



CC - 3385

ZEAL MANUFACTURING AND CALIBRATION SERVICES PRIVATE LIMITED

S.No: 78/1, Pandhari Industrial Estate, Shivana, Pune - 411023, Maharashtra, INDIA

Calibration Laboratory:

Mob. No.: +91 9325714841, +91 9075014802, Email: calibration@zealmfg.com

Marketing : Mob. No.: +91 9371025315, +91 7030326565

Email : marketing@zealmfg.com, support@zealmfg.com, Web: www.zealmfg.com

ZEAL**CALIBRATION – CERTIFICATE**

Date of Calibration	Next agreed Date of Calibration	Date of Issue	Certificate No.	ULR No.
30/06/2023	29/06/2024	03/07/2023	06/213 (2023-2024)	CC3385-23000001284F
1 Name of Customer			M/s: National Centre For Quality Calibration 4, Abhishree Corporate Park, Nr. Swagat Bungalow BRTS, Iskon-Ambli Road, Ambli, Ahmedabad - Gujarat, India, 380058	
2 Calibration Carried out at			Calibration Laboratory	
3 Date of Receipt of Item			30/06/2023	
4 Condition of the Item			Item received in working condition	
5 Calibration to be done			Without Adjustment	
6 Description & Identification of the Item:				
Nomenclature	Make	Model	Sr. No.	Id. No.
Decade Inductance Box	Zeal	ZMDIB	201705047	NCQC/E-17
7 Environmental Conditions			At Temperature 25°C ± 2 °C, Humidity 30 To 75 %RH	
8 Calibration Procedure No.			CPMIC-05	
9 Parameter to be calibrated			Inductance	
10. Details of Traceability Used For Calibration				
NAME	MAKE/MODEL	SR.NO. / ID.NO.	CALIBRATION CERT. NO. & DATE	CALIBRATED BY
Precision LCR Meter	GWINSTECK / LCR-6100	GEP200150 / ZS/LCR/03	CC/ECL/0787/22-23 Dated: 06/09/2022	IDEMI, Mumbai.

11. Remarks:

- 1) This certificate refers only to particular items submitted & results are observed at the time of calibration.
- 2) This certificate shall not be reproduced, except in full, without written approval of the Laboratory.
- 3) All measurements are traceable to National / International standards.
- 4) The reported expanded uncertainty of measurement is calculated at approximately 95.45% of confidence level with coverage factor $k = 2$.

12. A glossary of terms used in this Certificate includes:

1. U. U. C. : Unit Under Calibration
2. STD. : Standard
3. RDG. : Reading
4. DGT. : Digit
5. INST. : Instrument
6. ULR No. : Unique Lab Report Number

NCQC System Certificate No. 283

NCQC
Valid up to 29-06-2024
Reviewed: *[Signature]*

Calibrated By

*[Signature]*Calibration Engineer
(Mr. Bhauraj S. Gulik)

Format/Rev. No. : F/CL/04-06



Reviewed & Authorized By

*[Signature]*Technical Manager
(Mr. Vikas B. Rathod)



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ZEAL

ULR No-. CC338523000001284F

Certificate No. 06/213 (2023-2024)

13. OBSERVATIONS:

PARAMETER: INDUCTANCE @ 1 kHz [100 μ H - 1000 μ H] RESIDUAL INDUCTANCE: 0.98287 μ H Discipline: Group :- Electro-Technical : ALTERNATING CURRENT (< 1 GHZ)					
DECADE SWITCH	SET POSITION ON U.U.C	READING ON STD. METER	DEVIATION	ERROR IN (%)	EXPANDED UNCERTAINTY (%)
X 100 μ H		μ H	μ H	% Rdg	% Rdg
	1	99.8041	0.1959	0.20	± 0.1
	2	199.661	0.339	0.17	± 0.1
	3	299.425	0.575	0.19	± 0.1
	4	399.061	0.939	0.24	± 0.1
	5	498.668	1.332	0.27	± 0.1
	6	597.912	2.088	0.35	± 0.1
	7	697.779	2.221	0.32	± 0.1
	8	797.155	2.845	0.36	± 0.1
	9	896.291	3.709	0.41	± 0.1
	10	996.442	3.558	0.36	± 0.1
PARAMETER: INDUCTANCE @ 1kHz [1mH - 10 mH] Discipline: Group :- Electro-Technical : ALTERNATING CURRENT (< 1 GHZ)					
DECADE SWITCH	SET POSITION ON U.U.C	READING ON STD. METER	DEVIATION	ERROR IN (%)	EXPANDED UNCERTAINTY (%)
X 1 mH		mH	mH	% Rdg	% Rdg
	1	1.00233	-0.00233	-0.23	± 0.1
	2	2.00111	-0.00111	-0.055	± 0.1
	3	3.00248	-0.00248	-0.083	± 0.1
	4	3.99978	0.00022	0.0055	± 0.1
	5	4.99841	0.00159	0.032	± 0.1
	6	6.00785	-0.00785	-0.13	± 0.1
	7	6.99693	0.00307	0.044	± 0.1
	8	8.00341	-0.00341	-0.043	± 0.1
	9	9.01168	-0.01168	-0.13	± 0.1
	10	10.0032	-0.0032	-0.032	± 0.1

Calibrated By

Calibration Engineer
(Mr. Bhauraj S. Gulik)

Format/Rev. No. :F/CL/04-06



Reviewed & Authorized By

Technical Manager
(Mr. Vikas B. Rathod)





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**ZEAL MANUFACTURING AND CALIBRATION
SERVICES PRIVATE LIMITED****TRUE COPY**

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ULR No-. CC338523000001284F

Certificate No. 06/213 (2023-2024)

PARAMETER: INDUCTANCE @ 1kHz [10 mH - 100 mH] Discipline:Group :- Electro-Technical : ALTERNATING CURRENT (< 1 GHZ)					
DECADE SWITCH	SET POSITION ON U.U.C	READING ON STD. METER	DEVIATION	ERROR IN (%)	EXPANDED UNCERTAINTY (%)
		mH	mH	% Rdg	% Rdg
X 10 mH	1	9.93215	0.06785	0.68	± 0.1
	2	19.8498	0.1502	0.76	± 0.1
	3	29.7856	0.2144	0.72	± 0.1
	4	39.6957	0.3043	0.77	± 0.1
	5	49.6458	0.3542	0.71	± 0.1
	6	59.5953	0.4047	0.68	± 0.1
	7	69.4879	0.5121	0.74	± 0.1
	8	79.4599	0.5401	0.68	± 0.1
	9	89.3451	0.6549	0.73	± 0.1
	10	99.3756	0.6244	0.63	± 0.1
PARAMETER: INDUCTANCE @ 1kHz [100 mH - 1000 mH] Discipline:Group :- Electro-Technical : ALTERNATING CURRENT (< 1 GHZ)					
DECADE SWITCH	SET POSITION ON U.U.C	READING ON STD. METER	DEVIATION	ERROR IN (%)	EXPANDED UNCERTAINTY (%)
		mH	mH	% Rdg	% Rdg
X 100 mH	1	100.742	-0.742	-0.74	± 0.1
	2	201.437	-1.437	-0.71	± 0.1
	3	302.025	-2.025	-0.67	± 0.1
	4	402.498	-2.498	-0.62	± 0.1
	5	503.881	-3.881	-0.77	± 0.1
	6	603.632	-3.632	-0.60	± 0.1
	7	704.042	-4.042	-0.57	± 0.1
	8	806.131	-6.131	-0.76	± 0.1
	9	905.945	-5.945	-0.66	± 0.1
	10	1005.81	-5.81	-0.58	± 0.1

Calibrated By

Calibration Engineer
(Mr. Bhauraj S. Gulik)

Format/Rev. No. :F/CL/04-06



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