

FEATURES

- Overload protection up to 1200V DC / AC RMS in the AC/DC Voltage range.
- Overload protection up to 20A DC/AC RMS by fast blow fuse in the AC/DC Current range.
- Overload protection up to 600V DC / AC RMS in the capacitance, Frequency, Temperature, Resistance, Continuity and Diode Test Range. (1000V DC/AC RMS protection in Metrasafe 16 only).
- The instrument has overload protection up to 20A DC/AC RMS in the Voltage Range and 1000V DC/AC RMS in the Current Range.
- Surge Protection of 8 kV peak IEC 61010
- 'O' Ring Seal body.
- The instrument has IP-67 Protection making the body water proof even if dipped in 1m. deep water for 30 mins.
- Double molded injection body with rubber lining to provide insulation against electrical shocks and anti-slip grip.
- Confirms to EN61010-1, CAT IV 600V, CAT III 1000V.
- Two Years' Warranty against any manufacturing defects

GENERAL SPECIFICATIONS

Insulation	: Class2, Double insulation.
Overvoltage category	: CAT IV 600V, CAT III 1000V
Maximum Voltage between any terminal & earth ground	: 1000V DC/AC RMS
Surge Protection	: 8kV peak IEC 61010
Display	: 4000 counts Backlit LCD display, 21mm high
Polarity	: Automatic, (-) negative polarity indication.
Over-range	: "OL" mark indication.
Low battery indication	: A Battery "BAT" symbol is displayed when the battery voltage drops below the operating level.
Measurement rate	: 2 times per second nominal.
Auto power off	: Meter automatically shuts down after approx. 30 minutes of inactivity.
Operating environment	: -10°C to 50°C (14°F to 122°F) @ < 70% R.H.
Storage temperature	: -30°C to 60°C (-4°F to 140°F) @ < 80% R.H.
Relative humidity	: 90% (0°C to 30°C); 75%(30°C to 40°C); 45%(40°C to 50°C);
For inside use, max height:	
Operating	: 3000m
Storage	: 10,000m
Waterproof	: IP67
Pollution degree	: 2
Safety	: The instrument complies with EN61010-2-32
Power	: One 9V battery , NEDA 1604, IEC 6F22.
Dimensions	: 182 (H) x 82 (W) x55 (D) mm
Weight: Approx.	: 375g.
Data Hold	: To freeze the displayed data
Max/Min	: Records max/min data
Relative measurement facility	

*Technical Specifications & Appearance are subject to change without prior notice



METRA safe
15



METRA safe
16 (T-RMS)

TECHNICAL SPECIFICATIONS

Accuracy is given at 18°C to 28°C (65°F to 83°F), less than 70 % RH

DC Voltage (Auto-ranging)

Range	Resolution	Accuracy
400.0mV	0.1mV	± 0.5% of rdg ± 2 digits
4.000V	1mV	
40.00V	10mV	
400.0V	100mV	
1000V	1V	± 0.8% of rdg ± 2 digits

Input Impedance : 7.8MΩ.

Maximum Input : 1200V DC or 1200V AC rms.

AC Voltage (Auto-ranging) (T-RMS for Metrasafe 16 only)

Range	Resolution	Accuracy
400.0mV	0.1mV	± 0.8% of rdg ± 3 dgits
4.000V	1mV	
40.00V	10mV	
400.0V	100mV	
1000V	1V	± 1.2% of rdg + 5 dgits

Input Impedance : 7.8MΩ

AC Response : 50 Hz 60Hz

Maximum Input : 1200V DC or 1200V AC rms.

DC Current (Auto-ranging)

Range	Resolution	Accuracy
400.0uA	0.1uA	± 1.2% of rdg + 3 dgits
4000uA	1uA	
40.00mA	10uA	
400.0mA	100uA	
20A	10mA	± 2.5% of rdg + 3 dgits

Overload Protection : 0.5A / 1000V and 20A / 500V Fuse.

Maximum Input : 400uA DC on uA range
400mA DC on mA range
20A DC on 20A range.

Note: 10A continuous, 20A for 30 seconds max. with a 15 minute cool down interval.

AC Current (Auto-ranging) (T-RMS for Metrasafe 16 only)

Range	Resolution	Accuracy
400.0uA	0.1uA	± 1.5% of rdg + 5 dgits
4000uA	1uA	
40.00mA	10uA	
400.0mA	100uA	
20A	10mA	± 3.0% of rdg + 5 dgits

Overload Protection : 0.5A / 1000V and 20A / 500V Fuse.

AC Response : 50 Hz to 400 Hz

Maximum Input : 400uA AC rms on uA
400mA AC rms on mA
20A AC rms on 20A range.

Note: 10A continuous, 20A for 30 seconds max. with a 15 minute cool down interval.

Resistance [Ω] (Auto-ranging)

Range	Resolution	Accuracy
400.0Ω	0.1Ω	± 0.8% of rdg + 5 dgits
4.000kΩ	1Ω	± 0.8% of rdg + 2 dgits
40.00kΩ	10Ω	
400.0kΩ	100Ω	
4.000MΩ	1kΩ	± 2.5% of rdg + 8 dgits
40.00MΩ	10kΩ	

Input Protection : 600V DC or AC rms.

1000V DC or AC RMS in Metrasafe 16 only.

Capacitance (Auto-ranging)

Range	Resolution	Accuracy
4.000nF	1pF	± 5.0% of rdg + 20 dgts
40.00nF	10pF	± 5.0% of rdg + 7 dgts
400.0nF	0.1nF	± 3.0% of rdg + 5 dgits
4.000uF	1nF	
40.00uF	10nF	
400.0uF	0.1uF	
4.000mF	0.001mF	
40.00mF	0.01mF	± 10% of rdg + 10 dgts

Input Protection : 600V DC or AC rms.
1000V DC or AC RMS in Metrasafe 16 only.

Frequency (Auto-ranging)

Range	Resolution	Accuracy
4.000kHz	1Hz	± 1.2% of rdg + 3 dgits
40.00kHz	10Hz	
400.0kHz	100Hz	
40.00MHz	1kHz	± 1.5% of rdg + 4 dgits

Sensitivity : >0.5V RMS while ≤ 1MHz ;

Sensitivity : >3V RMS while >1MHz ;

Input Protection : 600V DC or 600V AC rms.
1000V DC or AC RMS in Metrasafe 16 only.

Temperature

Range	Resolution	Accuracy
-20°C~+760°C	1°C	±3% of rdg ±5dgits
-4°F~+1400°F	1°F	±3% of rdg ±9dgits

Sensor : Type K Thermocouple

Overload protection : 600V DC or AC rms.
1000V DC or AC RMS in Metrasafe 16 only.

Diode Test

Test current	Resolution	Accuracy
1mA typical/Open MAX.3V	1 mV	±10% of rdg + 5 dgits

Open circuit voltage : MAX. 3V DC

Overload protection : 600V DC or AC rms.
1000V DC or AC RMS in Metrasafe 16 Only

Audible continuity

Audible threshold : 35Ω Test current MAX. 1.5mA

Overload protection : 600V DC or AC rms.
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OPTIONAL ACCESSORIES:

- Infra-red non contact temperature adaptor to measure temperature from -30°C to 550°C with fixed emissivity of 0.95 and distance to sighting ratio of 8:1. Model TS-03
- Clamp on Current Adaptor to measure current up to 1000A. Model CA-1000D
- Clamp on Current Adaptor to measure upto 200A AC. Model CA-01

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