

AC/DC CURRENT TRANSDUCER
600A 10mV/1A, 1mV/1A

INTRODUCTION

1-1 Unpacking and Inspection

Upon removing your new Current Transducer from its packing, you should have the following items:

1. Current Transducer with coiled cable output plugs , without battery.
2. Carrying case.
3. Instruction manual.


1-2 Meter Safety

Terms as Marked on Equipment



ATTENTION : Refer to manual

 **Double Insulation:** protection class 2

 **DANGER :** risk of electric shock.

1-3 Front Panel

Refer to Figure 1 and the following numbered steps to familiarize yourself with the meter's front panel controls and connectors.

1. **Red LED :** Low battery display.
2. **Green LED :** Power on display.
3. **Function Switch :** Slide switch used to select measuring function.
4. **DC Zero Adj. knob :** Zero adjusts on DC current ranges.
5. **Trigger :** Press the lever to open the transformer jaws.
6. **Transformer Jaws :** Designed to pick up the ac/dc current following through the conductor.

Figure 1

SPECIFICATIONS

2-1 General Specifications

Position Error : +/- 1% of Reading

Type Of Sensing : Hall effect sensing for AC and DC

Low Battery Indicator: Red LED indicator

Power On Indicator : Green LED indicator , flashing

Temperature Coefficient: $0.2 \times (\text{specified accuracy}) / ^\circ\text{C}$, for $t < 18^\circ\text{C}$ or $t > 28^\circ\text{C}$

Power Requirement : Single 9V battery (NEDA 1604A or IEC 6LF22)

Battery Life : 45 hours typical (Alkaline)

Max/Conductor Size : 34mm diameter or 20 x 40 mm busbar

Size : 60mm (W) x 203mm (L) x 27mm(H)

Weight : 320grams

Accessories : Coiled cable output plugs (installed) , manual and carrying case.

2-2 Environmental conditions

Indoor use

Maximum Altitude : 2000 Meter

Installation Category : IEC 1010 , 600V , Category 2

Pollution Degree : II

Operation Ambient : 0°C to 50°C, R.H.< 80%

Storage Temperature : -20°C to 60°C, R.H.< 80%

2-3 Electrical Specifications

Accuracy is \pm (%reading + number of Amp.) at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$, less than 75% R.H.

Ranges	Accuracy	Output voltage	Overload protection
100A (AC or DC)	$\pm(2.0\%+2\text{A})$	10mV /A (AC/DC)	800A max. permanent current
600A (AC or DC)	$\pm(2.0\%+2\text{A}), I \leq 400\text{A}$	100mV /A (AC/DC)	
	$\pm(3.0\%+2\text{A}), I > 400\text{A}$		

Load impedance : 100K Ω min.

OPERATION

This instrument has been designed and tested in accordance with IEC Publication 1010, Safety Requirements for Electronic Measuring Apparatus, and has been supplied in a safe condition. This instruction manual contains some information and warnings which have to be followed by the user to ensure safe operation and to retain the instrument in safe condition.

3-1 Precautions and Preparations for measurement

1. Do not apply the voltage to the output plugs.
2. Make sure that the battery is connected properly.
3. Operate the instrument only in temperature between 0°C to 50°C and less than 75%R.H.
4. Do not use or store this instrument in high temperature or high humidity and do not store the unit in direct sunlight.
5. Do not make battery replacement with power switch set to ON and output plugs connected to instrument.

6. If the unit is not to be used for a long period of time, remove the battery.
7. Do not forget to turn power switch off after use.
8. If the meter is used near equipment that generates electro-magnetic , the output may be unstable or indicate incorrect measurement values.



THIS INSTRUMENT MUST NOT BE USED ON UNINSULATED CONDUCTORS AT A VOLTAGE GREATER THAN 600V ac/dc.

3-2 AC Current Measurement

1. Select the highest anticipated input (600A or 100A) by the function switch.
2. Insert the " Output plugs (red and black)" to the input terminals of a multimeter. Set the multimeter to " AC 200mV or 2V" range.
3. Press the trigger to open the transformer jaws and clamp one conductor only, make sure that the jaws is firmly closed around the conductor, then read the display from the multimeter directly.

3-3 DC Current Measurement

1. Select the highest anticipated input (600A or 100A) by the function switch.
2. Insert the "Output plugs (red and black)" to the input terminals of a multimeter. Set the Multimeter to "DC 200mV or 2V" range.
3. Adjust the "DCA Zero Adjust knob" until the display shows "0".
4. For DC measurement, output is positive in the red plug when the current flows from the lower side to the upper side of the transducer as shown in Fig. 2
5. Press the trigger to open the transformer jaws and clamp one conductor only, make sure that the jaw is firmly closed around the conductor, then read the display from the multimeter directly.

Figure 2

MAINTENANCE

TO AVOID ELECTRICAL SHOCK REMOVE TEST LEADS BEFORE OPENING THE COVER.

4-1 General Maintenance

1. Repairs or servicing not covered in this manual should only be performed by qualified personal.
2. Periodically wipe the case with a dry cloth and detergent do not use abrasives or solvents.

4-2 Battery replacement

The meter is powered by a single 9V battery. Use the following procedure to replace the battery.

1. Disconnect the output plus and turn the power off.
2. Position the adapter face down and remove the screw of the battery cover.
3. Slide off the battery cover and remove the battery.
4. Replace with a new 9V battery and reinstall the battery cover.

