

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, "63" 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 / Ω / \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/ μ A	Category II 250 Volts ac and 150 Volts dc
Transient protection	6.5kV (1.2/50 μ 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 μ A typical for RD700; 360 μ 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	

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	$\pm(0.3\%rdg + 4dgt)$	1000M Ω
	4.000V	$\pm(0.5\%rdg + 3dgt)$	10M Ω , 30pF nominal
	40.00V		
	400.0V		
	1000V		
ACV ¹⁾	400.0mV	$\pm(4.0\%rdg + 5dgt)$	1000M Ω
	4.000V	$\pm(1.5\%rdg + 5dgt)$	10M Ω , 30pF nominal
	40.00V		
	400.0V		
	1000V		
Ω	400.0 Ω	$\pm(0.8\%rdg + 6dgt)$	Open Circuit Voltage: <0.4VDC typical
	4.000k Ω	$\pm(0.6\%rdg + 4dgt)$	
	40.00k Ω		
	400.0k Ω		
	4.000M Ω		
	40.00M Ω	$\pm(3.0\%rdg + 4dgt)$	
\rightarrow	500.0nF	$\pm(2.5\%rdg + 6dgt)$ ²⁾	Additional 50.00nF range accuracy is not specified. Accuracies with film capacitor or better.
	5.000 μ F		
	50.00 μ F		
	500.0 μ F		
	3000 μ 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		
	1.000MHz		
TEMP	-20~300°C	$\pm(2\%rdg + 3^\circ C)$	Type-K thermocouple range & accuracy not included
	-4~572°F	$\pm(2\%rdg + 6^\circ F)$	

Function & Range	Accuracy	Burden Voltage	Remarks
DCA	400.0 μ A	$\pm(2.0\%rdg + 5dgt)$	0.15mV/ μ A
	4000 μ A	$\pm(1.2\%rdg + 3dgt)$	3.3mV/mA
	40.00mA	$\pm(2.0\%rdg + 5dgt)$	
	400.0mA	$\pm(1.2\%rdg + 3dgt)$	* 10A continuous
	4.000A	$\pm(2.0\%rdg + 5dgt)$	
10.00A [*]	$\pm(1.2\%rdg + 3dgt)$		
ACA ¹⁾	400.0 μ A	$\pm(2.0\%rdg + 6dgt)$	0.15mV/ μ A
	4000 μ A	$\pm(1.5\%rdg + 4dgt)$	3.3mV/mA
	40.00mA	$\pm(2.0\%rdg + 6dgt)$	
	400.0mA	$\pm(1.7\%rdg + 4dgt)$	50Hz~500Hz * 10A continuous
	4.000A	$\pm(2.0\%rdg + 6dgt)$	
10.00A	$\pm(1.8\%rdg + 4dgt)$		

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

Function	Accuracy ³⁾	Input Impedance	Remarks
ADP	DC	$\pm(0.3\%rdg + 4dgt)$	1000M Ω , 30pF nominal
	AC ¹⁾	$\pm(1.8\%rdg + 5dgt)$	RD700 : 50Hz~500Hz RD701 : 50Hz~3kHz

- 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 Ω / \rightarrow / \rightarrow / \rightarrow / TEMP COM	DC · AC 1000V	1050V rms, 1450Vpeak
ADP		DC · AC 400mV	
Ω , \rightarrow , \rightarrow , \rightarrow , TEMP		Voltage and Current input prohibited	600V DC/AC rms
Hz			
μ A · mA		μ A/mA · COM	DC · AC 400mA
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.

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New Digital Multimeter

RD700 RD701



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

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RD700

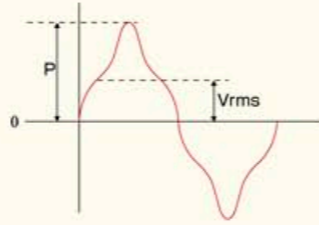


RD701 True RMS

Main feature

● **AC True RMS** RD701 only

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

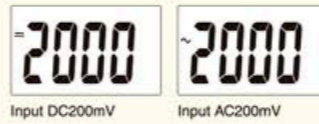


● **High input impedance 1000MΩ**

1000MΩ impedance for 400mV and ADP function.

● **ADP function**

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

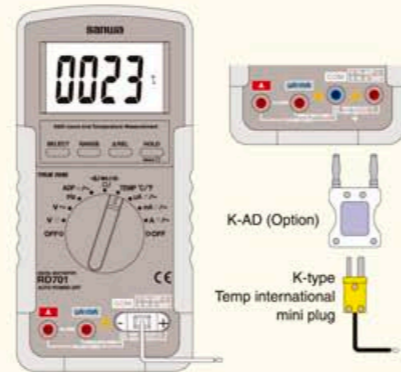


● **Auto Power Off (enable or disable)**

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.

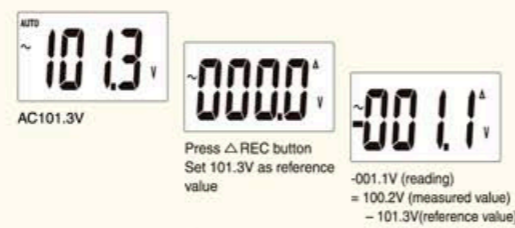


● **MAX hold**

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

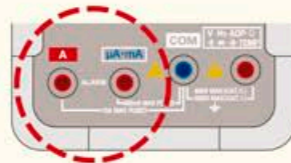
● **Relative**

Display Relative value



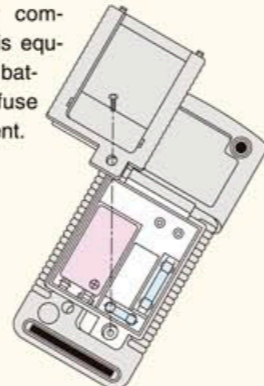
● **Alarm for mis-plug for Current Function**

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*	20A	10mV/A	1.5rdg +0.5mV	—		
	300A	1mV/A		200A	1mV/A		—		
ACA	—			20A	10mV/A	2.0%rdg +0.5mV	20A	AC2.0Vfs	1.5%fs
	—			200A	1mV/A		200A	AC2.0Vfs	
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		

* 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 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