

# WSM-6

## Electric Machine Experiment Trainer (Module Type)



### Introduction

- This trainer is designed for studying principle of a motor & generator.
- It consists of 11 type electric machine and 1 dynamometer and each experiment modules are provided.
- It is possible to change an electric machine for each experiment.

### Experiment

#### ■ DC Motor

- The construction of DC motor and winding resistance measurement
- Starting method of shunt motor and speed control
- Non-load characteristic experiment of shunt generator
- Load characteristic experiment of the shunt & compound generator
- Load characteristic experiment of shunt, series & compound motor
- Efficiency measurement of shunt motor by loss separation method
- Forward-and-reverse operation method of DC motor

#### ■ Induction Motor

- The construction of three-phase induction motor and winding resistance measurement.
- Direct input starting of three-phase induction motor and 2-nd resistance starting.
- Y- $\Delta$  starting of three-phase induction motor.
- Forward and reverse operation of three-phase induction motor.
- Speed control of pole number alteration motor.
- Non-load experiment of three-phase induction motor.
- Slip measurement of three-phase induction motor.
- Load characteristic experiment of three-phase induction motor.
- Starting of single-phase induction motor.
- Characteristic experiment of single-phase induction motor.
- Operation of universal motor.
- Rotor characteristic of wire wound motor.
- Power factor of three-phase induction motor.

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### ■ Synchronous Motor

- Construction and winding resistance measurement of synchronous motor.
- Non-load experiment of synchronous generator and Short experiment.
- Load experiment of synchronous generator.
- Starting method of synchronous motor.
- Phase and load characteristic experiment of synchronous motor

### Specification

- Main Voltage : 3 Phase 220V / 50/60Hz ( 380V / 415V - Selective )
- Working Table
- Working Frame
  - 3 Step
  - 220 ~ 240V Output Socket
- Module Storage Cabinet : 3EA
- Electric Machine Storage Cabinet : 2EA

### ■ Electric Machine

- WSM6-M1  
3 Phase Squirrel Cage Induction Motor
  - Input Voltage : 3 Phase 220V
  - 360W (1/2Hp)
- WSM6-M3  
3 Phase Wound Induction Motor
  - Input Voltage : 3 Phase 220V
  - 360W (1/2Hp)
- WSM6-M5  
DC Compound Motor (Generator)
  - Input Voltage : DC 200V
  - 360W (1/2Hp)
- WSM6-M2  
3 Phase Pole Change Motor
  - Input Voltage : 3 Phase 220V
  - 360W (1/2Hp)
- WSM6-M4  
3 Phase Synchronous Motor
  - Input Voltage : 3 Phase 220V
  - 360W (1/2Hp)
- WSM6-M6  
DC Shunt Motor (Generator)
  - Input Voltage : DC 200V
  - 360W (1/2Hp)

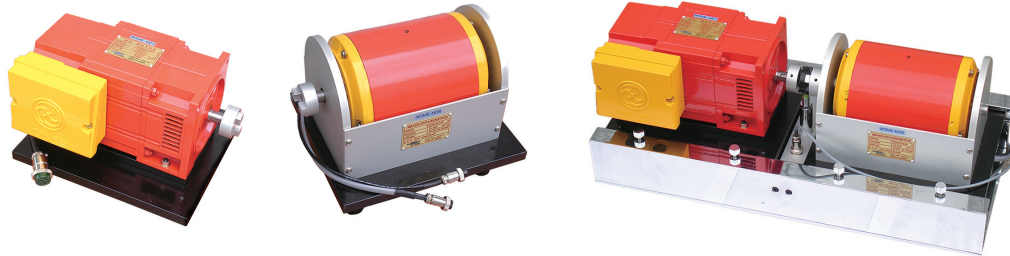


- WSM6-M7  
DC Series Motor (Generator)
  - Input Voltage : DC 200V
  - 360W (1/2Hp)
- WSM6-M9  
1 Phase Condenser Starting Motor
  - Input Voltage : 1 Phase 220V
  - 360W (1/2Hp)
- WSM6-M11  
Universal Motor
  - Input Voltage : AC / DC
- WSM6-M8  
Dynamometer
  - Excitation Voltage : DC 0 ~ 200V
  - Eddy Current Type of Squirrel Cage Motor
- WSM6-M10  
1 Phase Splitting Starting Motor
  - Input Voltage : 1 Phase 220V
  - 360W (1/2Hp)
- WSM6-M12  
Motor & Generator Assemble Frame

\* Product's design and appearance can be changed without any notice.

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## Electric Machine Experiment Trainer (Module Type)



### ■ Experiment Module

- WSM6-01  
DC Low Voltage Module
- WSM6-03  
Field Resistor Module
- WSM6-05  
DC Shunt Generator Field Resistor Module
- WSM6-07  
DC Compound Motor Power Module
- WSM6-09  
Condenser Module
- WSM6-11  
3 Phase Generator Load Module
- WSM6-13  
Synchronous Detection Module
- WSM6-15  
Lamp Load Module
- WSM6-17  
Connection Module A
- WSM6-19  
3 Phase Power Module
- WSM6-21  
3 Phase Induction Motor  
Forward / Reverse Switch Module
- WSM6-23  
Magnetic Connector Module
- WSM6-25  
Push Button Module A
- WSM6-27  
Secondary Resistance Starting Module
- WSM6-02  
Starting Resistor Module
- WSM6-04  
Forward / Reverse Switch Module
- WSM6-06  
DC Series Motor Starting Resistor Module
- WSM6-08  
AC Power Module
- WSM6-10  
Time Relay Module
- WSM6-12  
DC Generator Load Module
- WSM6-14  
Speed & Torque Meter Module
- WSM6-16  
Synchronous Excitation Power Module
- WSM6-18  
Connection Module B
- WSM-20  
Y- $\Delta$  Starting Switch Module
- WSM6-22  
Over Load Breaker Switch Module
- WSM6-24  
Over Load Relay Module
- WSM6-26  
Push Button Module B
- WSM6-28  
Pole Change Switch Module

01

02

03

04

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## Electric Machine Experiment Trainer (Module Type)

### ■ Electric Machine Connection Module

- WSM6-31  
DC Shunt Motor Connection Module
  - WSM6-33  
DC Series Motor Connection Module
  - WSM6-35  
DC Compound Generator Connection Module
  - WSM6-37  
1 Phase Condenser Starting Motor
  
  - WSM6-39  
3 Phase Wound Rotor Induction Motor Connection Module
  - WSM6-41  
Universal Motor Connection Motor
  
  - WSM6-43  
3 Phase Synchronous Motor Connection Module
- WSM6-32  
DC Shunt Generator Connection Module
  - WSM6-34  
DC Compound Motor Connection Module
  - WSM6-36  
1 Phase Splitting Starting Motor Connection Module
  - WSM6-38  
3 Phase Squirrel Cage Induction Motor Connection Module
  - WSM6-40  
3 Phase Pole Change Motor Connection Module
  
  - WSM6-42  
3 Phase Synchronous Generator Connection Module

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### Accessory

- Experiment Manual : 1 Copy
- Power Cable : 1 Unit
- Motor & Module Cabinet : 1Set
- Test Lead (Banana Plug) : 1 Set
- Dust Cover : 1 Set

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### Option

- AC Ampere Meter Module : 1EA
- DC Ampere Meter Module : 1EA
- AC Volt Meter Module : 1EA
- DC Volt Meter Module : 1EA
- Analog Frequency Meter & DC Volt Meter : 1EA
  - 45 ~ 65Hz & mV
- 3 Phase Digital Watt Meter : 1EA
  - Voltage / Current / Power / Power Factor

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