



1. ELECTRICAL SPECIFICATIONS

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

DC VOLTAGE

Range	Resolution	Accuracy	Overload protection
400.0mV	0.1mV	$\pm(1.0\% \text{rdg} + 3 \text{dgt})$	600VDC/ACrms
4.000V	0.001V		
40.00V	0.01V		
400.0V	0.1V		
600V	1V		

Input impedance: 10M Ω

AC TRMS VOLTAGE

Range	Resolution	Accuracy (50 ÷ 60Hz) (*)	Overload protection
4.000V	0.001V	$\pm(1.0\% \text{rdg} + 3 \text{dgt})$	600VDC/ACrms
40.00V	0.01V		
400.0V	0.1V		
600V	1V		

(*) Accuracy specified from 5% to 100% of measurement range, Input impedance: 10M Ω

Frequency range: 50Hz ÷ 60Hz (generic waveform), 45Hz ÷ 1kHz (sinusoidal waveform)

Crest factor: ≤ 3 (up to 300V), ≤ 1.5 (up to 600V)

DC CURRENT

Range	Resolution	Accuracy	Overload protection
400.0 μ A	0.1 μ A	$\pm(1.0\% \text{rdg} + 3 \text{dgt})$	Fast Fuse 0.5A/600V (inputs mA, μ A)
4000 μ A	1 μ A		
40.00mA	0.01mA		
400.0mA	0.1mA		
4.000A	0.001A	$\pm(1.2\% \text{rdg} + 3 \text{dgt})$	Fast Fuse 10A/600V (input 10A)
10.00A (*)	0.01A		

(*) 20A for max 30s with not declared accuracy

AC TRMS CURRENT

Range	Resolution	Accuracy (*) (50Hz ÷ 60Hz)	Overload protection
400.0 μ A	0.1 μ A	$\pm(1.2\% \text{rdg} + 3 \text{dgt})$	Fast Fuse 0.5A/600V (inputs mA, μ A)
4000 μ A	1 μ A		
40.00mA	0.01mA		
400.0mA	0.1mA		
6.000A	0.001A	$\pm(1.8\% \text{rdg} + 5 \text{dgt})$	Fast Fuse 10A/600V (input 10A)
10.00A (**)	0.01A		

(*) Accuracy specified from 5% to 100% of measurement range

(**) 20A for max 30s with not declared accuracy

DIODE TEST

Function	Test current	Open voltage
	<0.35mA	3VDC



RESISTANCE AND CONTINUITY TEST

Range	Resolution	Accuracy	Buzzer	Overload protection
400.0Ω	0.1Ω	±(1.5%rdg+5dgt)	<50Ω	600VDC/ACrms
4.000kΩ	0.001kΩ			
40.00kΩ	0.01kΩ			
400.0kΩ	0.1kΩ			
4.000MΩ	0.001MΩ	±(2.5%rdg+20dgt)		
40.00MΩ	0.01MΩ			

FREQUENCY (Electronic circuits)

Range	Resolution	Accuracy	Sensitivity
10.00Hz ÷ 10kHz	0.01Hz	±(1.2%rdg)	15Vrms

DUTY CYCLE

Range	Resolution	Accuracy
0.1 – 99.9%	0.1%	±(1.2%rdg + 2dgt)

Pulse frequency range: 5Hz ÷ 150kHz, Pulse width: 100µs ÷ 100ms

CAPACITANCE

Range	Resolution	Accuracy	Overload protection
40.00nF	0.01nF	±(4.5%rdg+10dgt)	600VDC/ACrms
400.0nF	0.1nF		
4.000µF	0.001µF	±(3.0%rdg+5dgt)	
40.00µF	0.01µF		
400.0µF	0.1µF		
4000µF	1µF	±(5.0%rdg+5dgt)	

optec

energie ist messbar

Optec AG | Guyer-Zeller-Strasse 14 | CH-8620 Wetzikon ZH

Telefon: +41 44 933 07 70 | Telefax: +41 44 933 07 77

E-Mail: info@optec.ch | Internet: www.optec.ch



2. GENERAL SPECIFICATION


Display:

- LCD, 4 dgt 4000 counts, sign and decimal point
- Automatic polarity indication
- Backlight
- "OL" over range indication
- Response time: 3/s

Features:

- Data HOLD
- MAX/MIN
- Built-in white torch
- Auto Power OFF after 15 minutes of idleness

Low battery indication:

- The symbol "  " appears when the battery voltage is low

Operating temperature:

- 5°C ÷ 50°C, <80%HR

Storage temperature:

- -20°C ÷ 60°C, <80%HR

General information:

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

Power supply:

- 2x1.5V alkaline batteries type AAA LR03

Dimensions (L x W x H)

- 120 x 65 x 45mm

Weight (included battery)

- 200g

Reference guidelines:

- Safety :IEC/EN61010-1, CAT III 600V
- EMC: IEC/EN61326-1

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)