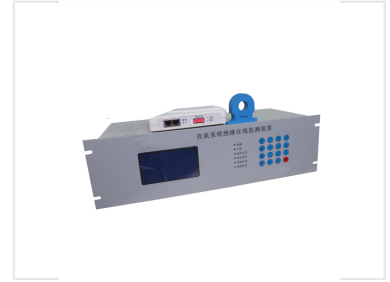


# DC System Insulation Online Monitoring Device

This device is designed for real-time monitoring of insulation status in DC systems. It provides comprehensive monitoring of voltage levels and insulation resistance, with visual indicators and communication ports for data logging and remote monitoring.



## Product Overview

### Advanced DC System Insulation Monitoring

The PEN-JYC DC system insulation on-line monitoring device is an advanced solution for real-time detection of grounding faults, insulation drops, and ring network states in complex power systems. Utilizing innovative distributed system architecture and the SynSystem analysis algorithm, the device ensures high-precision monitoring of DC bus voltages and insulation resistance. It provides critical operational safety through intelligent pattern matching, historical event logging, and seamless integration with automation systems via RS485 interfaces.

## System Capabilities

### Key Functional Features

- Real-time AC/DC voltage monitoring
- Ground loop detection and diagnosis
- Insulation classification warning
- Voltage balance compensation
- Historical event recording (up to 1000 logs)

### Communication Interfaces

RS232 • RS485 • RS422 • YX Switching

### Supported DC Voltages

220V, 110V, 48V, 24V

## Performance Metrics

### Featured Monitoring Metrics

**0.5 %**

Voltage Monitoring Error

**500 K $\Omega$**

Detection Accuracy

**10000  $\mu$ F**

Capacitance Interference Resistance

### Measurement Specifications

| Parameter                | Range            |
|--------------------------|------------------|
| Grounding Impedance      | 0-50k $\Omega$   |
| Insulation Reduction     | 51-500k $\Omega$ |
| Direct to Ground Voltage | 0-300V           |
| AC Series Voltage        | 0-300V           |

## Operating Environment

### Environmental Limits

- Operating Temperature: -30°C to +50°C
- Relative Humidity: < 96%
- Ripple Voltage Coefficient: 2%