



SPLIT TYPE AIR CONDITIONER TRAINING SYSTEM DL TMAC10



Air Conditioner Training System developed to demonstrate the operation and working principle of split air conditioners. Students will be able to follow the refrigeration cycle, explore the layout and functions of all main components and perform maintenance and troubleshooting exercises.

The didactic system is fully operable and contains all the basic components of a split air conditioner. The components are exposed and mounted on a vertical frame. The students control and monitor the experiments procedure using instruments and transparent observation points.

MAIN CHARACTERISTICS

- This air conditioner is based on a real inverter split-type unit with heat pump function.
- The functions available with the system are refrigeration, heating, ventilation, dehumidification, temperature and wind speed selection, timing, sleep.
- It includes electric control unit, air conditioning unit, measuring instruments unit, power supply units and fault introduction system.
- It shows the inner components layout and refrigerating cycle system structure.
- It includes AC voltmeter, AC ammeter, thermometer, vacuum pressure gauge, pilot lamps and real-time LED status. The main control board is covered with a transparent board for observation; schematic diagram of control system and relative test points; sight glass in the pipeline is used to refrigerant status observation; HV pipeline is marked with red, while LV pipeline with blue, relative components are all labeled.
- It includes a connection area for electrical control circuit of outdoor unit for students' hands-on ability training.
- It includes fault introduction system.



DIDACTIC EXPERIENCE

With this trainer is possible follow the experiments below:

- Transformer primary coil fault,
- Transformer secondary coil fault,
- Rectifier bridge fault,
- Three-terminal voltage regulator fault,
- Winding of step motor - Indoor faults,
- Buzzer Faults,
- Auxiliary Heating Faults,
- Four-way Valve Faults,
- Compressor faults,
- Outdoor Fan Faults,
- Open Circuit Fault of Outdoor Ambient Sensor,
- Fan motor-Indoor fault,
- Infrared receiving circuit fault,
- Indicator light fault,
- Temperature sensor X105 fault,
- Open Circuit Fault of Outdoor- Piping Coil Temperature Sensor.

TECHNICAL SPECIFICATIONS:

- Refrigerating system:
 - Indoor unit: Evaporator, indoor fan, indoor fan motor, Wind direction guide board, indoor wind direction step motor, room temperature sensor.
 - Outdoor unit: condenser, outdoor fan, outdoor fan motor, compressor, four-way valve, capillary tube, filter, dryer.
- Electrical control system:
 - Instruments: AC voltmeter, AC ammeter, Pressure gauge x2, thermometer x4.
- Film with schematic diagram and test points.
- Fault system: 34 faults could be set and simulated.
- Two manual valves could simulate ice block faults.
- Power supply: Single phase by the mains.
- Dimensions: approx. 1060 mm, 800 mm, 1940mm(L*W*H).
- Weight: approx. 70kg.
- Complete with all accessories needed.

The system is supplied with data acquisition software.

