

校准证书

CALIBRATION CERTIFICATE

证书编号:
Certificate No.

J201808263408-0001

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委托方

Client

优利德科技(中国)股份有限公司

委托方地址

Address

广东省东莞松山湖高新技术产业开发区工业北一路6号

仪器名称

Description

钳形谐波功率计

型号/规格

Model/Type

UT243

制造厂

Manufacturer

UNI-T

出厂编号

Serial No.

C180185189

管理号

Asset No.

校准日期

Date of Calibration

2018年09月03日

Y M D

样品接收日期

Date of Receipt

2018年08月28日

Y M D

批准人:

Approved Signatory

钟毅 (副总工)

审核:

Inspected by

张小明

校准:

Calibrated by

朱永钧

证书专用章

(Stamp)

地址: 广东省广州市黄埔大道西平云路163号

Address: No.163.Pingyun Rd, West of HuangPu Ave.Guangzhou.Guangdong.China

计量校准机构备案号(The record number): [2012]粤量校S003号

联系电话(Tel.): 020-38699960,66830999,400-602-0999

传真(Fax): 020-38698685

网站(Website): http://www.grgtest.com

邮政编码(Postcode): 510656

电子邮件(E-mail): grgtest@grgtest.com



扫一扫验真伪

校准说明 DIRECTIONS OF CALIBRATION

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1. 本实验室出具的数据均可溯源至国家计量基准和国际单位制(SI)。
(All data issued by GRGTest are traced to National Primary Standards and International System of Units(SI).)
2. 本结果仅对当次被测样品有效, 如有疑问请在15个工作日内反馈。(The result is ONLY valid for the tested sample, please feedback to us within 15 working days if you have any question.)
3. 本证书编号具有唯一性, 后缀若带有“-Gx”的证书为替换证书, 自发出后原证书即刻作废。
(Each certificate has a unique number. The suffix of "-Gx" will be added to the number as a replacement of the old version. The original certificate will be officially invalid once the new certificate number is issued.)
4. 证书中如有最大允许误差、判定结果, 仅供参考, 其中“P”代表“合格”, “F”代表“不合格”。证书中结论判定是指测得值是否符合规定要求的限定值, 而使用人员还应结合实际测量要求, 评估校准结果测量不确定度对符合性评定的影响。(MPE & judgement result in the datasheet is only for reference, "P" represents "Pass" and "F" represents "Fail". The judgement is made on the basis of whether the measured value conforms to the limited value specified in the regulation, whereas users should evaluate the effects of measurement uncertainty of calibration results on conformity determination associated with actual measurement.)
5. 本次校准的技术依据及CNAS认可范围, 超出范围的内容未被认可。注: 详细的认可范围请查看CNAS网站中注册编号为L0446的证书附件。(Reference document and accredited scope by CNAS for calibration, beyond which isn't accredited. Please see the attachment of certificate No.L0446 on CNAS website for details.)
JJF 1491-2014 数字式交流电参数测量仪校准规范: 交流电压: (0.01~1000)V; 交流电流: 10 μ A~120A; 交流功率: 1mW~60kW; 频率: 20Hz~10kHz; 相位: -1~0~1(0.00~359.99°)
JJF 1075-2015 钳形电流表校准规范(C.S. of Clamp Ammeters): 直流电流: (0.1~5000)A; 交流电流: (0.1~6000)A (45Hz~10kHz)

6. 本次校准使用的主要测量标准(Main Standards of Measurement Used in the Calibration.):

名称 / 型号 Description / Model	编号 Serial No.	证书编号 Certificate No.	证书有效期 Due Date	技术特征 Technique Character
多功能校准器/5502A	4065801	J201806014083-0002	2019-05-31	DCV: $\pm 0.005\%$ DCI: 0.01% ACV: $\pm 0.03\%$ ACI: $\pm 0.04\%$ Ohm: $\pm 0.009\%$

7. 校准地点、环境条件(Place and environmental conditions of the calibration):

地点 Place	广州计量电子电磁室	温度 Temperature	24 $^{\circ}$ C	相对湿度 Relative Humidity	51 %
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8. 建议复校时间间隔: 1年, 送校单位也可按实际使用情况自主决定。
Suggested calibration interval is 1 year or it can be altered depending on the actual usage of the user.

校准结果

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1、外观以及一般性检查: 正常

In view of External and Generality check : Pass

2、50Hz交流电压 (AC Voltage, 50Hz)

	标准值 Reference Value	示值 Indicade Value	误差 Error	允许误差 MPE	结论 Conclusion (Pass/Fail)
CH1	(V)	(V)	(V)	(V)	
	10	9.9	-0.1	±0.6	P
	50	49.9	-0.1	±1.1	P
	100	99.9	-0.1	±1.7	P
	200	199.9	-0.1	±2.9	P
	300	299.9	-0.1	±4.1	P
	400	399.5	-0.5	±5.3	P
CH2	500	499.4	-0.6	±6.5	P
	600	599.4	-0.6	±7.7	P
	10	9.9	-0.1	±0.6	P
	50	49.9	-0.1	±1.1	P
	100	100.0	0.0	±1.7	P
	200	199.8	-0.2	±2.9	P
	300	299.8	-0.2	±4.1	P
CH3	400	399.8	-0.2	±5.3	P
	500	499.8	-0.2	±6.5	P
	600	599.8	-0.2	±7.7	P
	10	9.9	-0.1	±0.6	P
	50	49.9	-0.1	±1.1	P
	100	99.9	-0.1	±1.7	P
	200	199.8	-0.2	±2.9	P
300	299.9	-0.1	±4.1	P	
400	399.2	-0.8	±5.3	P	
500	499.1	-0.9	±6.5	P	
600	599.1	-0.9	±7.7	P	

3、50Hz交流电流 (AC Current, 50Hz)

	标准值 Reference Value	示值 Indicade Value	误差 Error	允许误差 MPE	结论 Conclusion (Pass/Fail)
	(A)	(A)	(A)	(A)	
20	20	20.1	0.1	±0.9	P
50	50	40.4	-9.6	±1.3	P
100	100	100.4	0.4	±2.5	P
200	200	242.7	42.7	±5.3	P
400	400	402	2	±13	P
600	600	604	4	±17	P
800	800	811	11	±21	P
1000	1000	1001	1	±25	P

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4、60Hz交流电压 AC Voltage (60Hz)

	标准值 Reference Value	示值 Indicatde Value	误差 Error	允许误差 MPE	结论 Conclusion
	(V)	(V)	(V)	(V)	(Pass/Fail)
CH1	10	9.9	-0.1	±0.6	P
	50	49.9	-0.1	±1.1	P
	100	99.9	-0.1	±1.7	P
	200	199.9	-0.1	±2.9	P
	300	299.9	-0.1	±4.1	P
	400	399.4	-0.6	±5.3	P
	500	499.4	-0.6	±6.5	P
	600	599.4	-0.6	±7.7	P
CH2	10	9.9	-0.1	±0.6	P
	100	100.0	0.0	±1.7	P
	200	199.8	-0.2	±2.9	P
	300	299.8	-0.2	±4.1	P
	400	399.7	-0.3	±5.3	P
	500	499.7	-0.3	±6.5	P
	600	599.7	-0.3	±7.7	P
	CH3	10	9.9	-0.1	±0.6
50		49.9	-0.1	±1.1	P
100		99.9	-0.1	±1.7	P
200		199.8	-0.2	±2.9	P
300		299.8	-0.2	±4.1	P
400		399.1	-0.9	±5.3	P
500		499.0	-1.0	±6.5	P
600		598.9	-1.1	±7.7	P

5、60Hz交流电流 (AC Current, 60Hz)

	标准值 Reference Value	示值 Indicatde Value	误差 Error	允许误差 MPE	结论 Conclusion
	(A)	(A)	(A)	(A)	(Pass/Fail)
	20.0	20.1	0.1	±0.9	P
	50.0	40.5	-9.5	±1.3	P
	100.0	100.7	0.7	±2.5	P
	200.0	242.6	42.6	±5.3	P
	400.0	404	4	±13	P
	600.0	603	3	±17	P
	800.0	806	6	±21	P
	1000.0	1000	0	±25	P

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6. 功率 (Power)

频率 Fre. (Hz)	标准值 Reference Value (kW)	示值 Indicatde Value (kW)	误差 Error (kW)	允许误差 MPE (kW)	结论 Conclusion (Pass/Fail)
50	1	1.01	0.01	± 0.07	P
	5	5.09	0.09	± 0.15	P
	10	10.17	0.17	± 0.25	P
	50	50.38	0.38	± 1.05	P
	100	101.1	1.1	± 2.5	P
	200	200.8	0.8	± 4.5	P
	300	302.6	2.6	± 6.5	P
	400	404.7	4.7	± 8.5	P
	500	501.4	1.4	± 10.5	P
	600	601.9	1.9	± 12.5	P
60	1	1.01	0.01	± 0.07	P
	5	5.03	0.03	± 0.15	P
	10	10.08	0.08	± 0.25	P
	50	50.16	0.16	± 1.05	P
	100	100.4	0.4	± 2.5	P
	200	199.4	-0.6	± 4.5	P
	300	300.7	0.7	± 6.5	P
	400	399.6	-0.4	± 8.5	P
	500	498.7	-1.3	± 10.5	P
	600	598.9	-1.1	± 12.5	P

7. 频率 (Frequency)

标准值 Reference Value (Hz)	示值 Indicatde Value (Hz)	误差 Error (Hz)	允许误差 MPE (Hz)	结论 Conclusion (Pass/Fail)
50	50.02	0.02	± 5.25	P
60	60.02	0.02	± 5.30	P

8. 功率因数 (PF)

标准值 Reference Value	示值 Indicatde Value	误差 Error	允许误差 MPE	结论 Conclusion (Pass/Fail)
1.000	0.999	-0.001	± 0.022	P
0.500	0.507	0.007	± 0.011	P

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备注: 1.结论 (Conclusion): 所校项目符合技术要求

2.测量结果不确定度

(Expanded uncertainty of the measurement results)

交流电压 (ACV) $U_{rel}=0.28\%$ ($k=2$)交流电流 (ACA) $U_{rel}=0.3\%$ ($k=2$)功率 (Power) $U_{rel}=0.38\%$ ($k=2$)频率 (Frequency) $U_{rel}=0.004\%$ ($k=2$)功率因数 (PF) $U=0.002$ ($k=2$)

2.依据(Reference document)

JJF 1059.1-2012 测量不确定度评定与表示

(JJF 1059.1-2012 Evaluation and Expression of Uncertainty in Measurement)

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