

GISmonitor

Portable Version



The GISmonitor is a portable unit for partial discharge measurements on gas-insulated switchgear (GIS) caused by hopping particles, floating potentials, cracks in insulators or spacers, or other degradation in the insulation system. The instrument offers parallel real time PD acquisition on up to eight channels. Any UHF signal can be detected and digitized within microseconds. To eliminate disturbance signals from the measurement, the instrument can be connected to a disturbance antenna that provides a gating signal.

Measuring Principle

Partial discharge measurements can be easily applied on gas-insulated switchgear without the need of interrupting the operation. Such online measurements help to identify internal imperfections of the insulation system, which may lead to breakdown and system failure in the future.

Due to the dielectric properties of the SF6 gas, partial discharge activity in gas insulated switchgear covers a bandwidth of well beyond 2 GHz. The mechanical properties of the components of gas insulated switchgear further allow transmission of such signals over a distance of a couple of meters. Thus, the partial discharge monitoring of GIS equipment is done preferably in the UHF range.

Sensors

The GISmonitor is designed to suit all currently available UHF sensors for GIS PD

monitoring. This includes embedded and external retrofit UHF sensors. A special input protection unit (IPU2) blocks strong transients (VFT). The preprocessing unit FCU2 demodulates UHF signals into a lower frequency band for easy submission over longer distances.

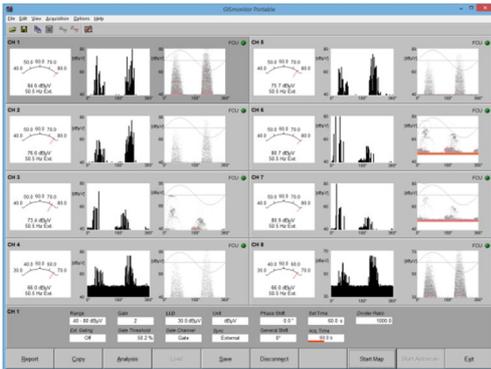


Enclosure Models

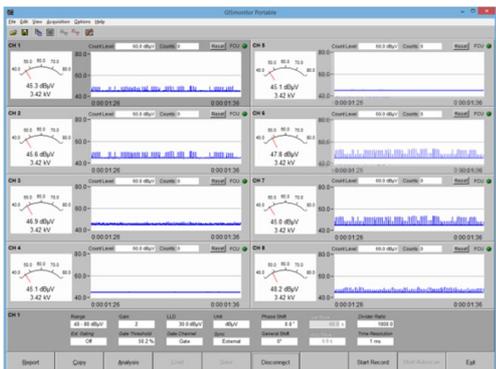
The instrument comes in a shock resistant and watertight outdoor case. However, other enclosure models, such as lightweight desktop enclosures of 1/2 19" and 19" or a black mini aluminum box are available.

Software

The instrument can be connected to a PC or laptop via a USB or an optional LAN interface for data evaluation and diagnosis with the GISmonitorPortable software.

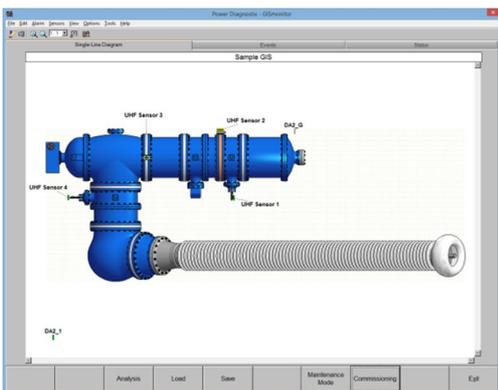


This service program software visualizes the current readings of eight partial discharge sensors of a GIS in parallel. Each sensor is linked with a specific input channel of the GISmonitor. In addition to the standard acquisition of partial discharge versus phase position, the GISmonitor Portable software



offers the possibility to acquire partial discharge at DC voltage. In this mode the partial discharge pulses are displayed versus time.

Every portable version of the GISmonitor can also be used with the software of the non-portable GISmonitor systems.



Technical Data

Acquisition Unit:

- Mains supply: 90–264 V_{AC}, 47–440 Hz
- Line fuse: 1.6 A, (time-lag)
- Power requirem.: ~ 25 VA
- Input impedance: 50 Ω//50 pF
- Input sensitivity: < 1 mV
- Synchronization: VT input, 20–350 Hz
- Interfaces: USB, TCP/IP
- Operation temp.: 10–40°C (non-condensing)
- Signal input: 8 x SMB (50 Ω) or 8 x BNC (50 Ω)
- Gate input: 1 x SMB (50 Ω) or 1 x BNC (50 Ω)
- Sync. input: 1 x SMB or 1 x BNC, 100 V_{rms} max. into 10 MΩ//200 pF

Enclosure:

- Material: Hardened polypropylene
- Overall size: 305 x 144 x 270 mm³
- Weight: Approx. 3.2 kg



Product information and design are subject to changes without notice.