



CALIBRATION CERTIFICATE



CC-2287

Work Order No. : WO/ECL/387/24-25
Work Order Date : 17/09/2024
Date Of Receipt : 17/09/2024
ULR No. : CC228724100001511F
Discipline : Mechanical Calibration (Group : Acceleration and Speed)

Certificate No. : CC/ECL/0970/24-25
Date of Calibration : 19/09/2024
Page No. : 1 of 3
Date of Issue : 26/09/2024

Calibrated for : M/s. NCQC Laboratory LLP, 4, Abhishree Corporate Park, Near Swagat Bungalow BRTS, Iskcon-Ambli Road, Ambli, Ahmedabad - 380 058, Gujarat, India.

Calibrated at : IDEMI, Mumbai.

TRUE COPY

Description and Identification of Device Under Calibration	Standards Used for Calibration
Name : Digital Tachometer Manufacturer : M/s. Line Seiki Condition on receipt : No visible damage Range of Instrument : 6.0 to 15000.0 RPM (Contact Mode) 6.0 to 99999.9 RPM (Non-Contact Mode) Sr. No. : 184-0004 Model : TM-7010 ID No. : NCQC/M-154 Accuracy : $\pm 0.01\% \pm 1$ Digit	RPM Source with Digital Tachometer ID No. : IDEMI/ECL/TACHO/01 Calibration Certificate No.: HT/CC/240131-01/001 Calibration Valid up to 30/01/2025 All measurement results are traceable to the International system of units (SI), ensured by comparison, directly or indirectly with National or International standards through unbroken chain of calibration

Ambient Conditions :

Temperature : $25\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$

Relative Humidity : 45 % to 75 %

Remarks : Please refer page 2 to 3 for Calibration Results.

- 1) Procedure of Calibration : Above mentioned item is calibrated as per operating procedure : OP-S&R-01
- 2) The reported expanded uncertainty in measurement is stated as the combined standard uncertainty in measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95 %.
- 3) Calibration Status : Sticker No. 970 indicating 'CAL STATUS' is affixed on instrument.
- 4) Our NABL Accreditation Certificate No. is CC - 2287, Valid up to 30/08/2025.
- 5) Next Calibration Due on : 18/09/2025

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AUTHORISED SIGNATORY

Note:

1. This certificate refers only to the particular item(s), submitted for calibration. The certificate should not be reproduced except in full without the prior permission from the Principal Director, IDEMI, Mumbai - 400 022.
2. This is computer generated certificate and may not contain signature. Where send by email, this is signed with digital signature of authorized signatory, approved by NABL. For any queries, please quote work order number mentioned in this certificate



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INSTITUTE FOR DESIGN OF ELECTRICAL MEASURING INSTRUMENTS, MUMBAI

भारत सरकार की सहायता
सूक्ष्म सधु एव मध्यम उद्यम मंत्रालय
Government of India Society

Ministry of Micro Small & medium Enterprises

स्वातंत्र्यवीर तात्या टोपे मार्ग चुरनाभट्टी, सान, प.ओ. मुंबई - 400 022

Swatantryaveer Tatyto Tope Marg, Churnabhatti, Sion, P.O. Mumbai - 400 022



FF-LAB-003 Rev. 01

NCQC System Certificate No. 55



वैद्युतिक मापन उपयंत्र अभिकल्प संस्थान, मुंबई ४०००२२

INSTITUTE FOR DESIGN OF ELECTRICAL
MEASURING INSTRUMENTS, MUMBAI - 400 022



Instrument Sr. No. : 184-0004
Date of Calibration : 19/09/2024
ULR No. : CC228724100001511F

Page No. : 2 of 3
Certificate No. : CC/ECL/0970/24-25

Calibration Results :

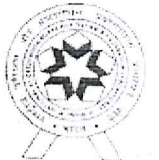
NON CONTACT MODE

Calibration Standard		Device Under Calibration		Error		Expanded Uncertainty (±) in RPM
Range	Reading	Range	Reading	Units	% of Rdg.	
	RPM		RPM		RPM	
5 RPM to 200000 RPM	6.002	6.0 RPM to 99999.9 RPM	6.0	-0.002	-0.033	0.7
	50.018		50.0	-0.018	-0.036	1
	100.03		100.0	-0.03	-0.030	1
	500.01		500.0	-0.01	-0.002	1
	1000.2		1000.0	-0.2	-0.020	2
	4999.9		4999.7	-0.2	-0.004	2
	9999.9		9999.6	-0.3	-0.003	3
	30001		29999.3	-1.7	-0.006	17
	40002		40000.2	-1.8	-0.004	17
	74999		74997.6	-1.4	-0.002	17
	99949		99947.3	-1.7	-0.002	17

Note : Value mentioned above is mean of 5 readings.

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Authorised Signatory

CC-2287

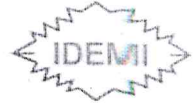
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INSTITUTE FOR DESIGN OF ELECTRICAL

MEASURING INSTRUMENTS, MUMBAI - 400 022



Instrument Sr. No. : 184-0004

Date of Calibration : 19/09/2024

ULR No. : CC228724100001511F

Page No. : 3 of 3

Certificate No. : CC/ECL/0970/24-25

Calibration Results :

CONTACT MODE

Calibration Standard		Device Under Calibration		Error		Expanded Uncertainty (±) in RPM
Range	Reading	Range	Reading	Units	% of Rdg.	
5 RPM to 200000 RPM	RPM 6.002	6.0 RPM to 15000.0 RPM	RPM 6.0	RPM -0.002	-0.033	0.7
	50.010		50.0	-0.010	-0.020	1
	100.09		100.1	0.01	0.010	1
	500.03		500.0	-0.03	-0.006	1
	4999.9		4999.5	-0.4	-0.008	3
	8000.2		8000.1	-0.1	-0.001	3
	10000		9999.7	-0.3	-0.003	3
	12000		11999.1	-0.9	-0.007	3

Note : 1) Value mentioned above is mean of 5 readings.

2) Calibration is carried out as per customer's requirement.

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CC-2287

FF-INS-09

END OF CALIBRATION CERTIFICATE

OUR NABL & BIS ACCREDITATION STATUS



IDEMI (MSME-Technology Centre) is a Government of India Society working under the Ministry of Micro, Small & Medium Enterprises (MSME) and Accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL) for its facilities at Mumbai and on site in the following fields as per ISO/IEC 17025:2017

SR. NO.	FIELD	NABL ACCREDITATION CERTIFICATE NUMBER
1	Electro Technical Calibration	CC-2287
2	Pressure Calibration	CC-2287
3	Mass & Volume Calibration	CC-2287
4	Dimensional Metrology	CC-2287
5	Fluid Flow Calibration	CC-2287
6	Thermal Calibration	CC-2287
7	Electrical Testing	TC-5538
8	EMI / EMC Testing	TC-5538
9	Monoblock Pump Testing	TC-5538
10	Electronics Testing	TC-5538
11	Energy Meter Testing	Recognised by BIS

NOTE

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