

# CPM601-P

## Streamlined PD Measurements Without External Converters



Our dual-frequency PD solution caters to various assets, including GIS, power transformers, rotating machines, and power cables, eliminating the need for external frequency converters and enabling real-time analysis.

CPM601-P is Rugged Monitoring's advanced portable dual-frequency PD monitoring edge device designed for detecting and analysing high-frequency (HF: 10 kHz—100 MHz), very high-frequency, ultra-high-frequency (UHF: 300 MHz—2000 MHz), and acoustic signals across critical electrical assets such as Transformers, Rotating Machines, Switchgear - GIS, AIS, MV Panel, Power Cables, and GIS Circuit Breakers. It enables real-time insulation assessment and supports early fault detection, helping operators take proactive measures before failures occur.

With its dual-frequency capability for 4 HF and 4 UHF channels, the CPM601-P removes the need for external converters, offering a compact, all-in-one solution for online monitoring and portable field testing. It offers high-speed acquisition at 250 MS/s for HF and 360 points per cycle for UHF. Equipped with software-controlled HF band-pass filters and user-selectable UHF filters across four bands, it ensures accurate signal isolation even in noisy or electromagnetically challenging environments.

The device supports multi-channel input configurations and is compatible with various sensor types, including HFCTs, TEVs, acoustic, ultrasonic, capacitive, and UHF sensors. Rugged Monitoring also provides customized sensor calibration services, ensuring optimal sensitivity and seamless matching of sensor characteristics to the input ports in line with industry standards.

Built for field reliability, the CPM601-P is housed in a rugged IP65-rated enclosure and features flexible Ethernet communication through RJ45 or LC Fiber connectors. It utilizes a proprietary TCP/IP protocol for secure, high-speed data transfer.

The system integrates seamlessly with PD Connect software, offering real-time diagnostics, PRPD graph generation, trend analytics, and customizable alarm settings all within an intuitive user interface.

Combining portability, robust design, and intelligent signal processing, the CPM601-P is a powerful solution for predictive maintenance, asset commissioning, and continuous PD monitoring in modern electrical infrastructure.

## » Features

- Multi-Channel Acquisition
- Wide Frequency Coverage
- Noise Elimination with Selectable Filters
- Plug-and-Play Sensor Compatibility
- Seamless Communication Channels
- Rugged, Software-Integrated Design

## » Benefits

- Durable and Reliable
- High-Speed Communication
- Superior Noise Management
- Customizable Solution
- Accurate PD Measurements

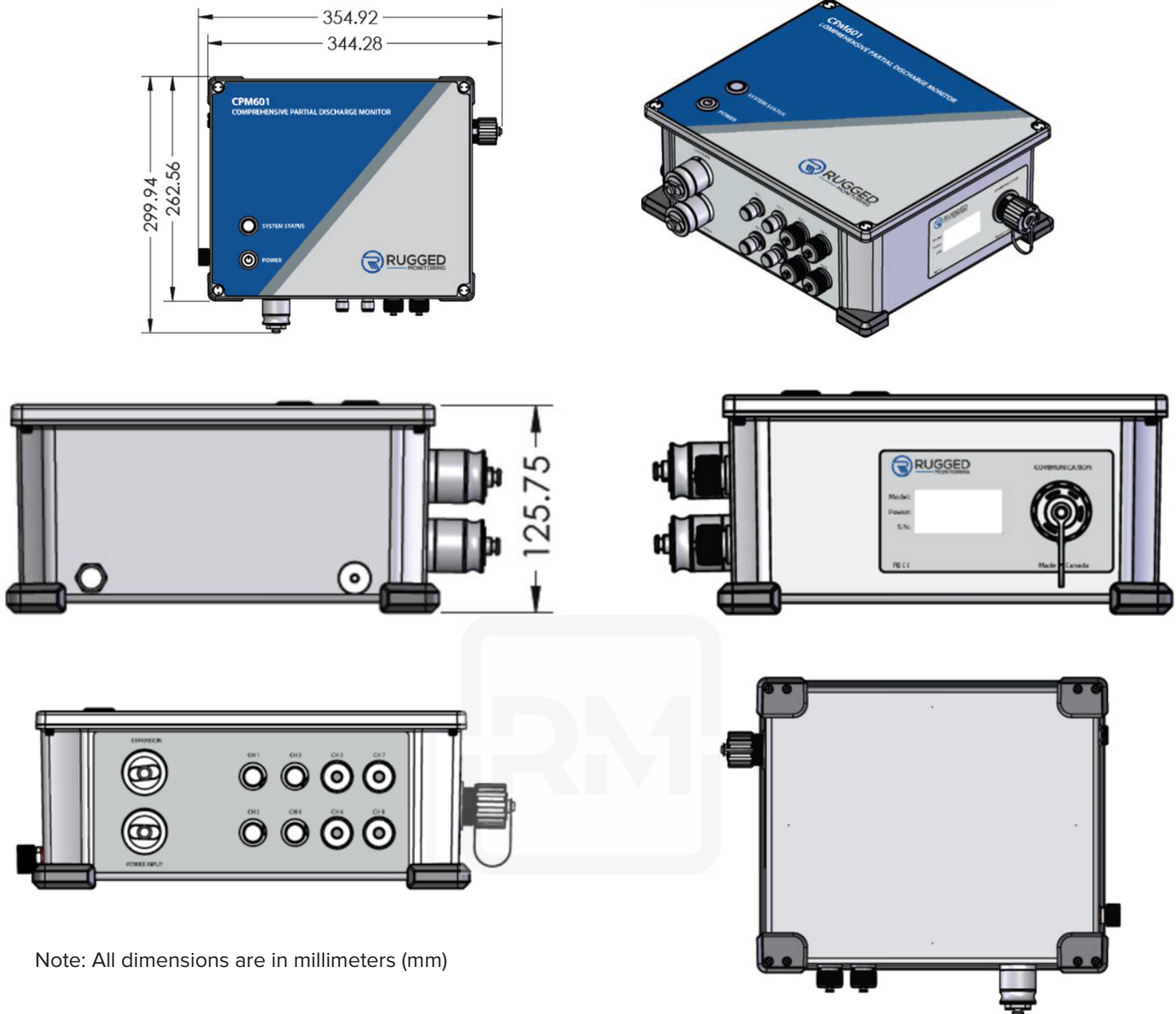
## » Applications

- Online PD measurement during HV AC testing (Resonant test set, VLF, OWTS)
- Power Cables and their accessories
- Switchgear - AIS, GIS, MV Panel
- GIS Circuit Breaker
- Online periodic PD monitoring
- Multiple-point PD monitoring
- Rotating machines
- Power Transformers

## » Technical Specifications

|                         |              |                                                                                                                        |
|-------------------------|--------------|------------------------------------------------------------------------------------------------------------------------|
| Sampling Rate           |              | HF: 250 MS/s<br>UHF: 360 Points/Cycle                                                                                  |
| Frequency               | HF Channels  | 10kHz-100MHz                                                                                                           |
|                         | UHF Channels | 300MHz-2000MHz                                                                                                         |
| No.of Channels          | HF Channels  | 4                                                                                                                      |
|                         | UHF Channels | 4                                                                                                                      |
| HF Noise Elimination    |              | Software controllable band-pass filter                                                                                 |
| UHF Noise Elimination   |              | User-selectable 4 UHF Band Pass Filters<br>1. 400 - 575MHz<br>2. 300 - 575MHz<br>3. 1100 - 2000MHz<br>4. 300 - 1100MHz |
| HF Range                |              | 1mV to 2000mV                                                                                                          |
| UHF Range               |              | -10dBm to -75dBm                                                                                                       |
| Ambient Temperature     |              | -30°C to +60°C                                                                                                         |
| Storage Temperature     |              | -40°C to +85°C                                                                                                         |
| Communication Channels  | Type         | Ethernet Copper<br>(100/1000 BASE-T)                                                                                   |
|                         | Connector    | RJ45 or LC Fiber Connector                                                                                             |
| Communication Protocols |              | Proprietary TCP/IP                                                                                                     |
| IP Rating               |              | IP 65                                                                                                                  |
| Compatible Sensors      |              | HF: HSENS-H, HSENS-T, HSENS-CC, BSENS, ASENS                                                                           |
|                         |              | UHF: USENS-V, USENS-T, USENS-BT, USENS-B, USENS-C, USENS-G USENS-W                                                     |
| Dimensions              |              | 354.92 mm(L) x 299.94 mm(W) x 125.75mm(H)                                                                              |
| Software                |              | Windows Based                                                                                                          |
| PD Measurements Type    |              | IEC 60270                                                                                                              |
|                         |              | HF and VHF                                                                                                             |
|                         |              | HVAC                                                                                                                   |
|                         |              | Acoustic                                                                                                               |

## » Product Drawing



Note: All dimensions are in millimeters (mm)

## » Ordering Code

C

P

M

6

0

1

P

0

8

M

y

L

x

Comprehensive PD  
Monitor

Portable

Memory

Laptop

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

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

### CERTIFICATIONS



ISO 9001:2015



ISO 14001:2015



ISO 45001:2018



Lloyd's Register



Atex Certification



NIST Certification

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