

GDZRS-10U 直流电阻测试仪

湖北省计量测试技术研究院

Hubei Institute of Measurement and Testing Technology

地址 (Add): 湖北省武汉市东湖新技术开发区茅店山中路二号 邮编 (Post Code): 430223
电话 (Tel): 027-81925136
网址 (Web site): <http://www.hbjl.gov.cn> 传真 (Fax): 027-81925137

中国校准服务联合体
China United Calibration Service

CUC

REGISTRATION NO. 002

校准证书

CALIBRATION CERTIFICATE

证书编号: [20190303410050]
Certificate No.

委托方名称: 西藏开投金桥水电开发有限公司
Customer

委托方地址: 西藏拉萨北京中路22号
Address

样品名称: 直流电阻测试仪
Name Of Sample

制造厂商: 武汉国电西高电气有限公司
Manufacturer

型号规格: GDZRS-10U
Model/Type

器具编号: G20190116821
No Of Sample

证书专用章
Stamp

湖北省计量测试技术
证书骑缝章



校准日期: 2019年03月14日
Calibration date: Y M D

证书批准人: 耿睿
Approved by
核验员: 吕良
Checked by
校准员: 何媛
Calibrated by

本次校准所使用的测量装置均溯源至保存在中国计量科学研究院的国家计量基准。中国计量科学研究院于1999年代表中国签署了国际间“国家计量基准及国家计量研究院出具的校准和测量证书相互承认协议”。
The measuring equipment used in the calibration is traceable to national primary standards maintained in National Institute of Metrology (NIM). NIM is the signatory to the Mutual Recognition Arrangement (MRA) for national measurement standards and for calibration and measurement certificates issued by national metrology institutes.



- 本院是政府计量行政管理部门依法设立的法定计量检定机构
This laboratory is a legal metrological verification institution established by the government metrological administrative department according to law.
- 本院质量管理体系符合ISO/IEC17025标准的要求。
The quality management system for laboratory complies with ISO/IEC 17025 standards.
- 本次校准的技术依据(名称、代号)
Reference documents for the Calibration (Name . Code)
参照: JJG1052—2009 回路电阻测试仪、直阻仪检定规程 Calibration for Fibre Fineness Tester of Air-flow Method

- 本次校准所使用的主要计量标准器具
Main standards of measurement used in the Calibration

设备名称 Name of Equipment	型号/编号 Model/Serial No.	证书号/有效期 Certificate No./Due Date
模拟大功率交直流标准电阻器	MIZ-600/12037	2018DW02250527/2019-07-26

- 校准环境条件

Environmental condition on the Calibration

温度: 22.9℃ Temperature	相对湿度: 40 % R.H.	其它: _____ Others:
气压: _____ Pressure	地点: 本院光谷基地B211室 Place	原始记录编号: 2019DW03410050 Record No.

本校准结论, 仅对受校样品的本次校准有效。
It's Effect That Results of This Report Relate Only To The Sample(s) Calibrated.
未经本院许可, 不得部分复制本证书。

校准数据/结果

Data/Results of Calibration

量程: 20A			量程: 10 A		
标准值(mΩ)	显示值(mΩ)	测量不确定度	标准值(mΩ)	显示值(mΩ)	测量不确定度
1.0000	1.000	$U_{95}=0.2\% (k=2)$	10.000	10.00	$U_{95}=0.2\% (k=2)$
3.0000	3.003		30.000	30.03	
5.0000	5.005		50.000	50.05	
7.0000	7.007		70.000	70.08	
10.000	10.01		100.00	100.1	
量程: 2A					
标准值(mΩ)	显示值	测量不确定度			
100.00	100.0 mΩ	$U_{95}=0.1\% (k=2)$			
300.00	300.2 mΩ				
500.00	500.3 mΩ				
700.00	700.5 mΩ				
1000.0	1.000 Ω				

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GDZRS-20A 三相直流电阻测试仪

	广州力赛计量检测有限公司 GUANGZHOU LISAI CALIBRATION AND TESTING CO.,LTD			
校准证书 CALIBRATION CERTIFICATE				
证书编号: Certificate No.			□ 扫一扫验真伪 1WA21111810545-0001	
委托方: Client	日照盈德气体有限公司			
委托方地址: Address	山东省日照市岚山区沿海路600号			
仪器名称: Description	三相直流电阻测试仪			
型号/规格: Model/Type	GDZRS-20A			
制造厂商: Manufacturer	武汉国电西高电气有限公司			
出厂编号: Serial No.	G20211151223	管理号: Asset No.	/	
样品接收日期: Date of Receipt	2021-11-18 Y M D			
结果: Conclusion	所校准项目合格(Passed at Calibration Items)			
校准日期: Date of Calibration	2021-11-18 Y M D	建议下次校准日期: Due Date	2022-11-17 Y M D	
校准: Calibration by	程越			
审核: Inspected by	徐继胜			
授权签字人: Approved Signatory	方文潮			证书专用章 (Stamp)
本实验室地址: 广东省广州市番禺区石基镇农科所南街8号 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.lsaitest.com		电子邮件(E-mail): cal@lsaiest.com		
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校准说明

DIRECTIONS OF CALIBRATION

证书编号:

Certificate No.



1WA21111810545-0001

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).

广州总部实验室(408电话室)

5. 报告无检测单位印章无效, 未加盖“检测/证书报告专用章”无效, 报告无主检、审核、批准人签章无效。

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.)

JIG 837-2003 直流低电阻表检定规程 V, R. of D.C. low Resistance Meters

JIG 1052-2009 回路电阻测试仪、直阻仪检定规程 V.R. of Loop Resistance Tester and DC Resistance Meters

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/有效期至 Certificate No./ Due Date	溯源机构 Traceability Institute	技术特征 Technique Character
直流电阻器	88900171零9 只)	3GC21040272447-0039 / 2022-04-28	广州力赛计量检测有限公司	±0.01%





广州力赛计量检测有限公司

GUANGZHOU LISAI CALIBRATION AND TESTING CO.,LTD

证书编号:

Certificate No.



中国合格评定
国家认可委员会
CALIBRATION
026817107

1WA21111810545-0001

1、外观以及一般性检查: 正常
In view of External and Generality check: Pass

2、电阻测量(Resistance Measurement):

测量电流 Test Current	相序 Phase	标准值 Reference	指示值 Indicated	误差 Error	不确定度 Uncertainty	允许误差 (MPE)	结论 (Conclusion)	
(A)	Ra	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	(Pass/Fail)	
1		10.00	10.012	-0.012	0.07	± 0.022	P	
		100.0	100.03	-0.03	0.07	± 0.22	P	
		(Ω)	(Ω)	(Ω)	(%)	(Ω)		
		1.000	1.0002	-0.0002	0.05	± 0.0022	P	
	Rb	10.00	10.004	-0.004	0.05	± 0.022	P	
		(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)		
		10.00	10.008	-0.008	0.07	± 0.022	P	
		100.0	100.07	-0.07	0.07	± 0.22	P	
	Rc	(Ω)	(Ω)	(Ω)	(%)	(Ω)		
		1.000	1.0003	-0.0003	0.05	± 0.0022	P	
		10.00	10.005	-0.005	0.05	± 0.022	P	
		(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)		
	10.00	10.009	-0.009	0.07	± 0.022	P		
	100.0	100.04	-0.04	0.07	± 0.22	P		
	(Ω)	(Ω)	(Ω)	(%)	(Ω)			
	1.000	1.0004	-0.0004	0.05	± 0.0022	P		
	10.00	10.005	-0.005	0.05	± 0.022	P		
	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)			
	(A)	Ra	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	(Pass/Fail)
	5	10.00	10.014	-0.014	0.07	± 0.022	P	
100.0		100.02	-0.02	0.07	± 0.22	P		
(Ω)		(Ω)	(Ω)	(%)	(Ω)			
1.000		1.0006	-0.0006	0.05	± 0.0022	P		
	10.00	10.014	-0.014	0.05	± 0.022	P		



广州力赛计量检测有限公司

GUANGZHOU LISAI CALIBRATION AND TESTING CO.,LTD

证书编号:
Certificate No.



中国合格评定
国家认可委员会
CALIBRATION
ENABLING

1WA21111810545-0001

2. 电阻测量(Resistance Measurement):

测量电流 Test Current	相序 Phase	标准值 Reference	指示值 Indicated	误差 Error	不确定度 Uncertainty	允许误差 (MPE)	结论 (Conclusion)
(A) 5	Rb	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
		10.00	10.013	-0.013	0.07	± 0.022	P
		100.0	100.01	-0.01	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0005	-0.0005	0.05	± 0.0022	P
		10.00	10.014	-0.014	0.05	± 0.022	P
	Rc	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
		10.00	10.010	-0.010	0.07	± 0.022	P
		100.0	100.03	-0.03	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0005	-0.0005	0.05	± 0.0022	P
		10.00	10.008	-0.008	0.05	± 0.022	P
(A) 10	Ra	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	(Pass/Fail)
		10.00	10.011	-0.011	0.07	± 0.022	P
		100.0	100.02	-0.02	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0004	-0.0004	0.05	± 0.0022	P
		10.00	10.009	-0.009	0.05	± 0.022	P
	Rb	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
		10.00	10.011	-0.011	0.07	± 0.022	P
		100.0	100.05	-0.05	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0007	-0.0007	0.05	± 0.0022	P
		10.00	10.006	-0.006	0.05	± 0.022	P
	Rc	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
		10.00	10.013	-0.013	0.07	± 0.022	P
		100.0	100.04	-0.04	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0008	-0.0008	0.05	± 0.0022	P
		10.00	10.004	-0.004	0.05	± 0.022	P



广州力赛计量检测有限公司

GUANGZHOU LISAI CALIBRATION AND TESTING CO.,LTD

证书编号:

Certificate No.



中国合格评定
国家认可委员会
CALIBRATION
04811717

1WA21111810545-0001

2. 电阻测量(Resistance Measurement):

测量电流 Test Current	相序 Phase	标准值 Reference	指示值 Indicated	误差 Error	不确定度 Uncertainty	允许误差 (MPE)	结论 (Conclusion)
(A)	Rb	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
20		10.00	10.005	-0.005	0.07	± 0.022	P
		100.0	100.04	-0.04	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0006	-0.0006	0.05	± 0.0022	P
		10.00	10.008	-0.008	0.05	± 0.022	P
		(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
	Rb	10.00	10.014	-0.014	0.07	± 0.022	P
		100.0	100.06	-0.06	0.07	± 0.22	P
		(Ω)	(Ω)	(Ω)	(%)	(Ω)	
		1.000	1.0003	-0.0003	0.05	± 0.0022	P
		10.00	10.009	-0.009	0.05	± 0.022	P
		(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)	
Rc	10.00	10.008	-0.008	0.07	± 0.022	P	
	100.0	100.06	-0.06	0.07	± 0.22	P	
	(Ω)	(Ω)	(Ω)	(%)	(Ω)		
	1.000	1.0004	-0.0004	0.05	± 0.0022	P	
	10.00	10.013	-0.013	0.05	± 0.022	P	
	(mΩ)	(mΩ)	(mΩ)	(%)	(mΩ)		

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.测量结果扩展不确定度 (Expanded uncertainty of the measurement results)

k=2

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