DCM1500
1500 A TRMS clamp meter



- **DC and AC current up to 1500 A**
- **True RMS measurement for greater accuracy**
- **Large jaw size safely assists with uninsulated conductor measurements**
- **750 VAC and 1000 VDC**
- **Resistance , continuity and frequency**
- **Peak, min/max and data-hold functions**

DESCRIPTION

Measuring up to 1500 A ac or dc the DCM1500 also offers 750 Vac and 1000 Vdc ranges making the instrument ideal for use in the installation, maintenance, monitoring or checking of large a.c. or d.c. electrical systems and equipment.

The large clear digits of the numeric display are complemented by the high-resolution digital bar graph, useful for indicating trending and fluctuation of measurement. The backlight assists use in poorly lit areas such as distribution cupboards and corners of switchrooms; and the data-hold feature enables use on difficult access cables where otherwise the display may be impossible to see.

Min/Max hold provides the ability to store the maximum and minimum d.c. or rms values over a period of time. While storage is taking place, either the present, maximum or minimum value can be displayed. Peak hold stores the maximum and minimum peak value of an a.c. signal at a 10 ms sample rate. The auto-off feature automatically places the meter in power-save mode after 30 minutes from power-on, but this can be disabled if required for min/max measurements.

Using the Relative mode (REL), a stable value can be stored, the instrument zeroed at that point, and then any variation from that value is displayed as a direct measurement relative to it.

The DCM1500 is safety rated to IEC 61010-1 CAT IV 600 V, and is drop-tested to 1.2 m onto a hard floor. It is supplied with test leads and a carry case, and a full 1-year manufacturer's warranty.

True RMS Measurement

By using True RMS measurement techniques the DCM1500 avoids the errors which can occur when non-sinusoidal waveforms created by today's complex loads are measured using traditional average sensing clamp meters.

APPLICATIONS

The DCM1500 is designed to be used on electrical systems and equipment where there is a need to measure current, volts, resistance and frequency. It is therefore intended for use while installing, maintaining, fault-finding or monitoring those systems.

The tactile barrier below the jaws of the instrument ensures a safe working distance for the operator's hand when measuring current on live uninsulated conductors, although additional personal protection must still be used.

The min/max and peak-hold enable maximum load currents from equipment to be identified such as start-up currents to motors and heaters.

With the added benefit of d.c. current measurement, it can also be used in applications including domestic power generation from solar panels and wind-turbines; battery monitoring; automotive uses for charging and load circuits; electric vehicle servicing such as fork-lift trucks; lift maintenance; UPS commissioning, servicing and maintenance; electro-plating plants and welding equipment servicing.

Megger

SPECIFICATIONS

Accuracy is ±(% reading + number of digits) at 23°C ± 5°C, less than 80% R.H.

AC current

Range	Resolution	Accuracy	Frequency Response	Overload Protection
400 A	0.1 A	±(1.5% reading + 5 digits)*	50 Hz ~ 60 Hz	1500 A rms
1000 A	1 A	±(1.9% reading + 7 digits)	50 Hz ~ 60 Hz	1500 A rms
1500 A	1 A	±(2.5% reading + 7 digits)	50 Hz ~ 60 Hz	1500 A rms
400 A	0.1 A	±(1.9% reading + 5 digits)*	61Hz ~ 400 Hz	1500 A rms
1000 A	1 A	±(2.5% reading + 7 digits)	61 Hz ~ 200Hz	1500 A rms
1500 A	1 A	±(3.0% reading + 7 digits)	61 Hz ~ 200 Hz	1500 A rms

AC Conversion Type: * add 2 digits to accuracy when reading less 15% of full scale.
AC Conversions are ac-coupled, true rms responding, calibrated to the rms value of a sine wave input. Accuracies are given for sine wave at full scale and non-sine wave below half scale. For non-sine wave add the following Crest Factor corrections:
For Crest Factor of 1.4 to 2.0, add 1.0% to accuracy.
For Crest Factor of 2.0 to 2.5, add 2.5% to accuracy.
For Crest Factor of 2.5 to 3.0, add 4.0% to accuracy.
Max.CF 2 @ 600A
1.5 @ 1500A

DC current

Range	Resolution	Accuracy	Over voltage protection
400 A	0.1 A	±(1.0% reading + 3 digits)	AC 1000 A for 1 min
1000 A	1 A	±(1.9% reading + 7 digits)	AC 1000 A for 1 min
1500 A	1 A	±(2.5% reading + 7 digits)	AC 1000 A for 1 min

Position Error: Add ±1% of LCD reading

AC voltage (auto-ranging)

Range	Resolution	Accuracy	Over voltage protection
400 V	100 mV	±(1.0% reading + 5 digits) 50 Hz ~ 500 Hz*	750 V rms
750 V	1 V	±(1.0% reading + 5 digits) 50 Hz ~ 500 Hz*	750 V rms

* add 2 digits to accuracy when reading less 15% of full scale.

Input Impedance: ≥1 MΩ// less than 100pF.
AC Conversion Type:
AC Conversions are ac-coupled, true rms responding, calibrated to the rms value of a sine wave input. Accuracies are given for sine wave at full scale and non-sine wave below half scale.
For non-sine wave add the following Crest Factor corrections:
For Crest Factor of 1.4 to 2.0, add 1.0% to accuracy.
For Crest Factor of 2.0 to 2.5, add 2.5% to accuracy.
For Crest Factor of 2.5 to 3.0, add 4.0% to accuracy.
Max.CF 2 @ 600V
1.5 @ 750V

DC voltage (auto-ranging)

Range	Resolution	Accuracy	Over voltage protection
400 V	100 mV	±(0.7% reading + 2 digits)	1000 V rms
1000 V	1 V	±(0.7% reading + 2 digits)	1000 V rms

Input impedance: ≥ 1 MΩ

Resistance and continuity

Range	Resolution	Accuracy	Over voltage protection
0 – 400 Ω	100 mΩ	±(1.0% reading + 3 digits)	600 V rms

Continuity check: buzzer sounds when resistance< 30 Ω

Frequency

Range	Resolution	Accuracy	Over voltage protection
20 – 400 Hz	1 Hz	±(0.1% reading + 2 digits)	AC /DC 1000 A for 1 min

Sensitivity: 3 A rms for < 400 Hz

Auto power down

Megger

The meter will automatically shut itself off after approximately 30 minutes after power on.

Peak Hold: ±(3% reading +10 digits)
* >750 V Unspecified.
* >800 A Unspecified.

Min/Max Hold: Add ± 15 dgt to accuracy for ACA and DCA.

LCD

Display 3 $^{3}/_{4}$ digit large scale readout
Count 4000
Overrange "OL"

Power supply

1 x PP3 MN1604 6LR61 alkaline cell
Battery life: 100 hours

Operating temperature range and humidity

0 °C - 30 °C (≤ 80% RH)
30 °C - 40 °C (≤ 75% RH)
40 °C - 50 °C (≤ 45% RH)

Conductor size	**Maximum conductor size:** 51 mm
Safety	IEC61010-1 CAT IV 600 V For use on uninsulated conductors
EMC	EN61326-1
Pollution degree	2
Storage temperature range	
	-20°C - + 60°C 0 to 80% RH (Battery removed)
Dimensions	105 mm (W) x 275 mm (L) x 48 (H)
Weight	524 g including battery

ORDERING INFORMATION

Description	Order Code
DCM1500 clampmeter 1500 A ac & dc	1005-572
Included accessories	
Battery	
Pouch	
Testleads red and black	
Replacement testleads	
Test lead set and crocodile clips	1002-001
Fused test lead set	1002-015

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