



1. ELECTRICAL SPECIFICATIONS

Accuracy is indicated as $\pm [\%rdg + (\text{numbers of digits} \times \text{resolution})]$ at $23^\circ\text{C} \pm 5^\circ\text{C}$, $<80\%HR$

DC VOLTAGE

Range	Resolution	Accuracy	Overload protection
60.00mV	0.01mV	$\pm(0.08\%rdg+10dgt)$	1000VDC/ACrms
600.0mV	0.1mV	$\pm(0.08\%rdg+2dgt)$	
6.000V	0.001V		
60.00V	0.01V		
600.0V	0.1V		
1000V	1V		

Input impedance: $10M\Omega // <100pF$

AC TRMS VOLTAGE

Range	Resolution	Accuracy (50Hz ÷ 1kHz)	Overload protection
60.00mV	0.01mV	$\pm(1.2\%rdg+5dgt)$	1000VDC/ACrms
600.0mV	0.1mV		
6.000V	0.001V	$\pm(0.8\%rdg+5dgt)$	
60.00V	0.01V		
600.0V	0.1V		
1000V	1V		

Input impedance: $10M\Omega // <100pF$

For non-sinusoidal voltages add the herewith correction on accuracies:

Crest factor $1.4 \div 2.0 \rightarrow$ add $1.0\%rdg$

Crest factor da $2.0 \div 2.5 \rightarrow$ add $2.5\%rdg$

Crest factor da $2.5 \div 3.0 \rightarrow$ add $4.0\%rdg$

Max crest factor: $3.0 (0 \div 3000 dgt)$; $2.0 (3000 \div 5000 dgt)$; $1.6 (5000 \div 6000 dgt)$

PEAK HOLD feature: specified accuracy $\pm 150dgt$

AC+DC TRMS VOLTAGE

Range	Resolution	Accuracy (50Hz ÷ 1kHz)	Overload protection
60.00mV	0.01mV	$\pm(2.0\%rdg+10dgt)$	1000VDC/ACrms
600.0mV	0.1mV		
6.000V	0.001V	$\pm(2.0\%rdg+5dgt)$	
60.00V	0.01V		
600.0V	0.1V		
1000V	1V		

Input impedance: $10M\Omega // <100pF$

For non-sinusoidal voltages consider the indication of AC TRMS voltage

PEAK HOLD feature: specified accuracy $\pm 150dgt$

AUTO -V VOLTAGE (Voltage measurement with low impedance)

Range	Resolution	Accuracy (50Hz ÷ 1kHz)	Overload protection
600.0V DC	0.1V	$\pm(0.8\%rdg+3dgt)$	1000VDC/ACrms
1000V DC	1V		
600.0V AC	0.1V		
1000V AC	1V		

Input impedance: approx $3k\Omega$

For non-sinusoidal voltages consider the indication of AC TRMS voltage

**DC CURRENT**

Range	Resolution	Accuracy	Overload protection
60.00mA	0.01mA	$\pm(0.8\%rdg+3dgt)$	Fuse 440mA/1kVAC/DC,10kA (input mA) Fuse 11A/1kVAC/DC,20kA (input A)
600.0mA	0.1mA		
6.000A	0.001A		
10.00A	0.01A		

AC TRMS CURRENT

Range	Resolution	Accuracy (50Hz ÷ 1kHz)	Overload protection
60.00mA	0.01mA	$\pm(1.2\%rdg+3dgt)$	Fuse 440mA/1kVAC/DC,10kA (input mA) Fuse 11A/1kVAC/DC,20kA (input A)
600.0mA	0.1mA		
6.000A	0.001A		
10.00A	0.01A		

For non-sinusoidal current consider the indication of AC TRMS voltage
PEAK HOLD feature: specified accuracy $\pm 150dgt$

AC+DC TRMS CURRENT

Range	Resolution	Accuracy (50Hz ÷ 1kHz)	Overload protection
60.00mA	0.01mA	$\pm(2.0\%rdg+5dgt)$	Fusibile 440mA/1kVAC/DC,10kA (ingresso mA) Fusibile 11A/1kVAC/DC,20kA (ingresso A)
600.0mA	0.1mA		
6.000A	0.001A		
10.00A	0.01A		

For non-sinusoidal current consider the indication of AC TRMS voltage
PEAK HOLD feature: specified accuracy $\pm 150dgt$

RESISTANCE

Range	Resolution	Accuracy	Open voltage	Overload protection
600.0 Ω	0.1 Ω	$\pm(0.8\%rdg+5dgt)$	<2.5V	1000VDC/ACrms
6.000k Ω	0.001k Ω	$\pm(0.8\%rdg+2dgt)$	<0.6V	
60.00k Ω	0.01k Ω			
600.0k Ω	0.1k Ω			
6.000M Ω	0.001M Ω			
40.00M Ω	0.01M Ω	$\pm(1.0\%rdg+5dgt)$		

CONTINUITY TEST

Range	Resolution	Accuracy	Overload protection
600.0 Ω	0.1 Ω	$\pm(0.8\%rdg+5dgt)$	1000VDC/ACrms

Max open voltage: 2.5V
Max test current: approx 1mA
Active buzzer: R <30 Ω

DIODE TEST

Range	Resolution	Accuracy	Open voltage	Overload protection
2.000V	1mV	$\pm(1.5\%rdg+2dgt)$	<2.5V	1000VDC/ACrms

Max test current: 0.4mA



FREQUENCY

Range	Resolution	Accuracy	Overload protection
100.00Hz	0.01Hz	$\pm(0.1\%rdg+2dgt)$	1000VDC/ACrms
1000.0Hz	0.1Hz		
10.000kHz	0.001kHz		
100.00kHz	0.01kHz		

Minimum value read: 1Hz

Sensitivity: > 5.0Vp-p (ACV 1Hz ÷ 10kHz) ; > 10Vp-p (ACV 10kHz ÷ 100kHz) ; > 2mA_{p-p} (AC mA) ; > 0.2A_{p-p} (AC A)

CAPACITANCE

Range	Resolution	Accuracy	Meas. Time	Overload protection
1.000μF	0.001μF	$\pm(1.2\%rdg+2dgt)$	<0.7s	1000VDC/ACrms
10.00μF	0.01μF			
100.0μF	0.1μF			
1.000mF	0.001mF			
10.00mF	0.01mF			
			<3s	

TEMPERATURE WITH TYPE K PROBE

Range	Resolution	Accuracy (*)	Overload protection
-40.0°C ÷ 400.0°C	0.1°C	$\pm(1.0\%rdg+10dgt)$	1000VDC/ACrms
-40.0°F ÷ 752°F	0.1°F	$\pm(1.0\%rdg+18dgt)$	

(*) Accuracy referred to the instrument without probe



2. GENERAL SPECIFICATIONS


Display:

- LCD display, 4 digit with maximum reading 6000 counts with sign, decimal point and bargraph
- Automatic polarity indication
- Backlight
- "OL" over range indication

Features:

- Data HOLD
- MAX/MIN for maximum and minimum value
- PEAK for peak measurement
- VOLTSENSE for AC voltage detection without contact
- AC+DC for measurement of DC component overlapped to the alternate signal
- AUTO-V for AC/DC voltage measurement with low impedance
- RANGE for manual range selection
- REL for relative measurement
- Auto Power OFF after 20 minutes of idleness

Low battery indication:

- The symbol " appears when the battery voltage is low

Environmental conditions:

- Working temperature/humidity: $-10^{\circ}\text{C} \div 50^{\circ}\text{C}$, $<80\%HR$
- Storage temperature/humidity: $-20^{\circ}\text{C} \div 60^{\circ}\text{C}$, $<80\%HR$

General information:

- Max height of use: 2000m
- Pollution degree: 2
- Insulation: double insulation

Power supply:

- 1 x 9V alkaline battery type NEDA1604, JIS006P, IEC6F22

Sizes:

- 190(L)x94(W)x48(H) mm

Weight (included batteries):

- 460g

Applied standards:

- Safety: IEC/EN61010-1, UL61010-1
- Measurement category: CAT IV 600V – CAT III 1000V

This product conforms to the prescriptions of the European directive on low voltage 2006/95/EEC and to EMC directive 2004/108/EEC