

HSENS-CC

Capacitive Coupler Partial Discharge Sensor

Designed for Diverse Utility and
Industry Applications



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Capacitive Coupler Partial Discharge Sensor



- **Compact Size, Highly Sensitive, Capacitive Coupler for PD Testing and Monitoring**
- **High Dielectric, Rugged, and Reliable design**
- **Built-in overvoltage (transient) protection**
- **Available for wide range of voltage levels 6kV to 45kV**
- **1pC PD Sensitivity (ASTM D1868 and IEC 60270)**
- **Suitable for extreme environment, Hazardous (ATEX) applications**
- **PD Free Sensor: No PD signals because of Sensor**

Capacitive Couplers with wide range of nominal voltage ratings are designed for Partial Discharge (PD) Testing and PD Monitoring as per IEC60270. The sensors are designed for different capacitance levels from 2nF to 80pF meeting requirements of various customers.

HSENS-CC is a Capacitive Coupler specially designed for capturing High Frequency Partial Discharge (PD) signals. The compact size and high dielectric properties of sensor makes it ideal for installation at busbar and within terminal boxes.

The sensor can be installed vertically and horizontally depending on the space limitations. The HSENS-CC sensors come with built-in overvoltage protection with different output connections (BNC/TNC). The sensors can be connected to any HF (High Frequency) PD monitoring system regardless of manufacturers.

Compact sized, Highly dielectric and accurate Partial Discharge sensor for temporary and permanent monitoring of Generators, Motors, Switchgears and Transformers.

Applications

- Continuous Online Partial Discharge Monitoring
- Periodic Partial Discharge Testing and Measurements
- High Voltage Testing during Commissioning
- Generator and Motor PD Testing and Monitoring
- MV Switchgear and Isolated Phase Bus PD Testing and Monitoring
- Transformer PD Testing and Dry Type Transformer PD Monitoring

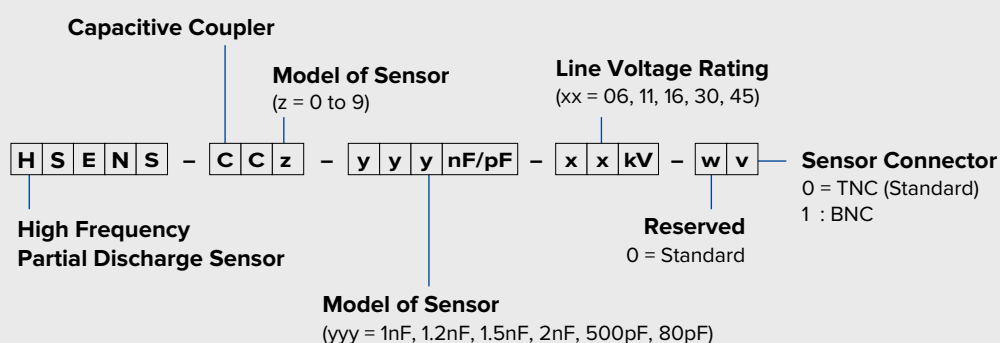
Benefits

- Higher sensitivity 1pC increases accuracy of PD detection
- Allow PD testing and Monitoring without the need for outage
- Easy installable, and High Dielectric strength, Safest Sensors
- Shielded Sensor, Noise Immunity
- Built in overvoltage protection keeps the PDM electronics safer
- Suitable for indoor and outdoor installations
- Wider Nominal Voltage and Capacitance levels for different Applications

Technical Specifications

Capacitance	1nF, 1.2nF, 1.5nF, 2nF, 500pF, 80pF (Custom designed - Optional)
PD Sensitivity	1pC
Line Voltage Rating	6kV, 11kV, 16kV, 30kV, 45kV
Line Voltage Frequency	50Hz - 60Hz
Capacitor Type	Mica and Ceramic
Body Material	Epoxy Resin
Output Connection Type	TNC-Type connector; Customized option available
Vibration Testing	Suitable for Generator, Motor and Transformer applications
Withstand Voltages	20kV, 35kV, 70kV, 120kV
Ambient (Operating Temperature)	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
Operating Humidity	95% humidity at 50 °C
Dimensions (in mm)	As per Line Voltage rating; from 125(W) x 95(D) x 90(H) to 250(W) x 165(D) x 450(H)
Weight	As per Line Voltage rating; from 0.5Kg. to 5.5Kg
Install Position	Installed on the study cast aluminum enclosure and connected to the Busbar
Signal Cable	Very low attenuation Coax cable, RG58

Ordering Code



Asset Monitoring : Enterprise Architecture

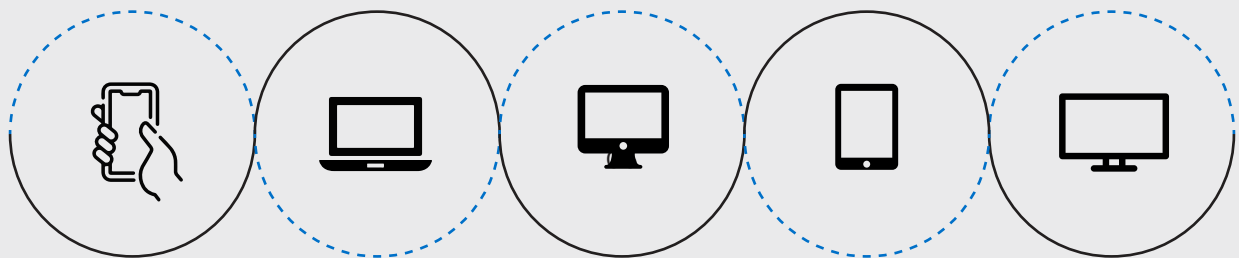
Compatible with Rugged Monitoring Enterprise Solution

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

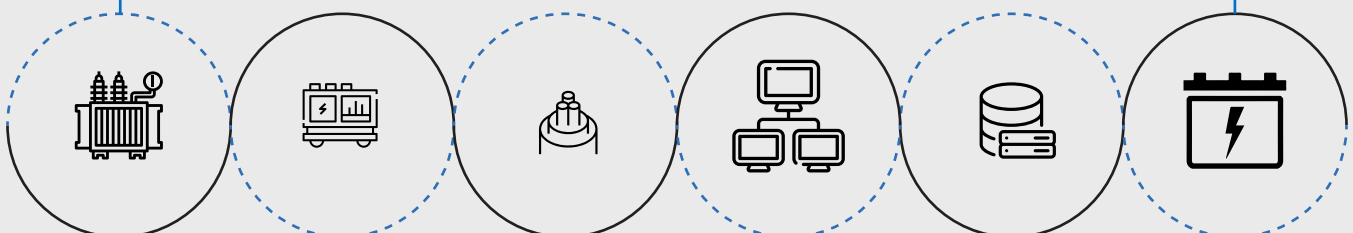
MODBUS

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 9000



ISO 14000



ISO 45001/
OHSAS 18000



Lloyd's
Register



ATEX
Certification

Our Presence Across the Globe



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