## Digi-Pas®

#### JSBTECH Pte Ltd

20 Science Park Road, Teletech Park #02-03A, Singapore Science Park II, Singapore 117674 Tel: (65)67780640 www.jsbtech.com



## **Certificate of Calibration**

Certificate No: D000000B0D02 Date: 26<sup>th</sup> December 2012

Manufacturer: JSB TECH Description: Dual Axis Precision Digital Level &

Model No: DWL3000XY Vibrometer Serial No: S/N 00A00002

**Options Installed with Specifications:** Temperature Compensated to -10° C to + 50° C

**Date of Calibration:** 19<sup>th</sup> December 2012

**Temperature:**  $20^{\circ} \text{ C} \pm 1 ^{\circ} \text{C}$  **Relative Humidity:**  $55 \pm 10 \text{ }\% \text{RH}$ 

**Procedure:** DP\_3000XYV1V1/temp 382793093

This certifies that the above product (s) was calibrated in compliance with ISO9001:2008 using applicable  $Digi-Pas^{\otimes}$  procedures. These calibration procedure and test points are those recommended in the procedure developed by  $Digi-Pas^{\otimes}$ .

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 accept in full, without prior written approval of the calibration facility.

#### **Calibration Equipment Used:**

Model Number Model Description

SH-240 S3 ESPEC -TAIBAI Temperature & Humidity Chamber P3– KPI897803 Digi-Pas® Reliability, Test & Evaluation Equipment

GT-0401008 Mitutoyo Granite Table (Grade Zero) MS-308405 Starrett Master Square (Grade AA)

SB-283809 Sine Bar

BG-516-946R-10 Mitutoyo Block Gauge (Grade Zero)

#### **Test/Inspection Report:**

Test Description	Specifications	Results	<b>Judgments</b>
Resolution:	0.01° (±0.175mm/M)	OK	PASS
Accuracy Cal:	$\pm 0.01^{\circ}$ at $0^{\circ} \sim \pm 10^{\circ}$	± 0.01°	PASS
	$\pm 0.03^{\circ}$ for other angles	± 0.03°	PASS
Repeatability:	±0.01°	$\pm 0.01^{\rm o}$	PASS
Symmetrical Check:	±0.01°	±0.01°	PASS
Metal Base Surface Flatness	:		
Base Surface:	8µm	бµm	PASS
Vertical Surface:	8µm	7µm	PASS
Metal Base Angle:	$90^{\circ} \pm 0.01^{\circ}$	$90^{\circ} \pm 0.01^{\circ}$	PASS
Buzzer (Smart sensor):	>50dBA	63dBA	PASS
LCD display:	TFT LCD	OK	PASS
Operating Temp.:	$-10^{\circ}$ C to $+50^{\circ}$ C	$-15^{\circ}$ C to $+55^{\circ}$ C	PASS
Storage Temp.:	$-20^{\circ}$ C to $+70^{\circ}$ C	$-25^{\circ}$ C to $+75^{\circ}$ 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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Certificate No: D000000B0D02 Serial Number: S/N 00A00002 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	0.99
	2.00	1.99	2.01	2.01
	15.00	14.97	15.03	15.02
	30.00	29.97	30.03	29.99
	45.00	44.97	45.03	45.01
	45.50	45.47	45.53	45.48
	46.00	45.97	46.03	45.97
	60.00	59.97	60.03	60.00
	90.00	89.97	90.03	89.97
(-) 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	0.99
	2.00	1.99	2.01	2.01
	15.00	14.97	15.03	15.02
	30.00	29.97	30.03	29.99
	45.00	44.97	45.03	45.00
	45.50	45.47	45.53	45.47
	46.00	45.97	46.03	45.97
	60.00	59.97	60.03	60.00
	90.00	89.97	90.03	89.97

#### **Dual Axis:**

Description	Standard	Lower Limit	Upper Limit	As Found
X-axis				
(+) SLOPE	0.00	-0.01	0.01	0.00
0	0.10	0.09	0.11	0.09
	0.50	0.49	0.51	0.51
	1.00	0.99	1.01	1.01
200	1.50	1.49	1.51	1.50
400	2.00	1.99	2.01	2.01
	5.00	4.99	5.01	4.99
	10.00	9.99	10.01	10.00
70.0	15.00	14.97	15.03	15.03
			and the same of th	
(-) SLOPE	0.00	-0.01	0.01	0.00
	0.10	0.09	0.11	0.09
	0.50	0.49	0.51	0.51
	1.00	0.99	1.01	1.01
	1.50	1.49	1.51	1.50
	2.00	1.99	2.01	2.01
	5.00	4.99	5.01	4.99
2000	10.00	9.99	10.01	10.01
Carried Contract	15.00	14.97	15.03	15.03
Y-axis (+) SLOPE	0.00	-0.01	0.01	0.00
and the same of th	0.10	0.09	0.11	0.10
	0.50	0.49	0.51	0.49
	1.00	0.99	1.01	0.99
	1.50	1.49	1.51	1.50
	2.00	1.99	2.01	2.01
	5.00	4.99	5.01	4.99
	10.00	9.99	10.01	10.01
	15.00	14.97	15.03	14.98
(-) SLOPE	0.00	-0.01	0.01	0.00
():-	0.10	0.09	0.11	0.10
	0.50	0.49	0.51	0.49
	1.00	0.99	1.01	0.99
	1.50	1.49	1.51	1.50
	2.00	1.99	2.01	2.01
	5.00	4.99	5.01	4.99
	10.00	9.99	10.01	10.01
		14.97		14.99

Checked by: \_

Simon QA Engineer Authorized by: \_

Kuu Senior Engineer