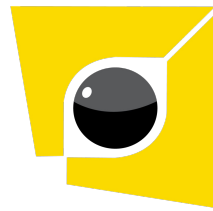


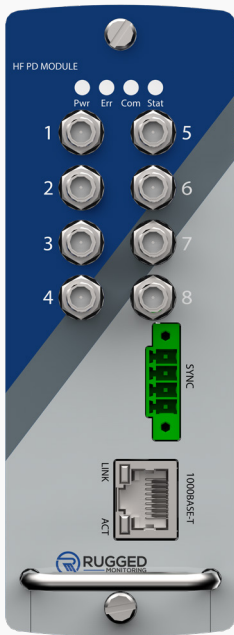


**RUGGED**  
MONITORING



**SHEN**  
RELIABILITY ENGINEERING

## PD201 - Rugged Partial Discharge Monitoring Module for OEMs



- Rugged, Compact Design with multiple mounting options - Din-Rail, Direct
- 4 or 8 Synchronous Input Channels for monitoring Partial Discharge
- Monitors Partial Discharge into the Insulation of MV/HV assets
- Best in class EMI, ESD Immunity
- Modbus (Serial-RS485) and Canbus integration with third party systems
- Advance noise gating with built-in filters and software algorithms
- Built-In Fail Safe Relay for System Failure

**Rugged design, designed for reliability, PD monitor for OEMs (Original Equipment Manufacturers) with advance and simple integration features to third party systems/gateways.**

## Product Summary

The Rugged Monitoring PD201 is a compact design, designed for reliability Partial Discharge (PD) Monitoring Module for Transformers, Switchgears, Power Cables and Rotating Machines. The PD201 PD Monitor combines reliability and user friendly configuration software. It has two variants, 04 channel and 08 channels, that can connect to 4 and 8 PD sensors respectively. The system can be integrated with wide range of PD sensors such as, HFCT, TEV, Bushing Adaptors, Capacitive Couplers, Acoustic, and Ultrasonic PD sensors.

The PD201 connects to the HF PD sensors installed at the MV/HV assets. It measures the High Frequency (HF) signals emitted by the PD Faults in HV/MV assets. The HF signals are then analyzed for PD activity and Module categorizes pulses as Internal PD, External PD and Noise Signals. Internal PD signals are captured and stored for further analysis such as PRPD, PD Amplitude, Discharge Rate, and trending. The PD amplitude and discharge rate is sent to the third party system via Modbus (RTU) protocol using built-in serial (RS-485) port. The PRPD data is stored int the module and also sent to third party system via CANBUS protocol using built-in CAN port. There is a dedicated team of experts available for customizing partial discharge monitoring solutions to meet specific customer needs.

## Applications

- Online continuous partial discharge monitoring
- Online PD measurement during HV AC testing
- Multiple point PD monitoring
- PD Monitoring in Transformer using Bushing Adaptors/Sensors
- PD Monitoring in Dry Type Transformers
- PD Monitoring in MV Switchgear using TEV / HFCT
- PD Monitoring in Power Cables using HFCT
- PD Monitoring in Generators and Motors using Capacitive Couplers and HFCT

## Benefits

- Suitable for OEM-type applications (TMS, Gateways)
- Multiple mounting options - Din-Rail and Direct (Bare-board)
- Cost optimized solution for Partial Discharge monitoring
- Software designed for integration into monitoring systems / gateways
- Robust datalogging and Analytics
- Customizable according to customer specific applications
- Most accurate PD analysis with advanced noise gating
- Highly robust and safe monitoring systems

## TECHNICAL SPECIFICATIONS

|                         |                                                                                                                     |
|-------------------------|---------------------------------------------------------------------------------------------------------------------|
| Number of Channels      | 04 or 08 (Simultaneous acquisition, No Multiplexing)                                                                |
| Sampling Rate           | 100 MS/s per channel                                                                                                |
| Acquisition Bandwidth   | 0.01 - 100Mhz                                                                                                       |
| Vertical Resolution     | 12-Bit                                                                                                              |
| Noise Elimination       |                                                                                                                     |
| - Bad Pass Filters      | User selectable integrated filters with 5Mhz to 25Mhz bandwidth range                                               |
| - Software Noise Gating | Advanced denoising algorithms                                                                                       |
| Data Storage (Memory)   | MicroSD external memory slot (Up to 2 TB)                                                                           |
| Compatible PD Sensors   | Any High Frequency (HF) PD Sensors<br>(Bushing Adaptors, HFCT, TEV, Capacitive Couplers, Acoustic, Ultrasonic etc.) |
| Synchronization Inputs  | 2 Inputs (Internal and External)                                                                                    |
| Serial Port             | RS-485 with Modbus RTU and Can Port with CANBUS protocol                                                            |
| Configuration Port      | Ethernet Port for configuration                                                                                     |
| Operating Temperature   | -30 to 75 °C                                                                                                        |
| Storage Temperature     | -40 to 85 °C                                                                                                        |
| Dimensions              | 4.92" x 4.92" x 1.89" (125mm x 125mm x 48mm)                                                                        |
| Humidity                | 95% Non Condensing                                                                                                  |
| Power Input             | 12 - 24V DC ( Default)                                                                                              |
| Power Consumption       | 15W                                                                                                                 |
| # of Relays Outputs     | 01 x Fail Safe Relay for System Failure                                                                             |

## ORDERING CODE



Number of Channels

04 = 4 Channels;

08 = 8 Channels

P D 2 0 1 -

M x Memory

0 = No Internal Memory

1 = for 64GB Memory

2 = for 128GB Memory

3 = for 256GB Memory

4 = for 512GB Memory



### 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 leading team of fiber optic 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.

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