NEMA Enclosure Standards FAQ

What are NEMA enclosure standards?

NEMA enclosure standards define enclosure types, applications and the environmental conditions they are designed to withstand.

https://www.nema.org/docs/default-source/products-document-library/nema-enclosure-types.pdf

What is an "enclosure"?

An electrical enclosure is a cabinet or box that protects electrical equipment from the elements and prevents electric shock. Enclosures are usually made from rigid plastics or metals such as steel, stainless steel, or aluminum. NEMA ratings designate the degree to which various enclosures protect against hazardous, non-hazardous, and other specific environmental conditions.

https://www.nema.org/directory/products/view/enclosures

What is the difference between the ratings?

Ratings 1-6 apply to enclosures designed to go inside or outside. The higher the rating, the greater the protection against dangerous or environmental conditions.

What is the specific difference between NEMA 4, and NEMA 4x?

Nema 4x has been tested and rated against corrosive materials. A great example would be sea air, or salt water (also consider iced roads that have been salted) which may corrode exposed electronics. A 4x unit will be resistant to corrosion and a 4 will not.

Why is it important that JuiceBox received a NEMA 4x rating?

This allows the JuiceBox to be safely installed in most environments and deliver reliable, long-term service.

Are there other safety ratings that JuiceBox has achieved?

The JuiceBox has also received an IP66 rating for its enclosure which means a high degree of protection from dust and water infiltration.

It has received and passed UL and CUL testing with an approved operating temperature of -40°F to 140°F (-40°C to 60°C).

The JuiceBox also provides a built-in security lock and integrated cable management system. Protecting your unit from theft.

Where can I find more information on Nema Standards?

Directly on the Nema.org website. If the information you are looking for is unavailable, you can contact the company by phone at (703.841.3288) or by email at communications@nema.org

Is there an FAQ issued by Nema?

https://www.nema.org/docs/default-source/products-document-library/nema-enclosure-types.pdf

Protection from	1	2	3	4	4x	5	6	6P
Access to hazardous parts	●	●	●	●	●	●	●	●
Solid foreign objects (falling dirt)	●	●	●	●	●	●	●	●
Intake of water (Dripping and light splashing)		●	●	●	●	●	●	●
Intake of solid foreign objects (Circulating dust, lint, fibers, and flyings **)				●	●		●	●
Intake of solid foreign objects (Settling airborne dust, lint, fibers, and flyings **)				●	●	●	●	●
Intake of water (Hose down and splashing water)				●	●		●	●
Corrosive agents					●			●
Intake of water (Occasional temporary submersion)							●	●
Intake of water (Occasional prolonged submersion)							●	●