

IP Rated Equipment: Codes & Clarification

IP stands for 'Ingress Protection'

An IP number is used to specify the environmental protection of enclosures around electronic equipment. These ratings are determined by specific tests that are standardised in order to ensure equipment can be safely used in a diverse range of applications.

The IP number is composed of two numbers, the first referring to the protection against solid objects and the second against liquids. The higher the number, the better the protection.

First Number

- 0 - No protection (Sometimes X)
- 1 - Protected against solid objects up to 50mm³
- 2 - Protected against solid objects up to 12mm³
- 3 - Protected against solid objects up to 2.5mm³
- 4 - Protected against solid objects up to 1mm³
- 5 - Protected against dust, limited ingress (no harmful deposit)
- 6 - Totally protected against dust

Second Number

- 0 - No protection (Sometimes X)
- 1 - Protection against vertically falling drops of water (e.g. condensation)
- 2 - Protection against direct sprays of water up to 15 degrees from vertical
- 3 - Protection against direct sprays of water up to 60 degrees from vertical
- 4 - Protection against water sprayed from all directions - limited ingress permitted
- 5 - Protected against low pressure jets of water from all directions - limited ingress permitted
- 6 - Protected against low pressure jets of water, limited ingress permitted (e.g. ship deck)
- 7 - Protected against the effect of immersion between 15cm and 1m
- 8 - Protected against long periods of immersion under pressure