

HDM3065 Series True-RMS Digital Multimeter 6 1/2 digit



6 1/2 bit resolution;30 k/s high-speed sampling frequency, which makes it easy to capture transient signals; front and back multimeter input,measure a key switch;statistic analysis、 histogram and run chart display function;Double display measurement function,display 2 kinds of signal parameters at the same time;3A/10A current range;4.3 inch 64K LCD;0.1uV resolution,easy to use,parameters can be setted easily; 13 kinds of measure functions:DC Voltage, AC Voltage, DC current, AC current, 2 line resistance, 4 line resistance, capacitance, diode, connectivity, frequency, period, temperature.

- Real 6 1/2 bit reading resolution;
- Front and back 2 sets of multimeter input interface,measure can a key switch;
- Up to 30,000 rdgs/s reading;
- Graph display function, trenddrawing function to paperless record teating data,statistic information and histogram;
- Double display measurement function,display 2 kinds of signal parameters at the same time;
- True RMS AC voltage and AC current measure;
- 0.1μV resolution,easy to use, parameters can be setted easily;
- Support dual display, Chinese and English menu;
- Built in help system, convenient access to information;
- 13 kinds of measure functions:DC Voltage, AC Voltage, DC current, AC current, 2 line resistance, 4 line resistance, capacitance, diode, connectivity, frequency, period, current range can be 10A;
- 4.3 inch 64K LCD;
- Safety standards: CAT II 300 V;
- Support standard SCPI Remote control command、 upper computer software、 Compatible with the latest mainstream multimeter command set;
- Configuration interface: USB Device, USB Host, LAN (HDM3065B) , GPIB (HDM3065H)

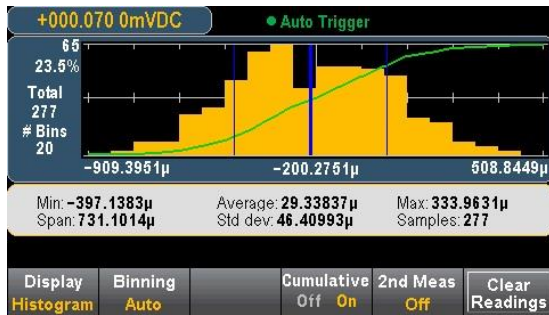
4.3 inch color LCD color



Front and back 2 sets of multimeter input



Histogram with statistic information



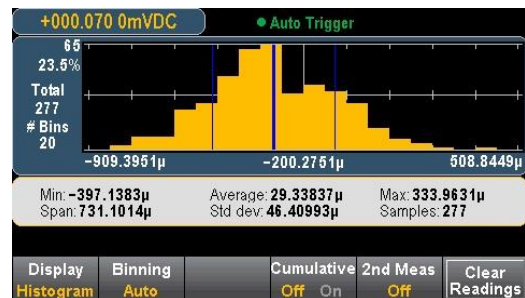
Histogram with run chart



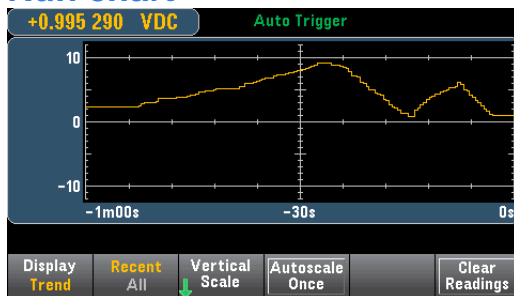
Real 6 1/2 bit reading resolution



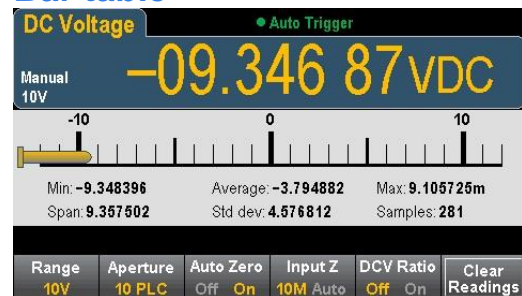
Histogram with statistic information



Run chart



Bar table



Math statistic function



Dual display function



Hold measure function



Product types choosing

Model	HDM3065H	HDM3065B	HDM3065A	HDM3065S	HDM3065
Resolution bit	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
DCV basic precision	35 ppm	35 ppm	35 ppm	35 ppm	35 ppm
Maximum reading rate	30,000 rdgs/s	30,000 rdgs/s	30,000 rdgs/s	30,000 rdgs/s	30,000 rdgs/s
Memory	10,000 readings	10,000 readings	10,000 readings	10,000 readings	10,000 readings
Double-display measurement function	√	√	√	√	√
Statistical graph	Histogram, bar graph, trend graph	Histogram, bar graph, trend graph	Histogram, bar graph, trend graph	Histogram, bar graph, trend graph	Histogram, bar graph, trend graph
Interface					
USB	√	√	√	√	√
232/485	√	√	√	√	√
LAN	√	√	×	×	×
GPIB	√	×	×	×	×
Front-panel input terminal	√	√	√	×	√
Rear-panel input terminal	√	√	√	√	×

Technical parameters

Range ² /frequency	24 hours ³	90 days	1 year	2 years	temperature coefficient/°C ⁴
DC Voltage	TCAL±1°C	TCAL±5°C	TCAL±5°C	TCAL±5°C	
100 mV	0.0030+0.0030	0.0040+0.0035	0.0050+0.0035	0.0065+0.0035	0.0005+0.0005
1 V	0.0020+0.0006	0.0030+0.0007	0.0040+0.0007	0.0055+0.0007	0.0005+0.0001
10 V	0.0015+0.0004	0.0020+0.0005	0.0035+0.0005	0.0050+0.0005	0.0005+0.0001
100 V	0.0020+0.0006	0.0035+0.0006	0.0045+0.0006	0.0060+0.0006	0.0005+0.0001
1000 V	0.0020+0.0006	0.0035+0.0010	0.0045+0.0010	0.0060+0.0010	0.0005+0.0001

True RMS AC voltage ^{2, 5, 6}						
100 mV, 1 V, 10 V, 100 V and 750 V range						
5 Hz - 10 Hz		0.35+0.02	0.35+0.03	0.35+0.03	0.35+0.03	0.035+0.003
10 Hz-20 KHz		0.04+0.02	0.05+0.03	0.06+0.03	0.07+0.03	0.005+0.003
20 KHz-50 KHz		0.10+0.04	0.11+0.05	0.12+0.05	0.13+0.05	0.011+0.005
50 KHz-100 KHz		0.55+0.08	0.60+0.08	0.60+0.08	0.60+0.08	0.060+0.008
100 KHz-300 KHz		4.00+0.50	4.00+0.50	4.00+0.50	4.00+0.50	0.200+0.020
Resistance ⁷	Testing current					
100 Ω	1 mA	0.0030+0.0030	0.008+0.004	0.010+0.004	0.012+0.004	0.0006+0.0005
1 kΩ	1 mA	0.0020+0.0005	0.008+0.001	0.010+0.001	0.012+0.001	0.0006+0.0001
10 kΩ	100 μA	0.0020+0.0005	0.008+0.001	0.010+0.001	0.012+0.001	0.0006+0.0001
100 kΩ	10 μA	0.0020+0.0005	0.008+0.001	0.010+0.001	0.012+0.001	0.0006+0.0001
1 MΩ	5 μA	0.002+0.001	0.008+0.001	0.010+0.001	0.012+0.001	0.0010+0.0002
10 MΩ	500 nA	0.015+0.001	0.020+0.001	0.040+0.001	0.060+0.001	0.0030+0.0004
100 MΩ	500 nA ¹⁰ MΩ	0.300+0.010	0.800+0.010	0.800+0.010	0.800+0.010	0.1500+0.0002
DC current	Potential drop of internal resistance					
100 μA	<0.11V	0.010+0.020	0.040+0.025	0.050+0.025	0.060+0.025	0.0020+0.0030
1 mA	<0.11V	0.007+0.006	0.030+0.006	0.050+0.006	0.060+0.006	0.0020+0.0005
10 mA	<0.05V	0.007+0.020	0.030+0.020	0.050+0.020	0.060+0.020	0.0020+0.0020
100 mA	<0.5V	0.010+0.004	0.030+0.005	0.050+0.005	0.060+0.005	0.0020+0.0005
1 A	<0.7V	0.050+0.006	0.080+0.010	0.100+0.010	0.120+0.010	0.0050+0.0010
3 A	<2.0V	0.180+0.020	0.200+0.020	0.200+0.020	0.230+0.020	0.0050+0.0020
10 A ⁸	<0.5V	0.050+0.010	0.120+0.010	0.120+0.010	0.150+0.010	0.0050+0.0010
Capacitance ¹⁵						
1.0000 nF		0.50+0.50	0.50+0.50	0.50+0.50	0.50+0.50	0.05+0.05
10.000 nF		0.40+0.10	0.40+0.10	0.40+0.10	0.40+0.10	0.05+0.01

100.00 nF	0.40+0.10	0.40+0.10	0.40+0.10	0.40+0.10	0.05+0.01
1.0000 µF	0.40+0.10	0.40+0.10	0.40+0.10	0.40+0.10	0.05+0.01
10.000 µF	0.40+0.10	0.40+0.10	0.40+0.10	0.40+0.10	0.05+0.01
100.00 µF	0.40+0.10	0.40+0.10	0.40+0.10	0.40+0.10	0.05+0.01
Range ² /frequency	24hours ³	90days	1year	2years	temperature coefficient/°C4
	TCAL ± 1°C	TCAL ± 5°C	TCAL ± 5°C	TCAL ± 5°C	
True RMS AC current ^{2, 6, 9}			Potentia drop of internal resistance		
100 µA, 1 mA, 10 mA and 100 mA range			<0.011,<0.11, <0.05,<0.5V		
3 Hz - 5 kHz	0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.015+0.006
5-10kHz	0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.030+0.006
(typicalvalue)					
1A range	<0.7V				
3Hz-5kHz	0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.015+0.006
5 kHz - 10 kHz (Typicalvalue)	0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.030+0.006
3 A Range	<2.0V				
3 Hz - 5 kHz	0.23+0.04	0.23+0.04	0.23+0.04	0.23+0.04	0.015+0.006
5 kHz - 10 kHz	0.23+0.04	0.23+0.04	0.23+0.04	0.23+0.04	0.030+0.006
(Typicalvalue)					
10 A Range ⁸	<0.5V				
3 Hz - 5 kHz	0.15+0.04	0.15+0.04	0.15+0.04	0.15+0.04	0.015+0.006
5 kHz -10 kHz (Typicalvalue)	0.15+0.04	0.15+0.04	0.15+0.04	0.15+0.04	0.030+0.006
1A range	<0.7V				
3Hz-5kHz	0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.015+0.006
5 kHz - 10 kHz (Typicalvalue)	0.10+0.04	0.10+0.04	0.10+0.04	0.10+0.04	0.030+0.006
3 A Range	<2.0V				

3 Hz - 5 kHz	0.23+0.04	0.23+0.04	0.23+0.04	0.23+0.04	0.015+0.006
5 kHz - 10 kHz	0.23+0.04	0.23+0.04	0.23+0.04	0.23+0.04	0.030+0.006
(Typicalvalue)					
10 A Range ⁸	<0.5V				
3 Hz - 5 kHz	0.15+0.04	0.15+0.04	0.15+0.04	0.15+0.04	0.015+0.006
5 kHz -10 kHz (Typicalvalue)	0.15+0.04	0.15+0.04	0.15+0.04	0.15+0.04	0.030+0.006
Connectivity					
1 kΩ	0.002+0.030	0.008+0.030	0.010+0.030	0.012+0.030	0.0010+0.0020
DiodeTesting ¹⁰					
5 V	0.002+0.030	0.008+0.030	0.010+0.030	0.012+0.030	0.0010+0.0020
DCrate (Typicalvalue)					
(Normalize precision input) + (Normalize reference accuracy)					
Temperature ¹¹					
PT100 (DIN/IEC751)	Theprobe accuracy+0.05°C				
5 kΩ thermistor	Theprobe accuracy+0.1°C				
Frequency : Technical Indicator± (%reading) ^{12.13}					
100mV、1V、10、100V and 750 V range ¹⁴					
3 Hz-10 Hz	0.1	0.1	0.1	0.1	0.1
10 Hz-100 Hz	0.03	0.03	0.03	0.03	0.035
100 Hz-1 KHz	0	0.008	0.01	0.01	0.015
1 KHz-300 KHz	0.002	0.006	0.01	0.01	0.015
Square wave ¹⁵	0.001	0.006	0.01	0.01	0.015
Extra Gate timeerror ± (%reading) ¹³					
Frequency	1second	0.1second	0.01second		
3 Hz-40 Hz	0	0.2	0.2		
40 Hz-100 Hz	0	0.06	0.2		

100 Hz-1 KHz	0	0.02	0.2
1 KHz-300 KHz	0	0.004	0.03
Square wave ¹⁵	0	0	0

- 1.For DC:technical indicators are valid after 60 minutes of preheating, set to 10 or 100NPLC in the integral period, and enable automatic zero setting.For AC:technical indicators are effective when preheating for 60 minutes, using slow ac filter and sine wave
- 2.All ranges have 20% overrange except for 1,000DCV、750ACV、10ADC、3AAC、10AAC and diode testing.
- 3.Relative to the calibration standard
- 4.Outside of the range of TCAL±5°C,each degree (°C) increases a coefficient.
- 5.Technical indicators are valid when sinusoidal wave is input >1.5% range and >1mVrms.The 750ACV range is limited to 8×10^7 v-hz.
- 6.Low frequency performance:three filter Settings are provided:3Hz、20Hz、200Hz.The frequency beyond the filter setting has been specified, no additional errors will occur.
- 7.Technical indicators are suitable for 4 lines or 2 lines measurement (peration bias returns to zero) resistance measurement.If there is no mathematical null, 2 lines resistance measurement will increase 0.2 Ω additional error.
- 8.The 10A range is provided on the front connector only.Each amplifier adds a 2mA base current value, or input current >5Arms.
- 9.Technical indicators are valid when sine wave is input >1.5% range and >10μAAC. 10.Technical indicators are suitable for the voltage measured at the input end.1mA test current is typical.The change of current source will lead to the change of voltage drop of diode junction
- 11.The selected probe limits the actual measuring range and measurement errors.Probe accuracy has included all measurement and ITS-90 temperature conversion errors.PT100Ro can be set to 100Ω±5Ω, to eliminate the original probe error.
- 12.Unless otherwise indicated, the technical indicators are valid after 60 minutes of warm-up and with sinusoidal input.Technical indicators are suitable for 1s gate time.(7 bits)
- 13.Suitable for sinusoidal and square wave input ≥ 100 mV.For 10mV to 100mV inputs, multiply the reading error % by 10.
- 14.The range is 10% to 120% below 750ACV.
- 15.The square wave input is specified as 10Hz-300kHz

