

PRE-START ALARM

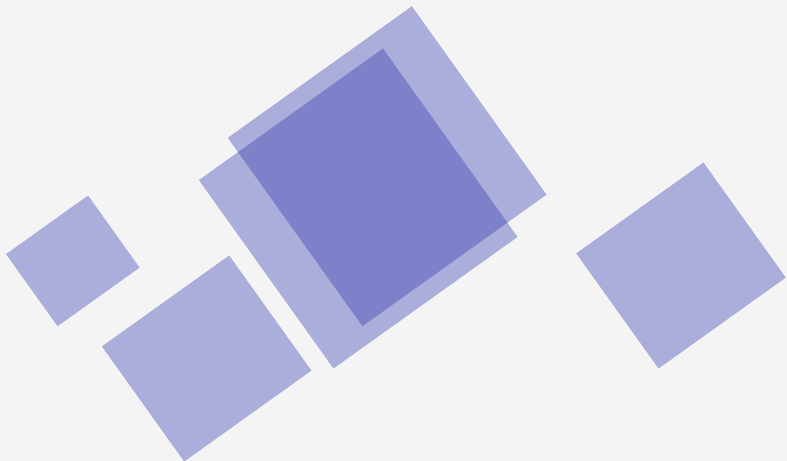
USER MANUAL



Model NO:UEE-PSA5687

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Introduction :



**PRE-START ALARM
CONTROLLER**

The Pre-Start Alarm System is a vital safety device designed to protect workers by providing an audible warning before a conveyor belt begins operation. This system is connected to a 230V AC power supply and automatically activates when the start switch is turned ON.

Once activated, the system triggers a 30-second audio alarm through a high-power 30W speaker, delivering a clear warning message in Hindi to alert workers to stay away from the conveyor belt. This ensures ample time for personnel to vacate the area, reducing the risk of accidents or injuries.

After the 30-second duration, the alarm automatically turns OFF, marking the end of the warning period. Designed for simplicity and reliability, this system is ideal for industrial environments where worker safety is a priority.

Safety Information



Electrical Safety: Ensure the system is connected to a stable 230V AC power supply. Use proper insulation and grounding to prevent electric shocks or short circuits.

Installation Precaution: Only qualified personnel should install and service the system. Always disconnect the power supply before performing any maintenance.

Speaker Placement: Position the 30W speaker in a secure location, ensuring it is audible across the workspace without causing discomfort or prolonged exposure to high noise levels.

Cable Management: Secure all cables and wires away from moving parts of the conveyor belt to prevent damage or accidental disconnection.

Environment Considerations: Install the system in a dry, dust-free environment to ensure optimal performance and avoid damage to electrical components.

System Testing: Regularly test the alarm system to verify that the audio warning and power connections function correctly, ensuring worker safety at all times.

Installation Guide

Mounting the Controller

Select a location close to the conveyor belt's control panel for easy access and wiring. Use screws or a mounting bracket to securely fix the controller on a flat, stable surface. Ensure the controller is protected from dust, moisture, and vibrations to avoid damage.

Connecting the AC Adaptor

Connect the AC adaptor to a standard 230V AC power outlet. Plug the output end of the adaptor into the designated power input port on the controller. Verify that the connection is firm and that the power supply is stable. Turn the adaptor ON and confirm the controller powers up (indicated by an LED or similar signal, if available).

Positioning the Speaker

Choose a location where the alarm sound can cover the entire workspace effectively. Mount the 30W speaker securely using brackets or screws to avoid vibrations or movement. Ensure the speaker is not obstructed and is placed away from direct exposure to dust or water. Route the speaker cable to the controller, ensuring the connections are secure and properly insulated.

Securing Cables

Organize all cables and wires to prevent tangling or interference with moving parts. Use cable ties or conduits to secure wires along walls or non-moving components. Keep cables away from high-heat areas or sharp edges to avoid damage. Double-check all connections to ensure proper functionality before powering on the system.

Features:

- 230V AC Operation:** Easily connects to standard power supplies for seamless integration into industrial setups.
- 30-Second Pre-Start Warning:** Audible alert provides workers with adequate time to move away from the conveyor belt before it starts.
- Hindi Audio Alert:** Delivers a clear warning message in Hindi, ensuring comprehension in the local language.
- High-Power Speaker:** Equipped with a 30W speaker for loud and clear audio coverage across the workspace.
- Automatic Shutoff:** The alarm automatically turns OFF after 30 seconds, ensuring operational efficiency.
- Compact Controller Design:** The controller is designed for easy installation and maintenance.
- Robust Construction:** Built with durable materials to withstand industrial environments, including dust, vibration, and temperature variations.
- Cable Management Support:** Secure wiring options ensure safety and organized installation.
- Energy Efficient:** Low power consumption ensures cost-effective operation without compromising performance.
- Worker Safety Compliance:** Meets industrial safety standards to enhance workplace safety protocols.
- Ease of Installation:** Simple setup with clear instructions for mounting the controller, connecting the adaptor, and positioning the speaker.

Power Harness Specifications:

- Input Voltage:** 230V AC, 50Hz.
- Adaptor Power Rating:** Suitable for powering the controller and the 30W speaker efficiently.
- Cable Specifications:**
 - Controller Power Cable:** 2-core, 1.5mm² cross-section, insulated.
 - Speaker Cable:** 2-core, 1.5mm² or higher for high-power audio transmission.
- Connector Type:**
 - Standard DC barrel connector for adaptor-to-controller connection.
 - Secure terminals for speaker connections.
- Power Consumption:** Approximately 35W during operation (controller + speaker).

Positioning :



POWER SUPPLY ADAPTOR

Controller Positioning

Mount the controller in a secure and easily accessible location, preferably near the conveyor belt's control panel. Ensure the mounting surface is flat and stable to prevent vibrations or accidental movement. Keep the controller at a safe distance from direct exposure to heat, dust, and moisture to enhance durability. Allow sufficient clearance around the controller for ventilation and easy access during maintenance.

Speaker Positioning

Install the 30W speaker in a location where the sound can effectively cover the entire workspace. Mount the speaker at an elevated position or directed toward the primary working area for better sound distribution. Ensure the speaker is securely fixed to prevent movement or vibrations during operation. Avoid placing the speaker near sensitive equipment or areas where high-volume noise may cause discomfort.

Cable Routing

Use cable conduits or trays to neatly route wires and prevent tangling or accidental disconnection. Keep all cables away from moving parts of the conveyor belt to avoid damage. Secure cables using cable ties or clamps at regular intervals to maintain organization. Avoid running power cables parallel to signal cables to reduce electromagnetic interference. Ensure all cable connections are properly insulated and firmly connected to prevent electrical hazards.

Controller Specifications:

1. Input Voltage: powered via AC adaptor from 230V AC input.
 2. Output Signal:
 - Speaker audio output: 30W capacity.
 - Timed control output for speaker (30-second duration).
 3. Control Features:
 - ON/OFF switch for system activation.
 - Pre-programmed 30-second timer for the audio alarm.
 4. Indicator: LED status indicator for power ON/OFF.
 5. Connectivity:
 - Input: DC barrel connector for power.
 - Output: Secure screw terminals for speaker connection.
 6. Operating Temperature: -10°C to 50°C.
 7. Enclosure:
 - Material: High-durability ABS or metal.
 - Protection: IP54-rated for dust and moisture resistance.
 8. Mounting: Wall-mountable with pre-drilled holes for easy installation.
 9. Weight: Approx. 500 g.
- This controller is designed for reliable operation in industrial environments, ensuring safety and ease of use.

Troubleshooting :

1. System Does Not Power On

- Possible Cause: Faulty AC adaptor or loose power connection.
- Solution:
 - Check the power outlet and verify the AC adaptor is securely connected.
 - Test the AC adaptor with a multimeter to confirm it outputs 24V DC.
 - Inspect the controller's power input for damage or loose connections.

2. No Sound from the Speaker

- Possible Cause: Speaker connection is loose or damaged.
- Solution:
 - Ensure the speaker is securely connected to the controller.
 - Check the speaker cable for damage or disconnection.
 - Verify the controller's output signal to the speaker using a multimeter.

3. Audio Alarm Does Not Turn Off After 30 Seconds

- Possible Cause: Timer circuit malfunction.
- Solution:
 - Reset the system by turning it OFF and ON again.
 - Inspect the controller's timer module for faults or errors.
 - Consult technical support if the issue persists.

4. Weak or Distorted Sound from the Speaker

- Possible Cause: Power supply issue or damaged speaker.
- Solution:
 - Check that the AC adaptor is supplying the correct voltage.
 - Test the speaker with another audio source to rule out speaker damage.
 - Inspect the speaker cable for proper connections and any damage.

5. Speaker Produces Continuous Sound

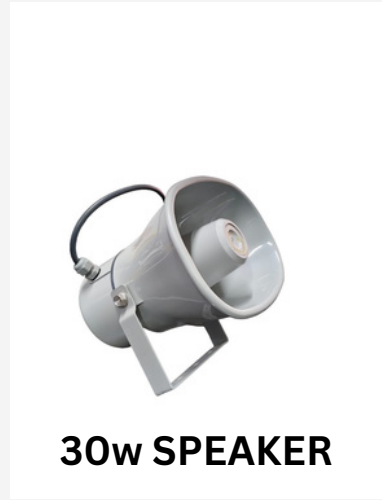
- Possible Cause: Faulty controller or short circuit in the wiring.
- Solution:
 - Disconnect the speaker and inspect the controller's output signal.
 - Check for any short circuits or miswiring in the system.
 - Replace or repair the controller if the fault is internal.

6. LED Indicator on Controller Does Not Light Up

- Possible Cause: Faulty LED or no power to the controller.
- Solution:
 - Confirm the power supply is functional.
 - Inspect the LED connections or replace the LED if necessary.

Maintenance Tip

- Periodically inspect all cables, connections, and components to ensure optimal functionality. Regular testing of the system can help identify issues early.



Warranty:

- Controller and Speaker: 1-year warranty from the date of purchase.
- AC Adaptor: 6-month warranty from the date of purchase.
- Exclusions: Damage from misuse, improper installation, normal wear and tear, or short circuits.
- Claims: Contact customer support with proof of purchase for repair or replacement.



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CONNECTION DIAGRAM:

Wire Color Coding:

1. Green & Black: Beacon light (Green = +, Black = -).
2. 2 Yellow Wires: Ignition line.
3. 2-Core Black cable: Speaker (Positive and Negative terminals).
4. Black Power Cable: From adaptor to controller.

CONTROLLER

