"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 Ø 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

C100 series

Dimensions:
- Width: 111 mm
- Height: 216 mm
- Depth: 31 mm
- Diameter: 99 mm
- Inner Diameter: 43.5 mm

Non-contractual document
Current clamp for AC current

Model C100

**ELECTRICAL SPECIFICATIONS**

- **Current range:**
  - 0.1 A AC .. 1,200 A AC
- **Current transformation ratio:**
  - 1000:1
- **Output signal:**
  - 1 mA AC / A (1 A to 1,000 A)
- **Accuracy and phase shift:**
  - % Accuracy of output signal:
    - ≤ 3 % + 0.1 mA
    - ≤ 3 %
    - ≤ 1.5 %
    - ≤ 0.75 %
    - ≤ 0.5 %
  - Phase shift:
    - not specified
    - ≤ 3°
    - ≤ 1.5°
    - ≤ 0.75°
    - ≤ 0.5°

- **Bandwidth:**
  - 30 Hz .. 10 kHz (-3 dB)
- **Crest factor:**
  - ≤ 6 for a current ≤ 3,000 A peak (500 Arms)
- **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)
- **Load impedance:**
  - ≤ 15 Ω
- **Operating voltage:**
  - 600 Vrms
- **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:**
  - ≤ 0.1 % of output signal for frequencies ≤ 400 Hz
- **Load influence:**
  - From 5 O to 15 O
  - ≤ 0.5 % on measurement
  - ≤ 0.5° on phase
- **Influence of frequency:**
  - ≤ 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 ≤ 3,000 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 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: 8 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)

**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 1080-4-3
    - Fast transients: IEC 1080-4-4
    - Magnetic field at 50/60 Hz: IEC 1080-4-8

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(1) Conditions of reference: 23°C ± 3 °K, 20 % to 75 % RH, signal sinus, 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 5 O (5 VA)
(2) Accuracy class in accordance with IEC 185: 5 VA - class 0.5 - 48 Hz .. 65 Hz
(3) Out of frequency domain

**To order**

AC current clamp model **C100** with operating manual

**Reference**

P01120301
Current clamps for AC current
Models C102 and C103

<table>
<thead>
<tr>
<th>Current</th>
<th>1,000 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>1000/1</td>
</tr>
<tr>
<td>Output</td>
<td>1 mA / A</td>
</tr>
</tbody>
</table>

DESCRIPTION
An electronic voltage limiter protects the output of the clamp, if the secondary circuit is opened accidentally.

ELECTRICAL SPECIFICATIONS

- **Current range:**
  - 0.1 A AC..1,200 A AC
- **Current transformation ratio:**
  - 1000:1
- **Output signal:**
  - 1 mA AC / A AC (1 A to 1,000 A)
- **Accuracy and phase shift:**
<table>
<thead>
<tr>
<th>Primary current</th>
<th>0.1 A .. 10 A</th>
<th>10 A</th>
<th>50 A (2)</th>
<th>200 A (2)</th>
<th>1,000 A (2)</th>
<th>1,200 A (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Accuracy of output signal</td>
<td>≤ 3 % + 0.1 mA</td>
<td>≤ 3 %</td>
<td>≤ 1.5 %</td>
<td>≤ 0.75 %</td>
<td>≤ 0.5 %</td>
<td>≤ 0.5 %</td>
</tr>
<tr>
<td>Phase shift</td>
<td>not specified</td>
<td>≤ 3°</td>
<td>≤ 1.5°</td>
<td>≤ 0.75°</td>
<td>≤ 0.5°</td>
<td>≤ 0.5°</td>
</tr>
</tbody>
</table>

- **Influence of frequency:**
  - ≤ 0.5 ° on phase
  - ≤ 0.5 % on measurement
  - ≤ 0.5 % on phase

- **Influence of adjacent conductor:**
  - ≤ 1 mA / A at 50 Hz

- **Influence of conductor position in jaws:**
  - ≤ 0.1 % of output signal for frequencies ≤ 400 Hz

- **Load influence:**
  - from 5 Ω to 15 Ω
  - ≤ 0.5 % on measurement
  - ≤ 0.5 % on phase

- **Influence of frequency:**
  - ≤ 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:**
  - < 6 % of output signal for crest factor ≤ 6 with current ≤ 3,000 A peak (500 Arms)

- **Influence of DC current superimposed on rated current:**
  - < 1 % of output signal for a current ≤ 30 A DC

- **Influence of crest factor:**
  - ≤ 3 % + 0.1 mA

- **Influence of conductor position in jaws:**
  - ≤ 1.5 %

- **Influence of adjacent conductor:**
  - ≤ 0.75 %

- **Influence of load impedance:**
  - ≤ 0.5 %

- **AC current:**
  - 1 mA / A

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:**
  - < 0.1 % 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: Ø max 32 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:**
  - C102: Safety sockets (4 mm)
  - C103: Two-wire cable with reinforced insulation or double insulation, length 1.5 m, terminated by 2 insulated elbowed male banana plugs (4 mm)

SAFETY SPECIFICATIONS

- **Electrical safety:**
  - Instrument with double insulation or reinforced insulation between the primary and 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, signal sinus, frequency of 48 Hz to 65 Hz, distortion factor < 1 %, no DC components, external magnetic field < 40 A/m, no AC magnetic field, conductor centered for measurement, load impedance 5.0 (5VA).

(2) Accuracy class in accordance with IEC 186: 5 VA – class 0.5 – 48..60 Hz.

(3) Out of reference domain.

To order

| AC current clamp model C102 with operating manual | P01120302 |
| AC current clamp model C103 with operating manual | P01120303 |
Current clamps for AC current
Models C106 and C107

### ELECTRICAL SPECIFICATIONS

- **Current range:**
  0.1 A AC .. 1,200 A AC
- **Output signal:**
  1 mV AC/A AC (1 V for 1,000 A)
- **Accuracy and phase shift:**
  
<table>
<thead>
<tr>
<th>Primary current</th>
<th>0.1 A .. 10 A</th>
<th>10 A</th>
<th>50 A</th>
<th>200 A</th>
<th>1,000 A</th>
<th>1,200 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Accuracy of output signal</td>
<td>≤ 3% + 0.1 mV</td>
<td>≤ 3%</td>
<td>≤ 1.5%</td>
<td>≤ 0.75%</td>
<td>≤ 0.5%</td>
<td>≤ 0.5%</td>
</tr>
<tr>
<td>Phase shift</td>
<td>not specified</td>
<td>≤ 3°</td>
<td>≤ 1.5°</td>
<td>≤ 0.75°</td>
<td>≤ 0.5°</td>
<td>≤ 0.5°</td>
</tr>
</tbody>
</table>

- **Bandwidth:**
  30 Hz .. 10 kHz
- **Crest factor:**
  ≤ 6 for a current ≤ 3,000 A peak (500 Ams)
- **Maximum currents:**
  1,000 A continuous for a frequency ≤ 1 kHz
  200 A for 40 minutes max (interval between measurements > 20 minutes)
- **Output impedance:**
  1 Ω ± 1 %
- **Load impedance:**
  ≥ 1 MΩ and ≤ 100 pF
- **Operating voltage:**
  600 Vrms
- **Common mode voltage:**
  600 V category III and pollution degree 2
- **Influence of adjacent conductor:**
  ≤ 0.1 % of output signal for frequencies ≤ 400 Hz
- **Influence of conductor position in jaws:**
  ≤ 0.1 % of output signal for frequencies ≤ 400 Hz
- **Load influence:**
  On receiver, for an input impedance of 100 Ω:
  ≤ 1 % on measurement, no measurement on phase
  On receiver, for an input impedance of 1 kΩ:
  ≤ 0.1 % on measurement, no measurement on phase
- **Influence of frequency (2):**
  < 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 ≤ 3,000 A peak (500 Ams)
- **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 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: 8 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:**
  5/15/25 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:**
  C106: Safety sockets (4 mm)
  C107: two-wire cable with reinforced insulation or double insulation, length 1.5 m, terminated by 2 insulated elbowed male banana plugs (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

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(1) Conditions of reference: 23 °C ± 3 °K, 20% to 75% RH, signal sinus, 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.

(2) Out of reference domain.

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**To order**

<table>
<thead>
<tr>
<th>AC current clamp model</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>C106 with operating manual</td>
<td>P01120304</td>
</tr>
<tr>
<td>C107 with operating manual</td>
<td>P01120305</td>
</tr>
</tbody>
</table>

Non-contractual document

906131102D - Ed 1
Current clamps for AC current
Models C112 and C113

**DESCRIPTION**

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

**ELECTRICAL SPECIFICATIONS**

- **Current range:**
  - 0.001 A AC .. 1,200 A AC
- **Current transformation ratio:**
  - 1000:1
- **Output signal:**
  - 1 mA/AC / A/AC (1/1A for 1,000 A)
- **Accuracy and phase shift**:
  - Primary current 0.1 A .. 100 mA: ≤ 3 % + 5 µA
  - Primary current 0.1 A .. 1 A: ≤ 2 % + 3 µA
  - Primary current 1 A .. 10 A: ≤ 1 %
  - Primary current 10 A .. 100 A: ≤ 0.5 %
  - Primary current 100 A .. 1,200 A: ≤ 0.3 %
  - Phase shift: not specified

- **Bandwidth:**
  - 30 Hz .. 10 kHz
- **Crest factor:**
  - ≤ 6 for a current ≤ 2,000 A peak (300 A
- **Maximum current:**
  - 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)
- **Load impedance:**
  - ≤ 1 Ω
- **Max. voltage output:**
  - Electronic protection circuit limiting voltage to 30 V peak max
- **Operating voltage:**
  - 600 Vrms
- **Common mode voltage:**
  - 600 V category III and pollution degree 2
- **Influence of adjacent conductor:**
  - ≤ 0.5 mA/A at 50 Hz
- **Influence of conductor position in jaws:**
  - ≤ 0.1 % of output signal for frequencies ≤ 400 Hz
- **Load influence:**
  - From 1 Ω to 5 Ω:
    - ≤ 0.1 % on measurement
    - ≤ 0.2 % on phase
- **Influence of frequency:**
  - ≤ 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 ≤ 2,000 A peak (300 A
  - 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 °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:**
  - ≤ 0.1 % 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: 8 mm² 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 60528-2-23)
- **Shock resistance:**
  - 100 g (IEC 60528-2-27)
- **Vibration resistance:**
  - 5/15 Hz 1.5 mm, 15/25 Hz 1 mm, 25/55 Hz 0.25 mm (IEC 1062-6)
- **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:**
  - C112: Safety sockets (4 mm)
  - C113: Two-wire cable with reinforced insulation or double insulation, length 1.5 m, terminated by 2 insulated elbowed male banana plugs (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 61010-1 & IEC 61010-2-032
  - 600 V category III, pollution degree 2
  - 300 V category IV, pollution degree 2
- **Electromagnetic compatibility (EMC):**
  - EN 55081-1: class B
  - EN 55082-2:
    - 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

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<table>
<thead>
<tr>
<th>Current</th>
<th>1,000 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>1000/1</td>
</tr>
<tr>
<td>Output</td>
<td>1 mA/AC</td>
</tr>
</tbody>
</table>

---

**DESCRIPTION**

Current clamps for AC current
Models C112 and C113

To order
AC current clamp model **C112** with operating manual
AC current clamp model **C113** with operating manual

Reference
P01120314
P01120315

Non-contractual document
9061311020 - Ed 1

4.04 (1/1)
**Current clamps for AC current**

**Models C116 and C117**

<table>
<thead>
<tr>
<th>Current</th>
<th>1,000 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>1 mV/A</td>
</tr>
</tbody>
</table>

**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):**

<table>
<thead>
<tr>
<th>Primary current</th>
<th>1 mA .. 100 mA</th>
<th>0.1 A .. 1 A</th>
<th>1 A .. 10 A</th>
<th>10 A .. 100 A</th>
<th>100 A .. 1,200 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Accuracy of output signal</td>
<td>≤ 3 % + 5 µA</td>
<td>≤ 2 % + 3 µA</td>
<td>≤ 1 %</td>
<td>≤ 0.5 %</td>
<td>≤ 0.3 %</td>
</tr>
<tr>
<td>Phase shift</td>
<td>not specified</td>
<td>not specified</td>
<td>≤ 2°</td>
<td>≤ 1°</td>
<td>≤ 0.7°</td>
</tr>
</tbody>
</table>

- **Bandwidth:**
  30 Hz .. 10 kHz

- **Crest factor:**
  ≤ 6 for a current ≤ 2,000 A peak (300 Arms)

- **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 Ω ± 1 %

- **Load impedance:**
  ≥ 1 MΩ and ≤ 100 pF

- **Operating voltage:**
  600 Vrms

- **Common mode voltage:**
  600 V category III and pollution degree 2

- **Influence of adjacent conductor:**
  ≤ 0.5 mA/A at 50 Hz

- **Influence of conductor position in jaws:**
  ≤ 0.1 % of output signal for frequencies ≤ 400 Hz

- **Load influence:**
  On receiver, for an input impedance of 100 Ω:
  ≤ 1 % on measurement, no measurement on phase.
  On source, for an input impedance of 1 kΩ:
  ≤ 0.1 % on measurement, no measurement on phase.

- **Influence of frequency:**
  < 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 ≤ 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 °C

- **Storage temperature:**
  40 °C to +70 °C

- **Influence of temperature:**
  ≤ 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

- **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

**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):**
  - 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

**To order**

<table>
<thead>
<tr>
<th>AC current clamp model</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC current clamp model C116 with operating manual</td>
<td>P01120316</td>
</tr>
<tr>
<td>AC current clamp model C117 with operating manual</td>
<td>P01120317</td>
</tr>
</tbody>
</table>

**Conditions of reference:** 23 °C ± 3 °K, 20 % to 75 % RH, signal sinus, frequency of 48 Hz to 65 Hz, distortion factor < 1 %, no DC components, external magnetic field < 48 A/m, no AC magnetic field, conductor centred for measurement, load impedance > 1 MΩ and ≤ 100 pF

**Out of reference domain** (2)

(1) Conditions of reference: 23 °C ± 3 °K, 20 % to 75 % RH, signal sinus, frequency of 48 Hz to 65 Hz, distortion factor < 1 %, no DC components, external magnetic field < 48 A/m, no AC magnetic field, conductor centred for measurement, load impedance > 1 MΩ and ≤ 100 pF

(2) Out of reference domain
**Current clamp for AC current**  
**Model C122**

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### ELECTRICAL SPECIFICATIONS

- **Current range:** 1 A AC .. 1,200 A AC
- **Current transformation ratio:** 1000:5
- **Output signal:** 5 mA AC / A (5 A for 1,000 A)
- **Accuracy and phase shift:**
  
<table>
<thead>
<tr>
<th>Primary current</th>
<th>1 A .. 20 A</th>
<th>20 A</th>
<th>50 A (2)</th>
<th>200 A (2)</th>
<th>1,000 A (2)</th>
<th>1,200 A (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy en %</td>
<td>≤ 6 % + 0.5 mA</td>
<td>≤ 5 %</td>
<td>≤ 3 %</td>
<td>≤ 1.5 %</td>
<td>≤ 1 %</td>
<td>≤ 1 %</td>
</tr>
<tr>
<td>Phase shift</td>
<td>not specified</td>
<td>≤ 3°</td>
<td>≤ 3°</td>
<td>≤ 1.5°</td>
<td>≤ 1°</td>
<td>≤ 1°</td>
</tr>
</tbody>
</table>

- **Bandwidth:** 30 Hz .. 10 kHz
- **Crest factor:** ≤ 6 for a current ≤ 3,000 A peak (500 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 30 minutes max (interval between measurements > 15 minutes)
- **Load impedance:** ≤ 0.6 Ω
- **Impedance of connection leads:** ≤ 40 mΩ
- **Maximum output voltage (secondary open):**
  - Electronic protection circuit limiting voltage to 30 V peak max
- **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:**
  - < 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

### SAFETY SPECIFICATIONS

- **Electrical safety:**
  - Instrument with double insulation or reinforced insulation between the primary and 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 55018-1: class B
  - EN 55018-2:
    - 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

---

To order

AC current clamp model **C122** with operating manual

**Reference**

P01120306

---

(1) Conditions of reference: 23 °C ± 3 °K, 20 % to 75 % RH, sinusoidal frequency of 48 Hz to 65 Hz, distortion factor < 1 %, no DC components, no external magnetic field < 40 A/m, no AC magnetic field, conductor centered 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
Current clamp for AC current

Model C148

**DESCRIPTION**

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

**ELECTRICAL SPECIFICATIONS**

- **Current range:**
  1 A AC ... 300 A AC
  1 A AC ... 600 A AC
  1 A AC ... 1,200 A AC

- **Current transformation ratio**
  250:5
  500:5
  1000:5

- **Output signal:**
  20 mA / A (AC) (5 A for 250 A)
  10 mA / A (AC) (5 A for 500 A)
  5 mA / A (AC) (5 A for 1,000 A)

- **Accuracy and phase shift**:
  - 250 A calibre:
    - Primary current 1 A ... 5 A
      - 5 A
      - 12.5 A
      - 25 A
      - 50 A
      - 100 A
      - 250 A
      - 300 A
    - Accuracy en %: ≤ 10 % + 2 mA
    - Phase shift: not specified
  - 500 A calibre:
    - Primary current 1 A ... 10 A
      - 10 A
      - 25 A
      - 50 A
      - 100 A
      - 200 A
      - 500 A
      - 600 A
    - Accuracy en %: ≤ 6 % + 1 mA
    - Phase shift: not specified
  - 1,000 A calibre:
    - Primary current 1 A ... 20 A
      - 20 A
      - 50 A
      - 100 A
      - 200 A
      - 1,000 A
      - 1,200 A
    - Accuracy en %: ≤ 6 % + 0.5 mA
    - Phase shift: not specified

- **Bandwidth:** 48 Hz ... 1 kHz

- **Crest factor:**
  - 250 A calibre:
    - ≤ 6 with current ≤ 750 A peak
  - 500 A calibre:
    - ≤ 6 with current ≤ 1,500 A peak
  - 1,000 A calibre:
    - ≤ 6 with current ≤ 3,000 A peak

- **Maximum currents:**
  1,200 A for frequencies ≤ 1 kHz for 30 minutes max (interval between measurements > 15 minutes)

- **Load impedance:**
  - 250 A calibre: ≤ 0.2 Ω
  - 500 A calibre: ≤ 0.4 Ω
  - 1,000 A calibre: ≤ 0.4 Ω

- **Impedance of connection leads:**
  ≤ 40 mΩ
Current clamp for AC current

Model C148

MECHANICAL SPECIFICATIONS

- Operating temperature: -10°C to +50°C
- Storage temperature: -40°C to +70°C
- Influence of temperature: ≤ 0.15 % of output signal per 10°C
- Relative humidity for operation: 0 to 85 % RH decreasing linearly above 35 °C
- Influence of relative humidity: From 10 % to 85 % RH
  - 250 A calibre: < 0.6 % of output signal and < 2° on phase
  - 500 A calibre: < 0.4 % of output signal and < 0.6° on phase
  - 1,000 A calibre: < 0.2 % of output signal and < 0.2° on phase
- Operating altitude: 0 to 2,000 m
- Max. jaw opening: 53 mm
- Patented progressive opening system

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

To order
AC current clamp model C148 with operating manual

Reference
P01120307
**DESCRIPTION**

This 1,000 A AC clamp can be used for easy display and measurement of current curves. Equipped with a coaxial cable terminated by a BNC connector, it is ideal for use with any oscilloscope. It outputs a signal in mV directly proportional to the current. It offers 3 different sensitivities.

**ELECTRICAL SPECIFICATIONS**

- **Current range:**
  - 0.1 A AC .. 10 A AC (30 A peak)
  - 1 A AC .. 100 A AC (300 A peak)
  - 1 A AC .. 1,000 A AC (2,000 A peak)

- **Output signal:**
  - 100 mV AC / A
  - 10 mV AC / A
  - 1 mA AC / A

- **Accuracy and phase shift:**
  - **10 A calibre**
    - Primary current: 0.1 A .. 0.5 A
    - % Accuracy of output signal: \( \leq 3\% + 10\text{ mV} \)
    - Phase shift: not specified
    - % Accuracy of output signal: \( \leq 3\% + 10\text{ mV} \)
    - Phase shift: not specified
    - % Accuracy of output signal: \( \leq 3\% + 10\text{ mV} \)
    - Phase shift: \( \leq 15^\circ \)

- **100 A calibre**
  - Primary current: 0.1 A .. 5 A
  - % Accuracy of output signal: \( \leq 2\% + 5\text{ mV} \)
  - Phase shift: not specified
  - % Accuracy of output signal: \( \leq 2\% + 5\text{ mV} \)
  - Phase shift: \( \leq 10^\circ \)
  - % Accuracy of output signal: \( \leq 2\% + 5\text{ mV} \)
  - Phase shift: \( \leq 5^\circ \)

- **1,000 A calibre**
  - Primary current: 1 A .. 50 A
  - % Accuracy of output signal: \( \leq 1\% + 1\text{ mV} \)
  - Phase shift: not specified
  - % Accuracy of output signal: \( \leq 1\% + 1\text{ mV} \)
  - Phase shift: \( \leq 3^\circ \)
  - % Accuracy of output signal: \( \leq 1\% + 1\text{ mV} \)
  - Phase shift: \( \leq 2^\circ \)
  - % Accuracy of output signal: \( \leq 1\% + 1\text{ mV} \)
  - Phase shift: \( \leq 1^\circ \)

- **Bandwidth:**
  - 10 Hz .. 100 kHz (-3 dB) (depending on current value)

- **Rise/fall time from 10 % to 90 %:**
  - 3.5 µs

- **10 % delay time:**
  - 0.5 µs

- **Ampere second product:**
  - 10 A calibre: 3.2 A.s
  - 100 A calibre: 26 A.s
  - 1,000 A calibre: 64 A.s

- **Maximum currents:**
  - 1,000 A permanent
  - 1,200 A for 40 minutes max. / > 20 minutes shutdown for a frequency ≤ 1 kHz (limitation proportional to the inverse of one third of the frequency beyond that)

- **Insertion impedance (at 400 Hz / 10 kHz):**
  - 10 A calibre: < 0.3 mΩ / < 6.6 mΩ
  - 100 A calibre: < 0.3 mΩ / < 2 mΩ
  - 1,000 A calibre: < 0.3 mΩ / < 1.6 mΩ

- **Output impedance at 1 kHz:**
  - 10 A calibre: \( \leq 515\Omega \) ± 10 %
  - 100 A calibre: \( \leq 515\Omega \) ± 10 %
  - 1,000 A calibre: \( \leq 515\Omega \) ± 10 %

- **Influence of temperature:**
  - ≤ 150 ppm /°C or 0.15 % of output signal per 10 °K

- **Influence of relative humidity:**
  - < 0.1 % of output signal

- **Influence of adjacent conductor:**
  - ≤ 1 mA / A at 50 Hz

- **Influence of DC current ≤ 30 A superimposed on rated current:**
  - < 1 %

- **Influence of conductor position in jaws:**
  - ≤ 0.1 % of output signal

- **Influence of frequency:**
  - 10 A calibre:
    - < 10 % of output signal from 10 Hz .. 1 kHz
    - < 5 % of output signal from 1 kHz .. 10 kHz
    - < 20 % of output signal from 10 kHz .. 50 kHz
  - 100 A calibre:
    - < 5 % of output signal from 10 Hz .. 1 kHz
    - < 3 % of output signal from 1 kHz .. 10 kHz
    - < 20 % of output signal from 10 kHz .. 50 kHz
  - 1,000 A calibre:
    - < 1 % of output signal from 10 Hz .. 1 kHz
    - < 1 % of output signal from 1 kHz .. 10 kHz
    - < 10 % of output signal from 10 kHz .. 50 kHz
  - 3 dB of output signal from 50 kHz .. 100 kHz

- **Influence of crest factor:**
  - < 1 % of output signal for crest factor ≤ 6 with current
  - 10 A calibre: < 30 A peak
  - 100 A calibre: < 300 A peak
  - 1,000 A calibre: < 3,000 A peak
### Oscilloscope clamp for AC current

**Model C160 (insulated AC current probe)**

#### MECHANICAL SPECIFICATIONS

- **Max. jaw opening:** 53 mm
- **Clamping capacity:**
  - Cable: Ø max 52 mm
  - Busbar: 1 busbar of 50 x 5 mm
  - 4 busbars of 30 x 5 mm
- **Operating temperature:** -10 °C to +55 °C
- **Storage temperature:** -40 °C to +70 °C
- **Relative humidity for operation:** 0 to 85 % RH decreasing linearly above 35 °C
- **Operating altitude:** 0 to 2,000 m
- **Casing protection rating:**
  - IP30 with clamp open (IEC 529)
  - IP40 with clamp closed (IEC 529)
- **Drop test:** 1 m (IEC 68-2-32)

#### 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
    - Without disturbance: 4 kV class 2
    - Non-destructive: 15 kV class 4
    - Radiated field: IEC 1000-4-3
    - Without disturbance: 10 V/m performance criterion A
    - Fast transients: IEC 1000-4-4
    - Without disturbance: 1 kV class 2
    - Non-destructive: 2 kV class 3
    - Magnetic field at 50/60 Hz: IEC 1000-4-8
    - Field of 400 A/m at 50 Hz: < 1 A

---

1. Conditions of reference: 23 °C ± 3 °K, 20 % to 75 % RH, signal sinus, frequency of 48 Hz to 1,000 Hz, distortion factor < 1 % with no DC component, external magnetic field < 40 A/m, no DC components, no external conductor with circulating current, conductor centred for measurement, load impedance: ≥ 1 MΩ and < 100 pF
2. Out of reference domain

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<table>
<thead>
<tr>
<th>To order</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC current clamp model C160 with operating manual</td>
<td>P01120308</td>
</tr>
</tbody>
</table>
Oscilloscope clamp for AC current

Model C160 (insulated AC current probe)

CURVES AT 50 Hz

1,000 A calibre

Error on measurement

Phase shift

100 A calibre

Error on measurement

Phase shift

10 A calibre

Error on measurement

Phase shift
**Oscilloscope clamp for AC current**

**Model C160** (insulated AC current probe)

**FREQUENCY RESPONSE (CONT.)**

10 A calibre

![Graphs showing frequency response for 10 A calibre.](image)

**RESPONSE TO A SQUARE SIGNAL**

1,000 A calibre

- **10 A at 1 Hz**
- **10 A at 10 Hz**
- **10 A at 1 kHz**
- **10 A at 10 kHz**

![Graphs showing response to a square signal.](image)
RESPONSE TO A SQUARE SIGNAL (CONT.)

100 A calibre

10 A at 10 Hz

Primary current

Secondary voltage

10 A at 100 Hz

Primary current

Secondary voltage

10 A at 1 kHz

Primary current

Secondary voltage

10 A at 10 kHz

Primary current

Secondary voltage

10 A calibre

10 A at 1 Hz

Primary current

Secondary voltage

10 A at 10 Hz

Primary current

Secondary voltage

10 A at 1 kHz

Primary current

Secondary voltage

10 A at 10 kHz

Primary current

Secondary voltage
**Current clamp for AC current**

**Model C173 (probe for leakage currents)**

<table>
<thead>
<tr>
<th>Current</th>
<th>1 A</th>
<th>10 A</th>
<th>100 A</th>
<th>1,000 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output</td>
<td>1 V/A</td>
<td>100 mV/A</td>
<td>10 mV/A</td>
<td>1 mV/A</td>
</tr>
</tbody>
</table>

**DESCRIPTION**

The C173 clamp measures leakage or differential currents from 1 mA upwards and can also be used with multimeters equipped with a range in mV AC. The C173 clamp measures earth-loop currents and leakage currents. It also locates faults in circuits of single and three-phase networks. For unearthed three-phase systems, use the optional Artificial Neutral.

**ELECTRICAL SPECIFICATIONS**

- **Current range:**
  - 0.001 A AC .. 1.2 A AC
  - 0.01 A AC .. 12 A AC
  - 0.1 A AC .. 120 A AC
  - 1 A AC .. 1,200 A AC
- **Output signal:**
  - 1 V AC / A AC (1 V for 1 A)
  - 100 mV AC / A AC (1 V for 10 A)
  - 10 mV AC / A AC (1 V for 100 A)
  - 1 mV AC / A AC (1 V for 1,000 A)
- **Accuracy and phase shift:**
  - 1 A calibre
    - Primary current:
      - 0.001 A .. 0.01 A
      - 0.01 A .. 0.1 A
      - 0.1 A .. 1 A
      - 1 A .. 1.2 A
    - % Accuracy of output signal:
      - ≤ 3 % + 1 mV
      - ≤ 3 % + 1 mV
      - ≤ 0.7 % + 1 mV
      - ≤ 0.7 % + 1 mV
    - Phase shift:
      - not specified
      - not specified
      - ≤ 10°
      - ≤ 10°
  - 10 A calibre
    - Primary current:
      - 0.01 A .. 0.1 A
      - 0.1 A .. 1 A
      - 1 A .. 10 A
      - 10 A .. 12 A
    - % Accuracy of output signal:
      - ≤ 1 % + 0.2 mV
      - ≤ 0.5 % + 0.2 mV
      - ≤ 0.5 %
      - ≤ 0.5 %
    - Phase shift:
      - not specified
      - ≤ 2°
      - ≤ 2°
  - 100 A calibre
    - Primary current:
      - 0.1 A .. 1 A
      - 1 A .. 10 A
      - 10 A .. 100 A
      - 100 A .. 120 A
    - % Accuracy of output signal:
      - ≤ 1 % + 0.2 mV
      - ≤ 0.5 % + 0.2 mV
      - ≤ 0.3 %
      - ≤ 0.2 %
    - Phase shift:
      - not specified
      - ≤ 2°
      - ≤ 1°
  - 1,000 A calibre
    - Primary current:
      - 1 A .. 10 A
      - 10 A .. 100 A
      - 100 A .. 1,000 A
      - 1,000 A .. 1,200 A
    - % Accuracy of output signal:
      - ≤ 1 % + 0.2 mV
      - ≤ 0.5 % + 0.2 mV
      - ≤ 0.2 %
      - ≤ 0.2 %
    - Phase shift:
      - not specified
      - ≤ 2°
      - ≤ 1°
- **Bandwidth:**
  - 10 Hz .. 3 kHz
- **Crest factor:**
  - 1 A calibre:
    - ≤ 3 for I ≤ 3 A peak (1 Anrms)
  - 10 A calibre:
    - ≤ 3 for I ≤ 30 A peak (10 Anrms)
  - 100 A calibre:
    - ≤ 3 for I ≤ 300 A peak (100 Anrms)
  - 1,000 A calibre:
    - ≤ 3 for I ≤ 1700 A peak (500 Anrms)
- **Maximum currents:**
  - 1,000 A continuous for a frequency ≤ 500 Hz (limitation proportional to the inverse of 1/2 of frequency beyond)
- **Load impedance:**
  - ≥ 10 MΩ and ≤ 47 pF
- **Output impedance:**
  - 1 A calibre: 10 kΩ ± 10 %
  - 10 A calibre: 1 kΩ ± 10 %
  - 100 A calibre: 100 Ω ± 10 %
  - 1,000 A calibre: 100 Ω ± 10 %
- **Operating voltage:**
  - 600 Vrms
- **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:**
  - ≤ 0.3 % of output signal for frequencies ≤ 400 Hz
- **Influence of frequency:**
  - 1 A calibre:
    - < 2 % of output signal 30 Hz .. 48 Hz and 65 Hz .. 1 kHz
    - < 10 % of output signal 1 kHz .. 3 kHz
  - 10 A calibre:
    - < 2 % of output signal 10 Hz .. 48 Hz and 65 Hz .. 3 kHz
  - 100 A calibre:
    - < 1.5 % of output signal 10 Hz .. 48 Hz and 65 Hz .. 3 kHz
  - 1,000 A calibre:
    - < 1 % of output signal 10 Hz .. 48 Hz and 65 Hz .. 1 kHz
- **Influence of crest factor:**
  - ≤ 0.5 % for crest factor limited to 3
- **Influence of DC current superimposed on rated current:**
  - ≤ 10 % at 1,000 A for a current DC from 10 A
Current clamp for AC current

Model C173 (probe for leakage currents)

MECHANICAL SPECIFICATIONS

- Operating temperature:
  -10°C .. +50°C
- Storage temperature:
  -40°C .. +70°C
- Influence of temperature:
  ≤ 0.15 % of output signal per 10°C from -10°C .. +40°C
  ≤ 0.2 % of output signal per 10°C from +40°C .. +50°C
- Relative humidity for operation:
  From 0 .. 85 % from RH decreasing linearly above 35°C
- Influence of relative humidity:
  < 0.1 % of output signal from 10 .. 85 % from 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 or 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
  25/55 Hz 0.25 mm
  (IEC 68-2-6)
- Self-extinguishing capability:
  UL94 VO
- Dimensions:
  216 x 111 x 45 mm
- Weight:
  550 g
- Colours:
  Dark grey case with red jaws
- Output:
  1.5 m two-wire lead with double or reinforced insulation terminated by 2 elbowed male safety plugs (4 mm)

SAFETY SPECIFICATIONS

- Electrical safety:
  Instrument with double insulation or reinforced insulation between the primary and 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, signal sinus, frequency of 48 Hz to 65 Hz, distortion factor < 1 %, no DC components, external magnetic field < 40 A/m, no AC magnetic field, conductor centered for measurement, load impedance: ≥ 10 MΩ and ≤ 47 pF

(2) Out of reference domain

To order

AC current clamp model **C173** with operating manual

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>AN1 artificial neutral box (see chapter 12)</td>
<td>P01120309</td>
</tr>
<tr>
<td>Bag n°11</td>
<td>P01197201</td>
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<td></td>
<td>P01100120</td>
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Non-contractual document
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