

## General Specification

Sensing	Average Sensing for RD700, AC True RMS for RD701
Display	4000 counts LCD (Hz: 9999 counts, $\pm$ : 5000 counts)
Update Sampling Rate	3 per second nominal (Hz: 2 per second nominal)
Low Battery Indication	Below approx. 2.4V, "6.3" mark indication
Range Selection	Auto and Manual ranges (partially Manual range or Auto range only)
Polarity Indication	Automatic selection ("." is indicated when negative voltage is inputted.)
Over ranging Indication	"OL" mark indication
Operating Temperature	0°C~40°C, 0~80% R.H.
Relative Humidity	Maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% relative humidity at 40°C
Storage Temperature	-20°C~60°C, <80% R.H. (With battery removed)
Altitude	Operating below 2000m
Temperature Coefficient	Nominal 0.15 x (specified accuracy) / °C @ (0°C ~18°C or 28°C~50°C), or otherwise specified
Power Supply	9V battery; NEDA1604A, JIS006P or IEC6F22

Safety	Meets IEC61010-1 (1995), EN61010-1 (1995), to terminals:	
	V / ADP / $\Omega$ / $\rightarrow$ / $\rightarrow$ / $\rightarrow$ / TEMP / Hz	Category III 600 Volts ac and dc, and Category II 1000 Volts ac and dc
	A	Category II 500 Volts ac and 300 Volts dc
	mA/ $\mu$ A	Category II 250 Volts ac and 150 Volts dc
Transient protection	6.5kV (1.2/50 $\mu$ s surge)	
Pollution degree	2	
E.M.C.	Meets EN61326 (1997, 1998/A1), EN61000-4-2 (1995), and EN61000-4-3 (1996)	
Auto Power Off Timing	Idle for 30 minutes	
Auto Power Off Function Consumption	300 $\mu$ A typical for RD700; 360 $\mu$ A typical for RD701	
Power Consumption	3.2mA Typical	
Dimension	179(L) x 87(W) x 55(H) mm with holster	
Weight	320g / 460g with holster	
Accessories	Test leads: TL-82, K-type thermocouple: K-250PC, Holster: H-50, Battery (installed), Instruction manual: RD700/RD701	

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## Measurement Range and Accuracy

Accuracy assurance range: 23~5°C & Less than 75% R.H.  
 rdg: reading dgt: digit

Function & Range	Accuracy	Input Impedance	Remarks
DCV	400.0mV	1000M $\Omega$	NMR: >50dB(50/60Hz) CMR: >120dB (DC, 50/60Hz, Rs=1k $\Omega$ )
	4.000V		
	40.00V		
	400.0V		
	1000V		
ACV <sup>1)</sup>	400.0mV	10M $\Omega$ , 30pF nominal	50~500Hz CMR: >60dB to DC~60Hz, Rs=1k $\Omega$
	4.000V		
	40.00V		
	400.0V		
	1000V		
$\Omega$	400.0 $\Omega$	Open Circuit Voltage: <0.4VDC typical	
	4.000k $\Omega$		
	40.00k $\Omega$		
	400.0k $\Omega$		
	4.000M $\Omega$		
$\rightarrow$	500.0nF	$\pm(2.5\%rdg + 6dgt)$ <sup>2)</sup>	Additional 50.00nF range accuracy is not specified. Accuracies with film capacitor or better.
	5.000 $\mu$ F		
	50.00 $\mu$ F		
	500.0 $\mu$ F		
	3000 $\mu$ F		
Hz	50.00Hz	$\pm(0.5\%rdg + 4dgt)$	Operating input voltage: <20Vrms. Input Signal: Sine wave, or Square wave with duty cycle 40%~70% Sensitivity: 10Hz~20kHz: > 0.9Vrms 20kHz~500kHz: > 2.6Vp or 1.9Vrms 500kHz~1MHz: > 4.2Vp or 3Vrms Update Rate: 2 per second nominal
	500.0Hz		
	5.000kHz		
	50.00kHz		
	500.0kHz		
TEMP	-20~300°C	$\pm(2\%rdg + 3^\circ C)$	Type-K thermocouple range & accuracy not included
	-4~572°F		

Function & Range	Accuracy	Burden Voltage	Remarks
DCA	400.0 $\mu$ A	0.15mV/ $\mu$ A	* 10A continuous
	4000 $\mu$ A		
	40.00mA		
	400.0mA		
	4.000A		
ACA <sup>1)</sup>	400.0 $\mu$ A	0.15mV/ $\mu$ A	50Hz~500Hz * 10A continuous
	4000 $\mu$ A		
	40.00mA		
	400.0mA		
	4.000A		
10.00A	0.03V/A		

Function & Range	Remarks
$\rightarrow$	2.000V Test Current (Typical): 0.25mA . Open Circuit Voltage: < 1.6 VDC
$\rightarrow$	400.0 $\Omega$ Audible threshold: Between 5 $\Omega$ and 120 $\Omega$ . Open circuit voltage: <0.4VDC

Function	Accuracy <sup>3)</sup>	Input Impedance	Remarks
ADP	DC	1000M $\Omega$ , 30pF nominal	RD700 : 50Hz~500Hz RD701 : 50Hz~3kHz
	AC <sup>1)</sup>		

- 1): Model RD701 True RMS accuracy of ACV, ACA & AC-ADP is specified from 5 % (10% for AC400.0mV range) to 100 % of range, or otherwise specified. Maximum Crest Factor < 1.75: 1 at full scale & < 3.5: 1 at half scale, and with frequency components within the specified frequency bandwidth for non-sinusoidal waveforms.  
 2): Specified with battery voltage above 2.8V. Accuracy decreases gradually to 12% at low battery warning voltage of approximately 2.4V.  
 3): The accuracy of the sensor is not included.

## Overload protections

Functions	Input terminals	Maximum rating input value	Maximum overload protection input
V	V/Hz/ADP $\Omega$ / $\rightarrow$ / $\rightarrow$ / $\rightarrow$ / TEMP COM	DC · AC 1000V	1050V rms, 1450Vpeak
ADP		DC · AC 400mV	600V DC/AC rms
$\Omega$ · $\rightarrow$ · $\rightarrow$ · $\rightarrow$ · TEMP		Voltage and Current input prohibited	
Hz			
$\mu$ A · mA	$\mu$ A/mA · COM	DC · AC 400mA	0.63A/250V Fuse IR1.5kA
A	A · COM	DC AC 10A (10A continuous)	12.5A/500V Fuse IR 20kA

Specifications and external appearance of the product described above may be revised for modification without prior notice.

## New Digital Multimeter

# RD700 RD701



# High Input Impedance 1000MΩ V, A, Ohm, Hz, C and Temperature measurement

New Digital Multimeter  
**RD700**  
**RD701**



**RD700**

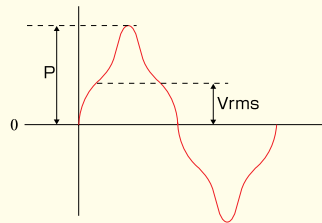


**RD701 True RMS**

**Main feature**

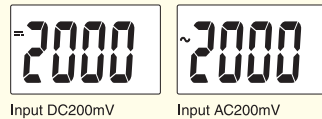
● **AC True RMS** RD701 only

It is suitable to measure AC component value correctly regardless of waveforms such as square, triangle waveform.



● **High input impedance 1000MΩ**

1000MΩ impedance for 400mV and ADP function.



● **ADP function**

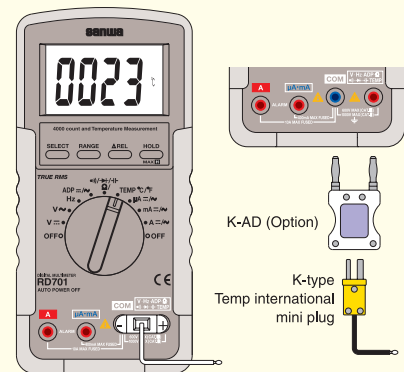
Prepare 400.0mV AC/DC single range (1000M ohm high input impedance) for adapter probe.

● **Auto Power Off (enable or disable)**

The meter goes to turn off automatically to extend battery life.

● **K-type temp measurement**

Temp (-20°C to 250°C) can be measured with standard accessory K-250PC. With optional accessory K-type adapter (K-AD), you can use international mini plug K-type Temp sensor to measure from -20°C to 300°C.

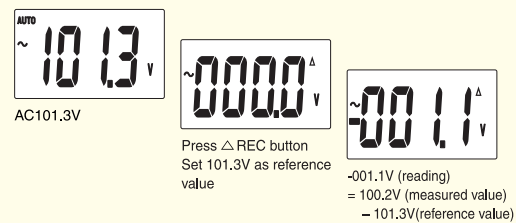


● **MAX hold**

Hold max value as fast as 30ms with automatic up range capability in V, A and ADP functions.

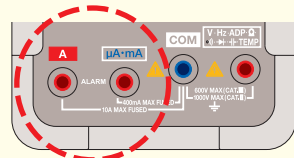
● **Relative**

Display Relative value



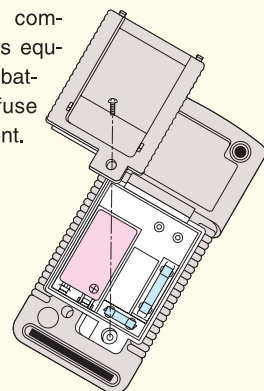
● **Alarm for mis-plug for Current Function**

The beeper warns you against mis-plug into current terminal to avoid damaging the measuring circuit and blowing the meter's fuse when you set the rotary SW to other function.



● **Battery compartment**

A battery compartment is equipped for battery or fuse replacement.



● **Optional Accessories**

**Clamp Probe**



**CL33DC**

Clamp Sensor Probe for DCA (with carrying case)

**CL-22AD**

Clamp Sensor Probe for AC/DC A (with carrying case)

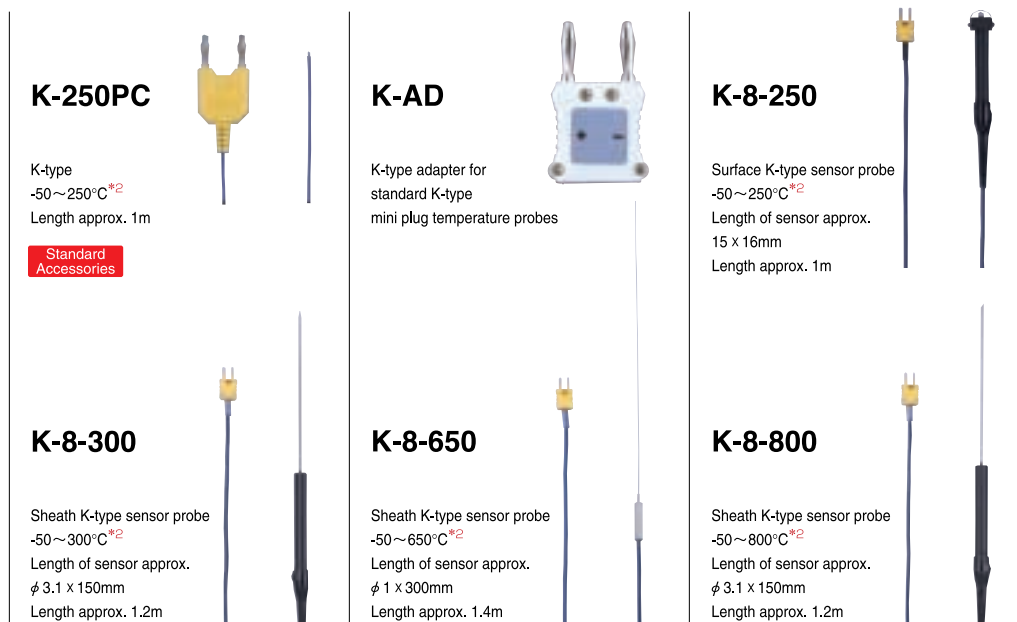
**CL-20D**

Clamp Sensor Probe for ACA (with carrying case)

	Range	Output	Accuracy	Range	Output	Accuracy	Range	Output	Accuracy
DCA	30A	10mV/A	1.5rdg +0.5mV *1	20A	10mV/A	1.5rdg +0.5mV	—		
	300A	1mV/A		200A	1mV/A		20A	AC2.0Vfs	1.5%fs
ACA	—			200A	10mV/A	2.0%rdg +0.5mV	20A	AC2.0Vfs	1.5%fs
	—			200A	1mV/A		200A		
Max. Clamp size	23mm			23mm			33mm		
Withstand	AC2000V			AC2000V			AC2000V		
Power Supply	R06×2			R06×2			—		
Size / Weight	H179×W56×D26.5mm/120g			H179×W56×D26.5mm/120g			H155×W55×D20mm/80g		

\*1 2.0rdg+0.5mV(200~300A)

**Temp Measurement Accessories**



**K-250PC**

K-type  
-50~250°C\*2  
Length approx. 1m

Standard Accessories

**K-AD**

K-type adapter for standard K-type mini plug temperature probes

**K-8-250**

Surface K-type sensor probe  
-50~250°C\*2  
Length of sensor approx. 15 x 16mm  
Length approx. 1m

**K-8-500**

Surface K-type sensor probe  
-50~500°C\*2  
Length of sensor approx. 15 x 16mm  
Length approx. 1m

**K-8-300**

Sheath K-type sensor probe  
-50~300°C\*2  
Length of sensor approx. φ 3.1 x 150mm  
Length approx. 1.2m

**K-8-650**

Sheath K-type sensor probe  
-50~650°C\*2  
Length of sensor approx. φ 3.1 x 300mm  
Length approx. 1.4m

**K-8-800**

Sheath K-type sensor probe  
-50~800°C\*2  
Length of sensor approx. φ 3.1 x 150mm  
Length approx. 1.2m

\*2 RD700 and RD701 can make temp measurement from -20°C up to 300°C only.

**Accessories**



**C-CD**

Carrying Case

**CL-13**

Alligator Clip set

**TL-82**

Test Lead set

Standard Accessories