

**Technical Specification: Bench Top Digital Multimeter, Qty: 3 Set**

Sr. no.	Description	Details
1.00	Make of Bench Top Digital Multimeter	
2.00	Model No of Bench Top Digital Multimeter	
3.00	Technical specifications :	Compliance (Remarks)
3.01	Resolution: 6½ or more	
<b>Trigger</b>		
3.02A	Sample per trigger :1-50,000 or more	
3.02B	Trigger Delay:<10 µS or better	
3.02C	External Trigger Delay: < 1ms or better	
3.02D	External Trigger Jitter: <500µS or better	
3.02E	Trigger Input:TTL	
<b>DC Voltage</b>		
3.03A	Input Range: 100mV – 1000V or better	
3.03B	Common Mode Rejection Ratio: 140dB	
3.03C	Input Bias Current: <30pA	
3.03D	Accuracy for 1 year: 100mV = 0.005% of measurement or better 1V = 0.005% of measurement or better 10V =0.005% of measurement or better 100V =0.005% of measurement or better 1000V =0.005% of measurement or better	
<b>AC Voltage</b>		
3.04A	Input Range: 100mV – 750V or better	
3.04B	Max Input: 1000V Peak	
3.04C	Input Impedance: 1MΩ	
3.04D	Measurement Method: AC Couple True RMS	
3.04E	Accuracy at 10Hz – 20KHz Frequency for 1 year: 0.07% or better of measurement of all range	
<b>Resistance</b>		
3.05A	Measurement range: 100Ω-1GΩ or better	
3.05B	Input Protection: 1000V for all range	
3.05C	Accuracy for 1 year: 100 Ω =0.03% of measurement or better 1k Ω =0.03% of measurement or better 10k Ω =0.03% of measurement or better 100k Ω =0.03% of measurement or better 1MΩ =0.03% of measurement or better 10MΩ =0.05% of measurement or better 100MΩ =0.9% of measurement or better 1GΩ =3% of measurement or better	
<b>AC Current</b>		
3.06A	Input Range: 100µA to 10A or better	
3.06B	Input Protection: 11A	
3.06C	Measurement Method: AC Coupled True RMS	

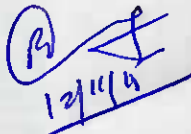
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3.06D	<b>Accuracy at 10Hz – 5 KHz frequency for 1 year:</b> 100 $\mu$ A=0.3% of measurement 1mA =0.3% of measurement 10mA =0.3% of measurement 100mA =0.3% of measurement 1A =0.3% of measurement 3A =0.3% of measurement 10A =0.3% of measurement	
<b>DC Current</b>		
3.07A	<b>Input Range:</b> 100 $\mu$ A to 10A or better	
3.07B	<b>Input Protection:</b> 11A	
3.07C	<b>Accuracy for 1 year:</b> 100 $\mu$ A=0.05% of measurement or better 1mA =0.05% of measurement or better 10mA =0.05% of measurement or better 100mA =0.05% of measurement or better 1A =0.1% of measurement or better 10A =0.2% of measurement or better	
<b>Frequency</b>		
3.08A	<b>Input Range:</b> 3Hz-300KHz or better	
3.08B	<b>Measurement Method:</b> AC-coupled input using the ac voltage measurementfunction	
3.08C	<b>Gate Time:</b> 10mS, 100mS, 1S	
3.08D	<b>Accuracy for 1 year in all range:</b> 3-10 Hz =0.3% of measurement 10-100Hz =0.05% of measurement 100-1KHz =0.05% of measurement 1-300kHz =0.05% of measurement	
<b>Continuity</b>		
3.09A	<b>Response Time:</b> 300 samples/sec with audible tone	
3.09B	<b>Continuity Threshold:</b> 1K $\Omega$ or better	
3.09C	<b>Accuracy for 1 year:</b> 0.01% of measurement or better	
<b>Diode Test</b>		
3.10A	<b>Response Time:</b> 300 samples/sec with audible tone	
3.10B	<b>Test Current:</b> 1 mA	
3.10C	<b>Accuracy for 1 year:</b> 0.01% of measurement or better	
<b>Capacitance</b>		
3.11A	<b>Measurement Range:</b> 1nF -100 $\mu$ F or better	
3.11B	<b>Accuracy for 1 year:</b> 1 nF = 2% of measurement or better 10 nF =1% of measurement or better 100 nF =1% of measurement or better 1 $\mu$ F =1% of measurement or better 10 $\mu$ F =1% of measurement or better 100 $\mu$ F =1% of measurement or better	
<b>Temperature</b>		

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3.12A	Measurement Temp. : -200°C - 600°C	
<b>Safety</b>		
3.13A	CAT II: 300V	
3.13B	Input Protection: 1000V DC	
3.13C	Over Range Protection: 1000V DC, 750V AC, 10A current	
<b>Display</b>		
3.14A	Size: 4" or more in size, colour, dual display	
3.15	Memory: Provision of Internal and external storage	
3.16	Math Function: Zero/Null, dBm, dB, Histogram, Statistics (Min, Max, Average, Standard Deviation)	
3.17	Computer Interface: USB/RS232	
<b>Power Supply</b>		
3.18A	Input: Single Phase AC	
3.18B	Frequency: 50HZ $\pm$ 5%	
3.19	Operating Temperature=0°C - 55°C	
4.00	Warranty:	
4.01	Min 3 year from the date of commissioning.	

Sr. no.	Description	Qty Required
5.00	Accessories	
5.01	Power cord of length 3m	1 no.
5.02	Test Leads	1 no.
5.03	4 wire lead for resistance measurement.	1 Set
6.00	Documentation	
6.01	Hard copy of user manual	1 no.
7.00	Acceptance Criteria	
7.01	Bench Top Digital Multimeter will be finally accepted after successful demonstration and user training on all of its features at BHEL Haridwar.	

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