

model: **Electrical Assembly-GTBD1300**

Electrical Assembly Training Equipment

1. Features

- 1) Motor test of stator 24 slot or 36 slot is possible.
- 2) The motor is manufactured in a structure that allows the front and rear of the housing to be opened to check the configuration and operation of the internal circuit.
- 3) Motor structure training equipment should be made in profile form and each display meter is supplied as panel type module.
- 4) Stator eccentricity is separated and stator disassembly and assembly are possible.
- 5) The voltage and current of each phase and the motor rotation speed can be monitored through the instrument.
- 6) Made of structure that can measure resistance of each phase easily.
- 7) Built in protection function against overcurrent and overvoltage considering that each module is educational equipment.
- 8) It should be possible to disassemble and assemble the motor and specially manufactured to easily understand the inside of the motor.

2. System configuration



2. Technical specifications

1) Worktable Structure

- (1) Size: 700 (W) * 460 (D)
- (2) Material: Aluminum
- (3) Aluminum profile: 30 * 30mm, hole spacing 25mm
- (4) Structure: Aluminum Profile
- (5) Electricity: 1x / 220V / 60Hz
- (6) Handle: 2EA
- (7) Rubber Feet: 20m (4EA)
- (8) Each module can be mounted on the profile with one touch base fixing method

2) Motor fixture

- (1) Combined stator 24 and 36 slots in one machine
- (2) Stator fixed block (fixed block 3EA / RPM measuring block 1EA): 4EA
- (3) Rotor fixing block: 4EA
- (4) Y / box: U1 safety terminal (2EA) / V1 safety terminal (2EA) / W1 safety terminal (2EA)
- (5) Bearing (2EA): Inner diameter: 12 / Outer diameter: 32
- (6) Photosensor: NPN / 100mm / 12V - 24V
- (7) Bottom: Structure and bearing that can be fixed to aluminum profile
- (8) Top plate: Bearing mounting hole and top handle (2EA)
- (9) Top plate size: 160 (W) * 160 (D) * 15 (H) mm
- (10) Bottom plate size: 330 (W) * 220 (D) * 15 (H) mm
- (11) Material: Aluminum
- (12) Post Treatment: Anodizing / Sending

3) 3 Induction Motor

- (1) General specification
 - Size: 139 / 161mm
 - Number of poles: 4 poles
- (2) Induction Motor Stator
 - Y / wiring practice available
 - Slot: 24 or 36 optional
 - Eccentricity: 40 (H) mm / 40EA
 - Stator Size
- (3) Rotor
 - Difference between stator and rotor voids: 3mm
 - Slots: $360^\circ / 34 \text{ units} = 10.588^\circ$
 - Eccentricity: Outer diameter (67), Inner diameter (15), 50 (H) mm
 - Shaft: 15 / 12 (bearing) / 161 (H) mm
 - rotor size

4) Voltage meter module

- (1) Power input terminal: 2EA
- (2) Measurement module terminal: 2EA
- (3) Voltage meter
 - Maximum allowable input: Max. AC400VAC
 - Maximum display range: Max. 1999
 - Measuring function: AC voltage
 - Power supply voltage: 110 / 220VAC 50Hz
 - Allowable voltage fluctuation range: 90% - 110% of power voltage
 - Power Consumption: 4VA
 - Display method: 7Segment LED Display (character height: 14mm)

5) Ammeter module

- (1) Power input terminal: 2EA
- (2) Measurement module terminal: 2EA
- (3) Current meter:
 - Maximum allowable input: Max. AC5A
 - Maximum display range: Max. 1999
 - Measuring function: AC current
 - Power supply voltage: 110 / 220VAC 50Hz
 - Allowable voltage fluctuation range: 90% - 110% of power voltage
 - Power Consumption: 4VA
 - Display method: 7Segment LED Display (character height: 14mm)

6) RPM meta module

- (1)†Power input terminal: 2EA
- (2)†Measurement module terminal: Round terminal (12 / 4P)
- (3) Pulse meter
 - Display method: 7 Segment LED (Zero Blanking)
 - Character Size: W4 * H8mm
 - Display range: -19999 - 99999
 - Power supply voltage: 100 - 240VAC 50Hz
 - Power consumption: Below 10.0VA
 - Sensor power supply: 12VDC \pm 10%, 80mA
 - Auxiliary Supply Power: 24VDC 30mA
 - Measuring range: 0.0005Hz - 50KHz

7) 3 phase inverter module

- (1) General specification
 - Toggle Switch: 3 steps 3P (1EA), 2 steps 2P (6EA)
 - Terminal: 4 (9EA), Safety Terminal 4 (5EA)
 - Variable resistance: 5K / 16 (1 / 2W)
 - Communication port: RS485
- (2)†Input
 - Voltage: 1 , 220 - 230V, 50Hz
 - Current: 1.82A
- (3)†Output
 - Voltage: 3 , 220V, 0 - 60Hz
 - Output: 0.4KW

8) NFB Module - 1EA

- (1) Rating: 1 , AC220V 15A