

1-ph Power Meter CP-268



Features

- IDRC CP-268 Series multi-range power meter Watt resolution up to 0.01mW at 150V/300V range
- Multi ranges to be best solution for component test.
 - 9 Voltage ranges from 1.5V, 3V, 6V ~ 600V;
 - 15 current with a powerful internal sensor measurement function, all the current ranges from 1mA, 2mA, 5mA ~ 50A(CP-268-5), connected in single terminal, without switching terminals or addition external sensors (45 ~ 65Hz).
 - 135 watt ranges .(CP-268-5), widely measurement range from “standby power” to 30kW, meet the requirement of ENERGY STAR.
- Proper for low capacity rectification load, the accuracy will not deviate even when PF=0.1
- True RMS voltage, current measure, auto/manual range.
- Frequency resolution 0.001Hz.
- All digitized type.
- Close case calibration, no adjust, soft calibration, high stability, long interval between two calibrations.
- IDRC CP-268 Series multi-range power meter seven measure parameter: V, A, W, PF, VA, VAR, Hz
- Bi-directional active power measurement
- Peak current over range indication.
- Current phase lead or lag indication

- 4 screens display , 4 test values at same time, all function refresh rate is 5 times/sec.
- Last panel set memory.
- Build-in RS-485 interface, baud rate up to 115K bps
- GPIB SCPI compatible (optional)
- CE approved

Specifications

TYPE		CP-268-1	CP-268-2	CP-268-5	CP-268-PS
Voltage(V)	Ranges (Auto or Manual)(9 range)	30V 60V 150V 300V 600V RMS	1.5V 3V 6V 15V 30V 60V 150V 300V 600V RMS		
	Display Resolution	5 digits			
	Operating Principle	Digital Calculation True RMS			
	Crest Factor	Up to 1.7(at FULL SCALING)			
	Frequency Range	10Hz to 1000Hz			
	Accuracy	10 to 20Hz	±1% reading ± 1% range ± 2C		
	(23°C ± 5°C)	20 to 30Hz	±0.5% reading ± 0.5% range ± 2C		
		30 to 45Hz	±0.2% reading ± 0.2% range ± 2C		
		45 to 66Hz	±0.1% reading ± 0.1% range ± 2C		
		66 to 550Hz	±0.2% reading ± 0.2%range ± 0.1% / 100Hz		
		550 to 1000Hz	±0.2% reading ± 0.5%range ± 0.2% / 100Hz		
	Maximum Input	Continuous	Continuous 600V RMS / 1000Vpk		
	Input impedance	2 MΩ and 10 pF on all ranges			
	Effective input range	20% to 120% of the range			

Current (A)	Ranges (Auto or Manual)(15 ranges)		100mA 200mA A 500mA 1A A 2A	1mA 2mA 5mA A 10mA	1mA 2mA 5mA A 10mA	1mA 2mA 5mA A 10mA	
			5A 10A 20A RMS	20mA 50mA A 100mA	20mA 50mA A 100mA	20mA 50mA A 100mA	
				200mA 500mA A 1A 2A	200mA 500mA A 1A 2A	200mA 500mA A 1A 2A	
				5A 10A 20A RMS	5A 10A 20A A 50A RMS	5A 10A 20A RMS	
	Display Resolution		5 digits				
	Operating Principle		Digital Calculation True RMS				
	Crest Factor		Up to 2 (at FULL SCALING)			Up to 4 (at FULL SCALING)	
	Frequency Range		10Hz to 1000Hz				
	Accuracy	Range	50A ~ 100mA		50mA ~ 1mA		
	(23°C ± 5°C)	10 to 20Hz	±1% reading ± 1% range ± 2C		±2% reading ± 2% range ± 2C		
		20 to 30Hz	±0.5% reading ± 0.5% range ± 2C		±1% reading ± 1% range ± 2C		
		30 to 45Hz	±0.2% reading ± 0.2% range ± 2C		±0.4% reading ± 0.4% range ± 2C		
		45 to 66Hz	±0.1% reading ± 0.1% range ± 2C		±0.2% reading ± 0.2% range ± 2C		
		66 to 550Hz	±0.2% reading ± 0.2% range ± 0.1% / 100Hz		±0.4% reading ± 0.4% range ± 0.2% / 100Hz		
		550 to 1000Hz	±0.2% reading ± 0.3% range ± 0.2% / 100Hz		±0.4% reading ± 0.6% range ± 0.4% / 100Hz		
	Maximum Input	Continuous	20A RMS / 40 Apk	50A RMS / 100Apk		20A RMS / 80 Apk	
	Input impedance		All ranges ≤ 2 mΩ				
Effective input range		10% to 110% of the range					
Power(W)	Ranges (Auto or Manual)		3W to 12kW	1.5mW to 12k W	1.5mW to 30k W	1.5mW to 12k W	
			40 ranges	126 ranges	135 ranges	126 ranges	
	Display Resolution		5 digits				
	Operating principle		Digital Calculation True Watt				
	Frequency Range		10Hz to 1000Hz				
	Accuracy	Range	50A ~ 100mA		50mA ~ 1mA		
	(23°C +/- 5°C)	10 to 20Hz	±1% reading ± 1% range ± 2C		±2% reading ± 2% range ± 2C		
		20 to 30Hz	±0.5% reading ± 0.5% range ± 2C		±1% reading ± 1% range ± 2C		
		30 to 45Hz	±0.2% reading ± 0.2% range ± 2C		±0.4% reading ± 0.4% range ± 2C		
		45 to 66Hz	±0.2% reading ± 0.2% range ± 2C		±0.4% reading ± 0.4% range ± 2C		
		66 to 550Hz	±0.2% reading ± 0.2% range ± 0.1% / 100Hz		±0.4% reading ± 0.4% range ± 0.2% / 100Hz		
		550 to 1000Hz	±0.2% reading ± 0.5% range ± 0.2% / 100Hz		±0.4% reading ± 1% range ± 0.4% / 100Hz		
	Effective input range		2% to 110% of the range (at 47 to 63Hz)				
			5% to 110% of the range (at all range)				

Frequency(Hz)	Display Resolution	5 digits
	Maximum resolution	0.001Hz of 10.000Hz to 99.999Hz
		0.01Hz of 100.00Hz to 999.99Hz
		0.1Hz of 1000.0Hz to 2000.0Hz
	Operating Principle	Reciprocal Counting method
	Accuracy(23°C ± 5°C)	±0.02% ± 1C
	Measuring Input	Voltage
	Effective input range	10% to 100% of the voltage range
Measuring Range	10 Hz to 2kHz	

Interface	RS-485	Standard.(CP-268-1, CP-268-2, CP-268-5, CP-268-PS)
	GPIB	Optional.(CP-268-2, CP-268-5, CP-268-8-PS)
Baud rate	RS-485	9600 / 19200 / 38400 / 57600 / 115200 bps selectable
RS485	Address	001 ~ 254
Computing function	Apparent Power	$VA = V \cdot A$
	Reactive power	$VAR = \sqrt{VA^2 - W^2}$
	Power factor	$PF = W / (VA)$
	Computing Range	VA , VAR : Voltage and current range
		PF : Zero to unity leading or lagging
Computing Accuracy	VA x VAR ± 0.05% of rated value	
	PF : ±0.001	
Dielectric strength	2.2KV AC (50/60Hz) for one minute between input terminals and case.	
Insulation resistance	More than 20MΩ at 500V dc between input terminals and case between case and power line.	
Operating temperature	5 to 50 °C (41 to 104°F)	
Humidity range	10 to 90% (relative humidity) non-condensing.	
Line requirements	AC115V or 230V ± 15%, 47 to 63 Hz 8VA	
Dimensions / Weight	260x110x360(WxHxD)/ 5.7kgs net.	

CP-268-1 Voltage ,Current and Watt range resolution table :

V \ A	100.00mA	200.00mA	500.00mA	1.0000A	2.0000A	5.0000A	10.000A	20.000A
30.000V	3.0000W	6.000W	15.000W	30.000W	60.00W	150.00W	300.00W	600.0W
60.00V	6.000W	12.000W	30.000W	60.00W	120.00W	300.00W	600.0W	1.2000kW
150.00V	15.000W	30.000W	75.00W	150.00W	300.00W	750.0W	1.5000kW	3.0000kW
300.00V	30.000W	60.00W	150.00W	300.00W	600.0W	1.5000kW	3.0000kW	6.000kW
600.0V	60.00W	120.00W	300.00W	600.0W	1.2000kW	3.0000kW	6.000kW	12.000kW

CP-268-2 Voltage ,Current and Watt range resolution table :

V \ A	1.0000mA	2.0000mA	5.0000mA	10.000mA	20.000mA	50.000mA	100.00mA	200.00mA
1.5000V	1.5000mW	3.0000mW	7.500mW	15.000mW	30.000mW	75.00mW	150.00mW	300.00mW
3.0000V	3.0000mW	6.000mW	15.000mW	30.000mW	60.00mW	150.00mW	300.00mW	600.0mW
6.000V	6.000mW	12.000mW	30.000mW	60.00mW	120.00mW	300.00mW	600.0mW	1.2000W
15.000V	15.000mW	30.000mW	75.00mW	150.00mW	300.00mW	750.0mW	1.5000W	3.0000W
30.000V	30.000mW	60.00mW	150.00mW	300.00mW	600.0mW	1.5000W	3.0000W	6.000W
60.00V	60.00mW	120.00mW	300.00mW	600.0mW	1.2000W	3.0000W	6.000W	12.000W
150.00V	150.00mW	300.00mW	750.0mW	1.5000W	3.0000W	7.500W	15.000W	30.000W
300.00V	300.00mW	600.0mW	1.5000W	3.0000W	6.000W	15.000W	30.000W	60.00W
600.0V	600.0mW	1.2000W	3.0000W	6.000W	12.000W	30.000W	60.00W	120.00W

V \ A	500.00mA	1.0000A	2.0000A	5.0000A	10.000A	20.000A
1.5000V	750.0mW	1.5000W	3.0000W	7.500W	15.000W	30.000W
3.0000V	1.5000W	3.0000W	6.000W	15.000W	30.000W	60.00W
6.000V	3.0000W	6.000W	12.000W	30.000W	60.00W	120.00W
15.000V	7.500W	15.000W	30.000W	75.00W	150.00W	300.00W
30.000V	15.000W	30.000W	60.00W	150.00W	300.00W	600.0W
60.00V	30.000W	60.00W	120.00W	300.00W	600.0W	1.2000kW
150.00V	75.00W	150.00W	300.00W	750.0W	1.5000kW	3.0000kW
300.00V	150.00W	300.00W	600.0W	1.5000kW	3.0000kW	6.000kW
600.0V	300.00W	600.0W	1.2000kW	3.0000kW	6.000kW	12.000kW

CP-268-5 Voltage ,Current and Watt range resolution table :

V \ A	1.0000mA	2.0000mA	5.0000mA	10.000mA	20.000mA	50.000mA	100.00mA	200.00mA
1.5000V	1.5000mW	3.0000mW	7.500mW	15.000mW	30.000mW	75.00mW	150.00mW	300.00mW
3.0000V	3.0000mW	6.000mW	15.000mW	30.000mW	60.00mW	150.00mW	300.00mW	600.0mW
6.000V	6.000mW	12.000mW	30.000mW	60.00mW	120.00mW	300.00mW	600.0mW	1.2000W
15.000V	15.000mW	30.000mW	75.00mW	150.00mW	300.00mW	750.0mW	1.5000W	3.0000W
30.000V	30.000mW	60.00mW	150.00mW	300.00mW	600.0mW	1.5000W	3.0000W	6.000W
60.00V	60.00mW	120.00mW	300.00mW	600.0mW	1.2000W	3.0000W	6.000W	12.000W
150.00V	150.00mW	300.00mW	750.0mW	1.5000W	3.0000W	7.500W	15.000W	30.000W
300.00V	300.00mW	600.0mW	1.5000W	3.0000W	6.000W	15.000W	30.000W	60.00W
600.0V	600.0mW	1.2000W	3.0000W	6.000W	12.000W	30.000W	60.00W	120.00W

V \ A	500.00mA	1.0000A	2.0000A	5.0000A	10.000A	20.000A	50.00A
1.5000V	750.0mW	1.5000W	3.0000W	7.500W	15.000W	30.000W	75.00W
3.0000V	1.5000W	3.0000W	6.000W	15.000W	30.000W	60.00W	150.00W
6.000V	3.0000W	6.000W	12.000W	30.000W	60.00W	120.00W	300.00W
15.000V	7.500W	15.000W	30.000W	75.00W	150.00W	300.00W	750.0W
30.000V	15.000W	30.000W	60.00W	150.00W	300.00W	600.0W	1.5000kW
60.00V	30.000W	60.00W	120.00W	300.00W	600.0W	1.2000kW	3.0000kW
150.00V	75.00W	150.00W	300.00W	750.0W	1.5000kW	3.0000kW	7.500kW
300.00V	150.00W	300.00W	600.0W	1.5000kW	3.0000kW	6.000kW	15.000kW
600.0V	300.00W	600.0W	1.2000kW	3.0000kW	6.000kW	12.000kW	30.000kW

CP-268-PS Voltage ,Current and Watt range resolution table :

V \ A	1.0000mA	2.0000mA	5.0000mA	10.000mA	20.000mA	50.000mA	100.00mA	200.00mA
1.5000V	1.5000mW	3.0000mW	7.500mW	15.000mW	30.000mW	75.00mW	150.00mW	300.00mW
3.0000V	3.0000mW	6.000mW	15.000mW	30.000mW	60.00mW	150.00mW	300.00mW	600.0mW
6.000V	6.000mW	12.000mW	30.000mW	60.00mW	120.00mW	300.00mW	600.0mW	1.2000W
15.000V	15.000mW	30.000mW	75.00mW	150.00mW	300.00mW	750.0mW	1.5000W	3.0000W
30.000V	30.000mW	60.00mW	150.00mW	300.00mW	600.0mW	1.5000W	3.0000W	6.000W
60.00V	60.00mW	120.00mW	300.00mW	600.0mW	1.2000W	3.0000W	6.000W	12.000W
150.00V	150.00mW	300.00mW	750.0mW	1.5000W	3.0000W	7.500W	15.000W	30.000W
300.00V	300.00mW	600.0mW	1.5000W	3.0000W	6.000W	15.000W	30.000W	60.00W
600.0V	600.0mW	1.2000W	3.0000W	6.000W	12.000W	30.000W	60.00W	120.00W

CP-268-PS Voltage ,Current and Watt range resolution table :

V \ A	500.00mA	1.0000A	2.0000A	5.0000A	10.000A	20.000A
1.5000V	750.0mW	1.5000W	3.0000W	7.500W	15.000W	30.000W
3.0000V	1.5000W	3.0000W	6.000W	15.000W	30.000W	60.00W
6.000V	3.0000W	6.000W	12.000W	30.000W	60.00W	120.00W
15.000V	7.500W	15.000W	30.000W	75.00W	150.00W	300.00W
30.000V	15.000W	30.000W	60.00W	150.00W	300.00W	600.0W
60.00V	30.000W	60.00W	120.00W	300.00W	600.0W	1.2000kW
150.00V	75.00W	150.00W	300.00W	750.0W	1.5000kW	3.0000kW
300.00V	150.00W	300.00W	600.0W	1.5000kW	3.0000kW	6.000kW
600.0V	300.00W	600.0W	1.2000kW	3.0000kW	6.000kW	12.000kW