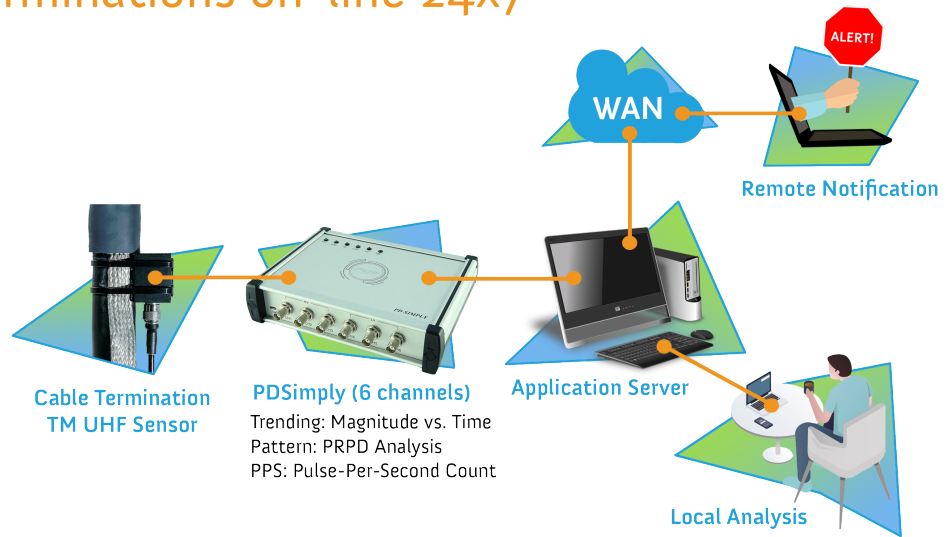


**PDS**  
Power Diagnostic Service

# CTM-UHF System

Monitor your cable terminations on-line 24x7

Power Diagnostic Service's CTM-UHF system offers a continuous, real-time, early warning partial discharge monitoring system for cable terminations of the HV apparatus. This system allows the user to transform their time based maintenance to condition based maintenance.



## Outstanding Features

- Easy installation
- 24 x 7 on line monitoring of HV/MV cable joints/cable terminations
- UHF sensor for high signal to noise ratio
- Local/Remote indication of alerts

## 24 x 7 Continuous Monitoring

The CTM-UHF is an IEC TS 62478 compliant on-line partial discharge (PD) diagnosis and monitoring system designed for early warning of partial discharge. The system provides continuous monitoring of the insulation condition of cable terminations and cable joints in medium-voltage and high-voltage assets under load. Each monitoring channel is updated every minute, enabling the user to review trending data. Advanced noise and PD source separation techniques of the system ensure reliable PD detection. The system is designed to sense the presence of partial discharge in the cable terminations which can occur due to improper installations.

## Two Stage Threshold for Alarm Indications

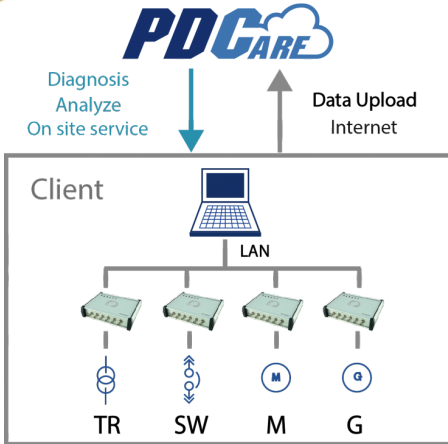
The system provides early warning detection of PD events affording the customer the opportunity to take corrective action to prevent failure. The two stages of threshold coupled with the PDS Smart algorithm prevents false alert of the early warning system. The relevant information data from PDSIMPLY can be transmitted to the local computer with the PDCare software system.

## UHF Sensors for High Signal to Noise Ratio

The system has two main components - the TM Sensor and the PDSIMPLY Six Channel data acquisition system. The TM Sensor works in UHF frequency range. This is ideal for the application to achieve high signal to noise ratio. PDSIMPLY's advanced noise suppression and multiple partial discharge source separation techniques ensure that only relevant PD data is evaluated so that faults can be detected quicker.

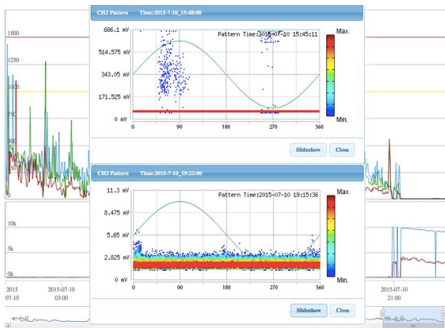
## Easy System Configuration and Installation

Installation of the system is very simple. It comprises of a UHF sensor type TM installed near the cable termination that is connected to the PDSIMPLY data acquisition system which can monitor up to 6 cable terminations. The system can monitor up to 2 sets of 3 phase cable terminations with 6 TM type sensors and one PDSIMPLY data acquisition system. PDSIMPLY has built-in self-monitoring function, and 5 output contacts can be configured for different status indications.



## PDCare Software System

The PDS PDCare software system can be used to review data over time for fault diagnosis. Two levels of alarm thresholds can be configured for viewing real-time data and trends locally or remotely. The PDCare system can send the instant alerts to a remote computer via email, and it can be accessed over WAN to download the information for timely action.



## Multiple Operation Modes

The CTM-UHF system can be configured for stand-alone, local, or network mode, providing maximum operational flexibility based on the user's choice. PDSimply acquires, processes, and stores the data for analysis.

In stand-alone mode, PDSimply can be accessed from a computer by users to analyze stored data following an alert.

In local mode, PDSimply transfers the data to the local computer on a continuous basis via USB or an Ethernet connection. The local computer can be accessed directly or remotely via WAN for data transfer and analysis.

In network mode, the local computer communicates via WAN with the remote devices. The alerts can be configured to send email notifications to remote devices. The PDCare software system allows the user to remotely access the system for data analysis.

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## PDSimply Technical Specifications



### Measurement Specs

No. of Channels	6
PD Measuring Frequency	50 MHz - 900 MHz
PD Measuring Range	0.1 mV - 5 Vp-p
Resolution	10 bits bi-polar
Input Resistance	50 $\Omega$
Filter	Built-in 50 MHz high-pass filter
Amplifier	90 dB Dynamic Amp, 6 dB/step

### Hardware

Storage	512 MB
Communication	micro USB, USB, RJ45
Output	5 x Dry Contacts
Power	AC 85 V - 264 V, 50/60 Hz, 15 W
Dimensions (mm)	250 x 164 x 53

### Function

PD Magnitude	Yes
PD Trend	Yes
Pulse-Per-Second (pps)	Yes
PRPD Pattern	Yes
Two-stage Adjustable Threshold	Yes, PDS Smart Algorithm
System Overview	Yes

## UHF TM PD Sensor

### Features

- Wide application range: can be applied to most HV equipment
- High safety: install on ground cable, no direct contact with HV components
- Easy installation: small size, easy mounting
- High reliability: passive sensor, no battery, long life
- Wide-band design: Features VHF-UHF bandwidth, up to 900 MHz
- 50  $\Omega$  input resistance: compatible with various instruments such as oscilloscopes and spectrum analyzers

### Technical Specifications

Type	TM
Connector	BNC or TNC
Frequency Bandwidth	30 MHz - 900 MHz
Dimensions (mm)	37 x 37 x 28
Input Resistance	50 $\Omega$



### Taiwan

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