



华标计量检测（深圳）有限公司

HUA BIAO JI LIANG JIAN CE (SHEN ZHEN) YOU XIAN GONG SI

校准证书

CALIBRATION CERTIFICATE



中国认可
国际互认
校准
CALIBRATION
CNAS L12368



证书编号
Certificate No.

HB202541919149

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委托方
Client

长沙中科智联科技有限公司 Changsha Zoko Link Technology Co., Ltd.

委托方地址
Address

湖南省长沙市岳麓区岳麓街道后湖艺术园D区 District D, Houhu
Industrial Park, Yuelu District, Changsha City, Hunan Province,
China

仪器名称
Description

超声波集成传感器 Ultrasonic Integrated Sensor

型号规格
Model/Type

NBL-W-71GUWS

制造厂
Manufacturer

长沙中科智联科技有限公司 Changsha Zoko Link Technology Co., Ltd.

出厂编号
Serial No.

2025110508

管理编号
Asset No. /

样品接收日期
Date of Receipt

2025-11-05

校准日期
Date of Calibration

2025-11-06

批准人：
Approved Signatory

程伟才

审核：
Inspected by

吴玄德

校准：
Tested by

宁亮



地址：广东省深圳市宝安区新玉路48号801室

Add: Room 801, No. 48 Xinyu Road, Bao'an District, Shenzhen City Guangdong Province

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- 1.本实验室出具的数据均可溯源至国家计量基准。
(All data issued by ZD Test are traced to National Primary Standards.)
- 2.本结果仅对当次被测样品有效，如有疑问请在15个工作日反馈。
(The results is ONLY valid for the tested sample,please feedback to us within 15 working days if you have any question.)
- 3.本证书编号具有唯一性，若替换证书，自发出后原证书即可作废。
(Each certificate has a unique number.If replaced the certificate,the original certificate will be invalid once the new certificate number is issued.)
- 4.证书中如有最大允许误差、判定结果，仅供参考，其中“P”代表“Pass”，“F”代表“Fail”。
(In the datasheet,MPE & determination is only for reference,"P"represents"Pass"and"F"represents"Fail".)
- 5.本次校准的技术依据及获认可的能力范围，超出范围的内容未被认可。
(Reference documents and Accredited Scopes for Calibration,Beyond the Scope has not been accredited):

参照 JJG 613-1989《电接风向风速仪检定规程》《Verification Regulations for Electric Wind Direction and Velocity Meters》、JJF1076-2020《数字式温湿度计校准规范》《Calibration specification for digital temperature and humidity meters》、JJG272-2007《空盒气压表和空盒气压计检定规程》《Verification Regulations for Empty Box Barometers and Empty Box Barometers》

- 6.本次校准使用的主要测量标准 (Main Standards of Measurement Used in the Calibration.):

名称/型号 Description/Model	编号 Serial No.	证书号 Certificate No.	有效期至 Due Date	技术特征 Technique Character
标准铂电阻温度计	172323	20250312542	2026-03-11	二等
数字压力表	211H18BD0045	20250228155	2026-02-27	0.1级
皮托管	B12	20250905186	2026-09-04	K=0.998
热式风速计	501479	20251105318	2026-11-04	$U = (0.021 \sim 0.040) \text{ m/s}, k=2$
差压传感器 (数字压力计)	120072	20241220155	2025-12-19	$U_{\text{rel}}=0.1\%, k=2$

- 7.校准地点、环境条件 (Place and environmental conditions of the calibration)

地点	本公司实验室	温度	22°C	相对湿度	55%
Place		Temperature		Relative Humidity	

- 8.建议复校时间间隔：12 个月，送检单位可根据实际情况自主决定。
Suggested calibration interval is 12 month or it can be altered depending on the actual usage of the user.



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1、外观及各部分功能相互作用(Appearance & Interaction of parts): 正常(Normal)

2、风速示值校准(Wind speed indication calibration):

风速点 Wind speed point	标准风速值 Standard wind speed value	风速示值 Wind speed indication	修正值 Correction value	允差 Allowable deviation	结论 Conclusion
6m/s	6.00m/s	6.02m/s	0.02m/s	±2.1m/s	P
10m/s	10.00m/s	10.03m/s	0.03m/s	±2.1m/s	P
20m/s	20.00m/s	20.05m/s	0.05m/s	±2.1m/s	P
30m/s	30.00m/s	30.08m/s	0.08m/s	±2.1m/s	P
40m/s	40.00m/s	40.11m/s	0.11m/s	±2.1m/s	P
50m/s	50.00m/s	50.12m/s	0.12m/s	±2.1m/s	P
60m/s	60.00m/s	60.18m/s	0.18m/s	±2.1m/s	P

3、风向示值校准(Wind direction indication calibration):

标准值 Standard value	示值 Indicated value	误差 Error	允差 MPE	结论 Conclusion
60°	61°	1°	±3°	P
180°	182°	2°	±3°	P
350°	352°	2°	±3°	P

4、温度示值校准(Temperature indication calibration):

校准点 Calibration point	标准值 Standard value	示值 Indication value	修正值 Correction value	允差 MPE	结论 Conclusion
10°C	10.001°C	10.1°C	-0.1°C	±0.5°C	P
30°C	30.002°C	30.1°C	-0.1°C	±0.5°C	P
50°C	50.001°C	50.2°C	-0.2°C	±0.5°C	P

5、湿度示值校准(Humidity indication calibration):

校准点 Calibration point	标准值 Standard value	示值 Indication value	修正值 Correction value	允差 MPE	结论 Conclusion
40%RH	40.1%RH	40.3%RH	-0.2%RH	±5%RH	P
60%RH	60.2%RH	60.6%RH	-0.4%RH	±5%RH	P
80%RH	80.3%RH	80.7%RH	-0.4%RH	±5%RH	P



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6、气压示值校准(Calibration of Air Pressure Indication):

标准气压值 (hPa) Standard value	示值 (hPa) Indication value	温度系数修正值 (hPa) Temperature coefficient correction value	气压差值 Air pressure difference	技术要求 Technical requirement
859.84	860.90	0.69	-1.1	±1.5hPa
909.81	911.00	0.69	-1.2	±1.5hPa
959.83	960.90	0.69	-1.1	±1.5hPa
1009.81	1010.80	0.69	-1.0	±1.5hPa
1049.84	1050.80	0.69	-1.0	±1.5hPa
1009.81	1010.90	0.69	-1.1	±1.5hPa
959.83	960.90	0.69	-1.1	±1.5hPa
909.83	910.80	0.69	-1.0	±1.5hPa
859.83	860.90	0.69	-1.1	±1.5hPa

7、雨量示值校准(Rainfall indication calibration):

标准值 Standard value	示值 Indicated value	误差 Error	允差 MPE	结论 Conclusion
4mm/min	4.02mm/min	0.02mm/min	±10%	P
6mm/min	6.02mm/min	0.02mm/min	±10%	P
8mm/min	8.05mm/min	0.05mm/min	±10%	P

8、辐射示值校准(Radiation indication calibration):

标准值 Standard value	示值 Indicated value	误差 Error	允差 MPE	结论 Conclusion
500W/m ²	502W/m ²	2W/m ²	±10%	P
1000W/m ²	1005W/m ²	5W/m ²	±10%	P
1500W/m ²	1507W/m ²	7W/m ²	±10%	P

备注(Notes):

1.测量结果的扩展不确定度: $U_{rel}=0.5\%$, $k=2$

(Expanded uncertainty of measuring results)

2.依据: JJF 1059.1-2012 《测量不确定度评定与表示》。

In accordance with: JJF 1059.1-2012 Evaluation and Expression of Uncertainty in Measurement.

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