

MATRIX

麦创科技

Bench Top Digital Multimeter

NEW





Introduction

Digit multimeter, as one of the essential products in testing field, which is widely used in modern times and gains much popularity among engineers due to its advantages of high precision, high speed, high resistance, digit display, accuracy of reading, high anti-interference capability, high automation of measurement, etc. The application requirements for digit multimeter are also developed and changed a lot. Matrix new models are equipped with 3.5 inches color display with high resolution and embedded intelligent operation system, providing more information and functions, easier operation, wider testing range and more flexible and convenient system building. It is a new digit multimeter leading the developing tendency above.

The double-benchmark calibration function peculiar to the product enables users to realize calibration of all the functions with only one 10V standard voltage and one 10k Ω standard resistance, with the calibration time for the whole machine not exceeding 1 hour.

Features:

- 6 1/2 resolution (MDM8165/MDM8165A), Or 5 1/2 resolution (MDM8155/MDM8155A)
 - 3.5-inch color display screen (resolution ratio is 320*480), which is powerful enough to provide greater coverage of content, flexible display of a variety of graphical interfaces, and good display effects. The users can also customize the display interface depending on their needs, and choose from various display functions such as graphics, figures, math and other functions simultaneously on the screen.
 - Bi-parameter display can display two parameters in one input signal (such as display AC voltage value and AC frequency value during AC voltage measurement).
 - Conduct remote operation through interfaces of IEEE 488 (MDM8165/MDM8155), RS-232, LAN and USB Device.
 - With functions of trigger input and output of measuring completion.
 - The front-panel menu is with USB port for data storage, procedure updating and configuration.
 - Customers can update host software by themselves.
 - Two-line and four-line measurement for resistance, 10 Ω and 1G Ω measurement range for extension
 - Measurement of period and frequency, and frequency can reach to 300KHz.
 - Capacitance measurement.
 - For temperature measurement, users can set sensor measurement by themselves.
 - Maximum current measurement capacity reaches to 10A.
 - Many math functions, such as statistics (maximum value, minimum value and average value), zero elimination, dB, dBm and limit.
 - Graphic display, such as run chart, histogram, history curve, listing and other display methods.
 - Support SCPI programming language and many command sets (Agilent 34401A and Fluke 45).
- The front and rear panel menus of the instrument are all equipped with input terminal (MDM8165/MDM8155).
- With internal and external calibration functions.

Technical specifications

Model		MDM8155	MDM8155A	MDM8165	MDM8165A
Display		3.5 inches color screen (with resolution of 320*480)			
Displayed digit		5 1/2		6 1/2	
Signal terminal		Front/Rear	Front	Front/Rear	Front
Maximum measuring speed		2300 readings/second			
Function	Item	Uncertainty, ± (% measurement value + % measurement range)			
DCV	Uncertainty	0.015+0.003		0.0030+0.0005	
	Measurement range	0mV-1000V			
	Maximum resolution	1uV		100nV	
ACV	Uncertainty	0.2+0.05		0.06+0.03	
	Measurement range	1mV-750V			
	Maximum resolution	1uV		100nV	
	Frequency range	3Hz-300kHz			
DCI	Uncertainty	0.05+0.005		0.05+0.006	
	Measurement range	0uA-10A			
	Maximum resolution	1nA		100pA	
ACI	Uncertainty	0.30+0.06		0.10+0.04	
	Measurement range	1uA-10A			
	Maximum resolution	1uA		100pA	
	Frequency range	3Hz-10kHz			
Resistance	Uncertainty	0.02+0.003		0.01+0.001	
	Measurement range	0Ω-1GΩ			
	Maximum resolution	100uΩ		10uΩ	
Frequency/period	Uncertainty	0.01		0.07	
	Measurement range	3Hz-1MHz			
	Maximum resolution	10uHz		1uHz	
Capacitance	Uncertainty	1.5+0.5		1+0.3	
	Measurement range	0nF-100mF			
	Maximum resolution	10pF		1pF	
On-off/Diode		Yes			
Proportion (DC: DC)	Reference terminal range	100mV-10V			
	Input terminal range	100mV-1000V			
Temperature	Type	Platinum resistance, thermistor and user-defined sensor			
	Maximum resolution	0.01℃		0.001℃	
Math function		Relative (ax+b), maximum/minimum/average, standard deviation, dB, dBm, reading-keeping and limits test			
Graph		Histogram and tendency chart			
Interface		RS-232, IEEE 488, LAN, USB Device, USB Host, Trig IN/OUT			
Programming language		SCPI compatible with Agilent 34401A and Fluke 45			



Purchase Information

Model	Description
MDM8165	6 1/2 precise digit multimeter, GPIB interface, signal input terminal on rear panel menu.
MDM8165A	6 1/2 precise digit multimeter, without GPIB interface, without signal input terminal on rear panel menu.
MDM8155	5 1/2 precise digit multimeter, GPIB interface, signal input terminal on rear panel menu.
MDM8155A	5 1/2 precise digit multimeter, without GPIB interface, without signal input terminal on rear panel menu.

Standard accessories:

- One piece Power cord
- One set three-core pen
- Two pieces backup power fuse

Optional accessories:

- GPIB cable
- cabinet-installing suite
- PT100 temperature probe
- RS232 serial cable
- USB cable