



Trin Calservices

CERTIFICATE OF CALIBRATION

An ISO/IEC 17025:2017
Accredited Company
ISO 9001:2015
Registered Company

Certificate Number: 132456789-1

Page 1 of 3

Description:	Multimeter	RMA/Quote No.:	4003-1
Model:	233	Work Order No.:	3056
Manufacturer:	Fluke	Calibration Date:	May 09, 2019
Serial No.:	132456	Calibration Due:	May 09, 2020
Equipment ID:	EQP-1	Room Temperature:	23 °C
Equip. Condition:	Good	Humidity:	32%
As Found Data:	In Tolerance	Cal Location:	In-Lab
As Left Data:	In Tolerance	Cal Procedure:	QSP-PRC
Customer:	Sample Company Ltd 123 Anywhere Street Brampton, ON, L6T 2W4	PO#:	43820

Trin Calservices Inc. hereby certifies that the above designated equipment was calibrated on the date shown and found to meet customer specifications. This equipment has been calibrated using standard instruments whose accuracies are traceable to SI units through NIST, NRC or other intrinsic standards. Trin Calservices Inc. is in compliance with ISO/IEC 17025:2017 and accredited by A2LA. The measured values of the equipment were observed in specification at the points calibrated/tested and traceable to NIST. Trin Calservices Inc. considers the uncertainty of measurements with a 95% confidence level and a coverage factor of 2. Any unaccredited uncertainty will be denoted with an asterisk (*). In this report, conformance statements of Pass or Failed are determined by the comparison of observed measurements using customer's specifications. This report may not be reproduced, except in full by the calibration organization issuing this report.

The customer must ensure equipment calibrated meets the intended use. Upon receipt of this certificate, the customer shall review and accept any deviations from specified calibration conditions on the calibrated items prior to use.

CALIBRATIONS STANDARD USED

Traceable No.	Asset No.	Cal Date	Cal Due	Name
CAL20416	TCS1002	25-Jul-19	25-Jul-20	Fluke Calibrator

Performed by:

Technologist

Steve Ramsumair, A.Sc. T.

Reviewed by:

Lab Manager

Vikram Paul, HBSc.

Quality Management System is assessed and registered by Orion & A2LA as conforming to the requirements of ISO 9001:2015 & ISO/IEC 17025:2017

Data Report (As Found = As Left)

Manufacturer	Model #	Serial #	Device Description	PO#
Fluke	233	132456	Multimeter	43820

TUR: > 4:1

Frequency	Test Desc.	True Value	Lo-Limit	As Found	Hi-Limit	P/F
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1 AC Voltage Measurements

60 Hz	600.0 mV	600.0 mV	593.7 mV	600.1 mV	606.3 mV	Pass
	6.000 V	6.000 V	5.937 V	6.001 V	6.063 V	Pass
	60.00 V	60.00 V	59.37 V	60.00 V	60.63 V	Pass
	600.0 V	600.0 V	593.7 V	600.1 V	606.3 V	Pass
	1000 V	1000 V	987 V	1000 V	1013 V	Pass
550 Hz	600.0 mV	600.0 mV	587.7 mV	600.4 mV	612.3 mV	Pass
	6.000 V	6.000 V	5.877 V	6.016 V	6.123 V	Pass
	60.00 V	60.00 V	58.77 V	60.24 V	61.23 V	Pass
	600.0 V	600.0 V	587.7 V	600.8 V	612.3 V	Pass
	1000 V	1000 V	977 V	1004 V	1023 V	Pass

2 DC Voltage Measurements

600.0 mV	600.0 mV	598.3 mV	600.0 mV	601.7 mV	Pass
6.000 V	6.000 V	5.983 V	6.000 V	6.017 V	Pass
60.00 V	60.00 V	59.83 V	60.00 V	60.17 V	Pass
600.0 V	600.0 V	598.3 V	600.0 V	601.7 V	Pass
1000 V	1000 V	996 V	1000 V	1005 V	Pass

3 Resistance Measurements

600.0 Ω	600.0 Ω	594.5 Ω	600.0 Ω	605.5 Ω	Pass
6.000 k Ω	6.000 k Ω	5.945 k Ω	6.000 kΩ	6.055 k Ω	Pass
60.00 k Ω	60.00 k Ω	59.45 k Ω	60.00 kΩ	60.55 k Ω	Pass
600.0 k Ω	600.0 k Ω	594.5 k Ω	600.0 kΩ	605.5 k Ω	Pass
6.000 M Ω	6.000 M Ω	5.945 M Ω	6.000 MΩ	6.055 M Ω	Pass
40.00 M Ω	40.00 M Ω	39.38 M Ω	40.00 MΩ	40.62 M Ω	Pass

4 AC Current Measurements

60 Hz	6.000 A	6.000 A	5.907 A	6.014 A	6.093 A	Pass
	10.00 A	10.00 A	9.82 A	10.05 A	10.18 A	Pass

Data Report (As Found = As Left)

Manufacturer	Model #	Serial #	Device Description	PO#
Fluke	233	132456	Multimeter	43820

Test Desc.	True Value	Lo-Limit	As Found	Hi-Limit	P/F
5 DC Current Measurements					
6.000 A	6.000 A	5.937 A	6.000 A	6.063 A	Pass
10.00 A	10.00 A	9.87 A	10.00 A	10.13 A	Pass
6 Frequency Measurements					
99.99 Hz	99.00 Hz	98.88 Hz	99.00 Hz	99.12 Hz	Pass
999.9 Hz	999.0 Hz	997.8 Hz	999.0 Hz	1000.2 Hz	Pass
9.999 kHz	9.990 kHz	9.978 kHz	9.990 kHz	10.002 kHz	Pass
50.00 kHz	49.00 kHz	48.93 kHz	49.00 kHz	49.07 kHz	Pass
7 Capacitance Measurements					
1000 nF	1000 nF	979 nF	1000 nF	1021 nF	Pass
10.00 nF	10.00 nF	9.79 μ F	10.00 nF	10.12 μ F	Pass
100.0 μ F	100.0 μ F	97.9 μ F	100.0 μF	101.2 μ F	Pass
9999 μ F	9999 μ F	9807 μ F	9999 μF	10101 μ F	Pass

END OF REPORT

Notes: If not stated, As Found = As Left

Lo-Limit and Hi- Limit calculated using Manufacturers Specifications