

Q50A

HIGH ACCURACY 1000A INSTRUMENTS CURRENT MEASUREMENT CLAMP ON CURRENT TRANSFORMER

The model Q50A clamp on current transformer is designed for fast and easy measure the current in industrial and power environment, it has wide range of current measurement from 1mA to 1200A, high precision 0.1%, low phase shift, wide frequency from 10Hz to 200KHz, with harmonics measurement function, easy operation for measurement instruments. Meet EN61010-2-032 standard. Q50A current transformer clamp have many kinds of versions, for example 100A/200A/300A/500A/1000A etc. The Q50A series AC clamp on cts are designed to extend the current measuring capabilities of DMMs, 4m banana or BNC, power instruments, oscilloscopes, hand-held scopes, recorders or loggers, clamp type grounding resistance tester, double clamp phase angle meter, energy meter calibrator and other diverse instruments. It has been used many in globally renowned measuring instrument company.

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

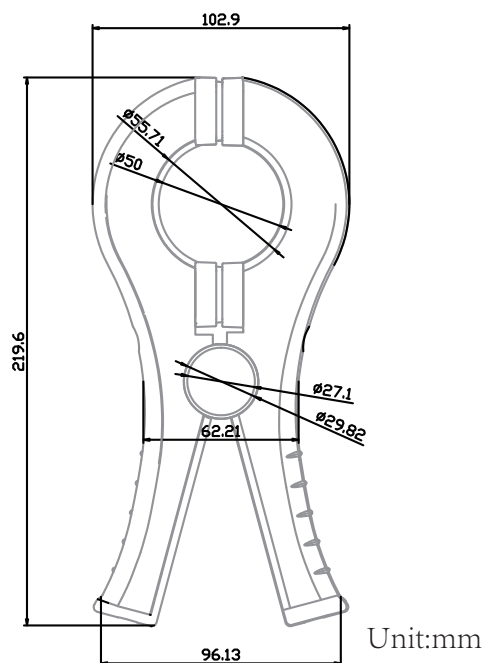
1. UL, CE CNAS mark;
2. High content permalloy core;
3. Holding wire diameter: $\phi 50\text{mm}$;
4. Frequency 10Hz-200kHz Bandwidth;
5. Conforms to EN 61010, 600V CAT III;
6. Industrial design & beautiful appearance;
7. Low phase shift for power measurement;
8. Measurement range of 1mA to 1000A AC;
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 recorders, loggers, oscilloscopes, power and harmonic meters;



Applications

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|-------------------------------------|--------------------------------------|-------------------------------------|
| 1. Multimeter; | 2. Power meter; | 3. Oscilloscopes; |
| 4. Power analyzer; | 5. Digital multi-meter; | 6. Energy sub-meters; |
| 7. Phase angle meter; | 8. Waveform analysis; | 9. Large industrial loads; |
| 10. Power quality analyzer; | 11. Data logging/recording; | 12. Power load monitoring; |
| 13. Power quality monitoring; | 14. Power and harmonic meters; | 15. Multi-function energy meter; |
| 16. CT secondary current detection; | 17. On site energy meter calibrator; | 18. Measuring around cable bundles; |

Outline Drawing



Parameters

Technical parameters	
Ratio	1000:5, 1000:1, 2000:1, 4000:1 (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, 5mA/A, 1mV/A, 5mV/A, 10mV/A
Secondary voltage	0-333mV, 0-500mV, 0-1V, 0-5V AC;
Secondary current	0-250mA, 0-500mA, 0-1A or 0-5A AC
Max. Cont. Input current	1200A
Load capacity	≤20Ω, standard 4Ω
Over voltage category	CAT III 600V

Technical parameters - continued	
Frequency range	10Hz-200kHz
Dielectric strength	3KV 50Hz/60Hz at 1minute
Temperature range	-20°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, 400A, 500A, 600A, 1000A optional
Output mode	lead output (2.5m, 5m, 10m or customized)
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
Q50A5-200	200A	240A	5A	40:1	2.5VA	0.5%
Q50A5-300	300A	360A	5A	60:1	2.5VA	0.5%
Q50A5-400	400A	480A	5A	80:1	2.5VA	0.5%
Q50A5-500	500A	600A	5A	100:1	2.5VA	0.5%
Q50A5-600	600A	720A	5A	120:1	2.5VA	0.5%
Q50A5-800	800A	960A	5A	160:1	2.5VA	0.5%
Q50A5-1000	1000A	1200A	5A	200:1	2.5VA	0.5%
Q50A1-100	100A	120A	1A	100:1	customized	0.2%
Q50A1-200	200A	240A	1A	200:1	customized	0.2%
Q50A1-300	300A	360A	1A	300:1	customized	0.2%
Q50A1-400	400A	480A	1A	400:1	customized	0.2%
Q50A1-500	500A	600A	1A	500:1	customized	0.2%
Q50A1-600	600A	720A	1A	600:1	customized	0.2%
Q50A1-800	800A	960A	1A	800:1	customized	0.2%
Q50A1-1000	1000A	1000A	1A	1000:1	customized	0.1%
Q50A2-250	250A	300A	250mA	1000:1	customized	0.1%
Q50A2-300	300A	360A	300mA	1000:1	customized	0.1%
Q50A2-500	500A	600A	500mA	1000:1	customized	0.1%
Q50A2-1000	1000A	1000A	500mA	2000:1	customized	0.1%
Q50A3-500	500A	600A	200mA	2500:1	customized	0.1%
Q50A3-800	800A	960A	400mA	2000:1	customized	0.1%
Q50A3-1000	1000A	1000A	400mA	2500:1	customized	0.1%
Q50A4-500	500A	600A	250mA	2000:1	customized	0.1%
Q50A4-1000	1000A	1000A	250mA	4000:1	customized	0.1%
Q50A6-1000	1000A	1000A	200mA	5000:1	customized	0.1%

Model	Rate Current	Max Current	Secondary Voltage	Coil Ratio	Burden Resistance	Accuracy
Q50A-V1-1000	1000A	1000A	1V	1000:1	customized	0.1%
Q50A-V2-1000	1000A	1000A	2V	1000:1	customized	0.1%
Q50A-V4-1000	1000A	1000A	4V	1000:1	customized	0.1%
Q50A-V5-1000	1000A	1000A	5V	1000:1	customized	0.1%
Q50A-V10-1000	1000A	1000A	10V	1000:1	customized	0.1%
Q50A-V1-1000-2	1000A	1200A	1V	1000:1	customized	0.2%
Q50A-V2-1000-2	1000A	1200A	2V	1000:1	customized	0.2%
Q50A-V4-1000-2	1000A	1200A	4V	1000:1	customized	0.2%
Q50A-V5-1000-2	1000A	1200A	5V	1000:1	customized	0.2%
Q50A-V10-1000-2	1000A	1200A	10V	1000:1	customized	0.2%
Q50A-V1-500	500A	600A	1V	1000:1	customized	0.1%
Q50A-V2-500	500A	600A	2V	1000:1	customized	0.1%
Q50A-V4-500	500A	600A	4V	1000:1	customized	0.1%
Q50A-V5-500	500A	600A	5V	1000:1	customized	0.1%
Q50A-V10-500	500A	600A	10V	1000:1	customized	0.1%
Q50A-V1-500-2	500A	600A	1V	1000:1	customized	0.2%
Q50A-V2-500-2	500A	600A	2V	1000:1	customized	0.2%
Q50A-V4-500-2	500A	600A	4V	1000:1	customized	0.2%
Q50A-V5-500-2	500A	600A	5V	1000:1	customized	0.2%
Q50A-V10-500-2	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%