

M21-1000 SERIES

Features

- .Provide available electrical components and interconnect in different configurations.
- .Acquire the basic knowledge on electrical engineering, installations and electrical measurements.
- .Study the means to check the main laws and principles.
- .Component symbols and electrical diagrams are represented on the front panel.
- .The symbols and electrical diagrams of each component are clearly represented on the front panel.
- .The connections are eased by 4mm terminals and cables of different colors.
- .The power supplies are included with extra low safety voltage.

Specifications

Main installed components:

- General switch, fuse and signaling lamp
- 1 Safety single-phase transformer 115-230V / 6-12-24 VAC-1 A
- 2 Fuse-holder with fuse type 6x30-1A
- 1 Moving iron ammeter with range: 0.5-1A
- 1 Moving iron voltmeter with range: 25 V
- 10 Resistors of different values
(2 Ω , 4 Ω , 8 Ω , 16 Ω , 31.5 Ω , 63 Ω , 250 Ω , 500 Ω , 1000 Ω , 2000 Ω)
- 1 linear rheostat 100 Ω /25W
- 4 Diodes 6A-100V
- 2 Lamp-holder with 24-V signaling lamp
- 1 24-Vac buzzer
- 1 Electrolytic capacitor, 100 μ F25Vdc
- 2 Electrolytic capacitors, 500 μ F25Vdc
- 2 Inductances 60 mH 0.5 A
- 2 Pushbuttons for general use
- 2 Shunters for general use
- 1 Inverter for general use
- 1 Relay, 2 exchange contacts, 24 Vac coil
- 1 Step-by-step relay, 24-Vac coil (M21-1100)
- 1 Set of 25mm cables with 4-mm plug
- Input Voltage: 110~127VAC \pm 10% 60Hz, 220~240 \pm 10% 50Hz
Switchable
- Dimensions: 258 \times 95 \times 334 mm
- Weight: 4.5kg



M21-1000



M21-1100

The main exercises which can be carried out are:

- AC voltage and current measurements
- Diode insertion with different configurations Half-wave rectifier, Full-wave rectifier, Bridge rectifier, Voltage doublers
- DC voltage and current measurements
- Insertion of resistances with different configurations Resistance measurements, Checking the Ohm's law, Series resistors, voltage divider, Parallel resistors, current divider, series and parallel resistors, max. power transfer, Kirchoff's principle, superimposition principle, Thevenin's theorem
- Power measurements DC power measurement, Joule's law, AC power
- Insertion of capacitors with different configurations Charge and discharge of a DC capacitor, series DC capacitors, parallel DC capacitors
- Electromagnetic phenomena Inductance of a coil, coils in series, coils in parallel, Ohmic/inductive/capacitive circuits, RC circuit, RL circuit, series resonant circuit, parallel resonant circuit, Q-factor, coupled circuits, attenuators
- The transformer
- Leveling filters Inductive circuit, capacitive input, LC filter
- Lighting of a lamp with switch
- Lighting of more lamps with switch
- Lighting of a lamp with shunters
- Lighting of a lamp with shunters and inverter
- Lighting of a hotel room
- Lighting of a file room
- Lighting of one or more lamps with relay
- Lighting of one or more lamps with step-by-step relay (M21-1100)
- Acoustic signaling
- Light signaling
- Acoustic/light signaling
- Pulse remote control of a user with relay
- Remote control with self-holding ci