

NEMA Ratings

There are many NEMA ratings available for enclosures. Below, is a brief explanation of each NEMA rating.

NEMA 1 General Purpose - Indoors Type 1 enclosures are intended for general purpose indoor use primarily to provide a degree of protection against contact with the enclosed equipment or locations where unusual service conditions do not exist.

NEMA 2 Drip Proof - Indoors Type 2 enclosures are intended for general purpose indoor use primarily to provide a degree of protection against limited amounts of falling water and dirt.

NEMA 3 Dust Tight, Rain Tight, & Ice/Sleet resistant - Indoors/Outdoors Type 3 enclosures are intended for general purpose outdoor use primarily to provide a degree of protection against windblown dust, rain, and sleet; and to be undamaged by the formation of ice on the enclosure.

NEMA 3R Rain Proof & Ice/Sleet Proof - Indoors/Outdoors Type 3R enclosures are intended for general purpose outdoor use primarily to provide a degree of protection against falling rain; and to be undamaged by the formation of ice on the enclosure.

NEMA 3S Dust Tight, Rain Tight, & Ice/Sleet Proof - Outdoors Type 3S enclosures are intended for general purpose outdoor use primarily to provide a degree of protection against sleet; and to be undamaged by the formation of ice on the enclosure.

NEMA 4 Water Tight & Dust Tight - Indoors/Outdoors Type 4 enclosures are intended for general purpose indoor or outdoor use primarily to provide a degree of protection against windblown dust and rain, splashing water, and hose directed water; and to be undamaged by the formation of ice on the enclosure.

NEMA 4x Water Tight, Dust Tight, & Corrosion Resistant - Indoors/Outdoors Type 4X enclosures are intended for general purpose indoor and outdoor use primarily to provide a degree of protection against corrosion, windblown dust and rain, splashing water, and hose-directed water; and to be undamaged by the formation of ice on the enclosure.

NEMA 5 Superseded by NEMA 12 for Control Apparatus Type 5 see NEMA 12

NEMA 6 Submersible, Water Tight, Dust Tight, & Ice/Sleet Resistant - Indoors/Outdoors Type 6 enclosures are intended for general purpose indoor or outdoor use primarily to provide a degree of protection against the entry of water during temporary submersion at a limited depth; and to be undamaged by the formation of ice on the enclosure.

NEMA 7 Underwriters Lab Class 1-Groups C&D -Explosion Proof - Indoors Type 7 enclosures are for indoor use in locations classified as Class I, Groups A, B, C, or D, as defined in the National Electrical Code. Type 7 enclosures shall be capable of withstanding the pressures resulting from an internal explosion of specified gases, and contain such an explosion sufficiently that an explosive gas-air mixture existing in the atmosphere surrounding the enclosure will not be ignited. Enclosed heat generating devices shall not cause external surfaces to reach temperatures capable of igniting explosive gas-air mixtures in the surrounding atmosphere. Enclosures shall meet explosion, hydro-static, and temperature design tests.

NEMA 8 Underwriters Lab Class 1-Groups C&D -Explosion Proof - Indoors Type 8 is same as NEMA 7, except the unit is oil-immersed

NEMA 9 Underwriters' Lab Class II - Groups E,F,G - Indoors Type 9 enclosures are intended for special purpose indoor use in locations classified as hazardous (Class II, Groups E, F, or G, as defined in the National Electrical Code). Type 9 enclosures shall be capable of preventing the entrance of dust. Enclosed heat generating devices shall not cause external surfaces to reach temperatures capable of igniting or discoloring dust on the enclosure or igniting dust-air mixtures in the surrounding atmosphere. Enclosures shall meet dust penetration and temperature design tests, and aging of gaskets (if used).

NEMA 10 Bureau of Mines

NEMA 11 Corrosion Resistant & Drip Proof - Oil Immersed - indoors

NEMA 12 Industrial Use - Dust Tight & Drip Tight - Indoors Type 12 enclosures are intended for industrial indoor use primarily to provide a degree of protection against dust, falling dirt, and dripping noncorrosive liquids.

NEMA 13 Oil Tight & Dust Tight - Indoors Type 13 enclosures are intended for industrial indoor use primarily to provide a degree of protection against dust, spraying of water, oil, and noncorrosive coolant.