

Explosion-proof split distribution box



Overview

Explosion-Proof Distribution Boxes for Hazardous Areas Expert guidance on specifying, installing, and maintaining explosion-proof distribution box solutions.

Key Takeaways

A split-type explosion-proof distribution box is a modular, certified power distribution unit designed for safe use in hazardous gas and dust environments.

Split-type explosion-proof distribution boxes are engineered to safely distribute electrical power in hazardous areas where flammable gases, vapors, or combustible dust may be present. These boxes are certified under ATEX, IECEx, and UKEX standards for use in Zones 1, 2 (gas) and Zones 21, 22 (dust), ensuring compliance with international safety regulations. They are commonly used in industries such as oil & gas, petrochemicals, aviation, and chemical plants.

Key Features

- **Modular and Stackable Design:** Many split-type boxes, such as the SA POWERNET EX, are modular and stackable, allowing flexible configuration and easy integration into existing power setups.
- **Durable Construction:** Enclosures are made from glass-reinforced polyester (GRP), stainless steel, or aluminum, providing high mechanical strength, corrosion resistance, and suitability for harsh environments.
- **Ingress Protection:** Typically rated IP65/IP66, these boxes are waterproof and dustproof, ensuring reliable operation in challenging conditions.

- **Portability:** Compact and lightweight designs often include integrated carry handles, facilitating easy transport and deployment in confined or remote areas .
- **Power Distribution:** Equipped with multiple socket outlets (e.g., four 16A sockets), these boxes can power lighting, tools, and ancillary equipment simultaneously .
- **Safety Standards:** Designed to prevent sparks or arcs that could ignite hazardous atmospheres, with options for intrinsic safety (Ex ia), increased safety (Ex e), and flameproof enclosures (Ex d) .

Applications

Split-type explosion-proof distribution boxes are ideal for:

- Temporary or permanent lighting setups in hazardous zones.
- Powering maintenance equipment in confined or explosive atmospheres.
- Industrial installations requiring modular, flexible, and safe power distribution.
- Environments with extreme temperatures, moisture, or corrosive conditions.

Advantages

- **Enhanced Safety:** Certified for explosive atmospheres, reducing the risk of ignition.
- **Flexibility:** Modular and configurable to meet specific project requirements.
- **Durability:** Resistant to corrosion, dust, and water ingress.
- **Ease of Use:** Portable, easy to install, and maintain. In summary, split-type explosion-proof distribution boxes provide a robust, versatile, and safe solution for distributing electrical power in hazardous environments, combining modularity, portability, and compliance with international explosion protection standards .

Article Content

Distribution Boxes

BXJ93 Fibre Optic Splice Box Explosion-Proof Fibre Optic Termination Solution for Hazardous Locations Engineered for safety,

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

