



6¹/₂ digit resolution, Essential device of "Electronic Measurement" Supporting basic measurement with variety of options

D I G I T A L M U L T I M E T E R

DME1600

- **DME1600**
- **DME1600GC** (with GPIB)

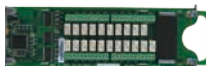
The DME1600 is a digital multi-meter with a resolution of 6 1/2 digit. It can be performed up to 2000 times per second at the setting condition of 4 1/2 digit as fastest measurement, and it can measure 50 times per second when it is set for the 6 1/2 digit. The DME1600 offers fully function of measurement for the voltage, current, resistance, frequency and temperature which can be used various application of measurement and evaluation in design, development and debugging of electronics devices. The DME1600 provides USB and GPIB interface* as standard feature for automated measurement besides manual operation. Furthermore, the DME1600 offers wide range of options such as 20-channel multi-point scanner card supporting the basic measurement.

- Resolution : 6 1/2 digit
- Display : 5 x 7 dot matrix VFD, dual display with 3-color
- Basic measurement function
 - DC voltage : 0.1 V, 1 V, 10 V, 100 V, 1000 V
 - AC voltage : 0.1 V, 1 V, 10 V, 100 V, 750 V
 - DC current : 10 mA, 100 mA, 1 A, 3 A
 - AC current : 1 A, 3 A
 - 2-wire / 4-wire resistance : 100 Ω, 1 kΩ, 10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ, 100 MΩ
 - Frequency : 3 Hz to 300 kHz
 - Continuity test
 - Diode test
 - Temperature test

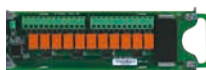
- Built-in USB Interface (GPIB Interface*: selected model)

*Model with GPIB Interface : DME1600GC

Options



20-channel multi-point scanner card
[DME1600-OPT09]



10-channel multi-point scanner card
[DME1600-OPT01]

10-channel thermocouple multi-point scanner card
[DME1600-OPT12]



Kelvin probe
(for 4-wire resistance measurement)
[DME1600-OPT07]



4-wire test lead
[DME1600-OPT08]



Thermocouple adapter
[DME1600-OPT02]



K type thermocouple cable
[DME1600-OPT11]

Specifications

DC Characteristics

Accuracy

- ±(% of reading + % of range)
- The specifications are for the following conditions: 6 1/2 digit resolution, minimum two-hour warm up, and auto trigger mode.
- Use the null function for the 2-wire / 4-wire resistance measurement method.

DC voltage			
Range	Resolution	Input resistance	1 year (23 °C ± 5 °C)
100.0000 mV	0.1 μV	> 10 GΩ	0.0050+0.0035
1.000000 V	1.0 μV	> 10 GΩ	0.0040+0.0007
10.00000 V	10 μV	> 10 GΩ	0.0035+0.0005
100.0000 V	100 μV	10 MΩ	0.0045+0.0006
1000.000 V	1 mV	10 MΩ	0.0045+0.0010
DC current			
Range	Resolution	Input resistance	1 year (23 °C ± 5 °C)
10.00000 mA	10 nA	5.1 Ω	0.050+0.020
100.0000 mA	100 nA	5.1 Ω	0.050+0.005
1.000000 A	1 μA	0.1 Ω	0.100+0.010
3.000000 A	10 μA	0.1 Ω	0.120+0.020
Resistance			
Range	Resolution	Input resistance	1 year (23 °C ± 5 °C)
100.0000 Ω	100 μΩ	1 mA	0.010+0.004
1.000000 kΩ	1 mΩ	1 mA	0.010+0.001
10.00000 kΩ	10 mΩ	100 μA	0.010+0.001
100.0000 kΩ	100 mΩ	10 μA	0.010+0.001
1.000000 MΩ	1 Ω	5 μA	0.010+0.001
10.00000 MΩ	10 Ω	500 nA	0.040+0.001
100.0000 MΩ	100 Ω	500 nA 10 MΩ	0.800+0.010
Diode test			
Range	Resolution	Test current	1 year (23 °C ± 5 °C)
1.0000 V	10 μV	1 mA	0.010+0.020
Continuity test			
Range	Resolution	Test current	1 year (23 °C ± 5 °C)
1 kΩ	10 mΩ	1 mA	0.010+0.030

Measurement characteristics

Item	Specification
DC voltage measurement : Overrange	Permits voltages that are up to 20 % over the range except when the 1000 V range is in use
DC voltage measurement : Input bias current	Less than 30 pA (at 25 °C)
DC voltage measurement : Input voltage protection	1000 V for all ranges
DC current measurement : Overrange	Permits currents that are up to 20 % over the range except when the 3 A range is in use
Resistance measurement : Maximum test lead resistance	10 Ω (100 Ω range), 100 Ω (1 kΩ range), 1 kΩ (other ranges)
Resistance measurement : Input voltage protection	1000 V for all ranges

Frequency and period characteristics

Accuracy

- ±(% of reading)
- The specifications are for the following conditions: 6 1/2 digit resolution and minimum two-hour warm up.

Range	Frequency	1 year (23 °C ± 5 °C)
100 mVrms to 750 Vrms	3 Hz to 5 Hz	0.10
	5 Hz to 10 Hz	0.05
	10 Hz to 40 Hz	0.03
	40 Hz to 300 kHz	0.01

Measurement characteristics

Item	Specification
Overrange	Permits voltages that are up to 20 % over the range except when the 750 Vrms range is in use
Measurement frequency	The maximum frequency for the 750 Vrms range is 100 kHz.

AC Characteristics

Accuracy

- ±(% of reading + % of range)
- The specifications are for the following conditions: 6 1/2 digit resolution, minimum two-hour warm up, and slow AC filter (3 Hz to 300 kHz bandwidth).
- Measured using a sine wave input whose amplitude is greater than 5% of range.

AC voltage (true rms value)			
Range	Resolution	Frequency	1 year (23 °C ± 5 °C)
100.0000 mV	0.1 μV	3 Hz to 5 Hz	1.00+0.04
		5 Hz to 10 Hz	0.35+0.04
		10 Hz to 20 kHz	0.06+0.04
		20 kHz to 50 kHz	0.12+0.05
		50 kHz to 100 kHz	0.60+0.08
1.000000 V to 750.000 V	1.0 μV to 1 mV	100 kHz to 300 kHz	4.00+0.50
		3 Hz to 5 Hz	1.00+0.03
		5 Hz to 10 Hz	0.35+0.03
		10 Hz to 20 kHz	0.06+0.03
		20 kHz to 50 kHz	0.12+0.05
3.000000 A	10 μA	50 kHz to 100 kHz	0.60+0.08
		100 kHz to 300 kHz	4.00+0.50
		3 Hz to 5 Hz	1.00+0.04
		5 Hz to 10 Hz	0.30+0.04
		10 Hz to 5 kHz	0.10+0.04

Measurement characteristics

Item	Specification
AC voltage measurement: Addition of range	For input that is between 1 % and 5 % of range, add 0.1 % of range when the input frequency is less than 50 kHz, or add 0.13 % range when the input frequency is between 50 kHz and 100 kHz.
AC voltage measurement: Overrange	Permits voltages that are up to 20 % over the range except when the 750 Vrms range is in use
AC voltage measurement: Measurement frequency	The maximum frequency for the 750 Vrms range is 100 kHz.
AC current measurement: Overrange	Permits voltages that are up to 20 % over the range except when the 750 Vrms range is in use

General specifications

Item	Specification
Input voltage range	100 Vac/120 Vac/220 Vac/240 Vac±10 %, single phase
Input frequency range	50 Hz/60 Hz ± 10 %
Power consumption	25 VAmx
Operating temperature range	0 °C to 50 °C
Operating humidity range	80 %rh or less (0 °C to 31 °C, no condensation)
Storage temperature range	-40 °C to 70 °C (80 %rh or less, no condensation)
Operating altitude	Up to 2000 m
Dimensions/Weight	224(8.82)W×113(4.45)H×373(14.69)D mm(inch) Approx. 3.7 kg (8.2 lb)
Interface	USB 2.0, GPIB (factory option)
Accessories	"Power cord" 1 pc. (with three-pronged plug), "Standard test leads" (1 red, 1 black), "USB cable" 1pc., "Fuse"(spare) 1pc., "CD-ROM" 1pc., "Packing list, safety precautions" (1 English, 1 Japanese) *Contains the user's manual and the remote interface manual.
Electromagnetic compatibility (EMC)	Complies with the requirements of the following directive and standard. EMC Directive 2014/30/EU EN 61326-1 (Class B) EN 55011 (Class B, Group 1) EN 61000-3-2, EN 61000-3-3
Safety	Complies with the requirements of the following directive and standard. Low Voltage Directive 2014/35/EU EN 61010-1 (Class I, Pollution degree 2), EN 61010-2-030



KIKUSUI ELECTRONICS CORPORATION

Southwood 4F, 6-1 Chigasaki-chuo, Tsuzuki-ku, Yokohama, 224-0032, Japan
Phone: (+81)45-482-6353, Facsimile: (+81)45-482-6261, www.kikusui.co.jp

KIKUSUI AMERICA, INC. 1-310-214-0000 www.kikusuiamerica.com

3625 Del Amo Blvd, Suite 160, Torrance, CA 90503
Phone: 310-214-0000 Facsimile: 310-214-0014

KIKUSUI TRADING (SHANGHAI) Co., Ltd. www.kikusui.cn

Room 305, Shengqiao Building, No.137, Xianxia Road, Shanghai City, China
Phone: 021-5887-9067 Facsimile: 021-5887-9069

For our local sales distributors and representatives, please refer to "sales network" of our website.

■ Distributor:

■ All products contained in this catalogue are equipment and devices that are premised on use under the supervision of qualified personnel, and are not designed or produced for home-use or use by general consumers. ■ Specifications, design and so forth are subject to change without prior notice to improve the quality. ■ Product names and prices are subject to change and production may be discontinued when necessary. ■ Product names, company names and brand names contained in this catalogue represent the respective registered trade name or trade mark. ■ Colors, textures and so forth of photographs shown in this catalogue may differ from actual products due to a limited fidelity in printing. ■ Although every effort has been made to provide the information as accurate as possible for this catalogue, certain details have unavoidably been omitted due to limitations in space. ■ If you find any misprints or errors in this catalogue, it would be appreciated if you would inform us. ■ Please contact our distributors to confirm specifications, price, accessories or anything that may be unclear when placing an order or concluding a purchasing agreement.