

IP Zoning and Ratings Explained

- **Zone 0 – Inside the bath or shower.** Any fittings used here must be SELV (Separated Extra Low Voltage – max. 12Volts) and have a minimum rating of *IPX7* (*IP67*) (protected against immersion in water – total immersion proof);
- **Zone 1 – Above the bath or shower to a height of 2.25m.** Recommended IP rating: *IP65*. In this zone, if there is likelihood of water jets being used for cleaning purposes, a minimum of *IPX5* is required. Also, subject to IP rating, SELV or 240V luminaires may be used in this zone; if the fitting is 240 volts, a 30mA residual current device (RCD) must also be used to protect the circuit in this zone.
- **Zone 2 – The area stretching to 0.6m outside the bath or shower and above the bath or shower if over 2.25m.** An IP rating of at least *IPX4* (*IP44*) is required. In this zone, if there is likelihood of water jets being used for cleaning purposes, a minimum of *IPX5* is required. Also, subject to IP rating, SELV or 240V luminaires may be used in this zone. In addition, it is a good practice to also consider the area around a wash basin (within a 60cm radius of any tap) as Zone 2.
- **Outside the zones – anywhere outside zones 0, 1, and 2.** Where water jets are not to be used for cleaning purposes, the general rules of [BS7671](#) apply. Here, there is no requirement for any lighting solutions to be protected against particles or solid objects, e.g. *IPX4* – no IP rating required.

IP ratings explained (IP = Ingress Protection)

1. **The first digit** – protection against ingress of foreign bodies, like: tools, dust, fingers, etc.
2. **The second digit** – protection against ingress of liquids. Ex. *IP44* offers protection against solid objects greater than 1 mm and water sprayed from all directions.

The first digit – protection from foreign bodies

- **0** – no protection from foreign bodies;
- **1** – protected against solid objects greater than 50mm(e.g. accidental touch by hands);
- **2** – protected against solid objects up to 12mm(e.g. fingers);
- **3** – protected against solid objects greater than 2.5mm(e.g. tools and wires);
- **4** – protected against solid objects greater than 1mm(e.g. small tools and wires);
- **5** – protected against dust, limited ingress(e.g. no harmful deposit);
- **6** – totally protected against dust.

The second digit – protection from liquids

- **0** – no protection from liquids;
- **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 high pressure jets of water (use on ship deck) – limited ingress permitted;
- **7** – protected against the effects of immersion between 15cm and 1m;
- **8** – protected against long periods of immersion under pressure.