



[NEMA enclosure classifications](#) are developed by NEMA and used in the U.S./American market.

[Ingress Protection - IP - ratings](#) are developed by the European Committee for Electro Technical Standardization (CENELEC) (described IEC/EN 60529), and specifies the environmental protection and enclosure provided.

The table below can be used to convert from NEMA Enclosure Types to IEC Enclosure Types:

<u>NEMA Enclosure Types</u>		<u>IEC Enclosure Classification Designation</u>	
1	General Purpose - Indoor	IP10	Protected against solid objects up to 50mm, e.g. accidental touch by hands.
2	Dripproof - Indoor	IP11	Protected against solid objects up to 50mm, e.g. accidental touch by hands. Protection against vertically falling drops of water e.g. condensation.
3	Dusttight, Raintight, Sleettight - Outdoor	IP54	Protected against dust limited ingress (no harmful deposit). Protection against water sprayed from all directions, limited ingress permitted.
3R	Raintight, Sleet Resistant- Outdoor	IP14	Protected against solid objects up to 50mm, e.g. accidental touch by hands. Protection against water sprayed from all directions, limited ingress permitted.
3S	Dusttight, Raintight, Sleettight- Outdoor	IP54	Protected against dust limited ingress (no harmful deposit). Protection against water sprayed from all directions, limited ingress permitted.
4	Watertight, Dusttight, Sleet Resistant-Indoor & Outdoor	IP56	Protected against dust limited ingress (no harmful deposit).
4X	Watertight, Dusttight, Corrosion-Resistant- Indoor & Outdoor	IP56	Protected against dust limited ingress (no harmful deposit).
5	Dusttight, Drip-Proof--Indoor	IP52	Protected against dust limited ingress (no harmful deposit). Protection against direct sprays of water up to 15° from the vertical.
6	Occasionally Submersible, Watertight, Sleet Resistant-	IP67	Totally protected against dust. Protected against the effect of

	Indoor & Outdoor		immersion between 15cm and 1m.
6P	Watertight, Sleet Resistant- Prolonged Submersion- Indoor & Outdoor	IP67	Totally protected against dust. Protected against the effect of immersion between 15cm and 1m.
12	Dusttight and Driptight- Indoor	IP52	Protected against dust limited ingress (no harmful deposit). Protection against direct sprays of water up to 15° from the vertical.
12K	Dusttight and Driptight, with Knockouts- Indoor	IP52	Protected against dust limited ingress (no harmful deposit). Protection against direct sprays of water up to 15° from the vertical.
13	Oiltight and Dusttight- Indoor	IP54	Protected against dust limited ingress (no harmful deposit). Protection against water sprayed from all directions, limited ingress permitted.

Note! NEMA standards meet or exceed IEC standards. The conversion does not work in the opposite direction