

NEMA VS. IP STANDARDS

There is no 'exact' match between NEMA and IP ratings, but these pairings are the closest associations between the two standards.



MOISTURE DIRT & DEBRIS



NEMA	REAL WORLD/TANGIBLE EXAMPLE	IP
1	Indoor Electrical Equipment (Fuse Box)	10
2	Same as NEMA 1 but can withstand dripping and light splashing of water	11
3	Outdoor Electrical Junction Boxes (Electric Wiring for Houses)	54
3R	Similar to NEMA 3 but can withstand a degree of windblown dust	14
3S	Similar to NEMA 3 but allows for external mechanism(s) to remain operable during ice formation (used in colder climates)	54
4	Outdoor, can withstand more extreme weather (Cellular Network Towers)	66
4X	Similar to NEMA 4 but with more protection against corrosion. Widely used for electrical grounding capabilities in high-voltage applications (needed in moisture-prone areas)	66
5	Indoor usage primarily. Provides protection against settling airborne dust, falling dirt, and dripping non-corrosive liquids, and during occasional, temporary submersion at a limited depth (Firebox/Fire Safety Equipment Enclosures Outdoors – placed on oil rigs)	52
6	Indoor/Outdoor where temporary submersion is expected occasionally (Electrical Vehicle Charging, Maritime Transportation)	67
6P	Allows for prolonged submersion (Oil Rig Electrical Enclosures/Oil Rig Power Generation Units)	67
12 & 12K	Indoor Application. Protects against water drips, dust, non-corrosive liquids, falling dirt (used in industrial automation systems). 12K has knockouts.	52
13	Same as NEMA 12 but adds protection against oil and coolant splashing (Oil rig power generation units)	54