

Clamp-on ammeter for AC current

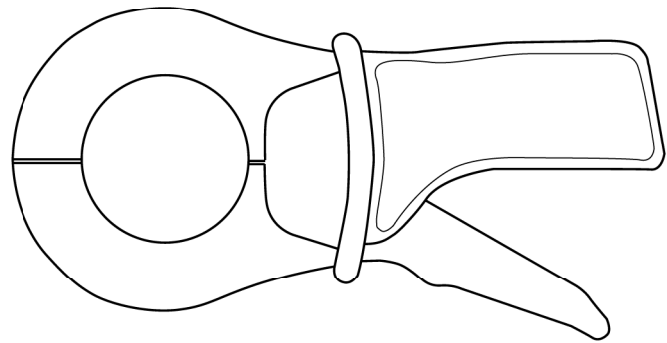
Model C122

C100 series

Current	1000 A
Ratio	1000/5
Output	5 mA/A

Description

An electronic voltage-limiting system protects output of clamp when operating, if the secondary circuit is opened accidentally.



Electrical specifications

Current calibre:

1 A AC ... 1200 A AC

Current transformation ratio:

1000:5

Output signal:

5 mA AC/A AC (5 A for 1000 A)

Accuracy and phase shift ⁽¹⁾:

Primary current	1 A...20 A	20 A	50 A ⁽²⁾	200 A ⁽²⁾	1000 A ⁽²⁾	1200 A ⁽²⁾
Accuracy in %	≤ 6 % + 0.5 mA	≤ 5 %	≤ 3 %	≤ 1.5 %	≤ 1 %	≤ 1 %
Phase shift	not specified	≤ 3°	≤ 3°	≤ 1.5°	≤ 1°	≤ 1°

Bandwidth:

30 Hz ... 10 kHz

Crest factor:

≤ 6 for a current ≤ 3000 A peak (500 Arms)

Maximum currents:

1000 A continuous for a frequency ≤ 1 kHz (limitation proportional to the inverse frequency beyond)

1200 A for 30 minutes max (interval between measurements > 15 minutes)

Load impedance:

≤ 0.6 Ω

Impedance of connection leads:

≤ 40 mΩ

Max. voltage at output (secondary circuit open):

Electronic limiter 30 V max. peak

Operating voltage:

600 V rms

Common mode voltage:

600 V category III and pollution degree 2

Influence of adjacent conductor:

≤ 1 mA/A at 50 Hz

Influence of conductor position in jaws:

≤ 0.2 % of output signal for frequencies ≤ 400 Hz

Load influence:

from 0.2 Ω to 0.6 Ω

< 0.5 % on measurement

< 0.5° on phase

Influence of frequency ⁽³⁾:

< 1 % of output signal from 30 Hz ... 48 Hz

< 0.5 % of output signal from 65 Hz ... 1 kHz

< 1 % of output signal from 1 kHz ... 5 kHz

Influence of crest factor:

< 1 % of output signal for crest factor ≤ 6 with current ≤ 3000 A peak (500 Arms)

Influence of DC current superimposed on rated current:

< 1 % of output signal for a current ≤ 30 A DC

Mechanical specifications

Operating temperature:

-10 °C to +50 °C

Storage temperature:

-40 °C to +70 °C

Influence of temperature:

≤ 0.1 % of output signal per 10 °K

Relative humidity for operation:

0 to 85 % RH with a linear decrease above 35 °C

Influence of relative humidity:

< 0.2 % of output signal from 10 % to 85 % RH

Operating altitude:

0 to 2,000 m

Max. jaw opening:

53 mm, patented progressive opening system

Clamping capacity:

- Cable: Ø max 52 mm

- Busbar: 1 busbar of 50 x 5 mm / 4 busbars of 30 x 5 mm

Casing protection rating:

IP40 (IEC 529)

Drop test:

1 m (IEC 68-2-32)

Shock resistance:

100 g (IEC 68-2-27)

Vibration resistance:

5/15 Hz 1.5 mm

15/25 Hz 1 mm

25/55 Hz 0.25 mm

(IEC 68-2-6)

Self-extinguishing capability:

Casing and jaws: UL94 V0

Dimensions:

216 x 111 x 45 mm

Weight:

550 g

Colours:

Dark grey case with red jaws

Output:

Safety sockets (4 mm)

Safety specifications

Electrical safety:

Instrument with double insulation or reinforced insulation between the primary, the secondary and the grippable part located under the guard as per IEC 1010-1 & IEC 1010-2-032

- 600 V category III, pollution degree 2

- 300 V category IV, pollution degree 2

Electromagnetic compatibility (EMC):

EN 50081-1: class B

EN 50082-2:

- Electrostatic discharge: IEC 1000-4-2

- Radiated field: IEC 1000-4-3

- Fast transients: IEC 1000-4-4

- Magnetic field at 50/60 Hz: IEC 1000-4-8

(1) Conditions of reference: 23 °C ± 3 °K, 20 % to 75 % RH, sine signal, frequency of 48 Hz to 65 Hz, distortion factor < 1 %, no DC components, external magnetic field < 40 A/m, no AC magnetic field, conductor centred for measurement, load impedance 0.2 Ω (5 VA)

(2) Accuracy class in accordance with IEC 185: 5 VA - class 1 - 48 ... 65 Hz

(3) Out of reference domain

To order	Reference
AC current clamp model C122 with operating manual	P01120306