

NEMA4XCE Certification for Vibration-Resistant Cabinets



Article Overview

NEMA 4XCE cabinets combine corrosion-resistant NEMA 4X standards with engineered vibration resistance for harsh industrial environments.

Understanding NEMA 4X Certification

NEMA 4X is a North American standard for industrial enclosures that ensures protection against water, dust, and corrosion. These enclosures are typically made from 304 or 316L stainless steel, providing durability in coastal, chemical, or washdown environments. The “X” in 4X specifically denotes enhanced corrosion resistance, verified through rigorous testing such as 200-hour salt spray tests (ASTM B117) and exposure to aggressive chemicals. NEMA 4X enclosures are suitable for outdoor and industrial applications where both environmental and chemical hazards are present.

Vibration-Resistant Design Considerations

For cabinets to be vibration-resistant, designers incorporate several strategies:

- **Structural Reinforcement:** Use of double-walled construction, cross-bracing, and back stiffeners to prevent frame bending under vibrational loads.
- **Heavy-Duty Materials:** Thicker gauge steel (up to 7 gauge) and vibration-resistant hardware improve durability.
- **Isolation Systems:** Passive isolators such as elastomeric dampers, rope coil isolato...

Article Content

NEMA Ratings for Enclosures

Offers corrosion resistance in addition to NEMA 4 specifications, making it suitable for harsh and corrosive environments. Often used

Industrial Enclosure Certifications for Harsh Applications | Rittal

Learn more about the NEMA, IP, and UL certifications that help engineers choose the right industrial enclosures for outdoor

Seismic Cabinets for Harsh Environments | Eaton

To pass the test, the enclosure must meet displacement* requirements of less than 3 inches and emit no resonant frequency below 6

NEMA 4x classification for indoor/outdoor enclosures

Where is it tested? Our enclosures are shipped and type tested at independent testing laboratories in the United States in order to

Industrial Enclosure Certifications for Harsh Applications | Rittal

NEMA Type 4: Engineered to be watertight and dust-tight, these enclosures are suitable for all outdoor applications, particularly solar

Enclosures for Vibration Monitoring Systems | PCB Piezotronics

Switch boxes for vibration monitoring systems Switch boxes provide a centralized point for route-based data collection, allowing

Standard-Depth Server Rack Cabinet, Seismic Certified, 42U | Eaton

It is designed for secure, high density server and networking applications in IT environments that are earthquake prone or subject to

NEMA 4X Enclosure, Box & Cabinet

To ensure the NEMA 4X stainless steel box, enclosure & cabinet products have high corrosion resistance to chemicals and salt

NEMA Ratings for Enclosures

At Nema, our knowledge and experience in NEMA-rated enclosures is so extensive, that it's in our name. For more information on

NEMA FAQ – Grouped

A manufacturer can choose to self-certify that the product meets the enclosure requirements of NEMA 250 or to seek independent,

How UL Tests Enclosures for NEMA 4X and NEMA 6 Ratings and

Bud Industries has a full offering of enclosures that meet UL certifications for NEMA 4x as well as NEMA 6 ratings. It is

NEMA 4X Electrical Enclosure | Corrosion-Resistant Waterproof Cabinets ...

Shop E-abel's NEMA 4X waterproof enclosures for food, marine, chemical, and outdoor use. IP66 certified, corrosion-proof cabinets

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