



INSTRUCTION MANUAL
ICA32N AC/DC CURRENT TRANSDUCER

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ICA 32N
CURRENT ADAPTOR
INSTRUCTION MANUAL

(1) Introduction

1.1 Unpacking and checking

When you unpack your new current adaptor, these are the items you should have:

1. Current adaptor for digital meters, complete with coiled output cable fitted with connectors
2. Carrying case
3. Operating manual

Markings on the unit

Attention — Follow the operating instructions

Symbol for double insulation

Indoor use only

Maximum Altitude 2000m

Installation category IEC1010 300V category III

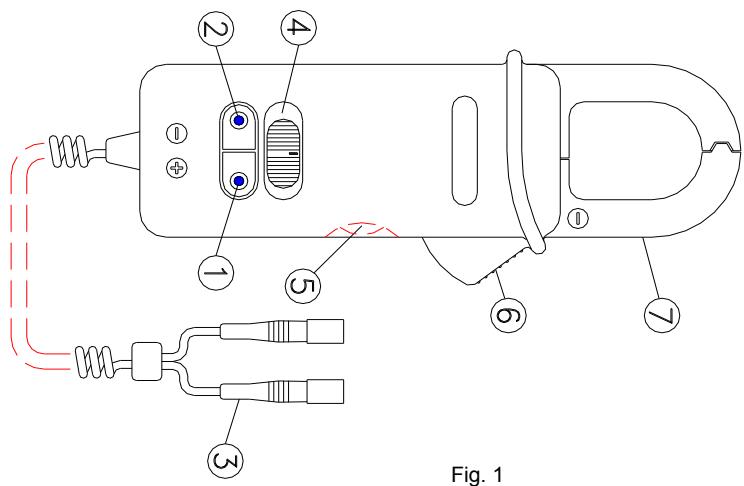
600V category II

Pollution degree 2

1.2 Adaptor front face

Fig.1 and the numbered list below identify the items fitted at the front of the adaptor. Before you use the adaptor, familiarize yourself with the indicators and controls at the front and the connectors.

- 1. Red LED** - Battery voltage low.
- 2. Green LED** - Power on.
- 3. Coiled output cable** - Voltage output signal.
- 4. On/off and function switch** - Slide switch for selecting measuring function.
- 5. Zeroing potentiometer** - For zeroing d.c. ranges.
- 6. Jaw lever** - Pressing this lever opens one jaw. Relax the pressure and the jaw will close again.
- 7. Current clamp** - This senses the a.c. or d.c. current flowing in a conductor within the clamp.



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(2) Technical specification

The figures given are for 23°C ±5°C, <75% RH.

Ranges : 0 to 100/600A ~

0 to 100/600A ==

Accuracy : A.c. currents at 45 to 65Hz

100A range (0 to 100A == / ~) ±(2% + 2A)

600A range (100 to 400A == / ~) ±(2% + 2A)

600A range (400 to 600A == / ~) ±(2.5% + 2A)

Output voltage

100A range (a.c./d.c.) 10mV/A

600A range (a.c./d.c.) 1mV/A

Output impedance : 100kΩ min. (a.c./d.c.)

Jaw position error : ±1% of reading

Method of sensing : Hall effect for a.c. and d.c.

Automatic power off : Approx. 15 minutes after power on.

Low battery voltage indication : Red LED.

Power-on indication : Green LED, flashing.

Operating temperature : 0 to +50°C, <75% RH.

Storage temperature : -20 to +60°C, <80% RH.

Temperature coefficient : 0.2 x specified accuracy/°C, <18°C or >28°C.

Power supply : One 9V battery (NEDA 1604, IEC6F22).

Battery life (alkaline) : 45 hours (typical).

Max. conductor dimensions : 34mm Ø or 20 x 40mm busbar

Size (L x B x H) : 203 x 60 x 27 mm.

Weight : 380g.

Accessories : Coiled output cable with prefitted connectors, operating manual and carrying case.

Precautions and preparing for measurements

1. Never apply voltage to the output connectors.
2. Do not use the current clamp for voltages of more than 600V a.c.
3. Make sure the battery is correctly inserted.
4. Only use the adaptor at temperatures from 0 to +50°C and at relative humidities of less than 75%.
5. Do not store or use the adaptor at high temperatures or high relative humidities or expose it to direct sunlight.
6. Before changing the battery, switch the adaptor off and unplug the output connectors from the meter.
7. Take the battery out if you are not going to be using the adaptor for any length of time.
8. Switch the adaptor off after use.

(3) Using the adaptor

3.1 Measuring a.c. currents

1. Use the slide switch to set the adaptor to the highest range you will need (600A or 100A).
2. Plug the output connectors (red and black) into the input sockets of a digital multimeter and set the multimeter to an a.c. voltage range of 200mV or 2V.

3. Press the lever to open the jaw and place the jaws round the conductor whose current you wish to measure.
Release the lever and make sure the jaws are properly closed. Then read off the measurement from the multimeter display.

3.2 Measuring d.c. currents

1. Use the slide switch to set the adaptor to the highest range you will need (600A or 100A).
2. Plug the output connectors (red and black) into the input sockets of a digital multimeter and set the multimeter to an d.c. voltage range of 200mV or 2V.
3. Adjust the zeroing potentiometer to give a reading of "0" on the multimeter display.
4. When measuring d.c. currents, you will get a positive measurement when the current in the conductor enclosed by the jaws is flowing upwards, as shown in Fig.2.
5. Press the lever to open the jaw and place the jaws round the conductor whose current you wish to measure.
Release the lever and make sure that the jaws are properly closed. Then read off the measurement from the multimeter display.

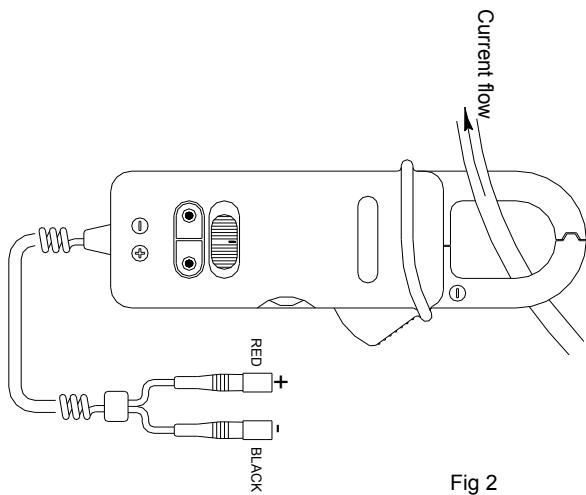


Fig 2

(4) Changing the battery

The adaptor is powered by a 9V battery. To change the battery, proceed as follows:

1. Unplug the output connectors from the digital multimeter and switch the adaptor off.
2. Place the adaptor front-face down on a work surface and unscrew the screw holding the battery cover.
3. Slide the battery cover to one side and remove the battery.
4. Fit a new 9V battery, close the cover, and screw the screw back in.

(5) General Maintenance

Repair or servicing not covered in this manual should only be performed by qualified personnel.

Periodically wipe the case with a damp cloth and detergent. Do not use abrasives or solvents.

Africa**RS Components SA**

P.O. Box 12182, Vorna Valley, 1686
20 Indianapolis Street, Kyalami Business Park,
Kyalami, Midrand
South Africa

www.rs-components.com

China**RS Components Ltd.**

Suite 23 A-C , East Sea Business Centre
Phase 2 , No. 618 Yan'an Eastern Road
Shanghai, 200001
China

www.rs-components.com

Japan**RS Components Ltd.**

West Tower (12th Floor),
Yokohama Business Park, 134 Godocho, Hodogaya,
Yokohama, Kanagawa 240-0005
Japan

www.rs-components.com

Asia**RS Components Pte Ltd.**

31 Tech Park Crescent
Singapore 638040

www.rs-components.com

Europe**RS Components Ltd.**

PO Box 99, Corby,
Northants. NN17 9RS
United Kingdom

www.rs-components.com

U.S.A**Allied Electronics**

7151 Jack Newell Blvd. S.
Fort Worth, Texas 76118
U.S.A.

www.alliedelec.com

South America**RS Componentes Limitada**

Av. Pdte. Eduardo Frei M. 6001-71
Centro Empresas El Cortijo
Conchali, Santiago, Chile

www.rs-components.com