

רמות איטמות IP RATING

DEGREES OF PROTECTION

EN 60529 outlines an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e. tools, dust, fingers) and moisture. This classification system utilizes the letters "IP" ("Ingress Protection") followed by two or three digits. (A third digit is sometimes used. An "x" is used for one of the digits if there is only one class of protection; i.e. IPX4 which addresses moisture resistance only).

First Digit

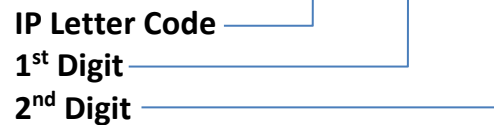
- 0 No special protection.
- 1 Protection from a large part of the body such as a hand (but no protection from deliberate access); from solid objects greater than 50mm in diameter.
- 2 Protection against fingers or other objects not greater than 80mm in length and 12mm in diameter.
- 3 Protection from entry by tools, wires, etc., with a diameter or thickness greater than 2.5mm.
- 4 Protection from entry by solid objects with a diameter or thickness greater than 1.0mm.
- 5 Protection from the amount of dust that would interfere with the operation of the equipment.
- 6 Dust tight.

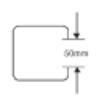

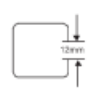

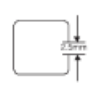

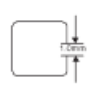





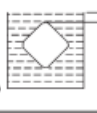
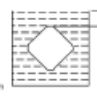
Second Digit

- 0 No special protection.
- 1 Protection from dripping water.
- 2 Protection from vertically dripping water.
- 3 Protection from sprayed water.
- 4 Protection from splashed water.
- 5 Protection from water projected from a nozzle.
- 6 Protection against heavy seas, or powerful jets of water.
- 7 Protection against immersion.
- 8 Protection against complete, continuous submersion in water. Submersion depth and time must be specified by the enduser. The requirement must be more onerous than IP67.

Note: EN 60529 does not specify sealing effectiveness against the following: mechanical damage of the equipment, the risk of explosions, certain types of moisture conditions, e.g. those that are produced by condensation, corrosive vapours, fungus, vermin.

IP67 =



1st Digit	Protection form solid objects	2nd Digit	Protection from moisture
0	Non protected	0	Non protected
1	 Protected against solid objects greater than 50mm	1	 Protected against dripping water
2	 Protected against solid objects greater than 12mm	2	 Protected against dripping water when tilted up to 15°
3	 Protected against solid objects greater than 2.5mmØ	3	 Protected against spraying water
4	 Protected against solid objects greater than 1.0mmØ	4	 Protected against splashing water
5	 Dust protected	5	 Protected against water jets
6	 Dust tight	6	 Protected against heavy seas
		7	 Protected against the effects of immersion
		8	 Protected against submersion (see note)