

IP Ratings & Bathroom Zones Explained

An IP (Ingress Protection) number is used to specify the environmental protection of enclosures around electronic equipment. These ratings are determined by specific tests. The IP (Ingress Protection) 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.

Solid Objects		Liquids	
0	No protection (Sometimes X)	1	Protection against vertically falling drops of water (example, condensation).
1	Protection against solid objects up to 50mm ² .	2	Protection against direct sprays of water up to 15 degrees from vertical.
2	Protection against solid objects up to 12mm ² . This is also known as touch proof.	3	Protection against direct sprays of water up to 60 degrees from vertical.
3	Protection against solid objects up to 2.5mm ² .	4	Protection against water sprayed from all directions - limited ingress permitted.
4	Protection against solid objects up to 1mm ² .	5	Protection against low pressure jets of water from all directions - limited ingress permitted.
5	Protection against dust, limited ingress (no harmful deposit).	6	Protection against high pressure jets of water, limited ingress permitted (example, ship deck).
6	Totally protected against dust.	7	Protection against the effect of immersion between 15cm and 1m.
		8	Protected against long periods of immersion under pressure. Also known as submersible.

For example IP65 would give you total protection against dust and it would also protect against low pressure jets of water such as showers or bath water etc.

General Guide to Bathroom Zones

Zone 0 is inside the bath or shower itself. Any fitting used in this zone must be low voltage, (max 12v) and be rated at least IP67 which is total immersion proof.

Zone 1 is the area above the bath to a height of 2.25m from the floor. In this zone a minimum rating of IP44 is required. If the fitting is 240v a 30ma residual current device (RCD) must also be used to protect the circuit in this zone.

Zone 2 is an area stretching 0.6m outside the perimeter of the bath and to a height of 2.25m from the floor. In this zone an IP rating of at least IP44 is required. In addition it is good practice to consider the area around a wash basin, within a 60cm radius of any tap to be considered as zone 2.

Zone 3 is anywhere outside zones 0,1 and 2 (subject to specific limits) and where no water jet is likely to be used. No IP rating is required.

In addition to the above, if there is a likelihood of water jets being used for cleaning purpose in zones 1,2 and 3 a fitting rated a minimum IP65 must be used. Full details can be found in the latest copy of the IEE wiring regulations.

