

IP international classification codes

Ingress Protection (IP)

When the setup of a product is not suitable for all possible environmental conditions, it is then classified upon an international rating system indicating the level of protection according to 2 main criteria:

The first digit indicates the degree of protection against ingress of solid objects.
(First digit after IPxx)

IP0x	No protection against contact and ingress of objects
IP1x	Protection against solid objects > Ø 50 mm
IP2x	Protection against solid objects > Ø 12 mm
IP3x	Protection against solid objects > Ø 2,5 mm,
IP4x	Protection against solid objects of Ø 1 mm, very small objects
IP5x	Dust protected (for limited periods).
IP6x	Dust tight

The second digit indicates the degree of protection against harmful ingress of water
(Second digit after IPxx)

IPx0	No protection against ingress of water
IPx1	Protection against vertical dripping water
IPx2	Protection against dripping water when tilted up to 15°
IPx3	Protection against spraying water from no greater than 60°
IPx4	Protection against splashing water from any angle
IPx5	Protection against water jets from any angle
IPx6	Protection against powerful water jets from any angle
IPx7	Protection against temporary submersion of no greater than 1m
IPx8	Protection against permanent submersion (beyond 1m). The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer.

Example :

IP54 : The product is protected against ingress of dust. However the product must not be exposed to dust too long otherwise dust could get into it. Water can splash the product in any direction but the product is not protected against jets of water.

For information only, subject to mistakes or modifications