

NEMA and IP Ratings *

NEMA	IP	Protection from solids	Protection from liquids
1	10	Any large surface of the body, such as the back of the hand, but no protection against deliberate contact with a body part.	Not protected
2	11	Any large surface of the body, such as the back of the hand, but no protection against deliberate contact with a body part.	Dripping water (vertically falling drops) shall have no harmful effect.
3	54	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.	Water splashing against the enclosure from any direction shall have no harmful effect.
3R	14	Any large surface of the body, such as the back of the hand, but no protection against deliberate contact with a body part.	Water splashing against the enclosure from any direction shall have no harmful effect.
3S	54	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.	Water splashing against the enclosure from any direction shall have no harmful effect.
4	56	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.	Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects.
4X	66	No ingress of dust; complete protection against contact.	Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects.
5	52	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.
6	67	No ingress of dust; complete protection against contact.	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).
6P	67	No ingress of dust; complete protection against contact.	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).
12 and 12K	52	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.
13	54	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; complete protection against contact.	Water splashing against the enclosure from any direction shall have no harmful effect.