

Package Air conditioner controllers

PS-AX-XXX



The PS-A3-116 series electronic controllers are designed for package/ductable air-conditioning AHU systems, chillers etc. It is functional between 90 to 285 Volts power supply with 1 to 6 compressors and a single blower. We have models for DOL, Star-Delta, variable fan speed & Standby for a single blower motor/ pump (operable from with and without VFD). It also ensures safe operations with error interlock protections for SPP, blower protection, and HP/LP. Features such as loading/unloading of compressors, based on cooling demand, help to optimize energy consumption and reduce operational costs without compromising user convenience. Additional features include an intelligent gas equalization time delay, status display, and the. Fig.3 helps in selecting the right controller with or without an electrical control panel.

1. PRODUCT HIGHLIGHT

- **Wide Operating Voltage Range:** Operating voltage in between 90 to 285 V AC/DC, ensures reliable operating under varying power supply conditions.
- **Multi-Mode Operation:** Supports Cooling, Fan modes as per the requirement.
- **Compressor & Blower Control:** Supports AHU operation up to six compressors with a single blower.
- **Intelligent Gas Time Equalization:** Optimized algorithm & logic for compressors during switching **ON & OFF**, loading & unloading, for individual compressor delays to minimize power line transients.
- **Blower Motor Control Flexibility:** options for Direct-On-Line(DOL), VFD, Star-Delta & Standby control operation
- **Temperature Control:** precise operation of compressors with set-point and cooling range selection for loading/unloading to save Energy and operational cost.
- **Advanced Protections:** Includes high/low-pressure (HP/LP) protection, blower failure and intelligent gas equalization.



Fig1. Figures of Package Air conditioner

- **Display & Indications:** Two-digit display and LED indicators show set/real temperature, modes, etc.
- **Additional Switches:** Added two more switches for show the status of compressors and health of compressors, blower & single phase protection.
- **Uniform wear and tear** of compressors with Run Hour Equalization algorithm.

2. UNIQUE FEATURES

- Shuffling Of Compressors:** This feature allows compressors to be shuffled at predefined intervals (1 to 24 hours), ensuring uniform wear and tear based on our built-in algorithm. The function can be disabled if desired.
- Cooling range:** The cooling range controls compressor ON/OFF operation to match load and reduce energy and operational costs. It can be set from 0 to 6°C, offsetting the set point above the base temperature range of 16 to 30°C.
- Status & Error checking Switches:** Two buttons are provided to check compressor status and system errors. The **Status** button displays which compressors are currently active. The **Error Scan** button performs a diagnostic scan and shows faults in Compressors (C1–C6), Blower Fan (BF), and Single Phase Protection (PF).

3. APPLICATION

The system is suitable for a wide range of applications, like:

- Convention centres
- Airports, railway stations
- Operation theatre in Hospitals
- Telecom exchanges
- Machining centres & server rooms
- Various industrial application.

4. ELECTRICAL SPECIFICATIONS

Input Voltage (V AC)		Frequency (Hz)		Power consumption	Compressor relay rating	Fan relay rating	Potential free relay	Mechanical dimensions (mm)					
								Power Box			Display box		
Min	Max	Min	Max	max	Steady state	Steady state	Steady state	L	B	H	L	B	H
90	285	45	55	6 VA	7A, 250V AC	7A, 250V AC	5A, 250V AC	255	130	85	120	120	15

Table 1. Electrical specifications

5. PRODUCT SELECTION CHART

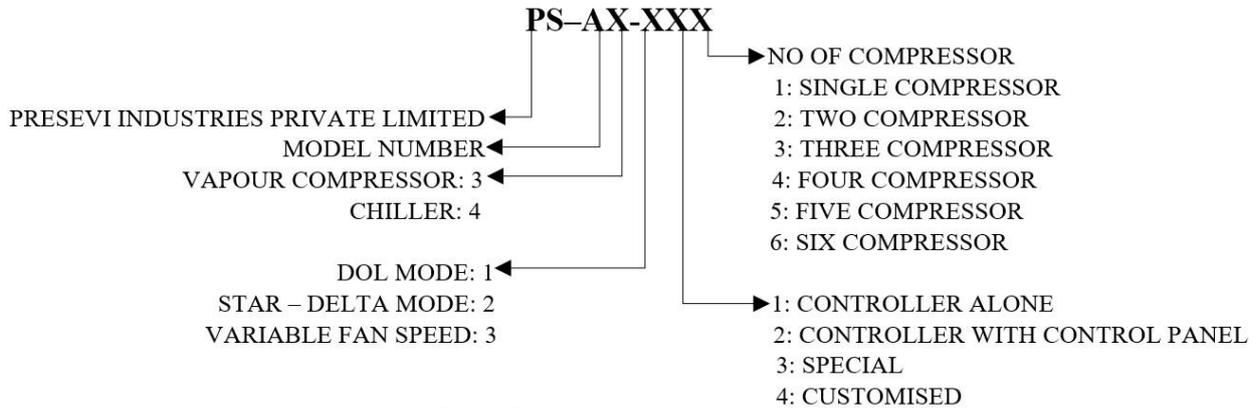


Fig 2. Product selection chart

6. ELECTRICAL CONNECTION DIAGRAM

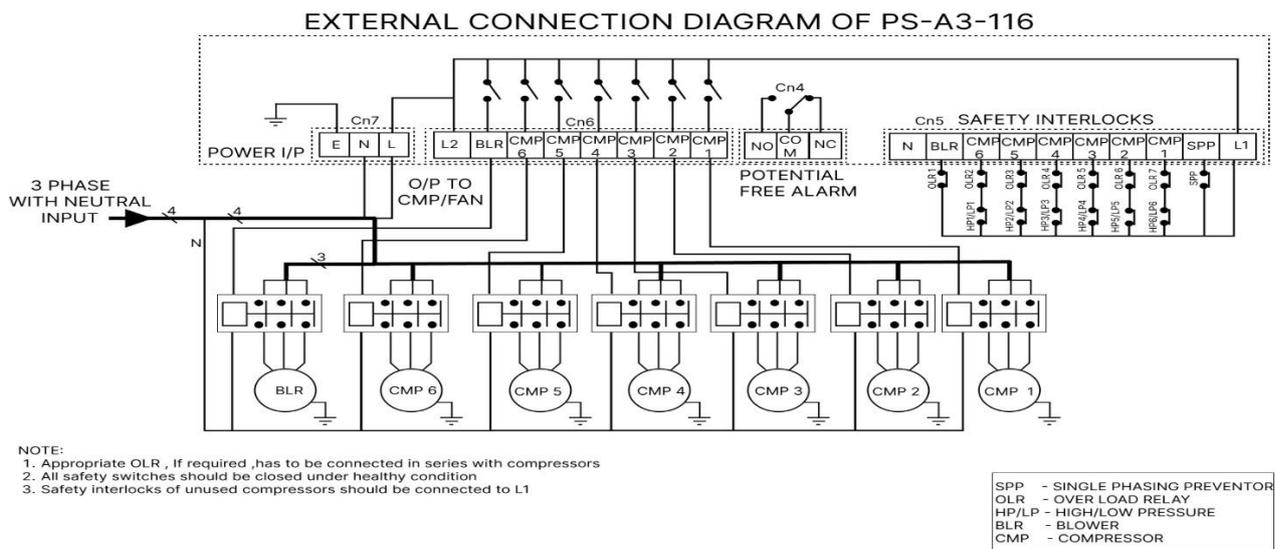


Fig 3. Connection diagram of Package Air conditioner (6 comp model)

Presevi Industries Pvt. Ltd., Chennai, India—established in 1985—is an Original Design Manufacturer (ODM) with a DSIR-recognized R&D division and two manufacturing facilities. The company specializes in designing, developing, and manufacturing highly reliable electronic controllers for the appliance industry, including air conditioning, refrigeration, and washing machines. Presevi Industries serves diverse sectors such as energy, hospitality, agriculture, space and atomic research, railways, and more. With 38 years of cumulative knowledge and expertise in power electronics, instrumentation, and mechatronics-based system design, the company considers reliability factors like FMECA, FTA, MTTR, and MTBF from the very first phase of product design. Over the years, the firm has successfully completed numerous innovative, research-based product developments in mechatronics, power electronics, embedded controller development, instrumentation, and networking. These products have been delivered to esteemed clients such as Indian Railways, ISRO, IGCAR, BSNL, IIT, and others.

#16, Pillaiyar Koil Street, Kanagam, Taramani (PO), Chennai-600 113, INDIA.

Website:- www.presevi.in ✉ admin@presevi.in, marketing@presevi.in

☎ +91 44 2254 2354 📞 +91 9444412563, +91 9382150289

AN ISO certified company with DSIR certified R&D