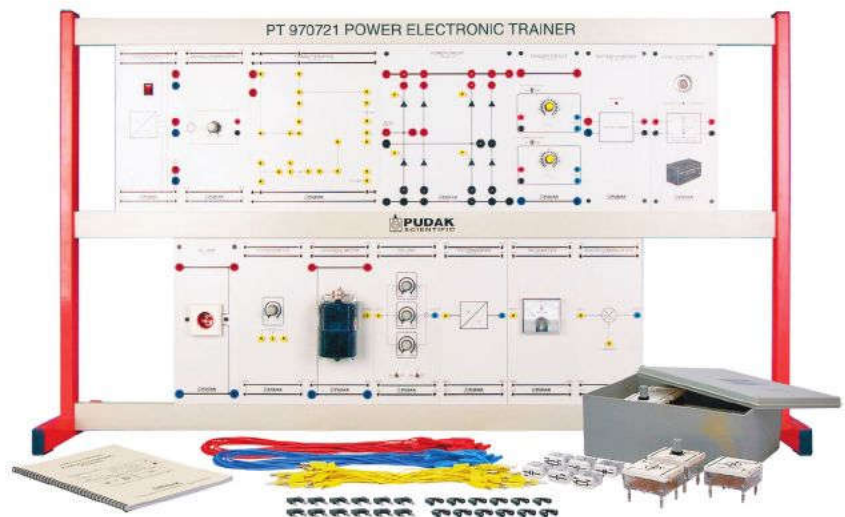


Features

- The trainer is designed to present and practice principle of basic power electronic and industrial applications.
- The trainer show standard symbol of electronic control on the front panel. The internal structure of the function units has been exclusively implemented with electronic.
- The system is supplied with power supplies required to run the experiment.
- The connections to and from the modules are easy and save to built.
- All inputs and outputs on each panel are equipped with safety connecting lead, safety connecting cross and connecting cross 4-mm.
- Complete with comprehensive experiment manual book to guide student step by step in conducting experiments.

Power Electronic Trainer

PT 970721



Covered Topics

- LE030001E Characteristic of Thyristor
- LE030002E Thyristor on DC Circuit
- LE030003E Characteristics of TRIAC
- LE030004E Lighting TRIAC Response
- LE030005E Characteristics of DIAC
- LE030006E Pulse Light Generator with UJT
- LE030007E Nature Commutations on Pulse Generating UJT
- LE030008E Phase Control with UJT
- LE030009E Voltage Rectifier of Single Phase Diode
- LE030010E Half Wave Voltage Rectifier of Single Phase Thyristor
- LE030011E Full Wave Voltage Rectifier of Thyristor Bridge Connection
- LE030012E Full Wave Control TRIAC and Anti-Parallel Thyristor Circuit
- LE030013E Battery Charging
- LE030014E Optical Encoder as Feedback
- LE030015E Identifications of Character Plant
- LE030016E Speed Control Open Loop
- LE030017E Speed Control of Motor AC Closed Loop with PID
- LE030018E Speed Control of Motor DC Closed Loop with PID

Specification

- **Power Supply [PTE-047-01]**
 - Supply voltage : Max. 230VAC, 50Hz
 - Output voltage : +15VDC, +5VDC, GND, 12VAC, 18VAC, 220VAC
 - Current : 3A
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Variable Power Supply [PTE-047-02]**
 - Supply voltage : +15VDC, -15VDC, GND
 - Output voltage : Var. 0 – 12VDC
 - Current : 500mA
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Characteristics [PTE-047-03]**
 - Circuit assembly for component resistor, SCR, TRIAC, Capacitor, DIAC, Potentiometer, Diode, SPDT
 - Conductive connections between the terminal points are made with 4mm / 19mm connection plugs
 - Output connections : 4mm sockets
 - Dimension : 228 x 297mm
- **Power Circuit [PTE-047-04]**
 - Provided with diode circuit for rectifier uncontrolled, SCR circuit, TRIAC with RC snubber RC circuit
 - Max. voltage 250VAC
 - Output connections : 4mm sockets
 - Dimension : 228 x 297mm
- **Trigger Circuit [PTE-047-05]**
 - Supply voltage : Max. 230VAC
 - Control voltage : 0 – 12VDC with trigger angle 0° to 180°
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Battery Charge [PTE-047-06]**
 - Supply voltage : 18VAC
 - Output voltage : 12VDC
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm

Continue >>

Training Panel System

>> Specification Continued

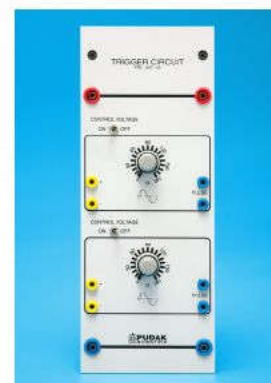
- **Lead Acid Battery [PTE-047-07]**
 - Supply voltage : 12VDC
 - Current : 1.2Ah
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Container Box [PTE-047-08],** consists of:
Resistor, Capacitor, Diode 1N4002, DIAC DB3, Incandescent Lamp 12V / 3W + Lamp Holder E10, Incandescent Lamp 12V / 25W, SPST Toggle Switch, Potentiometer 10kΩ / 0.25W, Potentiometer 100kΩ / 0.25W, SCR, TRIAC, UJT
- **Lamp Socket [PTE-047-09]**
 - Nominal voltage 220VAC
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Potentiometer [PTE-047-10]**
 - Potentiometer 100kΩ/0.25W
 - Adjustable potentiometer with pointer knob
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Universal Motor [PTE-047-11]**
 - Supply voltage : 200 / 250V
 - Input voltage optocoupler : +5VDC, GND
 - Output : 1 / 16HP
 - Current : 0.6A
 - Frequency : 50 / 60Hz
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **PID Unit [PTE-047-12]**
 - Supply voltage : +15VDC, -15VDC, GND
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **F/V Converter [PTE-047-13]**
 - Supply voltage : +15VDC, GND
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Tachometer [PTE-047-14]**
 - Measuring range : 0 – 20000 rpm, instrument: moving coil, class:2
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm
- **Analog Summing Block [PTE-047-15]**
 - Supply voltage : +15VDC, -15VDC, GND
 - Max. input voltage : 15VDC
 - Max. output voltage : 15VDC
 - Output connections : 4mm sockets
 - Dimension : 114 x 297mm

PT 970721 Power Electronic Trainer consists of

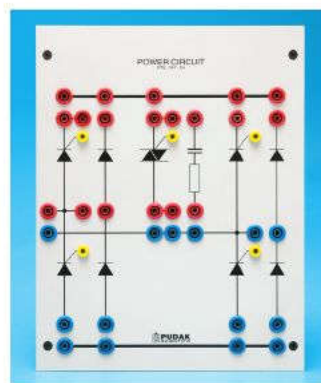
Cat. No.	Description	Qty.
PTE-047-01	Power Supply	1 pc
PTE-047-02	Variable Power Supply	1 pc
PTE-047-03	Characteristics	1 pc
PTE-047-04	Power Circuit	1 pc
PTE-047-05	Trigger Circuit	1 pc
PTE-047-06	Battery Charge	1 pc
PTE-047-07	Lead Acid Battery	1 pc
PTE-047-08	Container Box, consist of:	1 set
PEO 339 03	Resistor 10Ω, 0.5W	1 pc
PEO 339 10	Resistor 100Ω, 0.5W	1 pc
PEO 339 12	Resistor 220Ω, 0.5W	1 pc
PEO 339 18	Resistor 680Ω, 0.5W	1 pc
PEO 339 19	Resistor 1kΩ, 0.5W	2 pcs
PEO 339 22	Resistor 3.3kΩ, 0.5W	1 pc
PEO 339 23	Resistor 4.7kΩ, 0.5W	1 pc



Tachometer
PTE-047-14



Trigger Circuit
PTE-047-05



Power Circuit
PTE-047-04



Universal Motor
PTE-047-11

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Cat. No.	Description	Qty.
PEO 339 24	Resistor 10kΩ, 0.5W	1 pc
PEO 411 01	Capacitor Non Polar 10nF	1 pc
PEO 411 06	Capacitor Non Polar 47nF	1 pc
PEO 411 02	Capacitor Non Polar 100nF	1 pc
FET 23.01	Diode, 1N4002	1 pc
PEO 370	DIAC DB3	1 pc
PEO 120 04	Incandescent Lamp 12V + Lamp Holder E10	1 pc
FLS 20.04/101	SPST Toggle Switch	1 pc
FLS 20.08/103	Potentiometer 10kΩ, 0.25W	1 pc
FLS 322 03	Potentiometer 100kΩ, 0.25W	1 pc
PEO 510	SCR BT151	1 pc
PEO 511 01	TRIAC BT137	1 pc
PEO 512	UJT 2N2646	1 pc
PTE-047-09	Lamp Socket	1 pc
PTE-047-10	Potentiometer	1 pc
PTE-047-11	Universal Motor	1 pc
PTE-047-12	PID Unit	1 pc
PTE-047-13	F/V Converter	1 pc
PTE-047-14	Tachometer	1 pc
PTE-047-15	Analog Summing Block	1 pc
PEO 103	Incandescent Lamp 12V / 25W	1 pc
PEO 101	Incandescent Lamp 230VAC / 40W	1 pc
KAL 99/40-030	Connecting Lead 30cm, Yellow	10 pcs
KAL 99/40-050	Connecting Lead 50cm, Yellow	6 pcs
KAL 99/10-075	Connecting Lead 75cm, Black	5 pcs
KAL 99/20-075	Connecting Lead 75cm, Red	5 pcs
GSE 232 02	Safety Connecting Lead 50cm, Red	4 pcs
GSE 233 03	Safety Connecting Lead 100cm, Blue	4 pcs
GSE 231 02	Safety Connecting Lead 30cm, Red	7 pcs
GSE 235	Safety Connecting Cross	15 pcs
FLS 20.02/097	Connecting Cross	25 pcs
L03S-01E	Experiment Manual Book	1 pc

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Specifications and illustrations are subject to change without prior notice