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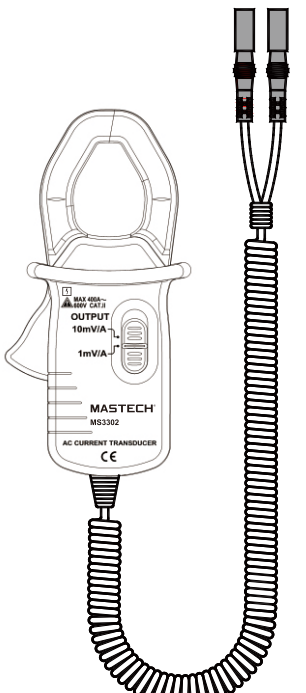
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MASTECH® MS3302

# AC CURRENT TRANSDUCER

## OPERATOR'S MANUAL




CAT II 600V



## 1. Safety Information

The AC current transducer has been design-ed according to IEC-61010 concerning safety requirements for hand - held current clamps for electrical measurement and test.Follow all introduction and operating require-ments to insure that the current clamp is used safely and is kept in good operating condition.

### 1.1 Symbols

| | |
|---|---|
| ⚠ | **Important safety information, refer to the operating manual.** |
| ⧈ | **Double insulation (Protection class II)** |

**CAT II:** MEASUREMENT CATEGORY II is applicable to test and measuring circuits connected directly to utilization points (socket outlets and similar points) of the low-voltage MAINS installation.

## 2. Description

Refer to the Figure 1. and to the following numbered steps to familiarize yourself with the AC current transducer.

| | |
|---|---|
| ① | **Transformer Jaws**<br>Designed to pick up the a.c. current following though the conductor. |
| ② | **Hand Guard**<br>Designed to protect user for safety. |
| ③ | **Trigger**<br>Press the lever to open the transformer jaws. |





## 3. Specifications

Accuracy is specified for a period of one year after calibration and at 18°C to 28°C(64°F to 82°F) with relative humidity to 80%. Accuracy specifications are given as:
± % of reading ± digits

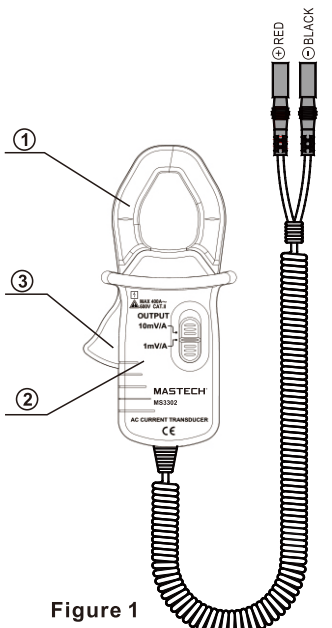



Figure 1

### 3.1 General

CURRENT RANGE: 0.1A - 400A a.c. RMS

OUTPUT VOLTAGE LEVELS:
10mV/A: 1mV a.c. per 0.1 Amp a.c.
1mV/A: 1mV a.c. per 1 Amp a.c.

WORKING VOLTAGE: 600V CAT II per IEC-61010-1

OPERATING TEMPERATURE:
0°C to 50°C <80% relative humidity

STORAGE TEMPERATURE: -20°C to 60°C

TYPE OF SENSING:
induction coil sensing for AC current

MAXIMUM OUTPUT IMPEDANCE: 45Ω

MAXIMUM JAW OPENING: 29mm

MAXIMUM CONDUCTOR SIZE: 28mm

SIZE: 64(W)×143(L)×30(D)

WEIGHT: 185g





### 3.2 Electrical Specification

| Range | Accuracy |
|---|---|
| 10mV/A | ±2.0% ± 0.5A |
| 1mV/A | |

**Frequency Response: 50-60Hz**

## 4. Precaution And Preparations For Measurement

| | |
|---|---|
| **4.1** | Dot not apply the voltage to the output plugs. |
| **4.2** | Do not use or store this instrument in a high temperature or high humidity environment and do not store the unit indirect sunlight. |
| **4.3** | Do not measure current before the unit is not combined with DMM. |
| **4.4** | If the instrument is used near noise generating equipment, be aware that output voltage may become unstable or get more errors. |
| ⚠ | **This instrument must not be used on uninsulated conductors at a voltage greater than 250V ac rms. or 250V dc** |





## 5. AC Current Measurement

| | |
|---|---|
| **5.1** | Set the DMM at ACV function and a relevant range. |
| **5.2** | Connect the plug of transducer with a DMM and combined firmly. |
| **5.3** | Press the trigger to open transformer jaws and clamp one conductor only, making sure that the jaws is firmly closed around the conductor, then read the reading from the digital display of DMM. |

## 6. Maintenance

to keep the instrument clean, wipe the case with a damp cloth and detergent, do not use abrasives or solvents. Any adjustment, maintenance and repair shall be conducted by a service personnel.



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