

Electrical Machine System

ZT-2238



Functional features

- Comprehensive strong: not only can finish "motor drag" experiments and also can finish single, three-phase transformer experiment, still can expand electrical control Technology experiment.
- Complete strong: the instrument, special power supply, motor and other Experimental unit and the connecting line are complete.
- Motor rail adopt the stainless steel, plate using 20 mm thick steel plate, the motor running noise small, never deformation, to ensure the long-term operation of the Equipment.
- Use the "correction DC dynamometer" measuring prime mover output power.

Technical parameters

- Input power: three phase four wire 380V \pm 10% 50Hz
- Working environment: temperature - 10 \pm 40 relative humidity < 85%
- Installed capacity: < 1.5 KVA
- Weight: 300 kg
- Dimension: 1600 x 750 x 1300 (mm)

Experiment project:

DC motor experiment

- ✚ Recognize experiments
- ✚ DC generator
- ✚ DC shunt motor
- ✚ DC motor start: series resistance start, Reduction voltage start
- ✚ The method of DC motor change veer
- ✚ DC motor speed regulation characteristic experiment: change the armature loop in resistance, excitation circuit in a resistance, to reduce the armature voltage

Single-phase transformer experiment

- ✚ Single-phase transformer variable ratio K
- ✚ Single-phase transformer no-load experiment, acquisition transformer no-load data I_0 , P_0 and U_0 .
- ✚ Single-phase transformer short-circuit experiment, acquisition transformer Short-circuit data U_K , I_K and R_K .
- ✚ Single-phase transformer load experiment, acquisition transformer load data $U_Z = f(I_Z)$.

Three-phase transformer experiment

- ✚ Three-phase transformer winding polarity measurement
- ✚ Three-phase transformer coupling group measurement

Asynchronous motor experiment

- ✚ Three-phase winding asynchronous motor stator resistance test
- ✚ Three phase asynchronous motor no-load experiment: acquisition no-load voltage U_0 , current I_0 , three-phase power P_0 , draw no load characteristic curve
- ✚ Three phase asynchronous motor short circuit experiment: acquisition shorted U_K voltage, current I_K , power P_K , draw short circuit characteristic curve
- ✚ Calculate three phase asynchronous motor parameter
- ✚ Mechanical properties of three phase asynchronous motor in various operation conditions

Basic equipment

- ✚ Experiment table The experiment table desktop is fire prevention, waterproof, wear-resisting high
- ✚ Density board, modeling is beautiful and easy.

Training screen

- ✚ AC power: provide three-phase 0~450V adjustable ac power, at the same time can get single-phase 0~250V adjustable ac power source (equipped with a set of Three-phase gang self-coupling voltage regulator, power 1.5 KVA).Adjustable ac power output place with over-current protection units, when inter phase, space over Current or direct short circuit all can alarm and cut off power supply. Equipped with three pieces of pointer ac voltmeter, through the switch to instruct a three-phase power grid voltage and three phase voltage output voltage, and a light indicator External power input and the work power output.

✚ High voltage dc power supply: provided
220 v (0.5 A) excitation source and 0 ~250 v (2 A) continuous adjustable voltage regulator armature power. And a digital Voltmeter to instruct.

✚ **Timer and alarm recorder:** has the setting time, timing alarm, cut off the power Supply and record various alarm time function.

Measuring instrument

- ✚ Three pieces of dc digital ammeter: range 2000 mA, 0.5 grade
- ✚ Three pieces of dc digital voltmeter: range 300 v, 0.5 grade
- ✚ Three pieces of ac digital ammeter range 3 a, 0.5 grade Three pieces of ac digital voltmeter: range 500 v, 0.5 grade
- ✚ two pieces of power, power factor meter, can measure power and power factor of Circuit. Power measurement accuracy is 1.0 grade, power factor measuring range 0.3-1.0, voltage current range is 450 V and 5 A , 5, two groups of three-phase switch, a group of single phase switch
- ✚ Three-phase adjustable resistor (three groups of $90 \Omega \times 2/1.3 \text{ A}$)
- ✚ Three-phase adjustable resistor (three groups of $900 \Omega \times 2/0.41 \text{ A}$)

Equipment provide

- ✚ Three pieces of single-phase transformer, primary side 220 v / 0.35 A, vice edge 55 V / 1.4 A
- ✚ DC And (he) excitation motor 1 set
- ✚ Correction dc dynamometer 1 set
- ✚ Winding machine ac asynchronous motor 1 set
- ✚ Stainless steel machine guide: light code disc speed system and digital tachometer, stainless steel rail flatness is good, no stress deformation, processing fine, good Concentricity and compatibility, the motor running noise is small.
- ✚ Light box load Safety conductor: using high reliable sheath structure pistol plug connection Method, with soft, pressure high, strength, prevents hardening, good toughness etc.