

# HPM601-P

## High Frequency Partial Discharge Monitor



Designed for Diverse Utility and Industry Applications

# HPM601-P High Frequency Partial Discharge Monitor



**Rugged design, designed for reliability, 3 Phase synchronous partial discharge monitoring equipment.**

Rugged Monitoring High Frequency Partial Discharge (PD) Portable Monitor is a compact and rugged device enabling the user to perform periodic offline and online PD measurements in power cables and accessories, switchgears and rotating machines. Compact size and rugged enclosure and electronics make it portable, easy to carry and enabling the user to perform PD measurements with less hassle.

Monitor is capable of transferring the data directly to Rugged Enterprise software installed on laptop or 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. Monitor and Software are packed with all necessary tools that help to perform effective PD measurements. Integrated variable amplifiers and on board denoising features help during onsite testing in case of presence of huge noise.

There is 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
- Offline 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
- 4 synchronous input channels allow 3 phase synchronous measurement with additional external synchronous channel to enable the use of other type of sensor
- An interactive and comprehensive software Rugged Enterprise 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

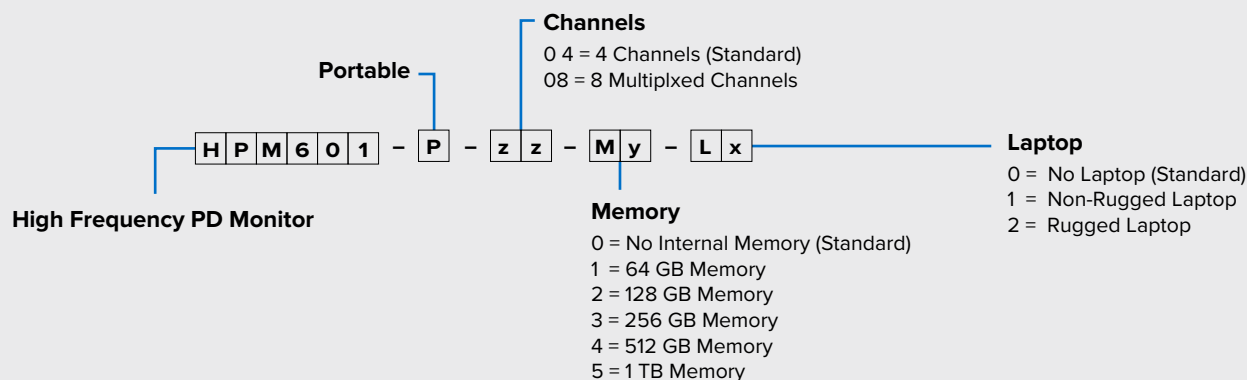
## Benefits

- 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 or Offline PD measurements

## Technical Specifications

<b>INPUT SIMULTANEOUS CHANNELS</b>	Channels	4 simultaneous channels 8 & 12 channel options available with multiplexer
	Sampling Rate	250 MS/s
	Bandwidth	0.01-100 MHz
	Amplification	up to 50 dB, software selectable
	Filtering	Software configurable band pass filters
<b>MEMORY</b>	SSD	up to 1 TB (Optional)
<b>DATA TRANSFER</b>	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)
<b>COMMUNICATION LINK</b>	Type	Ethernet Copper or Fiber (100/1000 BASE-T)
	Connector	RJ45 or LC Multi-mode
<b>TEMPERATURE RATING</b>	Ambient	-30°C - 60°C
	Storage	-40°C - 85°C
<b>POWER RATING</b>	Input Power	240-100Vac, 45W
<b>SYNCHRONISATION INPUTS</b>	2 Inputs, software	Internal & External
	IP Rating	IP65
<b>DIMENSIONS</b>	260mm(L)x310mm(W)x120mm(H)	
<b>SOFTWARE</b>	Rugged Enterprise	

## Ordering Code



# Asset Monitoring : Enterprise Architecture

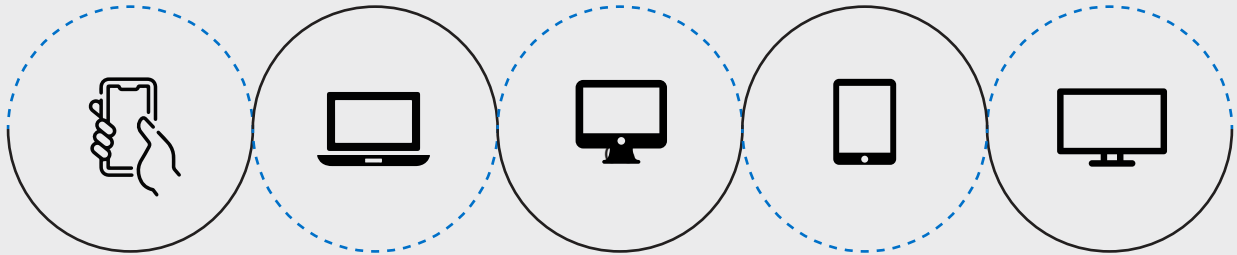
Compatible with Rugged Monitoring Enterprise Solution

## 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**

**IEC 61850**

**FTP/SFTP**

- XML, JSON

- CSV, COMTRADE



**Data Collection**

**ODBC**

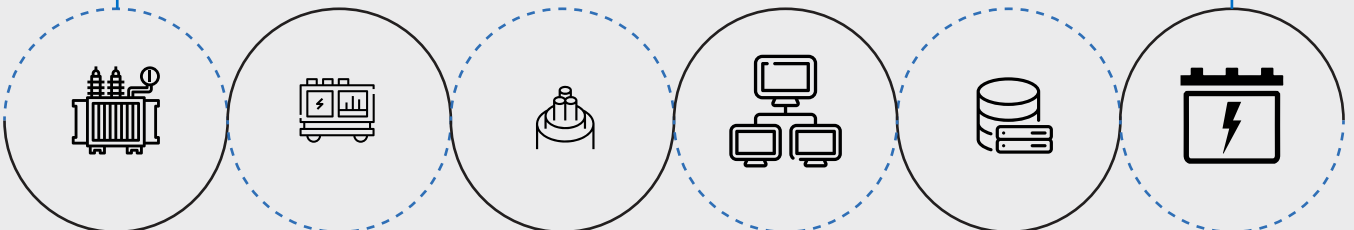
**MODBUS**

**DNP 3.0**

**HTTPS**

**MQTT**

## 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 notifications
- 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



Lloyd's  
Register



ATEX  
Certification

# Our Presence Across the Globe



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