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
国际互认
校准
CALIBRATION
CNAS L0730

校准证书
CALIBRATION CERTIFICATE

证书编号 Certificate No. GDDL202400110

委托方 Client 优利德科技(中国)股份有限公司

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

计量器具名称 Description 高精度钳形漏电电流表（钳形电流表）

型号规格 Model/Type UT251C

制造厂 Manufacturer UNI-T

出厂编号 Serial No. C160072671

设备编号 Equipment No. /

接收日期 Date of Receipt 2024 年 02 月 29 日

结果 Results 见校准结果

校准日期 Date of calibration 2024 年 03 月 01 日

批准人 Approved Signatory 何洪波

核验 Reviewed by 何洪波

校准 Calibrated by 郑艺成

证书专用章 Stamp

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说　明

证书编号 GDDL202400110
Certificate No.

DIRECTIONS

1. 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.

2. 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)

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

地点 Place	A4-403电力实验室	温度 Temperature	(20.6～20.7) ℃	相对湿度 RH	(50～50) %

4. 本次校准的技术依据：
Reference documents for the calibration:

JJF 1075-2015 钳形电流表校准规范　C.S. of Clamp Ammeters

5. 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 Name of Equipment /Model/Type/Range	编号 Serial No.	证书号/有效期/溯源单位 Certificate No./Due Date /Traceability to	计量特性 Metrological Characteristic
钳形表标准线圈 /5500A/COIL/(10～1000)A	20083345	DBB202306736 /2024-07-05 /省计量院	MPE:±0.25%
多功能标准源 /5522A/DCV:1mV～1020V;ACV:1mV～1020V;DCA:1μA～20.5A;ACA:30μA～20.5A;OHM:0.1Ω～100MΩ	4259901	DBS202302449 /2024-07-19 /省计量院	DCV:U_{rel}=0.0012%, ACV:U_{rel}=0.017%, DCA:U_{rel}=0.011%, ACA:U_{rel}=0.05%, DCR:U_{rel}=0.003%, DCW:U_{rel}=0.022%; ACW:U_{rel}=0.08%(k=2)

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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. “委托方”、“委托方联络信息”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 Client and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items.
4. 本次校准日期视为发布日期。The calibration date is the date of issue of the certificate.

校 准 结 果
RESULTS OF CALIBRATION

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一、交流电流：见表1

ACA：Shown in table 1

表1 Table 1

测试频率 Freq (Hz)	量程 Range (mA)	标准值 Reference Value (mA)	指示值 Indication Value (mA)	误差 Error (mA)	允许误差 MPE (mA)	结论 Conclusion P/F
50	600	600	599	-1	±14	Pass
	(A)	(A)	(A)	(A)	(A)	P/F
	6	6.00	5.99	-0.01	±0.14	Pass
	60	15.0	15.0	0.0	±0.7	Pass
		20.0	19.9	-0.1	±0.8	Pass
		40.0	39.9	-0.1	±1.1	Pass
		60.0	59.8	-0.2	±1.4	Pass
	600	600	596	-4	±17	Pass

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说明：

Note:

1.本次测量结果的扩展不确定度:

The Expanded Uncertainty of Measurement:

交流电流: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 in JJF1094-2002《Evaluation of the Characteristics of Measuring Instruments》 and the technical requirements in the manual.

3.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。

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 .