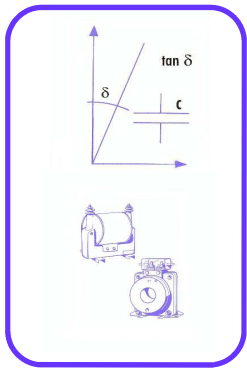
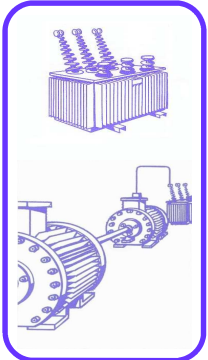


**NEW ACCURACIES**



**DIGITAL LOSS FACTOR ANALYSERS**  
**AFP 1000 - AFP 2000 & AFP 3000 TYPES**  
**TAN δ & CAPACITANCES MEASUREMENTS**



**FUNCTION**

- High precision measuring system of dielectric dissipation factor (Tan δ) and capacitances in high and low voltage (Built-in modes : UST, GST & GSTg). (Measurements from some hundred Volts up to 100 kV)
- Very easy and convenient mean for the characterization of dielectric insulants status.

**STANDARDS**  
• Conformity to IEC & NFC Standards

**APPLICATION**

- Measurement of status of new and degree of ageing of dielectric insulants used in high and medium voltage.
- Solid or liquid insulants: transformers, turning machines, cables, parts of equipments (coils, bars...), oils...
- Production, transmission and distribution of energy on national grid networks or local (including internal networks of industries)
- Manufacturers, repairers, maintenance of transformers, turning machines, cables and all HV insulated equipments...

**QUALITY**  
• of Manpower  
• of Know-how  
• of Procedures  
• of Components

**AFP RANGE BENEFITS**

- Very fast measuring system
- Simplicity of use
- LCD display very complete
- RS 232 interface for PC or printer
- Test results storage possible with USB terminal
- Total safety of operator
- Reliability
- Reduced maintenance
- Easy check of calibration
- Convenient and simple calibration

**ACCURACY**  
• High accuracy of measurements  
• Stability of components

**CALIBRATION**  
• Primary Standards linked to LNE  
• Tracing

**WARRANTY**  
1 YEAR

**AFTER SALES SERVICE**  
10 YEARS



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**NEW ACCURACIES**



# DIGITAL LOSS FACTOR ANALYSERS

## AFP 1000 - AFP 2000 & AFP 3000 TYPES

### TAN δ & CAPACITANCES MEASUREMENTS



### PRINCIPLE

- Vectorial analysis of voltage and current crossing test object (Test object can be a measuring solid or liquid test cell)
- Use of adequate HV standards (existing in Vettiner Ranges) according to test voltage
- Calculation & display of tan δ, capacitance, power factor, active power as well as test parameters : Voltage, frequency and test current.
- Very intuitive and simple to use

### MAIN CHARACTERISTICS

#### General

- Measuring modes : UST - GST - GSTg
- Interference suppression : Built-in circuit
- Measuring time : < 1 second
- Mains input (Temp. fuse) : 85 V - 265V / 45 - 65 Hz

#### Example of possible test voltages / current (Other values on request)

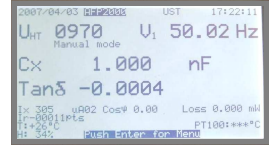
- Built-in AFP (New) : 0 - 2 kV / 20 mA max (50 or 60 Hz)
  - External HV supply : 0 - 12 kV / 200 mA (50 or 60 Hz)
  - Resonating inductor : 0 - 12 kV / 4 A (50 or 60 Hz)
  - Variable Frequency : Output between 45 & 65 Hz
- (Full HV protection for each measuring kit including power supplies)

#### Comparative characteristics inside AFP range

PARAMETERS		AFP 1000	AFP 2000	AFP 3000
• Voltage	• Display	• 4 digits	• 4 digits	• 5 digits
	• Range	• 0 - 2.5 kV or 0 - 15 kV	• 0 - 2.5 kV or 0 - 15 kV	• 0 - 2.5 kV or 0 - 15 kV
	• Resolution	• 1 Volt	• 1 Volt	• 0.1 Volt
	• Accuracy	• 1.0 % reading ± 1 digit	• 1.0 % reading ± 1 digit	• 0.5 % reading ± 5 digits
• Current	• Display	• 3 digits	• 3 digits	• 4 digits
	• Range	• 0 - 9.99 A (instrument)	• 0 - 9.99 A (instrument)	• 0 - 9.99 A (instrument)
	• Resolution	• 0.1 μA	• 0.1 μA	• 10 nA
	• Accuracy	• 1.0 % reading ± 1 digit	• 1.0 % reading ± 1 digit	• 0.5 % reading ± 5 digits
• Frequency	• Display	• 3 digits	• 4 digits	• 4 digits
	• Range	• 45.0 - 65.0 Hz	• 45.00 - 65.00 Hz	• 45.00 - 65.00 Hz
	• Resolution	• 0.1 Hz	• 0.01 Hz	• 0.01 Hz
	• Accuracy	• 0.1 % reading ± 1 digit	• 0.01 % reading ± 1 digit	• 0.01 % reading ± 1 digit
• Capacitance	• Display	• 4 digits	• 4 digits	• 5 digits
	• Range	• 0 - 9.999 μF (instrument)	• 0 - 9.999 μF (instrument)	• 0 - 9.9999 μF (instrument)
	• Resolution	• 0.01 pF	• 0.01 pF	• 0.01 pF
	• Accuracy	• 0.3 % reading ± 1 digit	• 0.1 % reading ± 1 digit	• 0.1 % reading ± 1 digit
• Tan delta (Tan δ)	• Display	• 4 digits	• 4 digits	• 5 digits
	• Range	• 1.10 <sup>-4</sup> to 100.0 %	• 1.10 <sup>-4</sup> to 100.0 %	• 1.10 <sup>-5</sup> to 100.0 %
	• Resolution	• 1.10 <sup>-4</sup>	• 1.10 <sup>-4</sup>	• 1.10 <sup>-5</sup>
	• Accuracy	• 1.0% rdg ± 1.10 <sup>-3</sup> ± 1 dgt	• 0.5% rdg ± 5.10 <sup>-4</sup> ± 1 dgt	• 0.2% rdg ± 1.10 <sup>-4</sup> ± 1 dgt
• Power factor (cos φ)	• Display	• 3 digits	• 3 digits	• 4 digits
	• Range	• 0 - 1.00	• 0 - 1.00	• 0 - 1.000
	• Resolution	• 0.01	• 0.01	• 0.001
	• Accuracy	• 1.5 % reading ± 1 digit	• 1.0 % reading ± 1 digit	• 1.0 % reading ± 1 digit
• Active power	• Display	• 3 digits	• 4 digits	• 4 digits
	• Range	• 0 - 99.9 kW	• 0 - 99.99 kW	• 0 - 999.9 kW
	• Resolution	• 10 μW	• 1 μW	• 1 μW
	• Accuracy	• 1.5 % reading ± 1 digit	• 1.0 % reading ± 1 digit	• 1.0 % reading ± 1 digit

### DISPLAY & INTERFACE

- Large graphic TFT display
- Display of test parameters and results
- Display of ambient temperature & hygrometry
- Display of test object temperature in option (with PT 100)
- RS 232 interface for PC or printer
- Storage of results possible on USB



### PRESENTATION

- IP54 Proof & shock absorber case
- Dimensions : 465 x 380 x h 175 mm
- Net weight : ≈ 15 kg



- Other presentation (Rack, Desk...) or other characteristics on simple request



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