

Ventilation holes for outdoor distribution boxes



Article Overview

Properly designed ventilation holes allow outdoor distribution boxes to release heat, prevent condensation, and maintain airflow while protecting against dust and insects.

Purpose of Ventilation Holes

Ventilation holes in outdoor distribution boxes are essential for passive airflow, allowing hot air to escape and cooler air to enter naturally, which helps prevent overheating of electrical components. They also help equalize internal pressure and reduce condensation that can damage sensitive electronics or wiring inside the enclosure .

Design Considerations

- **Placement:** Typically, vents are placed on the upper side of the enclosure to allow hot air to rise and exit, while lower vents allow cooler air to enter .
- **Size and Cross-Section:** The total vent area should be calculated to prevent overpressure inside the box. For example, a 33-liter enclosure may require venting designed to limit overpressure to 20 mBar .
- **Shape:** Louvered openings or perforated panels are common, providing airflow while minimizing direct exposure to rain or debris .

Materials and Protection...

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28 Venting Holes

28.1 Introduction To avoid over-pressurising in a box, venting holes must be applied. In this chapter a method is presented to

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