



Email : sales@laboratoryinstrumentindia.com

**Product Name :**  
Domestic Air Conditioning And Training Plant With Inverter

**Product Code :**  
LBNY-0005-14100033



#### **Description :**

The demonstrates how energy can be saved by regulating compressor rpm and fault simulation switches allow students to diagnose.

A Domestic Air Conditioning Training Unit with Inverter for investigating the hydraulic, mechanical and thermodynamic operation of a split-type air conditioning system equipped with an inverter.

The has been designed and manufactured for safe operation in the laboratory environment and the refrigerant used is a which complies with current legislation.

Students investigate the refrigeration system, mechanical operation and thermodynamic cycles of a split-type air conditioning system with an inverter and understand how changes at different parts of the system affect efficiency.

#### **Technical Specification :**

##### **Experiments:**

Studying the operation of a split-type air conditioner with an inverter

Studying the operation of cooling, de-humidification and heating cycles

ON-OFF control

System start-up and system monitoring using the protection and safety devices incorporated into the pilot plant

Analysis of system behaviour with varying:

Set point temperature

Evaporator flow rate

Operating mode

Plotting the cycle on a refrigerant pressure-enthalpy diagram

Analysis of compressor speed variation against the temperature difference between set and detected

---

temperatures

Obtaining data readings and calculation of:

Ideal and actual Energy Efficiency Ratio (E.E.R.)

Ideal and actual coefficient of performance (C.O.P.)

Volumetric compression efficiency

Heat balances for the evaporator, condenser and compressor

Refrigerant mass flow.



**Laboratory Instrument India**