

DELTAMAXX[®] 15 – Digital Loss Factor and Capacitance Analyser for Test Voltages up to 15kV



DELTAMAXX[®] 15 digitally determines with high precision loss factor and capacitance of a test object, as:

- Electrical machines, generators, motors and components
- Transformers
- Cables and capacitors

New computing algorithm

A new digital computing algorithm replaces moving parts and bridge components and allows digital calibration of the system.

Easy to use

Application and system integration is simplified. Phase angle and capacitance are determined by current/voltage or impedance measurements of the sample.

Compact and battery operated

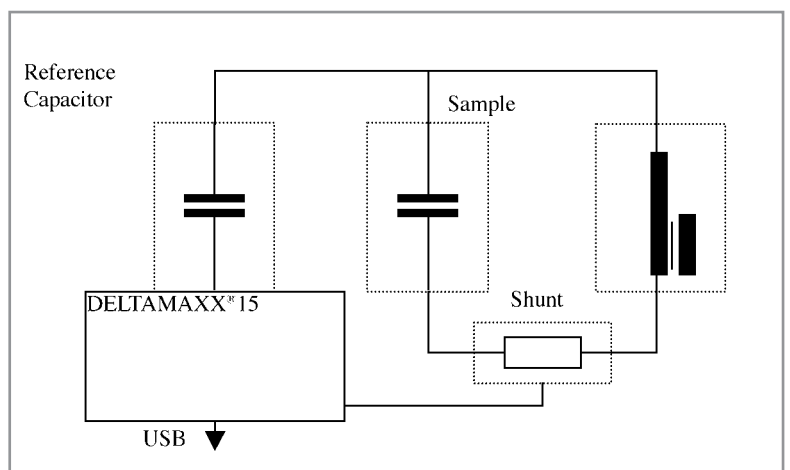
The instrumentation is ultra-compact. It can be battery operated, and it uses differential amplifiers, thus allowing easy application to grounded and non-grounded test objects.

The system automatically adapts to a wide range of test frequencies and locks into the main frequency while rejecting higher harmonics by the new algorithm. Typical 3rd and 5th harmonics are automatically eliminated.

Intelligent solution

Its robustness against external disturbance and easiness of application allows to retrofit many older high voltage test benches.

PD Tech Power Engineering AG can offer custom-designed as well as standard solutions for a broad range of test objects and capacitances.





The Software is the Instrument

The computer program is the instrument. The system calibration is a part of the software. Thus protocol generation and operation of the system is easier than using a microprocessor unit with extra computer interface.

A PC is an integral part of the instrumentation. Protocol generation is included (HTML, Excel-Export).

Ready to Use Units with Built-In Reference Capacitor

For many applications DELTAMAXX® 15 loss factor and capacitance measuring will use a direct connection with the reference capacitor. The shunt determines the measuring range. It is connected by a differential signal cable to the main box.

No need for main power supply

DELTAMAXX® 15 does not need a main power supply. It is powered through USB from the computer. In essence, you can do battery measurements.

NEW: Power supplied by USB-cable

In a typical application, the reference capacitor is combined with the data acquisition module itself (see picture), or, already existing capacitors may be connected by a signal cable (option). The basic unit's power is supplied by USB cable, which reduces ground loops and enables battery powered measurements (notebook).

Modular and System Solutions

The acquisition box is prepared for the optional partial discharge module.

Specifications

Maximum current through test object	10A, depends on shunt or option, higher on request
Reference Capacitor	1 nF
Capacitance Range	CN ... 5'000 CN
Loss Factor Range	10^{-5} ... ∞ exponential
Voltage Range	500 V – 15 kV
Uncertainty of Capacitance Measurement	$\pm 0.5\%$
Uncertainty of Phase Measurement	± 0.2 mrad $\pm 2\%$ of displayed value
Uncertainty of voltage measurement	$\pm 2\%$ of range ± 2 digits
Display/Software	capacitance in nF tan δ , in % test object current and test object voltage: value and frequency
Disturbance rejection	automatic
Test Frequency	20 ... 200 Hz
Interface	USB, Notebook or Desktop required Software requires MS Windows, PC with 512MB Ram

Under certain circumstances, excess noise or test object's impedance, the instrument's precision may vary.

Specifications may change without notice.