

CALIBRATION CERTIFICATE

Certificate No.



J202607276787A-0004-G1

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Client

Servico Nacional de Aprendizagem Industrial

Contact Inf.

Av. Assis Brasil, 8787 Bairro Sarandi, ZIP CODE 91140-001, Porto Alegre - RS, Brasil

Description

Artificial Mains Networks

Manufacturer

LISUN GROUP

Model/Type

LIS-TEMI-100A

Receipt Date

2026-08-01

Y M D

Serial No.

SO20260331A07

Cal. Date

2026-08-01

Y M D

Asset No.

Issued Date

2026-08-01

Y M D

Approved by

李文兴

li wen xing

Inspected by

张勇

zhang yong

Calibrated by

曾德胜

zeng de sheng

(Stamp)

Headquarters Add.:

No.8, Chuangyun Road, Shiqi Town, Panyu District, Guangzhou, Guangdong, China

Add.of the Lab:

No.8, Chuangyun Road, Shiqi Town, Panyu District, Guangzhou, Guangdong, China

Tel.:400-602-0999

Postcode:511450

Website:http:// www.grgtest.com

E-mail:grgtest@grgtest.com



Scan

CheckCode: 014268

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1.The quality system is in accordance with ISO/IEC 17025:2017,the calibration results are traceable to the International System of Units (SI).

2.The result is only valid for the calibrated sample.The certificate shall not be reproduced except in full,without the written approval of our laboratory .please feedback to us within 15 days if you have any question.

3.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.The modified certificate shall be based on the client content.

4.MPE & judgement result in the datasheet is only for reference , "P" is "Pass" , "F" is "Fail" and "N/A" is "Not Applicable".Whereas users should evaluate the effects of MU of calibration results on conformance assessment by actual measurement.

5.The traceability date of this instrument is the calibration date on this certificate.

6.Place and environmental conditions of the calibration:

Place: Room 703, BuildingA4, HuanchuangEnterprise Plaza,Yuelu District,Changsha

Temperature: 22.5℃

Relative Humidity: 55%

7.Suggested calibration interval is 1 year or it can be altered depending on the actual usage of the user.

8.Reference document and accredited scope by CNAS for calibration, beyond which isn't accredited. Please see the attachment of certificate on CNAS website for details.

CISPR 16-1-2:2017无线电骚扰和抗扰度测量仪器和方法规范 第1-2部分:无线电骚扰和抗扰度测量设备 传导骚扰测量的耦合装置(人工电源网络)Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurement(Artificial mains network) 阻抗: (0.1~180) Ω (9kHz~1000MHz) 分压系数: (0~60) dB 相角: (-90~90) $^\circ$ (9kHz~1000MHz) 隔离度: (0~120)dB
JJF1705-2018人工电源网络校准规范 (C.S. for Artificial Mains Networks) 阻抗: (0.1~180) Ω (9kHz~1000MHz) 分压系数: (0~60) dB 相位: (-90~90) $^\circ$ 隔离度: (0~120)dB

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9. Main Standards of Measurement Used in the Calibration.:

Description	Serial No.	Certificate No./ Due Date	Traceability Institute	Technique Character
Network analyzer calibration kit	MY53202900	J202507246592- 0059 2026-08-18	广电计量检测集 团股份有限公司	(0.009~9000) MHz, $U=0.020 (k=2)$
Network analyzer	MY49812157	J202605220046- 0054 2027-06-11	广电计量检测集 团股份有限公司	频率: 5Hz~3GHz; 动态范围 120dB; 迹线噪声0.005dB

10.Measurement traceability declaration.:

网络分析仪校准件(MY53202900)→网络分析仪/ Network Analyzer(MY49609241)→检验件 (2815A00996)
→S参数标准装置 (中国计量科学研究院/NIM);
网络分析仪(MY49812157)→网络分析仪校准件(MY53202900)→网络分析仪/ Network
Analyzer(MY49609241)→检验件 (2815A00996) →S参数标准装置 (中国计量科学研究院/NIM);

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、电压分压系数
Voltage Division Factor

频率 Frequency (MHz)	分压系数 Division Factor (dB)	不确定度 $U(k=2)$ (dB)
0.10	0.18	0.24
0.15	0.17	0.24
0.2	0.17	0.24
0.3	0.16	0.24
0.4	0.16	0.24
0.5	0.16	0.24
0.7	0.16	0.24
1.0	0.16	0.24
1.5	0.17	0.24
2.0	0.17	0.24
2.5	0.17	0.24
3	0.18	0.24
4	0.19	0.24
5	0.20	0.24
7	0.23	0.24
10	0.30	0.24
15	0.46	0.24
20	0.66	0.24
30	1.16	0.24
50	2.34	0.24
100	5.27	0.24

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3、阻抗

Impedance

频率 Frequency (MHz)	标称值 Nominal (Ω)	实测值 Measured (Ω)	不确定度 $U_{rel}(k=2)$ (%)	允许值 Limit (Ω)	结论 Conclusion (Pass/Fail)
0.10	/	3.10	1.3	/ ~ /	/
0.15	4.70	4.62	1.3	3.76 ~ 5.64	P
0.2	6.19	6.13	1.3	4.95 ~ 7.43	P
0.3	9.14	9.07	1.3	7.31 ~ 10.97	P
0.5	14.75	14.58	1.3	11.80 ~ 17.70	P
0.7	19.82	19.49	1.3	15.86 ~ 23.78	P
1.0	26.24	25.62	1.3	20.99 ~ 31.49	P
2.0	38.83	37.38	1.3	31.06 ~ 46.60	P
3.0	43.98	42.11	1.3	35.18 ~ 52.78	P
5	47.56	45.32	1.3	38.05 ~ 57.07	P
7	48.71	46.24	1.3	38.97 ~ 58.45	P
10	49.35	46.52	2.5	39.48 ~ 59.22	P
15	49.71	46.25	2.5	39.77 ~ 59.65	P
20	49.84	45.95	2.5	39.87 ~ 59.81	P
30	49.93	44.95	2.5	39.94 ~ 59.92	P
50	49.97	45.19	2.5	39.98 ~ 59.96	P
100	49.99	49.54	2.5	39.99 ~ 59.99	P

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4、阻抗相角

Impedance Phase

频率

实测值

不确定度

Frequency

Measured

$U(k=2)$

(MHz)

(°)

(°)

0.10

85.2

3.5

0.15

83.5

3.5

0.2

81.7

3.5

0.3

78.2

3.5

0.5

71.4

3.5

1.0

56.7

3.5

2.0

37.6

3.5

3

27.1

3.5

5

16.6

3.5

7

11.5

3.5

10

7.5

3.5

15

4.3

3.5

20

2.9

3.5

30

2.0

3.5

50

2.9

3.5

100

1.9

3.5

备注:

Notes:

结论 (Conclusion): 所校项目符合技术要求

1.本报告中的扩展不确定度是由标准不确定度乘以包含概率约为95%时的包含因子 k 。

The expanded uncertainty is given in the report by the standard uncertainty multiplied by the probability of about 95% when the factor k .

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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