

Instruction Manual for Model 8112 BNC

INTRODUCTION

Model 8112BNC is a small sized, high sensitivity clamp – on AC current probe designed for use with an oscilloscope. The differential coil incorporated permits a wide range of current measurements with the minimum effect of the external magnetic field. Jaws can be opened or closed simply by sliding the knob. Three current ranges can be switch selected.

SPECIFICATIONS

| Range Switch Position | Input | Output | Accuracy | Frequency Range |
|-------------------------|-----------|----------------|---|-----------------|
| 200mA/200mV (1mA/mV) | 0-0.5A AC | 0-500mV AC | $\pm 2\%$ of output $\pm 0.2\text{mV}$ | 100Hz-1kHz |
| | 0-1A AC | 0-1000mV AC | $\pm 4\%$ of output $\pm 0.4\text{mV}$ | 50Hz-10kHz |
| 2A/200mV (10mA/mV) | 0-20A AC | 0-2000mV AC | $\pm 1\%$ of output $\pm 0.2\text{mV}$ | 40Hz-1kHz |
| | | | $\pm 1.5\%$ of output $\pm 0.2\text{mV}$ | 1kHz-10kHz |
| 20A/200mV (100mA/mV) | 0-20A AC | 0-200mV AC | $\pm 1\%$ of output $\pm 0.1\text{mV}$ | 40Hz-1kHz |
| | | | $\pm 1.5\%$ of output $\pm 0.2\text{mV}$ | 1kHz-10kHz |
| | 20-40A AC | 200mV-400mV AC | $\pm 2.5\%$ of output | 50Hz-10kHz |
| | 40-80A AC | 400mV-800mV AC | $\pm 2.5\%$ of output | 100Hz-10kHz |

Output Impedance – 2k ohms

Frequency Characteristics – Within $\pm 3\text{dB}$ at 30Hz to 100kHz

Size of conductor under test

8mm maximum

Output cord

Approx. 1.5mm long coaxial cable with a connector

Accessory

Pouch

MEASUREMENT METHOD

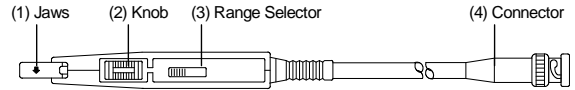


Fig.1

- (1) Connect the connector (4) of the adaptor to the vertical input terminal of the oscilloscope.
- (2) Slide the knob (2) backward to open the jaws and clamp on a current carrying conductor (refer to Fig.2). In example (a), output voltage selected by the range selector will be obtained. In case of (b), output voltage twice the value selected by the range selector will be obtained since two turns of the conductor is clamped as illustrated.
- (3) Arrow mark on the jaws indicates polarity relative to the current flowing through the conductor. When the current flows in the arrowed direction, output will be positive (+).
- (4) Select a desired range according to the current flowing through the conductor.
- (5) Where the current waveform is affected by noise, clip the earth lead onto the earth terminal of the probe and connect it to the circuit under test.

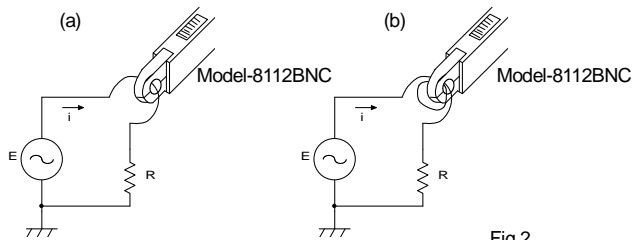


Fig.2

INSTRUCTION MANUAL

for

MODEL 8112 BNC

CAUTION

- (1) Though the maximum voltage of the circuit under test is specified as CAT II .100V when the jaws are closed, sufficient precaution should be taken not to bring the conductive portion of the jaws (jaw tips) into contact with a bare conductor under measurement.
- (2) When the jaws are not fully closed, measurement errors will result.
- (3) Reading will be affected by the strong external magnetic field when measurement is taken in its proximity, to minimize this effect, change the position or orientation of the jaws when making current measurement.



**KYORITSU ELECTRICAL
INSTRUMENTS
WORKS, LTD.**

No.5-20,Nakane 2-chome, Meguro-ku,
Tokyo, 152-0031 Japan
Phone: +81-3-3723-0131
Fax: +81-3-3723-0152
URL: <http://www.kew-ltd.co.jp>
E-mail: info@kew-ltd.co.jp
Factories: Uwajima & Ehime

KYORITSU ELECTRICAL INSTRUMENTS WORKS, LTD