



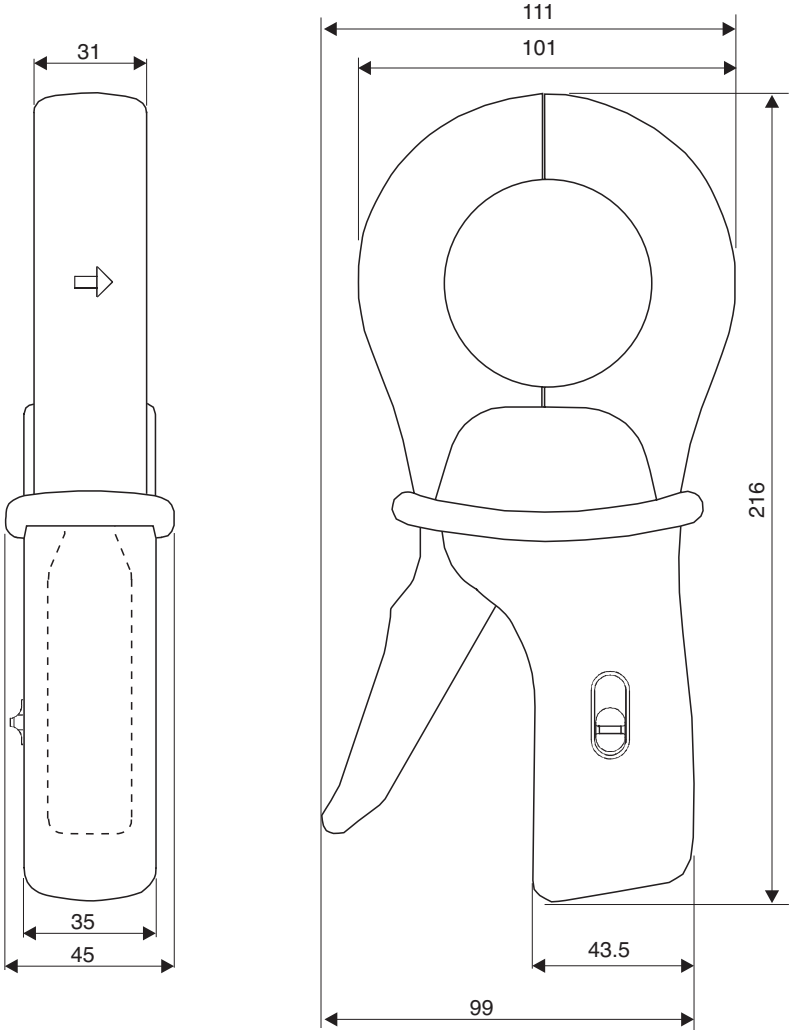
"C 100" SERIES

The "C100" series is a range of thirteen transformer clamps with all the advantages of our old "C30" series clamps whilst incorporating considerable improvements, particularly in the field of safety, ergonomics and performance:

- 1,000 A measurement, excellent metrology, high accuracy, high level of linearity, symmetrical coil windings for minimum phase shift, pendular adjusting system for magnetic elements, maximum conductor diameter \varnothing 52 mm and also some models with μ metal core specially made for wattmeter use.
- Innovative design: excellent ergonomics, handle with finger grips, assisted opening system for jaws (patented system), IEC 1010 600 V cat. III safety (industry and services), antislip protection, conductor anti-pinching system,...

All this technology and manufacturing quality has been combined to provide the best measurement possible without any complications.

A "C100" series clamp is compatible with any instrument (multimeter, wattmeter, recorder, oscilloscope...) for safe measurement of AC currents without shutting down the installation.



Current clamps for AC current

Models C116 and C117

C100 series

Current	1,000 A
Output	1 mV/A

DESCRIPTION

Thanks to their excellent technical performance (phase shift and linearity), these μ -metal core clamps are highly recommended for wattmeter use.

ELECTRICAL SPECIFICATIONS

- Current range:**
0.001 A AC .. 1,200 A AC
- Output signal:**
1 mVAC/A AC (1 V for 1,000 A)
- Accuracy and phase shift ⁽¹⁾:**

Primary current	1 mA .. 100 mA	0.1 A .. 1 A	1 A .. 10 A	10 A .. 100 A	100 A .. 1,200 A
% Accuracy of output signal	$\leq 3\% + 5 \mu\text{A}$	$\leq 2\% + 3 \mu\text{A}$	$\leq 1\%$	$\leq 0.5\%$	$\leq 0.3\%$
Phase shift	not specified	not specified	$\leq 2^\circ$	$\leq 1^\circ$	$\leq 0.7^\circ$

- Bandwidth:**
30 Hz .. 10 kHz
- Crest factor:**
 ≤ 6 for a current $\leq 2,000$ A peak (300 A_{RMS})
- Maximum currents:**
1,000 A continuous for a frequency ≤ 1 kHz (limitation proportional to the inverse of frequency beyond)
1,200 A for 40 minutes max (interval between measurements > 20 minutes)
- Output impedance:**
 $1 \Omega \pm 1\%$
- Load impedance:**
 $\geq 1 \text{ M}\Omega$ and $\leq 100 \text{ pF}$
- Operating voltage:**
600 V_{RMS}
- Common mode voltage:**
600 V category III and pollution degree 2
- Influence of adjacent conductor:**
 $\leq 0.5 \text{ mA/A}$ at 50 Hz
- Influence of conductor position in jaws:**
 $\leq 0.1\%$ of output signal for frequencies ≤ 400 Hz
- Load influence:**
On receiver, for an input impedance of 100Ω :
 $\leq 1\%$ on measurement, no measurement on phase.
On receiver, for an input impedance of $1 \text{ k}\Omega$:
 $\leq 0.1\%$ on measurement, no measurement on phase.
- Influence of frequency ⁽²⁾:**
 $< 0.5\%$ of output signal from 30 Hz .. 48 Hz
 $< 1\%$ of output signal from 65 Hz .. 1 kHz
 $< 2\%$ of output signal from 1 kHz .. 5 kHz

- Influence of crest factor:**
 $< 1\%$ of output signal for crest factor ≤ 6 with current $\leq 2,000$ A peak
- Influence of DC current superimposed on rated current:**
 $< 1\%$ of output signal for a current ≤ 15 A DC

MECHANICAL SPECIFICATIONS

- Operating temperature:**
 -10°C to $+50^\circ\text{C}$
- Storage temperature:**
 40°C to $+70^\circ\text{C}$
- Influence of temperature:**
 $\leq 0.2\%$ of output signal per 10°K
- Relative humidity for operation:**
0 to 85 % RH decreasing linearly above 35°C
- Influence of relative humidity:**
 $< 0.1\%$ 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: \emptyset max 52 mm
Busbar: 1 busbar of $50 \times 5 \text{ mm}$ /
4 busbars of $30 \times 5 \text{ mm}$
- 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:**
C116: Safety sockets (4 mm)
C117: two-wire cable with reinforced insulation or double insulation, length 1.5 m, terminated by 2 insulated elbowed male banana plugs, $\emptyset 4 \text{ mm}$

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: $23^\circ\text{C} \pm 3^\circ\text{K}$, 20 % to 75 % RH, signal sinus, frequency of 48 Hz to 65 Hz, distortion factor $< 1\%$, no DC components, external magnetic field $< 40 \text{ A/m}$, no AC magnetic field, conductor centred for measurement, load impedance $\geq 1 \text{ M}\Omega$ and $\leq 100 \text{ pF}$

(2) Out of reference domain

To order	Reference
AC current clamp model C116 with operating manual	P01120316
AC current clamp model C117 with operating manual	P01120317

