



校准证书

CALIBRATION CERTIFICATE

证书编号 GDDL202500080
Certificate No.

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客户名称 优利德科技(中国)股份有限公司
Name of the Customer

联络信息 广东省东莞市松山湖园区工业北一路6号
Contact Information

计量器具名称 相位伏安表(电参数测量仪)
Description

型号/规格 UT268B
Model/Type

制造厂 UNI-T
Manufacturer

出厂编号 C212400309
Serial No.

设备管理编号/
Equipment No.

接收日期 2025 年 02 月 25 日
Receipt on Y M D

结论 见校准结果
Conclusion

校准日期 2025 年 02 月 28 日
Calibration on Y M D

发布日期 2025 年 03 月 03 日
Issue on Y M D

批准 何洪波
Authorized by

核 验 何洪波
Reviewed by

校 准 齐海军
Calibrated by



扫一扫查真伪



华南国家计量测试中心 广东省计量科学研究所

SOUTH CHINA NATIONAL CENTER OF METROLOGY
GUANGDONG INSTITUTE OF METROLOGY



中国认可
国际互认
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CNAS L0730

说明

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DIRECTIONS

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- 本中心是国家市场监督管理总局在华南地区设立的国家法定计量检定机构, 本中心的质量管理体系符合 ISO/IEC 17025:2017 标准的要求。
This laboratory is the National Legal Metrological Verification Institution in southern China set up by the General Administration of Quality Supervision. The quality system is in accordance with ISO/IEC 17025:2017.
- 本中心所出具的数据均可溯源至国家计量基准和/或国际单位制(SI)。
All data issued by this laboratory are traceable to national primary standards and/or International System of Units (SI).
- 校准地点、环境条件:
Place and environmental conditions of the calibration:
地点 A4-403 电力实验室 温度 (21.5~21.9) °C 相对湿度 (62~68) %
Location Temperature RH
- 本次校准的技术依据:
Reference documents for the calibration:
JJF 1491-2014 数字式交流电参数测量仪校准规范 C.S. for Digital AC Electrical Parameters Meter
- 本次校准所使用的主要计量标准器具:
Major standards of measurement used in the calibration:

设备名称/型号规格/测量范围	编号	证书号/有效期/溯源单位	计量特性
Name of Equipment	Serial No.	Certificate No./Due Date	Metrological
/Model/Type/Range		/Traceability to	Characteristic
三相交直流指示仪表校验装置(数字功率源)	KS904032	DBB202405978	0.05级
/KS823/ACV:		/2025-10-14	
(0.001~900)V;ACI:		/省计量院	
(0.001~30)A;DCV:			
(0.001~900)V;DCI:			
(0.001~30)A			



注: 1. 本证书校准结果只与受校准仪器有关。 The results relate only to the items calibrated.
Note: 2. 未经本机构书面批准, 不得部分复制此证书。 This certificate shall not be reproduced except in full, without the written approval of our laboratory.
3. “客户名称”、“联络信息”由委托方提供, “制造厂”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注。 The information Name of the Customer and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items.



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一、功率因数:见表1

Power factor:Shown in table 1

表1 Table1

通道	标准值	显示值	误差	最大允许误差	结论
Channel	Standard value	Indication Value	Error	MPE	Conclusion
A相	1.000	1.000	0.000	±0.030	Pass
	L	0.500	0.485	±0.030	Pass
	C	0.500	0.515	±0.030	Pass
B相	1.000	1.000	0.000	±0.030	Pass
	L	0.500	0.485	±0.030	Pass
	C	0.500	0.515	±0.030	Pass
C相	1.000	1.000	0.000	±0.030	Pass
	L	0.500	0.485	±0.030	Pass
	C	0.500	0.515	±0.030	Pass

二、频率:见表2

Frequency:Shown in table 2

表2 Table2

标准值	显示值	误差	最大允许误差	结论
Standard value	Indication Value	Error	MPE	Conclusion
(Hz)	(Hz)	(Hz)	(Hz)	P/F
50.00	49.99	-0.01	±0.10	Pass
55.00	55.00	0.00	±0.10	Pass
60.00	60.01	0.01	±0.10	Pass

三、交流电压:见表3

AC voltage:Shown in table 3

表3 Table3

通道	量程	标准值	显示值	误差	最大允许误差	结论
Channel	Range	Standard value	Indication Value	Error	MPE	Conclusion
	(V)	(V)	(V)	(V)	(V)	P/F
Ua	100	20.0	20.0	0.0	±0.6	Pass



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续表3 Table3

通道	量程	标准值	显示值	误差	最大允许误差	结论
Channel	Range	Standard value	Indication Value	Error	MPE	Conclusion
	(V)	(V)	(V)	(V)	(V)	P/F
Ua	100	95.0	95.0	0.0	±1.7	Pass
	600	200	198	-2	±6	Pass
		300	300	0	±8	Pass
		400	400	0	±9	Pass
		500	500	0	±11	Pass
		590	590	0	±12	Pass
	(V)	(V)	(V)	(V)	(V)	P/F
Ub	100	20.0	20.0	0.0	±0.6	Pass
		95.0	95.0	0.0	±1.7	Pass
	600	200	199	-1	±6	Pass
		300	299	-1	±7	Pass
		400	400	0	±9	Pass
		500	500	0	±11	Pass
		590	591	1	±12	Pass
	(V)	(V)	(V)	(V)	(V)	P/F
Uc	100	20.0	20.0	0.0	±0.6	Pass
		95.0	95.0	0.0	±1.7	Pass
	600	200	200	0	±6	Pass
		300	300	0	±8	Pass
		400	400	0	±9	Pass
		500	500	0	±11	Pass
		590	590	0	±12	Pass



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四、交流电流:见表4

AC current:Shown in table 4

表 4 Table 4

通道	量程	标准值	显示值	误差	最大允许误差	结论
Channel	Range	Standard value	Indication Value	Error	MPE	Conclusion
	(A)	(A)	(A)	(A)	(A)	P/F
Ia	1	0.200	0.199	-0.001	±0.006	Pass
		0.950	0.949	-0.001	±0.017	Pass
	10	2.00	2.00	0.00	±0.06	Pass
		4.00	4.00	0.00	±0.09	Pass
	10	6.00	5.97	-0.03	±0.12	Pass
		8.00	7.96	-0.04	±0.15	Pass
		9.50	9.45	-0.05	±0.17	Pass
		19.00	18.91	-0.09	±0.31	Pass
	(A)	(A)	(A)	(A)	(A)	P/F
Ib	1	0.200	0.199	-0.001	±0.006	Pass
		0.950	0.950	0.000	±0.017	Pass
	10	2.00	2.00	0.00	±0.06	Pass
		4.00	4.00	0.00	±0.09	Pass
	10	6.00	5.98	-0.02	±0.12	Pass
		8.00	7.98	-0.02	±0.15	Pass
		9.50	9.48	-0.02	±0.17	Pass
		19.00	18.87	-0.13	±0.31	Pass
	(A)	(A)	(A)	(A)	(A)	P/F
Ic	1	0.200	0.199	-0.001	±0.006	Pass
		0.950	0.949	-0.001	±0.017	Pass
	10	2.00	2.01	0.01	±0.06	Pass
		4.00	4.00	0.00	±0.09	Pass
	10	6.00	5.97	-0.03	±0.12	Pass
		8.00	7.97	-0.03	±0.15	Pass
		9.50	9.44	-0.06	±0.17	Pass
		19.00	18.87	-0.13	±0.31	Pass



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五、交流功率: 见表5

AC power(Power): Shown in table 5

表 5 Table 5

通道	量程	标准值	显示值	误差	最大允许误差	结论
Channel	Range	Standard value	Indication Value	Error	MPE	Conclusion
	(W)	(W)	(W)	(W)	(W)	P/F
Pa	700	22.0	21.9	-0.1	±0.6	Pass
		220.0	219.0	-1.0	±3.6	Pass
		440.0	438.0	-2.0	±21.0	Pass
		880.0	871.6	-8.4	±21.0	Pass
0.5L		440.0	437.8	-2.2	±21.0	Pass
0.5C		440.0	435.8	-4.2	±21.0	Pass
	(kW)	(kW)	(kW)	(kW)	(kW)	P/F
	7	1.1000	1.0906	-0.0094	±0.0210	Pass
		1.7600	1.7432	-0.0168	±0.0210	Pass
		2.2000	2.1812	-0.0188	±0.0210	Pass
		4.4000	4.3603	-0.0397	±0.0420	Pass
Pb	700	22.0	21.9	-0.1	±0.6	Pass
		220.0	218.4	-1.6	±3.6	Pass
		440.0	438.0	-2.0	±21.0	Pass
		880.0	873.8	-6.2	±21.0	Pass
0.5L		440.0	435.8	-4.2	±21.0	Pass
0.5C		440.0	435.8	-4.2	±21.0	Pass
	(kW)	(kW)	(kW)	(kW)	(kW)	P/F
	7	1.1000	1.0906	-0.0094	±0.0210	Pass
		1.7600	1.7454	-0.0146	±0.0210	Pass
		2.2000	2.1812	-0.0188	±0.0210	Pass
		4.4000	4.3603	-0.0397	±0.0420	Pass



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续表 5 Table 5

通道	量程	标准值	显示值	误差	最大允许误差	结论
Channel	Range	Standard value	Indication Value	Error	MPE	Conclusion
	(W)	(W)	(W)	(W)	(W)	P/F
Pc	700	22.0	21.5	-0.5	±0.6	Pass
		220.0	218.4	-1.6	±3.6	Pass
		440.0	438.0	-2.0	±21.0	Pass
		880.0	871.6	-8.4	±21.0	Pass
0.5L		440.0	436.9	-3.1	±21.0	Pass
0.5C		440.0	438.0	-2.0	±21.0	Pass
	(kW)	(kW)	(kW)	(kW)	(kW)	P/F
	7	1.1000	1.0950	-0.0050	±0.0210	Pass
		1.7600	1.7498	-0.0102	±0.0210	Pass
		2.2000	2.1878	-0.0122	±0.0210	Pass
	14	4.4000	4.3647	-0.0353	±0.0420	Pass

说明:

Note:

1. 本次测量结果的扩展不确定度:

The Expanded Uncertainty of Measurement:

交流电压: $U_{rel}=0.5\%$; 交流电流: $U_{rel}=0.5\%$; 交流功率: $U_{rel}=1.0\%$; 功率因数: $U=0.01$; 频率: $U_{rel}=0.5\%$;

包含因子 $k=2$, 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度评定与表示》评定, 由合成标准不确定度乘以包含概率约为95%时对应的包含因子 k 得到。

Coverage factor $k=2$, the expanded uncertainty given in this certificate is evaluated according to JJF 1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", which is obtained by multiplying the combined standard uncertainty by the coverage factor k corresponding to the coverage probability of about 95%.

2. 校准结果符合性判定依据JJF1094-2002《测量仪器特性评定》第5.3.1条款和该仪器说明书技术要求。

Decision rules of conformity is JJF1094-2002 "Evaluation of the Characteristic of Measuring Instruments" (5.3.1) and the technical requirements in the manual.

3. 该仪器的溯源日期为本证书的“校准日期”, 按照所依据技术文件的规定, 建议复校时间间隔不超过1年。更换重要部件、维修或对仪器性能有怀疑时, 应及时校准。



华南国家计量测试中心
广东省计量科学研究院

SOUTH CHINA NATIONAL CENTER OF METROLOGY
GUANGDONG INSTITUTE OF METROLOGY



中国认可
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校准
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校准结果 RESULTS OF CALIBRATION

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The traceability date of this instrument is the "Calibration Date" on this certificate. According to the demand of reference document, next calibration is proposed within 1 year. In case of replacement of important parts, maintenance or doubt on the performance of the instrument, it shall be calibrated in time.

4. 校准活动中对测量结果有影响的条件:

Conditions under which the calibrations were made that have an influence on the measurement results:

温度(Temperature): (21.5~21.9)°C, 湿度(Humidity): (62~68)%RH.

