

# Appendix A-1: NEMA Enclosure Definitions

## NON-CLASSIFIED LOCATION ENCLOSURES.

NEMA enclosures 2, 5, 12, 12K and 13 are not intended to provide protection against conditions such as internal condensation. NEMA enclosures 3, 3R, 3S, 4, 4X, 6 and 6P are not intended to provide protection against conditions such as internal condensation or internal icing.

### Type 1 Enclosures.

Type 1 enclosures are intended for indoor use primarily to provide a degree of protection against limited amounts of falling dirt in locations where unusual service conditions do not exist.

### Type 2 Enclosures.

Type 2 enclosures are intended for indoor use primarily to provide a degree of protection against limited amounts of falling water and dirt.

### Type 3 Enclosures.

Type 3 enclosures are intended for outdoor use primarily to provide a degree of protection against rain, sleet, and wind-blown dust; and to be undamaged by the formation of ice on the enclosure.

### Type 3R Enclosures.

Type 3R enclosures are intended for outdoor use primarily to provide a degree of protection against rain and sleet; and to be undamaged by the formation of ice on the enclosure. They must have a provision for a drain hole.

### Type 3S Enclosures.

Type 3S enclosures are intended for outdoor use primarily to provide a degree of protection against rain, sleet, and wind-blown dust, and to provide for operation of external mechanisms when ice laden.

### Type 4 Enclosures.

Type 4 enclosures are intended for 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.

### Type 4X Enclosures.

Type 4X enclosures are intended for indoor or 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.

### Type 5 Enclosures.

Type 5 enclosures are intended for indoor use primarily to provide a degree of protection against settling airborne dust, falling dirt, and dripping noncorrosive liquids.

### Type 6 Enclosures.

Type 6 enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against hose-directed water and the entry of water during temporary submersion at a limited depth; and to be undamaged by the formation of ice on the enclosure.

### Type 6P Enclosures.

Type 6P enclosures are intended for indoor or outdoor use primarily to provide a degree of protection against hose-directed water and the entry of water during prolonged submersion at a limited depth; and to be undamaged by the formation of ice on the enclosure.

### Type 12 Enclosures.

Type 12 enclosures are intended for indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping noncorrosive liquids.

### Type 12K Enclosures.

Type 12K enclosures are intended for indoor use primarily to provide a degree of protection against circulating dust, falling dirt, and dripping noncorrosive liquids. The knockouts shall be provided only in the top or bottom walls, or both.

### Type 13 Enclosures.

Type 13 enclosures are intended for indoor use primarily to provide a degree of protection against lint, dust, spraying of water, oil, and noncorrosive coolant.

## CLASSIFIED LOCATION ENCLOSURES.

### Type 7 Enclosures.

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 8 Enclosures.

Type 8 enclosures are for indoor or outdoor use in locations classified as Class I, Groups A, B, C, or D, as defined in the *National Electrical Code*.

### Type 9 Enclosures.

Type 9 enclosures are intended for indoor use in locations classified as Class II, Groups E, F, and G, as defined in the *National Electrical Code*.

### Type 10 Enclosures (MSHA).

Type 10 enclosures shall be capable of meeting the requirements of the Mine Safety and Health Administration, 30 C.F.R., Part 18.



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