



Certificate of Calibration

Certificate No: D111111B0D11
Manufacturer: JSB TECH Pte Ltd
Model No: DWL4500XY
Serial No: S/N 11B11000

Date: 21st December 2022
Description: Dual Axis Compact Inclination
Sensor Module

Options Installed with Specifications: Temperature Compensated to -40° C to +85° C

Date of Calibration: 20th December 2022 (in storage: next cal.5 years)

Temperature: 20° C \pm 1 °C
Procedure: DP_4500XYV1V1/temp 382793093

Relative Humidity: 55 \pm 10 %RH

This certifies that the above product (s) was calibrated in compliance with ISO9001:2015 using applicable *Digi-Pas®* procedures. These calibration procedure and test points are those recommended in the procedure developed by *Digi-Pas®*.

As received: Factory tested

As Shipping Conditions: At the completion of the calibration, measure values were In-Specification at the points tested.

Remarks or Special Requirements: The product (s) bear a CE and/or FCC marks which is tested and certified by TÜV SÜD & PSB to comply with the EC and/or USA directives.

Traceability Information: Supporting document related to traceability is available for review by appointment. This report shall not be reproduced except in full, without prior written approval of the calibration facility.

Calibration Equipment Used:

Model Number

SH-240 S3
P3- KPI897803
GT-0401008
SB-283809
BG-516-946R-10
LL000076 & LL001230

Model Description

ESPEC -TAIBAI Temperature & Humidity Chamber
Digi-Pas® Reliability, Test & Evaluation Equipment
Mitutoyo Granite Table (Grade Zero)
Sine Bar
Mitutoyo Block Gauge (Grade Zero)
Digi-Pas® Precision Angle Jigs

Test/Inspection Report:

<u>Test Description</u>	<u>Specifications</u>	<u>Results</u>	<u>Judgments</u>
Resolution:	0.001° ($\leq 20\mu\text{m/M}$)	OK	PASS
Accuracy Cal:	$\pm 0.002^\circ$ (0.000 ⁰ ~ $\pm 2.000^\circ$) $\pm 0.004^\circ$ for other angles	$\pm 0.001^\circ$ $\pm 0.003^\circ$	PASS PASS
Repeatability:	$\pm 0.001^\circ$	$\pm 0.001^\circ$	PASS
Symmetrical Check:	$\pm 0.001^\circ$	$\pm 0.001^\circ$	PASS
Metal Base Surface Flatness:			
Base Surface:	8 μm	6 μm	PASS
Vertical Surface:	8 μm	7 μm	PASS
Metal Base Angle:	90° \pm 0.01°	90° \pm 0.01°	PASS
Operating Temp.:	-40° C to + 85° C	-40° C to + 85° C	PASS

The result of this Certificate of Calibration apply only to the item described above. All reported accuracy values are as measured with no reduction by the uncertainty of measurement. Measurement uncertainty is expresses at a confidence level of 95% (coverage factor k=2).



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Serial Number : S/N 11B11000

Uncertainty: ± 0.001

Units : Degrees

Single Axis:

Description	Standard	Lower Limit	Upper Limit	As Found
(+) SLOPE	0.000	-0.002	0.002	0.000
	1.003	1.001	1.005	1.003
	1.433	1.431	1.435	1.433
	2.006	2.002	2.010	2.007
	2.866	2.862	2.870	2.863
	5.020	5.016	5.024	5.022
	6.305	6.301	6.309	6.304
	8.056	8.052	8.060	8.055
	10.000	9.996	10.004	10.000
(-) SLOPE	0.000	-0.002	0.002	0.000
	1.003	1.001	1.005	1.003
	1.433	1.431	1.435	1.432
	2.006	2.002	2.010	2.006
	2.866	2.862	2.870	2.863
	5.020	5.016	5.024	5.021
	6.305	6.301	6.309	6.304
	8.056	8.052	8.060	8.056
	10.000	9.996	10.004	10.001

Dual Axis:

Description	Standard	Lower Limit	Upper Limit	As Found
X-axis				
(+) SLOPE	0.000	-0.002	0.002	0.000
	1.003	1.001	1.005	1.004
	1.433	1.431	1.435	1.434
	2.006	2.002	2.010	2.006
	2.866	2.862	2.870	2.865
	5.000	4.996	5.004	4.999
(-) SLOPE	0.000	-0.002	0.002	0.000
	1.003	1.001	1.005	1.003
	1.433	1.431	1.435	1.434
	2.006	2.002	2.010	2.005
	2.866	2.862	2.870	2.866
	5.000	4.996	5.004	5.000
Y-axis				
(+) SLOPE	0.000	-0.002	0.002	0.000
	1.003	1.001	1.005	1.002
	1.433	1.431	1.435	1.434
	2.006	2.002	2.010	2.009
	2.866	2.862	2.870	2.865
	5.000	4.996	5.004	4.997
(-) SLOPE	0.000	-0.002	0.002	0.000
	1.003	1.001	1.005	1.003
	1.433	1.431	1.435	1.433
	2.006	2.002	2.010	2.008
	2.866	2.862	2.870	2.865
	5.000	4.996	5.004	4.997

Checked by: _____

QA Engineer



Authorized by: _____

QA Manager

