

Order Code - 24257587.8 **Power Electronics Training Set**



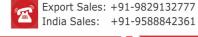
Scope Of Learning:

- Single Phase Rectifier and Bridge Converter
- Three Phase Rectifier and Bridge Converter
- Step Up and Step Down Chopper
- Inveter Single Phase Half Bridge and Full Bridge
- **Temperature PID Controller** •
- DC to DC Generation
- DC to AC Generation
- Operation on Dynamometer
- Three Phase Induction Motor

Technical Specifications:

- MCB (Power Switch) : Three Phase 10A
- Interconnections : 2mm & 4mm Safety Socket
- Diode Assembly : Diode 6A10 1000V/6A
- SCR Assembly : TYN 616 600V/16A
- IGBT Assembly: IGBT G4BC20S 600V/10A.
- Three/Single Phase Firing Circuit : Three Phase Firing Circuit (Firing Angle Control 30-150
- PWM Circuit : Triangular Comparator Method (For Inverter)
- PWM Circuit : (For Chopper)
- Digital AC Voltmeter : 0-500V AC Voltage Measurement
- Digital AC Ammeter : 0-30A AC Current Measurement
- Digital DC Voltmeter : 0-500V DC Voltage Measurement
- Digital DC Ammeter : 0-30A DC Current Measurement
- Frequency/VAR Meter
- Load Assembly : Six Load Assembly (Single Phase, Three Phase in Star/Delta)
- PID Controller (For Temperature)
- Single to Three Phase Frequency VVFD Drive
- Single Phase DC Drive

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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Power Supplies:

- Single Phase AC/DC Power Supply : 220V, 50/60Hz
- Center Tapped Transformer : 115V 0 115V ± 10%, 2A Supply
- Low Voltage AC Power Supply : 15V-0
- Low Voltage DC Power Supply : +15V, +12V at 250mA
- Three Phase AC Power Supply :230V Phase voltage, 415 Line voltage ± 10% 50 Hz
- Three Phase Low Voltage Power Supply: 15V Each Phase ± 10%, 50Hz
- Operated on Mains power 415V, 50Hz +10%

Salient Features:

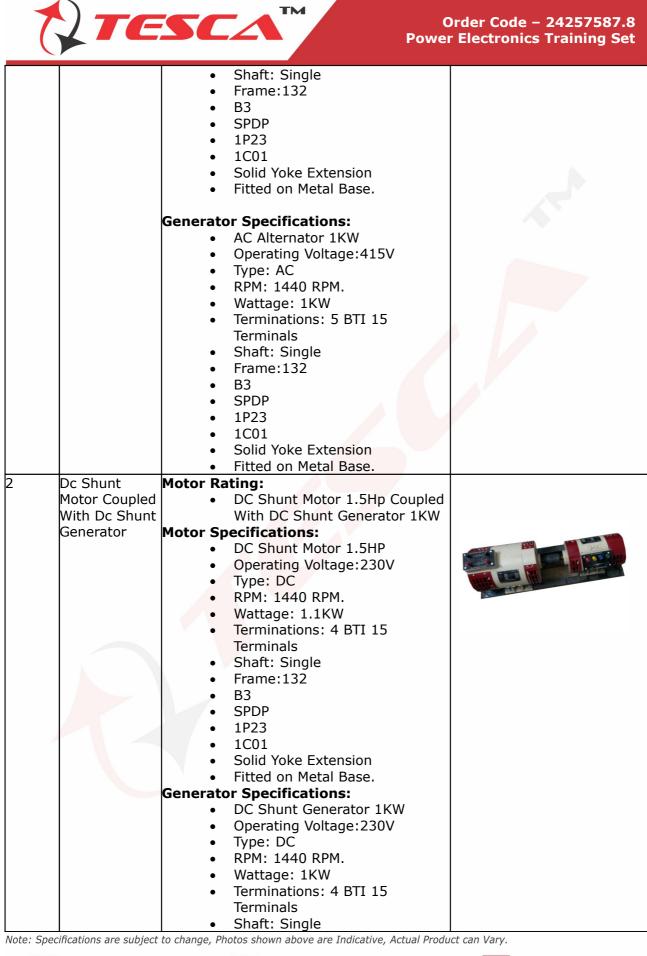
- Light Indicator for Mains.
- Front panel built with high class insulated Printed Bakelite/Aluminum Board sheet with well printed circuits and symbols.
- 4 Pole MCB for Short Circuit protection
- Instruction manual.
- Connections are brought out through 4mm Colored Safety Sockets.
- Patch Cords 4mm/2mm.
- The trainer is housed in Modular Based Rack Type Aluminum Extruded Metal cabinet.
- Size of the trainer set 54"x36"

OPTIONAL ACCESSORIES:

TEST BENCH

- SCOPE OF SUPPLY (PACKING LIST):
- Three Phase Inductive Load
- Three Phase Resistive Load
- Three Phase Transformer Unit
- MG Set-1, DC Motor Coupled With AC Generator
- MG Set-1, DC Motor Coupled With DC Generator
- Three Phase Capacitive Load
- Dynamometer Coupled With 3Phase Induction Motor
- Patch Cords 4mm, 2mm
- Bulbs (230V-100W, 24V-20W)
- POWER ELECTRONIC TRAINING SYSTEM

SN.	Name	Technical Details	Referene Image
1 Note: Si	Dc Shunt Motor Coupled With Ac Alternator	 Scope Of Learning: Study of Dc Shunt Motor Coupled With Ac Alternator MOTOR RATING: Dc Shunt Motor 1.5Hp Coupled With Ac Alternator 1KVA MOTOR SPECIFICATIONS: DC Shunt Motor 1.5HP Operating Voltage:230V Type: DC RPM: 1440 RPM. Wattage: 1.1KW Terminations: 4 BTI 15 	duct can Vary.
(F	Export Sales: +91-9 India Sales: +91-9		





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3 Three Phase	 Frame:132 B3 SPDP 1P23 1C01 Solid Yoke Extension Fitted on Metal Base. 	
3 Three Phase Induction Motor	 Motor Specifications: AC Squirrel Cage Induction Motor 1HP Operating Voltage:415V Type: AC RPM: 1440 RPM. Wattage: 0.75KW Terminations: 6 BTI 15 Terminals Shaft: Single Frame:132 B3 SPDP 1P23 1C01 Solid Yoke Extension Fitted on Metal Base. 	
4 DC Dynamomet For Motor Testing Experiment Set (EDDY Curre Brake)	These Dynamometers Swinging type are	<image/>





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 Fechnical Specs: Power ratings available : 1KW 2KW/ 5KW/ 10KW Voltage Input: 230V AC to Exciter unit. Rpm of Machine 1500 Single shaft extension, SPDP, IP23, IC01, B3, Class-B, S1, Solid yoke. List Of Experiments Possible Load testing of AC Motor / Load testing of DC Motor Torque calculation at various rpm Speed-Torque Analysis / Voltage-Speed Analysis Speed reversal / Efficiency Analysis Blocked rotor test / Cold Resistance & Hot Resistance Motor Operation parameters / Basic Overhauling Know how. Scope Of Supply: 3Phase Induction Motor Coupled to Dynamometer 1KW(DC Shunt Generator is Similar to) TECHNICAL SPECIFICATIONS: Power Supplies: Operated on Mains power 415V, 50Hz + 10% Digital/Analog Meters: Voltmeter Ammeter Color Indication For Input SALIENT FEATURES: Voltage regulation within limit as per ISS. Special guard also provided on the coupling to avoid any mishappening during operation. Front panel built with high class insulated Bakelite sheet with Sticker well printed circuits and symbols. Instruction manual. Patch Cords 4mm (Heavy Duty) 1Meter Length. High Voltage Test Points are Poi	
 High Voltage Test Points are Provided With 4mm Safety 	
Sockets	
The trainer is housed in Metal	





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	. /		
		cabinet.	
		 Short Circuit protection with the MCB. 	
		 Size of the trainer set 18"x12" 	
5	Three Phase	Technical Specifications:	
		Power Supplies:	
	(AIR Cooled)	AC Power Supply 440/220V AT	
		1000VAOperated on Mains power415, 50Hz	3 PHASE ISOLATION TRANSFORMER
		+10%	
		Salient Features:	
		Rating 1000VA per Phase	
		Transformer ration is Step down	All and the set of the
		2:1. (40) (with Tapping at 00) (00)	
		 440V with Tapping at 0%, 0%, 86.6% and 100%. 	
		 High insulation copper winding. 	
		Front panel built with high class	
		insulated Bakelite sheet with	
		Sticker well printed.	
		Instruction manual. High Voltage Test Points are	
		High Voltage Test Points are Provided With 4mm Safety	
		Sockets/BTI-15 Terminals	
		• The trainer is housed in Metal	
		cabinet.	
		Short Circuit protection with the	
		 Fuse. Size of the trainer set 18"x12" 	
6	3phase	Technical Specifications:	
Ŭ	Resistive Load	• 12 Control switches given board for	
	(3KW)	current control for Each Phase	
		Each switch controls 1A current.	
		12 Nos of Rheostats are mounted	
		inside the cabinet having value of	P use assisted to a substance to a
		1A.Rating of Rheostats are	
		4400hm,1A at 415V	
		Current Meter is provided for Load	
		Measurement	
		Operating Voltage 415V, 50Hz AC	
		(3Phase) Salient Features:	
		 Front panel built with high class 	
		insulated Bakelite sheet with	•
		Sticker well printed circuits and	
		symbols.	
		Instruction manual. A Research in the second seco	
		 3 Phase Indications with 25mm Multi Colored Indicators. 	
		 Patch Cords 4mm (Heavy Duty) 	
		 High Voltage Test Points are 	
1			
		Provided With 4mm Safety Sockets	



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7	3phase Inductive Load (3KW)	 current control for Each Phase Each switch controls 1A current. 12 Nos of Inductors are mounted inside the cabinet having value of 1A. Inductors are Copper wound. Current Meter is provided for Load Measurement Operating Voltage 415V, 50Hz AC (3Phase) Salient Features: Front panel built with high class insulated Bakelite sheet with Sticker well printed circuits and symbols. Instruction manual. 3 Phase Indications with 25mm Multi Colored Indicators. Patch Cords 4mm (Heavy Duty) High Voltage Test Points are Provided With 4mm Safety Sockets The trainer is housed in Metal cabinet. Short Circuit protection with 4Pole MCB. Size of the trainer set 18"x24" Easy to move as wheels are given 	
8	3phase Capacitive Load (3KW)	 Technical Specifications: 12 Control switches given board for current control for Each Phase Each switch controls 1A current. 12 Nos of Capacitor mounted inside the cabinet having value of 1A. Operating Voltage 415V, 50Hz AC (3Phase) Salient Features: Front panel built with high class insulated Bakelite sheet with Sticker well printed circuits and symbols. Instruction manual. 3 Phase Indications with 25mm Multi Colored Indicators. Patch Cords 4mm (Heavy Duty) 	3 PHASE CAPACITIVE LOAD BANK (DYWR)





