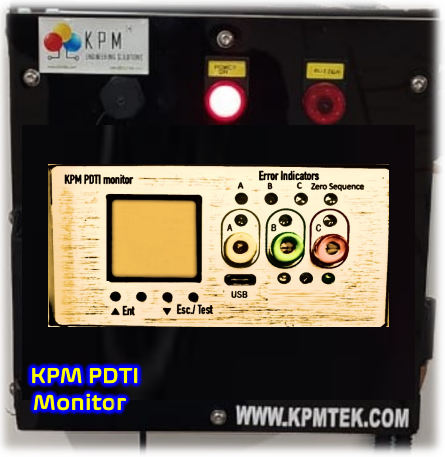
KPM PDTI Monitor



- PD Monitoring
- Temp.
- Sht. Ckt.
- Zero Seq.

For Critical Cable Termination Monitoring (UPTO 11kV)

The KPM PDTI system is deployed on primary switching equipment such as ring network switch cabinets, cable termination boxes, and transformer output cables etc. within the power distribution network. Its primary function is to conduct online monitoring of partial discharge, indicating potential short circuits and ground faults in corresponding cable sections, along with real-time temperature monitoring.

Utilizing the pulse current method, a widely recognized and utilized partial discharge testing technique, the system quantifies apparent discharge in pC units. This quantitative measurement objectively reflects the insulation status of electrical equipment. Notably, switch cabinets operating at voltage levels of 10kV and above witness the highest installation rates and are prone to significant failures with severe consequences.

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KPM PDTI, Cable Termination Monitor

Therefore, implementing online monitoring of partial discharge and temperature rise in switchgear rated at 10kV and above not only offers insights into equipment insulation status but also enables timely detection of manufacturing and installation issues. It aids in pinpointing the cause and severity of insulation faults. Additionally, the system integrates cable temperature monitoring, high-voltage live indication, and fault indication functions.

By amalgamating measurement, analysis, and diagnosis capabilities, the system presents data through a TFT color screen display interface. This feature aids inspection personnel in assessing the insulation status of the switch cabinet, thereby reducing operational and maintenance costs. Timely problem resolution minimizes insulation hazards and enhances the reliability of power distribution equipment operation.

Research indicates that organizations that utilize partial discharge monitoring experience up to a 70% reduction in unplanned downtime due to equipment failures.

Features :

- Real-time temperature: The electronic CT detects the temperature of the cable during work and transmits the real-time temperature to the host through optical fiber and displays it on the host screen.
- Short-circuit alarm indication: When the line current reaches or exceeds the preset short-circuit current setting value, the electronic CT Issues. The alarm signal is transmitted to the host through optical fiber .
- Ground alarm indication: When the line current reaches or exceeds the preset ground current setting value, the electronic CT sends an alarm signal and transmits it to the host through optical fiber.
- Temperature alarm indication: When the line temperature reaches or exceeds the preset temperature setting value, the electronic CT sends an alarm signal and transmits it to the host through optical fiber.
- The partial discharge detection technology using pulse current method has high monitoring sensitivity.
- Implement the international standard IEC60270 for partial discharge detection, which can quantify discharge.

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- Full-featured, integrated fault indicator, high-voltage live indication and cable temperature measurement functions.
- Using adaptive anti-interference technology, it can effectively eliminate on-site background noise interference.
- Continuous and real-time online monitoring of equipment insulation defects, and timely discovery of abnormal operating status of electrical equipment.
- Probability intensity, discharge frequency, charging status, fault indication, cable temperature measurement, etc. are displayed locally through the TFT color screen.
- RS 485 communication method can realize comprehensive diagnosis of big data and make the diagnosis results more accurate.
- Built-in partial discharge diagnostic analysis and alarm algorithm combined with cable head temperature. When partial discharge is detected in high-voltage equipment, the LED alarm light will always be on and the relay alarm contact will issue an equipment abnormality alarm.

Specifications:

1. Measuring range: 0~ 5000 pC
2. Sensitivity: not less than 100pC
3. Measurement accuracy: discharge intensity measurement is not less than 5%, discharge frequency measurement is not less than 2 %
4. Frequency band range: 100 kHz ~5 MHz
5. Monitoring variables: probability intensity, average intensity, discharge frequency
6. Discharge frequency : no more than 5000 (1s)
7. Short circuit fault current alarm factory setting value: 800A Error ± 10%, factory set according to customer needs
8. Ground fault current alarm factory setting value: 20A/50A (customizable) error ± 10% factory set according to customer needs
9. Cable temperature fault alarm factory setting value: 60℃ Error ± 1%, factory set according to customer needs
10. Cable real-time current measurement range: 5A~1200A Error ±3% (0.2 level accuracy can be customized)
11. Cable real-time temperature measurement range: -40℃~+120℃ Error±0.5℃
12. Working power supply: external power supply DC 18~72 V , current <200 mA .
13. Automatic reset time: can be set through the display (default 24 hours)
14. Protection level: Host: IP40; Electronic CT: IP65
15. Host working environment: -40℃~+75℃
16. Communication method: RS485 communication, supports MODBUS protocol (default 9600bps, 8 data bits, no parity, 1 stop bit).
17. Scope of use: In systems below 20kV

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KPM PDTI

Model :

Date :

Time :

PD Activity

Intensity : xxxx pC
Average Strength : xxxx pC
Discharge Freq : xxxx /s
Operating Status : Normal

PD Measurement

PD display consists of probability intensity, average intensity, discharge frequency, and operating status which enables real-time monitoring of the insulation status of the switch cabinet.

Temperature Activity

Phase A. : 21°C
Phase B. : 35°C
Phase C : 22°C

Optical Temp. Measurement

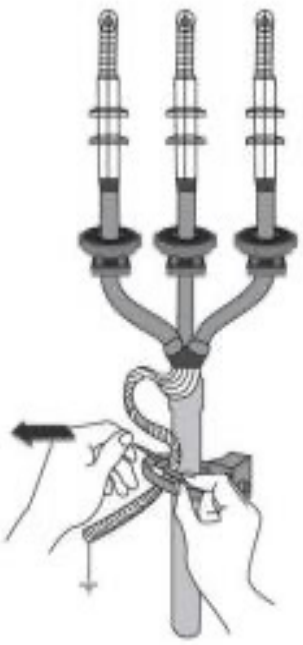
This feature mainly monitors A-phase,B-phase & C-phase cable temperature. The real-time data and status of the phase cable temperature are shown in the display.

Faults Indicators

Phase A. : Normal
Phase B. : Normal
Phase C : Normal
Zero Sequence : Normal

Fault indication monitoring

The fault indication monitoring menu consists of phase A, phase B and phase C short circuit fault sensors and grounding sensors, which can display relevant fault alarms in real time.



Connection Diagram

About Us

KPM is a high quality manufacturer & provider of rugged electrical testing equipment for EHV/HV/LV substations. KPM solutions are known for:

- Best in class specifications
- Unique test approach
- Interference rejection capability

Each equipment is supported by advance service center in Gurgaon backed by a team of expert application & service engineers. KPM aims in bringing highest specification products at the doorstep of Indian customers in best rates.

Our Techno Sales Partner

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