IP Ratings

What is IP?

IP stands for **I**ngress **P**rotection.

The IP Code outlines a system of classification for the protection of electrical enclosures against the intrusion of foreign bodies (i.e., tools, fingers, dust, etc.) and moisture. The system of classification was specified by the International Electrotechnical Commission and is officially designated as IEC 60529.

The rating is specified by the letters IP followed by two digits i.e. IP25, IP68, etc.

So what does it all mean?

The letters are used to indicate the numbers following are an IP rating.

First number - Degree of ingress protection
The first number of the IP code indicates the degree of protection against contact with moving parts and the degree that the equipment is protected against solid foreign bodies intruding into an enclosure.

0 - No special protection
1 - Protection from a large part of the body such as hand or from solid objects greater than 50 mm in diameter
2 - Protection against objects not greater than 80 mm in length and 12 mm in diameter
3 - Protection from entry by tools, wires, etc., with a diameter or thickness greater than 2.5 mm
4 - Protection from entry by solid objects with a diameter or thickness greater than 1.0 mm
5 - Protection from an amount of dust that would interfere with the operation of the equipment
6 - Dust-tight

Second number - Degree of moisture protection
The second number indicates the degree of protection for the equipment inside the enclosure against the harmful entry of various forms of moisture (e.g. dripping, spraying, submersion, etc.)

0 - No special protection
1 - Protection from vertically dripping water
2 - Protection from dripping water when tilted up to 15°
3 - Protection from sprayed water
4 - Protection from splashed water
5 - Protection from water projected from a nozzle
6 - Protection against heavy seas, or powerful jets of water
7 - Protection against temporary immersion
8 - Protection against complete continuous submersion in water (up to 1 metre deep for 15 minutes)

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