



校准证书  
CALIBRATION CERTIFICATE



证书编号:  
Certificate No.



扫一扫验真伪  
2WB22122235444-0003

委托方: 湖南三一智慧新能源设计有限公司  
Client

委托方地址: 湖南省邵阳市邵阳经济开发区管理委员会蜂巢创客大楼  
Address

仪器/样品名称: 全自动油介损及电导率测试仪  
Description

型号/规格: HM601  
Model/Type

制造厂商: 武汉国电华美电气设备有限公司  
Manufacturer

出厂编号: 2212043  
Serial No.

管理号: /  
Asset No.

样品接收日期: 2022-12-28  
Date of Receipt  
Y M D

结果: 所校准项目合格(Passed at Calibration Items)  
Conclusion

校准日期: 2022-12-28  
Date of Calibration  
Y M D

建议下次校准日期: 2023-12-27  
Due Date  
Y M D

校准: 程越  
Calibration by

审核: 徐继胜  
Inspected by

授权签字人: 方文潮  
Approved Signatory

证书专用章  
(Stamp)

本实验室地址: 广东省广州市番禺区石碁镇农科所南街8号 @力赛计量实验室

Address: No.8.South Street Shi Ji Institute Guangzhou.Guangdong.China

联系电话(Tel): 020-31134076

投诉电话(CT): 020-31104772

传真(Fax): 020-31134076

邮政编码(Post): 511400

公司网址(Web): www.lisaitest.com

电子邮件(E-mail): cal@lisaitest.com



# 校准说明

## DIRECTIONS OF CALIBRATION

证书编号:  
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本机构质量管理体系符合ISO/IEC17025标准要求。

The quality system is in accordance with ISO/IEC17025.

1. 证书内页中"P"代表"合格","F"代表"不合格","N/A"代表"不适用"。

In the datasheet,"P" represents "Pass" and "F" represents "Fail" and "N/A" represents "Not Applicable".

2. 本证书编号具有唯一性, 后缀若带有"A~Z"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 "A~Z" 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.

3. 环境条件。(Environmental condition during the calibration).

温度(Temperature): 22°C 相对湿度 (Relative Humidity): 58 %

4. 校准地点。(Place of the Calibration).

客户现场(2楼实验室)

5. 未加盖“证书报告专用章”无效, 报告无校准或检测、审核、授权签字人签章无效。

The report is invalid without the official stamp, report is invalid without 'report stamp', The report is invalid without the signatures of Approval and Reviewer.

6. 样品及生产/研制方的相关信息由委托方提供并由委托方承担相应责任。

The information of the samples and the manufacturer/developer shall be provided by the applicants and applicant shall bear the corresponding responsibilities.

7. 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。详细认可范围请查看CNAS网站中注

册编号为L7127的证书附件。(Reference documents and accredited scope by CNAS for the Calibration beyond which isn't accredited. Please see the attachment of certificate No.L7127 on CNAS website for details.)

JJF 1618-2017 绝缘油介质损耗因数及体积电阻率测试仪校准规范 Calibration Specification for Insulating Oil Dielectric Dissipation Factor and Volume Resistivity Testers

8. 本次校准使用的主要计量标准器具。(Main standards of measurement used in the Calibration).

名称 Description	出厂编号 Serial No.	证书号/有效期 Certificate No./ Due Date	溯源机构 Traceability Institute	技术特征 Technique Character
兆欧表标准电阻器	1609480	3WC22021423050-1128 / 2023-02-22	广州力赛计量检测有限公司(LiSai Metrology)	电阻: $\pm(0.2\% \sim 2\%)$
标准损耗器	101.58	3WC22110626454-2680 / 2023-11-15	广州力赛计量检测有限公司(LiSai Metrology)	电容: $U_{rel}=6E-3(k=2)$ 损耗: $U=0.003\% \sim 0.040\%(k=2)$



# 广州力赛计量检测有限公司

GUANGZHOU LISAI CALIBRATION AND TESTING CO.,LTD



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L7127

证书编号:

Certificate No.



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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、介质损耗因数(Dielectric loss factor):

标准值 Reference	指示值 Indicated	误差 Error	不确定度 Uncertainty (%)	允许误差 MPE	结论 Conclusion (Pass/Fail)
0.00015	0.00012	-0.00003	0.3	± 0.00021	P
0.01000	0.00991	-0.00009	0.3	± 0.00070	P
0.05000	0.04986	-0.00014	0.3	± 0.00270	P
0.09800	0.09775	-0.00025	0.3	± 0.00510	P

### 3. 电阻率测量(Resistance Measurement)

标准值 Reference ( MΩ.m )	指示值 Indicated ( MΩ.m )	误差 Error ( MΩ.m )	不确定度 Uncertainty (%)	允许误差 MPE ( MΩ.m )	结论 Conclusion (Pass/Fail)
1.000	0.999	-0.001	0.5	± 0.100	P
10.00	10.00	0.00	0.5	± 1.00	P
50.00	49.99	-0.01	0.5	± 5.00	P
100.0	100.1	0.1	0.5	± 10.0	P
500.0	500.0	0.0	0.5	± 50.0	P
( GΩ.m )	( GΩ.m )	( GΩ.m )	(%)	( GΩ.m )	(Pass/Fail)
1.000	1.000	0.000	0.5	± 0.100	P

附: 关于测量结果不确定度的说明:  
appendix: Directions of uncertainty in the calibration

#### 1.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)

2.本报告给出的扩展不确定度是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得到的。

The expanded uncertainty given in this report is obtained by multiplying the combined standard uncertainty by the corresponding coverage factor k when the coverage probability of about 95%.

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