



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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- Specialist Drummond Testers



Martindale Electric Company Limited
 Metrohm House, Penfold Trading Estate, Imperial Way, Watford WD24 4YY, UK
 Tel: +44(0)1923 441717 Fax: +44 (0)1923 446900
 E-mail: sales@martindale-electric.co.uk
 Website: www.martindale-electric.co.uk

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