

# DCM2031, 2033, 2039 Digital Clampmeters



- **Excellent Price Performance**
- **Three Models 400 A, 600 A and 1000 A**
- **Drop Proof**
- **EMC & IEC1010 Compliance**

## DESCRIPTION

The DCM clampmeters are the ideal instruments for use in the installation, maintenance, monitoring or checking of electrical systems and equipment.

There are three different current clamps in the DCM range covering many applications. The series starts with a plug-in unit for basic a.c. current measurements made in conjunction with a multimeter, a volt plus current unit where the user needs the flexibility of being able to make voltage measurements as well as current measurements and a high current a.c./d.c. unit.

The traditional measuring method for taking current measurements by inserting a shunt resistor or a current transformer has inherent disadvantages, like the necessity to break the circuit conductor. These competitively priced clamp-on instruments offer the user many advantages depending on the unit selected such as the measurement of d.c. as well as a.c. currents or the capability of measuring voltages and resistances.

The DCM2031 is purely a transducer and is designed to be operated by plugging into an oscilloscope or multimeter. The output of the instrument is 1 mV per 1 A of measurement with a maximum current reading of 400 A.

The DCM2033 can be used for measuring volts, resistance and current. It offers the flexibility of a multimeter with the advantages of a current clamp. The L.C.D. display has a readout of 4000 counts with measurement capabilities of up to 600 A, 600 V and 40 k $\Omega$ . This versatile model also

features a continuity buzzer on the resistance range and a data hold button for freezing the reading.

The highest current unit available in the series is the DCM2039. This instrument has a specified accuracy for measurements to 1000 A but has an over-range capability of up to 2000 A. As the clamp incorporates Hall Effect technology it can measure d.c. currents as well as a.c. currents. Additional features are the peak hold button and the frequency counter which will measure frequencies between 20 Hz and 10 kHz.

## Safety

The tactile barrier indicates to the operator a safe working distance for his hand to be from live uninsulated conductors, providing added confidence when making measurements in hazardous voltage areas.

## APPLICATIONS

These current clamps can be used to simplify current measurements since there is no need to switch off or break the circuit carrying the current. Instead, the clamp jaws surround the conductor while it remains energised. This makes the units ideal for commissioning and maintenance work and for routine testing or fault finding in electrical machinery, plant equipment or on cable installations.

Typical applications include measuring current when balancing the load on three phase supplies or checking feeder lines in the electrical supply industry.

**FEATURES AND BENEFITS**

- Measurement of high current made easier by retaining the circuit intact
- a.c. & a.c./d.c. models for various applications
- Jaw size up to 51 mm diameter for large conductors
- Hand Guard designed for operator safety

	<b>DCM2031</b>	<b>DCM2033</b>	<b>DCM2039</b>
<b>a.c. CURRENT</b>			
<b>Ranges</b>	400 A	400 A, 600 A	400 A, 1000 A
<b>Resolution</b>	1m V/A	0,1 A	0,1 A
<b>Accuracy</b>	±(1,9% +0,5A), 50 - 60Hz ±(3,9% +1A), 40 - 400Hz	50Hz - 60Hz ±(1,9% rdg +5d), 0 - 400 A ±(2,9% rdg +5d), 400 - 600 A	40Hz - 400Hz ±(1,9% rdg +8d), 0 - 40 A ±(1,9% rdg +7d), 40 - 400 A ±(2,9% rdg +5d), 400 - 1000 A
<b>Conversion Type</b>		Average sensing RMS indicating	Average sensing RMS indicating
<b>a.c. VOLTAGE</b>			
<b>Ranges</b>		400 V, 600 V	
<b>Resolution</b>		0,1 V in the 400 V range:	
<b>Accuracy</b>		±(1,2% rdg + 5d), 40Hz - 500Hz	
<b>Input Impedance</b>		10 MΩ//<100pF	
<b>Protection</b>		a.c. 850 V rms	
<b>Conversion Type</b>		Average sensing RMS indicating	
<b>RESISTANCE</b>			
<b>Ranges</b>		4 kΩ, 40 kΩ,	
<b>Resolution</b>		1 Ω in the 4 kΩ range	
<b>Accuracy</b>		±(2% rdg +9d)	
<b>Overload Protection</b>		500 V rms	
<b>CONTINUITY TEST</b>			
<b>Threshold</b>		<200 Ω approximate	
<b>Indicator</b>		2 kHz tone buzzer	
<b>d.c. CURRENT</b>			
<b>Ranges</b>			400 A, 1000 A
<b>Resolution</b>			0,1 A
<b>Accuracy</b>			±(2,9% rdg +8d), 0 - 40 A ±(1,9% rdg +4d), 40 - 400 A ±(2,9% rdg +5d), 400 - 1000 A
<b>FREQUENCY COUNT</b>			
<b>Ranges</b>			20 Hz to 10 kHz
<b>Accuracy</b>			±(0,5% rdg+ 3d)
<b>GENERAL</b>			
<b>Display</b>	none	4000 count L.C.D.	4000 count LCD
<b>Measuring Rate Times per second</b>	continuous	4 T/sec	2 T/sec
<b>Position Error</b>	±1%		
<b>Output Voltage a.c./d.c., 10 mV/A in 100 A, 1 mV/A in 600 A</b>	a.c. 1 mV/A Per 1 A current transformer	• current transformer "OL" + - 30 minutes non-use 0°C ~ 45°C, <75% R.H. -20°C ~ 60°C, <80% R.H. 0,2 x (spec. Acc'y)/°C, <18°C or >28°C 4 feet drop	• Hall Effect (for a.c. & d.c.) "OL" + - 30 minutes non-use
<b>Type of Sensing</b>			
<b>Overrange indication</b>			
<b>Low Battery Indicator</b>			
<b>Auto Power</b>			
<b>Operating Temperature</b>			
<b>Storage Temperature</b>			
<b>Temperature Coefficient</b>			
<b>Shock Proof</b>			
<b>Safety: Designed to IEC1010 -2-032</b>	600 V Cat. II to Earth	600 V Cat. II to Earth	1 kV Cat. III
<b>Maximum Conductor size</b>	dia.29 mm	dia.40mm	dia.51 mm
<b>Maximum Jaw Opening</b>	30 mm	42mm	53 mm
<b>Maximum Busbar Size</b>			24 x 60 mm
<b>Power Requirement</b>		9 V PP3 (IEC 6LR61)	9 V PP3 (IEC 6LR61)
<b>Battery Life (Alkaline battery)</b>		200 hrs	40 hrs
<b>Size W x L x D in mm</b>	72 x 148 x 36, w/o cable	88 x 215 x 36	106 x 240 x 40
<b>Weight</b>	250 g	320 g	420 g

**ORDERING INFORMATION**

<b>Item</b>	<b>Order Code</b>	<b>Included Accessories</b>
400 A Clamp-on Transducer	DCM2031	Test Leads (DCM 2033 only)
600 A Current Clamp Multimeter	DCM2033	Holster
1000 A a.c./d.c. Clampmeter	DCM2039	

**UK**  
Archcliffe Road Dover  
CT17 9EN England  
T +44 (0) 1304 502101  
F +44 (0) 1304 207342

**UNITED STATES**  
4271 Bronze Way  
Dallas TX 75237-1088 USA  
T 800 723 2861 (USA only)  
T +1 214 333 3201  
F +1 214 331 7399

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Registered to ISO 14001 Reg no. EMS 61597

**DCM2031\_2033\_2039\_DS\_en\_V10**

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