GIS*monitor* Portable
Portable PD monitoring on GIS

PD by Megger®
Power Diagnostix Systems

- UHF partial discharge (PD) measurements without interrupting assets in operation
- Parallel real-time PD measurement on up to 40 channels
- Reliable identification of insulation imperfections and their severity
- Robust case made of a high performance plastic compound
- Dust tight and protected against water according to Ingress Protection class 65

DESCRIPTION

The GIS*monitor* is a portable instrument for the temporary monitoring of partial discharge activity on gas-insulated switchgears (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 40 channels. UHF signals can be detected and digitised within microseconds. To eliminate disturbance signals from the measurement, the instrument can be connected to a disturbance antenna that provides a gating signal. This allows the instrument to calculate a separation of PD events from external disturbances in real time and provides an effective PD detection.

The GIS*monitor* is designed to suit all common 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 frequency converter unit FCU2 demodulates UHF signals into a lower frequency band for easy submission over longer distances.

YOUR BENEFITS

- PD monitoring on demand, thanks to a portable and lightweight instrument
- Prevention of asset breakdowns and system failures by early identification of insulation defects
- Quick operational readiness due to easy userfriendly set-up

FEATURES AND OPTIONS

- Two different housing models for indoor or outdoor use
  - Shock resistant and watertight outdoor case
  - Lightweight aluminium desktop enclosure
- External or internal synchronisation
- Analogue gating for suppression of disturbance signals
- Remote controlled via personal computer and specialised control software
- Built-in monitoring server providing an Ethernet gateway for platform-independent remote access
- Mobile communication interface MCI2, allows remote access to the GIS*monitor* Portable via UMTS

ACCESSORIES

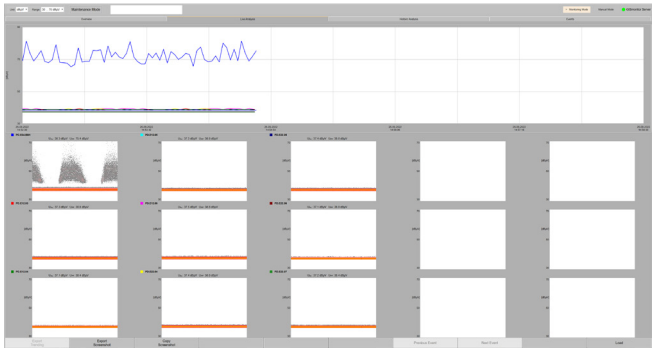
Power Diagnostix offers accessories to adapt the GIS*monitor* Portable to your specific measurement situation, for example:

- Frequency converter units
- Input protection units
- Retrofit UHF sensors for flanges
- Retrofit UHF sensors for inspection windows
- Adapters for electrodes embedded in the GIS
- Disturbance antennas
- DAkkS certified impulse generators
- Robust transportation case

For more details, as well as ordering information on our accessories, please refer to our accessories catalogue.

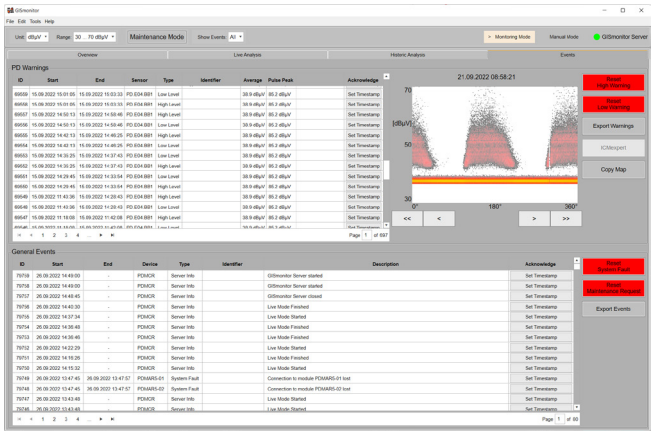
SOFTWARE

The instrument can be connected to a PC or laptop via a USB port or an optional LAN interface for data evaluation and in-depth diagnosis with the GIS*monitor* Portable software.



Software panel for live analysis

This service software provides easy access to view, compare, and analyse the acquired data. The current readings of up to 24 partial discharge sensors of a GIS are visualised in parallel. Each sensor is linked with a specific input channel of the GIS*monitor*. In addition to the standard acquisition of partial discharge versus phase position, the GIS*monitor* Portable software gives you the ability to acquire partial discharge at DC voltage. In this mode, the partial discharge pulses are displayed versus time.



Events list

TECHNICAL DATA

Acquisition unit

Half 19-inch desktop model

Mains supply:	100–240 V AC, 47–440 Hz (automatic)
Line fuse:	1.6 A time-lag
Power requirements:	Approx. 25 VA
Input impedance (PD):	50 Ohm||50 pF
Input sensitivity:	< 1 mV
Synchronisation:	VT input, 20–350 Hz
Interfaces:	USB, TCP/IP
Operation temperature:	10–55 °C (non-condensing)
Signal input:	8 or 16 SMB connectors (50 Ohm)
Gate input:	1 or 2 SMB connectors (50 Ohm)
Sync input:	1 or 2 SMB connectors, 100 V RMS into 10 MOhm||200 pF

Eight-channel Explorer model

Mains supply:	100–240 V AC, 47–440 Hz (automatic)
Line fuse:	1.6 A time-lag
Power requirements:	Approx. 25 VA
Input impedance (PD):	50 Ohm||50 pF
Input sensitivity:	< 1 mV
Synchronisation:	VT input, 20–350 Hz
Interfaces:	USB, TCP/IP
Operation temperature:	10–40 °C (non-condensing)
Signal input:	8 BNC connectors (50 Ohm)
Gate input:	1 BNC connector (50 Ohm)
Sync input:	1 BNC connector, 100 V RMS into 10 MOhm||200 pF

$^{2}/_{3}$ 19-inch desktop model

Mains supply:	90–240 V AC, 50–60 Hz (automatic)
Line fuse:	2 A time-lag
Power requirements:	Max. 70 W
Input impedance (PD):	50 Ohm||50 pF
Input sensitivity:	< 1 mV
Synchronisation:	VT input, 20–350 Hz
Interfaces:	USB, TCP/IP
Operation temperature:	10–40 °C (non-condensing)
Signal input:	8–32 SMB connectors (50 Ohm)
Gate input:	1–3 SMB connectors (50 Ohm)
Sync input:	1–3 SMB connectors, 100 V RMS into 10 MOhm||200 pF

Explorer model for 16, 24, 32, and 40 channels

Mains supply:	90–264 V AC, 50–60 Hz (automatic)
Line fuse:	3.15 A time-lag
Power requirements:	Max. 130 W
Input impedance (PD):	50 Ohm||50 pF
Input sensitivity:	< 1 mV
Operation temperature:	0–40 °C (non-condensing)
Synchronisation:	VT input, 20–350 Hz
Interfaces:	USB, TCP/IP
Operation temperature:	10–40 °C (non-condensing)
Signal input:	16–40 BNC connectors (50 Ohm)
Gate input:	1–3 BNC connectors (50 Ohm)
Sync input:	1 BNC connector, 100 V RMS into 10 MOhm||200 pF

TECHNICAL DATA

Housing

Desktop enclosure half 19-inch

Material:	Coated cast aluminium
Overall size:	236 x 132 x 296 mm³ (W x H x D, excl. BNC connectors)
Weight:	Approx. 4 kg (depending on the number of channels)

Desktop enclosure $^{2}/_{3}$ 19-inch

Material:	Coated cast aluminium
Overall size:	325 x 132 x 296 mm³ (W x H x D, excl. BNC connectors)
Weight:	Approx. 5.5 kg (depending on the number of channels)

Eight-channel outdoor case

Material:	Hardened polypropylene
Overall size:	305 x 144 x 270 mm³ (W x H x D, closed) 305 x 360 x 270 mm³ (W x H x D, open)
Weight:	Approx. 3.2 kg

Outdoor case with up to 40 channels

Material:	Hardened polypropylene
Overall size:	670 x 510 x 372 mm³ (W x H x D, closed)
Weight:	Approx. 23 kg (depending on the numbers of channels)

ORDERING INFORMATION

Product	Order no.
GIS*monitor*, 8 channels, Explorer case	PX10355
GIS*monitor*, 16–40 channels, Explorer case	PX90038
GIS*monitor*, half 19-inch desktop housing	PX90020
GIS*monitor*, $^{2}/_{3}$ 19-inch desktop housing	PX90065
GIS*monitor* plug-in board, SMA, with 8 channels	PX10359
Cables for GIS*monitor* plug-in board	PX17160

Software	Order no.
GIS*monitor* Portable control software	PX19030

Options	Order no.
Built-in monitoring server	PX10383
Mobile communication interface MCI2	PX90058
2-years VPN license for mobile communication interface	PX90059
10-years VPN license for mobile communication interface	PX90063
Transportation case for instruments in Explorer case	PX18123
High transportation case for instruments in Explorer case	PX18129
IP65 protected rugged outdoor case ICM*outlander*	PX10381

Set of measuring cables is NOT included with the instrument and must be ordered separately.

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GISMONITOR_PORTABLE_DS_E1.01
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