

NEW



Quality and reliability is our tradition

KYORITSU

DIGITAL MULTIMETERS KEW MATE SERIES

UP to 120A AC/DC Multimeters

Unique Open Jaw Technology for AC/DC current measurements

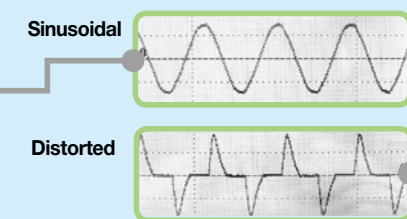
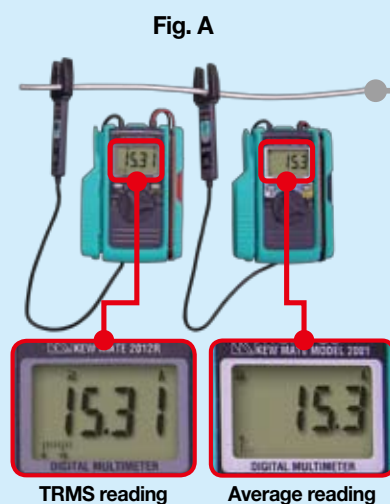
KYORITSU ELECTRICAL INSTRUMENTS WORKS,LTD.

<http://www.kew-ltd.co.jp>

Innovative Multimeters with current measurements up to 120A
The open jaws are thin, perfect to clamp wires even in tight spaces
Kewmates are very handy and as reliable as traditional full size

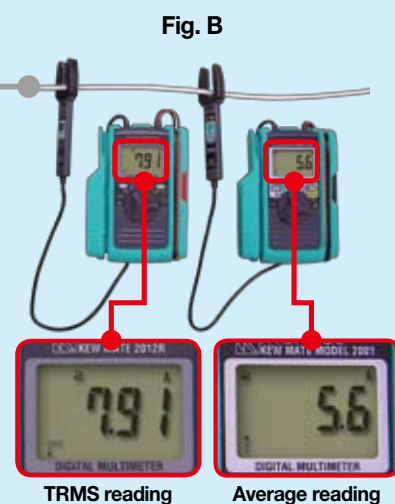


● TRMS (True Root Mean Square) (Only for 2012R)



For sinusoidal signals, TRMS and Averaging instruments read the same value, see figure A.
 For distorted signals, only the TRMS instrument reads the correct value, see figure B.

Kewmate 2012R with TRMS readings is recommended for measuring distorted currents and voltages generated by PCs, energy saving lighting, inverters, several home appliances and generally all devices powered by switching power supplies.



● KewMates 2000/2001/2012R come with Extra Features!!!!

- They can measure AC/DC currents up to: 60A, with Max. Resolution 0.1A AC/DC (for 2000)
 100A, with Max. Resolution 0.1A AC/DC (for 2001)
 120A, with Max. Resolution 0.01A AC/DC (for 2012R)
- Diode/Capacitance measurements (Only for 2012R)
- All equipped with a shock absorbing holster that incorporates test leads and open clamp sensor.

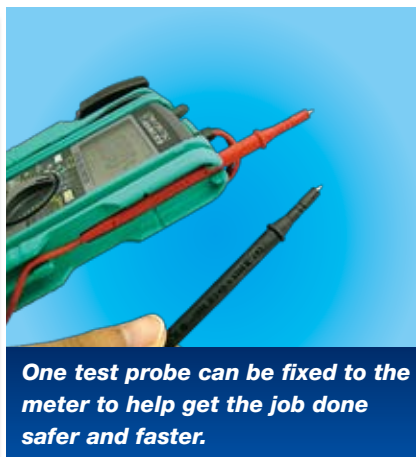
A AC/DC.
ces.
e Multimeters.



The open jaws of Kewmates are perfect in tight spaces where a normal clamp meter is too big or wires are too short.



Insulated and removable caps prevent shortening of IC legs for proving high density component boards.



One test probe can be fixed to the meter to help get the job done safer and faster.



Quick one touch DC zero adjustment for 2012R (rotary knob for 2000 and 2001).

● Applications

- Everyday multimeters for technicians, the Kewmates are designed for electrical and electronic testing in field service and all applications where extra features, such as AC/DC current measurements up to 60/100/120A, simplifies working.
- Ideal for electrical and electronic troubleshooting in residential, commercial and industrial installations.
- Thanks to the open clamp sensor, Kewmates are perfect for reading currents in tight spaces where a normal clamp meter would be unsafe or too big to use such as sub-distribution boards, consumer units, final circuits, connection boxes, control panels or simply where the wires are too short.
- Optimized for measuring the output of a solar panel in photovoltaic installations.
- DC current measurements permit electrical testing and servicing of cars, electric forklifts, small electric cars or trolleys for cleaning, DC motor adjustable speed controllers, golf cars and trolleys, small electric cars and chairlifts for the disabled, work platforms, UPS's, electric scooters and bikes, etc.
- Accurate True RMS readings of AC current and voltage also in presence of harmonics created by PC's, Inverter, Electronic Ballast for florescent lamps, UPS's, etc. (only 2012R)



Measuring current in a Switchboard



Servicing a Forklift



Servicing a car

● 2000/2001/2012R Specifications

	2000	2001	2012R
	 Φ6 MAX AC/DC 60A CE	 Φ10 MAX AC/DC 100A CE	 TRUE RMS Φ12 MAX AC/DC 120A CE
DC V	340.0mV/3.400/34.00/340.0/600V (Input impedance: approx. 10MΩ) ±1.5%rdg±4dgt		600.0mV/6.000/60.00/600.0V (Input impedance: approx. 10MΩ) ±1.0%rdg±3dgt
AC V	3.400/34.00/340.0/600V (Input impedance: approx.10MΩ) ±1.5%rdg±5dgt (50~400Hz)		6.000/60.00/600.0V (Input impedance: approx.10MΩ) ±1.5%rdg±5dgt (45~400Hz)
DC A	60.0A ±2%rdg±5dgt	100.0A ±2%rdg±5dgt	60.00/120.0A ±2.0%rdg±8dgt (60A) ±2.0%rdg±5dgt (120A)
AC A	60.0A ±2%rdg±5dgt (50/60Hz)	100.0A ±2%rdg±5dgt (50/60Hz)	60.00/120.0A ±2.0%rdg±5dgt (45~65Hz)
Ω	340.0Ω/3.400/34.00/340.0kΩ/3.400/34.00MΩ ±1%rdg±3dgt (0~340kΩ) ±5%rdg±5dgt (3.400MΩ) ±15%rdg±5dgt (34.00MΩ)		600.0Ω/6.000/60.00/600.0kΩ/6.000/60.00MΩ ±1.0%rdg±5dgt (600Ω/6/60/600kΩ) ±2.0%rdg±5dgt (6MΩ) ±3.0%rdg±5dgt (60MΩ)
Continuity buzzer	Buzzer sounds below 30±10Ω		Buzzer sounds below 35±25Ω
Diode test	—		2V ±3.0%rdg±5dgt Open-loop voltage: approx. 2.7V
Capacitance	—		400.0nF/4.000/40.00μF ±2.5%rdg±10dgt
Frequency	(AC A) 3.400/10.00kHz ±0.1%rdg±1dgt (AC V) 3.400/34.00/300.0kHz ±0.1%rdg±1dgt (Input sensitivity Current: more than 15A Voltage: more than 30V)	(Input sensitivity Current: more than 25A Voltage: more than 30V)	(AC A) 100/1000Hz/10kHz ±0.2%rdg±2dgt (100Hz) ±0.1%rdg±1dgt (1000Hz/10kHz) (AC V) 100/1000Hz/10/100/300.0kHz ±0.2%rdg±2dgt (100Hz) ±0.1%rdg±1dgt (1000Hz/10/100/300.0kHz) (Input sensitivity) Current: more than 2A Voltage: more than 2V[~10kHz]/more than 20V[10k~300kHz]
Conductor size	Φ6mm max.	Φ10mm max.	Φ12mm max.
Withstand voltage	3700V AC for 1 minute		3540V AC for 5 seconds
Applicable standards	IEC 61010-1 CAT.Ⅲ 300V, CAT.Ⅱ 600V Pollution degree 2 IEC 61010-031, IEC 61010-2-032, IEC 61326		IEC 61010-1 CAT.Ⅲ 300V, CAT.Ⅱ 600V Pollution degree 2 IEC 61010-031, IEC 61010-2-032, IEC 61326
Power source	R03 (1.5V)×2 *Continuous measuring time: approx. 45hours (Auto power save: approx. 10 minutes)		R03 (1.5V)×2 *Continuous measuring time: DCV: approx. 150hours, ACA: approx. 25hours (Auto power save: approx. 15 minutes)
Dimensions	128 (L)×87 (W)×24 (D)mm	128 (L)×91 (W)×27 (D)mm	128 (L)×92 (W)×27 (D)mm
Weight	210g approx. (including batteries)	220g approx. (including batteries)	220g approx. (including batteries)
Accessories	R03 (1.5V)×2 Instruction manual		
Optional	9107 (Carrying case[Soft])		



Safety Warnings :

Please read the "Safety Warnings" in the instruction manual supplied with the instrument thoroughly and completely for correct use. Failure to follow the safety rules can cause fire, trouble, electrical shock, etc. Therefore, make sure to operate the instrument on a correct power supply and voltage rating marked on each instrument.

■ For inquiries or orders :



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In consideration of the environment, soy ink and recycled paper were used in this publication.

● The contents of this leaflet are subject to change without notice.

KEW MATE 2000/2001/2012R-1E Jan. 10 AD

Selection Guide of Multimeters

	Analogue Multimeters		Digital Multimeters										
MODEL	1109S	1110	1018 1018H	1019R	1020R	1021R	1030	1009	1011 1012	1051 1052	1061 1062	2000 2001	2012R
Appearance													
Detection method	MEAN	MEAN	MEAN	RMS	RMS	RMS	MEAN	MEAN	MEAN(1011) RMS(1012)	RMS(1051) RMS/MEAN (1052)	RMS(1061) RMS/MEAN (1062)	MEAN	RMS
Maximum count display	-	-	4000	6000	6000	6000	4000	4000	6000	6000	50000	3400	6000
DC Basic accuracy	±3% of FS	±3% of FS	0.8%	0.8%	0.5%	0.5%	0.8%	0.6%	0.5%	0.09%	0.02%	1.5%	1.0%
Frequency response	30 - 20kHz	50 - 5kHz	50 - 400Hz	45 - 500Hz	40 - 500Hz	40 - 500Hz	50 - 400Hz	50 - 400Hz	40 - 1kHz	40 - 1kHz	10 - 20kHz(1061) 10 - 100kHz(1062)	50 - 400Hz	45 - 400Hz
Measurement													
DCV	1000V	600V	600V	600V	1000V	600V	600V	600V	600V	1000V	1000.0V	600V	600V
Resolution	0.002V	0.005V	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	0.1mV	0.001mV	0.1mV	0.1mV
ACV	1000V	600V	600V	600V	1000V	600V	600V	600V	600V	1000V	1000.0V	600V	600V
Resolution	0.2V	0.2V	0.001V	0.001V	0.1mV	0.1mV	0.001V	0.1mV	0.001V	0.1mV	0.01mV(1061) 0.001mV(1062)	0.001V	0.001V
DCA	250mA	300mA	-	-	-	10A	-	10A	10A	10A	10A	60A(2000) 100A(2001)	120A
ACA	-	-	-	-	-	10A	-	10A	10A	10A	10A	60A(2000) 100A(2001)	120A
AC+DC	-	-	-	-	-	-	-	-	-	-	✓	-	-
Resistance	20MΩ	300kΩ	40MΩ	40MΩ	40MΩ	40MΩ	40MΩ	40MΩ	60MΩ	60MΩ	50MΩ	34MΩ	60MΩ
Continuity buzzer	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Battery test	-	✓	-	-	-	-	-	-	-	-	-	-	-
Dioed test	-	-	✓	-	✓	✓	✓	✓	✓	✓	✓	-	✓
Capacitance test	-	-	200μF	600μF	1000μF	1000μF	100μF	100μF	4000μF	1000μF	50mF	-	40μF
Frequency	-	-	10kHz	-	ACV 99.99kHz	ACA 9.999kHz ACV 99.99kHz	200kHz	10MHz	10MHz	99.99kHz	99.99kHz	ACA 10kHz ACV 300kHz	ACA 400Hz ACV 300kHz
Duty cycle ratio	-	-	✓	-	✓	✓	✓	✓	✓	-	✓	-	-
Temperature	-	✓	-	-	-	-	-	-	✓	✓	✓	-	-
Decibel	✓	-	-	-	-	-	-	-	-	-	✓	-	-
Low power-Ω	-	-	-	-	-	-	-	-	-	-	✓(1062)	-	-
Function													
Dual display	-	-	-	-	-	-	-	-	-	✓	✓	-	-
Bar graph	-	-	-	-	-	-	-	-	✓	✓	✓	✓	✓
Back light	-	-	-	-	✓	✓	✓	-	-	✓	✓	-	-
Data hold	-	-	✓	-	✓	✓	✓	✓	✓	✓	✓	✓	✓
Auto hold	-	-	-	-	-	-	-	-	-	✓	✓	-	-
Peak hold	-	-	-	-	-	-	-	-	-	-	✓(1062)	-	-
Max/Min/Ave	-	-	-	-	✓(No Ave)	✓(No Ave)	-	-	✓(No Ave)	✓(1052)	✓	-	-
Relative	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Manual memory	-	-	-	-	-	-	-	-	-	✓(1052)	✓	-	-
Logging memory	-	-	-	-	-	-	-	-	-	✓(1052)	✓	-	-
Communication	-	-	-	-	-	-	-	-	-	✓(1052)	✓	-	-
Other													
Operating temperature	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	0 - 40℃	-10 - 55℃	-20 - 55℃	0 - 40℃
Measurement categories	-	CAT III 300V CAT II 600V	CAT III 300V	CAT III 300V CAT II 600V	CAT IV 300V CAT III 600V CAT II 1000V	CAT IV 300V CAT III 600V	CAT III 600V	CAT III 300V	CAT III 300V CAT II 600V	CAT IV 600V CAT III 1000V	CAT IV 600V CAT III 1000V	CAT III 300V CAT II 600V	CAT III 300V CAT II 600V
Power source	R6x2, 6F22x1	R6 x 2	LR-44 x 2	CR2032x1	R03 x 2	R03 x 2	LR-44 x 2	R6 x 2	R6 x 2	R6 x 2	R6 x 4	R6 x 4	R03 x 2
Dimensions (L)x(W)x(D)mm	150x100x47	140x94x39	107x54x10	126x85x18	155x75x40 ^{*2}	155x75x35 ^{*1} 155x75x40 ^{*2}	190x39x31	161x82x50	161x82x50	192x90x49	192x90x49	128x84x24(2000) 128x92x27(2001)	128x92x27
Weight(Approx.)	330g	280g	70g	135g	250g	250g	100g	280g	280g	560g	560g	210g(2000) 220g(2001)	220g

*1 With flat-type holder
*2 With wing-type holder