RUGGED MONITORING

MONITORING SIMPLIFIED

CPM601-P

One Device for a wide range of assets and testing applications

Rugged Monitoring presents most advanced Partial Discharge Monitor

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One Device for a wide range of assets and testing applications

Rugged Monitoring presents most advanced Partial Discharge Monitor CPM601 to perform PD measurements in dual frequency range i.e., in the range of 0.01MHz - 100MHz as well as 200 – 3000 MHz.

With the help of advanced electronics embedded inside CPM601, user can perform PD measurement using various sensors without the need of using external frequency down converters. This presents All-in-One solution to perform PD measurements using Acoustic, Ultrasonic, HFCT, TEV, Coupling Capacitors as well as UHF Sensors on all assets, GIS, Power Transformers, Rotating Machines and Power Cables.

CPM 601 is a Compact and sturdy enclosure with electronics making it portable, easy to carry, while enabling the user to perform PD measurements with less hassle. Monitor can directly transfer the data to PD Connect software installed on laptop else data can be temporarily stored (optional) in the device enabling the user to record PD pulses with higher sampling rate. Thousands of pulses per second can be transferred to the laptop enabling the user to generate fast and reliable Phase Resolved Partial Discharge (PRPD) graphs. PRPD patterns help the user to identify type of PD. CPM 601 and Software are packed with all necessary tools that help to perform effective PD measurements. Integrated variable amplifiers and onboard denoising features help during onsite testing in case of any huge noise.

We at Rugged Monitoring have a dedicated team for application specific customizations for sensors, monitor configuration and software integration to simplify data collection of testing and monitoring applications.

Applications

- Online periodic partial discharge monitoring
- Online PD measurement during HV AC testing (Resonant test set, VLF, OWTS)
- Multiple point PD monitoring
- Cables and their accessories
- Rotating machines
- AIS/GIS switchgear/switchboards
- Power transformers

Features

- Rugged, compact design
- Dual Frequency Ranges; 0.01MHz - 100MHz as well as 200 – 3000 MHz
- Compatible with Acoustic, Ultrasonic, HFCT, TEV, Coupling Capacitors as wells as UHF Sensors
- An interactive and comprehensive software PD Connect for reliable PD measurement and analysis
- Gigabit ethernet copper Cat5e communication link between monitor and laptop
- Optional rugged laptop with installed software suite
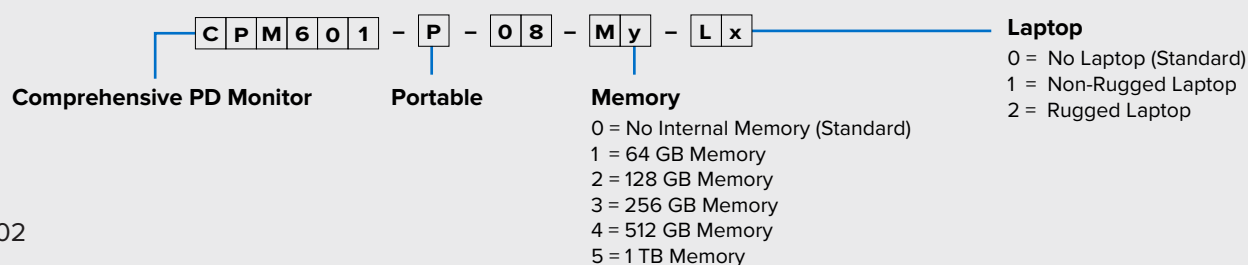- IP65 rated

CPM601-P

Benefits

- Rugged sensors, monitor and laptop
- Gigabit ethernet communication between monitor and laptop
- Enhanced noise rejection
- Realtime denoising

- Software packed with useful tools for reliable and interactive PD measurements
- Robust recording and analytics
- Customizable according to customer specific applications
- Suitable for Online PD measurements

Technical Specifications

INPUT CHANNELS	Channels	8 Multiplexed (4x HF and 4x UHF)
	Sampling Rate	250 MS/s
	Amplification	up to 50 dB, software selectable
	Filtering	Software configurable band pass filters
HF CHANNELS	Bandwidth	0.01 to 100 MHZ
	Sensitivity	-50dBm
	Dynamic Range	50dB
UHF CHANNELS	Bandwidth	200 - 3000 MHz
	Sensitivity	-80 dBm
	Dynamic Range	70 Db
DATA TRANSFER	High Resolution (pulses data on simultaneous channels)	10,000 pulses per second for 4 simultaneous channels
	Low Resolution (pulse amplitude on simultaneous channels)	50,000 pulses per second for 4 simultaneous channels
	Transfer Rate	400 Mbps (depending on operating system and connection)
MEMORY	SSD	up to 1 TB (Optional)
COMMUNICATION LINK	Type	Ethernet Copper or Fiber (100/1000 BASET)
	Connector	RJ45 or LC Multi-mode
SYNCHRONISATION INPUTS	2 Inputs, software	Internal
	External	selectable
IP RATING	IP 65	
TEMPERATURE RATING	Ambient	-30°C - 60°C
	Storage	-40°C - 85°C
POWER RATING	Input Power	240-100Vac, 45W
DIMENSIONS	260mm(L)x310mm(W)x120mm(H)	
LAPTOP	Rugged Laptop	(Optional)

Ordering Code

| C P M 6 0 1 | – | P | – | 0 8 | – | M y | – | L x |

Comprehensive PD Monitor

Portable

Memory
0 = No Internal Memory (Standard)
1 = 64 GB Memory
2 = 128 GB Memory
3 = 256 GB Memory
4 = 512 GB Memory
5 = 1 TB Memory

Laptop
0 = No Laptop (Standard)
1 = Non-Rugged Laptop
2 = Rugged Laptop

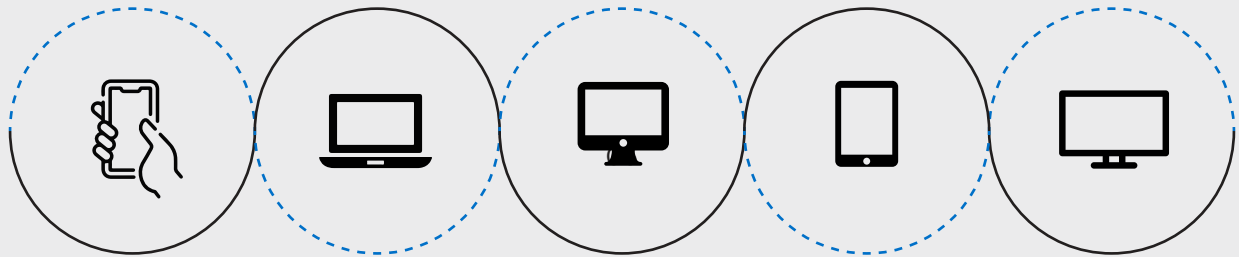# Asset Monitoring :
Enterprise Architecture

Compatible with Rugged Monitoring Enterprise Solution

UI UX

- Data Layer
- Analytics
- User Interface
- Custom Dashboards
- Reporting
- Email/SMS Notifications

RM EYE

Private Cloud (Customer Cloud),
Rugged Monitoring Cloud

IEC 60870-104	ODBC
IEC 61850	MODBUS
FTP/SFTP	DNP 3.0
- XML, JSON	HTTPS
- CSV, COMTRADE	MQTT

Data Collection

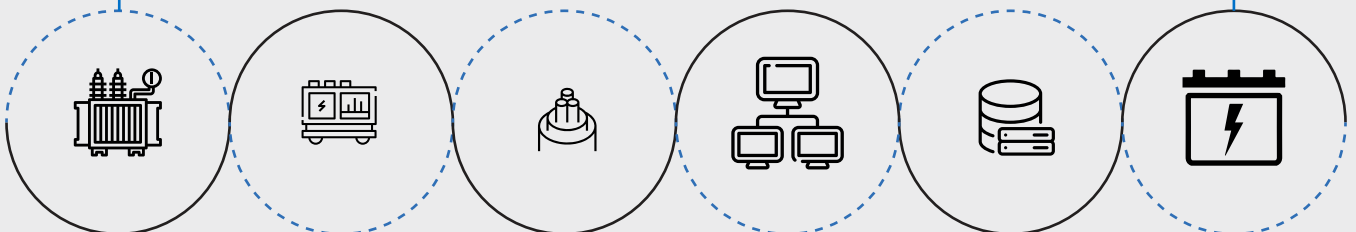**Asset Data**

Transformer Monitoring System

Switchgear Monitoring System

Power Cable Monitoring System

- Offline Test Results
- Inspection Records
- Name Plate

- Historian
- CMMS
- SCADA/ DCS

Power Electronics (Battery, UPS, VFD, Relay)

One Solution for Multi-Site Multi Asset Monitoring

Manage different industrial assets on one platform without human intervention

Features

- **Advanced and Exceptional Reporting** Technology with automated alerts

- **Modern remote monitoring solutions** provide valuable insights to Multiple Assets at Multiple Sites on real-time

- **Robust asset health monitoring** with analysis and recommendations support asset effectiveness in addition to maximizing equipment uptime

- **Establish a real time and consistent monitoring** by getting the right information into right hands

- **An efficient, reliable partial discharge monitoring** for all the assets

- **A detailed comprehensive DGA Analysis**

- **Lifetime Consumption details.**

- **Built on well-established remote and cloud-based monitoring technology**

- **Simple user-friendly interface** providing fast access to all the features and commands

- **Quick and easy 1 step configuration setup**

- **Encompasses a secure access to data and configuration**

- **Advanced asset algorithms** based on standard ones with new ideas

- **Systematic fleet management and analysis**

- **Extended multilingual support** to handle product inquires or troubleshoot problems proactively

- **Up System Level Reporting**

- **Industrial IoT**

Features Specific to PD Monitoring

- Partial Discharge monitoring and Analysis
- PRPD : Phase resolve partial discharge
- Partial Discharge Amplitude and Discharge rate trend analysis
- Partial Discharge Fault localization
- Artificial Intelligence based PD fault Identification

- Realtime PD Alarm system
- Get Alarm notifications for individual bushing parameters over Email, sms and push notificaions
- Analytics on Online, and offline partial discharge test data

Why Customers Choose Us?

RM solution, the trusted monitoring solution for over 10000+ assets across 50+ countries. We are a leading High Value Electrical Asset Monitoring Company integrating fibre optic technology to the assets.

Attention to Details
It's our attention to the small stuff, scheduling of timelines and keen project management that makes us stand out from the rest.

A plan for Success
Our Customers are well satisfied with the advisory services that we offer to help them with best in class technological performance and a long durable life.

Experts only
We bring in our diversified experienced team with over 100+ years of experience in Asset Monitoring

Meeting Deadlines
Work with us, and you'll work with seasoned professionals – vigilant of deadlines, and committed to exceeding client expectations.

Money Matters
We protect you against currency fluctuation with competitive and fair market prices

Rugged Monitoring Services

Rugged Monitoring provides customization of sensors, monitors & software. In addition we offer on-site commissioning services, maintenance contracts and technical support to all customers worldwide.

About Rugged Monitoring

Industry's leading team of asset condition monitoring experts with 100+ years of combined experience committed to delivering customizable solutions for challenging applications. We offer a range of reliable, high performance, customizable sensors and monitoring solutions that are immune to external influence.

Certification

ISO 9001	ISO 14001	ISO 45001/ OHSAS 18000	Llyod's Register	ATEX Certification

Our Presence **Across the Globe**

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