



K Series

The K series is a new product range possessing exceptional measurement capabilities.

Extremely compact in design, these "micro-probes" are designed for highly accurate measurement of very low currents.

Their small dimensions and shape make them ideal for probing into tight spaces where access is limited, as is the case on most switchboards, 4-20 A process loops or vehicle wiring looms for example.

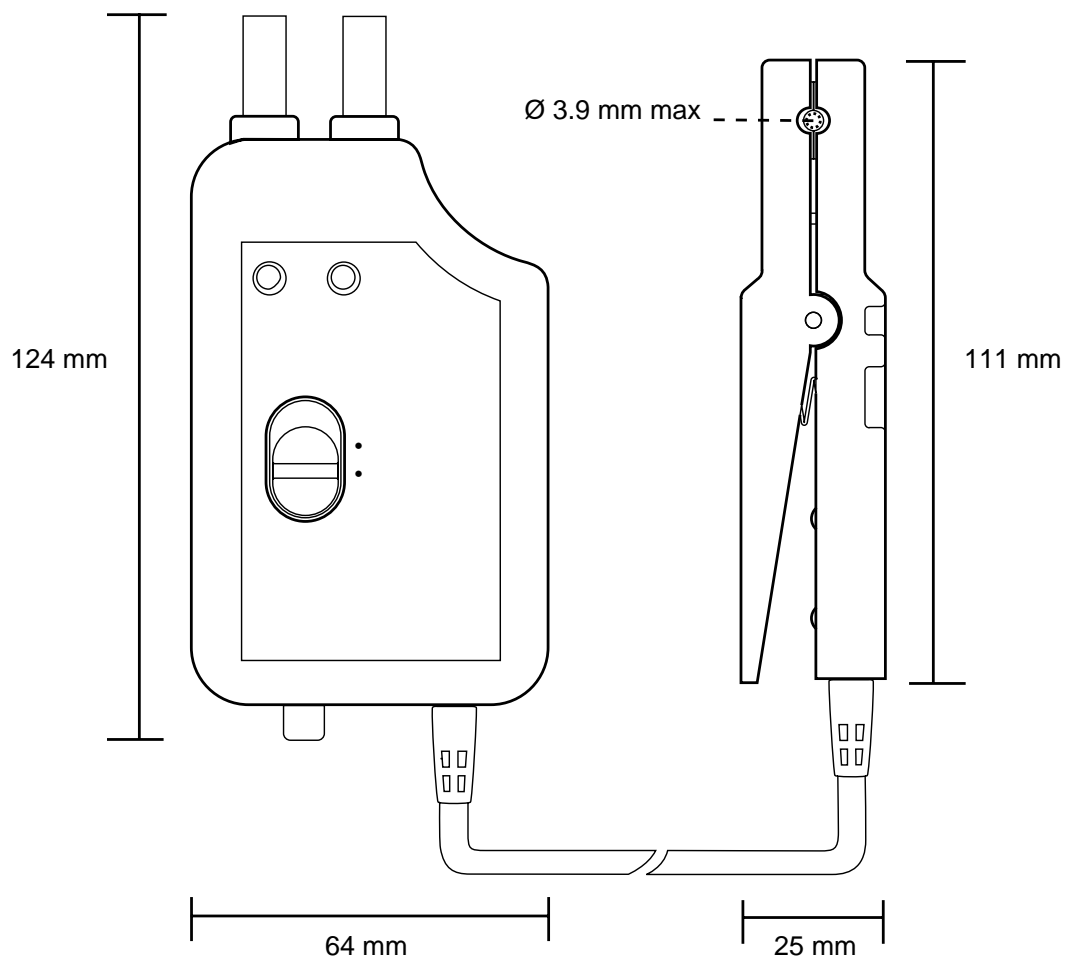
These "K" series current probes make excellent work companions for multimeters and any other instrument able to make use of their high sensitivity, dynamic range and ability to indicate the shapes of signals


and waveforms. They give an AC+DC output signal that is proportional to the measured current, without needing to change the range or filter the signal. RMS measurements are possible with DC+AC components.

There are two different types of K series current probes available.

Model K1 gives a 1 mV/mA output and lends itself to a variety of different applications, biased towards low current measurement.

Model K2 has a greater level of sensitivity with its 10 mV/mA output.



Title: K Series - Current probe	
Drawing N°	Drawn:
Manufactured by:  CHAUVIN ARNOUX	

AC/DC current probes

K1 Model

K Series

Current	4500 mA DC 3000 mA AC
Output	1 mV/mA

The K1 model measures currents as low as 100 μ A AC or DC.

The clamp provides a proportional output signal enabling direct readings on multimeters.

Electrical specifications

Current range:

1 mA... \pm 4.5 A DC

1 mA...3 A rms (sinusoidal)

1 mA...4.5 A peak, square and steps

Output (output voltage):

1 mV/mA

Resolution:

DC: 50 μ A typical

AC: 100 μ A typical

Accuracy (1):

DC current

Primary current	1...10 mA	10...120 mA	120...4500 mA
% accuracy of output signal	2% \pm 0.2 mV	2% \pm 0.1 mV	1%

AC current from 45 to 65 Hz

Primary current	1...10 mA	10...120 mA	120...3000 mA
% accuracy of output signal	3% \pm 0.3 mV	3% \pm 0.1 mV	1%

Frequency response:

DC to 2 kHz (at -3 dB)

Load impedance:

\geq 1 M Ω and \leq 100 pF

Output noise:

< 100 μ V, DC to 3 kHz

Output impedance:

220 Ω

Inductance of clamp:

< 1 μ H

Rise time:

< 200 μ s, 10% to 90%

Fall time:

< 200 μ s, 90% to 10%

Influence of adjacent conductors:

(50 Hz at 23 mm from the clamp): < 100 μ A/A

Influence of earth field:

< 120 μ A

Batteries:

9V alkaline, NEDA 1604, 6LR61 or IEC 6 LF22

Battery level indication:

Green LED when battery voltage > 6.5 V

Battery charge life:

Approximately 20 hours

Overload indication:

Red LED indicating momentary or continuous overload.

Mechanical specifications

Operating temperature:

-10°C to +55°C

Storage temperature:

-40°C to +80 °C

Influence of temperature:

< 1000 ppm/°K or 1%/10°C

Humidity:

< 95% for < 35°C, 75% at +55°C

Operating altitude :

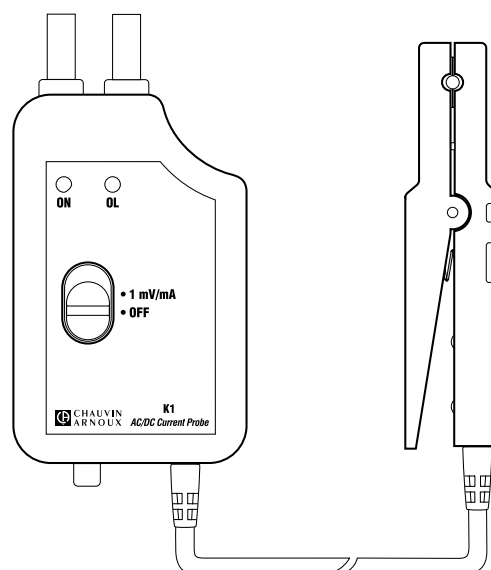
0 to 2000 m

Adjustment of DC zero:

approximately \pm 25 mA by turning the button on the bottom of the housing

Clamping capacity:

\varnothing 3.9 mm



Protection casing:

Housing: IP 40 as per IEC 529

Drop test:

1.0 m as per IEC 68-2-32

Impacts:

100 g as per IEC 68-2-27

Vibration:

As per IEC 68-2-6

Frequencies:

5 to 15 Hz, amplitude: 1.5 mm

15 to 25 Hz: amplitude: 1 mm

25 to 55 Hz: amplitude: 0.25 mm

Dimensions (electronic module):

124 x 64 x 28 mm

Dimensions (probe):

111 x 15 x 25 mm

Cable length:

1.5 m

Weight:

250 g

Colour:

Dark grey

Output:

Two 4 mm safety terminals 19 mm apart.

Safety specifications

Operating voltage:

300 V as per IEC 1010-1 cat. II

Electromagnetic compatibility:

Immunity (EN 50082-1):

Class A

DC: 15 mV for 0

AC (60 Hz): 2 dB from 10 mA...4.5 A

Emissivity (as per EN 50081-1): negligible

(1) Reference conditions: 23°C \pm 3°C, 20 to 75% RH, batteries 9 V \pm 0.1 V, earth's magnetic field < 40 A/m, no AC field, DC or sinusoidal current from 45 to 65 Hz

To order	Reference
K1 model AC/DC ammeter clamp in carrying case with battery and user's manual	P01.1200.67A