









## HDM3055 Series

5 1/2 reading multimeter with 1  $\mu\text{V}$  high resolution; 30 kS/s high-speed sampling frequency, which makes it easy to capture transient signals; Two sets of input interfaces front and rear, which provides convenience to arrange wires; Standard with bar chart, histogram, trend chart and data statistics functions; Double-display measurement

function, displaying voltage and frequency synchronously; A variety of measurement functions: DC voltage, AC voltage, DC current, AC current, 2-line resistance, 4-line resistance, capacitance, diode, connectivity, frequency, period, temperature; 4.3-inch color LCD screen; Simple operations, abundant measurement interfaces.

DC precision technical index: $\pm$ (% reading + % range)			
Range <sup>1</sup> /Frequency	Test current or Load voltage	Input impedance	1 year
DC voltage			23°C $\pm$ 5 °C
100 mV	—	10 M $\Omega$ or >10 G $\Omega$	0.018 + 0.0
1 V	—	10 M $\Omega$ or >10 G $\Omega$	0.015 + 0.0
10 V	—	10 M $\Omega$	0.015 + 0.0
100 V	—	10 M $\Omega$	0.015 + 0.0
1000 V	—	10 M $\Omega$	0.015 + 0.0
resistance <sup>2</sup>			
100 $\Omega$	1 mA	—	0.050 + 0.0
1k $\Omega$	1 mA	—	0.050 + 0.0
10 k $\Omega$	100 $\mu$ A	—	0.050 + 0.0
100 k $\Omega$	10 $\mu$ A	—	0.050 + 0.0
1 M $\Omega$	5 $\mu$ A	—	0.060 + 0.0
10 M $\Omega$	500 nA	—	0.250 + 0.0
100 M $\Omega$	500 nA    10 M $\Omega$	—	2.000 + 0.0
DC			
100 $\mu$ A	<0.02 V	—	0.050 + 0.0
1 mA	<0.2 V	—	0.050 + 0.0
10 mA	<0.02 V	—	0.050 + 0.0

100 mA	<0.2 V	—	0.050 + 0.0
1 A	<0.1 V	—	0.100 + 0.0
3 A	<0.3 V	—	0.250 + 0.0
10 A	<0.02 V	—	0.250 + 0.0
Breakover <sup>3</sup>			
1 kΩ	1 mA	—	0.100 + 0.1
Diode test <sup>4</sup>			
5 V	1 mA	—	0.05 + 0.03
AC precision technical index: ± (% reading + % range)			
True RMS AC voltage <sup>5,6</sup>	Test current or Load voltage	Input impedance	1 year
			23 °C ± 5 °C
100 mV Range			
20 Hz-45 Hz	—	—	1.00 + 0.10
45 Hz-10 kHz	—	—	0.20 + 0.10
10 kHz-30 kHz	—	—	1.50 + 0.30
30 kHz-100 kHz <sup>7</sup>	—	—	3.00 + 0.30
Range: 1 V, 10 V, 100 V and 750 V			
20 Hz-45 Hz	—	—	1.00+0.10 <sup>8</sup>
45 kHz-10 kHz	—	—	0.20+0.10
10 kHz-30 kHz	—	—	1.50+0.30
30 kHz-100 kHz <sup>3</sup>	—	—	3.00+0.30 <sup>9</sup>
True RMS AC current <sup>2</sup>			
Range: 100 uA-10 A			

20Hz-45 Hz	—	—	1.50 + 0.10
45Hz-1 kHz	—	—	0.50 + 0.10
1 kHz-10 kHz <sup>10</sup>	—	—	2.00 + 0.20
Frequency: technical index $\pm$ (% reading+3 counts)			
Frequency range <sup>11</sup> : 100 mV,1 V,10 V,100 V and 750 V			
20 Hz – 300 kHz <sup>12</sup>	—	—	0.02+3
Frequency resolution	Frequency		Resolution
Range <sup>13</sup> : 100 mV,1 V,10 V,100 V and 750 V	119.999 Hz		0.001 Hz
	1.19999 kHz		0.00001 kHz
	11.9999 kHz		0.0001 kHz
	119.999 kHz		0.001 kHz
	1.00000 MHz		0.00001 MHz
Capacitance <sup>1</sup>	Test current or probe type	Input impedance	1 year 23 °C $\pm$ 5 °C
1.000 nF	5 $\mu$ A	—	1. + 0.5
10.00 nF	5 $\mu$ A	—	1 + 0.5
100.0 nF	10 $\mu$ A	—	1 + 0.5
1.000 $\mu$ F	100 $\mu$ A	—	1 + 0.5
10.000 $\mu$ F	1 mA	—	1 + 0.5
100.00 $\mu$ F	1 mA	—	1 + 0.5

Technical indicators are valid in the following cases: preheating for 90 minutes, setting integral time to 10 or 100NPLC, enabling automatic zero. The temperature for the calibration should be within 18°C-28°C.

1. Except for 1000DCV and 3A/10ADC, all ranges have a 20% overrange.
2. Technical indicators are suitable for 4-wire or 2-wire resistance

measurement. However, if not pressing the "Null" key ahead of time to eliminate the offset, 2-wire resistance measurement will increase 0.2Ω additional error.

3. Continuous threshold value is fixed less than 10 Ω and only available in the fast measurement mode.

4. Technical indicators are only suitable for the voltage measured at the input terminal and only available in the fast measurement mode.

5. Except for 750VAC and ACI 3A/10A, all ranges have a 20% overrange.

6. If the measuring range is not 750 V, technical indicators are valid only if the input signal is a sinusoidal signal and the amplitude of it >5% of the current measuring range.

When adopting the 750 V range, the input signal must be greater than 50 Vrms.

7. When the input signal frequency > 30 kHz and the input signal amplitude < 10% of the current measuring range, an additional error will occur. If the frequency is 30 kHz ~ 100 kHz, each 1kHz will increase the additional error by 0.003% of the range.

8. Input < 200Vrms

9. Input < 300Vrms

10. The technical indicators are suitable when frequency < 5 kHz. The frequency which ≥ 5kHz is a typical value.

11. Frequencies up to 1 MHz can be measured when 0.5Vrms signal inputs at the 100 mV / 1 V gear.

12. Technical Indicators are suitable for all gears when input signal > 10% of the range except for specially specified gears. The technical indicators for 100 mV range can only be applied when the input signal is between 100 mV to 120 mV. When the input signal is between 10 mV and 100 mV, the indicator number should be multiplied by 10.

13. Frequency up to 1 MHz can be measured when 0.5Vrms signal input is at the 100 mV / 1 V gear.