



CAPTAN 12

TAN DELTA TEST KIT

Advanced Feature



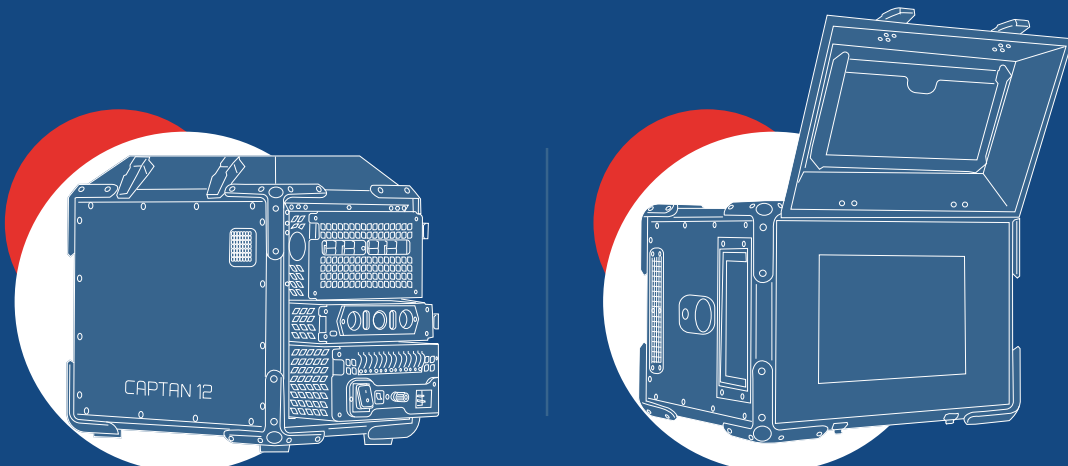
Narrow Band Dielectric Frequency Response (NB DFR) and Line Frequency Dissipation Factor (LF DF) are techniques for assessing dielectric properties, each with unique advantages. LF DF testing at line frequency (50 or 60 Hz) is simple and detects general insulation degradation, but it lacks detailed insights into specific issues like moisture or contamination. NB DFR, however, measures $\tan \delta$ across multiple frequencies (1 Hz to 500 Hz), giving a deeper view of insulation health and detecting early-stage problems that LF DF might miss. This broader frequency approach makes NB DFR more effective for proactive maintenance and risk assessment in electrical systems.

Modular Design

CAPTAN 12 is a modular device consisting of the following components:

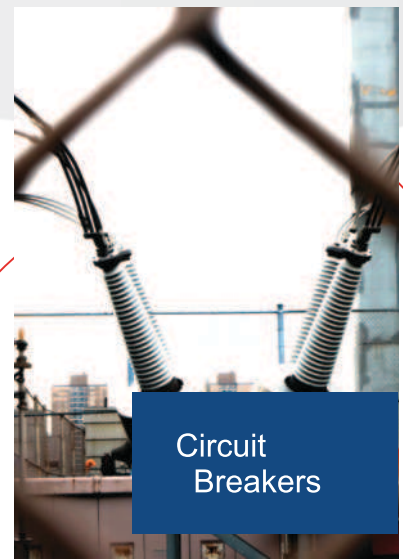
- Power supply module (to handle variations in input voltage magnitude and frequency)
- Measurement module (to feature automatic selection of the appropriate measurement range)
- Inverter module (to provide fully controllable output signals for precise and repeatable test results)
- Touch LCD module (to monitor and control of the test process)

These modules can be easily replaced by our trained service representatives.

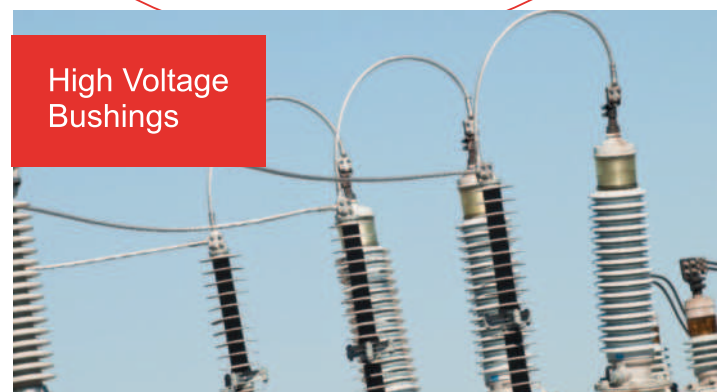
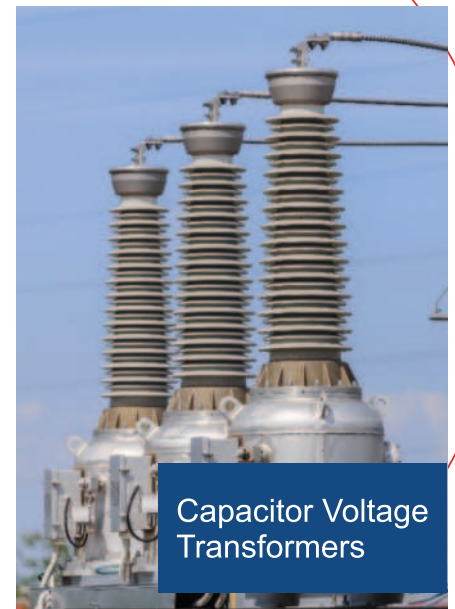
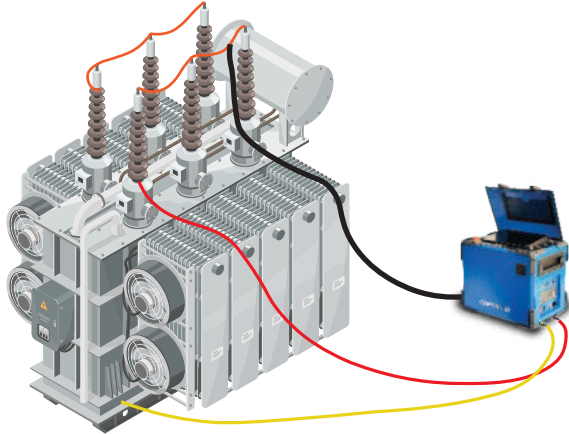


Applications

- Dissipation factor and capacitance measurement of HV equipment
- Dielectric frequency response analysis (1~500 Hz)
- Power transformer no-load current measurement



Simple Wiring



1
Rotary, Safety Switch, and Strobe Light

2
Measuring Inputs, Power Supply,
and ON/OFF Switch



3
Operation Status LEDs and
Test Start Button

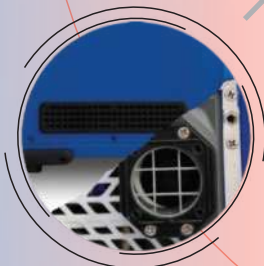


Emergency Stop, USB
and Ethernet Ports,
and Buzzer

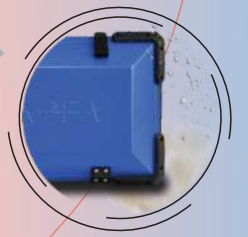
High Voltage Output



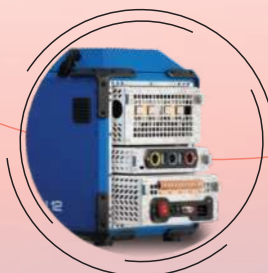
CAPTAN 12 Highlights



Sealed cooling system



Resistant to dust and water penetration



Modular



Impact resistant



Touchscreen LCD



Easy transportation

Product Values



TEST HIGHLIGHTS

- 12kV output voltage
- Wide frequency range
- Web-based software
- User-friendly software



SUPPORT

- 24/7 technical support for your peace of mind
- Quick and efficient on-site repairs thanks to a modular design
- Customized solutions tailored to meet our clients' needs and requirements



KNOWLEDGE

- More than 100 hands-on training sessions offered annually
- Extensive library of technical Paper and videos
- Expert consulting, testing, and diagnostic services tailored to your needs
- Regular user meetings, seminars, and interactive webinars
- Filing of international and National patents



RELIABILITY

- Robust and durable components designed to withstand harsh environmental conditions
- Long-lasting performance with minimal maintenance needs
- High accuracy and stability across extended testing periods
- Continuous monitoring and diagnostics to prevent unexpected failures

CAPTAN12

Capacitance and Tan Delta (Dissipation Factor) Measurement System



Technical Specifications

| Specification | Description |
|---------------------------------|--|
| Output Voltage | 50 ... 12000 V RMS @ 45 ... 75 Hz |
| Output Voltage Frequency | 1 ... 506Hz (Voltage < 5kV) |
| Maximum Output Current | 300 mA RMS @ 3600VA, t> 2min |
| Maximum Test Object Capacitance | -Max. 80 nF @ 12kV RMS, 50 Hz -Max. 66 nF @ 12kV RMS, 60Hz |
| Maximum Measuring Current | 300 mA RMS |
| Number of Inputs | 2 (Input A and Input B) |
| Internal Reference | 100pF Normal Capacitor |
| Safety Features | - Open Circuit Detection (inputs, test, and safety GND) - Safety Handheld Switch - Internal Warning Indicator (such as Overtemperature) - Internal Buzzer |

Soware Features

| |
|---|
| Web-based soware without need to be installed and can be run on a computer, tablet, or smartphone |
| Wi-Fi connection support |
| Manageable database |
| Specific test rooms with corresponding wiring diagrams depending on test parameters |
| Support of UST, GST, and GST-g modes |

Environmental, Mechanical and Power Supply Specifications

| | |
|---------------------------|---|
| Operating Temperature | -10 ... 55°C (14 ... 122° F) |
| Storage Temperature | -20 ... 70°C (-4 ... 158° F) |
| Humidity | 5 ... 95 % r.h. non condensing |
| Dimensions (W × D × H) | 41.5cm × 29cm × 39cm |
| Power Supply | 88 ... 258 VAC 50/60 Hz |
| EMC | IEC 61326-1, Class A |
| Environmental Reliability | Vibration and shock (IDC-STD-810, 2-directions) |

| Parameter | Range | Typical Accuracy | Conditions |
|----------------------------|---------------|----------------------------|---|
| Dissipation / Power Factor | 0 ... 10 % | Er. < 0.1% of r.d + 0.005% | I _x < 8 mA V test = 2 kV ... 12 kV f = 45 Hz ... 75 Hz |
| | 10.. 100 % | Er. < 0.5% of r.d + 0.02% | V test = 2 kV ... 12 kV |
| Capacitance | 1 pF ... 3μF | Er. < 0.05% of r.d + 1 pF | I _x < 8 mA V test = 2 kV ... 12 kV |
| | | Er. < 0.2% of r.d + 1 pF | I _x > 8 mA V test = 2 kV ... 12 kV |
| Voltage | 0 ... 12000 V | Er. < 1.0% of r.d + 1 V | V > 500 V |
| Current | 0 ... 300 mA | Er. < 0.5% of r.d + 1 μA | I _x > 1 mA |



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