INSTRUMENTS

IRIS POWER

LOW FREQUENCY PD MEASUREMENT

Option for off-line tests with TGA-B and PDA-IV instruments

Compliant with IEC 60034-27 “Off-line partial discharge measurements on the stator winding insulation of rotating electrical machines”

PDA-IV instrument with low frequency option. The laptop controls measurement process and stores test results

Low frequency option with a frequency range of 50 kHz to 5 MHz

The portable instruments TGA-B and PDA-IV are designed for on-line PD monitoring of stator windings in rotating machines including turbogenerators, motors and hydrogenerators and off-line PD tests at high frequencies (over 40 MHz). With the low frequency option the off-line tests can be performed in the frequency range of 50 kHz to 5 MHz, compliant with the new standard **IEC 60034-27:2006**.

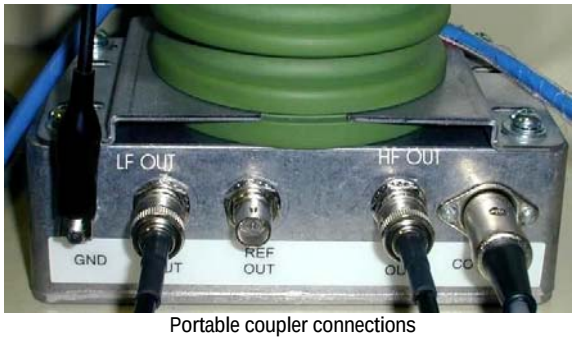
In normal operation of a motor or generator there is an increasing voltage from the neutral point to the machine terminals and thus PD is only likely to occur near the PD sensor connected to the high voltage end of the winding. Whereas, in off-line testing all the coils of the tested winding are subjected to the same test voltage from an external source and thus PD may occur anywhere in the winding. The low frequency mode will be sensitive to PD further from the PD sensor on the stator terminals.

25 kV PD free coupler with low frequency option

Low Frequency Option Components

Additional Instrument Circuit Board

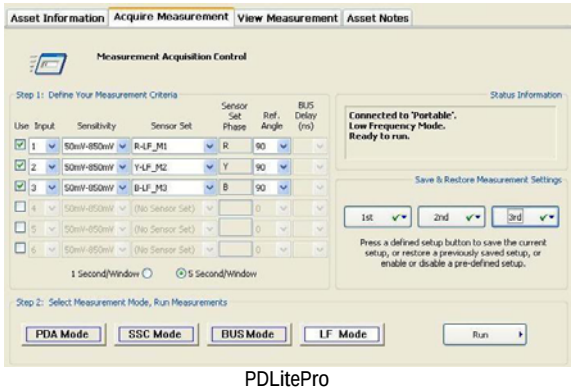
- BNC connector for off-line coupler
- Selector switch LF-HF, to select between Low Frequency and High Frequency operations
- Two LEDs, for indication of card status and low frequency operation



Portable coupler connections

Portable coupler kit

- Off-line coupler, 80 pF, 16 kV or 25 kV
- REF output to connect as external power frequency reference to TGA-B or PDA-IV
- CONTROL socket for control signal to instrument
- LF and HF outputs, to perform both low frequency and high frequency off-line tests with the same coupler. Switching between LF and HF modes can be done without deenergizing stator



PDLitePro

PDLitePro controlling software

- LF MODE for low frequency tests

PDView viewing software and PDLitePro

- Measuring units selectable between either **mV or pC**, convenient for off-line PD tests in capacitive loads such as bars. Calibration according to ASTM D1868 or IEC 60270 is required for converting mV to pC.
- Scaling factor per asset and multiplier per sensor set, to take into account either measuring unit; or to compensate for attenuation produced by alternative PD sensors (e.g. RFCT instead of 80 pF EMC)

Order

Part Nr.	Description
TGA-B	
B1240	Low frequency option, with one portable 16 kV coupler
B1241	Low frequency option, with one portable 25 kV coupler
PDA-IV	
P1240	Low frequency option, with one portable 16 kV coupler
P1241	Low frequency option, with one portable 25 kV coupler

For other options contact your sales representative

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