检 测 报 告

Test Report

Applicant: Huizhou Zhongcheng Electronic Technology Co., Ltd.

Sample Name: Single-phase Smart Meter

Test Type: Commissioned Test

厦门泓益检测有限公司

Xiamen Hongyi Testing Technology Co., Ltd.

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

Sample Name	:	Single-phase Smart Meter	**Model Specification**	:	DDSY1398 230V 5(60)A 50Hz
Trademark	:	ZCET	**Sample Quantity**	:	3 pcs
Entrust Unit	:	Huizhou Zhongcheng Electronic Technology Co., Ltd.			
Entrust Unit Address	:	No.7 Hechang East Fourth Road, Zhongkai High-tech Zone, Huizhou City, Guangdong Province			
Manufacturer	:	Huizhou Zhongcheng Electronic Technology Co., Ltd.			
Manufacturer Address	:	No.7 Hechang East Fourth Road, Zhongkai High-tech Zone, Huizhou City, Guangdong Province			
Test Type	:	Commissioned Test	**Test Date**	:	August 01, 2025 - September 30, 2025
Issuance Date	:	September 30, 2025			
Test Basis	:	IEC 62053-21:2003 AC Electrical Measuring Equipment - Special Requirements - Part 21: Static Active Energy Meters (Class 1 and 2) IEC 62053-23:2003 AC Electrical Measuring Equipment - Special Requirements - Part 23: Static Reactive Energy Meters (Class 2 and 3) IEC 62052-11:2003 AC Electrical Measuring Equipment - General Requirements, Tests and Test Conditions - Part 11: Measuring Equipment			
Test Items	:	Refer to the following section			
Sample Characteristics and Status	:	Intact upon receipt			
Ambient Temperature	:	24.6℃	**Ambient Humidity**	:	62%
Test Results	:	The Single-phase Smart Meter complies with the requirements of IEC 62053-21:2003, IEC 62053-23 and IEC 62052-11:2003 standards.			

厦门泓益检测有限公司 检测专用章

Report Prepared by: 张华伟

Report Reviewed by: 杨军群

Report Approved by:

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
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Content

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Test condition:

Ambient temperature: (21 ~ 24)℃ Relative humidity: (40 ~ 60) %

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1. Test of limits of errors due to variation of the current

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: When the meter is under the reference conditions, the percentage errors shall not exceed the limits.
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05I_b	1.0	±1.5	-0.1	0.1	-0.1
0.1I_b	1.0	±1.0	0.0	0.0	0.1
0.5I_b	1.0	±1.0	-0.1	-0.1	0.0
I_b	1.0	±1.0	-0.1	0.0	-0.1
0.5I_{max}	1.0	±1.0	-0.1	0.0	-0.1
I_{max}	1.0	±1.0	-0.2	0.0	-0.1
0.1I_b	0.5L	±1.5	-0.1	-0.1	0.0
0.2I_b	0.5L	±1.0	-0.1	-0.1	-0.1
0.5I_b	0.5L	±1.0	-0.1	0.0	-0.1
I_b	0.5L	±1.0	0.0	0.0	-0.1
0.5I_{max}	0.5L	±1.0	-0.1	-0.1	-0.1
I_{max}	0.5L	±1.0	-0.1	-0.1	0.0
0.1I_b	0.8C	±1.5	-0.1	-0.1	-0.1
0.2I_b	0.8C	±1.0	-0.1	0.0	-0.1
0.5I_b	0.8C	±1.0	-0.1	-0.1	0.0
I_b	0.8C	±1.0	0.0	-0.1	-0.1
I_{max}	0.8C	±1.0	-0.1	-0.1	0.0
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05 I_b	1.0	±2.5	-0.1	-0.1	-0.1
0.1 I_b	1.0	±2.0	0.0	-0.2	0.0
0.5 I_b	1.0	±2.0	-0.2	0.0	-0.1
I_b	1.0	±2.0	-0.1	-0.1	0.0
0.5I_{max}	1.0	±2.0	-0.1	-0.1	-0.1
I_{max}	1.0	±2.0	-0.1	0.0	-0.1
0.1 I_b	0.5L	±2.5	0.0	0.0	0.1
0.2 I_b	0.5L	±2.0	0.1	-0.1	0.0
0.5 I_b	0.5L	±2.0	-0.1	-0.2	-0.1
I_b	0.5L	±2.0	-0.1	-0.1	-0.1
0.5I_{max}	0.5L	±2.0	-0.2	-0.2	-0.1
I_{max}	0.5L	±2.0	-0.1	-0.1	0.0
0.2 I_b	0.25L	±2.5	-0.1	-0.1	-0.1
0.5 I_b	0.25L	±2.5	0.0	0.0	-0.1
I_b	0.25L	±2.5	-0.1	-0.1	-0.1
I_{max}	0.25L	±2.5	0.0	-0.2	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

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2. Test of starting condition

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The meter shall start and continue to register 0.004I_b and 0.005I_b.
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Power factor (cosΦ)	Current	Test Result		
		№25070100003	№25070100004	№25070100005
1.0	0.004I_b	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

Power factor (sinΦ)	Current	Test Result		
		№25070100003	№25070100004	№25070100005
1.0	0.005I_b	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

3. Test of no-load conditions

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The current circuit shall be open circuit and a voltage of 115% of the reference voltage shall be applied to the voltage circuits.
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Power factor: cosΦ=1.0 Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Voltage	Test result		
	№25070100003	№25070100004	№25070100005
115% of the reference voltage	Pass	Pass	Pass
Test conclusion	**Pass**	**Pass**	**Pass**

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4. Test of meter constant

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: It shall be verified that the relation between the test output and the indication on the display complies with the marking on the name-plate.
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Power factor (cosΦ)	Test result (imp/kWh)		
	№25070100003	№25070100004	№25070100005
1.0	1000	1000	1000
Test conclusion	**Pass**	**Pass**	**Pass**

Power factor (sinΦ)	Test result (imp/kvarh)		
	№25070100003	№25070100004	№25070100005
1.0	1000	1000	1000
Test conclusion	**Pass**	**Pass**	**Pass**

5. AC voltage tests

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The test voltage shall be substantially sinusoidal, having a frequency between 45Hz and 65Hz, and applied for 1 min. During this test no flashover, disruptive discharge or puncture shall occur.
3. Test equipment: Tester 860A (4540688)
4. Test result:

Test Voltage r.m.s	Test Result		
	№25070100003	№25070100004	№25070100005
Between circuit and earth:4kV	Pass	Pass	Pass
Test conclusion	**Pass**	**Pass**	**Pass**

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6. Impulse voltage test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The impulse voltage is applied ten times with one polarity and then repeated with the other polarity. The minimum time between the impulses shall be 3s.
3. Test equipment: Tester XTS-11A (03052)
4. Test result:

Impulse Voltage	Test result		
	№25070100003	№25070100004	№25070100005
Impulse waveform 1.2/50μs, 6kV	Pass	Pass	Pass
cosϕ=1.0, I_b, error(%)	-0.1	-0.1	0.0
Test conclusion	**Pass**	**Pass**	**Pass**

7. Test of ambient temperature influence

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The determination of the mean temperature coefficient for a given temperature shall be made over a temperature range 10K above and 10 K below that temperature, but in no case shall the temperature be outside the specified operating temperature range.
3. Test equipment: High and low temperature test chambers PL-2GT(920218)and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Temperature (K)	Limits of mean temperature coefficient (%/K)	Test result (%/K)		
				№25070100003	№25070100004	№25070100005
0.1I_b	1.0	-25℃~-5℃	0.05	0.010	-0.005	-0.012
I_b	1.0		0.05	-0.008	0.009	0.013
I_{max}	1.0		0.05	0.006	0.010	-0.003
0.2I_b	0.5L		0.07	0.008	-0.008	0.010
I_b	0.5L		0.07	-0.012	-0.010	0.012
I_{max}	0.5L		0.07	0.015	0.005	0.003
0.1I_b	1.0	-5℃~15℃	0.05	0.010	-0.010	-0.006
I_b	1.0		0.05	0.005	0.011	0.010
I_{max}	1.0		0.05	0.012	-0.011	-0.015
0.2I_b	0.5L		0.07	-0.011	0.005	0.009
I_b	0.5L		0.07	0.007	0.012	-0.006

I_{max}	0.5L		0.07	-0.006	-0.007	-0.014
$0.1I_b$	1.0	15℃~35℃	0.05	0.012	0.014	0.012
I_b	1.0		0.05	-0.010	0.007	-0.005
I_{max}	1.0		0.05	0.007	-0.003	-0.007
$0.2I_b$	0.5L		0.07	0.015	0.010	0.009
I_b	0.5L		0.07	0.002	-0.003	-0.008
I_{max}	0.5L		0.07	0.013	0.009	0.014
$0.1I_b$	1.0	35℃~55℃	0.05	0.008	-0.012	-0.007
I_b	1.0		0.05	-0.010	-0.009	-0.009
I_{max}	1.0		0.05	0.005	0.008	-0.012
$0.2I_b$	0.5L		0.07	-0.006	0.010	0.008
I_b	0.5L		0.07	0.010	-0.008	-0.003
I_{max}	0.5L		0.07	-0.012	-0.010	0.008
Test conclusion				**Pass**	**Pass**	**Pass**

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Current	Power factor (sinΦ)	Temperature (K)	Limits of mean temperature coefficient (%/K)	Test result (%/K)		
				№25070100003	№25070100004	№25070100005
$0.1I_b$	1.0	-25℃~-5℃	0.10	-0.010	-0.010	0.005
I_b	1.0		0.10	0.007	-0.009	-0.008
I_{max}	1.0		0.10	-0.008	0.010	0.011
$0.2I_b$	0.5L		0.15	0.007	0.013	-0.010
I_b	0.5L		0.15	-0.005	0.012	0.007
I_{max}	0.5L		0.15	-0.006	0.009	0.015
$0.1I_b$	1.0	-5℃~15℃	0.10	0.011	-0.012	-0.004
I_b	1.0		0.10	0.012	0.008	0.007
I_{max}	1.0		0.10	-0.006	0.013	-0.008
$0.2I_b$	0.5L		0.15	0.010	0.004	0.004
I_b	0.5L		0.15	0.007	-0.007	-0.007
I_{max}	0.5L		0.15	-0.002	-0.008	-0.005
$0.1I_b$	1.0	15℃~35℃	0.10	0.012	-0.006	0.004
I_b	1.0		0.10	0.006	0.008	-0.008
I_{max}	1.0		0.10	0.007	-0.006	0.004
$0.2I_b$	0.5L		0.15	-0.009	0.008	-0.008
I_b	0.5L		0.15	0.011	-0.012	0.010
I_{max}	0.5L		0.15	0.008	0.007	0.008
$0.1I_b$	1.0	35℃~55℃	0.10	-0.007	0.010	0.013
I_b	1.0		0.10	0.011	-0.004	0.008
I_{max}	1.0		0.10	0.014	-0.009	-0.007
$0.2I_b$	0.5L		0.15	0.012	0.011	-0.004
I_b	0.5L		0.15	0.009	-0.005	0.012
I_{max}	0.5L		0.15	-0.013	-0.017	0.015
Test conclusion				**Pass**	**Pass**	**Pass**

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8. Test of influence of self-heating

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test Method: After the voltage circuits have been energized at reference voltage for at least 2h for class 1, without any current in the current circuits, the maximum current shall be applied to the current circuits, the meter error shall be measured at unity power factor immediately after the current is applied.
3. Test Equipment: Meter calibration device ST9001D5 (7131019)
4. Test Result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Limits of variation (%)	Maximum change (%)		
			№25070100003	№25070100004	№25070100005
I_{max}	1.0	0.7	0.10	0.08	0.05
I_{max}	0.5L	1.0	0.07	0.15	0.15
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Limits of variation (%)	Maximum change (%)		
			№25070100003	№25070100004	№25070100005
I_{max}	1.0	1.0	0.06	0.07	0.14
I_{max}	0.5L	1.5	0.12	0.11	0.18
Test conclusion			**Pass**	**Pass**	**Pass**

9. Test of influence of voltage variation

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: Test the variation in percentage errors when voltage variation.
3. Test equipment:Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Voltage (V)	Limits of variation (%)	Test result (%)		
				№25070100003	№25070100004	№25070100005
$0.05I_b$	1.0	207	0.7	0.02	-0.06	0.04
I_b	1.0	207	0.7	-0.08	0.07	-0.10
I_{max}	1.0	207	0.7	-0.03	0.08	0.04
$0.1I_b$	0.5L	207	1.0	0.08	-0.02	0.10
I_b	0.5L	207	1.0	0.01	-0.04	-0.06
I_{max}	0.5L	207	1.0	0.05	0.05	-0.06
$0.05I_b$	1.0	253	0.7	-0.10	0.03	0.01
I_b	1.0	253	0.7	0.08	0.05	0.06
I_{max}	1.0	253	0.7	0.02	0.07	-0.01

$0.1I_b$	0.5L	253	1.0	-0.03	0.03	0.10
I_b	0.5L	253	1.0	0.05	0.05	-0.06
I_{max}	0.5L	253	1.0	0.06	0.03	-0.07
$0.05I_b$	1.0	184	2.1	0.12	-0.04	-0.07
I_b	1.0	184	2.1	0.01	-0.05	-0.10
I_{max}	1.0	184	2.1	0.08	-0.08	-0.12
$0.1I_b$	0.5L	184	3.0	0.16	-0.03	-0.04
I_b	0.5L	184	3.0	0.02	-0.02	-0.06
I_{max}	0.5L	184	3.0	0.15	-0.04	-0.07
$0.05I_b$	1.0	264.5	2.1	0.11	0.05	-0.01
I_b	1.0	264.5	2.1	0.15	0.09	0.13
I_{max}	1.0	264.5	2.1	0.04	0.12	-0.08
$0.1I_b$	0.5L	264.5	3.0	-0.10	0.15	0.20
I_b	0.5L	264.5	3.0	0.06	0.09	0.10
I_{max}	0.5L	264.5	3.0	0.14	0.15	-0.12
$0.05I_b$	1.0	< 184	-100 ~ 10	Pass	Pass	Pass
I_b	1.0	< 184	-100 ~ 10	Pass	Pass	Pass
I_{max}	1.0	< 184	-100 ~ 10	Pass	Pass	Pass
$0.1I_b$	0.5L	< 184	-100 ~ 10	Pass	Pass	Pass
I_b	0.5L	< 184	-100 ~ 10	Pass	Pass	Pass
I_{max}	0.5L	< 184	-100 ~ 10	Pass	Pass	Pass
Test conclusion				**Pass**	**Pass**	**Pass**

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Current	Power factor (sinΦ)	Voltage (V)	Limits of variation (%)	Test result (%)		
				№25070100003	№25070100004	№25070100005
0.05I_b	1.0	207	1.0	-0.05	0.11	-0.10
I_b	1.0	207	1.0	0.05	0.07	0.08
I_{max}	1.0	207	1.0	0.08	0.10	-0.01
0.1I_b	0.5L	207	1.5	-0.01	-0.04	-0.03
I_b	0.5L	207	1.5	0.00	0.07	0.02
I_{max}	0.5L	207	1.5	-0.01	0.05	0.11
0.05I_b	1.0	253	1.0	0.12	0.03	0.02
I_b	1.0	253	1.0	0.04	0.01	0.04
I_{max}	1.0	253	1.0	0.09	0.14	0.01
0.1I_b	0.5L	253	1.5	0.08	0.04	0.07
I_b	0.5L	253	1.5	0.01	0.09	0.01
I_{max}	0.5L	253	1.5	0.00	0.06	0.10
0.05I_b	1.0	184	3.0	-0.03	-0.01	-0.02
I_b	1.0	184	3.0	-0.09	0.03	-0.12
I_{max}	1.0	184	3.0	0.07	0.08	-0.08
0.1I_b	0.5L	184	4.5	0.12	0.07	0.00
I_b	0.5L	184	4.5	0.07	0.12	0.12
I_{max}	0.5L	184	4.5	0.09	0.15	0.07
0.05I_b	1.0	264.5	3.0	0.11	0.03	0.01
I_b	1.0	264.5	3.0	0.06	0.02	0.07
I_{max}	1.0	264.5	3.0	0.10	0.07	0.02
0.1I_b	0.5L	264.5	4.5	0.08	0.07	-0.12
I_b	0.5L	264.5	4.5	0.17	0.08	0.09
I_{max}	0.5L	264.5	4.5	0.18	0.18	0.22
0.05I_b	1.0	< 184	-100 ~ 10	Pass	Pass	Pass
I_b	1.0	< 184	-100 ~ 10	Pass	Pass	Pass
I_{max}	1.0	< 184	-100 ~ 10	Pass	Pass	Pass
0.1I_b	0.5L	< 184	-100 ~ 10	Pass	Pass	Pass
I_b	0.5L	< 184	-100 ~ 10	Pass	Pass	Pass
I_{max}	0.5L	< 184	-100 ~ 10	Pass	Pass	Pass
Test conclusion				**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱: hongyotest@123.com

10. Test of influence of frequency variation

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: Test the variation in percentage errors when frequency variation at ±2%.
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Frequency (Hz)	Limits of variation (%)	Test result (%)		
				№25070100003	№25070100004	№25070100005
$0.05I_b$	1.0	49	0.5	0.05	-0.06	-0.02
I_b	1.0	49	0.5	0.07	0.03	-0.05
I_{max}	1.0	49	0.5	0.04	0.05	-0.04
$0.1I_b$	0.5L	49	0.7	0.08	-0.02	-0.03
I_b	0.5L	49	0.7	0.02	0.05	0.03
I_{max}	0.5L	49	0.7	0.06	0.08	0.02
$0.05I_b$	1.0	51	0.5	0.04	0.04	-0.01
I_b	1.0	51	0.5	-0.03	0.02	-0.01
I_{max}	1.0	51	0.5	0.03	0.04	0.07
$0.1I_b$	0.5L	51	0.7	0.02	0.04	0.05
I_b	0.5L	51	0.7	0.07	0.05	-0.02
I_{max}	0.5L	51	0.7	0.08	0.10	-0.08
Test conclusion				**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Frequency (Hz)	Limits of variation (%)	Test result (%)		
				№25070100003	№25070100004	№25070100005
$0.05I_b$	1.0	49	2.5	-0.02	0.10	-0.05
I_b	1.0	49	2.5	0.08	0.07	-0.08
I_{max}	1.0	49	2.5	0.13	0.08	-0.12
$0.1I_b$	0.5L	49	2.5	0.05	-0.02	0.06
I_b	0.5L	49	2.5	0.12	-0.12	0.04
I_{max}	0.5L	49	2.5	0.09	0.12	0.01
$0.05I_b$	1.0	51	2.5	0.02	0.05	0.02
I_b	1.0	51	2.5	0.08	-0.06	0.01
I_{max}	1.0	51	2.5	0.02	0.02	0.02
$0.1I_b$	0.5L	51	2.5	-0.02	0.12	-0.03
I_b	0.5L	51	2.5	0.06	0.08	0.07

I_{max}	0.5L	51	2.5	0.08	0.10	-0.12
Test conclusion				**Pass**	**Pass**	**Pass**

11. Test of magnetic induction of external origin (0.5mT)

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: A magnetic induction of external origin of 0.5mT produced by a current of the same frequency as that of the voltage applied to the meter and under the most unfavorable conditions of phase and direction shall not cause a variation in the percentage error of the meter exceeding limits of variation.
3. Test equipment: Meter calibration device ST9001D5 (7131019) and External magnetic field test bench ZHZ26A(09021)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Direction of magnetic		Limits of variation (%)	Test result (%)		
					№25070100003	№25070100004	№25070100005
I_b	1.0	Upright	Same phase	2.0	0.13	-0.02	0.12
			60°	2.0	0.09	0.08	0.09
		Parallel	Same phase	2.0	0.10	0.12	0.05
			60°	2.0	-0.03	0.10	0.12
Test conclusion					Pass	Pass	Pass

Current	Power factor (sinΦ)	Direction of magnetic		Limits of variation (%)	Test result (%)		
					№25070100003	№25070100004	№25070100005
I_b	1.0	Upright	Same phase	3.0	0.07	0.14	0.04
			60°	3.0	0.15	0.12	0.11
		Parallel	Same phase	3.0	0.12	0.15	0.07
			60°	3.0	0.03	0.05	0.12
Test conclusion					**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱: hongyotest@123.com

12. Test of the influence of harmonies

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: Test the variation in percentage errors at power with harmonic.
3. Test equipment:Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Influence quantity	Current	Power factor (cosΦ)	Limits of variation (%)	Test result (%)		
				№250701000003	№250701000004	№250701000005
Harmonic components in the current and voltage circuits	$0.5I_{max}$	1.0	0.8	0.09	0.13	0.11
odd-harmonics in the A.C. Current circuit	$0.5I_b$	1.0	3.0	0.19	0.14	0.15
Sub-harmonics in the A.C. Current circuit	$0.5I_b$	1.0	3.0	0.22	0.27	0.22
DC and even harmonics in the current circuit	$\frac{I_{max}}{\sqrt{2}}$	1.0	3.0	0.30	0.35	0.35
Test conclusion				**Pass**	**Pass**	**Pass**

Influence quantity	Current	Power factor (sinΦ)	Limits of variation (%)	Test result (%)		
				№250701000003	№250701000004	№250701000005
DC and even harmonics in the current circuit	$\frac{I_{max}}{\sqrt{2}}$	1.0	6.0	0.30	0.23	0.20
Test conclusion				**Pass**	**Pass**	**Pass**

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地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

13. Test of influence of short time over currents

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: After the application of the short- time over current, the meter shall perform correctly when back to its initial working.
3. Test equipment: Pulse current test bench XTS-12D(03017) and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Limits of variation (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
I_b	1.0	1.5	0.11	0.15	0.09
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Limits of variation (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
I_b	1.0	1.5	0.12	0.08	0.10
Test conclusion			**Pass**	**Pass**	**Pass**

14. Spring hammer test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The meter shall be mounted in its normal working position and the spring hammer shall act on the outer surfaces of the meter cover (including windows) and on the terminal cover with a kinetic energy of 0.2J±0.02J.
3. Test equipment: Impact test bench TY2(027)
4. Test result:

Test part	Test requirement	Test result		
		№25070100003	№25070100004	№25070100005
Outside surface	No damage	Pass	Pass	Pass
Terminal cover	No damage	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

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地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱: hongyotest@123.com

15. Test of resistance to heat and fire

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The contact with the glow wire may occur at any random location.If the terminal block is integral with the meter base,It is sufficient to carry out the test only on the terminal block.
3. Test equipment: Hot wire test device ZHZ13 (35093)
4. Test result:

Location	Temperature (°C)	Requirement	Test result		
			№25070100003	№25070100004	№25070100005
Terminal block	960	No burn	Pass	Pass	Pass
Terminal Cover	650	No burn	Pass	Pass	Pass
Case	650	No burn	Pass	Pass	Pass
Test conclusion			**Pass**	**Pass**	**Pass**

16. Test of power consumption

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The power consumption in the voltage and current circuit at reference values of the influence quantities.
3. Test equipment: Low power factor watt-meter D5-W (20149) and DMM 7150(303645)
4. Test result:

Power factor: cosΦ=1.0 Reference frequency :50Hz Current :5(60)A Reference voltage:230V

Test item	Specified range of power consumption (active)	Test result (%)		
		№25070100003	№25070100004	№25070100005
Voltage circuit	2 W	0.18W	0.18W	0.19W
	10VA	1.05VA	1.06VA	1.06VA
Current circuit	4VA	0.01VA	0.01VA	0.01VA
Test conclusion		**Pass**	**Pass**	**Pass**

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Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

17. Test of influence of heating

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: With each current circuit of the meter carrying maximum current and with each voltage circuit carrying 1.15 times the reference voltage, the temperature rise of the external surface shall not exceed 25K, with an ambient temperature of 40°C.
3. Test equipment: Digital thermometer WMY-01(212)
4. Test result:

Power factor:cosΦ= 1.0 Voltage:264.5V Reference frequency:50Hz Current:5(60)A
Temperature :40°C

Test temperature arise part	Limits of temperature rise (K)	Test result (K)		
		№25070100003	№25070100004	№25070100005
Outside surface of cover	25	7	7	6
Test conclusion		**Pass**	**Pass**	**Pass**

18. Damp heat cyclic test

1. Requirement: IEC62053-21:2003 IEC62053-232003 IEC62052-11: 2003
2. Test method: After damp heat cyclic test, the meter shall show no damage or change of the information and shall operate correctly.
3. Test equipment: Damp heat cyclic test chambers SETH-101U/P(634003) and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
$0.05I_b$	1.0	±1.5	-0.1	0.0	0.0
I_b	1.0	±1.0	0.0	-0.1	-0.1
I_{max}	1.0	±1.0	-0.1	0.0	0.0
$0.1I_b$	0.5L	±1.5	-0.2	-0.1	-0.1
I_b	0.5L	±1.0	-0.1	-0.2	-0.2
I_{max}	0.5L	±1.0	-0.2	-0.1	-0.1
$0.1I_b$	0.8C	±1.5	-0.1	-0.2	-0.2
I_b	0.8C	±1.0	-0.1	-0.1	-0.1
I_{max}	0.8C	±1.0	-0.2	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

Current	Power factor (sinΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05 I_b	1.0	±2.5	-0.2	-0.1	-0.1
I_b	1.0	±2.0	-0.1	-0.2	-0.2
I_{max}	1.0	±2.0	-0.1	-0.1	-0.1
0.1 I_b	0.5L	±2.5	-0.2	-0.1	-0.1
I_b	0.5L	±2.0	-0.1	-0.2	-0.2
I_{max}	0.5L	±2.0	-0.2	0.1	0.0
0.2 I_b	0.25L	±2.5	-0.2	-0.1	-0.1
I_b	0.25L	±2.5	-0.1	-0.2	-0.2
I_{max}	0.25L	±2.5	-0.1	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

19. Vibration test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The meter shall show no damage or change of the information and shall operate correctly in accordance with the requirements of this standard after the test.
3. Test equipment: Vibration test bench D-1000-5(920407)and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05I_b	1.0	±1.5	-0.1	0.0	0.0
I_b	1.0	±1.0	-0.2	-0.1	-0.1
I_{max}	1.0	±1.0	-0.1	-0.2	-0.2
0.1I_b	0.5L	±1.5	-0.1	-0.1	-0.1
I_b	0.5L	±1.0	-0.2	-0.1	-0.1
I_{max}	0.5L	±1.0	0.2	0.1	0.2
0.1I_b	0.8C	±1.5	-0.2	-0.1	-0.1
I_b	0.8C	±1.0	-0.1	-0.2	-0.2
I_{max}	0.8C	±1.0	-0.1	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05 I_b	1.0	±2.5	-0.2	-0.1	-0.1
I_b	1.0	±2.0	-0.1	-0.2	-0.2
I_{max}	1.0	±2.0	0.1	0.0	0.1
0.1 I_b	0.5L	±2.5	-0.2	-0.2	-0.1
I_b	0.5L	±2.0	-0.2	-0.1	-0.2
I_{max}	0.5L	±2.0	-0.2	0.1	0.1
0.2 I_b	0.25L	±2.5	-0.1	-0.2	-0.1
I_b	0.25L	±2.5	-0.2	-0.1	-0.2
I_{max}	0.25L	±2.5	-0.1	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

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Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱: hongyotest@123.com

20. Shock test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: The meter shall show no damage or change of the information and shall operate correctly in accordance with the requirements of this standard after the test.
3. Test equipment: Shock test bench CP-100(120807)and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05I_b	1.0	±1.5	-0.2	-0.1	-0.1
I_b	1.0	±1.0	-0.1	-0.2	-0.2
I_{max}	1.0	±1.0	-0.1	-0.1	-0.1
0.1I_b	0.5L	±1.5	-0.2	-0.1	-0.1
I_b	0.5L	±1.0	-0.1	-0.2	-0.2
I_{max}	0.5L	±1.0	-0.1	-0.1	-0.1
0.1I_b	0.8C	±1.5	-0.2	-0.1	-0.1
I_b	0.8C	±1.0	-0.1	-0.2	-0.2
I_{max}	0.8C	±1.0	-0.1	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05 I_b	1.0	±2.5	0.0	0.1	0.0
I_b	1.0	±2.0	-0.2	-0.1	-0.1
I_{max}	1.0	±2.0	-0.1	-0.2	-0.2
0.1 I_b	0.5L	±2.5	-0.1	-0.1	-0.1
I_b	0.5L	±2.0	0.1	0.1	0.0
I_{max}	0.5L	±2.0	-0.2	-0.1	-0.1
0.2 I_b	0.25L	±2.5	-0.1	-0.2	-0.2
I_b	0.25L	±2.5	-0.2	-0.1	-0.1
I_{max}	0.25L	±2.5	-0.1	-0.2	-0.2
Test conclusion			**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱: hongyotest@123.com

21. Dry heat test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: After dry heat test, the meter shall show no damage or change of the information and shall operate correctly .
3. Test equipment: High and low temperature test chambers PL-2G(920218)and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05I_b	1.0	±1.5	-0.1	-0.2	-0.2
I_b	1.0	±1.0	-0.1	-0.1	-0.1
I_{max}	1.0	±1.0	-0.2	-0.1	-0.1
0.1I_b	0.5L	±1.5	-0.1	-0.2	-0.2
I_b	0.5L	±1.0	-0.1	-0.1	-0.1
I_{max}	0.5L	±1.0	-0.2	-0.1	-0.1
0.1I_b	0.8C	±1.5	-0.1	-0.2	-0.2
I_b	0.8C	±1.0	-0.1	-0.2	-0.2
I_{max}	0.8C	±1.0	-0.2	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05 I_b	1.0	±2.5	0.0	0.1	0.2
I_b	1.0	±2.0	-0.1	-0.2	-0.2
I_{max}	1.0	±2.0	-0.1	-0.1	-0.1
0.1 I_b	0.5L	±2.5	-0.2	-0.1	-0.1
I_b	0.5L	±2.0	-0.1	-0.2	-0.2
I_{max}	0.5L	±2.0	-0.1	0.1	0.0
0.2 I_b	0.25L	±2.5	-0.1	-0.1	0.0
I_b	0.25L	±2.5	-0.1	0.2	0.1
I_{max}	0.25L	±2.5	-0.2	0.2	0.1
Test conclusion			**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

22. Cold test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: After cold test, the meter shall show no damage or change of the information and shall operate correctly.
3. Test equipment: High and low temperature test chambers PL-2G(920218)and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Power factor (cosΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05I_b	1.0	±1.5	0.0	0.0	0.0
I_b	1.0	±1.0	-0.1	-0.2	-0.2
I_{max}	1.0	±1.0	-0.1	-0.1	-0.1
0.1I_b	0.5L	±1.5	-0.2	-0.1	-0.1
I_b	0.5L	±1.0	-0.1	-0.2	-0.2
I_{max}	0.5L	±1.0	-0.1	-0.1	-0.1
0.1I_b	0.8C	±1.5	-0.1	-0.2	-0.2
I_b	0.8C	±1.0	-0.1	-0.1	-0.1
I_{max}	0.8C	±1.0	-0.1	-0.2	-0.2
Test conclusion			**Pass**	**Pass**	**Pass**

Current	Power factor (sinΦ)	Percentage error limits (%)	Test result (%)		
			№25070100003	№25070100004	№25070100005
0.05 I_b	1.0	±2.5	0.0	0.0	0.0
I_b	1.0	±2.0	-0.1	-0.2	-0.2
I_{max}	1.0	±2.0	-0.1	-0.1	-0.1
0.1 I_b	0.5L	±2.5	-0.2	-0.1	-0.2
I_b	0.5L	±2.0	0.2	-0.1	-0.1
I_{max}	0.5L	±2.0	0.2	-0.2	-0.1
0.2 I_b	0.25L	±2.5	0.2	0.1	0.1
I_b	0.25L	±2.5	0.2	-0.1	-0.2
I_{max}	0.25L	±2.5	0.1	-0.1	-0.1
Test conclusion			**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

23. Test of immunity to electromagnetic HF fields

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: 1) Without any current in the current circuits, test the change in the register. With basic current I_b and power factor equal to 1.
   2) At sensitive frequencies or frequencies of dominant interest, test the variation of error.
3. Test equipment: Signal generator PMM3030-02(000WJ81009)and Power amplifier AS0104-200/200 (1034148) and Power amplifier A P32MT255 (S/N:0906-943)
4. Test result:

Power factor: cosΦ=1.0 Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Test field strength	Frequency (MHz)	Limits of variation (%)	Test result		
			№25070100003	№25070100004	№25070100005
10V/m	80	2.0	0.0	0.0	0.1
	100		0.2	0.1	0.0
	120		0.1	0.1	0.2
	200		0.1	0.2	0.2
	300		0.2	0.2	0.1
	400		0.1	0.1	0.1
	500		0.1	0.1	0.0
	600		0.1	0.2	0.1
	700		0.0	0.2	0.2
	800		0.1	0.1	0.1
	900		0.1	0.1	0.2
	1000		0.2	0.1	0.1
	1100		0.0	0.2	0.1
	1200		0.1	0.1	0.1
	1300		0.1	0.1	0.0
	1400		0.1	0.1	0.0
	1500		0.1	0.2	0.0
	1000		0.0	0.2	0.1
	1700		0.0	0.1	0.1
	1800		0.1	0.1	0.1
	1900		0.1	0.0	0.0
	2000		0.0	0.1	0.1
Test conclusion			**Pass**	**Pass**	**Pass**

Reference frequency :50Hz Reference voltage: 230V

Frequency band and field strength	Limits of charge in the register	Test result		
		№25070100003	№25070100004	№25070100005
80~2000MHz 30V/m	≤0.0184kWh	Pass	Pass	Pass
	No output	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

24. Fast transient burst test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Burst generator EFT-406N (EFT0460905)
4. Test result:

Reference frequency: 50Hz Reference voltage :230V

Test voltage	Test content	Test result		
		№25070100003	№25070100004	№25070100005
4kV	Pulse Output	Pass	Pass	Pass
Register function	≤0.184kWh	Pass	Pass	Pass
I_b Error (%)	≤4.0%	0.2	0.1	0.2
Test conclusion		**Pass**	**Pass**	**Pass**

25. Test of immunity to electrostatic discharges

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Electrostatic discharge generator ESD-203A(ESD-203A0130102)
4. Test result:

Reference frequency :50Hz Reference voltage : 230V

Test voltage	Limit value allowable %	Test result		
		№25070100003	№25070100004	№25070100005
contact discharge 8kV, air discharge 15kV	≤0.0184kWh	Pass	Pass	Pass
	No output	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

26. Tests of the effect of voltage dips and short interruptions

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Cycle drop device VDS-1132A(VDS-1132A0130101)and Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Reference voltage : 230V

Interrupt voltage and time	Test content	Limits of charge in the register	Test result		
			№25070100003	№25070100004	№25070100005
ΔU=100% 1s/50ms	Register Function	≤0.0184kWh	Pass	Pass	Pass
	Output pulse	No output	Pass	Pass	Pass
ΔU=100% 20ms	Register Function	≤0.0184kWh	Pass	Pass	Pass
	Output pulse	No output	Pass	Pass	Pass
ΔU=50% 1min	Register Function	≤0.0184kWh	Pass	Pass	Pass
	Output pulse	No output	Pass	Pass	Pass
I_b	Error (%)		-0.1	0.0	0.0
Test conclusion			**Pass**	**Pass**	**Pass**

27. Test of continuous magnetic induction of external origin

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: Put 1000At magnetic field to touchable part of the meter surface.
3. Test equipment: DC steady current source YJ-10A(6102) and Meter calibration device ST9001D5 (7131019).
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Current	Location	Power factor (cosΦ)	Limits of variation (%)	Test result (%)		
				№25070100003	№25070100004	№25070100005
I_b	Front	1.0	2.0	0.10	0.05	-0.02
I_b	Up	1.0	2.0	0.10	0.10	0.03
I_b	Left	1.0	2.0	0.05	0.03	0.04
I_b	Right	1.0	2.0	0.13	-0.05	0.14
Test conclusion				**Pass**	**Pass**	**Pass**

Current	Location	Power factor (sinΦ)	Limits of variation (%)	Test result (%)		
				№25070100003	№25070100004	№25070100005
I_b	Front	1.0	3.0	0.08	0.12	0.07
I_b	Up	1.0	3.0	0.15	-0.07	-0.02
I_b	Left	1.0	3.0	0.13	0.09	0.08
I_b	Right	1.0	3.0	0.05	0.12	0.17
Test conclusion				**Pass**	**Pass**	**Pass**

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

28. Marking and elements test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: Checked by inspection
3. Test equipment: Checked by inspection
4. Test result:

Test item	Test result		
	№25070100003	№25070100004	№25070100005
Case	Pass	Pass	Pass
Name-plates and marking	Pass	Pass	Pass
Terminal and Line connecting diagram	Pass	Pass	Pass
Clearance and creep age distances	Pass	Pass	Pass
Seal	Pass	Pass	Pass
Test conclusion	**Pass**	**Pass**	**Pass**

29. Test of supply voltage operating range

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11: 2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11: 2003
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Supply voltage operating range	Test result		
	№25070100003	№25070100004	№25070100005
Operating range(0.9~1.1)U_n Limit operating range(0~1.15)U_n	Pass	Pass	Pass
Test conclusion	**Pass**	**Pass**	**Pass**

30. Test of initial start-up

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11: 2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11: 2003
3. Test equipment: Meter calibration device ST9001D5 (7131019)
4. Test result:

Reference frequency :50Hz Current :5(60)A Reference voltage: 230V

Test item	Test result		
	№25070100003	№25070100004	№25070100005
Initial start-up	Pass	Pass	Pass
Test conclusion	**Pass**	**Pass**	**Pass**

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ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱: hongyotest@123.com

31. Surge immunity test

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11: 2003
2. Test method: After application of the surge immunity, test the change in the register.
3. Test equipment: Surge generator LSG-510A (LSG05100905)
4. Test result:

Reference frequency: 50Hz Reference voltage: 230V

Test content	Limits of charge in the register	Test result		
		№25070100003	№25070100004	№25070100005
Test voltage: 8kV Register function	≤0.023kWh	Pass	Pass	Pass
Pulse output	No output	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

32. Radio interference measurement

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Electromagnetic disturbance test receiver PMM9010 (696WX21006) and Three-phase power supply network of artificial L3-32 (0120X90108).
4. Test result:

a. Limit value of conducted disturbances:

Reference voltage :230V Power factor: cosΦ=1.0 Reference frequency :50Hz Current :0.5A

Frequency (MHz)	Limits dB(μV)		Test result
	Peak value	Average value	№25070100003
0.15 ~ 0.50	66 ~ 56	56 ~ 46	≤33
0.50 ~ 5	56	46	≤30
5 ~ 30	60	50	≤27
Test conclusion			**Pass**

b . Limit value of radiation disturbances:

Reference voltage: 230V Power factor: cosΦ=1.0 Reference frequency :50Hz Current :0.5A

Frequency (MHz)	Peak value dB(μV/m)	Test result
		№25070100003
30 ~ 230	40	≤28
230 ~ 1000	47	≤32
Test conclusion		**Pass**

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ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

33. Test of immunity to conducted disturbances, induced radio-frequency fields

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: NSG4070-75 Conducted disturbances test system (35761)
4. Test result:

Reference voltage :230V Power factor: cosΦ=1.0 Reference frequency :50Hz Current: 5(60)A

Test voltage	Frequency (MHz)	Limits of variation (%)	Test result		
			№25070100003	№25070100004	№25070100005
10V	0.15	2.0	0.1	0.1	0.0
	0.5		0.2	0.1	0.1
	1.0		0.1	0.1	0.2
	2.0		0.2	0.2	0.1
	5.0		0.1	0.3	0.2
	10.0		0.2	0.1	0.1
	20.0		0.2	0.1	0.2
	30.0		0.0	0.2	0.2
	50.0		0.1	0.1	0.2
	80.0		0.0	0.0	0.1
Test conclusion			**Pass**	**Pass**	**Pass**

Reference voltage :230V Reference frequency:50Hz

Test content	Limits of charge in the register	Test result		
		№25070100003	№25070100004	№25070100005
Frequency range: 150kHz ~ 80MHz	≤0.0184kWh	Pass	Pass	Pass
	No output	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

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地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

34. Test of solar radiation

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Xenon climate test chamber TET080D (030117)
4. Test result:

Test condition	Requirement	Test result		
		№25070100003	№25070100004	№25070100005
8h irradiation and16h darkness 3cycles Temperature:55℃	The appearance and, in particular, the legibility of markings shall not be altered. The function of meter shall not be impaired.	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

35. Test of protection against penetration of water

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Swing pipe rain test device BGL-06/08 (040196)
4. Test result:

Test condition	Requirement	Test result		
		№25070100003	№25070100004	№25070100005
IPX4	Any ingress of water shall be only in a quality not impairing the operation the meter, and its dielectric strength (insulating strength)	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

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ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

36. Test of protection against penetration of dust

1. Requirement: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
2. Test method: IEC62053-21:2003 IEC62053-23:2003 IEC62052-11:2003
3. Test equipment: Dust test chamber FCH-20 (990122)
4. Test result:

Test condition	Requirement	Test result		
		№25070100003	№25070100004	№25070100005
IP5X	Any ingress of dust shall be only in a quantity not impairing the operation of the meter and its dielectric strength (insulating strength)	Pass	Pass	Pass
Test conclusion		**Pass**	**Pass**	**Pass**

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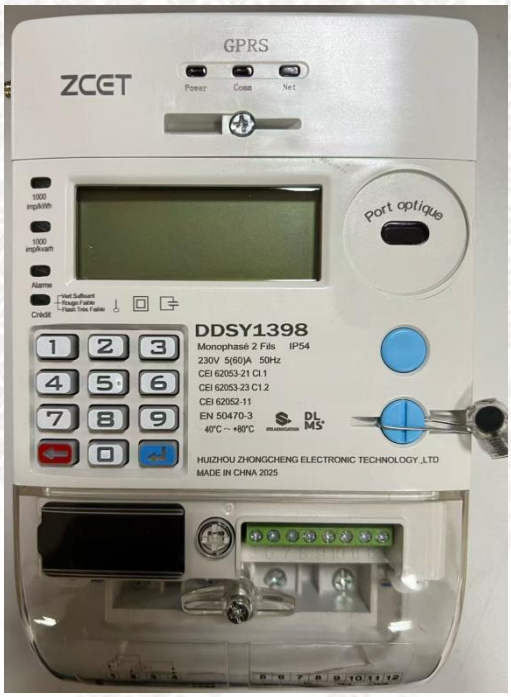
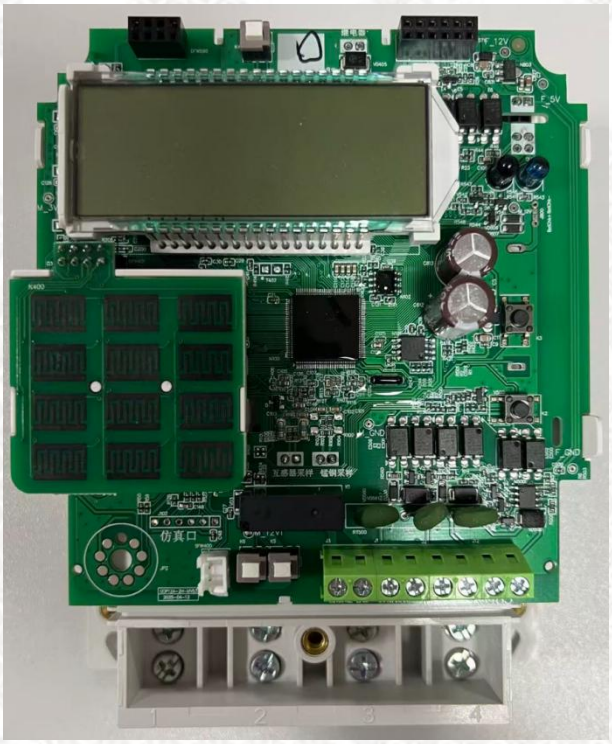
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

Meter Photos:





--END OF REPORT--

厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
ADDRESS: No. 99 Meihe Road, Light Industry Food Industrial Zone, Tongan District, Xiamen City, Fujian Province,
邮箱：hongyotest@123.com

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厦门泓益检测有限公司
Xiamen Hongyi Testing Co., Ltd.
地址: 福建省厦门市同安区轻工食品工业区美禾路 99 号
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