



ZM6127 Domestic Air Conditioning Trainer with Inverter

Note :

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



I Introduction

This trainer has been designed specifically for educational aims so that students can delve into the hydraulic, mechanical and thermodynamic aspects characterizing split-type air – conditioning system equipped with inverter. Moreover, it shows how energy can be saved considerably by the modulation of compressor rpm. It also includes manual fault setting. Supply software which can monitor voltage, current, frequency, power, power factor, pressure, flow, etc., they can be displayed on PC in real time, and can print report.

II Training Program

Plant starting and safety devices intervention checking
Studying the operation of a split-type air conditioner inverter
Operation in cooling, Dehumidification and Heating modes
On/off control: analysis of the variations of compressor r.p.m versus the thermal jump between set and detected temperatures
Examining the system behaviour versus the variations of:
- Operating mode
- Evaporator flow rate
- Set-point temperature
Plotting the refrigeration cycle on refrigerant pressure-enthalpy diagram
Data acquisition and calculation of:
Heat balances corresponding to evaporator, condenser, compressor
Refrigerant mass flow
Volumetric compressor efficiency
Heat balances on air side

Supplied with:

English general air- conditioning manual
English experimental handbook