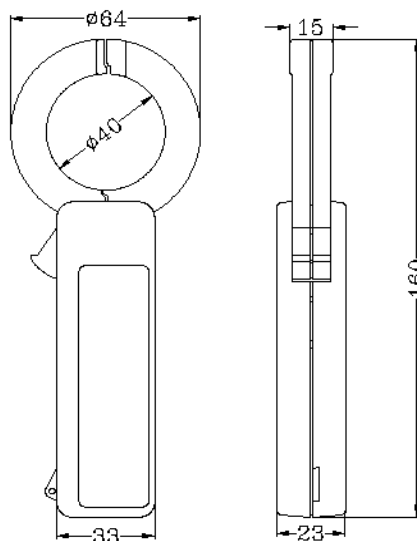


ETCR High Precision Clamp Current Sensor User Manual

ETCR5100 Series High Accuracy Clamp Leaker/Current Sensor



I . Introduction

High Accuracy Clamp Leaker/Current Sensor is widely applied in AC current leakage, current, power and energy measurement with high precision and small phase error of electricity, communications, meteorology, railway, oilfield, construction, measurement, scientific and research teaching unit, industrial and mining enterprises, which can be connected to a variety of high precision digital multi-meter and data recorder, quite easy to use.

ETCR5100 High Accuracy Clamp Leaker/Current Sensor obtains the latest CT technology. It performed almost without external magnetic field influence, ensuring high accuracy, high stability and high reliability of year-round uninterrupted acquisition..

II . Characteristics

1. Attractive appearance, compact body
2. Clamp design, unnecessary to disconnect the test circuit, non-contact measurement, safe, fast
3. Can output current signal or voltage signal (optional)
4. Current signal uA/mA or mA/A, voltage signal mV/mA or mV/A (optional)

III. Application

1. Current leakage, harmonic current, current, power, power factor correction device
2. Small phase detection analysis instrument
3. Industrial control device
4. Data recorder
5. Oscilloscope and harmonic analyzer

IV. Specifications

Function	AC current leakage, high harmonic current, online AC current detection, phase, power, power factor correction
Detection Method	Clamp CT
Output Method	Current mutual inductance output uA/mA; mA/A or voltage output mV/mA; mV/A(mode selection)
Meter Dimension	Width, height, thickness: 64mm×160mm×23mm
Clamp Dimension	φ40mm
Lead Length	2.0m (can be customized according to user's need)

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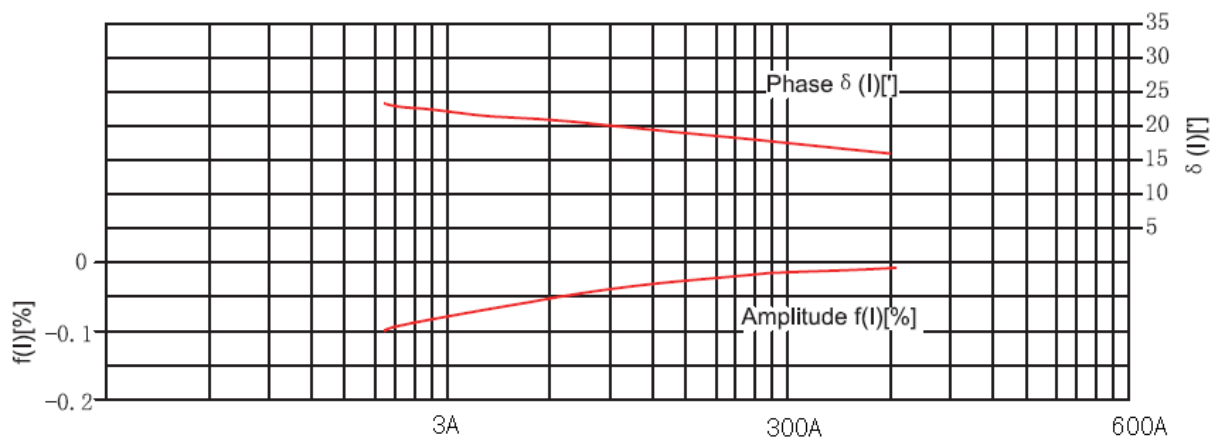
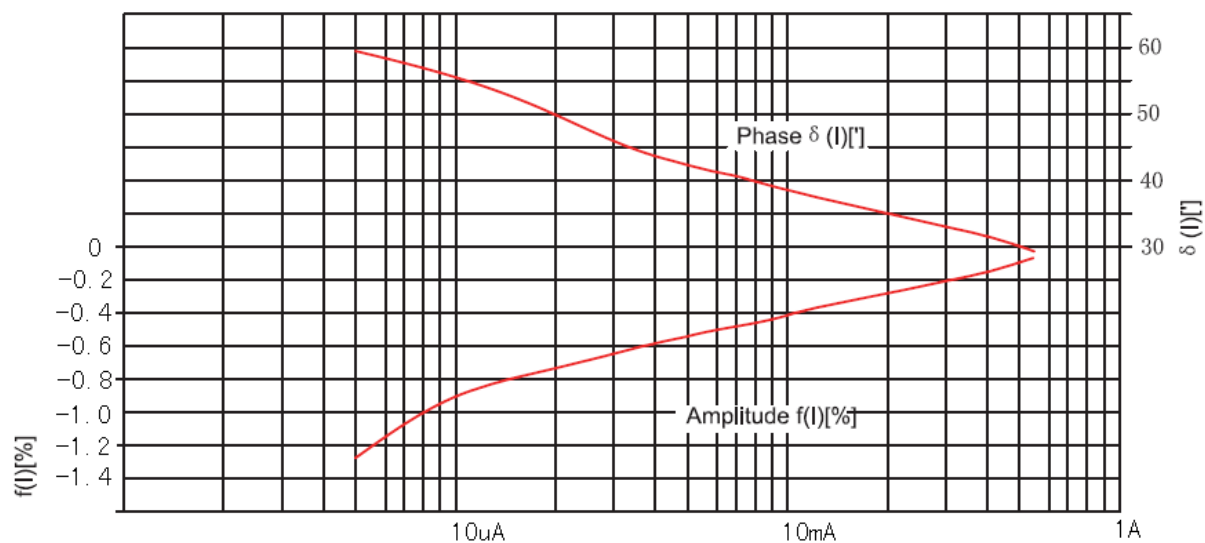
Test Scope	10uA~300A
Resolution	10uA
Accuracy	1.5%
Linearity	1%
Frequency	10~100KHz
Line Voltage	Line test below AC600V
Instrument Mass	120g
Working Temperature and Humidity	-25°C~70°C; below 80%rh
Storage Temperature and Humidity	-10°C~60°C, below 70%rh
Insulation Strength	AC2kV/rms (between core and box)
Applicable Safety Provisions	IEC1010-1, IEC1010-2-032, Pollution level 2, CAT III(600V)

V. Packing List

Sensor	1 piece
User manual, certificate, warranty card	1 set

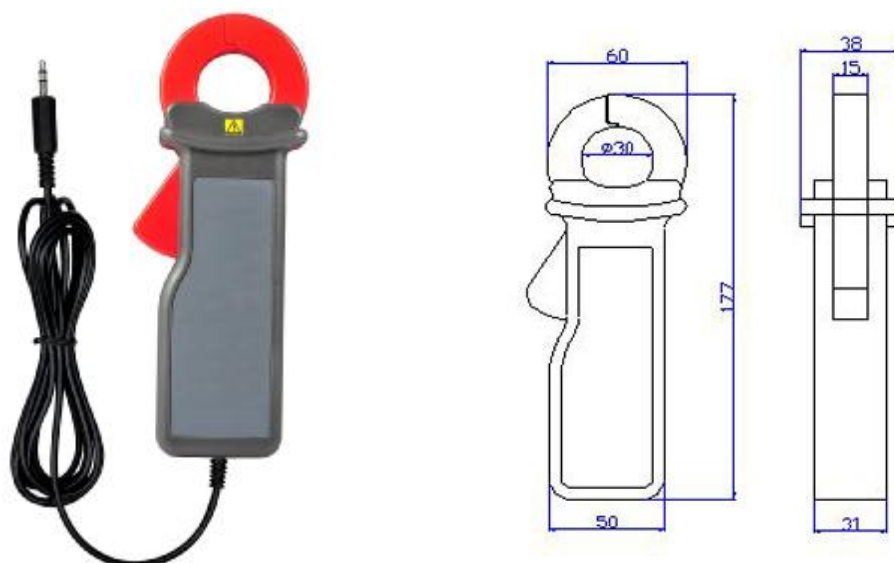
Annex: ETCR5100 Test Reference Curve

(50Hz; 25°C) (50Hz; 25°C)



ETCR High Precision Clamp Current Sensor User Manual

ETCR5163 High Accuracy Clamp Leaker/Current Sensor



I . Introduction

ETCR5163 High Accuracy Clamp Leaker/Current Sensor is made with unique dual shielding technology, with the characteristics of small volume, high precision, good stability and strong anti-interference characteristics, applicable to AC current leakage, current, power and energy measurement with high precision and small phase error of electricity, communications, meteorology, industrial and mining enterprises, which can be connected to a variety of high precision digital multi-meter and data recorder, quite easy to use.

ETCR5163 High Accuracy Clamp Leaker/Current Sensor obtains the latest CT technology. It performed almost without external magnetic field influence, ensuring high accuracy, high stability and high reliability of year-round uninterrupted acquisition.

II .Characteristics

1. Attractive appearance, compact body
2. Clamp design, unnecessary to disconnect the test circuit, non-contact measurement, safe, fast
3. Can output current signal or voltage signal (optional)
4. Current signal $\mu\text{A}/\text{mA}$ or mA/A , voltage signal mV/mA or mV/A (optional)

III. Application

1. Current leakage, harmonic current, current, power, power factor correction device
2. Small phase detection analysis instrument
3. Industrial control device
4. Data recorder
5. Oscilloscope and harmonic analyzer

IV. Specifications

Function	AC current leakage, AC current detection
Testing method	Clamp CT, induced current output
Clamp dimension	25mm×30mm
Range	0.001mA~60.00A
Resolution	1 μA

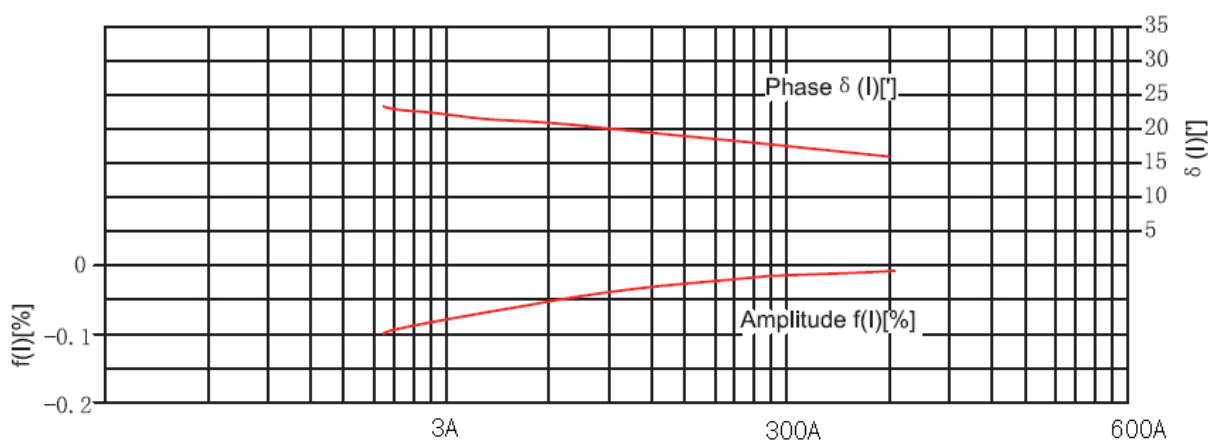
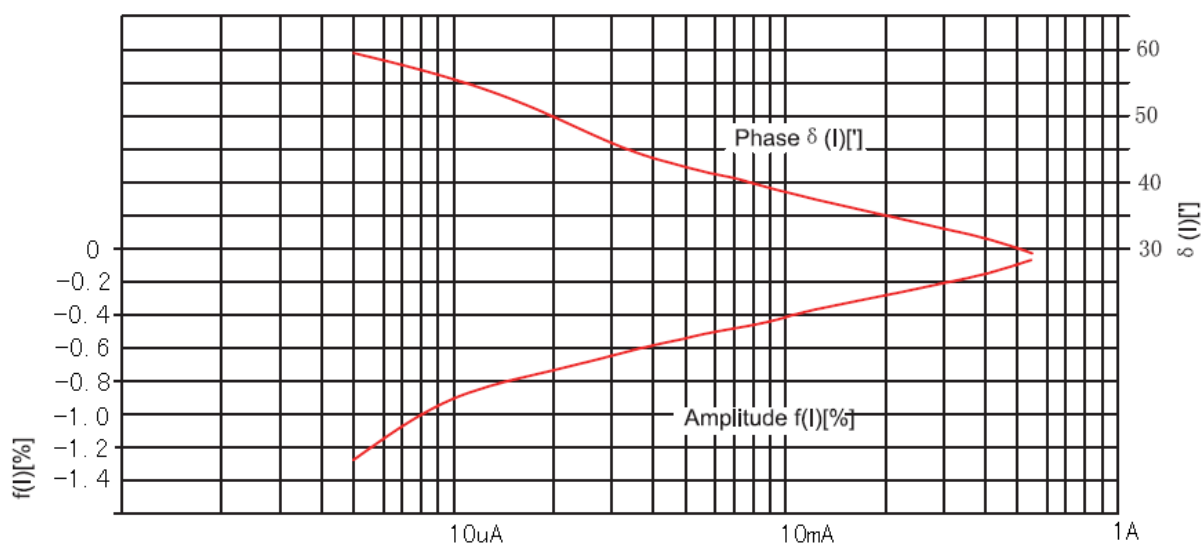
ETCR High Precision Clamp Current Sensor User Manual

Accuracy	$\pm 1.5\% \pm 5\text{dgt}$ ($23^{\circ}\text{C} \pm 3^{\circ}\text{C}$, below 70%RH)
Current ratio	1A/1mA
Dimension	170mm×70mm×38mm
Line voltage	Line test below AC600V
Lead length	2m
Meter mass	100g
Working temperature and humidity	$-20^{\circ}\text{C} \sim 50^{\circ}\text{C}$; below 80%rh
Storage temperature humidity	$-10^{\circ}\text{C} \sim 60^{\circ}\text{C}$; below 70%rh
Insulation strength	AC2kV/rms (between core and shell)
Applicable safety provisions	IEC1010-1, IEC1010-2-032, Pollution level 2, CAT III(600V)

V. Packing List

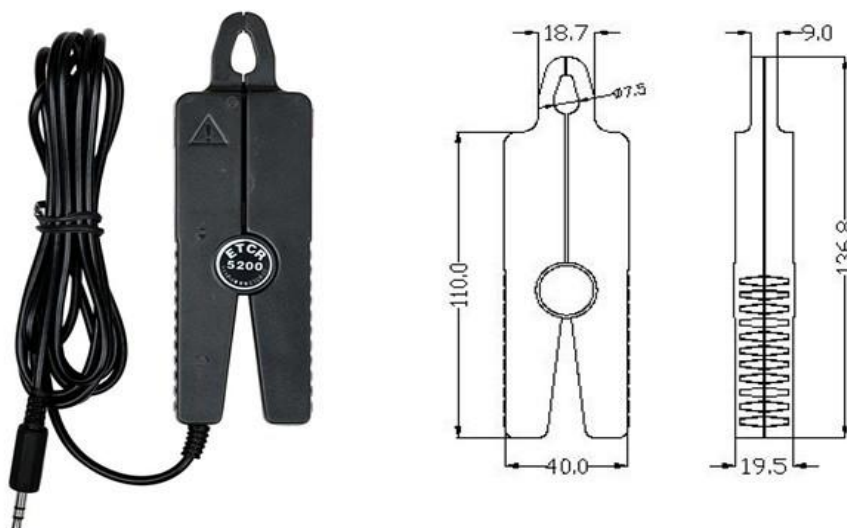
Sensor	1 piece
User manual, certificate, warranty card	1 set

Annex: ETCR5163 Test Reference Curve
(50Hz; 25°C)



ETCR High Precision Clamp Current Sensor User Manual

ETCR5200 Needle Nose current Sensor



I . Introduction

ETCR5200 Needle Nose current Sensor is widely applied in AC current leakage, current, power and energy measurement with high precision and small phase error of electricity, communications, meteorology, railway, oilfield, construction, measurement, scientific and research teaching unit, industrial and mining enterprises, which can be connected to a variety of high precision digital multi-meter and data recorder, quite easy to use.

II . Characteristics

1. Beak type, especially suitable for cable-intensive sites
2. Clamp design, unnecessary to disconnect the test circuit, non-contact measurement, safe, fast
3. Current mutual inductance output uA/mA or mA/A

III. Application

1. Current leakage, harmonic current, current, power, power factor correction device
2. Small phase detection analysis instrument
3. Industrial control device
4. Data recorder
5. Oscilloscope and harmonic analyzer

IV. Specifications

Function	AC current leakage, high harmonic current, online AC current detection, phase, power, power factor correction
Detection Method	Clamp CT
Output Mode	Current mutual inductance output
Meter Dimension	Length, width, height: 138mm×42mm×20mm
Clamp Dimension	φ7.5mm
Lead Length	2m
Test Scope	AC 0~30A
Resolution	10uA
Accuracy	1 (50Hz; 25℃)
Secondary Load	≤50Ω
Line Voltage	Line test below AC600V
Working Frequency	10~100KHz
Instrument Mass	175g

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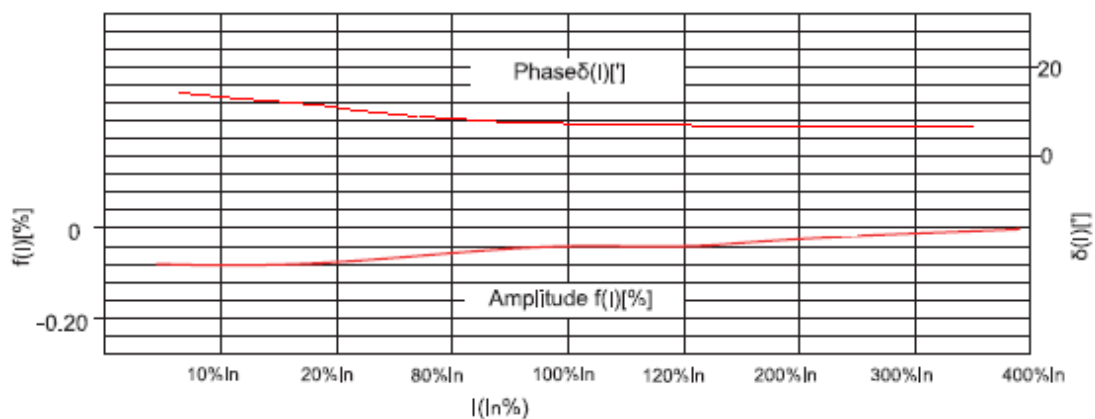
Working Temperature and Humidity	-25°C ~ 70°C; below 80%rh
Storage Temperature and Humidity	-10°C ~ 60°C, below 70%rh
Insulation Strength	AC2kV/rms (between core and box)
Applicable Safety Provisions	IEC1010-1, IEC1010-2-032, Pollution level 2, CAT III(600V)

V. Packing List

Sensor	1 piece
User manual, certificate, warranty card	1 set

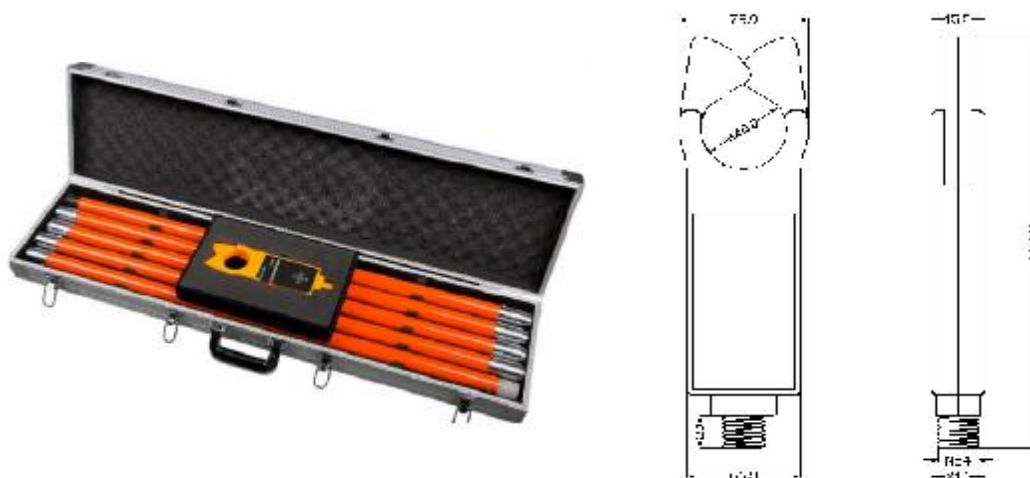
Annex: ETCR5200 Ratio Error and Phase Error Reference Curve

(50Hz; 25°C)



ETCR High Precision Clamp Current Sensor User Manual

ETCR5300 High Voltage Clamp Current Sensor



I . Introduction

ETCR5300 High Voltage Clamp Current Sensor is specially designed for high voltage current measurement, with unique plug function, using the latest CT technology with unique automatic plug function, composed of special detection clamp and high voltage insulation rod; the integration design of clamp and lead area ensures high-precision, high-reliability and high stability year-round uninterrupted testing.

ETCR5300 High Voltage Clamp Current Sensor can be used in the measurement of high voltage line current, currents on both sides of transformer, variable ratio test, online current monitoring below 35KV, safe and time saving. If not use insulation rods, it can also be used as high-precision low-voltage clamp current and current leakage sensor to accurately measure 1mA current or current leakage.

ETCR5300 High Voltage Clamp Current Sensor is widely used in power plant, substation, industrial and mining enterprise, inspection station, electrician maintenance department for current sensing, power audit and field working. Insulation rod is light and convenient, with the characteristics of moisture resistance, high temperature resistance, anti-impact, anti-bending, high insulation and scalability.

II . Characteristics

1. Break through the tradition: innovative integration design of clamp and lead area.
2. Remote operation, non-contact measurement, no need to disconnect the test line, safe and time saving
3. Can output current signal $\mu\text{A}/\text{mA}$ or mA/A , or voltage signal mV/mA or mV/A (model selection)
4. Voltage signal: output $0\sim 3\text{VAC}$ or $0\sim 3\text{VDC}$ (external input power supply 5VDC)
5. High accuracy: $0.01\text{mA}\sim 3000\text{mA}$ accuracy up to 1.0%
6. Scalability: $0\sim 5\text{m}$ (insulation rod $1\text{m}\times 5$ piece, according to the connection length)
7. Anti-drip structure: anti-drip type II
8. Multi-purpose: can be used as $0.01\text{mA}\sim 3000\text{mA}$ ultra-precision telescopic current leakage clamp

III. Application

1. High voltage current, low voltage current, high and low voltage variable ratio, current leakage,

ETCR High Precision Clamp Current Sensor User Manual

power, power factor correction device

2. First and secondary loop, bus protection system device, relay protection device
3. Power plant, transformation and distribution substation, transformer, relay protection device

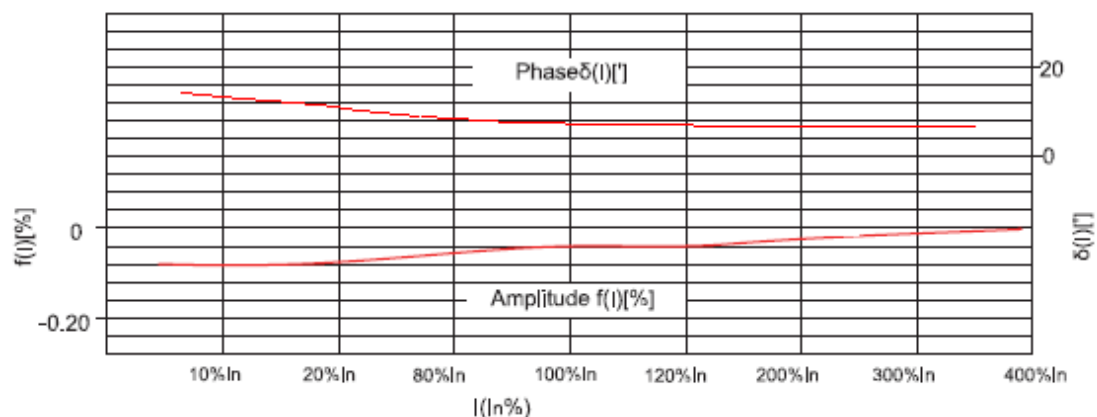
IV. Technical Specifications

Function	Testing of high voltage AC current, low voltage AC current, high and low voltage variable ratio, current leakage, etc
Open Mode	Clamp CT
Dimension	Width, height, thickness: 76mm×255mm×31mm
Clamp Dimension	φ48mm
Output Signal	Mutual inductance current signal or voltage signal
Voltage Signal	Full-scale output 0~3VAC or 0~2.5VDC (external 5VDC power supply)
Measurement Scope	0~600A
Resolution	1mA
Accuracy	1% (23°C±5°C, below 80%RH)
Lead Length	1~5m (customizable)
Test Distance	1~5m (customizable)
Line Voltage	Line test below AC35KV (with insulation rod operation)
Meter Mass	Detection sensor: about 150g, the total mass: about 2kg (with 5 pieces of insulation rods)
Working Temperature and Humidity	-10°C~40°C; 80%Rh 以下 -10°C~40°C; below 80%Rh
Storage Temperature and Humidity	-10°C~60°C; 70%Rh 以下 -10°C~60°C; below 70%Rh
Insulation rod Dimension	φ32mm , 1m/节 (5 节) φ32mm, 1m/piece (5 pieces)
Insulation Strength	AC 40kV/rms (between core and box)
Structure	Anti-drip II
Instrument Box Dimension	1130mm×245mm×115mm

VI. Packing List

Detection Sensor	1 Piece
Insulation Rod (1m/piece)	5 pieces
Instrument Box	1 piece

Annex: ETCR5300 Ratio Error and Phase Error Reference Curve (50Hz; 25°C)



ETCR High Precision Clamp Current Sensor User Manual

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