

Fluke i3000s Flex AC Current Clamp

Technical Data



The i3000s Flex is an ac current clamp utilizing the Rogowski principle. It can be used to measure currents up to 3000 A when used in conjunction with oscilloscopes, recorders or data loggers. The flexible and lightweight measuring head allows quick and easy installation in hard to reach areas.

Electrical specifications

Current ranges: 30 A, 300 A, 3000 A ac rms

Output sensitivity (ac-coupled): 100 mV, 10 mV, 1 mV per A

Load impedance: 100 k Ω minimum

Accuracy (at +25 °C): ± 1 % of range (45 Hz to 65 Hz)

Linearity (10 % to 100 % of range): ± 0.2 % of reading

Noise: 8 mV ac rms (30 A), 2 mV ac rms (300 A, 3000 A)

Frequency range: 10 Hz to 50 kHz (-3 dB)

Phase error: $< \pm 1^\circ$ (45 Hz to 65 Hz), $\pm 10^\circ$ (at 20 kHz)

Position sensitivity (with cable > 25 mm from the coupling): ± 2 % of range

External field (with cable > 200 mm from the head): ± 1 % of range

Power supply: 2 x AA MN 1500 LR6 alkaline, 400 hours, low battery indicator

Temperature coefficient: ± 0.08 % of reading per °C

Working voltage (see Safety Standards section): 600 V ac rms or dc

General specifications

Head cable length (double insulated):

610 mm (24 in) i3000s Flex-24

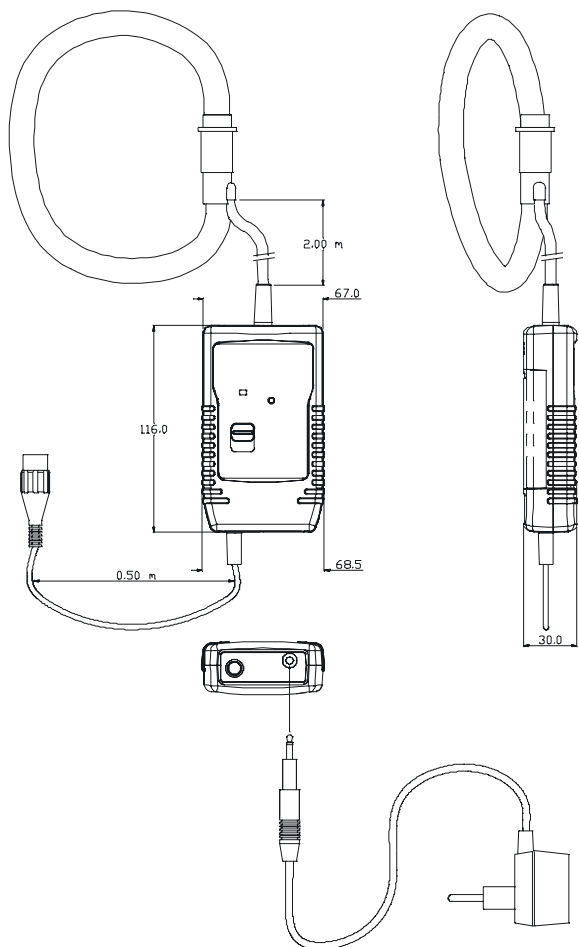
915 mm (36 in) i3000s Flex-36

Head cable diameter: 14.3 mm

Head bend radius: 38.1 mm

Cable length (head to electronics): 2 meters

Output connection: 0.5 m cable terminated with safety BNC connector. Supplied with BNC to Banana safety plug adapter.



Operating temperature range:

-20 °C to +90 °C (-4 °F to 190 °F) (head),
 -20 °C to +85 °C (-4 °F to 185 °F) (electronics)

Storage temperature range:

-40 °C to +105 °C (-40 °F to 221 °F) (head),
 -20 °C to +85 °C (-4 °F to 185 °F) (electronics)

Operating humidity: 15 % to 85 %
 (non-condensing)

Weight: 180 g (0.396 lb) (head),
 190 g (0.419 lb) (electronics)

Safety standards

BS EN 61010-1: 2001
 BS EN 61010-2-032: 2002
 BS EN 61010-031: 2002

600 Vrms, Category III, Pollution Degree 2

Use of the probe on uninsulated conductors is limited to 600 V acrms or dc and frequencies below 1 kHz.

EMC Standards

EN 61326: 1998 +A1, A2, & A3

Ordering information

i3000s FLEX-24 AC Current Probe, 24-inch circumference
 i3000s FLEX-36 AC Current Probe, 36-inch circumference
 i3000 FLEX-4PK, AC Current Probe, 4-pack of i3000s FLEX-24

Optional Accessories

FLEX PSU-EU Power supply unit for Europe
 FLEX PSU-UK Power supply unit for the United Kingdom

Note: Power supply units only available for Europe and the United Kingdom.



i3000s Flex connected to a Fluke 434 Power Quality Analyzer (The i430 FLEX-4PK can be used with the Fluke 434 and 435, without the need for the control box).



i3000s Flex connected to a Fluke 199C ScopeMeter.

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