

Q8A2

HIGH PRECISION LEAKAGE CURRENT MEASUREMENT 5A CLAMP ON CURRENT SENESEOR

Clamp on current sensors are devices with jaws that open up and clamp around an electrical conductor to measure current. They are very useful as they allow you to clip the probe around an existing conductor without having to disconnect and reroute cables. Clamp on sensors will read the magnitude of alternating current (AC) as well as the phase shift and waveform.

The model Q8A2 permalloy core clamp on current sensor with high accuracy up to 0.1% has been designed for use with energy meter tester, multimeters, recorders, power analyzers, safety testers etc. It has low phase shift for power measurement, greatly suitable for electric energy meter calibrator and oscilloscope. This Q8A2 clamp on ct sensor can convert 0 - 10A AC current to 0 - 10mA AC current with real shape, max 20A measurement, but with harmonic measurement function. It is suitable for leakage current measurement in the field.

All of our clamp on current sensor 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

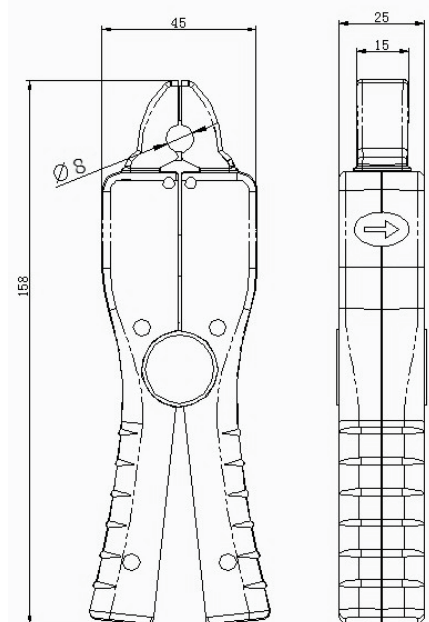
1. High precision 0.1% for current measurement;
2. Measurement range of 1mA to 20A AC;
3. Frequency 10Hz-2MHz Bandwidth;
4. 2-128th harmonic measurement;
5. Min 1mA for leakage current measurement;
6. Installation: clamp type design;
- 7 Holding wire diameter: $\phi 8\text{mm}$;
8. Conforms to EN 61010, 600V CAT III;
9. Industrial design & beautiful appearance;
10. Low phase shift for power measurement;
11. Improved ergonomic design & easy operation;
12. High content nickel metal permalloy core;
13. Designed for DMMs, recorders, oscilloscopes, power meters etc.;
14. UL, CE CNAS mark;
15. Sharp jaw design, suitable for precision line measurement;
16. IEC/EN61010-2-032, IEC/EN 61010-2-031, IEC 61869-2 etc standard;
17. As a high accuracy clamp current probe;
18. Can be customized 4mm banana/BNC connector;



Applications

1. Power meter;
2. Energy sub-meters;
3. Digital multi-meter;
4. Power quality analyzer;
5. Leakage current meter;
6. Data logging/recording;
7. Phase volt-ampere meter;
8. Power quality monitoring;
9. Power and harmonic meters;
10. Multi-function energy meter;
11. CT secondary current detection;
12. Oscilloscopes meter(Waveform analysis);
13. Electricity energy meter calibrator (on site);

Outline Drawing



Unit:mm

Parameters

Technical parameters	
Ratio	1000:1, 2000:1, 2500:1, 4000:1 (customized)
Accuracy Class	0.1%, 0.2%
Primary current	0 - 1A AC, 0 - 5A AC, 0 - 10A AC, 0 - 20A AC
Signal output	1mA/A, 5mA/A, 1mV/A, 5mV/A, 10mV/A
Secondary voltage	0 - 50mV, 0-100mV, 0-200mV, 0-1V, 0-5V AC (customized)
Secondary current	0 - 2.5mA, 0-5mA, 0-10mA, 0-20mA AC (customized)
Max. Cont. Input current	24A
Load capacity	≤20Ω, standard 4Ω
Over voltage category	CAT III 600V

Technical parameters - continued	
Frequency range	10Hz-2MHz
Dielectric strength	3KV 50Hz/60Hz at 1 minute
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	1A, 5A, 10A, 20A optional
Output mode	Lead output (2.5m, 5m, 10m or customized)
Output signal	333mV, 50mV, 1V, 2V, 5V AC at nominal input current
Connector	BNC, 4mm banana, signal cable(2 cores), Audio plug, customized
Accuracy (20A Range)	
0-10mA	≤0.5%
10mA-1A	≤0.2%
1A-20A	≤0.1%
Phase Shift(20A Range)	
0-10mA	≤0.5°
10mA-1A	≤0.2°
1A-20A	≤0.1°
Mechanical parameters	
Dimensions (L x W x H) (mm)	45x158x25
Weight (g)	250
Holding wire diameter (mm)	φ8
Max. jaw opening (mm)	8
Jaw color	Black
Material	PC+ABS+Polycarbonate, UL94 V0

Selection Guide

Model	Rate Current	Max Current	Secondary Current	Coil Ratio	Burden Resistance	Accuracy
Q8A2-1-1	1A	1.2A	1mA	1000:1	customized	0.1%
Q8A2-1-2	1A	1.2A	0.5mA	2000:1	customized	0.1%
Q8A2-5-1	5A	6A	5mA	1000:1	customized	0.1%
Q8A2-5-2	5A	6A	2.5mA	2000:1	customized	0.1%
Q8A2-5-3	5A	6A	2mA	2500:1	customized	0.1%
Q8A2-10-1	10A	12A	10mA	1000:1	customized	0.1%
Q8A2-10-2	10A	12A	5mA	2000:1	customized	0.1%
Q8A2-10-3	10A	12A	4mA	2500:1	customized	0.1%
Q8A2-20-1	20A	24A	20mA	1000:1	customized	0.1%
Q8A2-20-2	20A	24A	10mA	2000:1	customized	0.1%
Q8A2-V5-1	5A	6A	50mV	1000:1	customized	0.1%
Q8A2-V5-2	5A	6A	500mV	1000:1	customized	0.1%
Q8A2-V5-3	5A	6A	1V	1000:1	customized	0.1%
Q8A2-V10-1	10A	12A	100mV	1000:1	customized	0.1%
Q8A2-V10-2	10A	12A	1V	1000:1	customized	0.1%
Q8A2-V10-3	10A	12A	5V	1000:1	customized	0.1%
Q8A2-1-12	1A	1.2A	1mA	1000:1	customized	0.2%
Q8A2-1-22	1A	1.2A	0.5mA	2000:1	customized	0.2%
Q8A2-5-12	5A	6A	5mA	1000:1	customized	0.2%
Q8A2-5-22	5A	6A	2.5mA	2000:1	customized	0.2%
Q8A2-10-12	10A	12A	10mA	1000:1	customized	0.2%
Q8A2-10-22	10A	12A	5mA	2000:1	customized	0.2%
Q8A2-10-32	10A	12A	4mA	2500:1	customized	0.2%
Q8A2-20-12	20A	24A	20mA	1000:1	customized	0.2%
Q8A2-20-22	20A	24A	10mA	2000:1	customized	0.2%
Q8A2-V5-12	5A	6A	50mV	1000:1	customized	0.2%
Q8A2-V5-22	5A	6A	500mV	1000:1	customized	0.2%
Q8A2-V5-32	5A	6A	1V	1000:1	customized	0.2%
Q8A2-V10-12	10A	12A	100mV	1000:1	customized	0.2%
Q8A2-V10-22	10A	12A	1V	1000:1	customized	0.2%
Q8A2-V10-32	10A	12A	5V	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%