

Dear customer,

Thank you for choosing **HL-101S Standard Current Transformer**. Before using the machine, please read the manual carefully. It will guide you to use the machine easily and skillfully.



Our aim is to improve the products with constant efforts, so there might be a little discrepancy exist between the real objects and the manual descriptions. We are really sorry for all the inconvenience it might cause and we'll inform you in the attached pages if any change is made. Please call our After-sale Service Department if you have any questions. It's our honor to be at your service.



Considering that the input/output terminals and the test column might be electrically charged, you should pay extra attention when you plug the wire and socket, for sparks may appear in the process. Please take care of personal safety in case of electric shock.

(Note: If the User Manual is a little different from the using instrument, please refer to the instrument.)

Solemn assurance

We provide free repair service if there is any quality defect within one year, dating from the day it is delivered. And we provide charged lifelong service after one year.

Safety Requirements

Please read the following Safety Precautions carefully to avoid personal injury or damages to the machine itself and devices connecting to it. To avoid potential danger, this machine can only be used in specified regions.

Only qualified technicians are allowed to perform the repair.

To avoid fires or personal injury, please.

Use proper power cord. Only power cord that is special for the machine or of the right gauge can be used.

Connect and disconnect correctly. Please don't connect or disconnect the test wire if it is linked with charged terminals.

Ground the machine. The grounding column of the machine shell must be earthed, except when the product is earthed through the power ground wire. To avoid electric shock, grounding conductor must be connected to earth. You must make sure that the machine is correctly earthed before connecting the input or output terminals.

Pay attention to the rated values of all the terminals. To avoid

fire and electric shock, please pay attention to all the rated values and marks. Before connecting, please read the User Manual for detailed information about the rated values.

Don't operate without the cover. If the cover is removed, please don't operate the machine.

Use proper fuse. Only fuse that is of the right gauge and right rated value can be used.

Avoid touching the exposed circuit or charged metal. If the machine is charged, please don't touch the exposed parts.

If there are potential bugs, stop the operation. If you suspect there is any damage, please call our staff for examination. And stop operating the machine right away.

Please don't operate the machine in humid environment.

Please don't operate the machine in explosive environment.

Make sure that the machine surface is clean and dry.

— Safety Terms

Warnings: *Warnings point out dangerous practice or situations which might cause death and injuries.*

Caution: *Cautions point out practice or situations that might cause damage to the machine or other property.*

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Chapter 1 Brief Introduction

The HL-101S Standard Current Transformer is used to calibrate current transformer which accuracy class is two or more lower than itself.

Chapter 2 Structure

CT is made up with primary winding and secondary winding, with the principle shown in Figure 2.

Wiring must strictly follow the current ratio given by wiring nameplate and the User Manual. L and K are the polar terminals of primary winding and secondary winding respectively, and La is the polar terminal when it is needed to through the core.

Chapter 3 Technical Parameters

1. Temperature: $-5^{\circ}\text{C} \sim 40^{\circ}\text{C}$
2. Capacity: 5VA、 1VA
3. Power Factor: $\text{COS}\varphi=1.0$
4. Current Ratio: 1000A~10000A/5A、 1A (1000A, 1200A, 1250A, 1500A, 2000A, 2500A, 3000A, 4000A, 5000A, 6000A, 7000A, 7500A, 8000A, 10000A)
5. Secondary Current:5A、 1A
6. Accuracy Class: 0.01S
7. Allow long-term work under the rated current. More than150A through the core.

Chapter 4 Self-calibration

When the current ratio of CT is 5/5, it could often perform self-calibration to assess its accuracy. Wiring diagram for self-calibration is shown in Figure 3.

In this figure, Tx is current transformer, Z is load box.

Chapter 5 Calibrating

When it is used as a standard to calibrate current transformer whose accuracy class is two or more lower than itself. The wiring diagram is shown in Figure 4. In this figure, T0 is the standard CT; Tx is the tested CT; Z is load box of the tested CT.

Chapter 6 Attention Matters

1. The current of standard CT and measured CT must be the same in CT calibration.
2. Follow the given wiring diagram strictly.
3. Test whether the load box is accurate or not before calibrating the transformer.
4. Forbid secondary winding opening during the calibration or test.
5. Select demagnetization before calibration, suggest using closed-circuit demagnetization. When the demagnetization is finished, should short-circuit the secondary winding before cutting

off the power.

6. When the secondary current 5A and 1A are made in the same instrument, the secondary current only can select one group every time, that is to say secondary current 5A and 1A can not make the connection test at the same time, or it will damage the instrument.

7. Principle wiring diagram of CT with Current Power Supply is similar to above diagram. They are the same except the output winding of Current Power Supply and primary winding of transformer are the same one.

Chapter 7 After-sale Service

Customers enjoy the following after-sale service:

1. If there is any quality problem within three months since the day it is sold, we will provide free replacement service, but the user can't disassemble it by yourself.
2. We provide free repair service if there is any quality problem within one year.
3. We provide long-term repair service with appropriate charge after one year.
4. If the machine breaks down please call for qualified technicians or sending back to us, you are not supposed to disassemble the machine by yourself, or we won't be responsible for the damage.

Chapter 8 Figure

1. Structural Principle Diagram of Current Power Supply

2. Structure Principle Diagram of CT

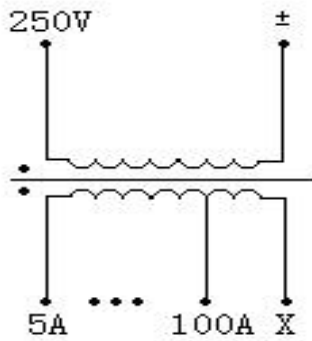


Figure1

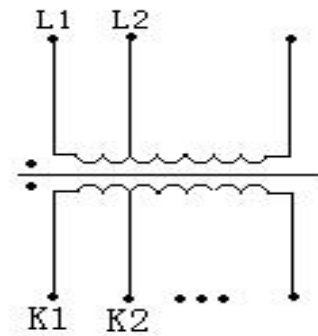


Figure 2

3. Self-calibration Diagram of CT

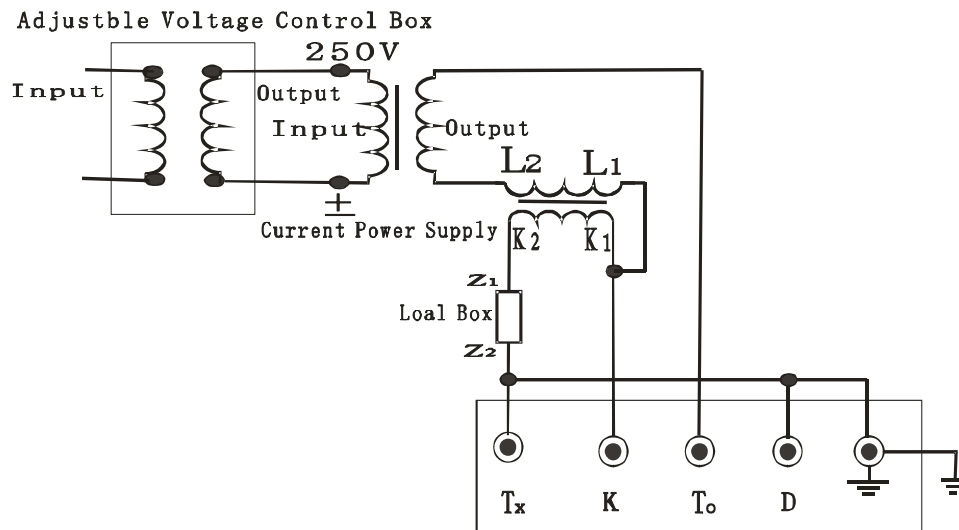


Figure 3

4. Calibrating Diagram of CT

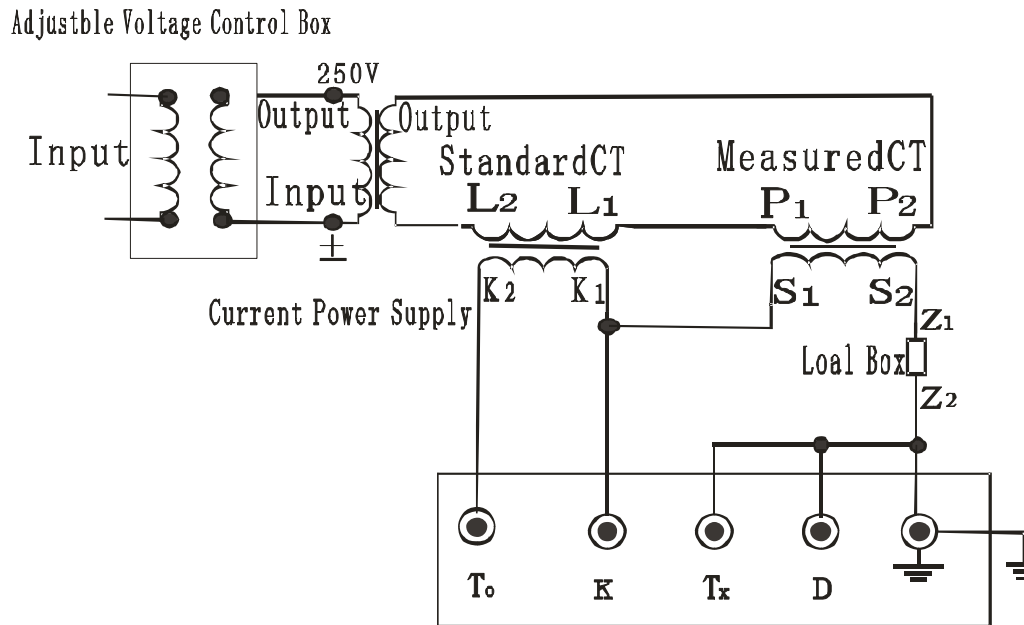


Figure 4