



## 1. ELECTRICAL SPECIFICATIONS

Accuracy calculated as  $\pm[\% \text{reading} + (\text{num dgt} * \text{resolution})]$  ta  $18^{\circ}\text{C} \div 28^{\circ}\text{C}$ ,  $<75\% \text{HR}$

### DC VOLTAGE

Range	Resolution	Accuracy	Input impedance	Overload protection
600.0mV	0.1mV	$\pm(0.1\% \text{rdg} + 5 \text{dgt})$	10M $\Omega$	1000VDC/ACrms
6.000V	0.001V			
60.00V	0.01V			
600.0V	0.1V	$\pm(0.2\% \text{rdg} + 5 \text{dgt})$		
1000V	1V			

### AC TRMS VOLTAGE

Range	Resolution	Accuracy (*) 50Hz $\div$ 60Hz	Accuracy (*) 61Hz $\div$ 1kHz	Overload protection
600.0mV	0.1mV	$\pm(0.9\% \text{rdg} + 5 \text{dgt})$	$\pm(3.0\% \text{rdg} + 5 \text{dgt})$	1000VDC/ACrms
6.000V	0.001V			
60.00V	0.01V			
600.0V	0.1V			
1000V	1V			

(\*) Accuracy specified from 5% to 100% of measurement range, Input impedance:  $>9 \text{M}\Omega$ ,  
Response time PEAK function:  $>1 \text{ms}$ , Accuracy PEAK function:  $\pm 10\% \text{rdg}$

### AC+DC TRMS VOLTAGE

Range	Resolution	Accuracy (*) 50Hz $\div$ 1kHz	Input impedance	Overload protection
6.000V	0.001V	$\pm(3.0\% \text{rdg} + 20 \text{dgt})$	$>9 \text{M}\Omega$	1000VDC/ACrms
60.00V	0.01V			
600.0V	0.1V			
1000V	1V			

### DC CURRENT

Range	Resolution	Accuracy	Overload protection
600.0 $\mu\text{A}$	0.1 $\mu\text{A}$	$\pm(0.9\% \text{rdg} + 5 \text{dgt})$	Fast Fuse 0.8A/1kVAC/DC (inputs mA, $\mu\text{A}$ )
6000 $\mu\text{A}$	1 $\mu\text{A}$		
60.00mA	0.01mA		
600.0mA	0.1mA	$\pm(0.9\% \text{rdg} + 8 \text{dgt})$	Fast Fuse 10A/1kVAC/DC (input 10A)
10.00A	0.01A	$\pm(1.5\% \text{rdg} + 8 \text{dgt})$	

### AC, AC+DC TRMS CURRENT

Range	Resolution	Accuracy (*) 50Hz $\div$ 1kHz	Overload protection
600.0 $\mu\text{A}$	0.1 $\mu\text{A}$	$\pm(1.2\% \text{rdg} + 5 \text{dgt})$	Fast Fuse 0.8A/1kVAC/DC (inputs mA, $\mu\text{A}$ )
6000 $\mu\text{A}$	1 $\mu\text{A}$		
60.00mA	0.01mA		
600.0mA	0.1mA		
10.00A	0.01A	$\pm(1.5\% \text{rdg} + 5 \text{dgt})$	Fast Fuse 10A/1kVAC/DC (input 10A)

(\*) Accuracy specified from 5% to 100% of measurement range  
Response time PEAK function:  $>1 \text{ms}$ , Accuracy PEAK function:  $\pm 10\% \text{rdg}$   
AC+DC TRMS Current: accuracy (50Hz $\div$ 1kHz):  $\pm(3.0\% \text{rdg} + 20 \text{dgt})$

### 4-20mA% READINGS

Range	Resolution	Accuracy	Reading
-25% $\div$ 125%	0.1%	$\pm 50 \text{dgt}$	0mA=-25%, 4mA=0%, 20mA=100%, 24mA=125%

**DIODE TEST**

Range	Max test current	Open voltage	Overload protection
	<1.5mA	3.2V	1000VDC/ACrms

**RESISTANCE AND CONTINUITY TEST**

Range	Resolution	Accuracy	Buzzer	Overload protection
600.0Ω	0.1Ω	±(0.8%rdg+10dgt)	<50Ω	1000VDC/ACrms
6.000kΩ	0.001kΩ	±(0.8%rdg+5dgt)		
60.00kΩ	0.01kΩ			
600.0kΩ	0.1kΩ			
6.000MΩ	0.001MΩ	±(2.5%rdg+10dgt)		
60.00MΩ	0.01MΩ			

**FREQUENCY (Electronic circuits)**

Range	Resolution	Accuracy	Sensitivity	Overload protection
60.00Hz	0.01Hz	±(0.09%rdg+5dgt)	2Vrms min (20% < duty < 80%, <100kHz) 5Vrms min (20% < duty < 80%, >100kHz)	1000VDC/ACrms
600.0Hz	0.1Hz			
6.000kHz	0.001kHz			
60.00kHz	0.01kHz			
600.0kHz	0.1kHz			
1.000MHz	0.001MHz			

**FREQUENCY (Electrical circuits)**

Range	Resolution	Accuracy	Sensitivity	Overload protection
40Hz ÷ 10kHz	0.01Hz ÷ 0.001kHz	±(0.5%rdg)	2Vrms	1000VDC/ACrms

**DUTY CYCLE**

Range	Resolution	Accuracy	Overload protection
0.1 ÷ 99.9%	0.01%	±(1.2%rdg+2dgt)	1000VDC/ACrms

Pulse frequency range: 40Hz ÷ 10kHz, Pulse width: ±5V (100μs ÷ 100ms)

**CAPACITANCE**

Range	Resolution	Accuracy	Overload protection
60.00nF	0.01nF	±(1.5%rdg+20dgt)	1000VDC/ACrms
600.0nF	0.1nF	±(1.2%rdg+8dgt)	
6.000μF	0.001μF	±(1.5%rdg+8dgt)	
60.00μF	0.01μF	±(1.2%rdg+8dgt)	
600.0μF	0.1μF	±(1.5%rdg+8dgt)	
6.000mF	0.001mF	±(2.5%rdg+20dgt)	

**TEMPERATURE WITH TYPE K PROBEK**

Range	Resolution	Accuracy (*)	Overload protection
-40.0°C ÷ 600.0°C	0.1°C	±(1.5%rdg+3°C)	1000VDC/ACrms
600°C ÷ 1350°C	1°C		
-40.0°F ÷ 600.0°F	0.1°F	±(1.5%rdg+5.4°F)	
600°F ÷ 2462°F	1°F		

(\*)Accuracy referred to instrument without probe



## 2. GENERAL SPECIFICATIONS


### Display:

- TFT LCD, colours, 4½ dgt, 6000 counts, decimal point and bargraph
- Automatic polarity indication
- Backlight
- "OL" over range indication
- Response time: 3/s

### Features:

- Data HOLD
- MAX/MIN/AVG
- PEAK (Voltage and Current) ; AC+DC feature
- Data Logger and Graph of measured parameters
- Internal memory for measurements, graphs and recordings
- Icons internal menu
- REL
- DC 4-20mA% current readings
- Auto Power OFF programmable up to 60min of idleness

### Low battery indication:

- The symbol  appears when the battery voltage is low

### Environmental conditions:

- Operating Temperature/Humidity: 5°C ÷ 40°C, <80%HR
- Storage Temperature/Humidity: -20°C ÷ 60°C, <50%HR (@40°C)

### General information:

- Altitude max of use: 2000m
- Pollution degree: 2
- Insulation: double insulation

### Power supply:

- 1 x 7.2V Li-ION rechargeable battery
- Adapter battery charger: 100/240VAC, 50/60Hz, 10VDC, 1A

### Dimensions (L x W x H)

- 175 x 85 x 55mm

### Weight (included batteries)

- 390g

### Reference guidelines:

- Safety : IEC/EN61010-1
- EMC : IEC/EN61326-1
- 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**

**This product conforms to the prescriptions of the European directive 2011/65/EU (RoHS) and the European directive 2012/19/EU (WEEE)**