

Article Overview

IP55 sealing ensures a fiber distribution box is protected against dust ingress and water jets, and can be verified through both standard and practical field tests.

Understanding IP55 Rating

An IP55 rating indicates that the enclosure provides:

- o Dust protection (first digit 5): Limited ingress of dust is allowed, but it will not interfere with the operation of the equipment inside.
- o Water protection (second digit 5): The enclosure can withstand water jets from any direction without harmful effects, making it suitable for outdoor or industrial environments . Plastic fiber distribution boxes designed for IP55, such as those made from durable engineering plastics with wall thicknesses of at least 3 mm, often include robust gaskets, corrosion-resistant hardware, and hinged doors to maintain sealing integrity .

Standard Testing Methods

- o IEC/GB Standard Testing: IP55 compliance is typically verified according to IEC 60529 or equivalent national standards (e.g., GB 4208-2008). The test involves:
 - o Dust test: Exposing the enclosure to circulating dust for a specified period to ensure no harmful ingress.
 - o Water jet test: Spraying water at the enclosure from all directions using a nozzle with defined pressure and flow rate to confirm water resistance .
- o Salt Spray Test (Optional for Corrosion Resistance): For outdoor boxes, a 48-hour salt spray test can be performed to ensure fasteners and hardware resist corrosion, which indirectly supports long-term sealing performance .

Practical Field Verification

For on-site or quick verification, a paper test can be used:

- o Place a strip of paper between the door and the gasket.
- o Close and lock the door fully.
- o Try to pull the paper out:
 - o If it slides out easily, the sealing is weak at that point.
 - o If it holds firmly or tears, the sealing is good.



IP55 sealing test of plastic fiber distribution box

- o Test all four sides, paying attention to corners, hinges, and latches, as these are common leakage points . Additional checks include ensuring:
 - o Continuous, unbroken gaskets.
 - o Uniform compression of the gasket when the door is closed.
 - o Proper sealing around cable entry points and ventilation grills .

Design Considerations for IP55 Plastic Boxes

- o Material: Use high-strength, UV-resistant plastics that maintain shape under temperature variations.
- o Gasket: Soft silicone or elastomer gaskets are preferred for uniform sealing and compliance under low clamping forces .
- o Door and Hinges: Hinged doors with a minimum opening angle of 120° and minimal gaps help maintain sealing integrity .
- o Cable Entries: Use perforable membranes or grommets to maintain water and dust protection while allowing cable installation . By combining standardized testing with practical field checks, you can ensure that a plastic fiber distribution box meets IP55 requirements and provides reliable protection in outdoor or industrial environments.

Legrand has launched Salamandre IP55 rated distribution trunking to answer growing demands for trunking systems that are suitable

Our "Red Range" junction boxes are perfect for indoor use. Really simple and tool-free Slim design Self

We test enclosures to a wide variety of safety regulations, providing third-party certification that your products have met the industry's

Key Features Robust Engineering Plastic: Wall thickness of at least 3.0mm ensures durability. Hinged Door Design: Opens to a

Stockwell Elastomerics manufactures sealing/enclosure gaskets with various IP ratings, and offers

How to Choose Between IP55 and IP65 Choose IP55 if the enclosure will be used in relatively clean, sheltered, or light

Bison ProFab is a leading manufacturer of high-quality IP55 electrical enclosures. The IEC's standardized International (or Ingress)

IP55 sealing test of plastic fiber distribution box

Ingress protection (IP) testing reduces the risk of product failure in the field by assessing the degree of protection provided against

Discover the EKDB10 plastic waterproof distribution boxes, crafted from top-grade ABS and PC materials. These boxes offer ample

Choose IP55 when you need balanced protection, easier ventilation, and better cost control. Choose IP65 or higher

2- Paper Test Method (for IP55 panel): Take a strip of paper (A4 sheet or similar). Place it between the door and the

The box provides a secure and organized environment for managing the fiber connections and splices. To

With an IP55, IP65 or IP68 protection rating, these boxes are ideal for a wide variety of environments, including industrial areas and

What equipment is installed in an IP55 outdoor cabinet? In practice, IP55 outdoor cabinets are used to house telecom,

Commesh Fiber Joint Box series is widely used in backbone and distribution networks due to its proven IP68 sealing

Famatel USA Plastic Waterproof Electrical Boxes IP55 are ideal to protect all your wiring connections from external

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