

- ★ Provided with Measuring Functions of Large Tester !
- ★ Very Useful for Measurements and Repairs !



DCV 0.5% Class

Test Leads Wound

Features

- ◆ All-in-one Pocket-sized Plastic Case !
- ◆ Voltage, Frequency and Duty Cycle Measurements !
- ◆ MAX/MIN and Difference Measurements !
- ◆ Continuity by Buzzer, Diode Tests and Capacitance Measurements !
- ◆ Auto Power Save : Prevents battery consumption !
- ◆ Auto and Manual-Ranging, Data Hold !
- ◆ Safety Design : IEC61010-1 CAT II 600V and EMC !

14mm High Numerals,
4000 Count Large LCD!

GENERAL SPECIFICATIONS

1. DISPLAY :

- a. **Numerical Display** : 4000 count LCD, 14mm high.
- b. **Units and Symbols** : mV, V, Hz, %, Ω , k Ω , M Ω , nF, μ F, \rightarrow , \rightarrow , DIFF, MAX, MIN, BAT, DH, OL, AUTO, APS, \approx , \sim , - and decimal point.

2. OPERATING PRINCIPLE : $\Sigma \Delta$.

3. RANGE SELECTION : Auto and Manual-ranging.

4. SAMPLING RATE : 3 times per second.

5. POLARITY : Autopolarity, - symbol when minus.

6. OVERRANGE INDICATION : OL symbol appears. (excluding DC/AC 600V)

7. DISPLAY HOLD / DIFF (Zero Adjustment) :

- a. **Display HOLD** : Press DH / DIFF Key for less than 0.5 second.
 - b. **Difference Measurement** : Press DH / DIFF Key for more than 1 second.
 - c. **Zero Adjustment** : Press DH / DIFF Key for more than 1 second same as above before measuring Capacitance.
8. **MAX / MIN Value** : When measuring \approx V, \sim V, Ω , press MAX/MIN Key for more than 1 second.

9. CONTINUITY TEST : Buzzer sounds in case less than approx. 60 Ω .

10. BATTERY WARNING : BAT symbol appears when battery voltage goes down below approx. 2.4V.

11. OPERATING TEMPERATURE & HUMIDITY : 0°C to 40°C, less than 80%RH in non-condensing.

12. STORAGE TEMPERATURE & HUMIDITY : -20°C to 60°C less than 80% RH in non-condensing.

13. POWER SUPPLY : One 3V CR2032 Battery.

14. POWER CONSUMPTION : 4.5mW typically.

15. BATTERY LIFE : 70 hours continuous operation.

16. AUTO POWER SAVE : Power turns off automatically in 15 minutes after any switch operation.

17. DIELECTRIC STRENGTH : 3.7kV rms for one minute between Input Terminal and Cases.

18. OVERLOAD PROTECTION :

- a. V : 900V DC or AC rms max. for 1 minute.
(400mV Range is 600V rms)

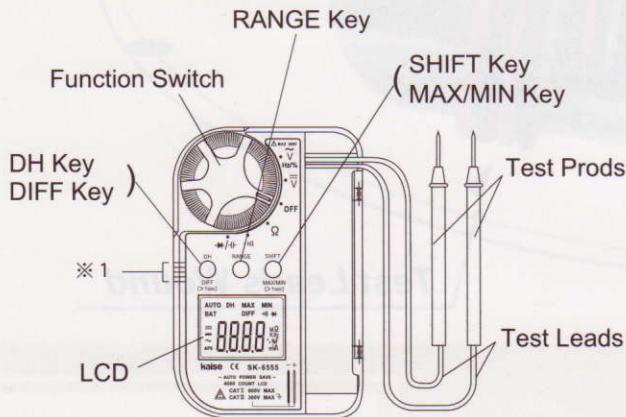
- b. Ω / \rightarrow / \rightarrow / \rightarrow : 300V rms max. for 1 minute.

19. DIMENSIONS & WEIGHT : 118(H) x 78(W) x 16(D)mm, 110g

20. SAFETY LEVEL : IEC-61010-1 Overvoltage CAT. III 300V CAT. II 600V and EMC Test passed.

21. ACCESSORY : Test Leads provided, Battery (Installed), Instruction Manual.

22. OPTIONAL ACCESSORY : 940 Alligator Clips.



※1) When opening the case cover, please push here.

MEASUREMENT SPECIFICATIONS

(23°C \pm 5°C, less than 80% RH in non-condensing)

1. DC Voltage (\approx V)

Range	Accuracy	Resolution	Input Impedance	Max Input Voltage
400.0mV	$\pm 0.5\%rdg \pm 3dgt$	100 μ V	$\geq 100M\Omega$	600V DC
4.000 V		1mV	$\approx 11M\Omega$	
40.00 V		10mV	$\approx 10M\Omega$	
400.0 V	100mV			
600 V	$\pm 1.0\%rdg \pm 3dgt$	1 V		

Overload Protection : 900V rms for 1 minute

2. AC Voltage (\sim V)

Average Rectification

Range	Accuracy	Resolution	Input Impedance	Max Input Voltage
4.000 V	$\pm 1.5\%rdg \pm 5dgt$	1mV	$\approx 11M\Omega$	600V rms
40.00 V		10mV	$\approx 10M\Omega$	
400.0 V		100mV		
600 V		1 V		

Overload Protection : 900V rms for 1 minute

Frequency Response : 50Hz~400Hz

3. Frequency (Hz)

Range	Accuracy	Resolution	Input Sensitivity	Max. Input Voltage
1.000kHz ~100.0kHz	$\pm 0.2\%rdg$ $\pm 2dgt$	0.001Hz ~100Hz	3V rms	300V rms

4. Duty Cycle (%)

Range	Accuracy	Resolution	Input Sensitivity	Max. Input Voltage
0.0% ~99.9%	$\pm 0.5\%rdg \pm 5dgt$	0.1%	<10kHz : 3V rms $\geq 10kHz$: not specified	300V rms

Frequency Scope : 1Hz~1kHz

5. Resistance (Ω)

Range	Accuracy	Resolution	Test Current	Open Circuit Voltage
400.0 Ω	$\pm 1.5\%rdg \pm 4dgt$	0.1 Ω	$\leq 0.2mA$	$\approx 0.44V$
4.000k Ω		1 Ω	$\leq 50 \mu A$	
40.00k Ω	$\pm 1.0\%rdg \pm 3dgt$	10 Ω	$\leq 5 \mu A$	
400.0k Ω		100 Ω	$\leq 0.5 \mu A$	
4.000M Ω	$\pm 3.0\%rdg \pm 3dgt$	1 k Ω	$\leq 50 nA$	
40.00M Ω	$\pm 7.0\%rdg \pm 3dgt$	10 k Ω		

Overload Protection : 300V rms

6. Continuity Tests (\rightarrow)

Range	Buzzer Sound	Response Time	Open Circuit Voltage	Overload Protection
400.0 Ω	less than 60 Ω	1m sec	$\approx 0.44V$	300V rms

7. Diode Tests (\rightarrow)

Range	Accuracy	Test Current	Open Circuit Voltage	Overload Protection
1.000V	$\pm 5.0\%rdg \pm 3dgt$	$\leq 0.7mA$	$\leq 1.7V$	300V rms

8. Capacitance (\rightarrow)

Range	Resolution	Accuracy	Test Voltage
50.00nF	10pF	$\pm 5.0\%rdg \pm 10dgt$	$\leq 1.7V$
500.0nF	100pF		
5.000 μ F	1nF		
50.00 μ F	10nF		
100.0 μ F	100nF		

Overload Protection : 300V rms

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