

P50

1000A SELECTED AC MEASUREMENT CLAMP ON CURRENT PROBE

The round jaw design on the P50 Series AC current probes along with the high content nickel metal core makes them well suited for power quality applications where high accuracy and low phase shift along with wide frequency are important. Measurement range is 1mA to 1200A.

The P50 is a general purpose 1000A AC current probe designed for use with DMMs, loggers and other instruments that have a current input. It has a 1000:1 ratio and output of 1mA per amp or 1mV per amp measured in the jaw. The P50 has an integral 2.5m lead terminated. The rounded jaw design on this probe makes it well-suited for power applications where high accuracy 0.1% and low phase shift and wide frequency response are important. This model P50 clamp on current probe can measure 2-128 times harmonics, application for harmonic instrument measurement.

Application

1. UL, CE mark;
2. High content permalloy core;
3. Holding wire diameter: $\phi 50\text{mm}$;
4. Frequency 10Hz-2MHz Bandwidth;
5. High times harmonic measurement;
6. Conforms to EN 61010, 600V CAT III;
7. Measurement range of 1mA to 1200A AC;
8. Low phase shift for power measurement;
9. High precision 0.1% for current measurement;
10. Improved ergonomic design & easy operation;
11. Large jaw opening accommodates conductors up to two 500kcmil;
12. Designed for DMMs, recorders, loggers, oscilloscopes, power and harmonic meters;



Application

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| 1. Multimeter; | 7. Earth resistance meter; | 12. Power quality analyzer(PQA); |
| 2. Power meter; | 8. Power load monitoring; | 13. Power and harmonic meters; |
| 3. Energy sub-meters; | 9. Data logging/recording; | 14. CT secondary current detection; |
| 4. Phase angle meter; | 10. Energy meter calibrator; | 15. Measuring around cable bundles; |
| 5. Cable fault analysis; | 11. Power quality monitoring; | 16. Waveform analysis(oscilloscopes meter); |
| 6. Large industrial loads; | | |

Parameters

Electrical parameters	
Ratio	1000: 1 or 2000:1 (customized)
Accuracy class	0.1%, 0.2%, 0.5%
Primary current	0 - 1000A AC
Secondary output	1mA/A AC , 1mV/A AC, 5mV/A or (customized)
Secondary current	0 - 1000mA AC and 0 - 5A AC
Max. Cont. Input current	1200A
Load capacity	$\leq 20\Omega$, Standard 4Ω
Over voltage category	CAT III 600V
Output signal	333mV, 500mV, 1V, 2V, 5V AC at nominal input current
Accuracy (1000A Range)	
0-10A	$\leq 0.5\%$
10-100	$\leq 0.2\%$
10-1200A	$\leq 0.1\%$
Phase Shift(1000A Range)	
0-10A	$\leq 0.5^\circ$
10-100	$\leq 0.2^\circ$
100-1200A	$\leq 0.1^\circ$
Frequency range	40Hz-2000Hz or 10-2MHz
Dielectric strength	3KV 50Hz/60Hz at 1 minute
Temperature range	-20°C to +55°C
Output	2.5 meter cable with D01 connector
Max. voltage not insulated conductors	600 V
Standard	EN 61010-1, EN 61010-2-032, EN 61010-2-031 IEC60044-1, & IEC61869-2, 600V CAT III
Installation	Clamp type
Output mode	Lead output (2.5m)
Connector	BNC, 4mm banana, signal cable(2 cores),customized
Mechanical parameters	
Dimensions (L x W x H) (mm)	102.9 x 219.6 x 28
Weight (g)	550
Holding wire diameter (mm)	$\phi 50$
Max. jaw opening (mm)	50
Color	Gray or blue
Material	PC+ABS+Polycarbonate, UL94 V0

Selection guide

Model	Rate Current	Max Current	Secondary Current	Coil Ratio	Burden Resistance	Accuracy
P50-200	200A	240A	5A	40:1	2.5VA	0.5%
P50-300	300A	360A	5A	60:1	2.5VA	0.5%
P50-400	400A	480A	5A	80:1	2.5VA	0.5%
P50-500	500A	600A	5A	100:1	2.5VA	0.5%
P50-600	600A	720A	5A	120:1	2.5VA	0.5%
P50-800	800A	960A	5A	160:1	2.5VA	0.5%
P50-1000	1000A	1200A	5A	200:1	2.5VA	0.5%
P501-100	100A	120A	1A	100:1	customized	0.5%
P501-200	200A	240A	1A	200:1	customized	0.5%
P501-300	300A	360A	1A	300:1	customized	0.2%
P501-400	400A	480A	1A	400:1	customized	0.2%
P501-500	500A	600A	1A	500:1	customized	0.2%
P501-600	600A	720A	1A	600:1	customized	0.2%
P501-800	800A	960A	1A	800:1	customized	0.2%
P501-1000	1000A	1200A	1A	1000:1	customized	0.1%
P502-500	500A	600A	500mA	1000:1	customized	0.1%
P502-1000	1000A	1200A	500mA	2000:1	customized	0.1%
P503-800	800A	960A	400mA	2000:1	customized	0.1%
P503-1000	1000A	1200A	400mA	2500:1	customized	0.1%
P504-500	500A	600A	250mA	2000:1	customized	0.1%
P504-1000	1000A	1200A	250mA	4000:1	customized	0.1%
Model	Rate Current	Max Current	Secondary Voltage	Coil Ratio	Burden Resistance	Accuracy
P50V1-1000	1000A	1200A	1V	1000:1	customized	0.1%
P50V2-1000	1000A	1200A	2V	1000:1	customized	0.1%
P50V4-1000	1000A	1200A	4V	1000:1	customized	0.1%
P50V5-1000	1000A	1200A	5V	1000:1	customized	0.1%
P50V10-1000	1000A	1200A	10V	1000:1	customized	0.1%
P50V1-1000-2	1000A	1200A	1V	1000:1	customized	0.2%
P50V2-1000-2	1000A	1200A	2V	1000:1	customized	0.2%
P50V4-1000-2	1000A	1200A	4V	1000:1	customized	0.2%
P50V5-1000-2	1000A	1200A	5V	1000:1	customized	0.2%
P50V10-1000-2	1000A	1200A	10V	1000:1	customized	0.2%
P50V1-500	500A	600A	1V	1000:1	customized	0.1%
P50V2-500	500A	600A	2V	1000:1	customized	0.1%
P50V4-500	500A	600A	4V	1000:1	customized	0.1%
P50V5-500	500A	600A	5V	1000:1	customized	0.1%
P50V10-500	500A	600A	10V	1000:1	customized	0.1%

Model	Rate Current	Max Current	Secondary Voltage	Coil Ratio	Burden Resistance	Accuracy
P50V1-500-2	500A	600A	1V	1000:1	customized	0.2%
P50V2-500-2	500A	600A	2V	1000:1	customized	0.2%
P50V4-500-2	500A	600A	4V	1000:1	customized	0.2%
P50V5-500-2	500A	600A	5V	1000:1	customized	0.2%
P50V10-500-2	500A	600A	10V	1000:1	customized	0.2%