



**ACCREDITATION
DOCUMENT**

F-06/02
Issue Date: 10/08/15
Rev. No: 07
LAB 044

Accreditation No: LAB 044

Awarded to

**PMEL 509, Electronics Base Workshop, EME, Gujranwala Cantonment,
Pakistan.**

The scope of accreditation is in accordance with the standard specifications outlined in the following page(s) of this document. The accredited scope shall be visible and legible in areas such as customer service, sample-receiving section etc and shall not mislead its users.

The accreditation was first time granted on **31-12-2016** by Pakistan National Accreditation Council.

The laboratory complies with the requirements of **ISO/IEC 17025:2005**.

The accreditation requires regular surveillance, and is valid until **30-12-2019**.

The decision of accreditation made by Pakistan National Accreditation Council implies that the organization has been found to fulfill the requirements for accreditation within the scope.

The organization however, itself is responsible for the results of performed measurements/tests.

PAKISTAN NATIONAL ACCREDITATION COUNCIL

Date

Director



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Calibration Laboratory.

Accreditation Scope of PMEL 509, Electronics Base Workshop, EME,
 Gujranwala Cantonment, Pakistan

Permanent laboratory premises

Field of measurement:			
Measured quantity	Range	Calibration & Measurement Capability (CMC)	Brief description of measurement and equipment used
Electronics / Electrical			
Frequency	1 MHz – 50 MHz	2.1×10^{-3} Hz	Micro Wave Synthesizer 2520A ID NO PMEL/E/ST-5/017 Electronics Counter 5345A ID NO PMEL/E/ST-5/019
	50 MHz – 100 MHz	9.1×10^{-3} Hz	
	100 MHz – 500 MHz	0.17 Hz	
	500 MHz – 4000 MHz	0.24 Hz	
DC Voltages	10 mV – 220 mV	0.48μ V	Calibrator 5720A & Amplifier 5725A ID NO PMEL/E/ST-2/007 Multi-meter 34587A ID NO PMEL/E/ST-8/035
	220mV – 2.2 V	1.8μ V	
	2.2 V – 11V	10μ V	
	11V – 22 V	42μ V	
	22 V – 220 V	140μ V	
	220 V – 750 V	1.8μ V	
AC Voltages @ 50 Hz to 1 KHz	10 mV – 220 mV	4.8μ V	
	220mV – 2.2 V	18μ V	
	2.2 V – 22 V	140μ V	
	22 V – 220 V	1.7μ V	
	220 V – 700 V	18μ V	
DC Current	100 μ A – 220 μ A	0.01μ A	
	200 μ A – 2.2 mA	0.015μ A	
	2.2 mA – 22 mA	0.11μ A	
	22 mA – 220 mA	1.7μ A	
	220 mA – 1 A	30μ A	
AC Current @ 50Hz to 1 KHz	100 μ A – 220 μ A	0.02μ A	
	220 μ A – 2.2 mA	0.06μ A	
	2.2 mA – 22 mA	0.6μ A	
	22 mA – 220 mA	5μ A	
	220 mA – 1 A	92μ A	
Resistance	0.9999273 Ω	$9.4 \times 10^{-5} \Omega$	
	9.49674 Ω	$2.2 \times 10^{-4} \Omega$	
	99.99771 Ω	$9.9 \times 10^{-4} \Omega$	
	1.0000197 K Ω	$8.5 \times 10^{-3} \Omega$	
	9.999952 K Ω	$8.4 \times 10^{-2} \Omega$	
	99.99807 K Ω	1.09 Ω	
	0.9999555 M Ω	19.9 Ω	
	9.998536 M Ω	399 Ω	
99.99964 M Ω	9.99 k Ω		

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Measured quantity	Range	Calibration & Measurement Capability (CMC)	Brief description of measurement and equipment used
Physical			
Vernier Caliper	2.4 inch – 4.8 inch	2.1×10^{-4} inch	SS36A1 Gauge Block Set ID NO PMEL/P/ST-29/573 Vernier Caliper ID NO PMEL/P/AL-C/01/712
	4.8 inch – 9.6 inch	3.9×10^{-4} inch	
Height Gauge	8 inch – 32 inch	7×10^{-4} inch	SS8A1 Gauge Block Set ID NO PMEL/P/AL-C/01/712 Height Gauge 40” ID NO PMEL/P/ST-29/573
Weight	10 mg – 32 500 mg	0.1002 mg	Weight Set 6825 ID NO PMEL/P/ST-24/533 Precision Electronics Balance HR-200 ID NO PMEL/P/ST-24/530 Weight Set DW-1(95) ID NO PMEL/P/ST-24/536 Precision Electronics Balance SK-30K ID NO PMEL/P/ST-24/529
	500 mg – 50 g	0.1 mg	
	50 g – 5 kg	12 g	

Date

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