



MEGGER® **DCM1000P**

- Performs seven basic power measurements
- Clamp on for measurement, no need to break the circuit
- Optional software for logging or trend analysis
- True RMS, ac, dc and ac + dc
- Direct measurement of balanced 3-phase power

Digital Power Clampmeter

DESCRIPTION

The Megger DCM1000P is an advanced clampmeter, giving true RMS readings of not only current and voltage, but of power quantities too. It measures ac and dc true RMS, giving accurate results even with distorted waveforms. Measurement can be made of power, apparent power, reactive power, and power factor, in single-phase and balanced three-phase systems with no need for additional adapters or calculations. Clamp-on power meters are the ideal hand-held instruments for use in the installation, maintenance, monitoring or checking of electrical systems and equipment.

As with all AVO products, the Power Clampmeter offers the high quality and precise measuring circuitry expected from the AVO name. Measurements can be taken regardless of waveform and up to a crest factor of 5. These unique instruments also measure power factor and frequency.

In addition to indicating the measurement on the large 3 1/2 digit LCD, each multimeter automatically displays the

engineering unit (A, V, kW, etc.) of the quantity being measured and an indication of whether ac or dc, or a composite ac+dc signal.

An automatic power-off function helps extend battery life; low-battery indication is displayed when the time for replacement is near. Battery life is typically 12 hours continuous use.

SOFTWARE

Using the built-in digital output with the optional PowerLog Windows™ software allows longer term monitoring to take place. PowerLog can give a multi-parameter display, or mimic a Y-t chart recorder, or a datalogger. All data can be easily exported for more detailed analysis with packages such as Microsoft Excel®.

APPLICATIONS

These clamp-on meters may be used for installation and maintenance work, for routine testing or fault finding in electrical machinery and plant equipment, or on small appliances. Typical applications include measuring cur-

rent when balancing the loading on three-phase supplies (star or delta), checking actual consumption against plate ratings, or checking feeder lines in the electricity supply industry.

One of the main applications is the measurement of waveforms with a high content of high-order harmonic current (i.e. electronic drives/frequency converters).

Additional functions include the measurement of the fundamental frequency of currents or voltages.

For applications requiring the measurement of voltage, power, $\cos\phi$ and phase sequence indication in balanced three-phase circuits, simply switch to 3-phase and read directly from the display.

The Power Clampmeter is invaluable for commissioning new equipment, performing scheduled plant maintenance as well as troubleshooting, as a standard tool in power distribution functions, and for safety and performance inspections.

FEATURES AND BENEFITS

- Integral digital output
- SmartHold captures all relevant parameters simultaneously
- Analog-style bargraph for direct indication of magnitude
- Large 4000 count LCD
- Automatic switch off to conserve battery power
- Measures active power (W), apparent power (VA), reactive power (VAr), and power factor ($\cos\phi$)
- Frequency measurement from 20 to 1000 Hz
- Auto detection of AC, DC, or AC with DC content
- Record mode gives min, max, & average for up to 12 hours
- Toggles through all power functions without necessity to change range
- Hand guard keeps user's hand at safe distance
- All functions easily accessible
- Only 2 voltage leads required

SPECIFICATION**Current Measurement****Ranges**

400 A, 1000 A dc or ac pk

Resolution

0.1A, 1A

Accuracy $I > 20 \text{ A} \pm 1.5\% \pm 5d$ $I \leq 20 \text{ A} \pm 1 \text{ A}$ **Frequency**

dc, 20 Hz - 1 kHz

Voltage Measurement**dc coupled True RMS****Ranges**

400 V, 600 V

Resolution

0.1V, 1V

Accuracy $V > 40 \text{ V} \pm 1\% \pm 5d$ $V \leq 40 \text{ V} \pm 1 \text{ V}$ **Frequency**

dc, 20 Hz - 1 kHz

Power Measurement**(1 ϕ and 3 ϕ)****Ranges**40 kW, 400 kW, 600 kW
(to 425 kW ac)**Resolution**

10 W, 100 W, 1 kW

Accuracy $\pm 2.5\% \pm 5d$ except1 ϕ : $< 2 \text{ kW} \pm 0.08 \text{ kW}$ 3 ϕ : $< 4 \text{ kW} \pm 0.25 \text{ kW}$ **Frequency**

dc, 20 Hz - 1 kHz

VA Measurement**(1 ϕ and 3 ϕ)****Ranges**40 kVA, 400 kVA, 600 kVA
(to 425 kVA ac)**Resolution**

10 VA, 100 VA, 1 kVA

Accuracy $VA > 2 \text{ kVA} \pm 2.5\% \pm 5d$ $VA \leq 2 \text{ kVA} \pm 0.08 \text{ kVA}$ **Frequency**

dc, 20 Hz - 1 kHz

V Ar Measurement**Ranges**

40 kVAr, 400 kVAr, 600 kVAr

Resolution

10 VAr, 100 VAr, 1 kVAr

Accuracy $VAr > 4 \text{ kVAr} \pm 2.5\% \pm 5d$ $VAr \leq 4 \text{ kVAr} \pm 0.25 \text{ kVAr}$ **Frequency**

dc, 20 Hz - 1 kHz

PF Range

0.99 > PF > 0.3

Power Factor ($\cos\phi$)**Range**-0.3 1.0 +-0.3
(cap) (ind)
(72.5° 0° +72.5°)**Resolution**

0.01

Accuracy $\pm 3^\circ$ **Frequency**

20 Hz - 1 kHz

Battery Supply

1 x 9 V Alkaline cells type

IEC LR6-LF22

Battery LifeContinuous battery life typically
12 hours**Auto Shut Off**After 5 minutes of instrument
inactivity.**Display**

3 1/2 digit LCD (4000 count)

Indicators

ac/dc/ac+dc indicator

Data Hold indicator, MIN/MAX/AVG
indicators in record modeSecondary 25 segment bargraph
indicator with scale

Low battery warning

SafetyComplies with UL3111-1 and IEC1010-
2-032, 600 V, Installation category III,
Pollution Deg. 2. Test leads compliant
to IEC1010-2-031.

Environmental Conditions**Reference Conditions**

Temperature:
73.5°F ± 1.5°F (23° C ± 1° C)

Operating Temperature
32 to 122° F (0 to 50° C)

Storage Temperature
-4 to 140°F (-20 to +80° C)

Humidity Range
0 to 95% RH

Temperature Coefficient
± 0.1 % of reading/° C
(voltage and current)

Weight

1.1 lb (500 g)

Dimensions

9.9 H x 3.9 W x 2.1D approx.
(251 H x 98 w x 52 D mm)

Jaw Opening

Max. 2 in. (50 mm)

1 x 50 mm cable or 2 x 30 mm cables

PowerLog Software**Requirements**

486-66 Mhz PC processor

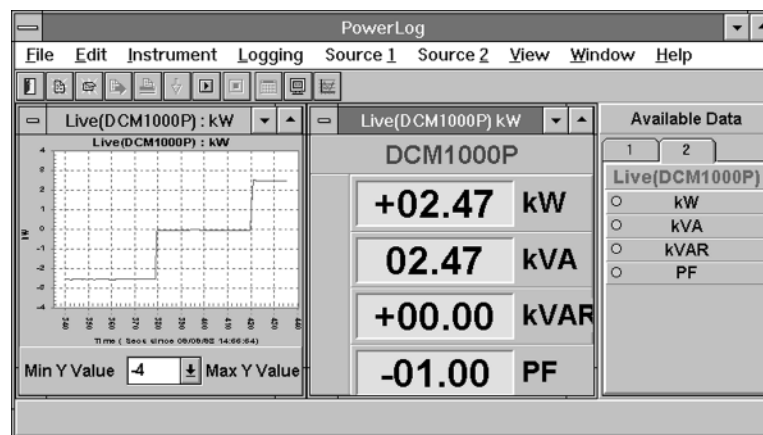
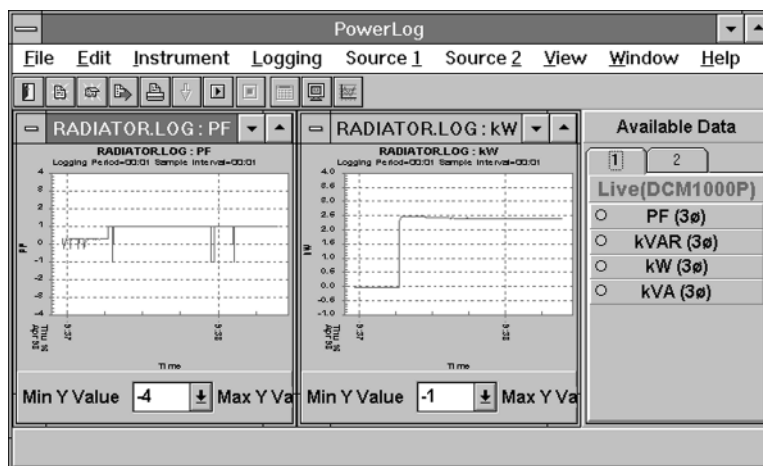
8 MB RAM

5 MB free hard disk space

MS-Windows® 3.1x, 95 or NT

1 serial port

Data interface cable included in the package



Screen images of PowerLog software

ORDERING INFORMATION

Item (Qty)	Cat. No.	Item (Qty)	Cat. No.
Power Clampmeter	DCM1000P	Optional Accessories	
Included Accessories		Replacement lead set	EV 6220-562
Test leads with prods	EV 6220-562	Zip-up carry case, imitation leather	EV 8101-080
Carrying case	EV 8101-080	FPK4 660V Fused probe kit	EV 6111-287
Instruction manual	EV 6172-310	PowerLog Windows™ Software	EV 6220-633

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