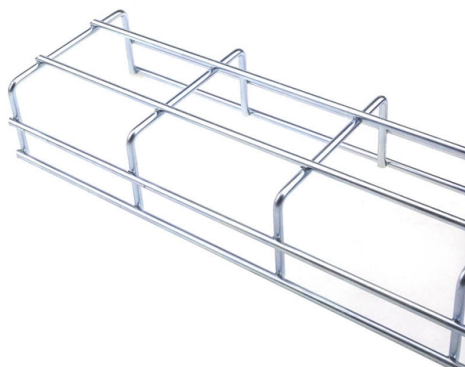


How are outdoor lighting distribution boxes classified



Overview

Outdoor lighting junction box requirements sit between general electrical code and real outdoor lighting conditions.

Key Takeaways

Outdoor lighting distribution boxes are classified based on their function, enclosure type, IP rating, and application in electrical distribution for outdoor lighting systems.

Functional Classification

Outdoor distribution boxes serve as connection and branching points for electrical circuits powering outdoor lighting, such as streetlights, floodlights, and sports field lighting. They are designed to protect electrical connections from environmental factors like rain, dust, and temperature extremes while providing safe access for maintenance ().

Common Functional Types

- **Junction Boxes:** Enclosures where multiple wires meet and connect, often used to split circuits or connect lighting fixtures to the main power supply ().
- **Splice Boxes:** Specifically designed for splicing wires together, ensuring secure and insulated connections.
- **Pull Boxes:** Larger boxes that allow pulling and routing of cables over long distances, often used in underground or high-mast lighting systems.

Design and Construction Classification

Outdoor distribution boxes are also classified by construction features:

- **Weatherproof Enclosures:** Rated for outdoor use, typically with IP66 or higher, ensuring protection against water and dust ingress ().
- **Material:** Commonly made from metal or high-strength plastic, resistant to corrosion and UV exposure.
- **Mounting Type:** Can be pole-mounted, wall-mounted, or ground-mounted, depending on the lighting system design.

Electrical Capacity Classification

Distribution boxes are rated by their maximum power handling capacity, which determines the number and type of lighting fixtures they can support. For example, some outdoor boxes can handle up to 6000W, suitable for high-mast or sports lighting systems ().

Standards and Codes

Outdoor distribution boxes must comply with National Electrical Code (NEC) requirements, including proper sizing (NEC 314), grounding, and accessibility for maintenance (). They are also designed to meet safety standards for outdoor electrical installations.

Summary

In essence, outdoor lighting distribution boxes are classified according to:

- **Function:** Junction, splice, or pull box.
- **Enclosure Type:** Weatherproof, IP-rated, material construction.
- **Electrical Capacity:** Maximum wattage or current rating.
- **Mounting and Application:** Pole, wall, or ground installation for specific lighting systems. Understanding these classifications helps in selecting the right distribution box for safe, efficient, and code-compliant outdoor lighting installations.

Article Content

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This specification guide provides system designers, electrical engineers, and procurement

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Choosing the right light distribution is critical to having good lighting. This article will help you

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

