

CAPO 12: 12 kV Capacitance Power Factor Test Set

The CAPO 12 is a fully automatic Capacitance, Insulation Power Factor / $\tan \delta$ measuring instrument developed by Raytech Engineers.

The self-contained instrument performs measurements of Insulation Power Factor ($\cos \varphi$), Dissipation Factor ($\tan \delta$), Capacitance, Inductance, Excitation, Quality Factor and Power Loss (watts).

Measurements can be made up to 12kVAC at variable frequency (from 10Hz to 400Hz).

The portable and rugged instrument is perfect for use in the field, facility or manufacturing plant. It is specially designed for fast and easy measurements with the well-known high precision and quality of all Raytech instruments.

Advanced intelligence of design: Like all Raytech products, this system initializes itself with a self-calibrating and circuit check sequence.

The operator is immediately notified if any problem is detected.

Features

- Test Voltage up to 12 kV
- Test Frequency 10Hz to 400Hz
- Power Factor / $\tan \delta$ reading
- Built-in Standard Capacitor
- Panel Mount thermal printer
- Microprocessor based system with internal storage for over 10,000 test results
- Data exchange via USB-Key or USB / RS232 Connection
- Storage and Printing of test results
- Complete automatic calibration system and system diagnostics
- Temperature channel
- Standard USB 2.0 & RS232 (serial) Interface
- Color LCD with backlighting and touch screen
- Panel mounted Emergency Stop Switch
- Mounted in rugged case for field testing
- 5 Year Standard Warranty**



CAPO 12

Accuracy

	Range	Accuracy	Resolution
Dissipation Factor $\tan \delta$	0 ... 0.1	$\pm 0.5\% \text{ Rdg} \pm 1 \times 10^{-4}$	1×10^{-5}
	0.1 ... 1	$\pm 0.5\% \text{ Rdg} \pm 1 \times 10^{-4}$	1×10^{-4}
	>1	$\pm 0.5\% \text{ Rdg}$	3 Digits
Power Factor $\cos \varphi$	0 ... 0.1	$\pm 0.5\% \text{ Rdg} \pm 1 \times 10^{-4}$	1×10^{-5}
	0.1 ... 1	$\pm 0.5\% \text{ Rdg} \pm 1 \times 10^{-4}$	1×10^{-4}
Capacitance	0.00pF ... 1.1 μ F @ 500V	$\pm 0.3\% \text{ Rdg} \pm 0.3\text{pF}$	0.01pF or 5 Digits
Capacitance @ 50 Hz	0.00pF ... 254nF @ 2.5kV	$\pm 0.3\% \text{ Rdg} \pm 0.3\text{pF}$	0.01pF or 5 Digits
	0.00pF ... 53nF @ 12kV	$\pm 0.3\% \text{ Rdg} \pm 0.3\text{pF}$	0.01pF or 5 Digits
Capacitance @ 60 Hz	0.00pF ... 1.1 μ F @ 500V	$\pm 0.3\% \text{ Rdg} \pm 0.3\text{pF}$	0.01pF or 5 Digits
	0.00pF ... 212nF @ 2.5kV	$\pm 0.3\% \text{ Rdg} \pm 0.3\text{pF}$	0.01pF or 5 Digits
	0.00pF ... 44nF @ 12kV	$\pm 0.3\% \text{ Rdg} \pm 0.3\text{pF}$	0.01pF or 5 Digits
Test Voltage	Up to 12,000V _{rms} (45 ... 400/400 Hz)	$\pm 0.5\% \text{ Rdg} \pm 1\text{V}$	1V
Test Current	Up to 200mA _{rms}	$\pm 0.3\% \text{ Rdg} \pm 1\mu\text{A}$	0.1 μ A or 4 Digits
Output Power	0 ... 2400VA		
Output Frequency	10 Hz ... 400 Hz (Step 0.5 Hz)	$\pm 0.01\%$	0.1%

CAPO 12: 12 kV Capacitance Power Factor Test Set *(continued)*

Specs

Model: CAPO 12

Size: L: 627 mm (24.7") W: 475 mm (18.7") H: 292 mm (11.5")

Weight: 36 kg (79 lbs.)

Input Power: 85 to 264 VAC, 47... 63 Hz

Output Voltage 0 to 12,000 V

Specifications subject to improvement at any time.

Color LCD with back lighting and touch screen

Front Panel Sealed, Anodized

Interfaces: 2 USB 2.0 full speed (1 host, 1 device) and 9 Pin RS232 serial

Memory Storage Internally stores more than 10,000 test results

Temperature: **Operating:** -10°C to 60°C, **Storage:** -20°C to 70°C

Standard Accessories Included

Cable Bag with Shoulder Strap

HV Cable 10m (32ft)

HV Ground Cable 10m (32ft)

Test Lead A Red 10m (32ft)

Test Lead B Blue 10m (32ft)

Safety Ground Lead 10m (32ft)

Safety Switch 2m (6.5ft)

Heavy Duty Power Cord 7.2m (25ft)

RS 232 Cable 3m (10ft)

A-B USB Cable 3m (10ft)

5 Rolls Paper Refill

Spare Fuse Set

External USB Drive & Touch Screen Stylus

Instruction Manual

Certificate of Accuracy

Optional Items Available

2021N-26001 Temperature Probe 10m (32ft)

3071N-31000 Safety Switch – 10m (32ft)

5090N-31003 Dual Safety Switch Adapter

5090N-15001 Annual Warranty Extension

Raytech is a world leader in the design and production of precision electronic measuring instruments and systems. The unique design approach of the engineering team at Raytech has resulted in the development of highly regarded measuring instruments, which have set new standards in the electrical testing industry.

Our exceptional reputation for support and service is unmatched.

Raytech products are designed for many years of trouble-free use, which is why we can offer a **standard 5-year warranty** – guaranteeing the highest quality instrumentation available.



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