

Explosion-proof wireless remote control power distribution box



Overview

Explosion-proof remote control, ATEX remote control The EXITX000 Series is a third-generation intrinsically safe industrial remote control certified for op.

Key Takeaways

Explosion-proof wireless remote control power distribution boxes are industrial-grade systems designed to safely control electrical power in hazardous areas, combining wireless operation with certified explosion protection.

Overview

Explosion-proof wireless remote control power distribution boxes are engineered for hazardous environments such as chemical plants, oil and gas facilities, and mining operations. They allow operators to remotely control power distribution and machinery without exposing personnel to explosive atmospheres. These systems integrate wireless communication, rugged enclosures, and safety-certified components to prevent sparks, high temperatures, or static discharge that could trigger explosions .

Key Features

- **Wireless Control:** Supports radio frequency communication, Wi-Fi, or WirelessHART for remote operation and sensor integration in Zones 1, 2, 21, and 22 .
- **Explosion-Proof Enclosures:** Made from stainless steel (AISI 304L/316L) or GRP, with sealed designs to prevent ignition sources .

- **Certifications:** Compliant with ATEX, IECEx, NEC, and other international standards for hazardous areas .
- **Control Options:** Can include joysticks, push buttons, toggle switches, key switches, and multi-button panels, often configurable for specific industrial applications .
- **Battery and Power:** Rechargeable batteries (NiMH or LiPo) with long operating times (up to 50 hours), and options for wired power supply .
- **Environmental Protection:** IP65 or higher ratings, resistant to dust, water, and extreme temperatures, ensuring reliable operation outdoors or in harsh conditions .
- **Feedback and Diagnostics:** Two-way communication allows status feedback from the receiver, LCD or multi-color displays, and diagnostic ports for testing and maintenance .

Applications

- **Industrial Cranes and Machinery:** Remote operation in hazardous zones without exposing operators to risk .
- **Power Distribution Control:** Safe switching and monitoring of electrical circuits in explosive atmospheres .
- **Process Automation:** Integration with IIoT systems for wireless monitoring and control of sensors and actuators .

Installation and Safety Considerations

- Ensure all connection points are properly sealed to maintain explosion-proof integrity .
- Regularly inspect enclosures, batteries, and seals for wear or damage. Replace components immediately if compromised .
- Custom configurations are available for higher-level explosion-proof requirements or specific operational needs, including mounting receivers inside explosion-proof boxes .
- Wireless systems should be paired with compatible receivers and gateways to maintain reliable communication in hazardous areas .

Manufacturers and Solutions

Leading providers include TeleCtrl, R. STAHL, ExRemote, and Atex Delvalle, offering modular, customizable solutions for industrial remote control and power distribution in explosive environments . These systems are widely used in oil & gas, chemical, mining, and heavy manufacturing industries.

Explosion-proof wireless remote control power distribution boxes provide a safe, flexible, and efficient solution for controlling electrical systems in hazardous areas, combining compliance with international safety standards, robust construction, and advanced wireless functionality.

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