



SDM3055 Digital Multimeter

Application

- Research & Development Laboratory
- Detection and Maintenance
- Calibration Laboratory
- Automatic Production Test

Key Features

- Real 5½ digits readings resolution
- Up to 150 rdgs/s measurement speed
- True-RMS AC Voltage and AC Current measuring
- 1 Gb Nand flash size, Mass storage configuration files and data files
- Built-in cold terminal compensation for thermocouple
- Standard interface: USB Device, USB Host, LAN, GPIB (only for SDM3055A)
- Support remote control via commands and compatible with commands of main stream multimeters

Digital Multimeter

Specifications

DC Characteristic

Accuracy± (% of Reading +% of Range) [1]

Function	Range [2]	Test current or Load voltage	1 Year 23°C±5°C	Temperature coefficient 0°C~18°C 28°C~ 50°C
DC Voltage	200 mV		0.015+0.004	0.0015+0.0005
	2 V		0.015+0.003	0.0010+0.0005
	20 V		0.015+0.004	0.0020+0.0005
	200 V		0.015+0.003	0.0015+0.0005
	1000 V[4]		0.015+0.003	0.0015+0.0005
DC Current	200 uA	<8 mV	0.055+0.005	0.003+0.001
	2 mA	<80 mV	0.055+0.005	0.002+0.001
	20 mA	<0.05 V	0.095+0.020	0.008+0.001
	200 mA	<0.5 V	0.070+0.008	0.005+0.001
	2A	<0.1 V	0.170+0.020	0.013+0.001
	10 A[5]	<0.3 V	0.250+0.010	0.008+0.001
Resistance [3]	200 Ω	1 mA	0.030+0.005	0.0030+0.0006
	2 KΩ	1 mA	0.020+0.003	0.0030+0.0005
	20 KΩ	100 uA	0.020+0.003	0.0030+0.0005
	200 KΩ	10 uA	0.020+0.010	0.0030+0.0005
	2 MΩ	1 uA	0.040+0.004	0.0040+0.0005
	10 MΩ	200 nA	0.250+0.003	0.0100+0.0005
Diode Test	2.0 V[6]	1 mA	0.05+0.01	0.0050+0.0005
Continuity Test	2000 Ω	1 mA	0.05+0.01	0.0050+0.0005

Remarks:

[1]Specifications are for 0.5 hour warm-up, "Slow" measurement rate and calibration temperature 18 °C~28°C.

[2]20% over range on all ranges except for DCV 1000 V, ACV 750 V, DCI 10 A and ACI 10 A.

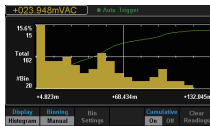
[3]Specifications are for 4-wire measure or 2-wire measure under "REF" operation. ±0.2 Ω of extra errors will be generated if perform 2-wire measure without "REF" operation.

[4]Plus 0.02 mV of error per 1 V after the first ±500 VDC.

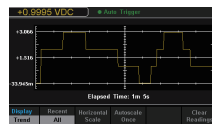
[5]30 seconds OFF after 30 seconds ON is recommend for the continuous current that higher than DC 7 A or AC RMS 7 A.

[6]Accuracy specifications are only for voltage measuring at input terminal. The typical value of current under measure is 1 mA. Voltage drop at diode junction may vary with current supply.

Features



Histogram



Trend Chart



Bar Chart



Interface

Standard Accessories





SDM3045X Digital Multimeter

Application

- Research Laboratory
- Development Laboratory
- Detection and Maintenance
- Calibration Laboratory
- Automatic Production Test

Key Features

- Real 4 1/2 digit readings resolution
- Up to 150 rdgs/s measurement speed
- True-RMS AC Voltage and AC Current measuring
- 1 Gb Nand flash size, Mass storage configuration files and data files
- Built-in cold terminal compensation for thermocouple
- With easy, convenient and flexible PC software: EasySDM
- Standard interface: USB Device, USB Host, LAN
- Supports remote control via commands and compatible with commands of main stream multimeters

Measuring Method and other Characteristics

DC Voltage	
Input Resistance	600 mV 10 M Ω or 10 G Ω selectable 6 V, 60 V, 600 V and 1000 V Range 10 M Ω \pm 2%
Input Bias Current	<90 pA, 25°C
Input Protection	1000 V on all ranges
CMRR	120 dB (For the 1 K Ω unbalanced resistance in LO lead, max \pm 500 VDC)
NMRR	60 dB at "slow" measurement rate
Resistance	
Testing Method	4-wire resistance or 2-wire resistance selectable
Input Protection	1000 V on all ranges
DC Current	
Shunt Resistor	600 μ A sampling voltage < 33 mV
	6 mA sampling voltage < 0.33 V
	1 Ω for 60 mA, 600 mA 1 Ω
	0.01 Ω for 6 A, 10 A
Input Protection	Rear panel : accessible 10 A, 250 V fast-melt fuse
	Internal : 12 A, 250 V slow-melt fuse
Continuity/Diode Test	
Measurement Method	1 mA \pm 5% constant-current source or open-circuit voltage
Beeper	yes
Continuity Threshold	Adjustable
Input Protection	1000 V
True-RMS AC Voltage	
Measurement Method	AC Coupled true RMS measure – up to 1000 V DC bias are permitted on every range.
Wave Crest Factor	\leq 3 at full scale
Input Impedance	1 M Ω \pm 2% in parallel with <100 pF on all ranges
AC Filter Bandwidth	20 Hz ~ 100 KHz
CMRR	60 dB (For the 1 K Ω imbalance resistance among Lo lead and <60 Hz, Max \pm 500 VDC)
True-RMS AC Current	
Measurement Method	DC Coupled to the fuse and shunt; AC Coupled the True-RMS measurement (measures the AC components only)
Wave Crest Factor	\leq 3 at full scale
Max Input	<10 A (include DC component)
Shunt Resistor	1 Ω for 60 mA, 600 mA 1 Ω ; 0.01 Ω for 6 A, 10 A
Input Protection	Rear panel : accessible 10 A, 250 V fast-melt fuse
	Internal : 12 A, 250 V slow-melt fuse
Frequency/Period	
Measurement Method	Reciprocal-counting technique, AC Coupled input, AC voltage or AC current measurement function
Measure Attentions	Error are leaded into all frequency counters when measuring low voltage or low frequency signal.
Capacitance Measuring	
Measurement Method	Measure the rate of change of voltage generated during the current flowing the capacitance
Connection Type	2-wire
Input Protection	1000 V on all ranges

Order Information

Product name	SIGLENT SDM3045X Digital Multimeter
Models	SDM3045X
Standard Accessories	A power Cord that fits the standard of destination country
	Two Test Leads, Two Alligator Clips
	A USB Cable
	A Quick Start
	A Guaranty Card
	A CD (Including EasySDM computer software system)