TA301

AC/DC CURRENT PROBE

User's Guide

SAFETY

The following symbols appear on the product:

Attention! Refer to this 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.

To avoid electric shock:

- Use caution during installation and use of this product; high voltages and currents may be present in the circuit under test.
- This product must be used only by qualified personnel practicing applicable safety precautions.
- Do not use the product if damaged.
- Always connect the probe to the scope device before installing it around the conductor.
- Do not hold the probe anywhere beyond the tactile barrier: see Fig. 1.

SPECIFICATION

Electrical data

(All accuracies are stated at 23 °C ± 1 °C)

Nominal current	2000 A AC peak or DC
Measuring range (s)	200 A / 2000 A
Overload capacity	2200 A (60 s)
Output sensitivity	10 / 1 mV/A
Accuracy[1] (0 – 200/1500 A)	± 1% of reading
	± 100 / ± 500 mA
Accuracy[1] (1500 – 1800 A)	± 3% of reading
Accuracy[1] (1800 – 2000 A)	± 6% of reading
Resolution	± 50 / ± 400 mA
Gain variation	± 0.1% of reading/°C
Frequency range[1]	DC to 20 kHz (-1 dB)
	I RMS x f ≤ 400,000
Power supply	5 V Nominal via
	PicoScope 4444
Load impedance (minimum)	> 100 kΩ and ≤ 100 pF

General data

Conductor size	32 mm diameter
Output cable and connectors	2 m long screened cable terminated with D9 plug
Operating temperature	0 °C to +50 °C
Storage temperature	-20 °C to +85 °C

[1]Accuracy quoted is for conductor in center of aperture

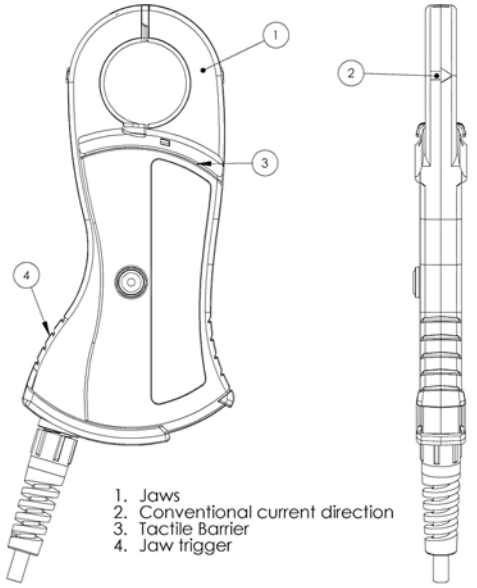

Fig. 1

OPERATING INSTRUCTIONS

Connecting the probe to PicoScope 4444

Connect the TA301 to the required channel of the **PicoScope 4444** via the D9 connector. The oscilloscope will identify, power and activate the probe automatically.

Zeroing the probe

The output zero offset of the probe may change due to thermal shifts and other environmental conditions. Offset is controlled via the PicoScope 6 software: open the Channel Options menu and adjust the DC Offset controls. When zeroing the probe, close its jaws and keep it away from the current-carrying conductor.

Current Measurement

1. Connect the output lead to the oscilloscope.
2. Zero the probe.
3. Clamp the jaws of the probe round the conductor, ensuring a good contact between the closing faces of the jaws.
4. Observe and take measurements as required. Positive output indicates that the current flow is in the direction shown by the arrow on the probe.

SAFETY STANDARDS

EN 61010-1

EN 61010-2-032

150 V CAT II, Pollution Degree 2

EMC Standards

EN 61326-2-2

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 probe on **uninsulated conductors** is limited to 150 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 authorized person. Ensure that your fingers are behind the tactile barrier (see Fig. 1) when using the probe. Always inspect the probe and lead for damage before use.

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

Use a cloth moistened with isopropyl alcohol to clean the probe. Make sure that the probe is completely dry before using it.

WARRANTY

Your current probe is guaranteed for one year from the date of purchase against defective material or workmanship. If the probe 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 probe to us, postage prepaid, with a description of the defect.

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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