



Monitoring Your Continuous Monitors

Thousands of Iris partial discharge (PD) monitors are in operation worldwide. Many have already proven invaluable by providing warning of failure mechanisms in stator winding insulation and by enabling users prioritize their maintenance activities.

However, we occasionally come across cases where data from PD monitors is not being utilized effectively, which could lead to undetected deterioration of winding insulation. In several reported cases, alarms had not been activated and increases in PD trend not been detected. Less frequently, instrumentation malfunctions have gone un-noticed due to lack of attention to the monitoring system.

Data Monitoring

It is important to periodically download and review PD data from your continuous monitor for several reasons:

- To identify a rapidly increasing PD trend. Generally, doubling of PD every 6 months is indicative of a rapidly progressing failure mechanism in winding insulation and should be investigated.
- To verify the correct sensitivity range for present levels of PD activity. An incorrect sensitivity range may lead to occurrence of “quality flags”. OVR and UND flags in the data indicate improper sensitivity range setting. In such cases your monitor may be unable to calculate summary numbers.
- If your monitor is connected over a LAN or WAN, the fact that you can communicate with the monitors serves as verification that networking components are operating normally.
- To check if data collected is recent. Downloaded data should have recent time stamps. Time stamps from several preceding days or weeks may indicate a number of possible issues, many of which can be resolved easily.
- To identify if your Trac monitor is approaching memory capacity. It is always a good idea to download data before your monitor over-writes older data with new. We recommend to purge the Trac memory after every download.
- To identify if the system controller of your Guard monitor or controlling computer of your Trac monitor (if equipped) is nearing its hard drive capacity. Depending on its capacity, the hard drive can run out of space quickly if triggers are programmed for frequent data collection.
- To identify hardware malfunctions. If PD data shows peculiar patterns like “0” values, only negative PD, only positive PD, only Machine PD, only System PD, or if there are issues detecting AC Sync, the monitor may have developed hardware malfunctions. Please report these immediately for further diagnostic assistance.

Hardware Monitoring

- It is advisable to check the LED’s on the Trac front panel as part of a route or walk-around:

- A blinking Attention LED may be indicative of hardware issues. However, not all hardware issues are reported by a blinking yellow or red LED so it is important to download and examine PD data for unusual patterns as mentioned above.
- A green Alarm LED alerts to a high-PD alarm being activated. Data must be downloaded and reviewed.
- An unlit New Data LED indicates no new data since the last download or reset.
- Ensure that the alarm or optional analogue output of your monitor remains wired to a suitable alarming scheme in your plant SCADA or DCS system. Also ensure that the alarm relay is programmed “enabled”.

Please refer to the appropriate user manuals to perform above activities. *Data download should be performed when the machine is running.*

For assistance, or to send us the database, please contact us at techsupport@irispower.com or call us at +1-905-677-4824 ext 229.

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