

Current clamp for AC current

Model D31N

DN series

Current	500 A AC	1000 A AC	1500 A AC
Ratio	500:1	1000:1	1500:1
Output	2 mA/A	1 mA/A	0.66 mA/A

Electrical specifications

Current calibres:

1 A AC ... 500 A AC
1 A AC ... 1000 A AC
1 A AC ... 1500 A AC

Current transformation ratio:

500:1, 1000:1, 1500:1

Output signal:

2 mA/A AC (1 A for 500 A)
1 mA/A AC (1 A for 1000 A)
0.66 mA/A AC (1 A for 1500 A)

Accuracy and phase shift ⁽¹⁾:

■ 500 A calibre

Primary current	25 A	100 A	500 A
% Accuracy of output signal	4 %	3 %	3 %
Phase shift	4°	3.5°	2°

- Load impedance: 5 Ω
- Overload: 700 A for 10 minutes
- Ampere second product: 6 A.s
- Accuracy: in accordance with IEC 185-26-27, 5 VA, class 3 from 48 Hz to 1000 Hz

■ 1000 A calibre

Primary current	50 A	200 A	1000 A
% Accuracy of output signal	3 %	1.5 %	1 %
Phase shift	3°	1.5°	1°

- Load impedance: 5 Ω
- Overload: 1400 A for 10 minutes
- Ampere second product: 30 A.s
- Accuracy: in accordance with IEC 185-26-27, 5 VA, class 1 from 48 Hz to 1000 Hz

■ 1500 A calibre

Primary current	75 A	300 A	1500 A
% Accuracy of output signal	1.5 %	0.75 %	0.5 %
Phase shift	1.5°	0.75°	0.5°

- Load impedance: 5 Ω
- Overload: 1800 A for 10 minutes
- Ampere second product: 65 A.s
- Accuracy: in accordance with IEC 185-26-27, 5 VA, class 0.5 from 48 Hz to 1000 Hz

Bandwidth:

30 Hz to 1500 Hz (in continuous use above 1 kHz the max. measurement current is limited)

Load impedance:

< 5 Ω

Operating voltage:

600 V AC

Common mode voltage:

600 V AC

Max. voltage at output (secondary circuit open):

Electronic protection limiting the voltage to 42 V peak max.

Influence of adjacent conductor:

0.005 A/A AC

Influence of conductor position in jaws:

1.5 % ± 0.2 A on the 500:1 ratio
1 % ± 0.2 A on the 1000:1 ratio
1 % ± 0.2 A on the 1500:1 ratio

Mechanical specifications

Operating temperature:

-10 °C to +50 °C

Storage temperature:

-25 °C to +80 °C

Influence of temperature:

< 0.1 % per 10 °K

Max. jaw opening:

90 mm

Max. jaw insertion capacity:

Cable: 64 mm
Group of wires: 50 x 135 mm - 64 x 100 mm

Casing protection rating:

IP20 in accordance with IEC 529

Drop test:

500 mm (IEC 68-2-32)

Shock resistance:

100 g, in accordance with IEC 68-2-27

Vibration resistance:

10/55/10 Hz, 0.15 mm
test in accordance with IEC 68-2-6

Self-extinguishing capability:

Casing: UL94 V0
Jaws: UL94 V2

Dimensions:

120 x 315 x 48 mm

Weight:

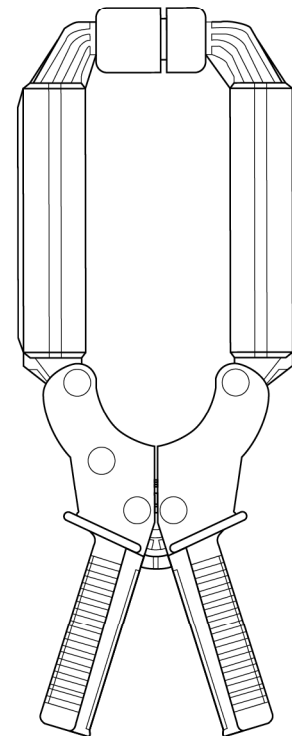
1200 g

Colour:

Dark grey casing with red jaws

Output:

2 safety sockets (4 mm)



Safety specifications

Electrical safety:

Double insulation or reinforced insulation between the primary and the secondary circuits and the outside casing in accordance with 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:
 - Electrical discharge IEC 1000-4-2
 - Radial 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 ± 5 °K, 20 % to 75 % RH, 48 Hz to 65 Hz, external magnetic field < 40 A/m, no DC component, no current-carrying conductor nearby, centred test sample.

To order	Reference
AC current clamp model D31N with operating manual	P01120050A