Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

0616

Accredited to ISO/IEC 17025:2017

Yadav Measurements Private Limited

Issue No: 039 **Issue date:** 20 March 2023

Post Box 169
Plot No. F-373 - 375
Riico Bhamashah Industrial Area
Kaladwas
Udaipur 313 003
India

Contact: Mr B M Vyas
Tel: +91 294 265 0127
Fax: +91 294 265 0129
E-Mail: yadav.measurements@ymllabs.com
Website: www.yadavmeasurements.com

Calibration performed by the Organisation at the locations specified

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	Activity	Location code
Address Post Box 169 Plot No. F-373 – 375 Riico Bhamashah Industrial Area Kaladwas Udaipur 313 003 India **Local contact** Mr B M Vyas Tel: +91 294 265 0127 Fax: +91 294 265 0129 E-Mail: yadav.measurements@ymllabs.com	Calibration: Electrical Flow	P

Site activities performed away from the locations listed above:

Location details	Activity	Location code
The customers' site or premises must be suitable for the nature of the particular calibrations undertaken and will be the subject of contract review arrangements between the laboratory and the customer	Calibration: Electrical	S

Calibration and Measurement Capability (CMC)

Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Values and uncertainties listed below are applicable for the calibration of both measurement instruments and for instruments with an output. the method used is by direct comparison unless otherwise stated in the remarks column.				
ELECTRICAL MEASUREMENTS				
Calibration of specific test equipment				
EFT/B Generators				P
Peak voltage into 50 Ω & 1 KΩ	0.25 kV to 7 kV	3.0 %		
Rise and fall time	5 ns to 50 ns	5.0 %		
Burst period and duration	15 ms to 300 ms	5.0 %		
Frequency	2.5 kHz, 5 kHz, 100 kHz	5.0 %		
Surge generator				P
Rise and fall time	0.5 µs to 700 µs	3.0 %		
Open circuit Voltage	0.5 kV to 15 kV	5.0 %		
Short circuit Current	0.2 kA to 7.5 kA	5.0 %		
Phase angle	0 ° to 360 °	1.70 °		
Damped oscillatory generator				P
Voltage	0.25 kV to 4 kV	5.0 %		
Rise time	1.0 ns to 1.0 s	3.5 %		
Frequency	100 kHz to 1 MHz	3.0 %		
Repetition rate	1.0 µs to 1.0 s	3.0 %		
Ring wave generator				P
Open circuit Voltage	0.25 kV to 6 kV	2.0 %		
Short circuit Current	8 A to 500 A	2.0 %		
Rise time	0.2 µs to 1.0 µs	2.0 %		
Repetition rate	1/minute or 1/s	1.0 %		
High frequency field uniformity calibration in GTEM/Anechoic chamber	GTEM (80 MHz to 1000 MHz) 2 V/m 3 V/m 10 V/m 30 V/m GTEM (1000 MHz to 6000 MHz) 2 V/m 3 V/m 10 V/m 30 V/m	 0.23 V/m 0.69 V/m 2.3 V/m 6.9 V/m 0.30 V/m 0.96 V/m 3.0 V/m 9.0 V/m		S

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Measured Quantity Instrument or Gauge	Range	Expanded Measurement Uncertainty (k = 2)	Remarks	Location Code
Three phase voltage dips and interruptions calibration				P
Phase angle	(0 to 360 °)	1.70 °		
Pulse rise/fall time	(0.1 to 5) µs	5.0 %		
Voltage at no load	0.1 VAC to 240 VAC (P-N) & 415 VAC (P-P)	1.0 %		
Inrush current	30 A	3.0 %		
Time interval	6 ms to 5 min	3.0 %		
Overshoot & undershoot		5.0 %		
FLOW MEASUREMENTS			Calibration of flow meters using volumetric and reference meter methods	P
Gas quantity passed	0.001 m^3 to 0.01 m^3	0.27 %		
	0.01 m^3 to 0.08 m^3	0.13 %		
	At flow rates of: 0.016 m^3/hour to 6.6 m^3/hour		Calibration medium: Air and Methane	
Gas volume flow-rate	0.016 m^3/hour to 6.6 m^3/hour			
	At quantities passed of			
	0.001 m^3 to 0.01 m^3	0.27 %		
	0.01 m^3 to 0.08 m^3	0.16 %		
Gas mass flow-rate	0.018 kg/hour to 7.5 kg/hour			
	At quantities passed of			
	0.0011 kg to 0.011 kg	0.32 %		
	0.011 kg to 0.090 kg	0.20 %		
END				

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Appendix - Calibration and Measurement Capabilities

Introduction

The definitive statement of the accreditation status of a calibration laboratory is the Accreditation Certificate and the associated Schedule of Accreditation. This Schedule of Accreditation is a critical document, as it defines the measurement capabilities, ranges and boundaries of the calibration activities for which the organisation holds accreditation.

Calibration and Measurement Capabilities (CMCs)

The capabilities provided by accredited calibration laboratories are described by the Calibration and Measurement Capability (CMC), which expresses the lowest measurement uncertainty that can be achieved during a calibration. If a particular device under calibration itself contributes significantly to the uncertainty (for example, if it has limited resolution or exhibits significant non-repeatability) then the uncertainty quoted on a calibration certificate will be increased to account for such factors.

The CMC is normally used to describe the uncertainty that appears in an accredited calibration laboratory's schedule of accreditation and is the uncertainty for which the laboratory has been accredited using the procedure that was the subject of assessment. The measurement uncertainty is calculated according to the procedures given in the GUM and is normally stated as an expanded uncertainty at a coverage probability of 95 %, which usually requires the use of a coverage factor of $k = 2$. An accredited laboratory is not permitted to quote an uncertainty that is smaller than the published measurement uncertainty in certificates issued under its accreditation.

Expression of CMCs - symbols and units

It should be noted that the percentage symbol (%) represents the number 0.01. In cases where the measurement uncertainty is stated as a percentage, this is to be interpreted as meaning percentage of the measurand.
Thus, for example, a measurement uncertainty of 1.5 % means $1.5 \times 0.01 \times q$, where q is the quantity value.

The notation Q[a, b] stands for the root-sum-square of the terms between brackets: $Q[a, b] = [a^2 + b^2]^{1/2}$