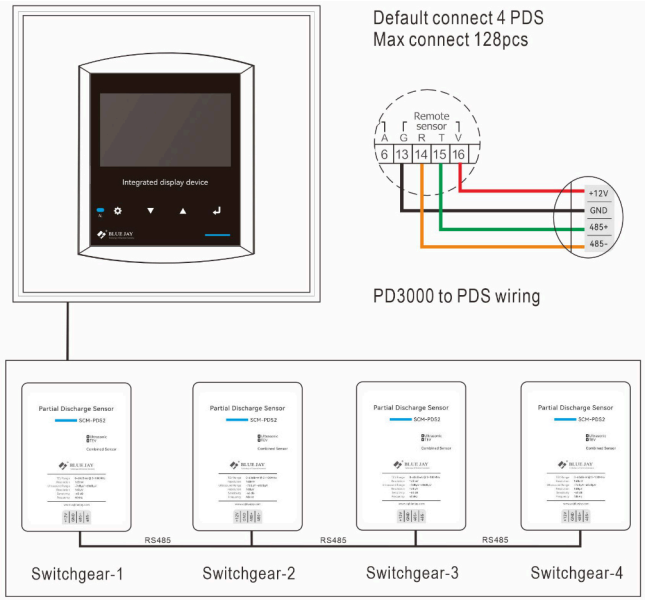
Main Features

- Wall-mounted installation.
- Alarm multi-level threshold setting.
- Waveform data recording function.
- RS 485, Modbus-RTU, SCADA systems.
- Sensor detects TEV and audible ultrasonic.
- Automatic PD data acquisition and analysis.
- 2*DO NC & NO contact for external alarm trig.
- Anti-interference performance and high measurement accuracy.
- Joint detection of partial discharge signals by transient earth waves.

Working Principle



Wiring Method



Technical Characteristics

HMI electrical specification	
Auxiliary power	85-265Vac/dc, 20-60Vdc Optional
Power consumption	<6W
Communication	RS-485, MODBUS-RTU
Digital output	2* Relay for alarm/trip, 5A@250VAC, passive node
Environment temperature	-10 ~ +60°C
Environment humidity	RH 20% ~ 95% (No condensation)
Dimensions (L × W × H)	96*96*85mm or 144*144*100mm
Open install hole	91*91mm or 138*138mm
Remote sensor	
Power supply	12-36Vdc or 7.2V 3000mAh build in battery*
Wireless band	433MHz~2.4GHz optional
Signal transmission distance	Up to 80m (260 feet)
Static power consumption	<10mW
Installation method	4* strong magnet, wall mount
Sampling period	4S
TEV sensor	
Detect range	0~60 dBmV
HF frequency response	3~100MHz
Resolution / Accuracy	1dBmV / ±1dBmV
Ultrasonic sensor	
Detect range	0~60dBμV
Resolution / Accuracy	1dBμV
Sensitivity	-65 dB (0 dB=1 volt/μbar rms SPL)
Sensor center frequency	40 KHz
UHF sensor	
Detect range	-70~10dBm
Pass band	300~1500MHz
Average equivalent height	≥10mm
Noise detection range	30~130dB
Temperature detection range	-40~85°C
Humidity detection range	5~95%RH