



TRANSFORMERS
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NEMA ENCLOSURES

There are many types of enclosures for dry type transformers. These enclosures are designed to provide a degree of protection to personnel against access to hazardous parts and to provide a degree of protection to the transformer from contaminants such as moisture, dust, metallic dust, and chemicals. These enclosures are typically specified by a NEMA rating. The most common dry type transformer enclosures are listed in the table below.

NEMA RATING	DESCRIPTION
1	For indoor use wherever oil, dust or water is not a problem
2	Used indoors to exclude falling moisture and dirt
3RI	Provides protection against the ingress of solid foreign objects and water (sprinkler head spray, light splashing)
3R	Provides protection against the ingress of solid foreign objects, rain, sleet and snow
3RE	Provides protection against the ingress of solid foreign objects (falling dirt or windblown non-corrosive dust), rain, sleet and snow
4	Needed when subject to great amount of water from any angle, such as areas which are repeatedly hosed down
4X	Same as NEMA 4, except stainless steel
12	Used for excluding oil, coolant, flying dust, lint, etc.

This document is intended as a general informational guide only. Before performing any work or purchasing any equipment, you should consult your electrician or electrical engineer. Alfa Transformer is not responsible for misinterpretation or misuse of this information.