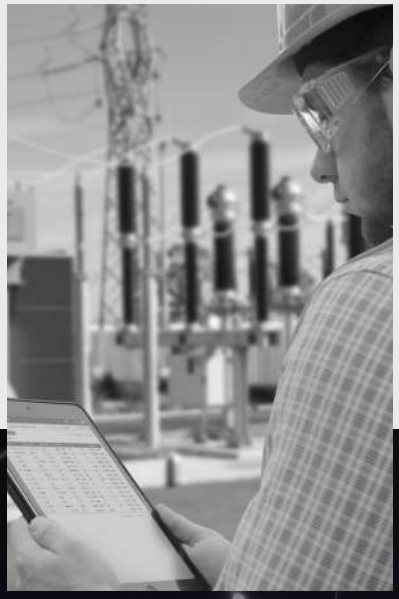
RUGGED MONITORING

MONITORING SIMPLIFIED



HSENS-H

Highly sensitive and reliable sensor to detect real time partial discharge activity

HSENS-H

Highly sensitive and reliable sensor to detect real time partial discharge activity

Sensor is IP65 rated and integrated features of transient overvoltage protection inside sensor. Transient protection will help in minimizing transients that can be expected during PD monitoring.

Ruged Monitoring's High Frequency Current Transformer sensor HSENS-H is a split core and an inductive type sensor that can be clamped around the earth (ground) shield to measure PD signals. Based on power cable termination condition, an HFCT sensor can also be clamped around cable insulation without earth shield or around the cable with earth shield looped back to measure PD. For HFCT clamped around the cable insulation without earth shield or cable with earth shield looped back, high current variant can be used for rated load current of cable.

Features

- High Frequency Current Transformer
- Rugged, reliable design
- IP65 rated
- Split core design for easy installation
- Transient overvoltage protection integrated inside Sensor
- Different options of internal diameter dimensions
- RG223 high noise immunity cable
- TNC connector for reliable connection

Applications

- Online periodic partial discharge monitoring
- Offline PD measurement during HV AC testing
- Multiple point PD monitoring
- Cables, joints and terminations
- Rotating machines
- AIS/GIS switchgear
- Power transformers

Benefits

- Transient overvoltage protected
- Noise immunity
- IP65 rated
- Rigorously tested
- Split core for easy installation
- Stainless steel robust latch to keep split core closed
- Customizable according to customer specific applications
- Suitable for Online or Offline PD measurements

Technical Specifications

SENSOR	Type	Split Core
	Typical Frequency Response (-6dB)	100 kHz-25 MHz
	Material	Rugged Plastic (Black), Other options available
	Current Ratings	50 A, other options available
MODELS	HFCT-3	220 mm (L) x 118 mm (W) x 33 mm(H) (ID=30 mm)
	HFCT-5	220 mm (L) x 163 mm (W) x 28 mm (H) (ID=30 mm)
	HFCT-9	265 mm (L) x 200 mm (W) x 38 mm (H) (ID=90 mm)
	HFCT-14	330 mm (L) x 275 mm (W) x 38 mm (H) (ID=140 mm)
SIGNAL CABLE	Type	RG223
	Connectors	Cable Gland (Sensor End) and TNC connector (Monitor End), other options available
	Cable Length	5m, other options available
	IP Rating	IP65
TEMPERATURE	Ambient	-30˚C - 70 ˚C
	Storage	-40˚C - 85 ˚C

Ordering Code

Internal Diameter Options
007 = 7 mm
03 = 30 mm
05 = 50 mm (Std)
09 = 90 mm
14 = 140 mm

Model of Sensor
(z = 0 to 9)

Sensor Material
0 = Rugged Plastic - Black (Standard)
1 = Aluminuim

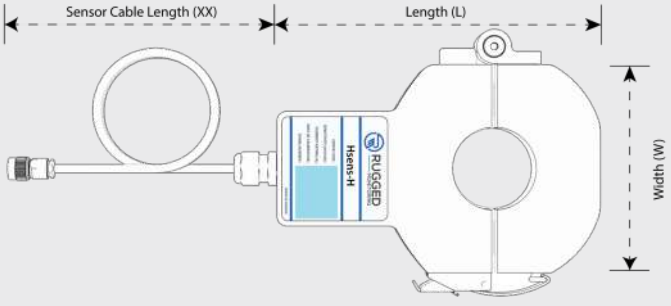
Sensor Connector
0 = TNC (Standard)
1 = BNC
2 = SMA (Std for 7mm diameter)

H	s	e	n	s	-	H	z	-	y	y	-	X	X	-	W	V

High Frequency Partial Discharge Sensor

HFCT

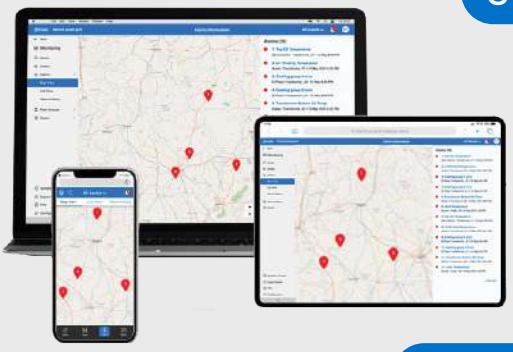
Sensor Cable Length
004 = 0.4 m (Std for 7mm diameter)
05 = 5 m (Standard)
10 = 10 m
15 = 15 m
20 = 20 m



DS0013R01_HSENS-H_EN_A4

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 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**

Head Office

Canada

1415 Frank-Carrel, Suite 230, Quebec, QC - G1N 4N7, CANADA

+1-418-767-0111

Asia Pasific | India | Europe | Latin America | Middle East | North America

ruggedmon

info@ruggedmonitoring.com

www.ruggedmonitoring.com

RUGGED MONITORING

MONITORING SIMPLIFIED