

NEMA ELECTRICAL ENCLOSURES

Electrical enclosures are boxes or other grounded surrounds containing electrical equipment (starters, solenoid valves, switches, controls, etc.). NEMA enclosures are classified according to the operating environment to which they are suited.

NEMA 1: General purpose for indoor use only. Suitable for indoor applications where no dusty or moist conditions occur. Provides protection against accidental contact with electrical equipment inside the enclosure. Meets tests for Rod Entry and Rust Resistance.

NEMA 3R: For outdoor use where falling rain, sleet or external ice formation are present. Gasketed cover or door. Meets tests for rain, Rod Entry, External Icing and Rust Resistance.

NEMA 4: For indoor or outdoor use where protection from splashing water, hose-directed water, and wind blown dust or rain is required. Constructed of sheet steel or stainless steel with gasketed cover or door. Meets tests for Hosedown, Dust, External Icing and Rust Resistance.

NEMA 4X: For indoor or outdoor use. As for NEMA 4 but constructed of stainless steel, glass polyester or other non-metallic insulating material. Also meets test for Corrosion Resistance.

NEMA 7: For use in Class 1, Group C or D hazardous **gas** indoor locations as defined in the National Electrical Code. NEMA 7 enclosures must withstand the pressure generated by explosion of internally trapped gasses and be able to contain the explosion so that gasses in the surrounding atmosphere are not ignited. Under normal operation, the surface temperature of the enclosure must be below the point where explosive gasses present in the surrounding atmosphere would be ignited. Meets test for Explosion, Temperature and Hydrostatic Design.

NEMA 9: For use in Class II, Group E, F, or G hazardous **dust** locations as defined in the National Electrical Code. Heat generating devices within the enclosure must not raise the surface temperature of the enclosure to the point where it could ignite the dust-air mixture in the surrounding atmosphere or cause discoloration of the surface dust. Meets tests for Dust Penetration, Temperature and Gasket Ageing.

NEMA 12: For indoor use. Provides a degree of protection from dripping liquids (non-corrosive), falling dirt and dust. Meets tests for Drip, Dust and Rust Resistance. Some NEMA 12 enclosures **MAY** be suitable for Class II, Division 2, Group G and Class III, Divisions 1 & 2 locations as defined in the National Electrical code.

NOTE: Enclosures are not designed to protect equipment against condensation, corrosion or icing which might occur inside the enclosure or enter through a conduit or unsealed opening. Provision to counter such conditions (space heaters, etc.) must be made by the user.