



Since 1998

# NATIONAL CENTRE FOR QUALITY CALIBRATION

4, Abhishree Corporate Park, Nr. Swagat Bungalows BRTS, Iskcon-Ambli Road, Ambli, Ahmedabad-380 058  
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CC-2128

Visit our Web Site : [www.calibrationlaboratory.in](http://www.calibrationlaboratory.in)

**Precision Calibration with National / International Traceability for Temperature, Dimensional, Pressure, Vacuum, Time, Mass, Electrical, Noise, Airflow, Lux & all Special Purpose Instruments in all ranges.**

## Calibration Certificate

F/CR/M/069 Issue No. 03

<b>Name of Customer</b> National Centre for Quality Calibration 4, Abhishree Corporate Park, Nr. Swagat Bungalows BRTS, Iskcon – Ambli Road, Ambli, Ahmedabad – 380 058, Gujarat		Certificate No. Date of Issue Date of Calibration Suggested Due Date	NCQC-M/040923/012 05/09/2023 04/09/2023 03/09/2024
ULR No. : CC21282300007490F		Discipline : Mechanical Calibration Acceleration & Speed	
<b>Details of Observation of Unit Under Calibration</b>		Identification No. : NCQC/M-35 Serial No. : Q604585 Name of Instrument : Digital Tachometer	
Range	0.5 to 19999 RPM (C), 10 to 99,999 RPM (NC)	Initial Error	Nil
Resolution	0.1 RPM Upto 999.9 RPM And Above 1 RPM	Visual Inspection	OK
Make / Model	Lutron/DT- 1236L	Accuracy	±0.05% ± 1 digit
Location	===	Type / Size	Contact & Non-Contact
Loc. of Calibration	At Laboratory	Std. Ref. Used	===
Environment Cond.	23 ± 2°C, 40 to 60 % Rh	Cali.Method No.	NCQC/CM/M/069
Actual Env. Cond.	23.4 °C 46.7 %Rh		

### Master Instruments Detail

NCQC SYS.NO.	Nomenclature	Make/ Model	Id / Serial No.	Traceable To	Certificate No.	Valid Upto
55	Master Digital Tachometer	Line Seiki / TM-7010	NCQC/M-154 / 184-0004	CC-2287	CC/ECL/0909/22-23	18/09/2023



### Calibration Results for Non – Contact Type (Auto Range)

Reading Observed by Master Tachometer in RPM	Reading Observed by UUC in RPM	Absolute Error	% Error	Expanded Uncertainty in RPM (k =2)
10.0	10.0	0.0	0.00 %	0.57
20.0	20.1	0.1	0.50 %	0.57
50.0	50.2	0.2	0.40 %	0.57
100.1	100.4	0.3	0.30 %	0.57
500.1	500.6	0.5	0.10 %	0.57
1000.3	1001	0.7	0.07 %	0.86
5000.8	5002	1.2	0.02 %	3.34
10001.0	10003	2.0	0.02 %	4.01

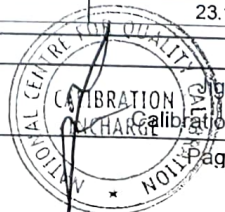
### Calibration Results for Non - Contact Type (X 10 Multiplier)

Reading Observed by Master Tachometer in RPM	Reading Observed by UUC in RPM	Absolute Error	% Error	Expanded Uncertainty in RPM (k =2)
20000.7	20003	2.3	0.01 %	7.49
30001.0	30004	3.0	0.01 %	7.49
50001.5	50005	3.5	0.01 %	10.35
70001.6	70006	4.4	0.01 %	10.35
80002.3	80007	4.7	0.01 %	23.15
90002.1	90008	5.9	0.01 %	23.15

Traceable To National / International Standards.

Calibrated By  Maulik Rathod Calibration Engineer  
 Reviewed & Approved By  Jigar Panchal Calibration Incharge

NCQC System Certificate No. 29





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	<b>Date of Receipt / Ref.No.:</b> 04/09/2023	

<b>ULR No. :</b> CC212823000007490F	<b>Discipline :</b> Mechanical Calibration Acceleration & Speed
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<b>Details of Observation of Unit Under Calibration</b>	<b>Identification No. :</b> NCQC/M-35 <b>Serial No. :</b> Q604585 <b>Name of Instrument :</b> Digital Tachometer
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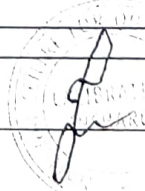
### Calibration Results For Contact Type

Reading Observed by Master Tachometer in RPM	Reading Observed by UUC in RPM	Absolute Error	% Error	Expanded Uncertainty in RPM (k =2)
10.0	10.0	0.0	0.00 %	0.57
50.0	50.1	0.1	0.20 %	0.57
100.1	100.3	0.2	0.20 %	0.57
500.1	500.6	0.5	0.10 %	0.57
1000.2	1001	0.8	0.08 %	2.12
2000.6	2002	1.4	0.07 %	2.14
5000.5	5002	1.5	0.03 %	2.21
10000.7	10003	2.3	0.02 %	4.01

#### Remarks:

- Averages of minimum five readings are reported.
- Suggested due date is given based on customer requirements
- Condition of instrument found satisfactory during receipt.
- These results are obtained at the time of calibration.
- Result relates to the item calibrated only.
- No external provider was used for calibration and hence it is not applicable.
- Calibration certificate shall not be reproduced except in full without written approval of Director, NCQC.
- Any hand written corrections (except @) or photocopies of the report invalidates this certificate.
- The uncertainties are for a confidence probability of not less than 95% with coverage factor k = 2
- Our masters are directly calibrated through NABL accredited calibration laboratory having direct traceability with National / international standard.

Traceable To National / International Standards.

<b>Calibrated By</b>  Maulik Rathod Calibration Engineer	<b>Reviewed &amp; Approved By</b>  Jigar Panchal Calibration Incharge
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