

# ETHOS 5020 SPECIFICATION

## General Specification

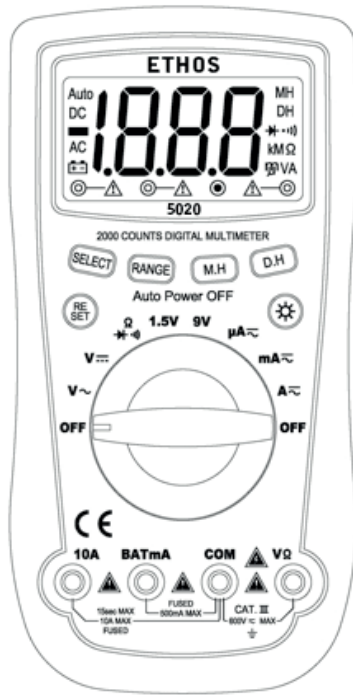
Display	LCD with a max. reading of 1999. Display sign of the test lead connect to socket
Range control	Auto range & Manual range control
Polarity	Automatic negative polarity indication
Zero adjustment	Automatic
Over range indication	The "OL" or "-OL" display
Low battery indication	Display "🔋" sign
Data hold	Display "DH" sign
Max hold	Display "MH" sign
Auto Power Off	When measurement exceeds 15 minutes without switching mode and pressing key, the meter will switch to standby mode. Press any key to exit standby mode. When restart the system, press and hold M.H key to disable auto power off
Safety standards	CE EMC/LVD. CATIII 600V. The meter is up to the standards of IEC1010 Double Insulation, Pollution Degree 2, Overvoltage Category III
Operating environment	Temperature 32° to 104°F (0°C to 40°C), Humidity ≤ 80% RH.
Storage environment	Temperature -4° to 140°F (-20°C to 60°C), Humidity ≤ 90% RH.
Fuse	F0.5AL 250V 5 x 20mm, F10AL 250V 5 x 20mm
Power supply	9V battery ( 6F22 ).
Test lead probe	RE10, CATIII 600V / CATIII 1000V, 10A, L=90cm
Dimension	177(H) x 92(W) x 40(D) mm
Weight	Approx. 320g (including battery)

**ETHOS**  
**Test Instruments**

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Web: [www.ethos-instruments.co.uk](http://www.ethos-instruments.co.uk)



## Electrical Specification

Accuracies are  $\pm$  (% of reading + number in last digit)  
 At  $23 \pm 5^\circ\text{C}$ ,  $\leq 75\%$  RH.

### 2.2.1 DC Voltage

Range	Accuracy	Resolution
200mV	$\pm (0.5\%+2)$	0.1mV
2V		1mV
20V		10mV
200V		100mV
600V	$\pm (0.8\%+2)$	1V

Overload protection: 600V DC or AC rms  
 Impedance:  $10\text{M}\Omega$ , More than  $100\text{M}\Omega$  on 200mV range

### 2.2.2 AC Voltage

Range	Accuracy	Resolution
2V	$\pm (0.8\%+3)$	1mV
20V		10mV
200V		100mV
600V	$\pm (1.2\%+3)$	1V

Average sensing, calibrated to rms of sine wave  
 Frequency: 40~500Hz  
 Overload protection: 600V DC or AC rms  
 Impedance:  $10\text{M}\Omega$



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## 2.2.3 DC Current

Range	Accuracy	Resolution
200 $\mu$ A	$\pm (1.2\%+2)$	0.1 $\mu$ A
2000 $\mu$ A		1 $\mu$ A
20mA		10 $\mu$ A
200mA		100 $\mu$ A
2A	$\pm (2.0\%+3)$	1mA
10A		10mA

Overload protection: 0.5A/250V, 10A/250V fuse  
Continuous testing the maximum steady-state current of 1A

## 2.2.4 AC Current

Range	Accuracy	Resolution
200 $\mu$ A	$\pm (1.5\%+3)$	0.1 $\mu$ A
2000 $\mu$ A		1 $\mu$ A
20mA		10 $\mu$ A
200mA		100 $\mu$ A
2A	$\pm (2.5\%+5)$	1mA
10A		10mA

Average sensing, calibrated to rms of sine wave  
Frequency: 40~500Hz  
Overload protection: 0.5A/250V, 10A/250V fuse  
Continuous testing the maximum steady-state current of 1A

## 2.2.5 Resistance

Range	Accuracy	Resolution
200 $\Omega$	$\pm (1.0\%+1\Omega)$	0.1 $\Omega$
2k $\Omega$	$\pm (1.0\%+2)$	1 $\Omega$
20k $\Omega$		10 $\Omega$
200k $\Omega$		100 $\Omega$
2M $\Omega$		1k $\Omega$
20M $\Omega$	$\pm (1.5\%+3)$	10k $\Omega$

Overload protection: 250V DC or AC rms


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## 2.2.6 Diode and Audible continuity test

Range	Description	Test condition
	Display read approximately forward voltage of diode	Forward DC current approx. 1mA Reversed DC voltage approx. 1.5V
	Built-in buzzer sounds if resistance is less than 30Ω	Open circuit voltage approx. 0.5V

Overload protection: 250V DC or AC rms

## 2.2.7 Battery test

Range	Accuracy	Load current	Resolution
1.5V	±(5.0%+5 )	100mA	1mV
9V		5mA	10mV

Overload protection: 0.5A/250V fuse

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