



# Certificate of Calibration

**Certificate No:** D111111B0D03  
**Manufacturer:** JSB TECH Pte Ltd  
**Model No:** DWL5000XY  
**Serial No:** S/N 13B11111

**Date:** 1<sup>st</sup> January 2018  
**Description:** Dual Axis Precision Sensor Module  
with Vibrometer

**Options Installed with Specifications:** Temperature Compensated to -20° C to +70° C

**Date of Calibration:** 1<sup>st</sup> January 2018 (in storage: next cal. 5 years)

**Temperature:** 20° C ±1 °C  
**Procedure:** DP\_5000XYV1V1/temp 382793093

**Relative Humidity:** 55 ± 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  
MS-308405  
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)  
Starrett Master Square (Grade AA)  
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:	0.01° (±0.175mm/M)	OK	PASS
Accuracy Cal:	± 0.01° at 0° ~ ±2° ± 0.03° for other angles	± 0.01° ± 0.03°	PASS PASS
Repeatability:	±0.01°	±0.01°	PASS
Symmetrical Check:	±0.01°	±0.01°	PASS
Metal Base Surface Flatness:			
Base Surface:	8µm	6µm	PASS
Vertical Surface:	8µm	7µm	PASS
Metal Base Angle:	90°±0.01°	90°±0.01°	PASS
Operating Temp.:	-20° C to + 70° C	-20° C to + 70° C	PASS
Storage Temp.:	-30° C to + 80° C	-30° C to + 80° 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 expressed at a confidence level of 95% (coverage factor k=2).



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Uncertainty: ±0.01  
Units : Degrees

**Single Axis:**

Description	Standard	Lower Limit	Upper Limit	As Found
(+) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.11
	0.50	0.49	0.51	0.51
	1.00	0.99	1.01	1.00
	2.00	1.99	2.01	2.00
	15.00	14.97	15.03	15.01
	30.00	29.97	30.03	30.02
	45.00	44.97	45.03	45.01
	45.50	45.47	45.53	45.50
	46.00	45.97	46.03	46.01
	60.00	59.97	60.03	60.03
	90.00	89.97	90.03	90.00
(-) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.11
	0.50	0.49	0.51	0.51
	1.00	0.99	1.01	1.00
	2.00	1.99	2.01	1.99
	15.00	14.97	15.03	15.01
	30.00	29.97	30.03	30.01
	45.00	44.97	45.03	45.01
	45.50	45.47	45.53	45.51
	46.00	45.97	46.03	46.00
	60.00	59.97	60.03	60.02
	90.00	89.97	90.03	90.00

**Dual Axis:**

Description	Standard	Lower Limit	Upper Limit	As Found
X-axis				
(+) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.10
	0.50	0.49	0.51	0.50
	1.00	0.99	1.01	1.00
	1.50	1.49	1.51	1.50
	2.00	1.99	2.01	2.00
	5.00	4.97	5.03	5.00
	12.00	11.97	12.03	11.99
	15.00	14.97	15.03	15.01
(-) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.10
	0.50	0.49	0.51	0.50
	1.00	0.99	1.01	1.01
	1.50	1.49	1.51	1.49
	2.00	1.99	2.01	2.00
	5.00	4.97	5.03	5.01
	12.00	11.97	12.03	12.00
	15.00	14.97	15.03	15.01
Y-axis				
(+) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.10
	0.50	0.49	0.51	0.50
	1.00	0.99	1.01	1.00
	1.50	1.49	1.51	1.50
	2.00	1.99	2.01	2.01
	5.00	4.97	5.03	5.02
	12.00	11.97	12.03	12.01
	15.00	14.97	15.03	15.00
(-) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.10
	0.50	0.49	0.51	0.50
	1.00	0.99	1.01	1.00
	1.50	1.49	1.51	1.51
	2.00	1.99	2.01	2.00
	5.00	4.97	5.03	5.02
	12.00	11.97	12.03	12.00
	15.00	14.97	15.03	15.01

Checked by: \_\_\_\_\_

Wu Ping  
QA Engineer



Authorized by: \_\_\_\_\_

Kuu  
Manager

