

YHDC SCT010T-D

YHDC SCT010T-D Split Core Current Transformer Instruction Manual

Model: SCT010T-D

1. INTRODUCTION

This manual provides essential information for the safe and effective use of the YHDC SCT010T-D Split Core Current Transformer. Please read this manual thoroughly before installation and operation.



Figure 1: YHDC SCT010T-D Split Core Current Transformer. This image shows the compact black casing of the current transformer with its split core open, revealing the internal mechanism. The YHDC logo and model number are visible on the side.

2. PRODUCT CHARACTERISTICS AND APPLICATIONS

2.1. Characteristics

- Safety lock clasp for easy installation.
- Built-in rectifier.
- Crimping terminal output.
- Mounted mounting.

2.2. Product Application

- Portable instruments.
- Household metering.
- Motor load monitoring.

2.3. Product Advantages

- Economic and practical design.
- Improves efficiency.

- High cost performance.



Figure 2: Overview of YHDC SCT010T-D characteristics, applications, advantages, and installation steps. This image displays various views of the current transformer, including front, open, and bottom views, alongside bullet points detailing its features, applications, and advantages. It also includes a four-step diagram illustrating the installation process.

3. INSTALLATION AND WIRING

3.1. Installation Diagram (Primary Threading Method)

Refer to Figure 2 for a visual guide to the installation steps:

1. Open the buckle.
2. Open upward.
3. Put in lead wire.
4. Fasten the buckle.

3.2. Wiring Schematic Diagram

The SCT010T-D features a voltage output type. It is crucial that the secondary circuit is *not* short-circuited.

- Primary threading direction: marked by arrow.
- Secondary output direction: $k \rightarrow l$.



Figure 4: Wiring schematic and outline dimensions of the YHDC SCT010T-D. This image provides a circuit diagram showing the primary and secondary connections, along with detailed dimensional drawings (front and side views) of the current transformer.

4. OPERATION

The YHDC SCT010T-D is designed for non-invasive current measurement. To operate:

1. Ensure the primary conductor (the wire carrying the current to be measured) is de-energized before installation.
2. Open the split core and carefully place the primary conductor through the aperture.
3. Close the split core securely until the buckle locks.
4. Connect the secondary output terminals (k and l) to your measurement device (e.g., multimeter, data logger, energy meter) according to its input specifications.
5. Apply power to the primary circuit. The transformer will now output a voltage proportional to the measured current.
6. Refer to the "Electrical Parameters" table in the Specifications section for output voltage corresponding to input current.

Important Safety Note: Never short-circuit the secondary output of a voltage output current transformer. This can damage the device and connected equipment.

5. MAINTENANCE

The YHDC SCT010T-D is a low-maintenance device. Follow these guidelines to ensure optimal performance and longevity:

- **Cleaning:** Keep the exterior of the transformer clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Inspection:** Periodically inspect the casing for any signs of physical damage, cracks, or loose connections.
- **Environmental Conditions:** Ensure the device operates within its specified temperature and humidity ranges (refer to specifications).
- **Connection Integrity:** Verify that all wiring connections are secure and free from corrosion.

No user-serviceable parts are inside the unit. Do not attempt to open or repair the transformer beyond the split core mechanism.

6. TROUBLESHOOTING

If you encounter issues with your SCT010T-D, consider the following common troubleshooting steps:

- **No Output/Incorrect Reading:**
 - Verify the primary conductor is correctly threaded through the aperture and the core is fully closed.
 - Check all secondary wiring connections for proper contact and polarity.
 - Ensure the primary circuit is energized and current is flowing.
 - Confirm your measurement device is correctly configured and functioning.
 - Check if the input current is within the specified range of the transformer.
- **Intermittent Readings:**
 - Inspect for loose connections on both primary and secondary sides.
 - Ensure the split core is securely latched and not vibrating open.
- **Physical Damage:**
 - If the casing is cracked or damaged, discontinue use and replace the unit.

If problems persist after following these steps, contact YHDC customer support or your distributor for further assistance.

7. SPECIFICATIONS

7.1. Typical Technical Index

- **Material of core:** Ferrite
- **Working voltage:** Phase voltage $\leq 720\text{V}$
- **Working temperature:** $-25^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- **Storage temperature:** $-30^{\circ}\text{C} \sim +90^{\circ}\text{C}$
- **Frequency range:** $50\text{Hz} \sim 1\text{KHz}$
- **Dielectric strength:** Input (bare conductor) / output AC 800V/1min 5mA 50Hz; Output/Outer shell AC 3.5KV/1min 5mA 50Hz
- **Weight:** 45g (1.59 ounces)

7.2. Electrical Parameters

The following parameters are typical values and actual values will be subject to product testing.

Output	Input current A/AC	Output voltage V/DC	Accuracy %	Sampling resistor Ω	Load impedance $K\Omega$	Number of turns
1V Output	5A	1V	2%	built-in	> 10K Ω	1
	10A	1V				
	20A	1V				
	30A	1V				
	50A	1V				
3V Output	5A	3V	2%	built-in	> 10K Ω	1
	10A	3V				
	20A	3V				
	30A	3V				
	50A	3V				
5V Output	5A	5V	2%	built-in	> 10K Ω	1
	10A	5V				
	20A	5V				
	30A	5V				
	50A	5V				

Figure 5: Detailed technical specifications and electrical parameters for the SCT010T-D. This image presents a table outlining various input current ranges (5A, 10A, 20A, 30A, 50A) and their corresponding output voltages (1V, 3V, 5V), along with accuracy, sampling resistor, load impedance, and number of turns.

**Parameters can be customized according to user requirements.*

7.3. Physical Dimensions

- **Product Dimensions:** 1.02 x 1.34 x 1.97 inches (26 x 34 x 50 mm)
- **Aperture:** 10mm
- **Opening Angle:** 180°

Typical technical index:

- Material of core——Ferrite
- Working voltage——Phase voltage $\leq 720V$
- Working temperature—— $-25^{\circ}C \sim +60^{\circ}C$
- Storage temperature—— $-30^{\circ}C \sim +90^{\circ}C$
- Frequency range—— $50Hz \sim 1KHz$
- Dielectric strength——Input (bare conductor) /output AC 800V/1min 5mA 50Hz
Output/Outer shell AC 3.5KV/1min 5mA 50Hz
- Weight--45g

Electrical parameters: (The following parameters are typical values and actual values will be subject to product testing)

	Input current A/AC	Output voltage V/DC	Accuracy %	Sampling resistor Ω	Load impedance K Ω	Number of turns
1V Output	5A	1V	2%	built-in	$>10K\Omega$	1
	10A	1V				
	20A	1V				
	30A	1V				
	50A	1V				
3V Output	5A	3V	2%	built-in	$>10K\Omega$	1
	10A	3V				
	20A	3V				
	30A	3V				
	50A	3V				
5V Output	5A	5V	2%	built-in	$>10K\Omega$	1
	10A	5V				
	20A	5V				
	30A	5V				
	50A	5V				

*Parameters can be customized according to user requirements

www.poweruc.pl

2/3

Figure 6: Detailed outline dimensions of the YHDC SCT010T-D. This image provides technical drawings showing the front and side views of the current transformer with measurements in millimeters, including the 10mm aperture and 180-degree opening angle.

8. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official YHDC website or contact your

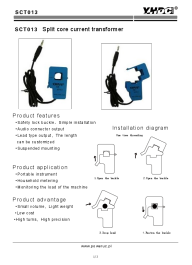
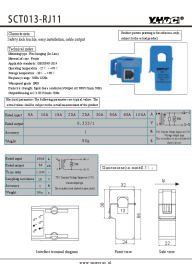
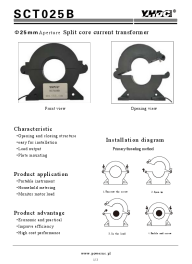
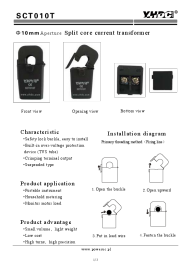
authorized distributor. Keep your purchase receipt as proof of purchase.

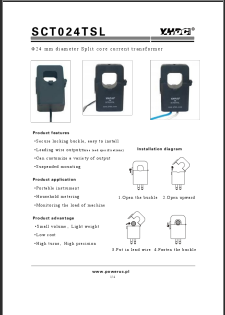
Manufacturer: Dechang Electronic Co., Ltd

Date First Available: June 12, 2020

© 2023 YHDC. All rights reserved.
For more information, visit www.yhdc.com

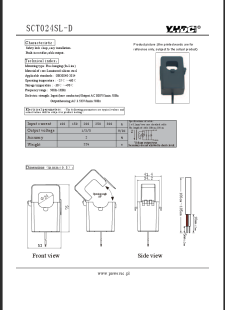
Related Documents - SCT010T-D

 <p>SCT013 Split core current transformer</p> <p>Product features</p> <ul style="list-style-type: none">High accuracy, large saturationSmall footprint, easy to installHigh temperature resistantHigh precision <p>Product application</p> <ul style="list-style-type: none">Industrial monitoringPower supply <p>Product advantages</p> <ul style="list-style-type: none">High accuracy, high precisionHigh temperature resistantHigh precision	<p>YHDC SCT013 Split Core Current Transformer Technical Specifications</p> <p>Comprehensive technical details for the YHDC SCT013 split core current transformer, including features, applications, advantages, electrical parameters, wiring schematics, and dimensions. Ideal for electrical engineers and technicians.</p>
 <p>SCT013-RJ11 Split core current transformer</p> <p>Product features</p> <ul style="list-style-type: none">High accuracy, large saturationSmall footprint, easy to installHigh temperature resistantHigh precision <p>Product application</p> <ul style="list-style-type: none">Industrial monitoringPower supply <p>Product advantages</p> <ul style="list-style-type: none">High accuracy, high precisionHigh temperature resistantHigh precision	<p>YHDC SCT013-RJ11 Split Core Current Transformer - Technical Specifications</p> <p>Detailed technical specifications for the YHDC SCT013-RJ11 split core current transformer, including electrical parameters, dimensions, and performance graphs. Features safety lock buckle and easy installation.</p>
 <p>SCT025B 25mm Aperture Split core current transformer</p> <p>Product features</p> <ul style="list-style-type: none">High accuracy, large saturationSmall footprint, easy to installHigh temperature resistantHigh precision <p>Product application</p> <ul style="list-style-type: none">Industrial monitoringPower supply <p>Product advantages</p> <ul style="list-style-type: none">High accuracy, high precisionHigh temperature resistantHigh precision	<p>SCT025B 25mm Aperture Split Core Current Transformer - YHDC</p> <p>Detailed technical specifications, features, applications, and installation guide for the YHDC SCT025B split core current transformer. This document covers its characteristics, product advantages, electrical parameters, wiring diagrams, and outline dimensions for electrical monitoring and metering.</p>
 <p>SCT010T 10mm Aperture Split core current transformer</p> <p>Product features</p> <ul style="list-style-type: none">High accuracy, large saturationSmall footprint, easy to installHigh temperature resistantHigh precision <p>Product application</p> <ul style="list-style-type: none">Industrial monitoringPower supply <p>Product advantages</p> <ul style="list-style-type: none">High accuracy, high precisionHigh temperature resistantHigh precision	<p>YHDC SCT010T 10mm Aperture Split Core Current Transformer Specifications</p> <p>Detailed specifications and technical data for the YHDC SCT010T, a 10mm aperture split core current transformer. Includes characteristics, applications, advantages, electrical parameters, wiring diagrams, and dimensions.</p>



YHDC SCT024TSL Split Core Current Transformer - Technical Specifications

Detailed technical specifications, features, applications, and dimensions for the YHDC SCT024TSL split core current transformer. Includes electrical parameters for various output types (AC, mA, Voltage).



YHDC SCT024SL-D Split Core Current Transformer Technical Specifications

Detailed technical specifications for the YHDC SCT024SL-D split core current transformer, including electrical parameters, dimensions, material information, and cable specifications.