SCAN ME

CAPTAN 12

# WISEGRID ENERGY

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1 Rotary, Safety Switch, and Strobe Light

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

3 Operation Status LEDs and Test Start Button

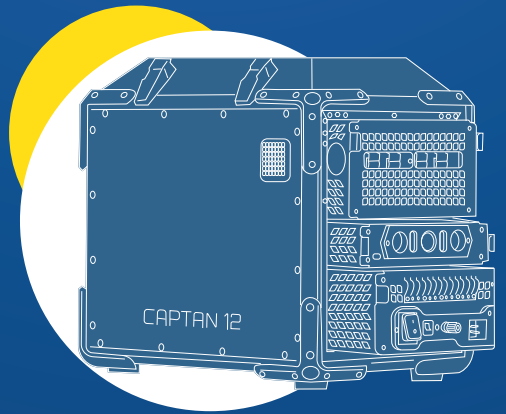

Emergency Stop, USB
and Ethernet Ports, and Buzzer
High Voltage Output
CAPTAN 12
TAN 12

# 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.




## CAPTAN12

### Capacitance and Tan Delta (Dissipation Factor) Measurement System

# CAPTAN 12
## Highlights

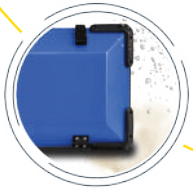
Sealed cooling system

Touchscreen LCD

Modular design

Easy transportation

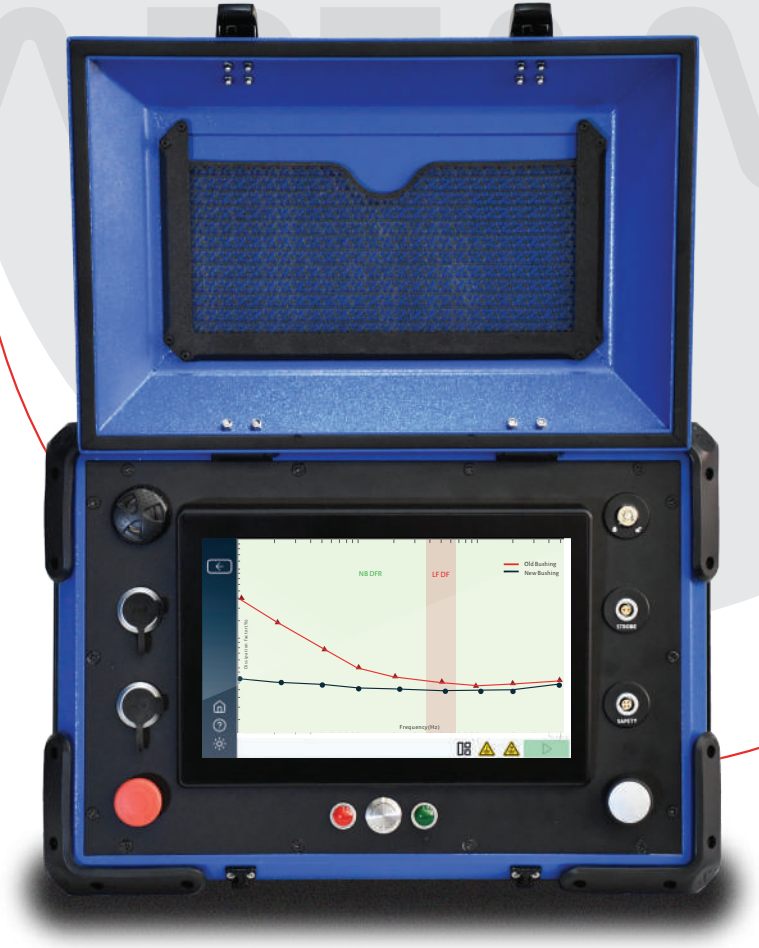
Impact resistant



Resistant to dust and water penetration

# Advanced
## Feature

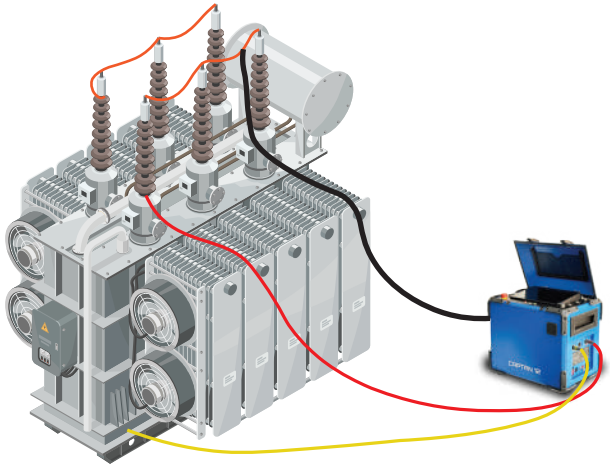
Narrow Band Dielectric Frequency Response (NB DFR) and Line Frequency Dissipation Factor (LF DF) are techniques for assessing dielectric properties, each with unique advantages. LF DF testing at line frequency (50 or 60 Hz) is simple and detects general insulation degradation, but it lacks detailed insights into specific issues like moisture or contamination. NB DFR, however, measures dissipation factor 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.



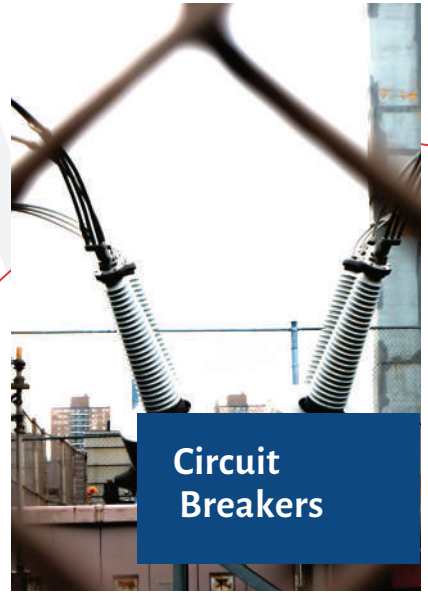
# Applications

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

## Simple Wiring



Surge Arrestors

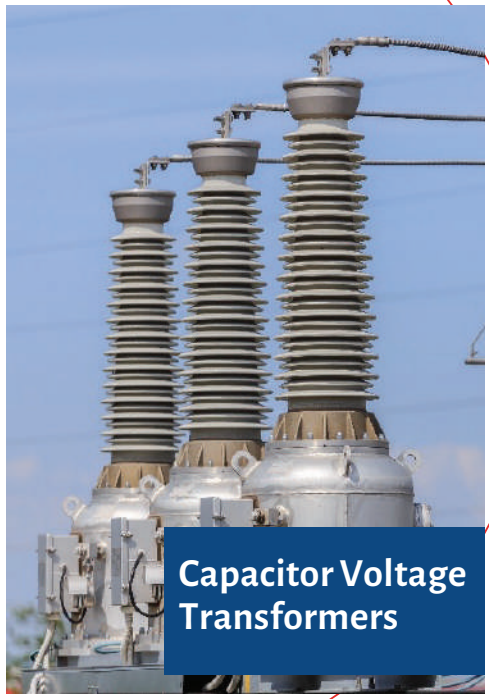


Circuit Breakers

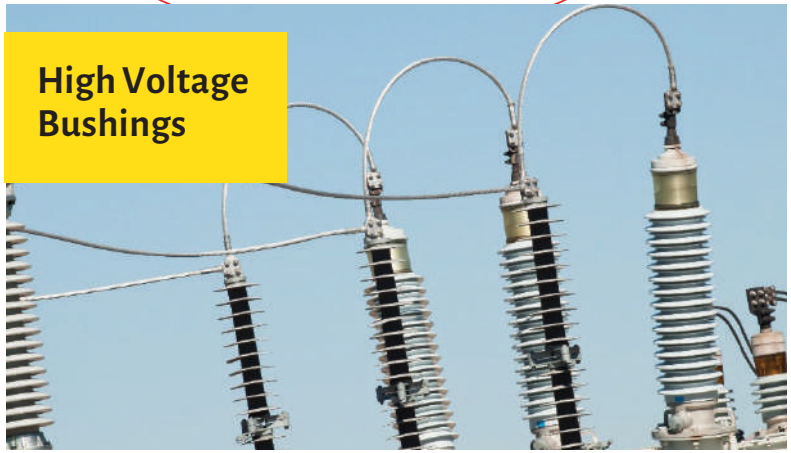
Transformers

CAPTAN12


Rotating
Machines


Capacitor Voltage
Transformers


Current
Transformers


High Voltage
Bushings

# Technical Specifications

| Specification | Description |
|---|---|
| Output Voltage | 50 ... 12000 V RMS @ 45 ... 75 Hz |
| Output Voltage Frequency | 1 ...500Hz (Voltage < 5kV)* |
| Maximum Output Current | –100 mARMS Continuous<br>–300 mA RMS @ 3600VA, t> 2min |
| Maximum Test Object Capacitance | –Max. 80 nF @ 12kV RMS, 50 Hz<br>–Max. 66 nF @ 12kV RMS, 60Hz |
| Maximum Measuring Current | 5 A RMS |
| Number of Inputs | 2 (Input A and Input B) |
| Internal Reference | Normal Capacitor |
| Safety Features | – Open Circuit Detection (inputs, test, and safety GND)<br>– Safety Handheld Switch<br>– Internal Warning Indicator (such as Overtemperature)<br>– Internal Buzzer |

| Software Features |
|---|
| Web–based software 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 |

CE



* by order (CAPTAN 12 pro)

## 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 | 90 ... 264 VAC / 45...66 Hz / 16A |
| 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 % | Ix < 8 mA<br>V test = 2 kV ... 12 kV<br>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 + 1pF | Ix < 8 mA<br>V test = 2 kV ... 12 kV |
| | | Er. < 0.2 % of r.d + 1 pF | Ix > 8 mA<br>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 | Ix > 1 mA |

# Product Values

## TEST HIGHLIGHTS

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

## SUPPORT

- 7/24 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

- Over 100 hands–on training sessions offered annually
- Extensive library of technical papers 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

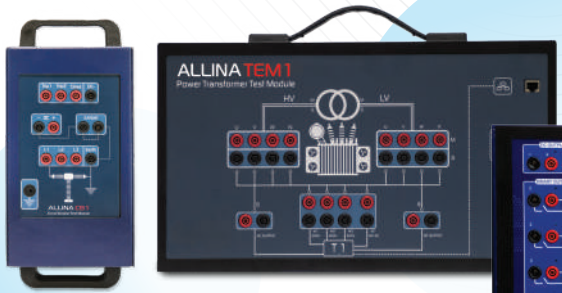
## RELIABILITY

- 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

# CAPTAN 12
## Accessories

# Other products

Three–Phase Transformer
Automatic Test Module (TEM1)




Coupling Module for Line
and Ground Test (CM1)


Motor Condition Monitoring(MCM1)



Circuit Breaker Test Module (CB1)


Diagnostic Test Tools (T1)