

National Accreditation Board for Testing and Calibration Laboratories

### **CERTIFICATE OF ACCREDITATION**

### PRECISION INSTRUMENTATION AND SERVICES PVT.LTD

has been assessed and accredited in accordance with the standard

### **ISO/IEC 17025:2017**

## "General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

21, SHREERAM BHAVAN, F-9, SHREERAM KUNJ, TAKLI ROAD, DWARKA, NASHIK, MAHARASHTRA, INDIA

in the field of

## CALIBRATION

**Certificate Number:** 

CC-2098

**Issue Date:** 

29/12/2021

Valid Until:

28/12/2023

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL. (To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : PRECISION INSTRUMENTATION AND SERVICES PRIVATE LIMITED

Signed for and on behalf of NABL



N. Venkateswaran Chief Executive Officer



21, Shreeram Bhavan, F-9, Shreeramkunj, Takli Road, Dwarka, Nashik - 422 011. Tel.: 0253 - 6145100

	CALIBRATI	ON CERTIFICATE	E	
1.CUSTOMER	÷	Page No.	:- 1 of 1	
Bush Electromech and	1 Engineering	Date of Receipt	:- 6-Oct-22	
Pvt. Ltd.		Service Request No.	:- A2022/22	
K-89, MIDC, Waluj, Au	rangabad 431 136.	Certificate No.	/065	
Ambient Temp.	:- 24.5 °C	Date of Calibration	:- 6-Oct-22	
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-23	
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET	r/WI/03
Condition of Item	:- OK			
2. Details of unit unde	r Calibration (UUC):-			
Name	:- AC High Voltage Tester	Range	:- 0 to 5 KV	AC
I.D No.	:- 101101	Resolution	:	
Make	:- Agronics	Specified Accuracy	:- ± 2 %	
		Location	:	
3. Details of Equipment	nt Used for Calibration			
Name	:- High Voltage Probe	Digital Multin	neter	
Make/I.D No.	:- Fluke/ PIS/HV/01	CIE/PISPL/A	ABAD/DMM/02	2
Certificate No.	:- TSC/20-21/13518-2	E2020/12/29	8 .	
Certified By	:- Transcal	PISPL		
Calibration Validity	:- 18-Mar-22	21-Dec-21		
4. Calibration Results	÷			
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
KVAC	KVAC	KVAC	KVAC	%
1	1	0.996	0.004	0.40
2	2	1.994	0.006	0.30
3	3	2.953	0.047	1.57
4	4	3.981	0.019	0.48
- 5	5	4.977	0.023	0.46
5.Accuracy in Measur	ement :- ± 1.57 %			
6.Remark	:- The Unit Ur	nder Calibration Found to Perfor	m Satisfactorily.	
Note:				
1) UUC stands for Unit Unde	r Calibration.			
2) This certificate refers only	to the particular item submitted for calibrat	tion		
3) This certificate shall not be	reproduced, except in full unless written p	permission for the publication of an appre	oved	
abstract has been obtained fr	om the Technical Manager of "Precision II	nstrumentation And Services Pvt. Ltd., N	lashik".	
4) The calibration results repo	orted in the certificate are valid at the time		asurement.	
Calibrated By		TION AND EN		Approved B
Kanu	Har C	1 all		réé
	Martin Martin	VASHIK ) B		au
Calibration Engineer	132		· · · ·	Technical Manage
Mr.Rahul Pawar	103	Hd # OF		Mrs.Vinita Ghogare

Instrument Calibration \* AHU Validation \* Thermal Validation \* PLC Validation



21, Shreeram Bhavan, F-9, Shreeramkunj, Takli Road, Dwarka, Nashik - 422 011. Tel.: 0253 - 6145100

KVAC         KVAC         KVAC         KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9.982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	Distribution for the big methodsbinstruction for the big methodsService Request No.: A2022/12/26Kx-89, MIDC, Waluj, Aurangabad 431 136.Certificate No.: A2022/10/066Ambient Temp.: 24.2 °CDate of Calibration: 6-Oct-22Relative Humidity: 52 % RHNext Calibration Due On: 6-Oct-23Location of calibration: On SiteCalibration Due On: 6-Oct-23Condition of Item: O N:PISPL/ET/WI/032. Details of unit under Calibration (UUC):-Range: 0 to 50 KVACName: AC High Voltage TesterRange: 0 to 50 KVACID No.: 8637/174(P)/09-10Resolution: 2 KVACMake: Rectifier & ElectronicsSpecified Accuracy: $\pm 2 %$ Location::3. Details of Equipment Used for CalibrationDigital MultimeterMake/LD No.: High Voltage ProbeDigital MultimeterMake/LD No.: TranscalTranscalCalibration Results::Calibration Results::Calibration Results::Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.001510109.9820.0181514.9770.0230.15202019.9660.03421: $\pm 0.18\%$ : The Unit Under Calibration Found to Perform Satisfactorily. <th>1.CUSTOMER</th> <th>:-</th> <th>Page No.</th> <th>:- 1 of 1</th> <th></th>	1.CUSTOMER	:-	Page No.	:- 1 of 1	
Prv. Ltd.Service Request No.:A2022/22K-89, MIDC, Waluj, Aurangabad 431 136.Certificate No.:A2022/10/066Ambient Temp.: $24.2$ °CDate of Calibration: $6$ -Oct-22Relative Humidity:: $52$ % RHNext Calibration Due On: $6$ -Oct-23Location of calibration:O N SiteCalibration method No.:PISPL/ET/WI/03Condition of Item:O K $0$ to 50 KVACRange:0 to 50 KVACName:AC High Voltage TesterRange: $0$ to 50 KVACI.D No.:8637/174(P)/09-10Resolution: $2$ KVACMake:Rectifier & ElectronicsSpecified Accuracy: $\pm 2$ %Location::3.Details of Equipment Used for CalibrationItel (PIS/HiV/0)Rish/PIS/DMM/02Name:High Voltage ProbeDigital MultimeterMake/LD No.:Fluke/ PIS/HiV/01Rish/PIS/DMM/02Certificate No.:TranscalItel (PIS/HiV/0)Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVACKVAC%554.9950.0050.1010109,9820.0180.18151514.9770.0230.1520202019.9660.0340.17	Prt. Ltd.Service Request No.: A2022/22K-89, MIDC, Waluj, Aurangabad 431 136.Certificate No.: A2022/10/066Ambient Temp.: 24.2 °CDate of Calibration: 6-Oct-22Relative Humidity: 52 % RHNext Calibration Due On: 6-Oct-23Location of Calibration: On SiteCalibration method No.: PISPL/ET/WI/03Condition of Item: OK: O to 50 KVAC2. Details of unit under Calibration (UUC):-Resolution: 2 KVACName: A C High Voltage TesterRange: 0 to 50 KVACLD No.: 8637/174(P)/09-10Resolution: 2 KVACMake: Rectifier & ElectronicsSpecified Accuracy: $\pm 2 %$ Location: $\pm 2 %$ Location: $\pm 2 %$ Solution: $\pm 15K/21-22/18060-1$ TSC/21-22/18060-1Certificate No.: TSC/21-22/18060-1TSC/21-22/18060-1Certificate No.: TSC/21-22/18060-1TSC/21-22/18060-1Calibration Results::Calibration Results::Calibration PointsUUC ReadingStandard ReadingError in KVACKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.1520202019.9660.0340.17282827.9620.0380.145.Accuracy in Measurement: $\pm 0.18\%$ : The Unit Under Calibration Found to Perfor	Bush Electromech and	Engineering	Date of Receipt	:- 6-Oct-22	
Androgen Hungen	Richor, minolog, manage       242.°C       Date of Calibration       :       6-Oct-22         Relative Humidity       :       52 % RH       Next Calibration Due On       :       6-Oct-23         Location of calibration       :       On Site       Calibration method No.       :       PISPL/ET/WI/03         Condition of Item       :       OK       .       :       PISPL/ET/WI/03         2. Details of unit under Calibration (UUC):-       .       .       Name       :       0 to 50 KVAC         Name       :       AC High Voltage Tester       Range       :       0 to 50 KVAC         Make       :       Rectifier & Electronics       Specified Accuracy       :       ± 2 %         Location       :        .       .       .         3. Details of Equipment Used for Calibration       Specified Accuracy       :       ± 2 %         Location       :        .       .       .         Make/ID No.       :       Fluke/ PIS/MV/01       Rish/PIS/DMM/02       .         Certified By       :       Transcal       .       .       .         Calibration Points       UUC Reading       Standard Reading       Error in       KVAC       %			Service Request No.	:- A2022/22	
Ambient Temp.: $24.2 \ ^{0}$ CDate of Calibration: $6-\text{Oct-}22$ Relative Humidity: $52 \ ^{0}$ RHNext Calibration Due On: $6-\text{Oct-}23$ Location of calibration:On SiteCalibration method No.:PISPL/ET/WI/03Condition of Item:OK.PISPL/ET/WI/03 <b>2. Details of unit under Calibration (UUC):</b> Name:AC High Voltage TesterRange:0 to 50 KVACLD No.: $8637/174(P)/09-10$ Resolution: $2 \text{ KVAC}$ Make::Rectifier & ElectronicsSpecified Accuracy: $\pm 2 \ ^{0}$ Location::: <b>3.Details of Equipment Used for Calibration</b> Name:High Voltage ProbeDigital MultimeterMake/LD No.:Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:TranscalIt-Mar-23Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17	Ambient Temp.: $242\ ^{\circ}$ CDate of Calibration: $6\ -\text{Oct}-22$ Relative Humidity: $52\ ^{\circ}$ RHNext Calibration Due On:: $6\ -\text{Oct}-23$ Location of calibration:On SiteCalibration method No.:PISPL/ET/WI/03Condition of Item:OK:PISPL/ET/WI/032. Details of unit under Calibration (UUC):-Name::AC High Voltage TesterRange:0 to $50\ KVAC$ ILD No.::8637/174(P)/09-10Resolution::2 KVACMake::Rectifier & ElectronicsSpecified Accuracy:::2 KVACMake::Rectifier & ElectronicsSpecified Accuracy:::::3. Details of Equipment Used for CalibrationMake/LD No.::Flake/PIS/HV/01Rish/PIS/DMM/02Traccal:::Calibration ResultsCalibration Validity:::	K-89, MIDC, Waluj, Au	rangabad 431 136.	Certificate No.	:- A2022/10/	/066
Relative Humidity:52 % RHNext Calibration Due On:6-Oct-23Location of calibration:On SiteCalibration method No.:PISPL/ET/WI/03Condition of Item:OK: $PISPL/ET/WI/03$ <b>2. Details of unit under Calibration (UUC):-</b> Name::AC High Voltage TesterRange:0 to 50 KVACI.D No.::8637/174(P)/09-10Resolution::2 KVACMake::Rectifier & ElectronicsSpecified Accuracy:: $\pm 2 \%$ Location::: <b>3.Details of Equipment Used for Calibration</b> Name::High Voltage ProbeDigital MultimeterMake/I.D No.::Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:::TranscalCalibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%5::10109.9820.0181515202019.9660.0340.17	Relative Humidity       52 % RH       Next Calibration Due On       :       6-Oct-23         Location of calibration       :       On Site       Calibration method No.       :       PISPL/ET/WI/03         Condition of Item       :       OK       :       PISPL/ET/WI/03         2. Details of unit under Calibration (UUC):-       .       .       :       Name       :       0 to 50 KVAC         LD No.       :       :       :       8637/174(P)/09-10       Resolution       :       2 KVAC         Make       :       Rectifier & Electronics       Specified Accuracy       :       ± 2 %         Location       :       :        .       .         3. Details of Equipment Used for Calibration       .       .       .       .         Name       :       High Voltage Probe       Digital Multimeter       .         Make/LD No.       :       Fluke/ PIS/IfV/01       Transcal       .       .         Calibration Validity       :       14-Mar-23       .       .       .         4. Calibration Points       UUC Reading       Standard Reading       Error in       Error in       .         KVAC       KVAC       KVAC       %       .       <			Date of Calibration	:- 6-Oct-22	
Location of calibration:On SiteCalibration method No.:PISPL/ET/WI/03Condition of Item:OK: $PISPL/ET/WI/03$ <b>2. Details of unit under Calibration (UUC):-</b>	Location of calibration : On Site Calibration method No. : PISPL/ET/WI/03 Condition of Item : OK Calibration flem : OK CAC KVAC KVAC KVAC KVAC % CAC KVAC KVAC % CAC KVAC KVAC KVAC KVAC % CAC KVAC KVAC KVAC % CAC KVAC KVAC KVAC KVAC KVAC KVAC % CAC KVAC		:- 52 % RH	Next Calibration Due On	:- 6-Oct-23	
Condition of Item: OK2. Details of unit under Calibration (UUC):-Range: 0 to 50 KVACName: AC High Voltage TesterRange: 0 to 50 KVACI.D No.: 8637/174(P)/09-10Resolution: 2 KVACMake: Rectifier & ElectronicsSpecified Accuracy: $\pm 2 \%$ Dotation::3.Details of Equipment Used for CalibrationName: High Voltage ProbeDigital MultimeterMake/I.D No.: Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.: TSC/21-22/18060-1TSC/21-22/18060-1Certified By: TranscalTranscalCalibration Validity: 14-Mar-2314-Mar-23Calibration PointsUUC ReadingStandard ReadingError inError inKVACKVACKVACKVAC%554.9950.0050.101010109.9820.0180.18151514.9770.0230.1520202019.9660.0340.17	Condition of Item: OK2. Details of unit under Calibration (UUC):-Range: 0 to 50 KVACName: AC High Voltage TesterRange: 0 to 50 KVACLD No.:: 8637/174(P)/09-10Resolution: 2 KVACMake:: Rectifier & ElectronicsSpecified Accuracy: $\pm 2 \%$ Location:3.Details of Equipment Used for CalibrationName:: High Voltage ProbeDigital MultimeterMake/I.D No.:: Fluke/ PIS/FIV/01Rish/PIS/DMM/02Certificate No.:: TSC/21-22/18060-1TSC/21-22/18060-1Certified By:: Transcal14-Mar-23Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.00510109.9820.018151519.9660.03420202027.962282827.9620.0385.Accuracy in Measurement: $\pm 0.18\%$ : $\pm 0.18\%$			Calibration method No.	:- PISPL/ET	C/WI/03
Name:-AC High Voltage TesterRange:-0 to 50 KVACI.D No.:- $8637/174(P)/09-10$ Resolution:- $2$ KVACMake:-Rectifier & ElectronicsSpecified Accuracy:- $\pm 2$ %Location:-:-:- $\pm 2$ %LocationName:-High Voltage ProbeDigital MultimeterMake/I.D No.:-Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:-TSC/21-22/18060-1TSC/21-22/18060-1Certified By:-Transcal14-Mar-23Calibration Validity:-14-Mar-2314-Mar-23KVACKVACKVACKVACKVAC554.9950.00510109.9820.0180.118151514.9770.0230.15202019.9660.0340.17	Name:-AC High Voltage TesterRange:-0 to 50 KVACLD No.:- $8637/174(P)/09-10$ Resolution:- $2$ KVACMake:-Rectifier & ElectronicsSpecified Accuracy:- $\pm 2$ %Location:-:3.Details of Equipment Used for CalibrationName:-High Voltage ProbeDigital MultimeterMake/LD No.:-Flake/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:-TranscalTranscalCalibration Results:Calibration Results:-:Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17282827.9620.0380.14: $\pm 0.18\%$ : The Unit Under Calibration Found to Perform Satisfactorily.		:- OK			
Name:High Yonge YongeResolution:2 KVACMake:Rectifier & ElectronicsSpecified Accuracy: $\pm 2 \%$ Location::3.Details of Equipment Used for CalibrationName:High Voltage ProbeDigital MultimeterMake/I.D No.:Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:TranscalCalibration Validity:14-Mar-234.Calibration Results::Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC554.9950.0050.1010109.9820.0180.18151514.9770.0230.1520202019.9660.0340.17	Name:8637/174(P)/09-10Resolution:2 KVACMake:Rectifier & ElectronicsSpecified Accuracy: $\pm 2 \%$ LocationS.Details of Equipment Used for CalibrationName:High Voltage ProbeDigital MultimeterMake/LD No.:Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:TSC/21-22/18060-1TSC/21-22/18060-1Certificate No.:TSC/21-22/18060-1TSC/21-22/18060-1Certified By:Transcal14-Mar-23(Alibration Validity:14-Mar-2314-Mar-23KVACKVACKVACKVACKVAC554.9950.00510109.9820.018151514.9770.023202019.9660.034282827.9620.0385.Accuracy in Measurement:::::the Unit Under Calibration Found to Perform Satisfactorily.	2. Details of unit unde	r Calibration (UUC):-			
I.D No.: $0007/174(x)$ (or 10InternationalMake:Rectifier & ElectronicsSpecified Accuracy: $\pm 2.\%$ <b>3.Details of Equipment Used for Calibration</b> Digital MultimeterName:High Voltage ProbeDigital MultimeterMake/I.D No.:Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:TSC/21-22/18060-1Certified By:TranscalCalibration Validity:14-Mar-23 <b>4.Calibration Results</b> :Calibration PointsUUC ReadingStandard ReadingKVACKVACKVAC554.9950.0050.1010109,982151514.977202019.966	IndicationIndicationMake:-Rectifier & ElectronicsSpecified Accuracy:- $\pm 2.\%$ Location:J.Details of Equipment Used for CalibrationName:-High Voltage Probe.Make/LD No.:-Fluke/ PIS/HV/01Certificate No.:-TSC/21-22/18060-1Certificate No.:-TSC/21-22/18060-1Certificate By:-TranscalCalibration Validity:-14-Mar-234.Calibration Results:-Calibration PointsUUC ReadingStandard ReadingKVACKVACKVAC554.9950.0050.1010109.982151514.977202019.966202028282920.0385.Accuracy in Measurement:- $\pm 0.18\%$ 6.Remark:- The Unit Under Calibration Found to Perform Satisfactorily.	Name	:- AC High Voltage Tester	Range	:- 0 to 50 KV	/AC
Ander     Preclainer of Electronice     Special Critical (Construction)       J. Details of Equipment Used for Calibration       Name     :- High Voltage Probe       Make/I.D No.     :- Fluke/ PIS/HV/01       Certificate No.     :- TSC/21-22/18060-1       Certified By     :- Transcal       Calibration Validity     :- Transcal       Calibration Points     UUC Reading       KVAC     KVAC       KVAC     KVAC       KVAC     KVAC       KVAC     KVAC       10     10       15     15       20     20	Ander     Interference Electronicity       Location     :       3.Details of Equipment Used for Calibration       Name     :       Make/I.D No.     :       Digital Multimeter       Make/I.D No.     :       TSC/21-22/18060-1     TSC/21-22/18060-1       Certificate No.     :       Certificate No.     :       Active Control of Calibration     Transcal       Calibration Results     :       Calibration Points     UUC Reading     Standard Reading     Error in       KVAC     KVAC     KVAC     %       5     5     4.995     0.005     0.10       10     10     9.982     0.018     0.18       15     15     14.977     0.023     0.15       20     20     20     20.902     0.038     0.14       5.Accuracy in Measurement     := ± 0.18%       6.Remark     :- The Unit Under Calibration Found to Perform Satisfactorily.	I.D No.	:- 8637/174(P)/09-10	Resolution	:- 2 KVAC	
3.Details of Equipment Used for Calibration           Name         :-         High Voltage Probe         Digital Multimeter           Make/I.D No.         :-         Fluke/ PIS/HV/01         Rish/PIS/DMM/02           Certificate No.         :-         TSC/21-22/18060-1         TSC/21-22/18060-1           Certified By         :-         Transcal         Transcal           Calibration Validity         :-         14-Mar-23         14-Mar-23           4.Calibration Results         :-           Calibration Points         UUC Reading         Standard Reading         Error in         Error in           KVAC         KVAC         KVAC         %         %           5         5         4.995         0.005         0.10           10         10         9.982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	3.Details of Equipment Used for Calibration         Name       : High Voltage Probe       Digital Multimeter         Make/I.D No.       :: Fluke/ PIS/HV/01       Rish/PIS/DMM/02         Certificate No.       :: TSC/21-22/18060-1       TSC/21-22/18060-1         Certified By       :: Transcal       Transcal         Calibration Validity       :: 14-Mar-23       14-Mar-23         4.Calibration Results       :-         Calibration Points       UUC Reading       Standard Reading       Error in       Error in         KVAC       KVAC       KVAC       %         5       5       4.9995       0.005       0.10         10       10       9,982       0.018       0.18         15       14.977       0.023       0.15         20       20       19.966       0.034       0.17         28       28       27.962       0.038       0.14         5.Accuracy in Measurement       := ± 0.18%       :- The Unit Under Calibration Found to Perform Satisfactorily.	Make	:- Rectifier & Electronics	Specified Accuracy	:- ± 2 %	
Name:- High Voltage ProbeDigital MultimeterMake/I.D No.:- Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:- TSC/21-22/18060-1TSC/21-22/18060-1Certified By:- TranscalTranscalCalibration Validity:- 14-Mar-2314-Mar-23Calibration ResultsCalibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17	Name:-High Voltage ProbeDigital MultimeterMake/I.D No.:-Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:-TSC/21-22/18060-1TSC/21-22/18060-1Certified By:-Transcal14-Mar-23Calibration Validity:-14-Mar-2314-Mar-23 <b>4.Calibration Results</b> :-Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.1520202019.9660.0340.17282827.9620.0380.14Staccuracy in Measurement:- $\pm 0.18\%$ c. $\pm 0.18\%$ c. $\pm 0.18\%$			Location	:	
Name:- High Voltage ProbeDigital MultimeterMake/I.D No.:- Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:- TSC/21-22/18060-1TSC/21-22/18060-1Certified By:- TranscalTranscalCalibration Validity:- 14-Mar-2314-Mar-23Calibration ResultsCalibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17	Name:-High Voltage ProbeDigital MultimeterMake/I.D No.:-Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:-TSC/21-22/18060-1TSC/21-22/18060-1Certified By:-Transcal14-Mar-23Calibration Validity:-14-Mar-2314-Mar-23 <b>4.Calibration Results</b> :-Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.1520202019.9660.0340.17282827.9620.0380.14Staccuracy in Measurement:- $\pm 0.18\%$ c. $\pm 0.18\%$ c. $\pm 0.18\%$					
Name:- High Voltage ProbeDigital MultimeterMake/I.D No.:- Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:- TSC/21-22/18060-1TSC/21-22/18060-1Certified By:- TranscalTranscalCalibration Validity:- 14-Mar-2314-Mar-23Calibration ResultsCalibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17	Name:-High Voltage ProbeDigital MultimeterMake/I.D No.:-Fluke/ PIS/HV/01Rish/PIS/DMM/02Certificate No.:-TSC/21-22/18060-1TSC/21-22/18060-1Certified By:-Transcal14-Mar-23Calibration Validity:-14-Mar-2314-Mar-23 <b>4.Calibration Results</b> :-Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.1520202019.9660.0340.17282827.9620.0380.14Staccuracy in Measurement:- $\pm 0.18\%$ c. $\pm 0.18\%$ c. $\pm 0.18\%$	3.Details of Equipmen	t Used for Calibration		All here in	
Certificate No.       :- TSC/21-22/18060-1       TSC/21-22/18060-1         Certified By       :- Transcal       14-Mar-23         Calibration Validity       :- 14-Mar-23       14-Mar-23         4.Calibration Results       :-       -         Calibration Points       UUC Reading       Standard Reading       Error in       Error in         KVAC       KVAC       KVAC       %         5       5       4.995       0.005       0.10         10       10       9.982       0.018       0.18         15       15       14.977       0.023       0.15         20       20       19.966       0.034       0.17	TranscalTSC/21-22/18060-1TSC/21-22/18060-1TranscalCalibration Validityi 14-Mar-23ACalibration ResultscCalibration PointsUUC Reading KVACStandard Reading KVACError in KVACError in 			Digital Multime	eter	
Certified By Calibration Validity:- Transcal 14-Mar-23Transcal 14-Mar-234.Calibration Results:-Image: Calibration PointsUUC ReadingStandard ReadingError in KVACError in KVACError in KVAC554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17	Certified By Calibration Validity: Transcal 14-Mar-23Transcal 14-Mar-234.Calibration Results:Calibration PointsUUC Reading KVACStandard Reading KVACError in KVAC $5$ 54.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17282827.9620.0380.14S.Accuracy in Measurement:- $\pm 0.18\%$ :- $\pm 0.18\%$ :- The Unit Under Calibration Found to Perform Satisfactorily.	Make/I.D No.	:- Fluke/ PIS/HV/01	Rish/PIS/DM	M/02	
Calibration Validity       :-       14-Mar-23         4.Calibration Results       :-         Calibration Points       UUC Reading       Standard Reading       Error in       Error in         KVAC       KVAC       KVAC       KVAC       %         5       5       4.995       0.005       0.10         10       10       9.982       0.018       0.18         15       15       14.977       0.023       0.15         20       20       19.966       0.034       0.17	Cellibration Validity :- 14-Mar-2314-Mar-234.Calibration Results :-Calibration PointsUUC ReadingStandard ReadingError inKVACKVACKVAC%554.9950.0050.1010109.9820.0180.18151514.9770.0230.15202019.9660.0340.17282827.9620.0380.145.Accuracy in Measurement:- $\pm 0.18\%$ :- $\pm 0.18\%$	Certificate No.	:- TSC/21-22/18060-1	TSC/21-22/1800	60-1	
4.Calibration Results         :-           Calibration Points         UUC Reading         Standard Reading         Error in         Error in           KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9.982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	4.Calibration Results       :-         Calibration Points       UUC Reading       Standard Reading       Error in         KVAC       KVAC       KVAC       %         5       5       4.995       0.005       0.10         10       10       9,982       0.018       0.18         15       15       14.977       0.023       0.15         20       20       19.966       0.034       0.17         28       28       27.962       0.038       0.14         S.Accuracy in Measurement       :- ± 0.18%         6.Remark       :- The Unit Under Calibration Found to Perform Satisfactorily.	Certified By	:- Transcal	Transcal		
Calibration Points         UUC Reading         Standard Reading         Error in         Error in           KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9.982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	Calibration Points         UUC Reading         Standard Reading         Error in         Error in           KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9,982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17           28         28         27.962         0.038         0.14           5.Accuracy in Measurement           6.Remark         :- ± 0.18%	Calibration Validity	:- 14-Mar-23	14-Mar-23		
Calibration Points         UUC Reading         Standard Reading         Error in         Error in           KVAC         KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9.982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	Calibration Points         UUC Reading         Standard Reading         Error in         Error in           KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9,982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17           28         28         27.962         0.038         0.14           5.Accuracy in Measurement           6.Remark         :- ± 0.18%	4 Calibration Results				
KVAC         KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9.982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	KVAC         KVAC         KVAC         KVAC         %           5         5         4.995         0.005         0.10           10         10         9,982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17           28         28         27.962         0.038         0.14           5.Accuracy in Measurement         :- ± 0.18%           :- The Unit Under Calibration Found to Perform Satisfactorily.		<u> </u>	Standard Reading	Error in	Error in
5         5         4.995         0.005         0.10           10         10         9,982         0.018         0.18           15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17	5         5         4.995         0.005         0.10           10         10         10         9,982         0.018         0.18           15         15         15         14.977         0.023         0.15           20         20         19.966         0.034         0.17           28         28         27.962         0.038         0.14           5.Accuracy in Measurement           6.Remark         :- ± 0.18%         :- The Unit Under Calibration Found to Perform Satisfactorily.				KVAC	%
10109.9820.0180.18151514.9770.0230.15202019.9660.0340.17	10     10     9,982     0.018     0.18       15     15     14.977     0.023     0.15       20     20     19.966     0.034     0.17       28     27.962     0.038     0.14       5.Accuracy in Measurement       6.Remark     :- ± 0.18%			4.995	0.005	0.10
20 20 19.966 0.034 0.17	20         20         19.966         0.034         0.17           28         28         27.962         0.038         0.14           5.Accuracy in Measurement         :- ± 0.18%         :- The Unit Under Calibration Found to Perform Satisfactorily.			9,982	0.018	0.18
	28     28     27.962     0.038     0.14       5.Accuracy in Measurement     :- ± 0.18%       6.Remark     :- The Unit Under Calibration Found to Perform Satisfactorily.	15	15	14.977	.0.023	0.15
	28     28     27.962     0.038     0.14       5.Accuracy in Measurement     :- ± 0.18%     :- The Unit Under Calibration Found to Perform Satisfactorily.			19.966	0.034	0.17
	5.Accuracy in Measurement       :- ± 0.18%         6.Remark       :- The Unit Under Calibration Found to Perform Satisfactorily.			27.962	0.038	0.14
5 Accuracy in Measurement $\cdot + 0.18\%$	6.Remark :- The Unit Under Calibration Found to Perform Satisfactorily.				1	
				der Calibration Found to Perform	n Satisfactorily.	
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Note: 1) UUC stands for Unit Under Calibration			r Calibration			
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<ol> <li>UUC stands for Unit Under Calibration.</li> <li>This certificate refers only to the particular item submitted for calibration</li> </ol>	2) This certificate refers only to the particular item submitted for calibration	<ol> <li>UUC stands for Unit Under</li> <li>This certificate refers only</li> </ol>	to the particular item submitted for calibrat			
<ol> <li>1) UUC stands for Unit Under Calibration.</li> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved</li> </ol>	<ul> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved</li> </ul>	<ol> <li>UUC stands for Unit Under</li> <li>This certificate refers only</li> <li>This certificate shall not be</li> </ol>	to the particular item submitted for calibrat reproduced, except in full unless written p	ermission for the publication of an approv		
<ol> <li>1) UUC stands for Unit Under Calibration.</li> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> </ol>	<ul> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> </ul>	<ol> <li>1) UUC stands for Unit Under</li> <li>2) This certificate refers only</li> <li>3) This certificate shall not be abstract has been obtained fr</li> </ol>	to the particular item submitted for calibrat reproduced, except in full unless written p om the Technical Manager of "Precision Ir	ermission for the publication of an approv astrumentation And Services Pvt. Ltd., Na	ıshik".	
<ol> <li>1) UUC stands for Unit Under Calibration.</li> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement.</li> </ol>	<ul> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement.</li> </ul>	<ol> <li>1) UUC stands for Unit Under</li> <li>2) This certificate refers only</li> <li>3) This certificate shall not be abstract has been obtained fr</li> <li>4) The calibration results report</li> </ol>	to the particular item submitted for calibrat reproduced, except in full unless written p om the Technical Manager of "Precision Ir orted in the certificate are valid at the time o	ermission for the publication of an approv astrumentation And Services Pvt. Ltd., Na of and under the stated conditions of mea	ıshik".	
<ol> <li>UUC stands for Unit Under Calibration.</li> <li>This certificate refers only to the particular item submitted for calibration</li> <li>This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement. Calibrated By</li> </ol>	<ul> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement.</li> <li>Calibrated By</li> </ul>	<ol> <li>1) UUC stands for Unit Under</li> <li>2) This certificate refers only 1</li> <li>3) This certificate shall not be abstract has been obtained fr</li> <li>4) The calibration results report Calibrated By</li> </ol>	to the particular item submitted for calibrat reproduced, except in full unless written p om the Technical Manager of "Precision Ir orted in the certificate are valid at the time o	ermission for the publication of an approv astrumentation And Services Pvt. Ltd., Na of and under the stated conditions of mea	ıshik".	Approved E
<ol> <li>UUC stands for Unit Under Calibration.</li> <li>This certificate refers only to the particular item submitted for calibration</li> <li>This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>The calibrated By Rahu</li> </ol>	<ul> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>4) The calibrated By Rahu</li> </ul>	<ol> <li>1) UUC stands for Unit Under</li> <li>2) This certificate refers only 1</li> <li>3) This certificate shall not be abstract has been obtained fr</li> <li>4) The calibration results report Calibrated By</li> </ol>	to the particular item submitted for calibrat reproduced, except in full unless written p om the Technical Manager of "Precision Ir orted in the certificate are valid at the time	ermission for the publication of an approv astrumentation And Services Pvt. Ltd., Na of and under the stated conditions of mea	ıshik".	Approved B
<ol> <li>UUC stands for Unit Under Calibration.</li> <li>This certificate refers only to the particular item submitted for calibration</li> <li>This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement.</li> <li>Calibrated By Rah Galardow MASHIK</li> </ol>	<ul> <li>2) This certificate refers only to the particular item submitted for calibration</li> <li>3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".</li> <li>4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement. Calibrated By Rahue NASHIK TON AND THE CALIBRATION AND THE CALIBRATICAL AND THE CALIBRATION AND THE CALIBRATICAL AND THE CALIB</li></ul>	<ol> <li>1) UUC stands for Unit Under</li> <li>2) This certificate refers only 1</li> <li>3) This certificate shall not be abstract has been obtained fr</li> <li>4) The calibration results reported by Rahes</li> </ol>	to the particular item submitted for calibrat reproduced, except in full unless written p om the Technical Manager of "Precision Ir orted in the certificate are valid at the time	ermission for the publication of an approv astrumentation And Services Pvt. Ltd., Na of and under the stated conditions of mea	ıshik".	Approved F



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1.CUSTOMER		Page No.	:- 1 of 1	
Bush Electromech and	l Engineering	Date of Receipt	:- 6-Oct-22	
Pvt. Ltd.		Service Request No.	:- A2022/22	
K-89, MIDC, Waluj, Au	rangabad 431 136.	Certificate No.	:- A2022/10/	/067
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22	
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-23	
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET	'/WI/02
Condition of Item	:- OK			
2. Details of unit unde	r Calibration (UUC):-			
Name	:- AC High Voltage Tester	Range	:- 0 to 100 m	AAC
	(Ammeter)	Resolution	:- 4 mAAC	
I.D No.	:- 8637/174(P)/09-10	Specified Accuracy	:- ±2%	
Make	:- Rectifier & Electronics	Location	>	
	11 1/2			
3.Details of Equipmer	nt Used for Calibration			
Name	:- Multifunction Calibration Sys	stem		
Make/I.D No.	:- Fluke / PIS/UNICAL/03			
Certificate No.	:- M-220829-20-2			
Certified By	:- GODREJ			
Calibration Validity	:- 29-Aug-23			
4.Calibration Results				
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
mAAC	mAAC	mAAC	mAAC	%
20	20	19.955	0.045	0.23
40	40	39.927	0.073	0.18
60	60	59.871	0.129	0.21
80	80	79.743	0.257	0.32
100	100	99.597	0.403	0.40
5.Accuracy in Measur	<b>ement</b> :- $\pm 0.40 \%$			
6.Remark	:- The Unit Une	der Calibration Found to Perform	m Satisfactorily.	
Note:				
1) UUC stands for Unit Unde	r Calibration.			
2) This certificate refers only	to the particular item submitted for calibrati	on		
3) This certificate shall not be	reproduced, except in full unless written pe	ermission for the publication of an appro-	oved -	
abstract has been obtained fr	om the Technical Manager of "Precision Ins	strumentation And Services Pvt. Ltd., N	ashik".	
4) The calibration results repo	orted in the certificate are valid at the time of	f and under the stated conditions of me	asurement.	
Calibrated By	SONTATIO	AND SO		Approved B
Vahiel	13/	12		roco
raing	F(			/ /// //
Fairy	· USE NAS	SHK ) SE		0
Calibration Engineer Mr.Rahul Pawar	PAN NAST	SHIK ) CE		Technical Manag Mrs.Vinita Ghoga



21, Shreeram Bhavan, F-9, Shreeramkunj, Takli Road, Dwarka, Nashik - 422 011. Tel.: 0253 - 6145100

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.CUSTOMER	-	Page No.	:- 1 of 1	
Bush Electromech and	Engineering	Date of Receipt	:- 6-Oct-22	
Pvt. Ltd.		Service Request No.	:- A2022/22	
K-89, MIDC, Waluj, Au	angabad 431 136.	Certificate No.	:- A2022/10/	068
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22	
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-23	
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET	/WI/03
Condition of Item	:- OK			
2. Details of unit under	r Calibration (UUC):-			
Name	:- AC High Voltage Tester	Range	:- 0 to 100 K	VAC
I.D No.	:- NTPL/055/17-18	Resolution	:- 0.1 KVAC :- ± 2 %	
Make	:- ntpl	Specified Accuracy		
		Location	:	
	1.1			
3.Details of Equipmen	t Used for Calibration		Serie Station	
Name	:- High Voltage Probe	Digital Multime		
Make/I.D No.	:- Fluke/ PIS/HV/01	Rish/PIS/DM		
Certificate No.	:- TSC/21-22/18060-1	TSC/21-22/1800	60-1	
Certified By	:- Transcal	Transcal		
Calibration Validity	:- 14-Mar-23	14-Mar-23		
4.Calibration Results	5-			
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
KVAC	KVAC	KVAC	KVAC	%
5	5	4.988	0.012	0.24
• 10	10	9.984	0.016	0.16
15	15	14.962	0.038	0.25
20	20	19.951	0.049	0.24
28	28	27.942	0.058	0.21
5.Accuracy in Measur 6.Remark		nder Calibration Found to Perform	n Satisfactorily.	
Note:				
1) UUC stands for Unit Unde	the second s			
	to the particular item submitted for calibrat			
3) This certificate shall not be	reproduced, except in full unless written p			
	om the Technical Manager of "Precision In	nstrumentation And Services Pvt. Ltd., Na		
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4) The calibration results repo	orted in the certificate are valid at the time	of and under the stated conditions of meas	surement.	
and the subscript read when		of and under the stated conditions of meas	surement.	Approved
4) The calibration results repo	orted in the certificate are valid at the time	ALD SER	surement.	Approved ?
4) The calibration results repo		ALD SER	surement.	Approved . Cere Technical Manag



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	1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1	Page No.	:- 1 of 1			
Bush Electromech and	d Engineering	Date of Receipt	:- 6-Oct-22			
Pvt. Ltd.		Service Request No.	:- A2022/22	:- A2022/22		
K-89, MIDC, Waluj, Au	rangabad 431 136.	Certificate No.	:- A2022/10/0	69		
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22	- 6-Oct-22		
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-23			
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET/V	WI/02		
Condition of Item	:- OK					
2. Details of unit unde	r Calibration (UUC):-					
Name	:- AC High Voltage Tester	Range	:- 0 to 100 mA	AC		
	(Ammeter)	Resolution	:- 0.1 mAAC			
I.D No.	:- NTPL/055/17-18	Specified Accuracy	:- ± 2 %			
Make	:- ntpl	Location :				
3. Details of Equipment	nt Used for Calibration					
3.Details of Equipmen	nt Used for Calibration :- Multifunction Calibration Sys	stem				
	2/ 00000000000 0000	stem				
Name	:- Multifunction Calibration Sys	stem				
Name Make/I.D No.	:- Multifunction Calibration Sys :- Fluke / PIS/UNICAL/03	stem				
Name Make/I.D No. Certificate No.	<ul> <li>Multifunction Calibration Sys</li> <li>Fluke / PIS/UNICAL/03</li> <li>M-220829-20-2</li> </ul>	stem				
Name Make/I.D No. Certificate No. Certified By	<ul> <li>Multifunction Calibration Sys</li> <li>Fluke / PIS/UNICAL/03</li> <li>M-220829-20-2</li> <li>GODREJ</li> </ul>	stem				
Name Make/I.D No. Certificate No. Certified By Calibration Validity	:- Multifunction Calibration Sys :- Fluke / PIS/UNICAL/03 :- M-220829-20-2 :- GODREJ :- 29-Aug-23 :- UUC Reading	Standard Reading	Error in	Error in		
Name Make/I.D No. Certificate No. Certified By Calibration Validity 4.Calibration Results	<ul> <li>Multifunction Calibration Sys</li> <li>Fluke / PIS/UNICAL/03</li> <li>M-220829-20-2</li> <li>GODREJ</li> <li>29-Aug-23</li> </ul>		Error in mAAC	Error in %		
Name Make/I.D No. Certificate No. Certified By Calibration Validity 4.Calibration Results Calibration Points	:- Multifunction Calibration Sys :- Fluke / PIS/UNICAL/03 :- M-220829-20-2 :- GODREJ :- 29-Aug-23 :- UUC Reading mAAC 20.0	Standard Reading	mAAC 0.033	% 0.17		
Name Make/I.D No. Certificate No. Certified By Calibration Validity 4.Calibration Results Calibration Points mAAC	:- Multifunction Calibration Sys :- Fluke / PIS/UNICAL/03 :- M-220829-20-2 :- GODREJ :- 29-Aug-23 :- UUC Reading mAAC	Standard Reading mAAC	mAAC 0.033 0.080	% 0.17 0.20		
Name Make/I.D No. Certificate No. Certified By Calibration Validity 4.Calibration Results Calibration Points mAAC 20	:- Multifunction Calibration Sys :- Fluke / PIS/UNICAL/03 :- M-220829-20-2 :- GODREJ :- 29-Aug-23 :- UUC Reading mAAC 20.0	Standard Reading mAAC 19.967 39.920 59.864	mAAC 0.033 0.080 0.136	% 0.17		
Name Make/I.D No. Certificate No. Certified By Calibration Validity 4.Calibration Results Calibration Points mAAC 20 40	:- Multifunction Calibration Sys :- Fluke / PIS/UNICAL/03 :- M-220829-20-2 :- GODREJ :- 29-Aug-23  UUC Reading mAAC 20.0 40.0	Standard Reading mAAC 19.967 39.920	mAAC 0.033 0.080	% 0.17 0.20		

4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement. TIONA

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Calibrated By Rah

Calibration Engineer Mr.Rahul Pawar

Approved By

ceel

Technical Manager Mrs.Vinita Ghogare



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### CALIBRATION CERTIFICATE

I.CUSTOMER	F	Page No.	:- 1 of 1	
Bush Electromech and	Engineering	Date of Receipt	:- 6-Oct-22	
Pvt. Ltd.		Service Request No.	:- A2022/22	
K-89, MIDC, Waluj, Au	rangabad 431 136.	Certificate No.	:- A2022/10,	/070
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22	
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-22	
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET	C/WI/03
Condition of Item	:- OK			
2. Details of unit unde	r Calibration (UUC):-			
Name	:- AC High Voltage Tester	Range	:- 0 to 2 KV.	AC
I.D No.	:- 1101101	Resolution	:	
Make	:- Agronics	Specified Accuracy	:- ± 2 %	
		Location	÷	
3.Details of Equipmen	nt Used for Calibration			
Name	:- High Voltage Probe	Digital Multin	neter	
Make/I.D No.	:- Fluke/ PIS/HV/01	Rish/PIS/DM	4M/02	
Certificate No.	:- TSC/21-22/18060-1	TSC/21-22/18	060-1	
Certified By	:- Transcal	Transcal		
Calibration Validity	:- 14-Mar-23	14-Mar-23		
4.Calibration Results				
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
KVAC	KVAC	KVAC	KVAC	%
		0.995	0.005	0.50
1	1	1.994		
2	2	1.994	0.006	0.30
5.Accuracy in Measur	ement :- ± 0.50 %			
6.Remark	:- The Unit Ur	nder Calibration Found to Perfor	m Satisfactorily.	
Note:				
1) UUC stands for Unit Unde				
	to the particular item submitted for calibrat			
	e reproduced, except in full unless written p			
	rom the Technical Manager of "Precision Ir			
	orted in the certificate are valid at the time	of and under the stated conditions of me	easurement.	
Calibrated By	1 Se	TRIONANO		Approved
Rance	THE SWA	LE LE		cee
	SNI	NASHIK ) R		
Calibration Engineer	13			Technical Mana
Mr.Rahul Pawar		3Hd * 01		Mrs.Vinita Ghog

◆ Instrument Calibration ◆ AHU Validation ◆ Thermal Validation ◆ PLC Validation

21, Shreeram Bhavan, F-9, Shreeramkunj, Takli Road, Dwarka, Nashik - 422 011. Tel.: 0253 - 6145100

I.CUSTOMER	:-	Page No.	:- 1 of 1	
Bush Electromech and	Engineering	Date of Receipt		
Pvt. Ltd.		Service Request No.	:- A2022/22	
K-89, MIDC, Waluj, Aur	angabad 431 136.	Certificate No.	:- A2022/10/0	071
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22	
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-22	
Location of calibration		Calibration method No.	:- PISPL/ET/	/WI/03
Condition of Item	- OK			
2. Details of unit under	Calibration (UUC):-			
Name	:- Insulation Tester	Range	:- 0 to 2.5 KV	AC
I.D No.	:- 363167	Resolution	:	
Make	:- Meco	Specified Accuracy	:- ± 2 %	
3.Details of Equipmen	t Used for Calibration			
Name	:- High Voltage Probe	Digital Multim	eter	
Make/I.D No.	:- Fluke/ PIS/HV/01	Rish/PIS/DM	M/02	
Certificate No.	:- TSC/21-22/18060-1	TSC/21-22/180	60-1	
Certified By	:- Transcal	Transcal		
Calibration Validity	:- 14-Mar-23	14-Mar-23		
Calibration value				
4. Calibration Results	5 x 1			1
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
KVAC	KVAC	KVAC	KVAC	%
1	1	0.998	0.002	0.20
2.5	2.5	2.492	0.008	0.32
5.Accuracy in Measure	ement :- ± 0.32 %			
5.Accuracy in Measure	· = 0.02 /0			
6.Remark	:- The Unit U	Inder Calibration Found to Perform	m Satisfactorily.	
Note				
Note:	e Calibration			
1) UUC stands for Unit Unde		ation		
	to the particular item submitted for calibr		wat	
		permission for the publication of an appro-		
and the second		Instrumentation And Services Pvt. Ltd., N		
	orted in the certificate are valid at the time	e of and under the stated conditions of me	asurement.	A
Calibrated By	1	A COLATION AND		Approved I
Rance				Cee
	IN S NI	NASHIK		
Calibration Engineer	11-2	1.1		Technical Manag



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I.CUSTOMER		Page No.	:- 1 of 1		
Bush Electromech and	Engineering	Date of Receipt	:- 6-Oct-22		
Pvt. Ltd.		Service Request No.	:- A2022/22		
K-89, MIDC, Waluj, Aur		Certificate No.	:- A2022/10/072		
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22		
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-23		
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET/W	I/04	
Condition of Item	:- OK				
2. Details of unit under					
Name	:- Contact Resistance Meter	Range	:- $40 \ \mu\Omega$ to 2000	μΩ	
I.D No.	:- 5509.00.W005	Resolution	:		
Make	:- Scope	Specified Accuracy	:- ± 2 %		
		Location	;		
3.Details of Equipmen					
Name	:- 4 Wire low resistance				
Make/I.D No.	:- Zeal/PIS/LR/01				
Certificate No.	:- 10/161 (2022-2023)				
Certified By	:- ZEAL				
Calibration Validity	:- 27-Oct-23				
4. Calibration Results			1		
Calibration Points	UUC Reading	Standard Reading	Error in	Error in	
μΩ	μΩ	Ωμ	Ωμ	%	
10	10	9.98	0.02	0.20 0.26	
50	50 100	49.87	0.13 0.17	0.20	
100 5.Accuracy in Measure		99.83	0.17	0.17	
6.Remark	:- The Unit Un	der Calibration Found to Perfor	m Satisfactorily.		
Note:					
1) UUC stands for Unit	Under Calibration.				
and the state of the second state of the second state of the state of	only to the particular item submitt	ted for calibration			
		nless written permission for the	publication of an app	roved	
,	of be reproduced, except in rull u				
3) This certificate shall n		f "Precision Instrumentation An	a Services Pvt. Ltd., 1	Nashik .	
3) This certificate shall n abstract has been obtain	ned from the Technical Manager o				
<ul> <li>3) This certificate shall n abstract has been obtain</li> <li>4) The calibration results</li> </ul>				easurement.	
<ol> <li>This certificate shall n abstract has been obtain</li> <li>The calibration results Calibrated By</li> </ol>	ned from the Technical Manager o			easurement.	
<ul><li>3) This certificate shall n abstract has been obtain</li><li>4) The calibration results</li></ul>	ned from the Technical Manager o	id at the time of and under the s		easurement.	
<ol> <li>This certificate shall n abstract has been obtain</li> <li>The calibration results Calibrated By</li> </ol>	ned from the Technical Manager o				
3) This certificate shall n abstract has been obtain 4) The calibration results Calibrated By Rahte	ned from the Technical Manager o	id at the time of and under the s		easurement. Approved I	
<ul><li>3) This certificate shall n abstract has been obtain</li><li>4) The calibration results Calibrated By</li></ul>	ned from the Technical Manager o	id at the time of and under the s		easurement.	

Instrument Calibration + AHU Validation + Thermal Validation + PLC Validation



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#### CALIBRATION CERTIFICATE

1.CUSTOMER	:-		Page No.	:-	1 of 2
Bush Electromech and	d Engineering		Date of Receipt	:-	
Pvt. Ltd.			Service Request No.	:-	A2022/22
K-89, MIDC, Waluj, Au	rangabad 431 136		Certificate No.	:-	A2022/10/073
			Date of Calibration	:-	6-Oct-22
			Next Calibration Due		6-Oct-22
			Calibration method N		PISPL/ET/WI/02,03,04
	1 1		Location of calibratio		On Site
			Condition of Item	:	OK
2.Environmental Con	ditions			N. N. M.	
Ambient Temp. :-	23.8 °C	Contra Maria State	State States		
Relative Humidity :-	56 % RH				
3.Description of Item		A COMPANY AND A			
Name :-	Digital Clam	o Meter			
ID.No./Sr.no :-		and the second second			
Make/Model No. :-	and the second sec	250 AUTO			
Range :-					
4.Detail of equipment					I STREET IN DESIGNATION
Name :-		n Calibration System			
Make/I.D No. :-			Fluke/PIS/UNICAL		
Certificate No. :-		1-2	NEC/22-23/SP/065	-1	
Certified By :-	· · · · · · · · · · · · · · · · · · ·		NEC		
Calibration Validity :-			22-Sep-24		
5. Calibration Results			TRICAL EQUIPMEN		
Parameter	Range	Standard Reading	UUC Reading	Error	Error in %
		0.50000	0.497	-0.00300	-0.600
	4 V	2.00000	1.997	-0.00300	-0.150
		4.00000	3.985	-0.01500	-0.375
	1	5.0000	4.97	-0.0300	-0.600
	40 V	20.0000	19.92	-0.0800	-0.400
		40.0000	39.66	-0.3400	-0.850
DC Voltage		50.000	50.4	0.400	0.800
0	400 V	200.000	200.2	0.200	0.100
		400.00	400.1	0.10	0.025
		400.00	- 400	0.00	0.000
	1000V	700.00	702	2.00	0.286
A CONTRACTOR		999.00	1000	1.00	0.100
AC Voltage @50Hz		0.50000	0.497	-0.00300	-0.600
	4 V	. 2.00000	1.994	-0.00600	-0.300
State of the second sec		4.00000	3.985	-0.01500	-0.375
		5.0000	4.99	-0.0100	-0.200
	40 V	20.0000	19.98	-0.0200	-0.100
		40.0000	39.67	-0.3300	-0.825
		50.000	50.2	0.200	0.400
	400 V	200.000	200.5	0.500	0.250
		400.00	400.4	0.40	0.100
		500.00	501	1.00	0.200
	750 V			500 March 1	
Calibrated By Rahw	750 V	600.00 750.00	601 747	1.00 -3.00	0.167 -0.400 A

Calibration Engineer

NASHIK



Technical Manager

Instrument Calibration 
AHU Validation 
Thermal Validation 
PLC Validation

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			Page No.	÷	2 of 2
			Certificate No.	:	A2022/10/073
			Date of Calibration	:-	6-Oct-22
Parameter	Range	Standard Reading	UUC Reading	Error	Error in %
		4.0000	4.11	0.1100	2.750
Contract of the second	40 A	20.0000	20.14	0.1400	0.700
100 050H		40.0000	40.18	0.1800	0.450
AC Current @50Hz		50.0000	50.1	0.1000	0.200
	400A	200.000	200.2	0.200	0.100
		400.00	401.2	1.20	0.300
		40.0000	40.10	0.1000	0.500
	400 Ω	200.000	200.1	0.100	0.500
N. H. Martin P.		. 400.00	399.9	-0.10	-0.500
		0.50000	0.497	-0.00300	-0.015
	4KΩ	4.00000	3.998	-0.00200	-0.010
Resistance		40.0000	39.95	-0.0500	-0.250
	400KQ	400.00	400.1	0.10	0.500
		0.50000	0.500	0.00000	0.000
	4ΜΩ	4.00000	4.007	0.00700	0.035
	1.22 1.0 20.0	10.0000	10.02	0.0200	0.100
	40ΜΩ	40.0000	40.01	0.0100	0.050

#### Note:

1) UUC stands for Unit Under Calibration.

2) This certificate refers only to the particular item submitted for calibration

3) This certificate shall not be reproduced, except in full unless written permission for the publication of an approved abstract

has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt.Ltd, Nashik".

4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement.

Calibrated By

Calibration Engineer Mr.Rahul Pawar



Approved By <u>Line</u> Technical Manager Mrs.Vinita Ghogare PF-31/0



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### CALIBRATION CERTIFICATE

1.CUSTOMER	-	Page No.	:- 1 of 1	
Bush Electromech and	Engineering	Date of Receipt	:- 6-Oct-22	
Pvt. Ltd.		Service Request No.	:- A2022/22	
K-89, MIDC, Waluj, Au	angabad 431 136.	Certificate No.	:- A2022/10/07	4
Ambient Temp.	:- 24.2 °C	Date of Calibration	:- 6-Oct-22	
Relative Humidity	:- 52 % RH	Next Calibration Due On	:- 6-Oct-23	
Location of calibration		Calibration method No.	:- PISPL/ET/W	/I/03
Condition of Item	:- OK			
2. Details of unit under	calibration (UUC):-			
Name	:- Primary Injection Kit	Range	:- 0 to 270 VAC	
Sr. No.	:- 2016-40	Resolution		
Make	:- Smruti	Specified Accuracy	:- ± 2 %	
		Location	:	
3.Details of Equipmen	t Used for Calibration			
Name	:- Digital Multimeter			
Make/I.D No.	:- Rish/PIS/DMM/02			
Certificate No.	:- TSC/21-22/18060-1			
Certified By	:- Transcal			
Calibration Validity	:- 14-Mar-23			
				and a second
4. Calibration Results	- :- · · · · · · · · · · · · · · · · · ·			
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
VAC	VAC	VAC	VAC	%
20	20	19.988	0.012	0.06
80	80	79.984	0.016	0.02
140	140	139.76	0.24	0.17
200	200	199.87	0.13	0.06
270	270	269.79	0.21	0.08
5.Accuracy in Measure	ement :- $\pm 0.17 \%$			
6.Remark	:- The Unit I	Under Calibration Found to Per	form Satisfactorily.	
Note:				
1) UUC stands for Unit	Under Calibration.			
2) This certificate refers	only to the particular item subn	nitted for calibration		
		l unless written permission for th	ne publication of an a	approved
		r of "Precision Instrumentation		
		valid at the time of and under th		
Calibrated By		NTION ANO		Approved I
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Kunt		LICENCE STREET		dee
	IN I	NASHIK ) R		
Calibration Engineer	131	J.S.		Technical Manag
1 C D 1 1 D	05	Num Office		Mrs.Vinita Ghoga
Mr.Rahul Pawar	1	AG A C		mile, i mila Onoga.



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#### CALIBRATION CERTIFICATE

Bush Electromech and I Pvt. Ltd. K-257 MIDC Walui Aut		Page No. :-	1 of 1	
	Engineering	Date of Receipt :-	6-Oct-22	
K-257 MIDC Wahi Aur		Service Request No. :-	A2022/22	
ives, wind, nul	rangabad 431 136.	Certificate No. :-	A2022/10/0	75
Ambient Temp.	:- 25 °C	Date of Calibration :-	6-Oct-22	
Relative Humidity	:- 54 % RH ·	Next Calibration Due On :-	6-Oct-23	
Location of calibration	:- On Site	Calibration method No. :-	PISPL/ET/	WI/04
Condition of Item	:- OK			
2. Details of unit under (	Calibration (UUC):-			
Name	:- Insulation Tester (Megger)	Range :-	0 to 5000 Mg	Ω
I.D No.	:- INS/MEG/01	Specified Accuracy :-	± 2 %	
Make	:	Location :-		
Туре	:- Analog			
3.Details of Equipment	Used for Calibration			
	:- Multifunction Calibration System	n with Current Coil		
	:- Fluke/PIS/UNICAL/03			
	:- NEC/22-23/SP/065-1			
Certified By	- NEC			
Calibration Validity	:- 22-Sep-24			
4.Calibration Results	5-			
Calibration Points	UUC Reading	Standard Reading	Error in	Error in
MΩ	MΩ	MΩ	MΩ	%
IVISZ	1	1.00263	-0.00263	-0.26
1				0.20
	5	5.0285	-0.0285	-0.57
1	Contraction of the second states of the second stat		-0.0285 -0.0472	
1 5	5	5.0285		-0.57

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abstract has been obtained from the Technical Manager of "Precision Instrumentation And Services Pvt. Ltd., Nashik".

4) The calibration results reported in the certificate are valid at the time of and under the stated conditions of measurement. ON

NASHIK

Calibrated By Rahu

Technical Manager Mrs.Vinita Ghogare

Approved By

Calibration Engineer Mr.Rahul Pawar

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1.CUSTOMER	+	Page No.	:- 1 of 1	ALC: NELL	
Bush Electromech and Engineering		Date of Receipt	:- 6-Oct-22		
Pvt. Ltd.		Service Request No.	:- A2022/22		
K-89, MIDC, Waluj, Aurangabad 431 136.		Certificate No.	:- A2022/10/076		
Ambient Temp.	:- 24.8 <sup>0</sup> C	Date of Calibration	:- 6-Oct-22		
Relative Humidity	:- 52.5 % RH	Next Calibration Due On	:- 6-Oct-23		
Location of calibration	:- On Site	Calibration method No.	:- PISPL/ET/WI/03		
Condition of Item	:- OK				
2. Details of unit under	r Calibration (UUC):-	A Constant State			
Name	:- Three Phase Secondary	Range	:- 0 to 2 KVAC	:	
	Injection Kit				
I.D No.	:- QMPL-052092019				
Make	:- Agronics				
3.Details of Equipmen	t Used for Calibration 🥖				
Name	:- Digital Multimeter				
Make/I.D No.	:- Rish/PIS/DMM/02				
Certificate No.	:- TSC/21-22/18060-1				
Certified By	:- Transcal				
Calibration Validity	:- 14-Mar-23				
4. Calibration Results	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -				
1.SET AC/DC VOLTM	<b>METER VERIFICATION</b>				
SET VOLTMETER READING (V)		EXTERNAL STANDAR	D VALUE (V)		
	63	63.4			
	110	110.5			
	230	229.7			
2.SET AC CURRENT	OUTPUT VERIFICATIC	N			
SET AMMETER READING (Amp)	R PHASE (Amp)	Y PHASE (Amp)	BI	PHASE (Amp)	
2	2.2	2.3		2.1	
4	4.1	4.2		4.1	
10	10.3	10.5		10.3	
15	15.4	15.7		15.2	
30	30.5	30.6		30.3	

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Calibrated By Rahu

Approved By

all

Calibration Engineer

Technical Manager