AC Current Probe

GCP-020

QUICK START GUIDE

ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

The information in this manual was correct at the time of printing. However, Good Will continues to improve its products and therefore reserves the right to change the specifications, equipment, and maintenance procedures at any time without notice.

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SAFETY INSTRUCTIONS

In this User's manual, failure to follow or carry out instructions preceded by this symbol may result in personal injury or damage to the device and the installations.

Safety Symbols

Warning: Identifies conditions or practices that could result in injury or loss of life.

Clamp fitted with an electronic output limiter, providing protection against voltage surges caused by the accidental opening of the probe's secondary circuit, 8 V max. peak.

This appliance is protected by dual insulation or reinforced insulation. It does not have to be connected to an earth protection terminal for electrical safety.

This voltage surge category III clamp, with pollution level 2, complies with stringent reliability and availability requirements, corresponding to fixed industrial and domestic installations (see IEC 664-1).

Do not dispose electronic equipment as unsorted municipal waste. Please use a separate collection facility or contact the supplier from which this instrument was purchased.

Thank you for purchasing GCP-020 AC current probe.
To obtain the best possible service from your device:

- Read this User's manual carefully,
- Comply with the precautions for use.

PRECAUTIONS FOR USE

- Do not measure currents greater than 240 A and limit measuring times above 200 A,
- Do not use the device on non-insulated conductors with a potential of more than 600 V in relation to the earth and a voltage surge category greater than III.
- Comply with environmental conditions
- Keep the jaw gap perfectly clean

FEATURES

- The GCP-020 can be used on any multimeter or oscilloscope. It has dual calibre output, alternating voltage.
- It has dual insulation or reinforced insulation and comply with international norms, particularly IEC 1010-2-032.
- Output: Lead. lead length: 1.5 m and 2 m.
- Ratio switch
- The raised arrow on top of the unit indicates the direction of the current flow. The current is considered to flow in the positive direction when it flows from the current producer to the current consumer. This probe orientation is necessary when measuring power (measuring current in parallel with voltage).

OPERATING INSTRUMENT

Limit the measuring time between 200 and 240 A: 10 minutes on, followed by 30 minutes off.

- Before connecting the probe to the multimeter, check that the multimeter has an appropriate calibrate.
- Open the jaws and clamp the cable through which the current you wish to measure is running. Roughly centre the cable in the jaws. Follow the direction of the arrow, if so required by the application in question.
- To read the measurement, apply the appropriate reading coefficient.

PRECISION AND DEPHASING

- 200 A calibre

Intrinsic error +20mA	≤ 3.5 %	≤ 3 %	≤ 2,5 %	≤ 1.5 %
Dephasing	Unspecified	≤ 6 °	≤ 4 °	≤ 3 °

- 20A caliber

Intrinsic error	≤ 2 %+50mV

CONDITIONS OF USE

The probe must be used in the following conditions, in order to comply with user safety and metrological performance requirements.

Overloads

Limit measuring time above 200 A.

Intensity	I < 200 A~	200 A~ < I <240 A~
Operation	Permanent (1)	10 min. ON followed by 30 min. OFF

(1) With a frequency F < 1kHz and a peak factor Fc < 3

Frequency

Use : 40 Hz to 10 kHz

Limit to 1 kHz if permanent operation at 200 A~

Environmental conditions

- Indoor use
- Altitude: < 2000 m
- Climatic conditions: -10 to +55° C and RH < 85%
- Avoid splashing with water

SPECIFICATIONS

Model	GCP-020
Nominal measuring scope	500mA~200A and 100mA~20A
Ratio Input/ Output	1A~/10mV~ and 1A~/100mV
Sinusoidal current	48~65Hz
Connection	BNC
Direct Current	No
Temperature & humidity range (Guaranteed accuracy)	20~26°C, relative humidity: 20~75% (no condensation)
Continuous magnetic field	Earth field (<40A/m)
Proximity of external conductors	No current
Measuring device impedance	>1 MW and < 100pF
Max. clamping capacity	Ø 20 mm cable or 20 x 5 mm bar.
Location for use	Altitude up to 2000m, Indoors
Dimension	135 x 50 x 30mm
Open jaw height	69mm
Weight	Approx. 180g
Jaw opening	21mm

MAINTENANCE

Only use specified spare parts for maintenance purposes. The manufacturer cannot accept any responsibility for accidents occurring following repairs carried out outside its after-sales department or approved maintenance network.

Cleaning

The probe must not be clamped to a cable and must be disconnected from the measuring device. Do not splash water onto the probe.

- Keep the jaw gap perfectly clean. Remove dust with a dry, soft cloth.
  Wipe the iron jaws from time to time with an oil soaked cloth, in order to prevent rust from forming.
- Clean the unit with a cloth and a little soapy water. Rinse with a damp cloth. Then dry quickly with a cloth or pulsed air at 70°C max.