

# 产品规格书

## PRODUCT APPROVAL SHEET

客户名称:			
CUSTOMER:			
贵司制品名:	我司制品名:	电流传感器	
CUSTOMER PN:	PRODUCT PN:	Current sensor	
贵司规格:	我司规格:	5(60)A/2mA 10(100)A/4mA	
PRODUCT CODE:	PRODUCT CODE:		
贵司料号:	我司规格书编号:	TFY-CSB-Z100	
CUSTOMER NO.	PRODUCT NO.		
<input type="checkbox"/> 新品承认	批准 APPROVAL:  PLB  日期 Date: 2021/10	审查 CHECK:  ZHS  日期 Date: 2021/10	设计 DESIGN:  ZMY  日期 Date: 2021/10
<input type="checkbox"/> NEW APPROVE			
<input type="checkbox"/> 规格变更再承认			
<input type="checkbox"/> CHANGE CODE APPROVE AGAIN			
<input type="checkbox"/> 材料变更再承认			
<input type="checkbox"/> CHANGE MATERIAL APPROVE AGAIN			
贵司承认栏 APPROVAL SIGNATURE			
贵司印章 Company seal			
确认人:		联系电话:	
请于        年        月        日前承认返回, 日期 DATE: PLEASE RETURN TO US AFTER CONFIRMED! THANK YOU!			

地址: 中国浙江宁波慈溪杭州湾新区滨海五路 198 号

Add: No. 198, Binhai Five Road, Hangzhouwan New Zone,  
Ningbo, Zhejiang, Province, China

邮编 (Zip code): 315336

电话(Tel): (86)574-63078969, 传真(Fax): (86)574-63476372

Email: service@cn-tfy.com, Http://www.cn-tfy.com



## 1. Sphere of application

This specification is applicable to the detection and measurement of phase line current of three-phase direct access watt-hour meter (external relay) of State Grid 2020 edition. It can accurately measure AC, DC, impact load current, arc fault current, pulse current and various irregular waveform currents.

## 2. Applicable conditions

2.1 atmospheric pressure: 63kPa~106kPa, at an altitude below 4000m.

2.2 Climatic environment: there are no gases, vapors, chemical deposits, dust and other corrosive and explosive media that seriously affect the insulation of the transformer.

2.3 temperature and humidity (table 1)

Table1 temperature and humidity

conditions	scope	conditions	scope
Specified operating temperatures	-40°C~85°C	Average annual humidity	<75%
Extreme operating temperature	-40°C~95°C	30 days (these days are distributed in a natural way throughout the year)	95%
Storage temperature	-40°C~85°C	Occasional on other days	85%

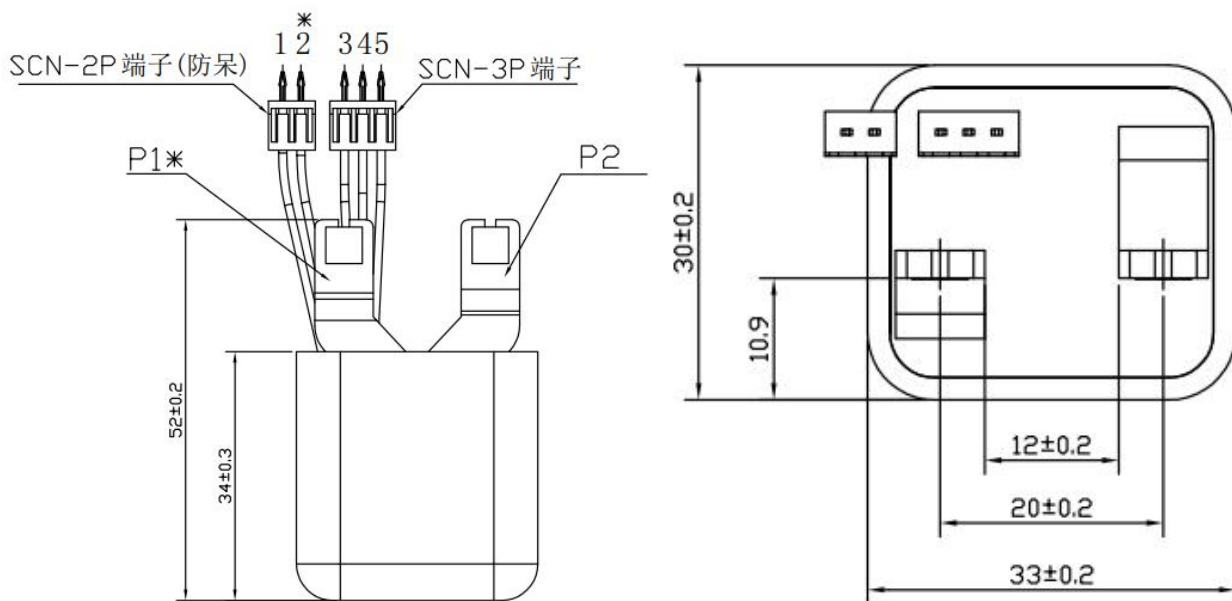
## 3. Reference standard

JBT 10665-2016 Miniature current transformer for electric energy meters

JJG313-2010 Verification Regulation of Current Transformer for Measurement

Q/GDW 11179.15-2015 Technical Specifications for Components for Electric Energy Meters Part 15: Current Transformer

## 4. Structure and size



**Figure 1 Dimension drawing**

Note: P1 and P2 are primary current input terminals, and P1 and SCN-2P-2 are dotted terminals.

SCN Terminal: 1(yellow/green/red) is connected with the negative current sampling input. 2 (white) connect current sampling input positive. 3 (red) connected to+3.9V. 4 (yellow) connect to-3.9V. 5 (black) earthing.

## 5. Electrical requirements

### 5.1 Electrical specification

Table2 Electrical specification

electrical specification	parameter	items	parameter
Primary basic current	5A, 10A	Secondary basic current	2mA, 4mA
Primary maximum current	60A, 100A	Secondary load	20Ω
Accuracy requirements	Table 3 Ratio error and phase error limits	Dotted terminals	Figure 1 Dimension drawing

5.2 The ratio error and phase error shall not exceed the values in Table 3 below.

Table 3 Ratio error and phase error limits (23°C)

Accuracy level	Ratio error ±%						phase error ±'					
	0.01I <sub>b</sub>	0.05I <sub>b</sub>	0.2I <sub>b</sub>	I <sub>b</sub>	1.2I <sub>b</sub>	I <sub>max</sub>	0.01I <sub>b</sub>	0.05I <sub>b</sub>	0.2I <sub>b</sub>	I <sub>b</sub>	1.2I <sub>b</sub>	I <sub>max</sub>
0.1	0.2	0.1					15	8				4

Note: The difference between the error values of each current test point should not exceed the value of 0.1. When half-wave is applied, the ratio error change is not more than 0.2% and the phase error change is not more than 15' in the range of I<sub>B</sub> ~ 1.2 I<sub>MAX</sub>.

5.3 The absolute value of the change in the current rise and fall error shall not exceed the values in Table 4 below.

Table4 The load fluctuation variation limit

Accuracy level	Ratio error variation ±%	Phase error variation '
0.1	0.05	8

Note: The current range is 0.05I<sub>b</sub>~I<sub>max</sub>.

### 5.4 Other requirements

NO.	test condition	technical requirement
1	Short-time thermal current test 《Q/GDW 11179.15-2015》-7.2.3	There is no visible damage, the difference between the error after demagnetization and that before the test is less than half of the basic error limit, and the insulation in contact with the conductor surface has no obvious deterioration.
2	short time over-current test 《Q/GDW 11179.15-2015》-7.2.4	Ratio error change ≤ 0.1%, phase error change ≤ 5'.
3	temperature rise test 《Q/GDW 11179.15-2015》-7.2.5	Temperature rise of shell is not more than 25K.
4	Power frequency withstand voltage test 《Q/GDW 11179.15-2015》-7.2.7	No destructive discharge occurred during the test.
5	Impact pressure test 《Q/GDW 11179.15-2015》-7.2.8	No appearance damage, meeting the requirements of error variation limit in Table 4.
6	insulation resistance test 《Q/GDW 11179.15-2015》-7.2.9	The insulation resistance between the primary winding and the secondary winding should not be less than 1000mΩ (DC 500v).
7	mechanical performance tests	There is no fracture at outlet terminal in the secondary

	《Q/GDW 11179.15-2015》-7.3	winding.
8	High temperature test 《Q/GDW 11179.15-2015》-7.4.1	No appearance damage, meeting the requirements of error variation limit in Table 4.
9	Low temperature test 《Q/GDW 11179.15-2015》-7.4.2	No appearance damage, meeting the requirements of error variation limit in Table 4.
10	High temperature and humidity test 《Q/GDW 11179.15-2015》-7.4.3	No appearance damage, meeting the requirements of error variation limit in Table 4.
11	temperature shock test 《Q/GDW 11179.15-2015》-7.4.4	No appearance damage, meeting the requirements of error variation limit in Table 4.