

Electrical Class 1 Distribution Box



Summary of Content

A Class 1 Division 2 (C1D2) distribution box is a specially designed enclosure that protects electrical components in environments where flammable gases may be present only under abnormal conditions.

Overview

Class 1 Division 2 enclosures are defined by the National Electrical Code (NEC) and are intended for areas where explosive gases or vapors are not normally present but could appear during abnormal conditions, such as equipment failure or leaks . These boxes are commonly used in refineries, chemical plants, and manufacturing facilities handling flammable materials .

Key Design Requirements

- **Material:** Metal enclosures such as steel, aluminum, or stainless steel are preferred for durability, grounding continuity, and corrosion resistance. Plastic enclosures are allowed only if they meet strict flame, impact, and static dissipation standards and are certified under UL 1203 or UL 50E .
- **Sealing:** Enclosures must be properly sealed to prevent flammable gases from entering. Some designs use purge and pressurization systems to maintain a clean internal environment, following standards like NFPA 496 .
- **Temperature Rating:** The external surface temperature must remain below the ignition point of nearby gases. For example, a T4 rating ensures the surface does not exceed 135°C .

Article Content

Understanding Class 1 Div 2 Enclosure Requirements

In simple terms, a Class 1 Division 2 enclosure is designed to protect electrical components in environments where

Class I, Div 1 and 2, Group B, C, D Hazardous Location Electrical ...

When it comes to Class I, Div 1 and 2, Group B, C, D Hazardous Location Electrical Enclosures, you can count on Grainger.

Hazardous Location Electrical Boxes | McMaster-Carr

Choose from our selection of hazardous location electrical boxes, including outlet boxes and covers, weatherproof outlet boxes and

Appliance classes

Any Class 1 equipment will act like a Class 0 equipment when connected to an ungrounded outlet. Appliance Class I is not only

Hazardous Area Electrical Enclosures | Class I Div 1 (2026)

Hazardous area electrical enclosures are specially designed housings that contain electrical components and prevent

Class I Division 2 Requirements Using NEMA 4 or 4X Enclosures ...

Using a NEMA 4 or 4X enclosure in a Class I Division 2 area is not only possible—it's a common and effective solution. However,

Explosion Proof Class 1 Div 1 Junction Box Factory, Dust Proof ...

Looked a square shape designed with flat joint surface of flame proof path on housing and cover, this flameproof junction box can be

Class 1 Division 1 Junction Box — ATEX Certified Products ...

Browse our certified Class I Division 1 junction boxes below, filter by size and entry configuration, and contact our team for help

Power Distribution Systems | Explosion Protected | R. STAHL

This combination enclosure allows for non-rated breakers to be used by means of explosionproof protection, while having the

Distribution Box and Selection Guide: Internal Structure, Components ...

Learn how to choose a distribution box and understand its internal structure, including MCBs, busbars, neutral bars,

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://benniedesignstudio.co.za>

Email: sales@benniedesignstudio.co.za

Phone: +27 82 391 4765

Address: The Towers, 1 St Georges Mall, Cape Town, 8001, South Africa

This document is for informational purposes only. Specifications subject to change without notice.

