sanwa®

TOKYO JAPAN

DIGITAL CLAMP METER DCL series

Light Weight 290g

"Approx. 30% lighter than our equivalent models"

New clamp meter designed to be lightweight for portable use

Non Contact Voltage detection function (EF function)

True RMS reading to measure nonsinusoidal waveform AC current and voltage
Can measure up to AC1200A (MAX 2000A)

Large data hold button to hold reading easily and precisely

DCL1000

DCL1200R

www.sanwa-meter.co.jp

SANWA DIGITAL CLAMP METER

DCL series


DCL1000


DCL1200R

Measuring Range and Best Accuracy : Temperature 23±5℃, Humidity 75% R.H. max

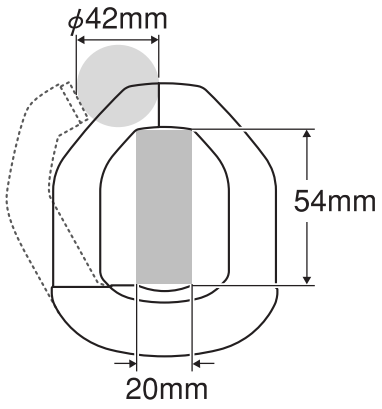
☐ General Specifications

Model	DCL1000	DCL1200R
Operating Method	Δ - Σ Method	
AC Sensing	Average value	True RMS AC coupling
LCD	4000 counts	6000 counts
Sampling rate	3 times / sec nominal	5 times / sec nominal
Range selection	Auto and Manual	
Over-range indication	"OL" shown in numerical part	
Polarity indication	"-" indicated only when negative input	
Low Battery Indication	⊟ Mark lights or flickers at about 2.4V or below	
Environmental condition	Altitude 2,000m or below , pollution degree II	
Operation Temperature	5℃ to 40℃ and maximum relative humidity 80% for temperature up to 31℃ decreasing linearly to 50% relative humidity at 40℃ (No condensation)	
Storage Temperature / Humidity	-20℃ to 60℃, 70%RH or below (with battery removed)	

Model	DCL1000	DCL1200R
Power supply	R03 1.5V × 2pieces	
Power consumption	2.2mA at DCV (typical)	2.8mA at DCV (typical)
Battery Life at DCV	Approx. 120h	Approx.90h (with auto power off disabled)
Safety Standards	IEC61010-2-032 (2002), CAT. III 600V	
	IEC61010-031	
EMC	IEC61326 In an RF field of 3V / m: Total Accuracy = Specified Accuracy + 45 digits Performance above 3V/m is not specified	
Clamp sensor (CT) clamp size	Max. 42mm	
Dimensions / Weight	238 (L)×95 (W)×45 (H)mm / Approx. 290g (including batteries)	
Auto Power Off	About 30min. after power on	About 3 to 7min. after power on
Accessories	Battery (built-in), Test leads (TL-23), Carrying case (C-DCL1000), Instruction manual	

■ Model : DCL1000

FUNCTION	RANGE	ACCURACY	BANDWIDTH	INPUT IMPEDANCE
ACA (Average)	400.0A, 1000A	±(1.7%rdg + 5dgt)	Sine Wave AC 50Hz/60Hz	–
DCV	400.0mV	±(1.2%rdg + 3dgt)	–	Approx. 1000MΩ
	4.000V, 40.00V, 400.0V	±(1.9%rdg + 3dgt)		Approx. 10MΩ
	600V	±(2.2%rdg + 4dgt)		
ACV (Average)	400.0mV	±(4.2%rdg + 5dgt)	50Hz - 500Hz	Approx. 10MΩ
	4.000V	±(2.2%rdg + 5dgt)	50Hz/60Hz	
		±(2.7%rdg + 5dgt)	60Hz - 500Hz	
	40.00V	±(2.2%rdg + 5dgt)	50Hz/60Hz	
		±(2.7%rdg + 5dgt)	60Hz - 500Hz	
	400.0V	±(2.2%rdg + 5dgt)	50Hz/60Hz	
		±(2.7%rdg + 5dgt)	60Hz - 500Hz	
	600V	±(3.2%rdg + 5dgt)	50Hz - 500Hz	
Resistance Ω	400.0Ω	±(1.7%rdg + 6dgt)	Open Circuit Voltage : Approx. DC0.4V	
	4.000kΩ, 40.00kΩ, 400.0kΩ	±(1.2%rdg + 4dgt)		
	4.000MΩ	±(1.7%rdg + 4dgt)		
	40.00MΩ	±(2.7%rdg + 4dgt)		
Continuity Check Buzzer •ıl)	Measuring Range : 400.0Ω Buzzer Sound Range : 0Ω to 65Ω (±55Ω) Open Circuit Voltage : Approx. 0.4VDC			
Diode Test →+	Open Circuit Voltage : Approx. 1.6VDC Test Current : 0.4mA (Typical)			



■ Model : DCL1200R

FUNCTION	RANGE	ACCURACY	BANDWIDTH	INPUT IMPEDANCE	REMARKS
ACA (True RMS)	400.0A, 1200A	±(1.7%rdg + 5dgt)	50Hz/60Hz (Sine wave AC)		CREST FACTOR (CF) : Full Scale CF<2.0, Half Scale CF<4.0 Accuracy guaranteed 5% to100% of the range.
DCV	6.000V	±(0.7%rdg + 3dgt)	–	Approx. 5MΩ	–
	60.00V	±(1.2%rdg + 5dgt)			
	600.0V	±(2.2%rdg + 5dgt)			
ACV (True RMS ac coupling)	6.000V	±(1.7%rdg + 5dgt)	50Hz/60Hz	Approx. 5MΩ	CREST FACTOR (CF) : Full Scale CF<1.6, Half Scale CF<3.3
		±(2.2%rdg + 5dgt)	50Hz - 500Hz		
	60.00V	±(1.7%rdg + 5dgt)	50Hz/60Hz		
		±(2.2%rdg + 5dgt)	50Hz - 500Hz		
	600.0V	±(2.2%rdg + 5dgt)	50Hz/60Hz		
		±(2.7%rdg + 5dgt)	50Hz - 500Hz		
Auto V・Ω	DC 6.000V	±(1.0%rdg + 3dgt)	–	A guide for input voltages and impedance : 100V : 15kΩ 300V : 100kΩ 600V : 210kΩ	The initial internal resistance is about 2.1kΩ and at an input above 50V, the internal resistance increases rapidly.
	DC 60.00V	±(1.2%rdg + 5dgt)			
	DC 600.0V	±(2.2%rdg + 5dgt)			
	AC 6.000V	±(1.7%rdg + 5dgt)	50Hz/60Hz		
		±(2.2%rdg + 5dgt)	50Hz - 500Hz		
	AC 60.00V	±(1.7%rdg + 5dgt)	50Hz/60Hz		
		±(2.2%rdg + 5dgt)	50Hz - 500Hz		
	AC 600.0V	±(2.2%rdg + 5dgt)	50Hz/60Hz		
		±(2.7%rdg + 5dgt)	50Hz - 500Hz		
	6.000kΩ	±(1.4%rdg + 6dgt)	–		
	60.00kΩ, 600.0kΩ	±(1.2%rdg + 4dgt)			
	6.000MΩ	±(2.2%rdg + 4dgt)			
Resistance /Continuity Check (600Ω) •ıl)	600.0Ω	±(2.2%rdg + 8dgt)	・Buzzer response speed : < 100μs ・Buzzer Sound Range : 0Ω - 155Ω(±145Ω) ・Open circuit voltage : Approx. 0.4 VDC		

			SENSITIVITY (Sine Wave)	REMARKS
Frequency	9.999Hz	±(0.6%rdg + 4dgt)	4V / 6.000V Range	・6.000V - 600V Range Auto Range Only ・Only 6.000V Range is Specified
	99.99Hz		30V / 60.00V Range	
	999.9Hz		60V / 600.0V Range	
	9.999kHz		4V / 6.000V Range	
	30.00kHz			
Capacitance	100.0nF	±(3.7%rdg + 5dgt)	・Auto Range Only ・50.00nF or below out of accuracy guarantee range ・The accuracy drops to ±(12% rdg + 8 dgt) when the power supply voltage is in a range of 2.8V and about 2.4V (out of accuracy guarantee range) at which the battery low mark will light	
	1000nF			
	10.00μF			
	100.0μF			
	2000μF			

	VOLTAGE DETECTED	GUIDE FOR BAR INDICTION	REMARKS
EF function (Non contact voltage detection)	15V - 85V	-	・Frequency: 50Hz/60Hz ・Detection sensor : Ⓨ mark part of clamp sensor (CT) ・Voltage detection can be performed with test lead connected to + measuring terminal
	40V - 130V	–	
	60V - 210V	—	
	90V - 300V	—	
	120V or above	—	
Diode Test →+	Open Circuit Voltage : Approx. 1.6VDC Test Current : 0.4mA (Typical)		

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