

# ESD-V-BNSD Technical Information

## Air Conditioner for ElectricBus



| Model:                                                 |                                                                                                                                                                                                                                                        | ESD-V-BNSD                               |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| Cooling Capacity                                       | Standard                                                                                                                                                                                                                                               | 20~32 kW (Variable frequency adjustable) |
| Compressor                                             |                                                                                                                                                                                                                                                        | HIGHLY DC250-750V (Adjustable)           |
| Recommended Bus Length (Applicable to China's climate) |                                                                                                                                                                                                                                                        | 9.5-10.4m                                |
| Air Flow Volume(Zero Pressure)                         | Condenser (Fan Quantity)                                                                                                                                                                                                                               | 8000 m3/h (4)                            |
|                                                        | Evaporator (Blower Quantity)                                                                                                                                                                                                                           | 5400 m3 /h (6)                           |
|                                                        | Fresh air                                                                                                                                                                                                                                              | 1800 m3 /h                               |
| Roof Unit                                              | Dimension                                                                                                                                                                                                                                              | 3170(L)×2000(W) ×278(H)mm                |
|                                                        | Weight                                                                                                                                                                                                                                                 | 290kg                                    |
| Cooling Power Consumption                              | Cooling /Heat pump/ PTC                                                                                                                                                                                                                                | 8kw / 7.5kw / 16kw                       |
| Refrigerant                                            | Type                                                                                                                                                                                                                                                   | R407C                                    |
| Optional                                               |                                                                                                                                                                                                                                                        |                                          |
| BTMS                                                   | charging                                                                                                                                                                                                                                               | ≤10kw(outlet water 7℃-15℃)               |
|                                                        | discharging                                                                                                                                                                                                                                            | 1~3.5kw(outlet water 10℃-20℃)            |
| Cloud Control (Optional)                               | Remote control check failure,<br>Improve product services through big data applications                                                                                                                                                                |                                          |
| Air purification function<br>(Optional)                | Contains four major functions: electrostatic dust collection, ultraviolet light, ion generator, and photocatalyst filtering, to achieve sterilization, deodorization and efficient dust removal, and effectively block the virus transmission pathway; |                                          |



Expansion Valve



Compressor



Condenser Fan



Control Panel



Evaporator Blower



Air Return Grille

## 1. Evaporator Blower and Condenser Fan

EBM brand, the key components (like bearing and carbon brush) adopt famous brands, high air volume, low noise, high efficiency.

## 2. Evaporator and Condenser Core

SONGZ brand, adopt small diameter ( $\varnothing 7\text{mm}$ ) and inner grooved copper tube, comparing to  $\varnothing 9\text{mm}$  copper tube, the coefficient of heat transfer is improved by 5%, condensing temperature declines  $2\sim 3^{\circ}\text{C}$ , system COP rises 5~8%, refrigerant filling declines 10%.

## 3. Expansion Valve

Famous brand, high reliability, high adjustment accuracy and excellent performance.

## 4. Compressor

HIGHLY brand, hermetically sealed electric compressor, high efficiency, steady quality.

## 5. Control Panel

Digital display, intelligent temperature control, waterproof design and fault indication.

## 6. Air Return Grille

Adopt aluminum alloy, strong and durable, elegant appearance, various colors for selection.

## 7. Framework and Shell

The framework adopt high strength fiber glass. The roof unit has compact structure, elegant appearance, streamline design, small wind resistance.

## 8. Product EMC meets GB / T 18655 level 3 requirements.

The system adopts independent intellectual property rights insulation design, which is safe and reliable.