



KL-500

POWER ELECTRONIC (I) INDUSTRIAL ELECTRONIC TRAINER



KL-58001

2. Meter/Motor Unit (KL-58001)

- Dual-Scale ACV: 0-110V-220V, class 2.5
- Dual-Scale ACA: 0-100mA-1A, class 2.5
- Dual-Scale DCV: 0-10V-20V, class 2.5
- Dual-Scale DCA: 0-100mA-1A, class 2.5
- AC 110V/220V motor

Experimental Modules

- 2mm plugs and sockets used throughout, connected by 2mm test leads
- Circuit symbols, blocks and components printed on the surface of each module
- Modules secured in plastic housing, the dimension: 297x226x60mm
- With storage cabinet for all modules to be easily stored
- Comprehensive experiment manuals



Stand feet for easy operation on the Workbench



Storage cabinet for all modules to easy storing

List of Modules

- | | |
|-----------------|--|
| Module KL-53001 | UJT Experiments |
| Module KL-53002 | PUT Experiments |
| Module KL-53003 | PUT & SCR Experiments |
| Module KL-53004 | SCS Experiments |
| Module KL-53005 | UJT & PUT Trigger SCR Experiments |
| Module KL-53006 | SCR Control DC Motor & DIAC TRIAC Characteristic Experiments |
| Module KL-53007 | Automatic Control Lamp & TRIAC Control Speed Experiments |
| Module KL-53008 | Temperature Ratio & Photo-Coupl & Touch Control Experiments |
| Module KL-53009 | Over/Under-Voltage Breaker & Flasher Control Experiment |
| Module KL-53010 | TRIAC Liquid Level & IC Timer Switch Experiments |
| Module KL-53011 | Digital Signal Driver & Zero-Voltage Switch Experiments |
| Module KL-53012 | Zero-Voltage Switch Experiments |
| Module KL-53013 | SCR Converter Experiment |



KL-53001



KL-53002



KL-53003



KL-53004



KL-53005



KL-53006



KL-53007



KL-53008



KL-53009



POWER ELECTRONIC (1)
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KL-53010



KL-53011



KL-53012



KL-53013

List of Experiments

(1) Power Supply Unit Experiment

- a. AC Voltage measurement
- b. DC Voltage measurement

(2) UJT Experiments

UJT Characteristic & Equivalent Circuit

- a. UJT Introduction
- b. UJT Characteristic
- c. UJT Equivalent Circuit
- d. CDS Trigger
- e. RTH Trigger

UJT Oscillator Circuit & Timer Switch

- a. UJT Relaxation Oscillator
- b. UJT Timer Switch

(3) PUT Experiments

PUT Characteristic & Equivalent Circuit

- a. PUT Introduction
- b. PUT Characteristic
- c. PUT Equivalent Circuit
- d. CDS Trigger
- e. RTH Trigger

PUT Oscillator Circuit & Timer Switch

- a. PUT Circuit Oscillator
- b. PUT Timer Switch

(4) PUT & SCR Experiments

PUT Staircase Generator & VCR Circuit

- a. PUT Staircase Generator Circuit
 - b. PUT Voltage Control Ramp Circuit
- SCR Characteristic & RC Shift Control circuit
- a. SCR Principle
 - b. SCR Characteristic Curve
 - c. SCR Construction
 - d. SCR Trigger Mode
 - e. SCR RC Shift Control circuit

(5) SCS Experiment

SCS Characteristic Experiment

- a. SCS Construct and Operation Mode
 - b. Use VOM Meter Measure SCS
 - c. SCS Schmitt Circuit
 - d. SCS Simulate PUT Circuit
- SCS Trigger Circuit Experiment

- a. CDS Trigger
- b. RTH Trigger

(6) UJT & PUT Trigger SCR Experiments

UJT Trigger SCR Shift Control Circuit

- a. Shift Control Basic Circuit
 - b. Shift Control Analysis
 - c. AC Shift Control Circuit Analysis
 - d. UJT Trigger SCR Shift Control Circuit
- PUT Trigger SCR Shift Control Circuit

- a. PUT Trigger SCR Shift Control Circuit

(7) SCR Control DC Motor & DIAC, TRIAC Characteristic Experiments

SCR Control DC Motor Forward/Reverse Experiment

- a. SCR Cut-Off Principle
- b. SCR Control DC Motor Forward/Reverse Control Experiment

DIAC, TRIAC Characteristic Experiment

- a. DIAC Construction and Characteristic
- b. DIAC Operation Mode and Measurement
- c. TRIAC Construction and Characteristic
- d. TRIAC Trigger Mode
- e. TRIAC Static Measurement

(8) Automatic Control Lamp & TRIAC Control Speed Experiments

Automatic Control Lamp Experiment

- a. TRIAC Shift Control
 - b. TRIAC Automatic Control Lamp Experiment
- TRIAC Control Motor Speed Experiment
- a. Different Motor Introduction
 - b. TRIAC Control Motor Speed Experiment

(9) Temperature Ratio & Photo-Couple & Touch Control Experiments

Bridge Temperature Ratio Control Experiment

- a. Component Of Thermal Converter Electronic
- b. SCR Bridge Temperature Ratio Control Experiment

Photo-Couple & Touch Control Experiment

- a. Photo-Couple Control Circuit
- b. FET Construction and Characteristic
- c. Touch Alarm Circuit



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(10) Over /Under Voltage Breaker & Flasher Control Experiment

- Over/Under Voltage Breaker Experiment
- OPA Characteristic and Reverse & Non-reverse Circuit
 - Voltage Comparison Circuit
- Flasher Control Experiment
- Application Of TRIAC Power Control
 - AC Circuit Control
 - Multivibrator

(11) TRIAC Overflow & IC Timer Switch Experiments

- TRIAC Overflow Control Experiment
- Digital Circuit Introduction
 - TRIAC Overflow Control Experiment
- IC Timer Switch Experiment
- NE 555 IC Circuit Introduction
 - IC Timer Switch Experiment

(12) Digital Signal Driver & Zero-Voltage Switch Experiments

- Digital Signal Driver Control Experiment
- Digital Signal Driver Control Experiment
- Zero-Voltage Switch Experiments (1)
- Ideal Half-Wave Zero-Voltage Switch Experiments

(13) Zero-Voltage Switch Experiments

- Zero-Voltage Switch Experiments
- TRIAC Zero-Voltage Switch Experiments
 - IC Mode Zero-Voltage Switch Experiments

(14) SCR Converter Experiment

- Parallel Converter Introduction
- Series Converter Introduction
- Converter Trigger Source
- Converter Voltage Adjust
- Converter Output-Waveform Improvement

(15) Accessories (KL-58002)

- Tank x2
- Short-jumper
- Experiment manual
- One set of 2mm-2mm multilam, stackable test lead
- Power cord
- Storage Cabinet

(16) Option (KL-59003)



Option: Rack Frame (KL-59003)