



## CALIBRATION REPORT

Report No. : LL001317

Page 1 of 3

**Customer** : JSB Tech Pte Ltd  
20 Science Park Road  
Teletech Park, Unit 02-03A  
Singapore 117674

### Subject Details

Subject : A Digital Level  
Manufacturer : JSB Tech Pte Ltd  
Model : Digi Pas DWL-8500XY  
Serial Number : 11A20865  
Range : Single-Axis: 0" to  $\pm 14400$ "  
Dual-Axis: 0" to  $\pm 7200$ "

Sales Order No. : 2028011379/1  
Calibration Date : 2014-01-09

### Ambient Conditions

Temperature :  $(20 \pm 1)$  °C  
Relative Humidity :  $(50 \pm 10)$  % relative humidity

Rahman Ibrahim  
Calibration Officer

Tan Siew Leng (Ms)  
Approving Officer  
Optical Metrology

For further enquiries, please contact the calibration officer at Tel: +65 6279 1953, Fax: +65 6279 1994 or Email: rahman\_ibrahim@nmc.a-star.edu.sg

### **National Metrology Centre**

1 Science Park Drive Singapore 118221  
Tel: (65) 6279 1900 Fax: (65) 6279 1992  
Website: www.nmc.a-star.edu.sg

**Method of Calibration**

This digital level has been calibrated at the National Metrology Centre under the stated ambient conditions with reference to calibration procedure LS/NR/001 and the manufacture's manual on Guide for Self-Calibration and Test of Digi-Pas 2 Axis Ultra Precision Digital Level Utilizing Micrometer Sine Bar.

The calibration was carried out using a laser interferometer measurement system (serial no.: 3403A00338) and a precision small angle generator (serial no.: 137/1918 - LE6003) traceable to national reference standards maintained at the National Metrology Centre.

Reading up to 1000" was calibrated using laser interferometer and reading above 1000" was calibrated using small angle generator.

**Results of Calibration**

The results of calibration are shown on page 2 to 3 of this report.

**SINGLE AXIS**

Description	Set Standard (")	Lower Limit (")	Upper Limit (")	Level Reading (")	Expanded Measurement Uncertainty	Coverage Factor k
(+) Slope	0	-1	1	0	2	2.52
	5	4	6	5	1	2
	10	9	11	10	1	2
	15	14	16	15	1	2
	300	299	301	300	1	2
	1000	999	1001	1000	2	2
	5000	4997	5003	4999	1	2
	7000	6997	7003	7000	1	2
	12000	11997	12003	11999	2	2.52
(-) Slope	0	-1	1	0	1	2
	5	4	6	6	2	2.52
	10	9	11	10	1	2
	15	14	16	15	1	2
	300	299	301	301	2	2.37
	1000	999	1001	1000	2	2
	5000	4997	5003	4999	1	2
	7000	6997	7003	6999	1	2
	12000	11997	12003	11999	2	2.52

  
Calibration Officer

**Results of Calibration****DUAL AXIS**

Description	Set Standard (")	Lower Limit (")	Upper Limit (")	Level Reading (")	Expanded Measurement Uncertainty	Coverage Factor k
X- AXIS	0	-1	1	0	2	2.52
(+) Slope	5	4	6	5	1	2
	10	9	11	9	1	2
	15	14	16	14	1	2
	300	299	301	300	2	2.37
	1000	999	1001	1000	2	2
	5000	4997	5003	5001	2	2.52
	7000	6997	7003	7001	1	2
X-AXIS	0	-1	1	0	2	2.52
(-) Slope	5	4	6	5	1	2
	10	9	11	10	1	2
	15	14	16	15	1	2
	300	299	301	300	1	2
	1000	999	1001	1000	2	2
	5000	4997	5003	5000	2	2.52
	7000	6997	7003	7000	1	2
Y- AXIS	0	-1	1	0	2	2.52
(+) Slope	5	4	6	5	2	2.52
	10	9	11	10	2	2.52
	15	14	16	15	2	2.52
	300	299	301	300	1	2
	1000	999	1001	1001	2	2
	5000	4997	5003	5000	2	2.52
	7000	6997	7003	6999	2	2.52
Y-AXIS	0	-1	1	0	2	2.52
(-) Slope	5	4	6	5	2	2.52
	10	9	11	10	1	2
	15	14	16	15	1	2
	300	299	301	300	1	2
	1000	999	1001	1000	2	2
	5000	4997	5003	4999	1	2
	7000	6997	7003	6998	1	2

The expanded measurement uncertainties are estimated at a level of confidence of approximately 95%.

The user should determine the suitability of this digital level for its intended use.

*N. N. N.*

Calibration Officer