



Specification  
CM87  
Clamp meters



All specified accuracies are at 23°C ± 5°C,  
<70% RH for 1 year.  
**Temperature Coefficient:** 0.1 x (specified accuracy) per °C. (0°C to 18°C, 28°C to 50°C).

All accuracies below are expressed as  
± (percentage of reading + digits)

**DC Voltage**

Range	Resolution	Input impedance	Accuracy
6.6V	0.001V	10MΩ	0.5% + 2
66V	0.01V	9.1MΩ	
660V	0.1V		
1000V	1V		

Overload Protection: 1000V DC or 750V AC rms

**AC Voltage (True RMS)**

Range	Resolution	Input impedance	Accuracy (50Hz to 500Hz)
6.6V	0.001V	10MΩ	1.5% + 8
66V	0.01V	9.1MΩ	
660V	0.1V		
750V	1V		

True rms AC voltage accuracy is specified from 5% of range to 100% of range.  
Crest factor: ≤ 3  
Frequency measurement accuracy (50Hz to 1kHz): 0.1% + 5  
Minimum input voltage: >500 dgts  
Overload Protection: 1000V DC or 750V AC rms



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**Resistance**

Range	Resolution	Open circuit voltage	Accuracy
660Ω	0.1Ω	-3.2V dc	1.0% + 5
6.6kΩ	0.001kΩ	-1.1V dc	
66kΩ	0.01kΩ		
660kΩ	0.1kΩ		
6.6MΩ	0.001MΩ		2.0% + 5
66MΩ	0.01MΩ		3.5% + 5

Overload Protection: 600V DC or AC rms

**Capacitance**

Range	Resolution	Accuracy
6.6nF	0.001nF	3.0% + 30
66nF	0.01nF	3.0% + 10
660nF	0.1nF	3.0% + 30
6.6μF	0.001μF	3.0% + 10
66μF	0.01μF	
660μF	0.1μF	
6.6mF	0.001mF	5.0% + 10

Overload Protection: 600V DC or AC rms



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**AC Current (True RMS)**

Range	Resolution	Accuracy	
		50Hz to 60Hz	60Hz to 400Hz
660A	0.1A	2.0% + 10	3.0% + 10
1500A	1A	2.5% + 10 (≤1000A)	3.5% + 10 (≤1000A)
		5.0% + 10 (>1000A)	

True rms AC current accuracy is specified from 5% of range to 100% of range.  
Crest factor: ≤ 3  
Frequency measurement accuracy (50Hz to 1kHz): 0.1% + 5  
Minimum input current: >500 dgts  
Overload Protection: 1500A AC rms

**DC Current**

Range	Resolution	Accuracy
660A	0.1A	2.0% + 5
2000A	1A	3.0% + 5 (≤1000A) 5.0% + 5 (>1000A)

Overload Protection: 2000A DC for 60 seconds maximum



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**Frequency**

Range	Resolution	Accuracy
66Hz	0.01Hz	0.1% + 5
660Hz	0.1Hz	
6.6kHz	0.001kHz	
66kHz	0.01kHz	
660kHz	0.1kHz	
1MHz	0.001MHz	

Sensitivity (10Hz to 1MHz): >3.5V AC rms  
Minimum input frequency: 10Hz  
Minimum pulse width: >1μs  
Duty cycle limits: >30% and <70%  
Overload protection: 600V DC or AC rms

**Duty Cycle**

Range	Frequency range	Resolution	Pulse width	Accuracy (5V logic)
5% to 95%	40Hz to 20kHz	0.1%	> 10μs	2.0% + 10

Overload protection: 600V DC or AC rms

**Temperature (Type K Thermocouple)**

Range	Resolution	Accuracy
0°C to 400°C	1°C	1.0% + 2
-20°C to 0°C, 400°C to 1000°C		2.0% + 3
32°F to 750°F	1°F	1.0% + 4
-4°F to 32°F, 750°F to 1832°F		2.0% + 6

Overload protection: 60V DC or 30V AC rms



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**Continuity**

Range	Resolution	Response time	Open circuit voltage	Audible indication
660Ω	0.1Ω	100ms approx.	-3.2V dc	<30Ω

Overload protection: 600V DC or AC rms

**Diode Test**


Range	Resolution	Test current	Open circuit voltage	Audible indication	Accuracy
2V	1 mV	0.8mA	3.2V dc typical	<0.25V	1.5% + 5

Overload protection: 600V DC or AC rms

**GENERAL**

Display: Liquid crystal display  
 Digital, 6600 counts, updates 2.8/sec  
 Polarity: automatic, positive implied, '-' for negative polarity indication  
 Overrange: (OL) or (-OL) is displayed  
 Bar-graph, 66 segments, updates 28/sec

Power: 9V, PP3 carbon-zinc battery (IEC 6F22, NEDA 1604D)  
 Battery life: 75 hours typical with carbon zinc

Low battery indication:  symbol displayed  
 Auto power off: after 30 minutes  
 Jaw opening capability: conductor diameter 57mm  
 bus bar 70 x 18mm

Dimensions: 281 x 108 x 53mm  
 Weight: 585g approx. including battery

Includes: carrying case, set of TL16 test leads, Type K thermocouple, 9V PP3 battery (installed), instructions



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**ENVIRONMENTAL**

Temperature & humidity: (Operating): 0°C to 50°C <70% R.H.  
 (Storage): -20°C to 60°C < 80% R.H.

Altitude: up to 2000m  
 Pollution degree 2, indoor use

**SAFETY**

Conforms to BS EN 61010-1, BS EN 61010-2-032, CAT IV 600V, CAT III 1000V  
 Class II, Double insulation

**EMC**

Conforms to BS EN 61326-1

**SPECIFICATION FOR TL16 TEST LEADS**

Maximum voltage: 1000V AC/DC  
 Maximum current: 10A continuous  
 Connector: 4mm banana plug with fixed shroud

**Environmental**

Temperature (Operating & Storage): 0°C to 40°C  
 Altitude: up to 2000m  
 Pollution degree 2

**Safety**

Conforms to BS EN 61010-031,  
 CAT IV 600V, CAT III 1000V, 10A (Probe tip caps fitted)  
 CAT II 1000V, 10A (Probe tip caps removed)  
 Class II, Double insulation

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