

## Q40

### 500A GOOD LINEARITY UNIVERSAL AC CLAMP ON CURRENT CT SENSOR

The Q40 Series clamp on current sensor are high performance current clamp models, and use a custom nickel core to improve accuracy and phase shift on the low end of the measurement range. The Q40 ct clamp sensor is an excellent probe to be used in power and low level current measurement applications detection. The range, transformation ratio, output interface of the sensor can be customized according to customer requirements. Q40 CT clamp sensors, also known as current transformers or current sensors, are devices that measure the current running through a wire by using the magnetic field to detect the current and generate a proportional output. Q40 current CT sensors can be used to measure less than 500A AC current circuit on site.

### Features

1. UL, CE, CNAS mark;
2. Small, compact size;
3. 10Hz to 200kHz response;
4. Installation: clamp type design;
5. Holding wire diameter:  $\phi 40\text{mm}$ ;
6. Measurement range of 1mA to 600A AC;
7. High content nickel metal permalloy core;
8. Lower phase shift for power measurement;
9. Improved ergonomic design and easy operation;
10. 1mV/A AC, 10mV/A AC or 1mA/A AC output signals;
11. Designed to EN 61010, 600V CAT III safety standard;
12. Suitable for 10A, 50A, 100A, 500A cable online measurement;
13. Designed for DMMs, PQA, recorders, oscilloscopes and power meter;



### Application

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

## Parameter

Electrical parameters	
Ratio	1000: 1 or 2000:1 (customized)
Accuracy class	0.1%, 0.2%, 0.5%
Primary current	0 - 500A AC
Secondary current	0 - 500mA AC or 0-5V AC (customized)
Max. Cont. Input current	600A
Load capacity(Burden)	≤10Ω, standard 4Ω
Over voltage category	CAT III 600V
Output signal (AC current)	250mA,500mA,1V, 5V AC at nominal input current
Output signal (AC voltage)	250mV, 500mV, 1V, 5V AC at nominal input current
Frequency range	10Hz-200KHz
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	720 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), 5m or customized
Connector	BNC, 4mm banana, signal cable(2 cores),customized
Accuracy (500A Range)	
0-0.5A	≤0.5%
0.5-5A	≤0.2%
5-600A	≤0.1%
Phase Shift(500A Range)	
0-0.5A	≤0.5°
0.5-5A	≤0.2°
5-600A	≤0.1°
Mechanical parameters	
Dimensions (L x W x H) (mm)	82 x 290 x 25.3
Weight (g)	500
Holding wire diameter (mm)	φ40
Max. jaw opening (mm)	40
Color	Black
Material	PC+ABS+Polycarbonate, UL94 V0

## Selection Guide

Model	Rate Current	Max Current	Secondary	Coil Ratio	Burden Resistance	Accuracy
Q40A1-300	300A	360A	300mA	1000:1	customized	0.1%
Q40A1-400	400A	480A	400mA	1000:1	customized	0.1%
Q40A1-500	500A	600A	500mA	1000:1	customized	0.1%
Q40A2-500	500A	600A	250mA	2000:1	customized	0.1%
Q40A3-500	500A	600A	200mA	2500:1	customized	0.1%
Q40V03-300	300A	360A	300mV	1000:1	customized	0.1%
Q40V04-400	400A	480A	400mV	1000:1	customized	0.1%
Q40V05-500	500A	600A	500mV	1000:1	customized	0.1%
Q40V1-500	500A	600A	1V	2000:1	customized	0.1%
Q40V2-500	500A	600A	2V	2000:1	customized	0.1%
Q40V4-500	500A	600A	4V	2000:1	customized	0.1%
Q40V5-500	500A	600A	5V	2000:1	customized	0.1%
Q40V10-500	500A	600A	10V	2000:1	customized	0.1%
Q40A1-300-2	300A	360A	300mA	1000:1	customized	0.2%
Q40A1-400-2	400A	480A	400mA	1000:1	customized	0.2%
Q40A1-500-2	500A	600A	500mA	1000:1	customized	0.2%
Q40A2-500-2	500A	600A	250mA	2000:1	customized	0.2%
Q40A3-500-2	500A	600A	200mA	2500:1	customized	0.2%
Q40V03-300-2	300A	360A	300mV	1000:1	customized	0.2%
Q40V04-400-2	400A	480A	400mV	1000:1	customized	0.2%
Q40V05-500-2	500A	600A	500mV	1000:1	customized	0.2%
Q40V1-500-2	500A	600A	1V	2000:1	customized	0.2%
Q40V2-500-2	500A	600A	2V	2000:1	customized	0.2%
Q40V4-500-2	500A	600A	4V	2000:1	customized	0.2%
Q40V5-500-2	500A	600A	5V	2000:1	customized	0.2%
Q40V10-500-2	500A	600A	10V	2000:1	customized	0.2%

Notes: Can be customized current probe according to user requirements!