

校准证书

Calibration Certificate



中国认可
国际互认
校准
CALIBRATION
CNAS L5138

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证书编号
Certificate No. Z2019J2-F027403

客户名称
Client Name 中清能绿洲科技股份有限公司

地址
Address 北京市丰台区科学城星火路11号B座5088室

仪器名称
Description 智能三相相位伏安表

型号/规格
Model/Type LDSMG3000 制造厂商
Manufacturer 武汉朗电电气设备有限公司

出厂编号
Serial Number LD201805039 管理编号
Management No. /

接收日期
Date of Receipt 2019 年 06 月 01 日
Year Month Day

校准日期
Calibration Date 2019 年 06 月 01 日
Year Month Day

建议下次校准日期
Due Date 2020 年 05 月 31 日
Year Month Day

发布日期
Issue Date 2019 年 06 月 06 日
Year Month Day



发证单位(专用章)
Issued by (stamp)



批准:
Approved by 辛贝洲研壹 (技术经理)

核验:
Inspected by 钟霞芝

校准:
Calibrated by 罗梯



地址: 广东省深圳市龙岗区锦龙大道2号1栋、4栋、6栋
ADD: Building 1/4/6, No. 2, Jinlong Road, Longgang District, Shenzhen, Guangdong, China
电话 (TEL): 0755-84815081

邮编 (Post Code): 518116
网址: <http://www.51jL.org>
传真 (Fax): 0755-28949551

说 明

DIRECTIONS

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1. 本机构管理体系符合ISO/IEC 17025:2017的要求。
The quality system is in accordance with ISO/IEC 17025:2017.
2. 本证书未经签章、数据涂改、或分离使用均无效。未经我司书面批准，不得部分复制此证书。校准结果仅对受测仪器当时之情况负责。
The Certificate is invalid when no stamp sealed on, data alteration or separate use. Without our written approval, the certification should not be partially duplicated. The calibration results are only responsible for calibration conditions of the instrument at the time.
3. 本证书具有唯一性，带有相同证书编号、按页码顺序的组成页为校准证书，我司对本证书的内容拥有最终解释权。
The certificate is unique, and made up of pages with same certificate number and serial order, and reserves final explanation right of the certificate contents.
4. 若被校仪器属于强检范畴，按照法规要求，不能替代检定证书。
If the instrument belongs to compulsory test field, the corresponding calibration can not replace the verification according to the compulsory regulations.
5. 带*的参数项目表示不在CNAS认可范围内。
Parameter with asterisk '*' is not within the accreditation by CNAS.
6. 本次校准所依据的技术文件(Reference documents for the calibration):
JJG440-2008 工频单相相位表检定规程
JJG(军工)72-2015 交流数字电压表检定规程
JJF1491-2014 数字式交流电参数测量仪校准规范
JJF1075-2015 钳形电流表校准规范
7. 校准的地点及环境条件(Place and environmental condition in the calibration):
校准地点: 委托方现场【试验室】
Cal. Place: _____
温 度: 20.2 °C 相对湿度: 57 %
Temperature: _____ °C Relative Humidity: _____ %
8. 联系方式: 010-63733600
Contact: _____
9. 校准所用的主要计量标准器具(Main Standards of Measurement Used in the Calibration):

| 名称 Description | 设备编号 Equipment No. | 证书编号 Certificate No. | 有效期至 Due date | 溯源机构 Actuator |
|-------------------|-----------------------|-------------------------|------------------|------------------|
| 三相交直流指示仪表校验装置 | TM31-020 | DBB201807331 | 2019-09-05 | 广东省计量院 |



校准结果

Results of Calibration

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1. 外观及工作性能检查:
(Appearance & Working Performance Check)

符合(Pass)

2. 交流电压:
AC Voltage

| 量程 Range | 标准值 Reference Value | 示值 Indication | 误差 Error | 允差 MPE | 结论 Pass/Fail |
|-------------|------------------------|------------------|-------------|-----------|-----------------|
| Ua | 50V | 50.40V | +0.80% | ±1.0% | P |
| | 250V | 252.4V | +0.96% | ±1.0% | P |
| | 500V | 503V | +0.60% | ±1.0% | P |
| Ub | 50V | 50.10V | +0.20% | ±1.0% | P |
| | 250V | 249.1V | -0.36% | ±1.0% | P |
| | 500V | 503V | +0.60% | ±1.0% | P |
| Uc | 50V | 50.15V | +0.30% | ±1.0% | P |
| | 250V | 248.6V | -0.56% | ±1.0% | P |
| | 500V | 504V | +0.80% | ±1.0% | P |

3. 交流电流:
AC Current

| 量程 Range | 标准值 Reference Value | 示值 Indication | 误差 Error | 允差 MPE | 结论 Pass/Fail |
|-------------|------------------------|------------------|-------------|-----------|-----------------|
| Ua | 1.0A | 1.006A | +0.60% | ±2.0% | P |
| | 5.0A | 4.97A | -0.60% | ±2.0% | P |
| | 10.0A | 10.1A | +1.00% | ±2.0% | P |
| Ub | 1.0A | 1.005A | +0.50% | ±2.0% | P |
| | 5.0A | 5.09A | +1.80% | ±2.0% | P |
| | 10.0A | 10.1A | +1.00% | ±2.0% | P |
| Uc | 1.0A | 1.017A | +1.70% | ±2.0% | P |
| | 5.0A | 5.08A | +1.60% | ±2.0% | P |
| | 10.0A | 10.1A | +1.00% | ±2.0% | P |

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4. 相位:
Phase

| 标准值 Reference Value | 示值 Indication | 误差 Error | 允差 MPE | 结论 Pass/Fail |
|------------------------|------------------|-------------|-----------|-----------------|
| 60° | 57.20° | -2.80° | ±3° | P |
| 90° | 88.95° | -1.05° | ±3° | P |
| 360° | 362.23° | +2.23° | ±3° | P |

5. 三相功率:
Three phase power

| 量程 Range | 标准值 Reference Value | 示值 Indication | 误差 Error | 允差 MPE | 结论 Pass/Fail |
|-------------|------------------------|------------------|-------------|-----------|-----------------|
| Ua | 50W | 50.06W | +0.12% | ±1.0% | P |
| | 500W | 502.8W | +0.56% | ±1.0% | P |
| | 5000W | 4968W | -0.64% | ±1.0% | P |
| Ub | 50W | 49.79W | -0.42% | ±1.0% | P |
| | 500W | 496.4W | -0.72% | ±1.0% | P |
| | 5000W | 5046W | +0.92% | ±1.0% | P |
| Uc | 50W | 50.26W | +0.52% | ±1.0% | P |
| | 500W | 501.3W | +0.26% | ±1.0% | P |
| | 5000W | 5039W | +0.78% | ±1.0% | P |

说明:本次测量结果的扩展不确定度为:

(The Expanded Uncertainty of the Measurement Result Is)

电压: $U_{rel}=0.2\%$ 电流: $U_{rel}=0.2\%$ 相位: $U=0.1^\circ$ 功率: $U_{rel}=0.19\%$ $k=2$

(依据JJF1059.1-2012测量不确定度评定与表示)

(According to JJF1059.1-2012 Evaluation and Expression of Uncertainty in Measurement)

