



Solar Power Generation Experiment Box

Equipment Overview

- This trainer is composed of training model and experiment box.
- The training model consists of monocrystalline silicon solar panel and simulative light source. The position of solar panel and the light intensity of simulated light source are both adjustable.
- All units are modular and open type designed, which is clear and convenient to operate.
- The experiment box is made of thickened aluminum alloy frame and epoxy resin board, with high crushing resistance and good insulation characteristic.



Basic Configuration

1. Training module: 15W monocrystalline silicon solar panel (35cm×30cm) and spotlight are adopted so that the experiment can be conducted indoors. The distance between solar panel and light source can be adjusted by aluminum guide rail. The intensity of simulated light source is adjustable, which is convenient for student to test the characteristic of solar panel.
2. Digital display: provided with two transformers (input 220V, output four-way AC9V)
 - (1). Charging ammeter: DC0~2A, power supply AC220V
 - (2). Charging voltmeter: DC0~30V, power supply AC220V
 - (3). DC load ammeter: DC0~5A, power supply AC220V
 - (4). DC load voltmeter: DC0~30V, power supply AC220V
 - (5). Inverter AC ammeter: AC0~1A, power supply AC220V
 - (6). Inverter AC voltmeter: AC0~250V, power supply AC220V
3. Solar power controller (with RS232 to USB communication cable): designed with data acquisition and software monitoring function. LCD system charging/discharging animation display. Maximum working current 64A, overcurrent 65A for 1 minute, short circuit $\geq 180A$ with instantaneous protection, suitable for battery of 12V, 24V, 48V, 72V (plumbic acid/Lithium-ion/Iron-ion storage battery).
4. Dot matrix module: provided with 8 pcs dot matrixes (8*8). Each adopts two 74HC138 as the row scanning driver, two 74H5C95 as column scanning driver. DC5V power supply and 51 microcontroller are adopted as the minimum system.
5. Storage battery: 12V, 7.2AH lead-acid battery
6. Load module: Provided with built-in AC/DC inductive/resistive load.
 - (1). Inductive load: DC12V fan, AC 220V fan
 - (2). Resistive load: DC12V LED lamp, DC12V indicator, AC220V LED lamp, AC220V indicator
 - (3). Universal load: $10\Omega \sim 99.99K\Omega$ variable resistance box
7. Single phase grid off inverter: 100W, single phase sine wave inverter

Technical Parameters

1. Power supply: AC 220V $\pm 10\%$, 50Hz
2. Power consumption: $\leq 500W$
3. Dimensions: 620mm $\times$ 425mm $\times$ 180mm (experiment box)
4. Weight: 15kgs (approx.)

Note :

Due to keeping innovation, the specification and Machine pictures or color are subject to alteration without notice!



Wind Power Generation Experiment Box



Equipment Overview

- This trainer is composed of training model and experiment box.
- The training model consists of horizontal-axis wind generator and simulative wind tunnel. The blast capacity of simulated wind tunnel is adjustable.
- All units are modular and open type designed, which is clear and convenient to operate.
- The experiment box is made of thickened aluminum alloy frame and epoxy resin board, with high crushing resistance and good insulation characteristic.

Basic Configuration

1. Training module: horizontal-axis wind generator and axial flow fan are adopted so that the experiment can be conducted indoors. The blast capacity of simulated wind tunnel is adjustable, which is convenient for student to test the characteristic of wind generator.
2. Digital display: provided with two transformers (input 220V, output four-way AC9V)
 - (1). Charging ammeter: DC0~2A, power supply AC220V
 - (2). Charging voltmeter: DC0~30V, power supply AC220V
 - (3). DC load ammeter: DC0~5A, power supply AC220V
 - (4). DC load voltmeter: DC0~30V, power supply AC220V
 - (5). Inverter AC ammeter: AC0~1A, power supply AC220V
 - (6). Inverter AC voltmeter: AC0~250V, power supply AC220V
3. Wind power controller (with RS232 to USB communication cable): designed with data acquisition and software monitoring function. LCD system charging/discharging animation display. Maximum working current 64A, overcurrent 65A for 1 minute, short circuit $\geq 180A$ with instantaneous protection, suitable for battery of 12V, 24V, 48V, 72V (plumbic acid/Lithium-ion/Iron-ion storage battery).
4. Dot matrix module: provided with 8 pcs dot matrixes (8*8). Each adopts two 74HC138 as the row scanning driver, two 74HC95 as column scanning driver. DC5V power supply and 51 microcontroller are adopted as the minimum system.
5. Storage battery: 12V, 7.2AH lead-acid battery
6. Load module: Provided with built-in AC/DC inductive/resistive load.
 - (1). Inductive load: DC12V fan, AC 220V fan
 - (2). Resistive load: DC12V LED lamp, DC12V indicator, AC220V LED lamp, AC220V indicator
 - (3). Universal load: 10 Ω ~99.99K Ω variable resistance box
7. Single phase grid off inverter: 100W, single phase sine wave inverter

Note :

Due to keeping innovation, the specification and Machine pictures or color are subject to alteration without notice!

Technical Parameters

1. Power supply: AC 220V $\pm$ 10%, 50Hz
2. Power consumption: $\leq$ 500W
3. Dimensions: 620mm $\times$ 425mm $\times$ 180mm (experiment)