

sanwa

TOKYO JAPAN

DIGITAL MULTIMETER

CD77series

Sanwa's new standard DMM series giving priority to the safety



CD771

CD770

CD772



● A **backlight** was adopted to the usages of dark conditions.

● **True RMS reading** is to measure nonsinusoidal waveform AC current and voltage.

● **Continuity buzzer** and **LED** provide user to verify electric continuity by both buzzer sound and LED illumination even under the noisy condition.

● **ANTI-SHOCK CASE** made by thermoplastic elastomer prevents from damages of the drop.

● **K Type temperature** $-20^{\circ}\text{C} \sim 300.0^{\circ}\text{C}$
*K type thermocouple temperature sensor K-250CD is included as a standard accessory.

● **Maximum 20A** can be measured if the measurement time is less than 10 seconds. (Take 10 minutes or longer intervals between measurements)

● **Fuses** provide the priority to safety with overcurrent protection and high interception.

● A **safety cap** is provided to prevent an operation mistake of measurement in current mode.

SANWA DIGITAL MULTIMETER CD77 series

Measuring range and best accuracy : Temperature 23 ± 5 , humidity 80% R.H. max.
(No condensation), voltage 2.4V or above



CD772



CD771



CD770



GENERAL SPECIFICATIONS

Model	CD772	CD771	CD770
Operation method	Δ - Σ method		Average value method
AC measuring method	True RMS value method		Average value method
LCD	4000 Counts		
Sampling rate	Approx. 3 times/sec		
Range selection	Auto and Manual (Some with Manual only or Auto only)		
Over-range indication	"OL" shown in numerical part (1000V DC/AC, 10A excluded - 600V DC/AC excluded for CD770)		
Polarity indication	"-" indicated only when negative input		
Low battery indication	[] mark lights or flickers at approx. 2.4V or below		
Environmental condition	Altitude 2,000m or below, pollution degree II		
Operating temperature / humidity	5°C to 40°C and maximum relative humidity 80% for temperature up to 31°C decreasing linearly to 50% relative humidity at 40°C (No condensation)		
Storage temperature / humidity	-10°C to 40°C, 80%RH max., 40°C to 50°C, 70%RH max no condensation (When the meter will not be used for a long time, remove the batteries before storage)		
Power supply	SUM 3 (R6), 2 pieces		
Battery life at DCV	Approx. 150h (Disable auto power off)		Approx. 400h (Disable auto power off)
Auto power off	About 30min. after the last operation		
Fuse	0.5A/1000V, breaking capacity 30kA 16A/1000V, breaking capacity 30kA	0.5A/1000V, breaking capacity 30kA 10A/1000V, breaking capacity 30kA	0.5A/250V, breaking capacity 1.5kA
Safety standards	IEC61010-1 CAT. III 600V, CAT. II 1000V		IEC61010-1 CAT. III 600V
EMC Directive	IEC61010-031 IEC61326		
Dimensions	166 (L) × 82 (W) × 44 (D)mm (Projections not included)		
Weight	Approx. 360g (Batteries included)		Approx. 340g (Batteries included)
Power consumption	15mW at DCV (Typical)		4.5mW at DCV (Typical)
Standard accessories included	Test lead (TL-25)		Test lead (TL-23)
	Battery (Built-in)		Battery (Built-in)
	Sheath shape thermocouple K type (K-250CD)		Instruction manual
	Inspection certificate / Instruction manual		Inspection certificate
Optional accessories	Alligator clip: CL-11, CL-15, TL-81C		
	Clamp probe: CL-22AD, CL-33DC, CL-20D		
	Carrying case: C-77		
	Temperature probe: K-8-800, K-8-650, K-8-300, K-8-500, K-8-250 (For CD772 only) K-type adapter: K-AD (For CD772 only)		

Model	CD772	CD771	CD770	
AC Sensing	True RMS	Average	Average	
Function	Range	Accuracy	Input impedance	Remarks
DCV voltage	400.0mV	± (0.5%rdg + 2dgt)	≥ Approx. 100M Ω	-
	4.000V		Approx. 11M Ω	
	40.00V		Approx. 10M Ω	
	400.0V			
1000V (600V for CD770)				
ACV voltage	4.000V	± (1.2%rdg + 7dgt)	Approx. 11M Ω	<ul style="list-style-type: none"> Sine wave : 45Hz~500kHz (4V range of CD772) - 45Hz~1kHz (Above 40V range of CD772) - 40Hz~400kHz (For CD771 and CD770) CD772: Accuracy specified at 5% to 100% of range, CF: <3:1
	40.00V		Approx. 10M Ω	
	400.0V			
1000V (600V for CD770)				
Resistance measurement Ω	400.0 Ω	± (1.2%rdg + 5dgt)	-	<ul style="list-style-type: none"> Open circuit voltage: Approx. 0.4VDC The measuring current varies depending on resistance of resistors to measure
	4.000k Ω			
	40.00k Ω			
	400.0k Ω			
	4.000M Ω			
40.00M Ω				
Frequency	5.000Hz	± (0.3%rdg + 3dgt)	-	<ul style="list-style-type: none"> Auto range only Sensitivity: 3 Vrms or over Input resistance ≥ Approx. 2k Ω
	50.00Hz			
	500.0Hz			
	5.000kHz			
	50.00kHz			
	500.0kHz			
	5.000MHz			
Capacitance	50.00nF	± (5.0%rdg + 10dgt)	-	<ul style="list-style-type: none"> Accuracy after canceling the indicated value by the relative function Auto range only
	500.0nF			
	5.000 μF			
	50.00 μF			
	500.0 μF			
	5.000mF			
	50.00mF			
DCA	4000 μA	± (1.4%rdg + 3dgt)	Approx. 100 Ω	<ul style="list-style-type: none"> The input resistance excludes the fuse resistance
	40.00mA		Approx. 1 Ω	
	400.0mA		Approx. 0.01 Ω (Except CD770)	
	4.000A			
	15.00A (10.00A for CD771)		± (2.0%rdg + 3dgt)	
ACA	400.0 μA	± (1.8%rdg + 5dgt)	Approx. 100 Ω	<ul style="list-style-type: none"> Accuracy in sine wave : 45Hz~1kHz (CD772) - 40Hz~400Hz (CD771 and CD770) CD772: Accuracy specified at 5% to 100% of range, CF: <3:1
	4000 μA			
	40.00mA		Approx. 1 Ω	
	400.0mA		Approx. 0.01 Ω (Except CD770)	
	4.000A		± (2.4%rdg + 5dgt)	
15.00A (10.00A for CD771)	± (2.4%rdg + 5dgt)			
Cont. check []	<ul style="list-style-type: none"> Buzzer sound and continuity lamp on range: 0 Ω ~ 85 Ω (± 45 Ω) (No LED lamp for CD770) Open circuit voltage: Approx. 0.4 VDC Open circuit voltage: Approx. 1.5 VDC 			
DIODE test []				
Temp Temperature (°C & °F)	-20.0°C ~ 300.0°C	± (3.0%rdg + 30dgt)	-	-
1.5V battery check	-	-	-	-
			Approx. value (30 Ω Load) Special for 1.5-V battery	

sanwa®

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

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