Brief description

- Partial discharge tests in a few minutes without having to shutdown
- Checkable and reproducible due to artificial PD source
- Specially designed for medium-voltage switchgear
- Utilises the coupling capacitance of the voltage testing system
- Fits directly to HR interfaces or equipment and sensors with CapEye®-Interface
- Read off and/or record measured values
- Long-term observations, trend recognition
- Data recorded on SD memory cards
- Evaluation on a PC with standard software
- Light, portable and maintenance-free
- Can be used without a PC
- Optional: sensors to record weather data simultaneously: pressure, temperature, humidity and dew point
- Optional: sending text messages via GSM modem

Area of application

The use of partial discharge (PD) tests on high-and medium-voltage installations is now undisputed. Manufacturers test their equipment before delivering it to customers. Many customers ask for a repeat test after assembly and before commissioning on site. However, these do not include the major weak points for operators, namely the cable terminations. Subsequent regular testing requires the complete isolation of the installation, is very costly and is therefore generally dispensed with.

INDIPORT is a portable partial-discharge measuring system. It is designed for use during operation and does not need the installation to be isolated. Installations can consequently be tested at any time and at reasonable cost. In addition to instantaneous values, the INDIPORT can also be used for long-term measurements, including climate measurements.

Data recorded on normal commercially-available SD memory cards

Method of operation

INDIPORT, with its preamplifier, uses the existing capacitance taps on the switchgear, such as the HR interfaces or voltage testing systems with CapEye® interface. Sensors in the INDIPARD partial discharge monitoring system can also be connected directly. The normal operating voltage is used as the test voltage. Pulses with a known charge are

fed in from the adjacent cell with the IDP-SRC PD simulator, again via the capacitance tap, and compared with the display. This means the measurement results are reproducible and comparable with other stations.

Partial discharges often occur sporadically, depending on the weather. In order to be able to obtain any meaningful information about the condition of the insulation in an installation, observation over an extended period of time is necessary. Consequently, the INDIPORT includes a complete data logger for long-term data capture in addition to the momentary display with a phase diagram. SD or SDHC memory cards of up to 32 GB storage capacity can be used for data recording.
PD measurements from different time periods and locations can only be compared if the most important climate data is taken into account.
To do this, INDIPORT simultaneously captures the partial discharge activity, relative humidity, temperature, dew point and air pressure at adjustable time intervals. For evaluation, the memory card is removed from the unit and can then be evaluated on a PC with a card reader and spreadsheet program.

INDIPORT can be combined with a GSM modem. When a PD occurs, the unit calls the service personnel by text message. This is particularly important when searching for and localising sporadic PDs.
INDIPORT is supplied with its accessories in a study plastic carrying case.
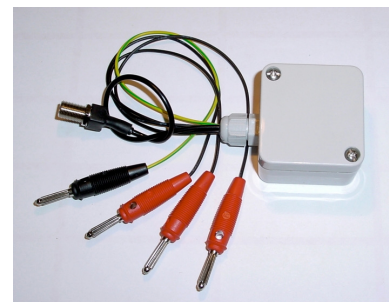
CapEye® IDPS-GTU-E amplifier for connecting to HR interfaces
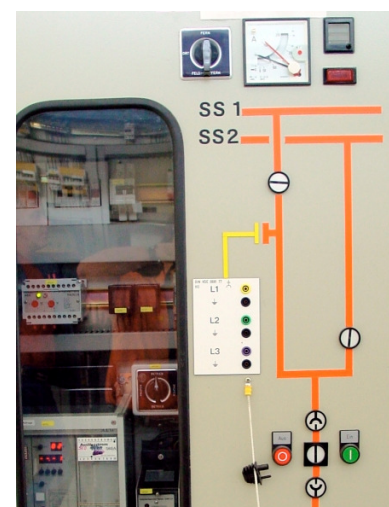
HR interface

Technical data

Mechanical

- **Housing:**
  Table-top housing with combined stand/handle and grip recesses on both sides.

- **Dimensions and weight**
  (without handles)
  Width: 199 mm
  Height: 178 mm
  Depth: 54 mm
  Weight: approx. 1 kg

- **Permissible ambient temperature:**
  -20^0C to 55^0C in operation
  -25^0C to 70^0C in storage

Electrical

- **Inputs:**
  2 x BNC sockets for PD sensors with short-circuit proof power supply cable-breakage and short-circuit monitoring

  connectable PD sensors:
  CapEye® IDPS-GTU-E amplifier
  (1 included in scope of supply)
  units with CapEye®-Interface

  1 x socket, 4 mm, for earthing

  1 x 6-pole MiniDIN socket for connecting an optional temperature / humidity sensor

- **Card Reader:**
  for SD- and SDHC memory cards V2.0 up to 32 GB

- **Front displays**
  1 x LED (green) Power on
  1 x LED (red) SD card active

- **LCD Display**
  graphic, 240x128 pixels, monochrome

- **Interface:**
  USB V2.0 full speed compatible
  B socket

  optional:
  RS-232C (V24)
  preset at 115200 Baud
  connection via 9-pole D plug

- **Optional:** GSM modem control
  text message with measured data sent automatically in case of alarm, or can be called up at any time

- **Optional:** Internal absolute pressure sensor
  Measuring range:
  300 ... 1200 hPa
  Tol.: +- 1 hpa

- **Mains connection:**
  Max. power consumption 7 VA
  230V / 50...60 Hz
  115V / 50...60 Hz (optional)
  via cold device mains cable socket

- **Unit functions:**
  Detection: PD peak value capture
  pulse decay time: < 40 µs
  Measurement range configurable

Scope of supply:
1 x INDIPORT IDC 20
1 x IDPS-GTU-E PD amplifier
1 x coaxial cable, 3m, with plugs
1 x power cable
1 x SD memory card, 256 MB
in plastic carrying case

Data for supplied IDPS-GTU-E amplifier
Rated measuring range   1000 pC
Rated voltage   5 ... 36 KV
coupling capacitance (C1)   5 ... 100 pF
Dimensions   50 x 52 x 35 mm

Accessories

- External temperature/humidity sensor IP 65 protection against water jets temperature -40 ... 90°C,
  (Tol. 0.3°C at 25°C)
  rel. humidity: 0 ... 100 %, +- 1.8%
  2m cable with 6-pole MiniDin plug,
  Type IDC-F75

- Partial-discharge simulator for connection to HR interfaces or Capdis-Sx-C
  Type: IDP-SRC

- PC software
  Phase diagram, PD pulses recorded in the correct phase and evaluation on PC screen for diagnostic purposes via the interface
  Type: IDP-Phase

INDIPARD★
Indipard is a registered trademark of the company May Elektronik

capEYE
CapEye is a mutal trademark of the companies Kries-Energietechnik and May Elektronik

Subject to technical change without notice. Errors and omissions excepted.

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