SRL Diagnostics

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Auth. :
QA Function

SRL LTD,
Plot No. CA-11 Urvashi Phase II,
Ambedkar Sarani, City
Centre, Durgapur, Bardhaman,
WestBengal, 716216

CENTRIFUGE CALIBRATION REPORT

DEPARTMENT	INSTRUMENT NAME	INSTRUMENT ID	MODEL NO	REPORT NO
Accession	Centrifuge	ACC/001	R8C	CAL/CFG/Jan-23/02

Cal Done Date	18/01/2023	Cal Due Date	18/07/2023
Ownership	SRL ☒	LOAN ☒	RR ☒
Acceptable rpm/time limit	± 5 %	Operating. Range	From 100 rpm To 4000 rpm

Sr. No.	Set Value	Measured Value (Avg. of 5 reading)	SD	Error	Exp. Uncert.
1	1000	1006.4	2.51	5.935	6.325
2	2000	2007.0	2.55	6.635	6.338
3	4000	4013.4	2.302	13.235	6.262

Sr. No.	Set Value	Measured Value (Avg. of 5 reading)	SD	Error	Exp. Uncert.
1	60	60.32	0.13	0.086	0.164
2	300	300.48	0.164	0.089	0.247
3	600	600.88	0.13	0.293	0.372

Sr. No.	Set Value °c	Measured Value (Avg. of 5 reading)	SD	Error	Exp. Uncert.

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor k=2, providing the level of confidence of approx. 95%.

Calibration status	Passed ☒	Failed ☐

TEST EQUIPMENT NAME	Test equipment ID	Traceable Report No
TACHOMETER	ENG/DTM-01	MTL/SRLL/R02/01-23
TIMER	ENG/SW-01	MTL/SRLL/R06/01-23
THERMOMETER		

The above mentioned instrument has been calibrated using standards with accuracy guidelines traceable to the National Institute of Standards & Technology (NIST).

Engineer's Name	Mirajul Islam	Report Reviewed by	
Signature/Date	18/1/23	Signature/ Date	D. Saha

SECTION HEAD SIGN:

MEASURE TECHNO LAB

2, B.T. ROAD (JAYANTI CINEMA COMPLEX), BARRACKPORE,
KOLKATA - 700120, W.B.

Phone : 033 - 2215 - 0032, 2215 - 9687, 8100875519, Mobile: 9831190974,
LAB:- 8100143376, E-mail: measuretechno@yahoo.co.in

NABL ACCREDITED LABORATORY
Certificate No. CC - 2343

CALIBRATION CERTIFICATE OF DIGITAL TACHOMETER

CALIBRATION CERTIFICATE NO.:MTL / SRLL / R02 / 01 - 23 | ULR - CC254523000001407F | Page: 1 of 1

1.0 Service Request No.: MTL / 14 / 01 / 22 - 23

1.1 Issued to:
M/s. SRL Limited,
P.S. Srijan Tech Park, Ground Floor,
DN - 52, Sector V, Salt Lake,
Kolkata - 700091, W.B.

1.2 Description & Identification of Item to be Calibrated:

a) Name:	Digital Tachometer	b) Code No.:	ENG / DTM - 01
c) Sl. No.:	AB.16577	d) Make:	Lutron
e) Model / Type:	DT - 2236	f) Range:	5 rpm to 99999 rpm
g) Sensor:	N.A.	h) Resolution:	0.1 rpm upto 999.9 rpm then 1 rpm
i) End User:	Engineering Department	j) Accuracy:	N.S.

k) Calibration done at: On Site / √ In House

1.3 Date of receipt of item : 13-01-23
1.4 Physical Condition of DUC : OK
1.5 Date of calibration : 14-01-23
1.6 Recommended date of next calibration : 14-01-24
1.7 Date of Issue : 16-01-23
1.8 Environmental Conditions During Calibration: Temperature: 20 °C ± 2 °C; Humidity: 50 % RH ± 10 % RH
1.9 Method of Calibration: SOP / RPM / 01
2.0 Traceability :

a)Standards used for calibration are traceable to National standards through NABL Accredited Laboratory.
b)The following standards / Equipment have been used.
i) Digital Tachometer Cal. Certificate No. JRPM - CCTR - A&S - 2022 - 0025 (JRPM, Chennai) (Cal. Date: 09/07/22, Due Date: 08/07/23)

2.1 Result :
Mechanical Calibration

Sl. No.	Parameter/ Range	Nominal Value on DUC rpm	Std. Value Average of Five Readings rpm	Error rpm	Measurement Expanded Uncertainty ± rpm
1.	Rotation 5 rpm to 99999 rpm	100.1	100.11	-0.01	0.28 upto 100 rpm then 1.28 upto 10000 rpm then 14 upto 30000 rpm then 10.43
2.		499.9	499.85	0.05	
3.		1000	1000.5	-0.5	
4.		4999	4999.6	-0.6	
5.		9987	9986	1	
6.		19999	19995	4	
7.		29988	29992	-4	
8.		59983	59980	3	
9.		89485	89487	-2	

Remarks: i) This result has an expanded uncertainty with a coverage factor k=2 at approximately 95% confidence level.
ii) The calibration certificate issued for this instrument is to be used for scientific or industrial purposes only.
iii) Error = DUC Reading - Standard Reading.

DUC - Device Under Calibration | N.S. - Not Specified | N.A. - Not Applicable
Std. - Standard | rpm - Rotation Per Minute

Opinions and Interpretations			
Calibrated	√	Accepted / Valid for use	
Limited Use		Rejected / Out of use	

Calibrated by: Calibration Engineer
Measure Techno Lab
P.K.Singh
Calibration Engineer

Checked / Approved by:

Measure Techno Lab KOLKATA