



MICRO PRECISION CALIBRATION PTE LTD
BLOCK 5008 ANG MO KIO AVENUE 5 #07-04
TECHPLACE II SINGAPORE 569874
65 67484384



Certificate of Calibration

Date: February 21, 2019

Cert No. 551220082826686

Customer:

GES SINGAPORE PTE LTD
28 MARSILING LANE
SINGAPORE 739152

Work Order #: SG-11010042

MPC Control #: 97016
Asset ID: NA
Gage Type: DC POWER SUPPLY
Manufacturer: TDK-LAMBDA
Model Number: GENH 60-12.5
Size: N/A
Temp/RH: 24.2°C / 42 %
Location: Calibration performed at Customer's facility

Serial Number: 97016
Department: N/A
Performed By: STEVEN CHOO
Received Condition: IN TOLERANCE
Returned Condition: IN TOLERANCE
Cal. Date: February 21, 2019
Cal. Interval: 12 MONTHS
Cal. Due Date: February 21, 2020

Calibration Notes:

Please refer to the attached calibration data. (1 page)

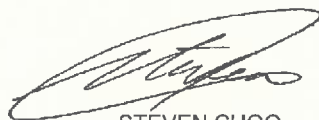
Standards Used to Calibrate Equipment

I.D.	Description.	Model	Serial	Manufacturer	Cal. Due Date	Traceability #
CA8179	MULTIMETER	3458A	2823A23892	HEWLETT PACKARD	May 31, 2019	551220081398539
CH2324	CURRENT SHUNT	34330A	0804	AGILENT	Sep 7, 2019	551220081550644

Procedures Used in this Event

Procedure Name	Description
MANUFACTURER	MANUAL REV CONTROL

Calibrating Technician:


STEVEN CHOO

QC Approval:


JULES PHILIPPE AGPANGAN

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA's Publication and NIST Technical Note 1297, 1994 Edition. Services rendered comply with ISO/IEC 17025:2017, ANSI/NCSL Z540-1-1994, ANSI/NCSL Z540.3-2006, MPC Quality Manual, MPC CSD and with customer purchase order instructions.

Calibration cycles and resulting due dates were submitted/approved by the customer. Any number of factors may cause an instrument to drift out of tolerance before the next scheduled calibration. Recalibration cycles should be based on frequency of use, environmental conditions and customer's established systematic accuracy. The information on this report, pertains only to the instrument identified.

All standards are traceable to SI through the National Institute of Standards and Technology (NIST) and/or recognized national or international standards laboratories. Services rendered include proper manufacturer's service instruction and are warranted for no less than thirty (30) days. This report may not be reproduced in part or in a whole without the prior written approval of the issuing MPC lab.



TDK-LAMBDA GENH60-12.5 DC Power Supply

Procedure: Manufacturer

Order Number: SG-11010042

ID Number: 97016

Date Calibrated: Feb 21, 2019

Section 1 - DC Voltage Accuracy

Measurement	Nominal	Lower Limit	As Found	As Left	Upper Limit	Result	Uncertainty ($\pm$)
Output Accuracy	1.000 V	0.9743 V	1.0030 V	1.0030 V	1.0257 V	PASS	0.000059V
	5.000 V	4.9715 V	5.0036 V	5.0036 V	5.0285 V	PASS	0.000087V
	10.000 V	9.9680 V	10.0052 V	10.0052 V	10.0320 V	PASS	0.00014V
	15.000 V	14.9645 V	15.0047 V	15.0047 V	15.0355 V	PASS	0.00020V
	20.000 V	19.9610 V	20.0078 V	20.0078 V	20.0390 V	PASS	0.00027V
	25.000 V	24.9575 V	25.0088 V	25.0088 V	25.0425 V	PASS	0.00033V
	30.000 V	29.9540 V	30.0083 V	30.0083 V	30.0460 V	PASS	0.00039V
	60.000 V	59.9330 V	60.0076 V	60.0076 V	60.0670 V	PASS	0.00046V

Section 2 - DC Current Accuracy

Measurement	Nominal	Lower Limit	As Found	As Left	Upper Limit	Result	Uncertainty ($\pm$)
Output Accuracy	1.000 A	0.9835 A	1.0010 A	1.0010 A	1.0165 A	PASS	0.00014 A
	5.000 A	4.9775 A	4.9987 A	4.9987 A	5.0225 A	PASS	0.00037 A
	10.000 A	9.9700 A	10.0021 A	10.0021 A	10.0300 A	PASS	0.00061 A
	12.500 A	12.4663 A	12.5031 A	12.5031 A	12.5338 A	PASS	0.00014 A

Jeff 12-MAR-19
JAEON AGBAY/KN