IP Code (Ingress Protection Code)

IP Code is defined in IEC 60529 (International Electrotechnical Commission), which is an international organisation that includes all national electronical committees. The IP Code provides a guideline to the degree of protection provided by electrical equipments lower or equal to 72.5 KiloVolts against intrusion, dust, accidental contact, and water.

For example, the code IP 64:

- IP means Ingress Protection
- The number 64 is divided into two digits. 6 indicates the degree of protection against incidental contact and intrusion of solid particles, and 4 indicates the degree of protection against detrimental effects caused by intrusion of water. The table below shows that an IP 64 material is fully protected against dust (6) and againt splashes (4).

IP Rating Chart

IP	1st digit: INTRUSION OF FOREIGN MATTER	2nd digit: RESISTANCE TO WATER
0	No protection	No protection
1	Protection against foreign matter > 50 mm	Protection against vertically dripping water
2	Protection against foreign matter > 12.5 mm	Protection against oblique dripping water (tilt < 15°)
3	Protection against foreign matter > 2.5 mm	Protection against ”rain” water
4	Protection against foreign matter > 1 mm	Protection against splashes
5	Protection against dust deposit	Protection against water jet
6	Protection against dust intrusion	Protection against big amount of water
7	-	Protection against immersion
8	-	Protection against permanent immersion

The code determines:

1. The degrees of protection of electrical materials for:
    1.1. Personal safety against the access of harmful parts inside the casing.
    1.2. Protection of materials inside the casing against the intrusion of solid forein matter.
    1.3. Protection of materials inside the casing against detrimental effects caused by water intrusion.
2. The designation of these protection degrees.
3. The requirements for each designation.
4. The test to perform to check if the casing meets the requirements.