



## PAC Series

The PAC series is a range of professional AC/DC clamp-on current probes designed to meet the very latest in safety and performance standards.

There are two different jaw designs available for the clamping of cables and small busbars.

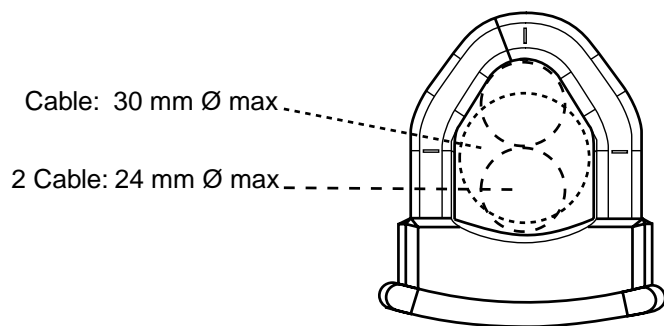
The PAC series clamps operate on the Hall effect principle, giving current measurement up to 1500 A DC and 1000 A AC. The electronics and the battery are all located in the clamp handles. There are two sensitivity levels available: 1mV/A and 10 mV/A.

A push button operates the automatic DC zeroing on models PAC 11, 12, 21 and 22.

Models PAC 10 and PAC 20 have potentiometer operated zero adjustment.

True RMS measurement is even possible on inputs containing DC components. Phase shifting poses no problem either, hence the PAC series is very well adapted to power measurement applications.

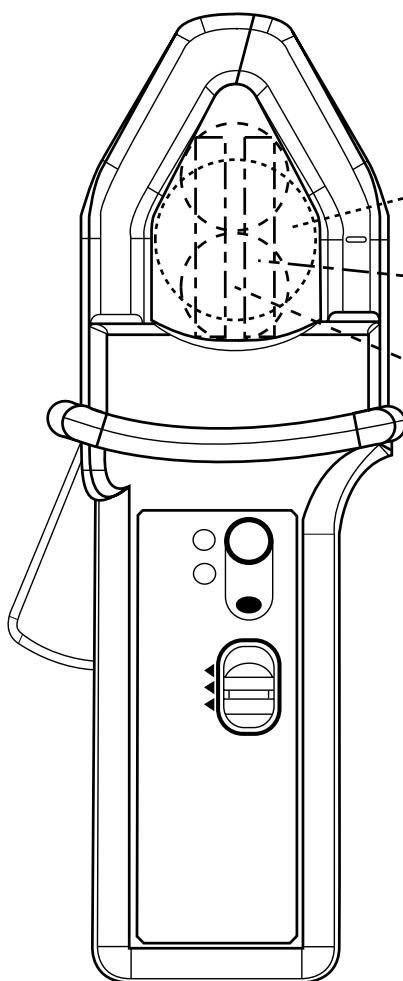
Models PAC 12 and PAC 22 are designed for use with oscilloscopes and other BNC input instruments.



Cable: 30 mm Ø max

2 Cable: 24 mm Ø max

Clamp Jaws  
PAC 10, 11, and 12



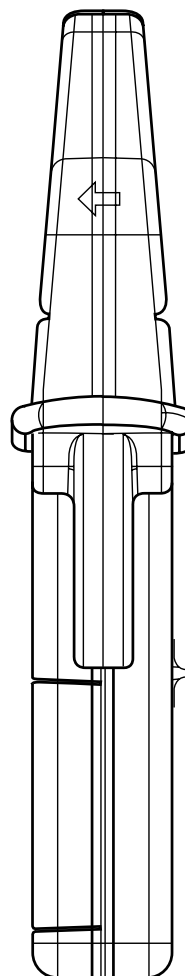
Cable:  
42 mm Ø max

2 Busbar:  
50 x 5 mm max

2 Cable:  
25 mm Ø max

PAC 20, 21, 22


97 mm



224 mm  
(Pac 10, 11 and 12)

236,5 mm  
(Pac 20, 21 and 22)

44 mm

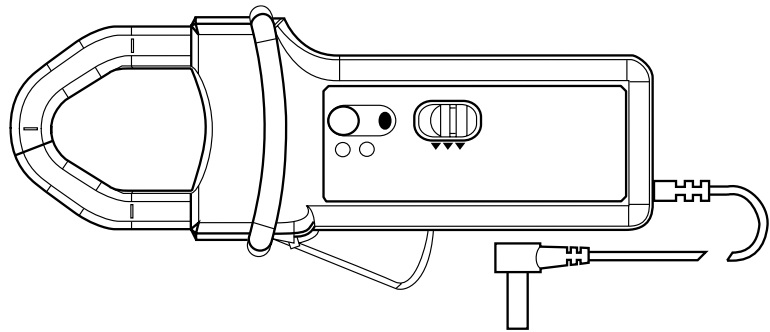
Title : PAC Series	
Drawing N°	Drawn :
Manufactured by:  CHAUVIN ARNOUX	

# Clamp-on AC/DC current probe

## Model PAC11

PAC series

<b>Current</b>	40 A AC 60 A DC	400 A AC 600 A DC
<b>Output</b>	10 mV/A	1 mV/A



Model PAC11 is a high precision clamp-on current meter that operates using Hall effect technology for the measurement of AC and DC currents. There is a mV output for direct measurement reading on a multimeter, and an automatic DC zeroing system.

### Electrical Specification

Range	60 A	600 A
Current Range	0.2...40 A (60 A peak) 0.4...60 A DC	0.5...400 A (600 A peak) 0.5...600 A DC
Output signal	10 mV/A	1 mV/A
% accuracy of Output signal (1)	0.5...40 A: 1.5% ±5 mV 40...60 A DC: 1.5%	0.5...100 A: 1.5% ±1 mV 100...400 A DC: 2% 400...600 A DC: 2.5%
Phase shift (45...65 Hz) (1)	10...20 A: < 3° 20...40 A: < 2°	10...100 A: < 2° 100...400 A: < 1.5°
Noise	DC...1 kHz: < 8 mV DC...5 kHz: < 12 mV 0.1 Hz...5 kHz: < 2 mV	DC...1 kHz: < 1 mV DC...5 kHz: < 1.5 mV 0.1 Hz...5 kHz: < 500 µV
Rise/fall time	≤ 100 µs to go from 10 to 90% V <sub>out</sub>	≤ 70 µs to go from 10 to 90% V <sub>out</sub>

#### Overload:

2000 A DC and 1000 A AC up to 1 kHz

#### Bandwidth:

DC...10 kHz at -3 dB

#### Load impedance:

≥ 1 MΩ and ≤ 100 pF

#### Insertion impedance:

0.39 mΩ at 50 Hz, 58 mΩ at 1000 Hz

#### Working voltage:

600 Vrms

#### Common mode voltage:

600 Vrms

#### Influence of adjacent conductor:

< 10 mA/A at 50 Hz

#### Influence of conductor positioning in the clamp's jaws:

0.5% of the reading

#### Battery:

9V Alkaline (NEDA 1604 A, IEC 6LR61)

#### Battery level indicator:

Green LED when the battery voltage > 6.5 V

#### Battery life:

50Hrs with Alkaline battery .

#### Overload indicator:

Red LED

#### Auto switch-off:

After 10 min's

### Mechanical Specification

#### Operating temperature:

-10° to +55°C

#### Storage temperature:

-40° to +80°C

#### Operating relative humidity:

+10° to +35°C : 90 ±5% RH  
(without condensation)

+40° to +55 °C : 70 ±5% RH  
(without condensation)

#### Temperature influence:

< 300 ppm/°K or 0.3%/10°K  
< 0.3 A/°K

#### Humidity influence:

10 to 90% RH at reference temperature:  
< 0.1%

#### Operating altitude:

0 to 2000 m

#### DC zero adjustment:

Automatically operated by button (± 10 A)

#### Max. jaw insertion capacity:

1 cable: 30 mm Ø or 2 cables : 24 mm Ø  
or 2 x 31.5 x 10 mm busbars

#### Case Protection:

IP30 in accordance with IEC529

#### Drop test:

1 m on a 38 mm container of oak on concrete, test in accordance with IEC 1010

#### Mechanical shock:

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

#### Vibration :

Test in accordance with IEC 68-2-6

#### Frequency range:

5 to 15 Hz: amplitude: 1.5 mm  
15 to 25 Hz: amplitude: 1 mm  
25 to 55 Hz: amplitude: 0.25 mm

#### Self-extinguishing ability:

Casing and jaws: UL 94 V0

#### Dimensions:

224 x 97 x 44 mm

#### Weight:

440 g

#### Colour:

Dark grey casing with red jaws

#### Output:

Via 1.5 m double insulated cable with 4 mm male safety plug

### Safety Specification

#### Electrical:

Double or reinforced insulation between the primary, the secondary and the outer casing in accordance with IEC 1010-1-2 (indoor use).

600 V category III, pollution: 2

300 V category IV, pollution: 2

#### Electromagnetic Compatibility

##### (EC stamp):

EN 50081-1: class B

EN 50082-2:

- Electrical discharge IEC 1000-4-2

- Radial field IEC 1000-4-3

- Rapid transients IEC 1000-4-4

- Magnetic field to 50/60 Hz IEC 1000-4-8

(1) Reference Conditions : 18° to 28°C, 20 to 75% RH, 48 to 65 Hz, external magnetic field < 40 A/m, no DC component, no current carrying conductor nearby, centred test sample, load ≥ 1 MΩ and ≤ 100 pF, reset to zero before measurement (DC only) DC to 65 Hz, Battery 9V ±0.1 V

To order	Reference
Clamp-on AC/DC current probe model <b>PAC11</b> with battery and user's manual	P01.1200.68
Clamp-on AC/DC current probe model <b>PAC11</b> with carrying case, battery and user's manual	P01.1200.68D