SOUTH CHINA NATIONAL CENTER OF METROLOGY

GUANGDONG INSTITUTE OF METROLOGY

TEST REPORT

No. XNZ202502130

Name of Sample:	Power Quality Analyzer
Model / Type:	APView500 230 V 5A 50/60Hz
Sample Number:	02125022200002
Applicant:	Acrel Co.,Ltd.
Manufacturer:	Jiangsu Acrel Electrical Manufacturing Co., Ltd.
Test Type:	Commission
Date Issued:	2025-06-03

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（1）Basic Information

Name of Sample	Power Quality Analyzer	Trade Mark	--
Model / Type	APView500 230 V 5 A 50/60 Hz	Class	Class A
Sample No.	02125022200002	Sample quantity	1
Applicant	Acrel Co., Ltd.		
Address	No. 253, Yulv Road, Jiading, Shanghai, China		
Manufacturer	Jiangsu Acrel Electrical Manufacturing Co., Ltd.		
Test Site	Environment and EMC Lab of Dongguan Branch		
Test Conditions	Temperature: (23±2) ℃ Humidity: (45~60)%RH		
Date Received	Mar. 6, 2025	Commission No.	WT20252096
Test Date	May 26, 2025 to May 30, 2025	Test Type	Commission
Test Item	See “Test Results Summary”		
Test Standard	1. The applicant's test requirements 2. IEC 61000-4-30 (Edition 3.1): 2021 Electromagnetic compatibility(EMC) – Part 4-30 : Testing and measurement techniques – Power quality measurement methods 3. IEC 62586-2(Edition 2.1): 2021 Power quality measurement in power supply systems – Part 2 : Functional tests and uncertainty requirements		
Conclusion	PASS (Seal of Report)		
Remarks	This report is for scientific research and internal quality control use only.		

Tested by: Checked by: Approved by:

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（2）Test Results Summary

No.	Test Item	Test Standard	Sample No.	Pass（P）	Fail（F）
1	Power frequency	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
2	Magnitude of supply voltage	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
3	Flicker	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
4	Supply voltage interruptions, dips and swells	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
5	Supply voltage unbalance	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
6	Voltage harmonics	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
7	Voltage interharmonics	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
8	Mains signalling voltages on the supply voltage	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
9	Measurement of underdeviation and overdeviation parameters	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	

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No.	Test Item	Test Standard	Sample No.	Pass（P）	Fail（F）
10	Flagging	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
11	Variations due to external influence quantities	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
12	Rapid voltage changes (RVC)	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
13	Magnitude of current	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
14	Harmonic current	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
15	Interharmonic currents	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
16	Current unbalance	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	
17	Calculation of measurement uncertainty and operating uncertainty	IEC 61000-4-30 (Edition 3.1) : 2021 IEC 62586-2 (Edition2.1) : 2021	02125022200002	P	

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ANNEX A

Table 1 – Testing points for each measured parameter

Measured parameter	Class	Testing point P1	Testing point P2	Testing point P3	Testing point P4	Testing point P5
Frequency 50 Hz (covers 50 Hz)	A or S	42,5 Hz	50,05 Hz	57,5 Hz	50 Hz	N.A.
Frequency 60 Hz (covers 60 Hz)	A or S	51 Hz	59,95 Hz	69Hz	60 Hz	N.A.
Voltage magnitude	A	10%U_{din}	45%U_{din}	80%U_{din}	115%U_{din}	150%U_{din}
	S	20%U_{din}	45%U_{din}	70%U_{din}	95%U_{din}	120%U_{din}
Magnitude of current	A or S	10%I_n	45%I_n	80%I_n	100%I_n	N.A.
Swells	A	Threshold swell −	Threshold swell +	110%U_{din}	120%U_{din}	200%U_{din}
	S	Threshold swell −	Threshold swell +	110%U_{din}	120%U_{din}	150%U_{din}
Dips	A	Threshold dip−	Threshold dip+	20%U_{din}	60%U_{din}	85%U_{din}
	S	Threshold dip−	Threshold dip+	20%U_{din}	60%U_{din}	85%U_{din}
Harmonics	A	Fundamental as specified 5 % on the 2nd harmonic	Fundamental as specified 10 % on the 3rd harmonic	Fundamental as specified 1 % on the 50th harmonic	Fundamental as specified Distortion on all harmonics simultaneously up to the 50th order at 10 % of class 3 compatibility levels from IEC 61000-2-4	Fundamental as specified Distortion on all harmonics simultaneously up to the 50th order at 200 % of class 3 compatibility levels from IEC 61000-2-4
	S	Fundamental as specified 5 % on the 2nd harmonic	Fundamental as specified 10 % on the 3rd harmonic	Fundamental as specified 1 % on the 40th harmonic	Fundamental as specified Distortion on all harmonics simultaneously up to the 40th order at 10 % of class 3 compatibility levels from IEC 61000-2-4	Fundamental as specified Distortion on all harmonics simultaneously up to the 40th order at 100 % of class 3 compatibility levels from IEC 61000-2-4
Interharmonics	A	Fundamental as specified 5 % on the interharmonic at 1,5 × the fundamental frequency	Fundamental as specified 10 % on the interharmonic at 7,5 × the fundamental frequency	Fundamental as specified 1 % on the interharmonic at 49,5 × the fundamental frequency	Fundamental as specified Distortion on 4 selected interharmonics up to the 50th order at 10 % of class 3 compatibility levels from IEC 61000-2-4	Fundamental as specified Distortion on 4 selected interharmonics up to the 50th order at 200 % of class 3 compatibility levels from IEC 61000-2-4
	S	N.A.	N.A.	N.A.	N.A.	N.A.

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MsV	A	U_{din} applied at the fundamental frequency, with 0 % U_{din} at the Specified carrier frequency	U_{din} applied at the fundamental frequency, with 1 %U_{din} at the specified carrier frequency	U_{din} applied at the fundamental frequency, with 3 % U_{din} at the Specified carrier frequency	U_{din} applied at the fundamental frequency, with 9 % U_{din} at the specified carrier frequency	U_{din} applied at the fundamental frequency, with 15 % U_{din} at the specified Carrier frequency
	S	N.A.	N.A.	N.A.	N.A.	N.A.

Table 2 – List of single "power-system influence quantities"

Power system influence quantities	Class	Testing state S1		Testing state S2	Testing state S3	Testing state S4
Frequency 50 Hz(covers 50 Hz)	A or S	42,5 Hz		50 Hz	57,5 Hz	N.A.
Frequency 60 Hz(covers 60 Hz)	A or S	51 Hz		60 Hz	69Hz	N.A.
Voltage magnitude	A	10%U_{din}		N.A.	200%U_{din}	N.A.
	S	10%U_{din}		N.A.	150%U_{din}	N.A.
Magnitude of current	A or S	10%I_n		N.A.	100%I_n	N.A.
Harmonics (in addition to the specified fundamental signal)	A or S	c% fundamental signal H1: 100% H3: 10% 180 ° H7: 10% 180 ° H11: 10% 180 ° H15: 4% 180 ° H19: 5% 180 ° H23: 5% 180	d % fundamental signal H1: 100% H3: 60%180 ° H5: 55% 0 ° H7: 50%180 ° H9: 41% 0 °	N.A.	N.A.	N.A.
Interharmonics (including ranks below fundamental)	A	N.A.		Frequency = 1,5 × fundamental frequency; 9 % of U_{din}	Frequency = 0,5 × fundamental frequency; 2,5 % of U_{din}	Distortion applied at two interharmonic frequencies simultaneously: 1) Frequency = 2nd harmonic plus 5 Hz (105 Hz at 50 Hz, and/or 125 Hz at 60 Hz), Magnitude = 4 % of U_{din} 2) Frequency = 2nd harmonic plus 10 Hz (110 Hz at 50 Hz, and/or 130 Hz at 60 Hz), Magnitude = 6 % of U_{din}

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	S	N.A.	Frequency =1,5 × fundamental frequency; 2,5 % of U_{din}	Frequency =0,5 × fundamental frequency; 2,5 % of U_{din}	N.A.

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