



致力于电子测试、维护领域!

TA189

AC / DC

CURRENT CLAMP



User Guide

SAFETY

The following symbols appear on the product:



Attention! Refer to manual.



Application around and removal from UNINSULATED HAZARDOUS LIVE conductors is permitted.



Double/reinforced insulation.



Complies with the relevant European standards.



Do not dispose of this product as unsorted municipal waste. Contact a qualified recycler for disposal.



Read all instructions completely before using this product.

To avoid electric shock:

- Use caution during installation and use of this product. High voltages and currents may be present in circuit under test.
- This product must be used only by qualified personnel practising applicable safety precautions.
- Do not use product if damaged.
- Always connect clamp to display device before it is installed around the conductor.
- Always ensure that the clamp is removed from any live electrical circuit, and that leads are disconnected before removing the battery cover.
- Do not hold the clamp anywhere beyond the tactile barrier see Fig. 1.

SPECIFICATION

Electrical data

(All accuracies stated at 23°C ± 1°C)

Nominal current	30 A AC _{PEAK} or DC
Measuring range (s)	30 A
Overload capacity	500 A (60 s)
Output sensitivity	100 mV/A
Accuracy	± 1% of reading ± 2 mA
Resolution	± 1 mA
Gain variation	±0.01% of reading/°C

Frequency range ¹⁾	DC to 100 kHz (0.5 dB)
Power supply	9 V Alkaline battery PP3, MN 1604 or IEC6LR61
Load impedance (minimum)	> 100 kΩ and ≤ 100 pF

General data

Conductor size	25 mm diameter
Output cable and connectors	2 m long coax terminated with safety BNC connector
Operating temperature	0°C to +50°C
Storage temperature with battery removed	-20°C to +85°C

¹⁾Accuracy quoted is for conductor in centre of aperture

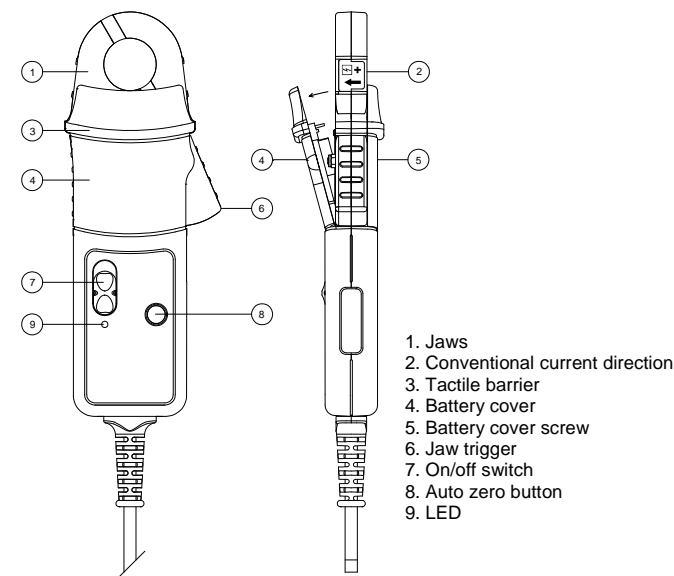
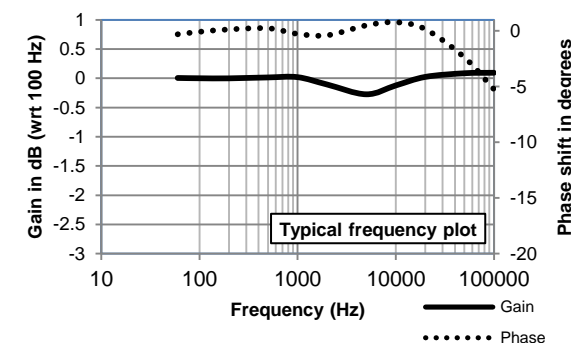


Fig. 1.

OPERATING INSTRUCTIONS

Switch On

When the clamp is switched on to the required measuring range, the **green LED** will illuminate. The LED starts flashing when the battery voltage is too low for normal operation and warns the user that it requires changing. This procedure is described below.

Auto Zero

The output zero offset voltage of the clamp may change due to thermal shifts and other environmental conditions. Select the required measuring range and, to null the output voltage, depress the Auto Zero button. Ensure that the clamp is away from the current carrying conductor while the clamp is being nulled.

Current Measurement

1. Switch on the clamp using the **on/off** switch and check that the green LED is lit.
2. Connect the output lead to the oscilloscope.
3. Zero the clamp using the Auto Zero button.
4. Clamp the jaws of the clamp round the conductor ensuring a good contact between the closing faces of the jaws.
5. Observe and take measurements as required. Positive output indicates that the current flow is in the direction shown by the arrow on the clamp.

Auto Power OFF

In order to save battery life, the clamp will automatically switch itself off after approximately 10 minutes. To disable the Auto power off function, switch off the clamp and switch on while pressing the Auto Zero button. The red LED will illuminate and the clamp will stay ON until switched off again.

Battery Replacement

The green or red LED will flash when the minimum operating voltage is approached (refer to Fig. 1). Use the following procedure:

SAFETY WARNING

Before removing the battery cover, ensure that the clamp is disconnected from the oscilloscope and remote from any live electrical circuit.

Unclamp the clamp from the conductor, turn it off using the **on - off** switch and disconnect the output leads from external equipment.

Loosen the captive screw which secures the battery cover. Lift the cover through 30° and pull it clear of the clamp body as shown in Fig. 1. Replace the battery, re-fit the battery cover and fasten the screw.

Fit only 9 V battery type PP3 Alkaline (MN 1604).

SAFETY STANDARDS

EN 61010-1:2010

EN 61010-2-032:2012

300 V Cat III, Pollution Degree 2

EMC Standards

EN 61326-2-2:2006

ROHS and WEEE compliant

This product is designed to be safe under the following conditions:

- indoor use
- altitude up to 2000 m
- temperature 0°C to +50°C
- maximum relative humidity 80% for temperatures up to 31°C decreasing linearly to 40% relative humidity at 50°C.

Use of the clamp on **uninsulated conductors** is limited to 300 V AC_{RMS} or DC. and frequencies below 1 kHz.

Safety in its use is the responsibility of the operator who must be a suitably qualified or authorised person. Ensure that your fingers are behind the **protective barrier** (see Fig. 1) when using the clamp. Always inspect the clamp and lead for damage before use.

To avoid electric shock, keep the clamp clean and free of surface contamination.

Use a cloth moistened with isopropyl alcohol to clean the clamp. Ensure that the clamp is completely dry before using.

WARRANTY

Your current clamp is guaranteed for one year from the date of purchase against defective material or workmanship. If the clamp fails during the warranty period, we shall, at our discretion, repair or replace it with a new or reconditioned unit provided we are satisfied that the failure is due to defective material or workmanship. To make a claim under warranty, return the clamp to us, postage prepaid, with a description of the defect. The use of a battery other than that specified invalidates this warranty.

Goods alleged by the buyer to be defective shall not form the subject of any claim for injury, loss, damage, or any expense howsoever incurred, whether arising directly or indirectly from such alleged defects other than death or personal injury resulting from the seller's negligence.

No condition is made or to be implied, nor is any warranty given or to be implied as to the life or wear of goods supplied or that they will be suitable for any particular purpose or for use under specific conditions, notwithstanding that such purpose or conditions may be made known to the seller.

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