

High-strength aluminum alloy junction box



Overview

Find your aluminum alloy junction box easily amongst the 6 products from the leading brands (A2S, CORTEM, YONGUCASE, ...) on DirectIndustry, the industry specialist for your professional purchases.

Key Takeaways

High-strength aluminum alloy junction boxes provide durable, corrosion-resistant, and impact-resistant protection for electrical components in harsh industrial environments. Material and Construction High-strength aluminum alloy junction boxes are typically made from alloys such as AlSi 12, which offer excellent mechanical strength and resistance to corrosion. These enclosures are often die-cast or fabricated from aluminum plates, providing a robust structure capable of withstanding heavy industrial use.

Surface treatments like SurTec 650 or Alodine enhance corrosion resistance and serve as primers for painting or powder coating, allowing customization to specific RAL colors and finishes.

Protection Ratings

These junction boxes are designed to meet stringent industrial standards: IP66: Complete protection against dust ingress and high-pressure water jets. IK09 to IK10: High impact resistance to prevent damage from mechanical shocks. Temperature Range: Typically from -60°C to +175°C, suitable for extreme environmental conditions.

Industrial Applications High-strength aluminum alloy junction boxes are ideal for: Electrical and electronic equipment protection in factories, power grids, and automation systems. Explosion-proof or hazardous zones (Zones 1, 2, 21, 22) when designed with appropriate certifications.

EM

C shielding to prevent electromagnetic interference in sensitive equipment. Heavy machinery environments, where vibration, sparks, and chemical exposure are common.

Customization and Features

Manufacturers offer extensive customization options: Mechanical machining to fit specific components or layouts. Powder coating or painting for branding or additional protection. Internal mounting solutions for PLCs, circuit breakers, and other control devices.

Flexible sizing and fabrication through sheet metal bending, plate splicing, or tooling for unique dimensions.

Advantages Over Other Materials

Compared to plastic or standard steel enclosures, aluminum alloy junction boxes provide: Superior heat dissipation, reducing the risk of overheating sensitive electronics. High durability and impact resistance, ensuring long-term reliability in industrial settings. Corrosion resistance, especially when treated with passivation or protective coatings.

High-strength aluminum alloy junction boxes are therefore a versatile, reliable, and customizable solution for protecting electrical systems in demanding industrial environments, combining mechanical robustness, environmental protection, and adaptability to specific operational needs.

Article Content

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Aluminium Junction Box - Industrial Enclosure IP66 for Harsh

The Aluminium Junction Box by Phoenix Mecano is a highly rugged industrial enclosure made of AlSi 12, specifically engineered for demanding environments. Featuring an IP66 protection rating, IK09

Aluminum junction box, Aluminum terminal box

Find your aluminum junction box easily amongst the 113 products from the leading brands (ORTAC, SENSOCAR, KROMA MEC, ...) on DirectIndustry, the industry specialist for your professional

Aluminium Castings (Junction Boxes)

Aluminium Cast Junction Boxes are rugged, corrosion-resistant enclosures made using high-quality aluminium alloys through various casting methods like pressure die casting, gravity die casting, or

Heavy-Duty High-Capacity Aluminum Junction Box

Built from high-tensile aluminum alloy, this weatherproof junction box acts as a fortress for your sensitive electronics. Its thick-walled construction provides inherent EMI/RFI shielding, effectively isolating

Aluminum Junction Boxes | McMaster-Carr

Choose from our selection of aluminum junction boxes, including over 225 products in a wide range of styles and sizes. Same and Next Day Delivery.

Electric Junction Boxes of Aluminium

Designed for durability and reliability, Conex's Electric Junction Boxes of Aluminium ensure secure electrical connections in industrial, commercial, and residential

Aluminum Terminal and Junction Boxes | nVent HOFFMAN

Durable material with high impact resistance, aluminum can provide a strong solution for heavy industrial environments Excellent resistance to corrosion helps the enclosure last longer

DIECAST ALUMINIUM TERMINAL JUNCTION BOX

IP65 protection class and impact resistant diecast aluminium terminal junction box. Diecast aluminum box has superior heat dissipation, heat resistance, and oil resistance compared to plastic boxes.

Electric Junction Boxes of Aluminium

At Conex Aluminium Components, we specialize in manufacturing **Electric Junction Boxes of Aluminium** that are engineered for superior performance in

Junction Box Waterproof Aluminum Enclosure Why Choose that?

Discover how a junction box waterproof aluminum enclosure protects electronics from water, dust, and impact in outdoor and industrial use.

BBOX Enclosures | Aluminium Die Cast Enclosures Manufacturer

BBOX Enclosures manufactures heavy duty aluminium die cast enclosures and junction boxes engineered for demanding industrial and outdoor applications.

Aluminium Junction Box – Industrial Enclosure IP66 for Harsh

Aluminium Junction Box is an industrial enclosure with IP66 protection and superior EMC shielding for demanding environments. Datasheet and CAD files available. Download technical details or request

Cast aluminium Ex d junction and terminal boxes

They are made from a copper-free cast aluminium alloy, which makes them incredibly resistant to damage from seawater. R. STAHL's new 8252 series seawater-resistant, cast aluminium alloy,

Outdoor Electrical Boxes | Durable Exterior & Junction Boxes

Discover durable, weatherproof junction boxes at Polycase—ideal for electrical and industrial applications. Choose from a variety of sizes and materials for reliable outdoor or indoor protection.

TECHNICAL DATA SHEET 0000 eoe ee Cast aluminum steel control/junction box

Cover Bolts - premium, high strength steel (zinc plated and coated); stainless steel-optional Hinges - aluminum with stainless steel hardware Mounting plate - XPM - 12 gauge galvanized steel (.108"

Junction Box Aluminium (Ex d) EJB-A

EJB A series Ex d enclosures are normally used in the chemical and petrochemical plants, offshore platforms, refineries and any other industry where hazardous atmospheres (gas and combustible

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

