



中国认可
国际互认
校准
CALIBRATION
CNAS L1093

威凯检测技术有限公司计量中心

Vkan Certification & Testing Co.,Ltd Measuring Center

机械工业第三计量测试中心站（广州）

Third Measuring & Testing Center Station Under Machinery Industry(GuangZhou)

校准证书

CALIBRATION CERTIFICATE

证书编号:

Certificate No.



W0812030978-001

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委托单位 Applicant

名称:

Name

地址:

Address

计量器具 Measuring instruments

名称:

Name

型号规格:

Model/Type

编号:

Serial No.

制造商:

Manufacturer

Impulse Voltage Generator

LSG-255

PG2009LSG01

Pego Group (HK) Company Limited

接收日期

Date of receipt

2020

年

09

月

29

日

Year

Month

Day

校准日期

Date of calibration

2020

年

10

月

14

日

Year

Month

Day

签发日期

Date of issue

2020

年

10

月

15

日

Year

Month

Day

批准

Approved by

核验

Inspected by

校准

Calibrated by



发证单位(专用章)

Issued by (stamp)

地址(Add): 中国广州科学城开泰大道天泰一路3号

No.3 Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou P. R. China

电话(Tel): 020-32293902 32293896 传真(Fax): 020-32293902

邮编(Post Code): 510663

网址(Http): www.cvc.org.cn

Email: cvcjz@cvc.org.cn



说明 DIRECTIONS



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1. 本中心是中国机械工业联合会在广州设立的计量校准机构, 证书号为: 机量(2018) 03 号。也是经中国合格评定国家认可委员会认可的校准实验室, 证书号为: CNAS L1093。

This laboratory is the metrology and calibration institution set up by the China Machinery Industry Federation in Guangzhou. The certificate number is (2018) 03. This laboratory is also accredited by China National Accreditation Service for Conformity Assessment (CNAS). The certificate number is CNAS L1093.

2. 本中心所出具的数据可溯源到国家计量基准或社会公用计量标准。

The data issued by this laboratory are traced to national primary standards or the public metrological standards.

3. 本次校准的环境条件:

Environmental conditions in the calibration

地 点: 本中心实验室 (The central laboratory)
place

温 度: 20 °C 相对湿度: 55 %
Temperature R.H.

4. 本次校准参考的技术文件:

Reference documents for the calibration

JJG238-2018 时间间隔测量仪检定规程

V. R. of Digital Time Interval Meters

JJP(电子)30803-2007 电浪涌发生器校准规范

Galibration Specifications of Electrical Surge Generator

5. 本次校准所使用的主要工作标准:

Main working standards used in the calibration

仪器名称/型号 Name of working standards / Model	机身号 Serial No.	技术特征 Technical characteristics	溯源机构 Traceability institution	证书号/有效期 Certificate No./ Due date
数字荧光示波器 Digital phosphor oscilloscope DPO4054	B010407	$\pm 1.5\%$	广东省计量科学研究院	WWM202000053 2021-02-16
高压探头 High voltage probe P6015A	C070555	$\pm 3.0\%$	广东省计量科学研究院	WWM201900963 2020-11-12
电子秒表 Electronic stopwatch HS-3(V)	ZH-00292-3-GZ	分辨力: 0.01 s Resolution: 0.01 s	威凯检测技术有限公司计 量中心	W0812023764-001 2020-11-28

注: 1 证书无校准单位公章无效。

Note: The certificate is invalid without the official stamp of our laboratory.

2 本证书的校准结果仅对所校准样品有效, 并且只与受校准的项目有关。

The results of the certificate is valid to the calibrated sample, and relate only to the items calibrated.

3 未经本中心书面批准, 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.

4 带“★”项为未经CNAS认可的项目。

“★” item cannot be accredited by CNAS.



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- 1 外观及工作正常性检查: 符合要求
Appearance and Functions checked: Pass

- 2 开路脉冲电压的校准:
Calibration of Open Pulse Voltage:

耦合方式 Coupling	设定值 Set Value	实测值 Measured Value	误差 Error	允许误差 MPE	结论 Conclusion
(Ω)	(kV)	(kV)	(kV)	(kV)	(Pass/Fail)
2	0.5	0.510	-0.010	± 0.05	Pass
	1.0	1.019	-0.019	± 0.10	Pass
	2.0	2.028	-0.028	± 0.20	Pass
	5.0	5.150	-0.150	± 0.50	Pass
	8.0	8.247	-0.247	± 0.80	Pass
	10.0	10.30	-0.30	± 1.00	Pass
	12.0	12.27	-0.27	± 1.20	Pass
	-12.0	-12.20	-0.20	± 1.20	Pass
500	0.5	0.493	+0.007	± 0.05	Pass
	1.0	0.970	+0.021	± 0.10	Pass
	2.0	2.044	-0.044	± 0.20	Pass
	5.0	5.210	-0.210	± 0.50	Pass
	8.0	8.289	-0.289	± 0.80	Pass
	10.0	10.29	-0.29	± 1.00	Pass
	12.0	12.32	-0.32	± 1.20	Pass
	-12.0	-12.30	-0.30	± 1.20	Pass

- 3 开路脉冲电压波前时间的校准:
Calibration of Open Circuit Pulse Voltage Wave Front Time:

耦合方式 Coupling	电压 Voltage	标称值 Nominal Value	实测值 Measured Value	误差 Error	允许误差 MPE	结论 Conclusion
(Ω)	(kV)	(μ s)	(μ s)	(μ s)	(μ s)	(Pass/Fail)
2	0.5	1.2	1.40	-0.20	± 0.36	Pass
	1.0	1.2	1.33	-0.13	± 0.36	Pass
	2.0	1.2	1.34	-0.14	± 0.36	Pass
	5.0	1.2	1.30	-0.10	± 0.36	Pass
	8.0	1.2	1.33	-0.13	± 0.36	Pass
	10.0	1.2	1.31	-0.11	± 0.36	Pass
	12.0	1.2	1.30	-0.10	± 0.36	Pass
	-12.0	1.2	1.30	-0.10	± 0.36	Pass



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耦合方式	电压	标称值	实测值	误差	允许误差	结论
Coupling	Voltage	Nominal Value	Measured Value	Error	MPE	Conclusion
(Ω)	(kV)	(μs)	(μs)	(μs)	(μs)	(Pass/Fail)
500	0.5	1.2	1.38	-0.18	±0.36	Pass
	1.0	1.2	1.35	-0.15	±0.36	Pass
	2.0	1.2	1.34	-0.14	±0.36	Pass
	5.0	1.2	1.32	-0.12	±0.36	Pass
	8.0	1.2	1.34	-0.14	±0.36	Pass
	10.0	1.2	1.31	-0.11	±0.36	Pass
	12.0	1.2	1.31	-0.11	±0.36	Pass
	-12.0	1.2	1.32	-0.12	±0.36	Pass

4 开路脉冲电压半波时间的校准:

Calibration of Open Circuit Pulse Voltage Half Wave Time:

耦合方式	电压	标称值	实测值	误差	允许误差	结论
Coupling	Voltage	Nominal Value	Measured Value	Error	MPE	Conclusion
(Ω)	(kV)	(μs)	(μs)	(μs)	(μs)	(Pass/Fail)
2	0.5	50	50.0	0.0	±15.0	Pass
	1.0	50	51.0	-1.0	±15.0	Pass
	2.0	50	52.0	-2.0	±15.0	Pass
	5.0	50	50.0	0.0	±15.0	Pass
	8.0	50	52.0	-2.0	±15.0	Pass
	10.0	50	51.0	-1.0	±15.0	Pass
	12.0	50	50.0	0.0	±15.0	Pass
	-12.0	50	51.0	-1.0	±15.0	Pass
500	0.5	50	53.0	-3.0	±15.0	Pass
	1.0	50	50.0	0.0	±15.0	Pass
	2.0	50	53.0	-3.0	±15.0	Pass
	5.0	50	51.0	-1.0	±15.0	Pass
	8.0	50	51.0	-1.0	±15.0	Pass
	10.0	50	50.0	0.0	±15.0	Pass
	12.0	50	50.0	0.0	±15.0	Pass
	-12.0	50	51.0	-1.0	±15.0	Pass



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5 间隔时间的校准:

Calibration of Interval Time:

设定值 Set Value	实测值 Measured Value	误差 Error	允许误差 MPE	结论 Conclusion
(s)	(s)	(s)	(s)	(Pass/Fail)
5	5.07	-0.07	± 0.25	Pass
30	30.11	-0.11	± 1.50	Pass
60	60.15	-0.15	± 3.00	Pass

说明(Note):

1 测量结果的扩展不确定度(The expanded uncertainty related to measurd result):

脉冲电压(Pulse Voltage): $U_{rel}=3.5\%$;

脉冲电压波前时间(Pulse Voltage Wave Front Time): $U_{rel}=5.5\%$;

脉冲电压半波时间(Pulse Voltage Half Wave Time): $U_{rel}=5.5\%$;

间隔时间(Interval Time): $U=2s$;

包含因子(Coverage factor): $k=2$

2 本次校准参考技术依据(Reference documents for the calibration) IEC61180-1。

3 复校时间间隔, 建议不超过壹年(The interval of calibration is advised to be within one year)。