P50

HIGH ACCURACY 0.1% LOW COST 1000A CLAMP ON CURRENT TRANSFORMER

The round jaw design on the P50 Series clamp on current transformers 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 1000A.

The P50 is a general purpose 1000A AC current clamp 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 clamp on cts has an integral 2.5m lead terminated. The rounded jaw design on this clamp 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 transformer can measure 2-128 times harmonics, application for harmonic instrument measurement.

All of our clamp on current transformers are strictly comply IEC60044-1, IEC 61869-2, ANSI/IEEE C57.13, GB1208-2006, GB/T 20840.1-2010, GB/T 20840.2-2014, GB/T 22071.1-2018, IEC/EN61010-2-032, IEC/EN 61010-2-031.

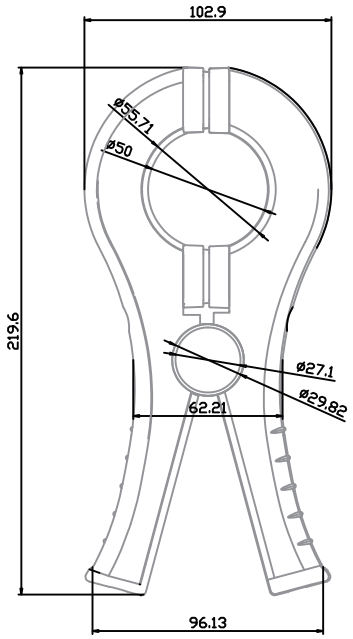
Features

1. UL, CE mark;
2. High content permalloy core;
3. Holding wire diameter: ϕ50mm;
4. Frequency 10Hz-2MHz Bandwidth;
5. High times harmonic measurement;
6. Conforms to EN 61010, 600V CAT III;
7. Low phase shift for power measurement;
8. Measurement range of 1mA to 1000A AC;
9. As a high accuracy current transformer clamp;
10. Improved ergonomic design & easy operation;
11. High precision 0.1% for current measurement;
12. Large jaw opening accommodates conductors up to two 500kcoil;
13. IEC/EN61010-2-032, IEC/EN 61010-2-031, IEC 61869-2 etc standard;
14. Designed for DMMs, recorders, loggers, oscilloscopes, power and harmonic meters;

Appliations

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

Outline Drawing



Unit:mm

Parameters

Technical parameters	
Ratio	1000:1, 2000:1, 4000:1, 1000:5 (customized)
Accuracy Class	0.1%, 0.2%, 0.5%
Primary current	0-1000A AC, 0-500A AC, 0-200A AC, 0-100A AC
Signal output	1mA/A, 1mV/A, 5mV/A, 10mV/A
Secondary voltage	0 - 500mV AC, 0 - 1V AC, 0 - 5V AC;
Secondary current	0-500mA, 0-1A or 0-5A AC
Max. Cont. Input current	1200A
Load capacity	≤20Ω, standard 4Ω

Technical parameters - continued	
Over voltage category	CAT Ⅲ 600V
Frequency range	10Hz-2MHz, 40Hz-2kHz
Dielectric strength	3KV 50Hz/60Hz at 1minute
Temperature range	-40°C to +55°C
Output	2.5 meter cable with D01 or BNC connector
Max. voltage not insulated conductors	720 V
Standard	EN 61010-1, EN 61010-2-032, EN 61010-2-031 IEC60044-1, & IEC61869-2, 600V CAT Ⅲ
Installation	Clamp type
Range	100A, 200A, 500A, 1000A optional
Output mode	Lead output(2.5m)
Output signal	333mV, 500mV, 1V, 2V, 5V AC at nominal input current
Connector	BNC, 4mm banana, signal cable(2 cores), customized
Accuracy (1000A Range)	
0-10A	≤0.5%
10-100A	≤0.2%
100-1000A	≤0.1%
Phase Shift(1000A Range)	
0-10A	≤0.5°
10-100A	≤0.2°
100-1000A	≤0.1°
Mechanical parameters	
Dimensions (L x W x H) (mm)	102.9 x 219.6 x 28
Weight (g)	550
Holding wire diameter (mm)	φ50
Max. jaw opening (mm)	50
Jaw color	Blue & Grey
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	0.2%
P501-200	200A	240A	1A	200:1	customized	0.2%
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%
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%

Notes: Can be customized clamp on current transformers according to user requirements!

Clamp On Current Transformer Selection Model

Model	Current Range	Max Current	Secondary Output Signal	Ratio	Resistance	Accuracy
S50	0-1200A	1200A	250mA, 500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	1000:1, 2000:1,4000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
S120	0-3000A	3600A	250mA, 500mA, 1A, 2A, 5A, 333mV, 1V, 2V , 5V, 10V etc	600:1, 1000:1, 2000:1,4000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
P8	0-10A	20A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1, 4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
P18	0-200A	240A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1, 4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
P50	0-1000A	1200A	250mA, 500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	1000:1,2000:1, 2500:1,4000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
P110	0-1500A	1500A	250mA, 500mA, 1A, 2A, 5A, 333mV, 1V, 2V , 5V, 10V etc	200:1, 600:1, 1000:1, 2000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q8A1	20A	20A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q8A2	20A	20A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q13	100A	120A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q20A	200A	240A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q20B	200A	240A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q40	500A	600A	200mA, 250mA, 500mA, 333mV, 1V, 2V , 5V, 10V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q50A	1000A	1000A	250mA, 500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	1000:1,2000:1, 2500:1,4000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q70	1000A	1200A	250mA, 500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	200:1, 600:1, 1000:1, 2000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q110	1500A	1500A	250mA, 500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	200:1, 600:1, 1000:1, 2000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
Q125	2000A	2400A	500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	200:1, 600:1, 1000:1, 2000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.2%, 0.5%
Q125B	3000A	3600A	250mA, 500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	600:1, 1000:1, 2000:1,4000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.2%, 0.5%
Q150	3000A	3600A	500mA, 1A, 5A, 333mV, 1V, 2V , 5V, 10V etc	600:1, 1000:1, 2000:1,4000:1 etc	2.5VA, 1VA, 4Ω, 10Ω, 20Ω etc	0.2%, 0.5%
XQ13	100A	120A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
XQ20	200A	240A	2mA, 2.5mA, 5mA, 10mA,20mA, 333mV, 1V, 2V , 5V, 10V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%
HQ15	100A	120A	2mA, 2.5mA, 5mA, 10mA, 20mA, 333mV, 1V, 2V , 5V etc	1000:1,2000:1, 2500:1,4000:1 etc	4Ω, 10Ω, 20Ω etc	0.1%, 0.2%, 0.5%