

Delivery Locations Package: Electrical and Electronics Related Equipment's Annexure-A Lot-3.1: Metering & Measuring Devices																																													
S.No.	Proposed Name of Equipment/item	Govt. ITI Ghumarwin	Govt. ITI Swarghat	Govt. ITI Garnota	Govt. ITI Chhatrari	Govt. ITI Lambloo	Govt. ITI Sujapur Thira	Govt. ITI Baijnath	Govt. ITI Baroh	Govt. ITI Dadasiba	Govt. ITI Daulatpur	Govt. ITI Garhjumla	Govt. ITI Nagrota Bagwan	Govt. ITI Talwar at Lahru	Govt. ITI Patikuh	Govt. ITI Nirmand	Govt. ITI Balh at Ner chowk	Govt. ITI Mohin	Govt. ITI Thalaat	Govt. ITI Bhadrota	Govt. ITI Junga	Govt. ITI Sunni	Govt. ITI Theog	Govt. ITI Jalog	Govt. ITI Chirgaon	Govt. ITI Nainidhar	Govt. ITI Kumarsain	Govt. ITI Maina	Govt. ITI Kaffota	Govt. ITI Krishangarh (Kuthar)	Govt. ITI Syri	Govt. ITI Pubowal	Govt. ITI Bhaderkali	Govt. ITI Mehatpur	Govt. ITI Bharmour	Govt. ITI Tissa at Koti	Govt. ITI Sarahan	Govt. ITI Sandhole	Govt. ITI Padhar	Govt. ITI Arki	Govt. ITI Nerwa	Govt. ITI Pandoga	Quantity	Total Quantity	
1	A.C. Energy Meter	1	0	0	2	0	0	0	1	0	2	2	2	0	2	1	1	1	1	1	0	1	0	0	0	1	1	1	0	0	1	2	1	0	0	0	0	0	0	0	2	2	29	29	
2	A.C. Energy Meter	2	0	1	2	0	0	0	1	0	2	0	2	0	1	1	1	1	1	2	0	0	0	0	0	2	2	2	0	0	1	1	1	0	0	0	0	2	0	0	2	2	32	32	
3	A.C. Voltmeter M.I. Analog	3	0	0	3	3	0	0	3	0	3	3	1	0	3	3	3	2	2	3	0	3	0	3	0	3	3	2	0	0	3	3	3	0	0	0	0	3	0	0	3	3	67	67	
4	Ac Ammeter Mi, Analog	2	0	0	2	2	0	0	2	0	2	0	2	0	2	1	1	2	1	2	0	1	0	2	0	2	2	3	0	0	2	2	2	0	0	0	0	0	0	0	2	1	40	40	
5	Ac Ammeter Mi, Analog	2	0	0	2	2	0	0	2	0	2	0	2	0	2	1	1	1	1	2	0	1	0	2	0	1	2	3	0	0	2	2	2	0	0	0	0	0	0	0	2	1	38	38	
6	Ac Ammeter Mi, Analog	2	0	0	2	2	0	0	2	0	2	0	2	0	2	1	1	1	1	2	0	1	0	2	0	1	2	3	0	0	2	2	2	0	0	0	0	0	0	0	2	1	38	38	
7	Ammeter (0-10 mA), (0-50mA), (0-100mA) (table	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	4	
8	Ammeter 300A/ 60A DC with external shunt	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	0	0	4	0	0	0	4	1	4	0	0	0	0	0	0	4	3	4	0	0	0	0	0	0	0	0	0	32	32
9	Ammeter 300A/ 60A DC with external shunt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
10	Ammeter 300A/ 60A DC with external shunt	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
11	Ammeter DC with external shunt	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
12	Ammeter Mc Analog	2	0	1	2	2	0	0	2	0	1	2	2	0	2	1	1	1	1	2	0	1	0	0	0	1	2	3	0	0	2	2	2	0	0	0	0	2	0	0	2	1	40	40	
13	Ammeter Mc Analog	2	0	1	2	2	0	0	2	0	1	2	2	0	2	1	1	1	1	2	0	1	0	0	0	1	2	3	0	0	2	2	2	0	0	0	0	2	0	0	2	1	40	40	
14	Ammeter Mc Analog	2	0	1	2	2	0	0	2	0	1	2	2	0	2	1	1	1	1	2	0	1	0	0	0	1	1	3	0	0	2	2	2	0	0	0	0	2	0	0	2	1	39	39	
15	Ammeter, AC/DC portable precision grade Digital Panel board type	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5	5	
16	Analog multimeter	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
17	Analog Multimeter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	16	26
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10		
18	Auto Transformer starter	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	2
19	Clamp meter	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	2	0	2	0	0	12	12	
20	Compound gauge, Digital type	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	5	
21	DC Ohmmeter	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	35	
		0	0	0	0	2	0	0	2	0	0	2	0	0	0	1	0	0	2	0	2	2	2	2	2	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	25	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
		0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4			
22	DC & AC ammeter 0-1 A(table model for lab experiments)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10	10	
23	DC & AC ammeter 0-1mA(table model for lab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10	10	
24	DC & AC ammeter 0-50 mA (table model for lab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10	10	
25	DC & AC ammeter 0-500 mA(table model for lab	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	10	10		
26	Dial thermometer remote control, armored capillary dial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3	
27	Digital LCR Meter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	6	6		

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Schedule of supply

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1. List of Goods and Related Services

Package Name: Supply of Metering & Measuring Devices for Industrial Training Institutes to enhance technical and vocational skills among the youth of Himachal Pradesh. HPSPD-DOTE/30; RFQ No. 01/2022

Lot No: Not Applicable									
Lot Name: Not Applicable								Delivery Time (in days): not more than 60	
Item No	Name of Goods or Related Services	Description	Unit of Measure-ment	Quantity	Unit Price INR	Total price per item INR	Sales and other taxes per item	Total Price (Including GST)	Remarks (Please mention Page Number of detailed information brochure having make and model no.)
1	2	3	4	5	6	7=5*6	8=7*@GST%	9=7+8	
1.	A.C. Energy Meter	A.C. Energy Meter, as per technical specifications	No.	29					
2.	A.C. Energy Meter	A.C. Energy Meter, as per technical specifications	No.	32					
3.	A.C. Voltmeter M.I. Analog	A.C. Voltmeter M.I. Analog, as per technical specifications	No.	67					
4.	Ac Ammeter Mi,	Ac Ammeter Mi,	No.	40					

	Analog	Analog, as per technical specifications							
5.	Ac Ammeter Mi, Analog	Ac Ammeter Mi, Analog, as per technical specifications	No.	38					
6.	Ac Ammeter Mi, Analog	Ac Ammeter Mi, Analog, as per technical specifications	No.	38					
7.	Ammeter (0-10 mA), (0-50mA), (0-100mA) (table model)	Ammeter (0-10 mA), (0-50mA), (0-100mA) (table model) , as per technical specifications	No.	4					
8.	Ammeter 300A/ 60A DC with external shunt	Ammeter 300A/ 60A DC with external shunt, as per technical specifications	No.	32					
9.	Ammeter 300A/ 60A DC with external shunt	Ammeter 300A/ 60A DC with external shunt, as per technical specifications	No.	4					
10.	Ammeter 300A/ 60A DC with external shunt	Ammeter 300A/ 60A DC with external shunt, as per technical specifications	No.	4					
11.	Ammeter DC with external shunt	Ammeter DC with external shunt, as per technical specifications	No.	4					
12.	Ammeter Mc Analog	Ammeter Mc Analog, as per technical specifications	No.	40					
13.	Ammeter Mc Analog	Ammeter Mc Analog, as per technical specifications	No.	40					
14.	Ammeter Mc Analog	Ammeter Mc Analog, as per technical specifications	No.	39					
15.	Ammeter, AC/DC	Ammeter, AC/DC	No.	5					

	portable precision grade Digital Panel board type	portable precision grade Digital Panel board type, as per technical specifications							
16.	Analog multimeter	Analog multimeter, as per technical specifications	No.	4					
17.	Analog Multimeter	Analog Multimeter, as per technical specifications	No.	26					
18.	Auto Transformer starter	Auto Transformer starter, as per technical specifications	No.	2					
19.	Clamp meter	Clamp meter, as per technical specifications	No.	12					
20.	Compound gauge, Digital type	Compound gauge, Digital type, as per technical specifications	No.	5					
21.	DC Ohmmeter	DC Ohmmeter, as per technical specifications	No.	35					
22.	DC & AC ammeter 0-1 A(table model for lab experiments)	DC & AC ammeter 0-1 A(table model for lab experiments) , as per technical specifications	No.	10					
23.	DC & AC ammeter 0-1mA(table model for lab experiments)	DC & AC ammeter 0-1mA(table model for lab experiments) , as per technical specifications	No.	10					
24.	DC & AC ammeter 0-50 mA (table model for lab experiments)	DC & AC ammeter 0-50 mA (table model for lab experiments) , as per technical specifications	No.	10					
25.	DC & AC ammeter 0-500 mA(table model for lab experiments)	DC & AC ammeter 0-500 mA(table model for lab experiments) , as per technical specifications	No.	10					
26.	Dial thermometer	Dial thermometer	No.	3					

	remote control, armored capillary dial	remote control, armored capillary dial, as per technical specifications							
27.	Digital LCR Meter	Digital LCR Meter, as per technical specifications	No.	6					
28.	Digital Multimeters	Digital Multimeters, as per technical specifications	No.	275					
29.	Digital thermometer	Digital thermometer, as per technical specifications	No.	1					
30.	Digital Tong Tester	Digital Tong Tester, as per technical specifications	No.	2					
31.	Digital Wattmeter	Digital Wattmeter, as per technical specifications	No.	46					
32.	A.C. Energy Meter	A.C. Energy Meter, as per technical specifications	No.	2					
33.	Clamp Meter	Clamp Meter, as per technical specifications	No.	2					
34.	Clamp Meter	Clamp Meter, as per technical specifications	No.	6					
35.	Frequency Meter	Frequency Meter, as per technical specifications	No.	20					
36.	Glow plug tester	Glow plug tester, as per technical specifications	No.	6					
37.	Hydrometer	Hydrometer, as per technical specifications	No.	16					
38.	Digital Wattmeter	Digital Wattmeter, as per technical specifications	No.	4					
39.	Kilo Wattmeter	Kilo Wattmeter, as per technical specifications	No.	27					
40.	LCR meter	LCR meter, as per	No.	10					

		technical specifications							
41.	LCR meter (Digital) Handheld	LCR meter (Digital) Handheld, as per technical specifications	No.	2					
42.	Lux Meter	Lux Meter, as per technical specifications	No.	37					
43.	Magnetic Flux	Magnetic Flux, as per technical specifications	No.	28					
44.	Milli Ammeter (AC)	Milli Ammeter (AC) , as per technical specifications	No.	6					
45.	Milli Ammeter (DC)	Milli Ammeter (DC) , as per technical specifications	No.	4					
46.	Milli Voltmeter	Milli Voltmeter, as per technical specifications	No.	33					
47.	Analogue type Multimeter	Analogue type Multimeter, as per technical specifications	No.	5					
48.	Digital Multimeter	Digital Multimeter, as per technical specifications	No.	59					
49.	Ohm Meter; Portable box type	Ohm Meter; Portable box type, as per technical specifications	No.	30					
50.	Ohm Meter; Series Type	Ohm Meter; Series Type, as per technical specifications	No.	30					
51.	Ohm Meter; Shunt Type	Ohm Meter; Shunt Type, as per technical specifications	No.	30					
52.	Electrode drying Oven	Electrode drying Oven, as per technical specifications	No.	1					
53.	Phase Sequence Indicator	Phase Sequence Indicator, as per technical specifications	No.	45					

54.	Power Factor	Power Factor, as per technical specifications	No.	39					
55.	Power Meter	Power Meter, as per technical specifications	No.	6					
56.	Power Meter	Power Meter, as per technical specifications	No.	9					
57.	Pressure gauge Digital type	Pressure gauge Digital type, as per technical specifications	No.	6					
58.	Room temperature thermometer	Room temperature thermometer, as per technical specifications	No.	1					
59.	Analog Tachometer	Analog Tachometer, as per technical specifications	No.	22					
60.	Digital Tachometer	Digital Tachometer, as per technical specifications	No.	13					
61.	Tachometer digital, multi range	Tachometer digital, multi range, as per technical specifications	No.	2					
62.	Thermometer Digital	Thermometer Digital, as per technical specifications	No.	25					
63.	Tong tester (clamp on multi meter)	Tong tester (clamp on multi meter) , as per technical specifications	No.	5					
64.	Sensor thermometer (digital)	Sensor thermometer (digital) , as per technical specifications	No.	4					
65.	Tong Tester	Tong Tester, as per technical specifications	No.	23					
66.	Voltmeter (0-1V), (0-10V), (0-30V) (table model)	Voltmeter (0-1V), (0-10V), (0-30V) (table model) , as per technical specifications	No.	4					
67.	Voltmeter 50V/DC	Voltmeter 50V/DC, as	No.	5					

		per technical specifications							
68.	Voltmeter AC 500V	Voltmeter AC 500 V, as per technical specifications	No.	2					
69.	Voltmeter, AC/DC portable precision grade Digital Panel board type	Voltmeter, AC/DC portable precision grade Digital Panel board type, as per technical specifications	No.	5					
70.	Wattmeter AC/DC, 0 to 10 Kw	Wattmeter AC/DC, 0 to 10 Kw, as per technical specifications	No.	2					
71.	Digital Wattmeter	Digital Wattmeter, as per technical specifications	No.	1					
72.	Conductivity meters- both low range and high range.	Conductivity meters- both low range and high range, as per technical specifications	No.	1					
73.	pH meters	pH meters, as per technical specifications	No.	1					
74.	Temperature probes	Temperature probes, as per technical specifications	No.	1					
75.	Thermo-hygrometers	Thermo-hygrometers, as per technical specifications	No.	1					

2. Delivery and Completion Schedule

The delivery period shall start as of *date of Signing the Contract*

Item No	Description of Goods or Related Services	Delivery Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1 To 75	As per Schedule 1 – List of Goods and Related Services	Within 60 Days from the Signing of the contract.	As per delivery locations attached as Annexure-A	Within 60 Days from the Signing of the contract.

3. Technical Specifications

Item No.	Name of Goods or Related Services	Technical Specifications of Item and/or Bureau of Indian Standards (BIS) (if applicable) reference	Features	Accessories	Spare parts	Documents	Installation & Training	Warranty of Equipment/ parts
1.	A.C. Energy Meter	A.C. Energy Meter- induction type Single Phase, 10 A, 240 V • Conforming to IEC 62052 or IS 13779 • portable type Housed in Bakelite case	• 6 digits including one decimal digit display • LED indication for Calibration, phase indication, earth load tamper and reverse tamper. • Accuracy Class 1.0	case and connection cords	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
2.	A.C. Energy Meter	AC energy meter Three Phase, 15 A , 440 V induction portable type AC Energy Meter Housed in Bakelite case	• 6 digits including one decimal digit display • LED indication for Calibration, phase indication, earth load tamper and reverse tamper. • Conforming to IEC 62052 or IS 13779 • portable type Housed in Bakelite case • Accuracy Class 1.0	case and connection cords	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
3.	A.C. Voltmeter M.I. Analog	A.C. Voltmeter M.I. analog, Multi Range A.C. Voltmeter M.I. 75V - 150 V - 300 V – 600V A.C Confirming to BS 89, IEC 51 & IS 1248	portable box type housed in Bakelite case	Batteries, Case	standard	User Manual	installation and training to be provided in the	1 Year

							designated ITI as per delivery location	
4.	Ac Ammeter Mi, Analog	<ul style="list-style-type: none"> • AC Ammeter MI • Analog • 0-1 A range with Moving iron spring-mounted jewel bearing suspension 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010, 	standard	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
5.	Ac Ammeter Mi, Analog	<ul style="list-style-type: none"> • AC Ammeter MI • Analog • (0-5 A MI) with Moving iron spring-mounted jewel bearing suspension 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010, 	standard	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
6.	Ac Ammeter Mi, Analog	<ul style="list-style-type: none"> • AC Ammeter MI • Analog • (0-25A MI) with Moving iron spring-mounted jewel bearing suspension 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic 	standard	standard	Product Catalogue	installation and training to be provided in the designated ITI as per	1 Year

			molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010,				delivery location	
7.	Ammeter (0-10 mA), (0-50mA), (0-100mA) (table model)	Table model Analog Ammeter with range 0-10 mA : • Range: Current (A): 0 – 10 m A Table model Analog Ammeter with range 0-50 mA : • Range: Current (A): 0 – 50 m A Table model Analog Ammeter with range 0-100mA : • Range: Current (A): 0 – 100 m A	• Movement Type: Moving Iron type • Standards: IS-1248 • Accuracy: $\pm 1.5\%$ of Full Scale	standard	standard	catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
8.	Ammeter 300A/ 60A DC with external shunt	•Analog type portable Ammeter •Min 300 A/60 A DC with external shunt with probe Fitted in Box •Shall conform to I.S. 1248 / I.E.C. 60051 (Part 2)	•Linear Scale •Anti-glare Glass.	Patch Cords	standard	Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
9.	Ammeter 300A/ 60A DC with external shunt	•Analog type portable Ammeter •Min 300 A/60 A DC with external shunt with probe Fitted in Box •Shall conform to I.S. 1248 / I.E.C. 60051 (Part 2)	•Linear Scale •Anti-glare Glass.	Patch Cords	standard	Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
10.	Ammeter 300A/ 60A DC with external shunt	•Analog type portable Ammeter •Min 300 A/60 A DC with external shunt with probe Fitted in Box •Shall conform to I.S. 1248 / I.E.C.	•Linear Scale •Anti-glare Glass.	Patch Cords	standard	Catalogue	installation and training to be provided in	1 Year

		60051 (Part 2)					the designated ITI as per delivery location	
11.	Ammeter DC with external shunt	<ul style="list-style-type: none"> •Analog type portable Ammeter •Min 300 A/60 A DC with external shunt with probe Fitted in Box •Shall conform to I.S. 1248 / I.E.C. 60051 (Part 2) 	<ul style="list-style-type: none"> •Linear Scale •Anti-glare Glass. 	Patch Cords	standard	Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
12.	Ammeter Mc Analog	<ul style="list-style-type: none"> •Ammeter MC analog - (0 - 500mA) with Moving Coil with Central Magnetic Core • Spring Mounted Jewel Bearing Suspension •It should have banana terminals with permanent marking of range and terminals • it should have knife edged pointer and anti parallax mirror • it should be moving coil type 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) • portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010, 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
13.	Ammeter Mc Analog	<ul style="list-style-type: none"> •Ammeter MC analog - (0-5 A- MC) with Moving Coil with Central Magnetic Core • Spring Mounted Jewel Bearing Suspension •It should have banana terminals with permanent marking of range and terminals •It should have knife edged pointer and anti parallax mirror 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) •portable box type housed in Bakelite 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

		<ul style="list-style-type: none"> •It should be moving coil type 	case <ul style="list-style-type: none"> • Meters Shall comply to IS-1248 or IEC-1010, 					
14.	Ammeter Mc Analog	<ul style="list-style-type: none"> •Ammeter MC analog - (0-5 A- MC) with Moving Coil with Central Magnetic Core • Spring Mounted Jewel Bearing Suspension •It should have banana terminals with permanent marking of range and terminals •It should have knife edged pointer and anti parallax mirror •It should be moving coil type 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) •portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010, 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
15.	Ammeter, AC/DC portable precision grade Digital Panel board type	AC/DC Digital ammeter 0-30 Amps <ul style="list-style-type: none"> • 3 Digit, 7 Segment LED Display • True RMS Measurement for AC measurement • For 1Ø-2 Wire Electrical Network • IP Protection (Front): IP65 	<ul style="list-style-type: none"> •Panel Mounted •Accuracy: $\pm 0.5\%$ 	Standard Accessories	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
16.	Analog multimeter	Analog Multimeter <ul style="list-style-type: none"> •AC Voltage (Volts) 10-1000 V •AC Voltage Accuracy $\pm 4\%$ •DC Voltage Accuracy $\pm 3\%$ •DC Current (Amp) $50\mu\text{A}$-10 A •DC Voltage 0.1mV-1000 V •DC Current Accuracy $\pm 3\%$ •Resistance (ohm) $0.2\ \Omega$-20 MΩ •Resistance Accuracy $\pm 3\%$ 	<ul style="list-style-type: none"> • Analog Multimeter with Mirror Scale • Inbuilt Buzzer and LED • $0\ \Omega$ Adjustment with X 100 Range • Transistors Test , hFE with Diode. • Test Resistance 	*Batteries *Case *Test Leads	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year

			Range : X1 , X10 , X100 , X1K , X10K • Diode Test • Transistor Testing • Continuity Buzzer About 100 Ω • Function Protection • Meters Shall comply to IS-1248 or IEC-1010,					
17.	Analog Multimeter	Analog Multimeter as per IS 1248 with following range: •AC Voltage (Volts) 10-1000 V •AC Voltage Accuracy $\pm 4\%$ •DC Voltage Accuracy $\pm 3\%$ •DC Current (Amp) 50 μ A-10 A •DC Voltage 0.1mV-1000 V •DC Current Accuracy $\pm 3\%$ •Resistance (ohm) 0.2 Ω -20 M Ω •Resistance Accuracy $\pm 3\%$	• Analog Multimeter with Mirror Scale • Inbuilt Buzzer and LED • 0 Ω Adjustment with X 100 Range • Transistors Test , hFE with Diode. • Test Resistance Range : X1 , X10 , X100 , X1K , X10K • Diode Test • Transistor Testing • Continuity Buzzer About 100 Ω • Function Protection	*Batteries *Case *Test Leads	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
18.	Auto Transformer starter	•Auto Transformer starter suitable for Motor starting upto 3 HP Motors. •Shall conform to IEC 60947-4-1 •Starter enclosure to conform IP 53	•Push button operation for ON-OFF •Ammeters, ammeter selector switch	standard accessories	standard	Operation Manual	installation and training to be provided in the designated ITI as per delivery	1 Year

							location	
19.	Clamp meter	<p>Tong Tester / Clamp Meter</p> <ul style="list-style-type: none"> • 0 – 10 amp.(Min) • Dial (aka rotary switch). • Min Max button: On first push, display shows maximum input. On subsequent pushes, minimum and average inputs are shown. Works in current, voltage and frequency modes. • Zero button (yellow): Removes dc offset from dc current measurements. Also serves as dial's shift button to select yellow functions scattered around the dial. • Shall comply to Safety standard IEC 1010 or IEC 61010 	<ul style="list-style-type: none"> • Current-sensing jaw. • Tactile barrier (to protect fingers from shocks). • Hold button: Freezes the display reading. Reading is released when button is pushed a second time. • Backlight button. • Jaw release lever. • Alignment marks: To meet accuracy specifications, a conductor must be aligned with these marks. • Common input jack. • Volts/ohm input jack. • Input for flexible current probe 	<ul style="list-style-type: none"> • Test Leads • Batteries • Soft carrying case 	standard	Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
20.	Compound gauge, Digital type	<ul style="list-style-type: none"> • Digital type Compound gauge diameter 63mm with recalibration set screw • scale vacuum 76mm. • Pressure 15 Kg/sq.cm 	<ul style="list-style-type: none"> • Case ABS plastic 	ABS Plastic Case with standard accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery	1 Year

							location	
21.	DC Ohmmeter	<p>Ohm Meter Specification :-</p> <ul style="list-style-type: none"> • Measuring min. 0-300 Ohm with mid scales at 20 Ohms Capacity with Probe Black & red Ohm meter. • Range : min. 0-300 ohm . • Accuracy : +/- 5 % of the indicating value at center zero - Set of 2 pcs . • Shall comply to IS 1248 	<ul style="list-style-type: none"> • Portable Box type, • Self contained , • Battery operated, • Should be moving coil type and anti parallax mirror scale and knife edge pointer provided accurate reading. Should have facility of press to read switch avoids battery drain, • An infinity adjustment potentiometer help to provide accurate reading without effect of variation of battery voltage. • Mechanical zero adjuster is provided adjust zero, 	Patch cords Standard Accessories Case	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
22.	DC & AC ammeter 0-1 A(table model for lab experiments)	<ul style="list-style-type: none"> • AC Ammeter MI, analog, 0-1 A range with Moving iron spring-mounted jewel bearing suspension • DC Ammeter MC analog- (0 - 1 A MC) with Moving Coil with Central Magnetic Core, Spring Mounted Jewel Bearing Suspension • It should have banana terminals with permanent marking of range and 	<ul style="list-style-type: none"> • It should have banana terminals with permanent marking of range and terminals , it should have knife edged pointer and anti parallax mirror, it should be moving 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

		terminals • It should have knife edged pointer and anti parallax mirror	coil type • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010,					
23.	DC & AC ammeter 0-1mA(table model for lab experiments)	• AC Ammeter MI , analog, 0-1 mA range with Moving iron spring-mounted jewel bearing suspension • Ammeter MC analog- (0 - 1 mA MC) with Moving Coil with Central Magnetic Core, Spring Mounted Jewel Bearing Suspension • It should have banana terminals with permanent marking of range and terminals • It should have knife edged pointer and anti parallax mirror	• It should have banana terminals with permanent marking of range and terminals , it should have knife edged pointer and anti parallax mirror, it should be moving coil type • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

			IEC-1010,					
24.	DC & AC ammeter 0-50 mA (table model for lab experiments)	<ul style="list-style-type: none"> • AC Ammeter MI, analog, 0-50 mA range with Moving iron spring-mounted jewel bearing suspension • Ammeter MC analog- (0 - 50 mA MC) with Moving Coil with Central Magnetic Core, Spring Mounted Jewel Bearing Suspension • It should have banana terminals with permanent marking of range and terminals • It should have knife edged pointer and anti parallax mirror 	<ul style="list-style-type: none"> • It should have banana terminals with permanent marking of range and terminals , it should have knife edged pointer and anti parallax mirror, it should be moving coil type • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010, 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
25.	DC & AC ammeter 0-500 mA (table model for lab experiments)	<ul style="list-style-type: none"> • AC Ammeter MI, analog, 0-500 mA range with Moving iron spring-mounted jewel bearing suspension • Ammeter MC analog- (0-500 mA MC) with Moving Coil with Central Magnetic Core, Spring Mounted Jewel Bearing Suspension • It should have banana terminals with 	<ul style="list-style-type: none"> • It should have banana terminals with permanent marking of range and terminals , it should have knife edged pointer and anti parallax mirror, it 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery	1 Year

		<p>permanent marking of range and terminals</p> <ul style="list-style-type: none"> • It should have knife edged pointer and anti parallax mirror 	<p>should be moving coil type</p> <ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010, 				location	
26.	Dial thermometer remote control, armored capillary dial	<p>Dial thermometer Specifications:</p> <ul style="list-style-type: none"> • Range:-50 ... 50 °C • Dial size in mm: 75 mm (Min.) • Capillary length: Min. 20 m • Material • Connection: Stainless steel 316 • Stem: Stainless steel 316L • Case/ring: Stainless steel 304 or 316L • Capillary: Stainless steel 316 • Armor: Flexible, SS 304 • Window: Instrument glass, optional laminated safety glass 	<ul style="list-style-type: none"> • Rugged stainless steel construction • Fast response • Protection IP65 • High repeatability and small hysteresis • Dry or liquid filled • Rigid stem or bulb with capillary • Dial: Aluminum, black markings on white background • Pointer: Aluminum, black • Movement: Stainless steel 304 • Accuracy: Class 1 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year

27.	Digital LCR Meter	<p>Digital LCR meter with following specifications:</p> <ul style="list-style-type: none"> • RESISTANCE: 600/6k/60k/600k/6M $\Omega \pm 1.0\%$, 60M $\Omega \pm 1.5\%$ • CAPACITANCE: 6nF $\pm 2.0\%$, 60n/600n/6 Ω F $\pm 1.0\%$, 60 Ω /600Ω /6mF $\pm 1.5\%$ • INDUCTANCE: 600 Ω H $\pm 2.5\%$; 6m/60m/600mH $\pm 1.5\%$; 6H: <4H $\pm 2.8\%$ >4H $\pm 5.0\%$; 60H: <40H $\pm 3.5\%$ >40H Unspecified • POWER: 6 (1.5V) (AAA Type) 	<ul style="list-style-type: none"> • Designed to international safety standard IEC1010-1 • A tilt stand provides position flexibility for viewing and operating the meter • SMT application • Auto range and manual range • Data hold • Max. /min. Value measurement • Auto power off / disable auto power off 	<ul style="list-style-type: none"> *Batteries *Case *Test Leads 	standard	<ul style="list-style-type: none"> *Manual *Test Certificates 	installation and training to be provided in the designated ITI as per delivery location	1 Year
28.	Digital Multimeters	<p>Multimeter Digital Specifications :-</p> <ul style="list-style-type: none"> • Voltage between any Terminal and Earth Ground: 1000V Min • Display: Digital: 4000 count updates 3/sec • Operating Altitude: 0 to 2000 meters <p>Specification:</p> <ul style="list-style-type: none"> • DC voltage: 200m/2V/20V/200V $\pm 0.5\%$, 1000V $\pm 0.8\%$ • AC voltage: 2V/20V/200V $\pm 0.8\%$, 750V $\pm 1.2\%$ • Resistance: 200/2k/20k/200k/2M? $\pm 0.8\%$, 20M? $\pm 1.0\%$ • DC current: 200mA $\pm 1.5\%$, 10A $\pm 2.0\%$ • AC current: 200mA $\pm 1.8\%$, 10A $\pm 3.0\%$ • Capacitance: 20nF/200nF/2 μF/20 μF/200 μF $\pm 4.0\%$ • Temperature: -20 $^{\circ}$ C ~ 1000 $^{\circ}$ C • Inductance: 20mH/200mH/2H/20H $\pm 3.0\%$ • Transistor hFE: 1 ~ 1000 	<ul style="list-style-type: none"> • Basic dc accuracy • Digital display to 4,000 words • Automatic and manual range • Display hold function • Diode and continuity test with buzzer • Cover designed for easy hanging • Automatic shutdown • Easily replaceable battery design • 500 hours battery life • Voltage AC, Voltage DC, resistance, 	<ul style="list-style-type: none"> • Universal hanger clip • Test Leads • Batteries 	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

		<ul style="list-style-type: none"> •Power supply: (9V) •Battery Life: Alkaline: 500 Hours •Safety Compliance: IEC 61010-1, 2000 CAT I 1000 V, CAT II 600 V, and CAT III 300 V overvoltage standards 	capacitance, continuity beeper, diode test, A ac, A dc all in a durable holster <ul style="list-style-type: none"> • Rugged and durable design – all inputs, ranges and functions are protected up to 1000 V 					
29.	Digital thermometer	Digital thermometer <ul style="list-style-type: none"> •Type: Graduated disc analogy •Range: -50...50 °C 	<ul style="list-style-type: none"> • ISI/CE Mark Product 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
30.	Digital Tong Tester	Tong Tester / Clamp Meter <ul style="list-style-type: none"> •0 – 20 amp.(min) •Shall comply to Safety standard IEC 1010 or IEC 61010 • Current-sensing jaw. • Tactile barrier (to protect fingers from shocks). • Hold button: Freezes the display reading. Reading is released when button is pushed a second time. • Dial (aka rotary switch). • Backlight button. • Min Max button: On first push, display shows maximum input. On subsequent pushes, minimum and average inputs are shown. Works in current, voltage and frequency modes. 	<ul style="list-style-type: none"> • Zero button (yellow): Removes dc offset from dc current measurements. Also serves as dial's shift button to select yellow functions scattered around the dial. • Jaw release lever. • Alignment marks: To meet accuracy specifications, a conductor must be aligned with these marks. • Common input jack. 	Test Leads Batteries Soft carrying case	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year

			<ul style="list-style-type: none"> • Volts/ohm input jack. • Input for flexible current probe 					
31.	Digital Wattmeter	<ul style="list-style-type: none"> • Digital Wattmeter which calculate and displays power of single phase 230 V, Min. 1 KW Measurement, 50 Hz on a seven segment display. • 600 V CAT IV/1000V CAT III as per International Safety standard IEC61010-1- 2010 	<ul style="list-style-type: none"> • Range change function. • Data Hold Function freezes the reading. • Continuity check. • Diode measurement. • Low battery indication • Auto Power Off (APO) function. • Active Reactive and Apparent Power • Horse Power Measurement 	<ul style="list-style-type: none"> *Batteries *Case 	standard	<ul style="list-style-type: none"> *Manual *Test Certificates 	installation and training to be provided in the designated ITI as per delivery location	1 Year
32.	A.C. Energy Meter	<ul style="list-style-type: none"> • A.C. Energy Meter- induction type • Single Phase, 5 A, 230-240 V 	<ul style="list-style-type: none"> • 6 digits including one decimal digit display • LED indication for Calibration, phase indication, earth load tamper and reverse tamper. • Conforming to IEC 62052 or IS 13779 • portable type Housed in Bakelite case • Accuracy Class 1.0 	case and connection cords	standard	<ul style="list-style-type: none"> *Manual *Test Certificates 	installation and training to be provided in the designated ITI as per delivery location	1 Year

33.	Clamp Meter	<ul style="list-style-type: none"> •Fluke Meter Tong Tester / Clamp Meter •0 – 100 amp.(Min) •Shall comply to Safety standard IEC 1010 or IEC 61010 	<ul style="list-style-type: none"> • Current-sensing jaw. • Tactile barrier (to protect fingers from shocks). • Hold button: Freezes the display reading. Reading is released when button is pushed a second time. • Dial (aka rotary switch). • Backlight button. • Min Max button: On first push, display shows maximum input. On subsequent pushes, minimum and average inputs are shown. Works in current, voltage and frequency modes. • Zero button (yellow): Removes dc offset from dc current measurements. Also serves as dial's shift button to select yellow functions scattered around the dial. • Jaw release lever. • Alignment marks: To meet accuracy specifications, a conductor must be 	<ul style="list-style-type: none"> •Test Leads •Batteries •Soft carrying case 	standard	Catalogue/ Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
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			aligned with these marks. • Common input jack. • Volts/ohm input jack. • Input for flexible current probe					
34.	Clamp Meter	Fluke Meter Tong Tester / Clamp Meter 0 – 100 amp.(Min) • Hold button: Freezes the display reading. Reading is released when button is pushed a second time. • Dial (aka rotary switch). • Backlight button. • Min Max button: On first push, display shows maximum input. On subsequent pushes, minimum and average inputs are shown. Works in current, voltage and frequency modes. • Shall comply to Safety standard IEC 1010 or IEC 61010	• Current-sensing jaw. • Tactile barrier (to protect fingers from shocks). • Zero button (yellow): Removes dc offset from dc current measurements. Also serves as dial's shift button to select yellow functions scattered around the dial. • Jaw release lever. • Alignment marks: To meet accuracy specifications, a conductor must be aligned with these marks. • Common input jack. • Volts/ohm input jack. • Input for flexible current probe	• Test Leads • Batteries • Soft carrying case	standard	Catalogue/ Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
35.	Frequency Meter	Frequency Meter • AC frequency meter analog with range 45 to 55hz • Installation category 300 V CAT III • IS : 1248 / IEC 51	• Better resolution. • Linear Scale • Glass filled polycarbonate • Knife edge pointer. • Easily replicable	• Test Leads • Batteries • Soft carrying case	standard	*Manual *Test Certificates	installation and training to be provided in the designated	1 Year

			glass and bezel. • IP 52 case • Accuracy class 0.5 according to IS: 1248				ITI as per delivery location	
36.	Glow plug tester	Glow Plug tester/analyser suitable for voltages upto 48 Volts.	• Test the Glow Plug / Heater Plug • Test the glow plug without removing from the Engine • Latest ISO 9001 Certified factory product	Patch cords Case	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
37.	Hydrometer	Hydrometer •Range: 1.100 - 1.300 Specific Gravity at 27°C • Complete with Glass Barrel	Use to check gravity of battery	Case	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
38.	Digital Wattmeter	•Digital Wattmeter which calculate and displays power of single phase 230 V, Min. 1 KW Measurement, 50 Hz on a seven segment display. •600 V CAT IV/1000V CAT III as per International Safety standard IEC61010-1- 2010	• Range change function. • Data Hold Function freezes the reading. • Continuity check. • Diode measurement. • Low battery indication • Auto Power Off (APO) function. • Active Reactive and Apparent Power • Horse Power Measurement	*Batteries *Case*Test Leads	standard	*Manual*Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year

39.	Kilo Wattmeter	<ul style="list-style-type: none"> •Kilo Wattmeter Analog 0-1.5-3KW, •Pressure coil rating- 240v/440v, •Current rating-5A/10A(min) Analog, •Portable type Housed in Bakelite case Conforming to IS 1248 	<ul style="list-style-type: none"> • Knife edge pointer and Anti-parallax mirror scale. • Accuracy class as per IS:1248 • Wooden case with Bakelite Top. • Wide window for easy reading. • Quick response due to unique damping. 	<ul style="list-style-type: none"> *Connecting Leads *Case 	standard	<ul style="list-style-type: none"> *Manual *Test Certificates 	installation and training to be provided in the designated ITI as per delivery location	1 Year
40.	LCR meter	Digital LCR meter with following specifications: <ul style="list-style-type: none"> • RESISTANCE: 600/6k/60k/600k/6M $\Omega \pm 1.0\%$, 60M $\Omega \pm 1.5\%$ • CAPACITANCE: 6nF$\pm 2.0\%$, 60n/600n/6 Ω F$\pm 1.0\%$, 60 Ω /600Ω /6mF$\pm 1.5\%$ • INDUCTANCE: 600 Ω H$\pm 2.5\%$; 6m/60m/600mH$\pm 1.5\%$; 6H:$<4H \pm 2.8\%$ $>4H \pm 5.0\%$; 60H:$<40H \pm 3.5\%$ $>40H$ Unspecified • POWER: 6 (1.5V) (AAA Type) 	<ul style="list-style-type: none"> • Designed to international safety standard IEC1010-1 • A tilt stand provides position flexibility for viewing and operating the meter • SMT application • Auto range and manual range • Data hold • Max. /min. Value measurement • Auto power off / disable auto power off 	<ul style="list-style-type: none"> *Batteries *Case *Test Leads 	standard	<ul style="list-style-type: none"> *Manual *Test Certificates 	installation and training to be provided in the designated ITI as per delivery location	1 Year
41.	LCR meter (Digital) Handheld	Digital LCR meter with following specifications: <ul style="list-style-type: none"> • RESISTANCE: 600/6k/60k/600k/6M $\Omega \pm 1.0\%$, 60M $\Omega \pm 1.5\%$ • CAPACITANCE: 6nF$\pm 2.0\%$, 60n/600n/6 Ω F$\pm 1.0\%$, 60 Ω /600Ω /6mF$\pm 1.5\%$ • INDUCTANCE: 600 Ω H$\pm 2.5\%$; 6m/60m/600mH$\pm 1.5\%$; 6H:$<4H \pm 2.8\%$ $>4H \pm 5.0\%$; 60H:$<40H \pm 3.5\%$ $>40H$ 	<ul style="list-style-type: none"> • Designed to international safety standard IEC1010-1 • A tilt stand provides position flexibility for viewing and operating the meter • SMT application • Auto range and 	<ul style="list-style-type: none"> *Batteries *Case *Test Leads 	standard	<ul style="list-style-type: none"> *Manual *Test Certificates 	installation and training to be provided in the designated ITI as per delivery location	1 Year

		Unspecified •POWER: 6 (1.5V) (AAA Type)	manual range • Data hold • Max. /min. Value measurement Auto power off / disable auto power off					
42.	Lux Meter	Lux Meter - • Display -3½ digit ,LCD , • Ranges - 0-70,000 Lux .(3 ranges) , • Accuracy - + (5% rdg. +2 dgts) , • Operating Temperature - 0° to 50 °(32° to 122° F) • Operating Humidity - Less than 80% R.H. • Power Supply - min 9V battery (6F 22) ,	*Photo Detector Shall have a Spectral Sensitivity close to CIE photopic Curve. *Low Battery Indication - (- +) , Data Hold , Display in Lux ,	Standard Accessories Case, batteries	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
43.	Magnetic Flux	•Magnetic Flux Meter portable type Housed in Bakelite case Technical Specifications : •Range : 0-500 tesla •Accuracy : ± 0.5% •Display : 3 ½ digit 7 seg. (DPM) •Detector : Hall probe with an imported hall element •Power : 220V, 50 Hz	• Shall operate on the principle of Hall Effect in Semiconductors. • Indicate the direction of the magnetic field. • Latest ISO 9001 Certified factory product	Standard Accessories Case	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
44.	Milli Ammeter (AC)	AC Ammeter MI, analog, 0-200mA range with Moving iron spring-mounted jewel bearing suspension	• This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite	Standard Accessories	standard	Catalogue/ Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

			case • Meters Shall comply to IS-1248 or IEC-1010,					
45.	Milli Ammeter (DC)	Ammeter MC analog- (0 - 500 mA MC) with Moving Coil with Central Magnetic Core, Spring Mounted Jewel Bearing Suspension •It should have banana terminals with permanent marking of range and terminals •It should have knife edged pointer and anti parallax mirror •It should be moving coil type	• This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite case • Meters Shall comply to IS-1248 or IEC-1010,	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
46.	Milli Voltmeter	Milli Voltmeter •Centre - zero analog, •Milli Voltmeter centre zero 100 – 0 – 100 m volt •Confirming to BS 89, IEC 51 & IS 1248	portable box type housed in Bakelite case	Batteries, Case	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
47.	Analogue type Multimeter	Analog Multimeter •AC Voltage (Volts) 10-1000 V •AC Voltage Accuracy $\pm 4\%$ •DC Voltage Accuracy $\pm 3\%$ •DC Current (Amp) 50 μ A-10 A •DC Voltage 0.1mV-1000 V •DC Current Accuracy $\pm 3\%$ •Resistance (ohm) 0.2 Ω -20 M Ω •Resistance Accuracy $\pm 3\%$	• Analog Multimeter with Mirror Scale • Inbuilt Buzzer and LED • 0 Ω Adjustment with X 100 Range • Transistors Test , hFE with Diode. • Test Resistance	*Batteries *Case *Test Leads	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year

			Range : X1 , X10 , X100 , X1K , X10K • Diode Test • Transistor Testing • Continuity Buzzer About 100 Ω • Function Protection					
48.	Digital Multimeter	Multimeter Digital Specifications :- • Voltage between any Terminal and Earth Ground: 1000V Min • Display: Digital: 4000 count updates 3/sec • Operating Altitude: 0 to 2000 meters Specification: • DC voltage: 200mV/2V/20V/200V ± 0.5%, 1000V ± 0.8% • AC voltage: 2V/20V/200V ± 0.8%, 750V ± 1.2% • Resistance: 200/2k/20k/200k/2M? ± 0.8%, 20M? ± 1.0% • DC current: 200mA ± 1.5%, 10A ± 2.0% • AC current: 200mA ± 1.8%, 10A ± 3.0% • Capacitance: 20nF/200nF/2 μF/20 μF/200 μF ± 4.0% • Temperature: -20 ° C ~ 1000 ° C • Inductance: 20mH/200mH/2H/20H ± 3.0% • Transistor hFE: 1 ~ 1000 • Power supply: (9V) • Battery Life: Alkaline: 500 Hours • Safety Compliance: IEC 61010-1, 2000 CAT I 1000 V, CAT II 600 V, and CAT III 300 V overvoltage standards	• Basic dc accuracy • Digital display to 4,000 words • Automatic and manual range • Display hold function • Diode and continuity test with buzzer • Cover designed for easy hanging • Automatic shutdown • Easily replaceable battery design • 500 hours battery life • Voltage AC, Voltage DC, resistance, capacitance, continuity beeper, diode test, A ac, A dc all in a durable holster • Rugged and durable design – all inputs, ranges and functions	• Universal hanger clip • Test Leads • Batteries	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

			are protected up to 1000 V					
49.	Ohm Meter; Portable box type	Ohm Meter- Shunt Type - Specification :- •Measuring 0-2000 Ohm Capacity with Probe Black & red Ohm meter. •Range : 0-2000 ohm . •Accuracy : +/- 5 % of the indicating value at center zero	<ul style="list-style-type: none"> • Latest ISO 9001 Certified factory product • Portable Box type, Self contained , Battery operated, • Should be moving coil type and anti parallax mirror scale and knife edge pointer provided accurate reading. Should have facility of press to read switch avoids battery drain, • An infinity adjustment potentiometer help to provide accurate reading without effect of variation of battery voltage. • Mechanical zero adjuster is provided adjust zero, 	Batteries if applicable, Case	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
50.	Ohm Meter; Series Type	Ohm Meter- Series Type - Specification :- •Measuring 0-2000 Ohm Capacity with Probe Black & red Ohm meter. •Range : 0-2000 ohm . •Accuracy : +/- 5 % of the indicating	<ul style="list-style-type: none"> • Latest ISO 9001 Certified factory product • Portable Box type, Self contained , Battery operated, 	Batteries if applicable, Case	standard	User Manual	installation and training to be provided in the designated	1 Year

		value at center zero	<ul style="list-style-type: none"> • Should be moving coil type and anti parallax mirror scale and knife edge pointer provided accurate reading. Should have facility of press to read switch avoids battery drain, • An infinity adjustment potentiometer help to provide accurate reading without effect of variation of battery voltage. • Mechanical zero adjuster is provided adjust zero, 				ITI as per delivery location	
51.	Ohm Meter; Shunt Type	<p>Ohm Meter- Shunt Type -</p> <p>Specification :-</p> <ul style="list-style-type: none"> •Measuring 0-2000 Ohm Capacity with Probe Black & red Ohm meter. •Range : 0-2000 ohm . •Accuracy : +/- 5 % of the indicating value at center zero 	<ul style="list-style-type: none"> • Latest ISO 9001 Certified factory product • Portable Box type, Self contained , Battery operated, • Should be moving coil type and anti parallax mirror scale and knife edge pointer provided accurate reading. Should have facility of press to read switch avoids battery drain, • An infinity adjustment 	Batteries if applicable, Case	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

			<p>potentiometer help to provide accurate reading without effect of variation of battery voltage.</p> <ul style="list-style-type: none"> • Mechanical zero adjuster is provided adjust zero, 					
52.	Electrode drying Oven	<p>Electrode drying Oven</p> <ul style="list-style-type: none"> •capacity: 10 kg •Voltage : 230 volt ac •Temperature : Max:350 Deg.cel •Wattage : 1000 Watt Min 	<ul style="list-style-type: none"> • Easy to carry • High density insulation for energy savings • Insulated chamber door along with gasket to avoid heat losses • Inner mild steel duly painted with heat resistant paint • Auto Cut with temperature control. • Digital display of Temp. at front 	Power Cord	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
53.	Phase Sequence Indicator	<p>Phase Sequence Indicator</p> <ul style="list-style-type: none"> •3 Phase, 415 V , •Working Voltage: 100 - 500 Volt •Freq. : 25-60 Hz •Shall comply to Safety standard IEC 1010 or IEC 61010 or EN 61010 	<ul style="list-style-type: none"> • Indicates Phase Presence • Indicates Phase Rotation • Indicates Motor Rotation / wiring • Indicates Battery Status 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
54.	Power Factor	<p>415 V, 20 A, Three Phase portable portable type Power Factor Meter</p> <ul style="list-style-type: none"> • Accuracy Class Class1.0 • Frequency 50Hz \pm 5 % • System Voltage 415V AC • Mounting flush 	<ul style="list-style-type: none"> • True RMS measurements • Accuracy class 1.0 • L.E.D Indications:• Presence of phases (R, Y, B)• Reverse 		standard	*Manual *Test Certificates	installation and training to be provided in the designated	1 Year

		Display parameters: E.B Energy (6.3 format),Line voltages (Vr, Vy, and Vb with respect to Neutral),Line currents (Ir, Iy, and Ib),Line Frequency,Average power factor lag or lead,Active power- R ph, Y ph, B ph & summation,EB On hour	polarity • 2 –Line, 16 Char back lit LCD display • Confirms to IS-13779/ IEC-62052-11 & IEC-62053-21 • RS 485 PORT – Mod bus protocol • Compact and ideal for industrial environment				ITI as per delivery location	
55.	Power Meter	•Digital Wattmeter which calculate and displays power of single phase 230 V, Min. 1 KW Measurement, 50 Hz on a seven segment display. •600 V CAT IV/1000V CAT III as per International Safety standard IEC61010-1- 2010	• Range change function. • Data Hold Function freezes the reading. • Continuity check. • Diode measurement. • Low battery indication • Auto Power Off (APO) function. • Active Reactive and Apparent Power • Horse PowerMeasurement	*Batteries *Case	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
56.	Power Meter	•Digital Wattmeter which calculate and displays power of single phase 230 V, Min. 1 KW Measurement, 50 Hz on a seven segment display. •600 V CAT IV/1000V CAT III as per International Safety standard IEC61010-1- 2010	• Range change function. • Data Hold Function freezes the reading. • Continuity check. • Diode measurement. • Low battery indication • Auto Power Off (APO) function. • Active Reactive	Standard accessories	standard	Operating Manual/user Manual,	installation and training to be provided in the designated ITI as per delivery location	1 Year

			and Apparent Power • Horse Power Measurement					
57.	Pressure gauge Digital type	Digital type Pressure gauge with diameter 63mm with recalibration set • Min Pressure (PSI)0 and Max Pressure (PSI)30 • Min Temperature (° C)-20 and Max Temperature (° C)60 • Display5-digit LCD, 0.5" H • Battery Type : Two AA (included) • Battery Life2000 hours minimum	<ul style="list-style-type: none"> • Case ABS plastic • Enclosure Rating: IP67 • Media Compatibility: Gases and liquids compatible with wetted materials • Resolution: 0.01 psi • Accuracy±0.5% full-scale • CE Mark product / Latest ISO 9001 Certified factory product 	ABS Plastic Case with standard accessories	standard	Instructional manual with calibration certificate	installation and training to be provided in the designated ITI as per delivery location	1 Year
58.	Room temperature thermometer	Spirit-filled glass thermometer mounted on a rust-proof aluminium plate with dual scale -20° to 230°F x 1°F and -30 to 110 C x 1°C division.	<ul style="list-style-type: none"> • Latest ISO 9001 Certified Factory Product / CE mark product 	Standard accessories should be provided.	standard	manual/catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
59.	Analog Tachometer	Tachometer - Analog type Analog Type - 10000 RPM	<ul style="list-style-type: none"> • Hand held type • Latest ISO 9001 Certified factory product 	Standard Accessories Case	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery	1 Year

							location	
60.	Digital Tachometer	<p>Tachometer Digital</p> <ul style="list-style-type: none"> • Digital Photo Sensor Type - 10000 RPM (Tachometer - 5 Digit bright LED display of 10 mm height with memories of last ,highest and lowest readings , • 60 to 10000 RPM for rotational speeds, Auto - ranging ,Resolution 0.1 RPM from 60 to 1000 RPM ,1 RPM from 1000 to 50000 RPM. 6 to 1000 MPM (meters per minute) for surface speeds with resolution of 0.1 RPM • Choice of battery operation with 4 pen cells of 1.5 volts ,or mains voltage 230 + 10 % volts AC ,50/60 Hertz with the help of battery adaptor supplied • Auto power off facility. 	<ul style="list-style-type: none"> • Portable Type with sensor • Display 5 Digital LCD Display • The Last Value/ Max Value/ Min Value will be Automatically Stored in Memory. • Surface Speed Sensor for Speed Measurement • Low Battery Indication. • Testing Parameters : RPM, m/min, ft/min 	Power Cords if applicable, Batteries If Applicable	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
61.	Tachometer digital, multi range	<p>Tachometer Digital</p> <ul style="list-style-type: none"> • Digital Photo Sensor Type - 3000 RPM (Tachometer - 5 Digit bright LED display of 10 mm height with memories of last ,highest and lowest readings , 	<ul style="list-style-type: none"> • Portable Type with sensor • Display 5 Digital LCD Display • The Last Value/ Max Value/ Min Value will be Automatically Stored in Memory. • Surface Speed Sensor for Speed Measurement • Low Battery Indication. • Testing Parameters 	Power Cords if applicable, Batteries If Applicable	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

			: RPM, m/min, ft/min					
62.	Thermometer Digital	<ul style="list-style-type: none"> • 0° C - 150° C Industrial-grade digital thermometer with stainless steel probe for use with all hot and cold fluids and solids, including aquariums and hydroponics, ovens, refrigerators and freezers, ventilation systems, and heating systems • Dual-reading display has -58 to +482 degree F/ -50 to +250 degree C temperature range and 0.1 degree resolution • 2-1/2" stainless steel probe with 20" cable • Includes wallet-style case 	<ul style="list-style-type: none"> • Includes wallet-style case • Latest ISO 9001 Certified factory product 	Probes	standard	Instruction Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
63.	Tong tester (clamp on multi meter)	<p>Tong Tester / Clamp Meter</p> <ul style="list-style-type: none"> • 0 – 10-30 amp.(min) with 0-500 V • Dial (aka rotary switch). • Backlight button. • Min Max button: On first push, display shows maximum input. On subsequent pushes, minimum and average inputs are shown. • Works in current, voltage and frequency modes. • Shall comply to Safety standard IEC 1010 or IEC 61010 	<ul style="list-style-type: none"> • Current-sensing jaw. • Tactile barrier (to protect fingers from shocks). • Hold button: Freezes the display reading. Reading is released when button is pushed a second time. • Zero button (yellow): Removes dc offset from dc current measurements. Also serves as dial's shift button to select 	Test Leads Batteries Soft carrying case	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year

			<p>yellow functions scattered around the dial.</p> <ul style="list-style-type: none"> • Jaw release lever. • Alignment marks: To meet accuracy specifications, a conductor must be aligned with these marks. • Common input jack. • Volts/ohm input jack. • Input for flexible current probe 					
64.	Sensor thermometer (digital)	<p>Sensor thermometer (digital) with following specifications:</p> <ul style="list-style-type: none"> • Range: -50°C to 150°C • Temperature Resolution: 0.1°C • Display Min. 36 x 17mm • Accuracy: $\pm 0.1\% + 0.4^\circ\text{C}$ • Survey Cycle: 10 Sec • Sensor: PT 100 • Battery: 1.5V (LR44) 	<ul style="list-style-type: none"> • IP67 waterproof • Max/Min/Avg function • Backlit LCD • Resolution 0.1°C; 0.1°F • Battery life indicator • ISO 9001 Certified Factory Product/ CE mark Product 	Batteries and case	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
65.	Tong Tester	<p>Digital Type Tong Tester / Clamp Meter</p> <ul style="list-style-type: none"> • 0 – 100 Amp. • Dial (aka rotary switch). • Backlight button. • Min Max button: On first push, display shows maximum input. On subsequent pushes, minimum and average inputs are shown. • Works in current, voltage and frequency modes. • Shall comply to Safety standard IEC 1010 or IEC 61010 	<ul style="list-style-type: none"> • Current-sensing jaw. • Tactile barrier (to protect fingers from shocks). • Hold button: Freezes the display reading. Reading is released when button is pushed a second time. • Zero button (yellow): Removes 	<ul style="list-style-type: none"> • Test Leads • Batteries • Soft carrying case 	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year

			<p>dc offset from dc current measurements. Also serves as dial's shift button to select yellow functions scattered around the dial.</p> <ul style="list-style-type: none"> • Jaw release lever. • Alignment marks: To meet accuracy specifications, a conductor must be aligned with these marks. • Common input jack. • Volts/ohm input jack. • Input for flexible current probe 					
66.	Voltmeter (0-1V), (0-10V), (0-30V) (table model)	<p>Table model Analog Voltmeter with range 0-1V :</p> <ul style="list-style-type: none"> • Range: Voltage (V): 0 – 1 V <p>Table model Analog Voltmeter with range 0-10V :</p> <ul style="list-style-type: none"> • Range: Voltage (V): 0 – 1 0V <p>Table model Analog Voltmeter with range 0-30V :</p> <ul style="list-style-type: none"> • Range: Voltage (V): 0 – 130V 	<ul style="list-style-type: none"> • Movement Type: Moving Iron type • Standards: IS-1248 • Accuracy: $\pm 1.5\%$ of Full Scale 		standard	catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
67.	Voltmeter 50V/DC	<ul style="list-style-type: none"> • Voltmeter MC analog - (0 - 50V) with Moving Coil with Central Magnetic Core, Spring Mounted Jewel Bearing Suspension • It should have banana terminals with permanent marking of range and terminals • It should have knife edged pointer and anti parallax mirror • It should be moving coil type 	<ul style="list-style-type: none"> • This precision grade portable laboratory type direct indicating meter should be housed in electrical grade phenolic (plastic molded case) , portable box type housed in Bakelite 	case and connection cords	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year

			case • Meters Shall comply to IS-1248 or IEC-1010,					
68.	Voltmeter AC 500 V	<ul style="list-style-type: none"> • A.C. Voltmeter • M.I. analog, • A.C. Voltmeter M.I. 75V - 150 V - 300 V – 500V A.C • Confirming to BS 89, IEC 51 & IS 1248 	portable box type housed in Bakelite case	Batteries, Case	standard	User Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
69.	Voltmeter, AC/DC portable precision grade Digital Panel board type	Ac/DC Digital Voltmeter 0-500 Volts <ul style="list-style-type: none"> • 3 Digit, 7 Segment LED Display • True RMS Measurement for AC measurement • For 1Ø-2 Wire Electrical Network • IP Protection (Front): IP65 	<ul style="list-style-type: none"> • Panel Mounted • Accuracy: $\pm 0.5\%$ 	Standard Accessories	standard	Manual	installation and training to be provided in the designated ITI as per delivery location	1 Year
70.	Wattmeter AC/DC, 0 to 10 Kw	<ul style="list-style-type: none"> • Kilo Wattmeter Analog 0-10 KW, • pressure coil rating- 240v/440v, • Current rating-5A/10A(min) Analog, • Portable type Housed in Bakelite case Conforming to IS 1248	<ul style="list-style-type: none"> • Knife edge pointer and Anti-parallax mirror scale. • Accuracy class as per IS:1248 • Wooden case with Bakelite Top. • Wide window for easy reading. • Quick response due to unique damping. 	*Connecting Leads *Case	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year

71.	Digital Wattmeter	<ul style="list-style-type: none"> • Multirange Digital Wattmeter which calculate and displays power of single phase 230 V, 1 KW Measurement, 50 Hz on a seven segment display. • 600 V CAT IV/1000V CAT III as per International Safety standard IEC61010-1- 2010 	<ul style="list-style-type: none"> • Range change function. • Data Hold Function freezes the reading. • Continuity check. • Diode measurement. • Low battery indication • Auto Power Off (APO) function. • Active Reactive and Apparent Power • Horse power Measurement 	*Batteries *Case	standard	*Manual *Test Certificates	installation and training to be provided in the designated ITI as per delivery location	1 Year
72.	Conductivity meters- both low range and high range.	Digital Conductivity meters with both low range and high range. complete in all aspect with key specifications as: <ul style="list-style-type: none"> • Display : 3.5 Digital LED • Ranges 0 to 200 uS/cm, 0 to 2 mS/cm, 0 to 20 mS/cm, 0 to 200 mS/cm & 0 to 1000 mS/cm 	Digital Conductivity meters with min. features as: <ul style="list-style-type: none"> • CE/ Latest ISO 9001 certified factory product • Accuracy + 1%FS ± 1 digit • Adjustable Cell constant on Digital Display • Resolution 0.1uS/cm • Power 230V + 10%, 50Hz 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
73.	pH meters	Digital pH meters complete in all aspect with key specifications as: <ul style="list-style-type: none"> • Display: 3 1/2 Digit LED • Accuracy: + 0.01 pH • Power Requirement 220 VAC +10% 50 Hz 	Digital pH meters with min. features as: <ul style="list-style-type: none"> • CE/ Latest ISO 9001 certified factory product 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery	1 Year

							location	
74.	Temperature probes	Temperature probes complete in all aspect with key specifications as: <ul style="list-style-type: none"> • Measuring Range : -50 to +250 Deg.C; • Accuracy : Class A Accuracy of ± 0.2 Deg.C +/- 1 count • Output : Pt-100 3 Wire Type standard • Type : Simplex type with transition teflon/teflon cable of length 3 meters. • Sensor Length : Standard 6 inch(150mm) • MOC : Stainless Steel 304 pipe of 150mm length of Outer Diameter : Standard 6 mm. 	Temperature probes with min. features as: <ul style="list-style-type: none"> • CE/ Latest ISO 9001 certified factory product 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year
75.	Thermo-hygrometers	Thermo-hygrometers complete in all aspect with key specifications as: <ul style="list-style-type: none"> • Measuring rate 18 s • Storage temp. -40 to +70 °C • Battery type 9V block battery • Battery life approx. 1 year • Material/Housing ABS • Display LCD, 2 lines 	Thermo-hygrometers with min. features as: <ul style="list-style-type: none"> • Continuous display of temperature, humidity and dew point • Max. and min. value display • Battery monitor • LED alarm reports limit value violations • High accuracy ± 2 %RH • CE/ Latest ISO 9001 certified factory product 	Standard Accessories	standard	Product Catalogue	installation and training to be provided in the designated ITI as per delivery location	1 Year

4. Drawings

Not Applicable