

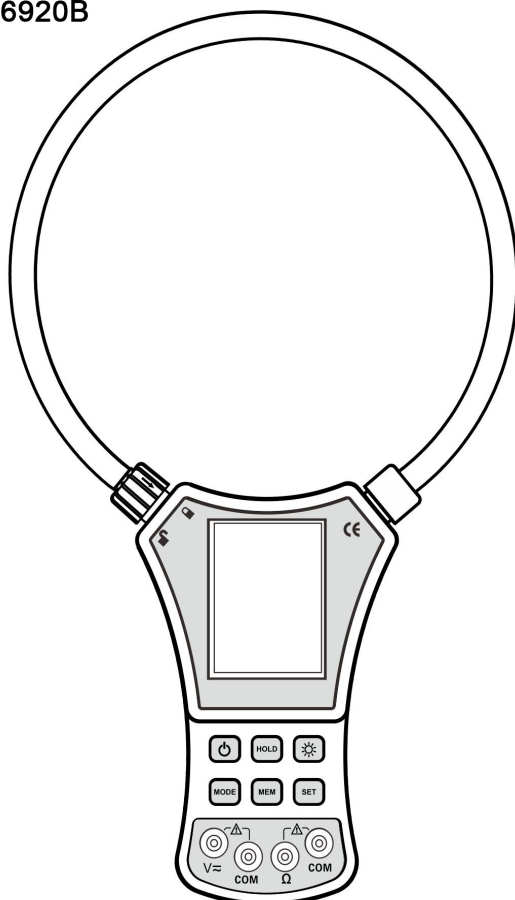
# sisco

## ROGOWSKI COIL CURRENT CLAMP

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SISCO-ETCR6920

SISCO-ETCR6920B



### MANUAL

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## Precaution For Use

Thank you for purchasing **SISSCO-ETCR6920 Flexible Coil Clamp Large Current Meter**, In order to better for use of the product, please be certain:

**---Read the instruction manual in detail.**

**---Comply with safety regulations and cautions listed in manual.**

- ◆ Under any circumstance, shall pay special attention on safety when using this meter.
- ◆ The communication interface and the internal circuit of the meter are non-isolated interfaces, and it is strictly forbidden to connect the computer when testing the voltage, otherwise it will burn the meter or cause an electric shock accident. The voltage test line must be pulled out of the meter before connecting the communication data line to the computer to read the data.
- ◆ Pay attention to the text labeled on the panel and backplane of the meter.
- ◆ Keep the clamp jaw clean and maintain regularly.
- ◆ Do not place and store the meter in high temperature&humidity or dewy places and under direct sunlight for a long time.
- ◆ If the tester will not use for a long time, please take out the battery. When the battery voltage low, please replace the battery in time.
- ◆ Please pay attention to the battery polarity when replace the battery.
- ◆ Use, disassembly and maintenance of this leakage current meter shall hand by authorized personnel
- ◆ Due to the reason of this instrument, if it is dangerous to continue using, should stopped and sealed immediately ,and handled by an authorized institution
- ◆ The meter manual with the danger mark "", users must follow instructions to operate safely.
- ◆ The meter manual with the extremely dangerous mark "", users must in strict follow instructions to operate safely.







## 1. Introduction

**SISCO-ETCR6920 Flexible Coil Large Current Clamp Meter** is designed and manufactured for field testing of AC large current. It can also be used as a common multimeter to measure AC voltage, DC voltage, resistor and continuity testing. Widely used in electric power, communications, meteorology, railway, oil field, construction, measurement, scientific research and teaching units, industrial and mining enterprises and other fields. Especially suitable for the flat cable dense place, current test of transformer grounding core, thick wire and cable, relay protection, silicon controlled rectifier, frequency conversion speed regulation, semiconductor switch, power electronic conversion equipment, arc welding and other industrial environment with serious signal distortion.

**Flexible current clamp sensor**, Rogowski Coil, adopts advanced Rogowski Coil technology, which is a loop coil uniformly wound on non-ferromagnetic materials, with no hysteresis effect, almost zero phase error, no magnetic saturation, high linearity and strong anti-interference ability. The output signal is the differential of the current with respect to time. By integrating the output voltage signal, the input current can be truly restored. The measured current ranges from milliamperes up to ten thousands of amperes. Flexible coil without any exposed metal conductor, non-contact measurement, safe and reliable. Small size, light weight, soft and flexible, suitable for narrow environment and flat cable dense places. High measurement accuracy, strong reliability, wide response frequency band, the user can customize the coil length according to demand.

**SISCO-ETCR6920 Flexible Coil Large Current Clamp Meter** is small size and light weight. It is very simple to operate on site and with high measurement accuracy. The meter has the USB communication interface, and the store data can be uploaded the stored to the computer through the system software to realize historical data reading, query, save, print and other functions. The meter also has backlight function and data hold function, which is an essential tool for electrician safety testing.

## 2. Electrical Symbol


	Extremely dangerous! The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Dangerous! The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.
	Warning ! Operators must strictly follow safety rules , otherwise personal injury or equipment damage may occur
	Double insulation
	AC
	DC

### 3. Product Model

Model	Current Range	Voltage Range	Resistance Range	Power, power factor, energy, frequency, phase	Coil diameter
SISCO-ETCR6900	0.00A~10000A	/	/	/	Φ200mm
SISCO-ETCR6920	0mA~10000A	0.0V~750V AC 0.0V~1000V DC	0Ω~2kΩ	/	Φ200mm
SISCO-ETCR6920B	0mA~10000A	0.0V~750V AC 0.0V~1000V DC	0Ω~2kΩ	/	Φ300mm
SISCO-ETCR7350	0.0A~6000A	0.0V~600V AC	/	Yes	Φ200mm
SISCO-ETCR7350B	0.0A~6000A	0.0V~600V AC	/	Yes	Φ300mm

### 4. Range & Error

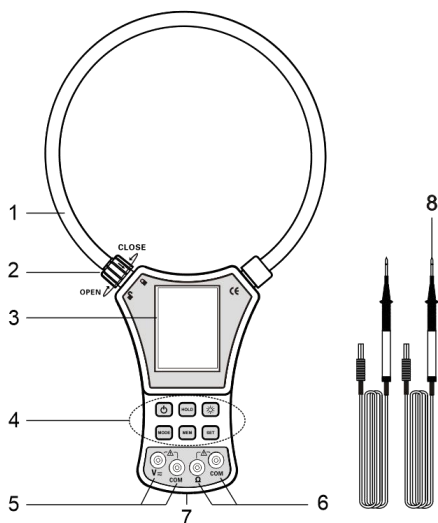
Function	AC large current, AC voltage, DC voltage, resistor, continuity testing
Power Supply	6V DC(LR03X4pcs Alkaline dry cell)
Test Method	Flexible CT: The output signal is the differential of current with respect to time. By integrating the output voltage signal, the input current can be truly restored.
Coil Diameter	Inside diameter φ200mm/φ300mm
Conductor Position	The measured conductor should in the center of the coil

Data Store	600 groups
Communication Interface	USB interface, all stored data can upload to computer and convenient to data analysis
Communication Cable	Length: 1.8 meters
Frequency	50Hz/60Hz(Automatic)
Gear Shift	Automatic
Sampling Rate	2times/second
Display Mode	2.8 inch TFT colorful screen; display area: 58mmX44mm
Meter Size	SISCO-ETCR6920: LXWXH: 200mmX370mmX35mm
	SISCO-ETCR6920B: LXWXH: 300mmX470mmX35mm
Backlight	Yes, “ * ” key control
Data Hold	Data hold function: “ <b>HOLD</b> ” symbol display
Overflow Display	Exceed measure range overflow function: “ <b>OL</b> ” symbol display
Automatic Shutdown	After power on the meter about 10minutes and without any operation, the meter will shutdown automatic, to reduce battery consumption
Battery Voltage	When the battery voltage drop to 4.8V, meter will display “  ” symbol and remind to replace the battery
Weight	Meter: 272g, total weight: 755g(include battery and accessories)
Working Current	Backlight on 80mA; backlight off 40mA



Working Environment	-10°C~40°C; below 80%RH
Store Environment	-10°C~60°C; below 70%RH
Insulation Resistance	100MΩ or large more,1000V
Suitable Safety Standard	IEC1010-1, IEC1010-2-032, Pollution 2, CAT VI(1000V) ,IEC61326(EMC standard)

## 5. Meter Structure

- 1.Flexible coil CT
- 2.Lock catch (Turn back and forth according arrow to lock or open the coil)
- 3.LCD screen
- 4.Function keys
- 5.Voltage&current test interface
6. Resistor test interface
7. Communication interface
8. Pen probe test lin



## Function Keys

	Power On/Off	<b>MODE</b>	Switch display mode/switch delete option
<b>HOLD</b>	Data hold and save, query	<b>MEM</b>	Enter to reading, query and browse data
	On/Off backlight	<b>SET</b>	Switch display channel, inquiry data page, delete data

## 6. Operate Method

### 6.1. Start-up/Shutdown

Press **POWER** key to start up, LCD display and enter into measurement mode; Press the **POWER** key again to shut down. after 10minutes the meter start up and without any operation will shutdown automatic; If LCD display is dark after start up, it might battery voltage is low, please replace battery.

### 6.2. Measurement Mode Selection

Press **MODE** key to switch 3 different measurement mode: Current/AC voltage, Current/DC voltage, Current/resistor

### 6.3. Current Measurement



**Electric,dangerous! Must be operated by trained and authorized personnel. The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.**

**Cannot be used to measure the voltage line exceed 1000V, otherwise there would be danger of electric shock, causing personal injury or injury accident**

- 1). Start up the meter and enter measurement mode.
- 2). Rotate the lock catch according to the **OPEN** direction in the above meter structure diagram, unscrew the flexible coil lock catch, clamp the measured wire with flexible coil clamp, and then rotate the lock catch as to the **CLOSE** direction, to lock the flexible coil again.
- 3). Observe the reading value, if the meter display "**OL**" symbol, indicate the measured current exceeds the upper limit range of the meter. The tested wire should be in the central position of the flexible coil as far as possible (near point A), not near the opening and closing point (area C). The test error at the opening and closing point increases about twice or more, and the error near position point **B** increases by about 1%..

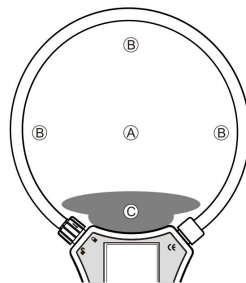


Figure1



4). When the measured current is small, the test resolution can be improved by repeatedly wrapping the flexible coil around to the measured wire for many times and then closing. For example, the measured current is 10A, and the flexible coil wrapped around the tested wire for 3 times, the meter will show 30A, and the flexible coil will show 50A if it is wrapped around 5 times, and so on, the actual current is equal to the display value of the meter divided to the number of winding of the flexible coil.


## 6.4. Voltage Measurement

- 1). Start up the meter.
- 2). Press **MODE** key switch to **AC V**(AC voltage mode) or **DC V**(DC voltage mode).
- 3). Connect to the test line and the meter will display voltage value


## 6.5. Resistance Measurement

- 1). Start up the meter.
- 2). Press **MODE** key switch to **RES** resistance gear.
- 3). Connect to the test line and the meter will display resistance value

## 6.6. Continuity Testing

- 1). Start up the meter.
- 2). Press **MODE** key switch to **RES** resistance gear.
- 3). Press **SET** key and turn on continuity testing function, and display  symbol indicate on.
- 4). Connect to the test line and when the tested resistance value is smaller than 20Ω, the buzzer will rings to alert.

## 6.7. Backlight Control

After start up the meter, press  key can control the backlight, suitable to apply in the dark site and night, the backlight open default.

## 6.8. Data Hold & Store

Press **HOLD** key can hold the present display data, the LCD screen display "**HOLD**" symbol. Press **HOLD** key again cancel the data hold. The meter will automatic numbering and save the present hold data. The meter can store 600 groups data at most.

## 6.9. Data Query & Return

In measurement mode, press **MEM** key enter data query mode, and display "READ" symbol, query the data start from "READ:001", press **HOLD** key to increasing query, press **MEM** key to decreasing query, Press **MODE** key return back to data query mode.

## 6.10. Data Delete




In the data query mode, press **SET** key enter to data delete option, press **MODE** key again switch the cursor to "YES" or "NO", "YES" mean delete or "NO" return back to query mode, press **SET** key to confirm.

## 6.11. Upload Data


Before upload the data, need to install the USB driver and upload software.


Log in to the official website to download the data upload software for the corresponding model.

Connect the meter and computer with the standard communication line, start up the meter and run the software, select the history query, and then read, save, report, print historical data, etc. Historical data can choose to save as Txt or Excel format. When the meter is under voltage testing, it is forbidden to connect the meter to the computer via the communication line, otherwise it may cause leakage and damage the meter.

	<b>Electricity, dangerous ! Must be operated by trained and authorized personnel. The operator must strictly follow the safety rules, otherwise there would be danger of electric shock, causing personal injury or injury accident.</b>
	<b>Dangerous! Cannot be used to measure over 600V circuit loop, otherwise there would be danger of electric shock, causing personal injury or injury accident.</b>
	Don't measure the current which exceed the meter upper limit range
	The conductor should be in the center of the clamp as possible
	Clean the clamp head and maintain the meter after the test
	<b>When measuring voltage, pay attention to connecting the measurement line to avoid short circuiting the tested circuit.</b>
	<b>After the voltage is measured, the test line should be removed from the tested wire first, and then pulled out from the meter to avoid electric shock</b>

## 7. Battery Replacement

	<b>Warning! The meter cannot test in the situation of the battery cover plate is not covered properly, otherwise it is dangerous</b>
	<b>Please pay attention to the polarity of battery, or will damage the meter.</b>
	<b>Low battery, please replace the battery in time</b>
	<b>If not use the leaker for a long time, please take out batteries.</b>

7.1. When the battery power is drop to 4.8V, the meter display “”symbol remind to replace the battery.

7.2. Press **POWER** key to shut down the meter; and confirm the meter is in off state, and then open the battery cover, please attention batter model, and then replace with qualified new battery; cover battery cover plate.

7.3. Press POWER key to confirm if succeed to replace the battery, or reoperate the step 2.

## 8. Accessories

Meter	1 PCS
Tool bag	1 PCS
Probe test line	2 PCS(red, black each 1pcs)
Communication cable	1 PCS
Package/Manual/Warranty card / Certification	1 SET



**The company is not responsible for other losses caused by use.**

**The contents of this user manual cannot be used as a reason to use the product for special purposes.**

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