



## 1. ELECTRICAL SPECIFICATIONS

Accuracy is indicated as [% rdg + dgt]. It is referred to the following reference conditions: 23°C ± 5°C with RH < 75%.

### DC Voltage

| Range         | Resolution | Accuracy            | Input impedance | Overload protection |
|---------------|------------|---------------------|-----------------|---------------------|
| 0.00 ÷ 59.99V | 0.01V      | ±(0.7% rdg + 5 dgt) | 3MΩ, <100pF     | 1000VACrms          |
| 60.0 ÷ 599.9V | 0.1V       |                     |                 |                     |
| 600 ÷ 1000V   | 1V         |                     |                 |                     |

### AC, AC+DC TRMS Voltage

| Range         | Resolution | Accuracy            | Input impedance | Frequency range | Overload protection |
|---------------|------------|---------------------|-----------------|-----------------|---------------------|
| 0.00 ÷ 59.99V | 0.01V      | ±(1.0% rdg + 5 dgt) | 3MΩ, <100pF     | 45 ÷ 500Hz      | 1000VACrms          |
| 60.0 ÷ 599.9V | 0.1V       |                     |                 |                 |                     |
| 600 ÷ 1000V   | 1V         |                     |                 |                 |                     |

### Peak AC Voltage (Peak Max / Peak Min)

| Range       | Resolution | Accuracy             | Overload protection |
|-------------|------------|----------------------|---------------------|
| 5.0 ÷ 84.9V | 0.1V       | ±(3.0% rdg + 15 dgt) | 1000VACrms          |
| 85 ÷ 1400V  | 1V         |                      |                     |

Resolution for sine wave, ACV>5Vrms, frequency: 50 – 400Hz

### DC Current

| Range        | Resolution | Accuracy            | Overload protection |
|--------------|------------|---------------------|---------------------|
| 0.0 – 600.0A | 0.1A       | ±(1.5% rdg + 5 dgt) | 600Arms             |

Additional accuracy due to the position of the clamped cable: ±1.0% rdg

### AC, AC+DC TRMS Current

| Range        | Resolution | Accuracy            | Frequency range | Overload protection |
|--------------|------------|---------------------|-----------------|---------------------|
| 0.0 – 600.0A | 0.1A       | ±(1.5% rdg + 5 dgt) | 45÷65Hz         | 600Arms             |
|              |            | ±(2.5% rdg + 5 dgt) | 66÷400Hz        |                     |

Additional accuracy due to the position of the clamped cable: ± 1.0%.

### Peak AC Current (Peak Max / Peak Min)

| Range       | Resolution | Accuracy             | Overload protection |
|-------------|------------|----------------------|---------------------|
| 5.0 ÷ 84.9A | 0.1A       | ±(3.0% rdg + 15 dgt) | 600Arms             |
| 85 ÷ 850V   | 1A         |                      |                     |

Resolution for sine wave, ACA>5Arms, frequency: 50 – 400Hz

### Inrush Current (INRUSH)

| Range        | Resolution | Accuracy            | Overload protection |
|--------------|------------|---------------------|---------------------|
| 10.0 ÷ 59.9A | 0.1A       | ±(2.5% rdg + 2A)    | 600Arms             |
| 60 ÷ 600.0A  | 1A         | ±(2.5% rdg + 5 dgt) |                     |

Resolution for sine wave, ACA>10Arms, frequency: 50/60Hz

Integration period: approx 100ms

**Frequency with test leads and with jaws**

| Range           | Resolution | Accuracy          | Input   | Overload protection |
|-----------------|------------|-------------------|---------|---------------------|
| 20.0 ÷ 399.9Hz  | 0.1Hz      | ±(0.1% rdg+5 dgt) | 5VACrms | 1000VACrms          |
| 0.400kHz ÷ 4kHz | 0.001kHz   |                   | 5AACrms | 600Arms             |

The instrument displays 0.0Hz if the input signal has frequency <10.0Hz

**Total Harmonic Distortion THD% (Harmonics up to the 25<sup>th</sup>)**

| Function | Resolution | Accuracy           | Overload protection  |
|----------|------------|--------------------|----------------------|
| THD%     | 0 ÷ 100%   | ±(3.0% rdg+10 dgt) | 1000VACrms / 600Arms |

The instrument displays "rdy" if ACV<10VACrms or ACA<10AACrms

The instrument displays "out.F" if the fundamental frequency of the input signal is <45Hz or >65Hz

**Active Power**

| Range           | Resolution | Accuracy                            | Overload protection  |
|-----------------|------------|-------------------------------------|----------------------|
| 0.015 ÷ 3.999kW | 0.001kW    | ±(2.5% rdg + 5 dgt)<br>(45 ÷ 65Hz)  | 1000VACrms / 600Arms |
| 4.00 ÷ 39.99kW  | 0.01kW     |                                     |                      |
| 40.0 ÷ 399.9kW  | 0.1kW      | ±(3.5% rdg + 5 dgt)<br>(66 ÷ 400Hz) |                      |
| 400 ÷ 600kW     | 1kW        |                                     |                      |

Resolution for sine wave, ACV>10Vrms, ACA>5Arms, frequency: 45-65Hz, PF=1.00

**Power Factor (Cosφ)**

| Range               | Accuracy | Overload protection  |
|---------------------|----------|----------------------|
| -1.00 ÷ 0.00 ÷ 1.00 | ±3.0°    | 1000VACrms / 600Arms |

**Resistance and Continuity Test**

| Range           | Resolution | Accuracy            | Buzzer | Overload protection |
|-----------------|------------|---------------------|--------|---------------------|
| 0.0 ÷ 599.9Ω    | 0.1Ω       | ±(1.0% rdg + 5 dgt) | ≤ 30Ω  | 600VACrms           |
| 0.600 ÷ 5.999kΩ | 0.001kΩ    |                     |        |                     |
| 6.00 ÷ 19.99kΩ  | 0.01kΩ     |                     |        |                     |

Maximum open circuit voltage: 2.4V

**Diode test**

| Range        | Accuracy            | Overload protection |
|--------------|---------------------|---------------------|
| 0.00 ÷ 2.00V | ±(1.0% rdg + 5 dgt) | 600VACrms           |

Maximum open circuit voltage: 3.0V

**Temperature**

| Function | Range           | Accuracy          | Overload protection |
|----------|-----------------|-------------------|---------------------|
| °C       | -50.0 ÷ 399.9°C | ±(1.0% rdg + 3°C) | 600VACrms           |
|          | -400.0 ÷ 1000°C |                   |                     |
| °F       | -58.0 ÷ 751.9°F | ±(1.0% rdg + 6°F) |                     |
|          | -752.0 ÷ 1832°F |                   |                     |

Accuracy for environmental temperature variable within ±1°C




## 2. GENERAL SPECIFICATIONS

### Mechanical characteristics

|                             |                           |
|-----------------------------|---------------------------|
| Size:                       | 235(L) x 78(La) x 51(H)mm |
| Weight (including battery): | about 380g                |
| Jaws opening:               | 45mm                      |
| Max conductor size:         | 35mm                      |

### Supply

|                         |   |
|-------------------------|---|
| Battery type:           | 1 battery 9V NEDA 1604 IEC 6F22 JIS 006P.   |
| Low battery indication: | "  " |
| Battery life:           | about 50 hours  |
| Auto Power Off:         | About 10 minutes after power-on   |

### Display

|                  |  |
|------------------|--|
| Characteristics: | 3 <sup>5</sup> / <sub>6</sub> LCD (max 6000 counts), decimal point, unit symbol indication, bargraph and backlight |
| Sample rate:     | 3 times/sec  |
| Conversion mode: | TRMS   |

### Special function

Inrush current measurement  
Automatic AC and DC detection  
Continuity Beeper  
Data Hold  
Peak Hold (10ms)  
Min Max Function  
Auto Power off  
DCA Zeroing Key

### Climatic conditions

|                          |  |
|--------------------------|--|
| Reference temperature:   | 23° ± 5°C                                    |
| Operating temperature:   | 0 ÷ 50 °C                                    |
| Operating humidity:      | < 75% RH                                     |
| Storage temperature:     | -20 ÷ 60 °C                                  |
| Storage humidity:        | < 80% RH                                     |
| Temperature coefficient: | <0.2 x Specified accuracy /°C, <18°C, > 28°C |

### Reference standards

|                             |                            |
|-----------------------------|----------------------------|
| Comply with:                | EN 61010-1                 |
| Insulation:                 | Class 2, Double insulation |
| Pollution:                  | Level 2                    |
| For inside use, max height: | 2000m                      |
| Installation category:      | CAT III 600V to the ground |

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