



中国认可
国际互认
校准
CALIBRATION
CNAS L6025



机量(2021)10号

Measurement and Testing Center of Shanghai Electric Tool Research Institute (Group) Co., Ltd.
The Tenth Metering and Measuring Center Station of Mechanical Industry (Shanghai)

证书编号: 2023-C-05953

Certificate No.

上海电动工具研究所(集团)有限公司计量测试中心 机械工业第十计量测试中心站(上海) 校准证书

CALIBRATION CERTIFICATE

委托者

Customer

Intertek USA

委托者地址

Add. of Customer

40 51st Way NE, Suite 100, Fridley, MN 55421

委托书编号

Order Number

2023-06023

器具的名称

Description of Instrument

6工位电源线弯曲试验机

6 Station Power Cord Bending Tester

制造厂商

Manufacturer

上海力汕

LISUN GROUP

型号/规格

Model/Type

SW-6

器具编号

Number of Instrument

SOLS20230022-A1

受样日期

Date of Sampling

2023. 03. 31

受样方式/地点

Way & Place of Sampling

现场

On site

签发人

Approved by

校核员

Checked by

校准员

Calibrated by

机构校准专用章

Stamp

校准专用章

发布日期

Date for issued

2023

年

04

月

04

日

Year

Mouth

Day

地址: 上海市桂箐路 19 号

Address: No. 19 Guiqing Rd., Shanghai

电话: (021)64314612 (021) 64331431

Tel:

传真: (021)64331130

Fax:

邮编: 200233

Post Code:

本证书提供的结果仅对本次被校的样品有效。

It's effect that the result of this certificate only for the sample(s) Calibrated.

本实验室获中国合格评定国家认可委员会认可。认可证书编号为: L6025

SETRI has been accredited by China National Accreditation Service for Conformity Assessment. The number of the Certificate is L6025

本站机构认定资质证书编号: 机量(2021)10号

The approval quality certificate no. of this station: mechanical measure(2021)No. 10



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1. 校准依据

Calibration Specification

SETRI/JJF 004-2022 电缆试验机校准规范; SETRI/JJF067-2022 动作次数计数器校准规范;
Specification of Calibration for Cable Tester Specification of Calibration for Operating-times Counter
SETRI/JJF070-2022 耐久性操作机构校准规范; JJG1112-2015 继电保护测试仪检定规程
Specification of Calibration for Endurance Test Equipment Verification Regulation of Testers for Relaying Protection

2. 本次校准所使用的主要计量标准器(组):

Main standards of measurement used in this calibration

| 名称 Name | 型号 Type | 出厂编号 Ex-factory No. | 测量范围 Measuring range | 准确度/等级 Accuracy/Class | 溯源机构名称 Name of traceability institution | 证书编号/ 有效期限 Certificate No/ Due Date |
|--|----------------|------------------------|-------------------------|---|--|--|
| 数字多用表 Digital multi-meter | 8845A | E-17-272 | ACI: 0~10A | ACI: $\pm(0.10\% \text{读数} + 0.04\% \text{量程})$ ACI: $\pm(0.10\% \text{reading} + 0.04\% \text{range})$ | SIMT | 2022F11-10-41 47441001 2023. 09. 27 |
| 钢卷尺 Steel tape | GW-366-5(0~3m) | L-17-051 | 0~3m | II级 II Grade | SIMT | 2022G10-20-39 79527001 2023. 07. 06 |
| 电流互感器 Current Transformer (1000A/5A) | HL-10A-5 | E-17-213(2) | 5A/5A~1000A/5A | 0.01级 0.01 Grade | SIMT | 2021F12-20-34 94926001 2023. 08. 26 |
| 游标万能角尺 Casting universal angle ruler | II | L-01-016 | 0~360° | 5' | SIMT | 2022G10-10-37 86048001 2024. 01. 27 |
| 转速频率仪(频率) Speed frequency meter (frequency) | GZCY-1A | S-17-043 | 0~999999 | 1×10^{-6} | SIMT | 2022F34-10-39 02238001 2023. 06. 09 |
| 秒表 Stopwatch timer | JD-3B | S-01-019 | 0~9 h 59 min 59.99s | $\pm(5.8 \times 10^{-6} \times T + 0.01) \text{ sT}$: 被测时段 $\pm(5.8 \times 10^{-6} \times T + 0.01) \text{ sT}$: Test period | SIMT | 2022F34-20-39 79523001 2023. 07. 06 |

以上计量标准器具的量值溯源至国家基准/测量标准。

Quantity values of above measurement standards used in this calibration are traced to the national primary standards of People's R. China/national measurement standards.

3. 校准的日期、地点、环境条件:

Place, time and environmental condition of this calibration

校准日期: 2023 年 03 月 31 日

Date for calibrated

地点: 上海市嘉定区沪宜公路 1101 号南翔智地越界产业园 1 幢 113

Place: 113-114, No. 1 Building, Nanxiang Zhidi Industry Park, No. 1101, Huyi Road, Jiading District, 201802, Shanghai, China

温度: 21°C

湿度: 53%RH

其它: /

Temp

R.H.

Others

4. 其它:

本次校准只对所给数据有效。

Other

The calibration results presented in this report relate only to the item calibrated.



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校准结果/说明

Instructions / Results of Calibration

一、外观及工作正常性检查: 正常

Appearance and work normal examination: normal

二、摆动角测量:

Swing angle measurement

设定值: 45°

Set value

| | 左摆动角测量值 Left swing angle measurement value | 右摆动角测量值 Right swing angle measurement value | 测量不确定度 Measurement uncertainty $U(k=2)$ |
|--------------------|--|---|--|
| 工位 1 Position 1 | 45° 5' | 45° 10' | 8' |
| 工位 2 Position 2 | 44° 55' | 45° 15' | 8' |
| 工位 3 Position 3 | 45° | 45° 15' | 8' |
| 工位 4 Position 4 | 44° 55' | 45° 15' | 8' |
| 工位 5 Position 5 | 45° 5' | 44° 45' | 8' |
| 工位 6 Position 6 | 45° 5' | 44° 45' | 8' |

设定值: 90°

Set value

| | 左摆动角测量值 Left swing angle measurement value | 右摆动角测量值 Right swing angle measurement value | 测量不确定度 Measurement uncertainty $U(k=2)$ |
|--------------------|--|---|--|
| 工位 1 Position 1 | 90° 5' | 90° 10' | 8' |
| 工位 2 Position 2 | 89° 55' | 90° 10' | 8' |
| 工位 3 Position 3 | 90° 5' | 89° 50' | 8' |
| 工位 4 Position 4 | 90° | 89° 55' | 8' |
| 工位 5 Position 5 | 90° 5' | 89° 45' | 8' |
| 工位 6 Position 6 | 90° | 89° 55' | 8' |

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二、摆动角测量: (续)

Swing angle measurement: (continued)

设定值: 180°

Set value

| | 左摆动角测量值 Left swing angle measurement value | 右摆动角测量值 Right swing angle measurement value | 测量不确定度 Measurement uncertainty $U(k=2)$ |
|--------------------|--|---|--|
| 工位 1 Position 1 | 179° 55' | 180° 15' | 8' |
| 工位 2 Position 2 | 180° 5' | 180° 10' | 8' |
| 工位 3 Position 3 | 180° 5' | 179° 50' | 8' |
| 工位 4 Position 4 | 180° 5' | 179° 50' | 8' |
| 工位 5 Position 5 | 180° 10' | 179° 45' | 8' |
| 工位 6 Position 6 | 180° 5' | 180° 10' | 8' |

三、弯曲周期测量:

Bending cycle measurement

| 标称值 (s) nominal value | $T_{\text{弯}}(s)$ | 周期测量值 (s) Cycle measurement value | 测量不确定度 Measurement uncertainty $U(k=2)$ |
|--------------------------|-------------------|--------------------------------------|---|
| 1 | 90.1 | 1.0 | 0.3s |
| 2 | 180.2 | 2.0 | 0.3s |
| 3 | 270.1 | 3.0 | 0.3s |

注: 弯曲周期测量值 $t_{\text{弯}} = T_{\text{弯}}/90$, 其中 $T_{\text{弯}}$ 为动作 (计数器读数) 180 次所用时间。

Note: The measurement value of the bending cycle $t_{\text{curved}} = T_{\text{Bend}}/90$. Among them, T_{curved} is the use of 180 times (counting readers).

四、动作次数计数值校准:

Calculation of the number of action times

| 设定值 (次) Set value | 示值 (次) Show value (times) | 测量值 (次) Measurement value (times) | 测量不确定度 Measurement uncertainty $U(\text{次})(k=2)$ |
|----------------------|------------------------------|--------------------------------------|---|
| 100 | 100 | 100 | 1 |
| 1000 | 1000 | 1000 | 2 |

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机量 (2015) 10号

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五、砝码质量校准:

Weight quality calibration

| 标称值 (g) nominal value | 工位 Position | 测量值 (g) Measurement value | 测量不确定度 Measurement uncertainty $U(k=2)$ |
|--------------------------|--------------------|------------------------------|---|
| 510 | 工位 1 Position 1 | 508 | 2g |
| | 工位 2 Position 2 | 509 | 2g |
| | 工位 3 Position 3 | 512 | 2g |
| | 工位 4 Position 4 | 511 | 2g |
| | 工位 5 Position 5 | 510 | 2g |
| | 工位 6 Position 6 | 512 | 2g |
| 1020 | 工位 1 Position 1 | 1018 | 2g |
| | 工位 2 Position 2 | 1022 | 2g |
| | 工位 3 Position 3 | 1019 | 2g |
| | 工位 4 Position 4 | 1021 | 2g |
| | 工位 5 Position 5 | 1019 | 2g |
| | 工位 6 Position 6 | 1020 | 2g |
| 2040 | 工位 1 Position 1 | 2043 | 2g |
| | 工位 2 Position 2 | 2042 | 2g |
| | 工位 3 Position 3 | 2038 | 2g |
| | 工位 4 Position 4 | 2042 | 2g |
| | 工位 5 Position 5 | 2039 | 2g |
| | 工位 6 Position 6 | 2042 | 2g |

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六、 电流校准:

Current calibration:

| 示值 (A) Show value | 工位 Position | 测量值 (A) Test value | 测量不确定度 Measurement uncertainty $U_{rel} (k=2)$ |
|----------------------|--------------------|-----------------------|--|
| 1.00 | 工位 1 Position 1 | 1.00 | 0.24% |
| | 工位 2 Position 2 | 1.00 | 0.24% |
| | 工位 3 Position 3 | 1.00 | 0.24% |
| | 工位 4 Position 4 | 1.00 | 0.24% |
| | 工位 5 Position 5 | 1.00 | 0.24% |
| | 工位 6 Position 6 | 1.00 | 0.24% |
| 2.00 | 工位 1 Position 1 | 2.00 | 0.24% |
| | 工位 2 Position 2 | 2.00 | 0.24% |
| | 工位 3 Position 3 | 2.00 | 0.24% |
| | 工位 4 Position 4 | 2.00 | 0.24% |
| | 工位 5 Position 5 | 2.00 | 0.24% |
| | 工位 6 Position 6 | 2.00 | 0.24% |
| 5.00 | 工位 1 Position 1 | 5.00 | 0.24% |
| | 工位 2 Position 2 | 5.00 | 0.24% |
| | 工位 3 Position 3 | 5.00 | 0.24% |
| | 工位 4 Position 4 | 5.00 | 0.24% |
| | 工位 5 Position 5 | 5.00 | 0.24% |
| | 工位 6 Position 6 | 5.00 | 0.24% |

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六. 电流校准: (续)

Current calibration : (continued)

| 示值 (A) SE Show value | 工位 Position | 测量值 (A) Test value | 测量不确定度 Measurement uncertainty $U_{rel} (k=2)$ |
|-------------------------|--------------------|-----------------------|--|
| 10.00 | 工位 1 Position 1 | 9.98 | 0.24% |
| | 工位 2 Position 2 | 10.02 | 0.24% |
| | 工位 3 Position 3 | 10.01 | 0.24% |
| | 工位 4 Position 4 | 9.97 | 0.24% |
| | 工位 5 Position 5 | 10.00 | 0.24% |
| | 工位 6 Position 6 | 10.01 | 0.24% |
| 20.00 | 工位 1 Position 1 | 19.98 | 0.24% |
| | 工位 2 Position 2 | 19.99 | 0.24% |
| | 工位 3 Position 3 | 20.01 | 0.24% |
| | 工位 4 Position 4 | 20.02 | 0.24% |
| | 工位 5 Position 5 | 19.98 | 0.24% |
| | 工位 6 Position 6 | 20.02 | 0.24% |

校准结果内容结束

The end

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