

International Standards

International Standards Agencies			
Argentina	Germany	Mexico	South Africa
Australia	Hungary	Netherlands	Spain
Austria	India	New Zealand	Sweden
Belgium	Indonesia	Norway	Switzerland
Canada	Iran	Pakistan	United Kingdom
Denmark	Ireland	Poland	United States
Egypt	Israel	Portugal	Venezuela
Finland	Italy	Romania	Yugoslavia
France	Japan	Singapore	

International Power Plugs and Sockets	
Continental Europe	
Europlug (ungrounded)	
Australia	
Australia (ungrounded)	
United Kingdom	
Denmark	
France	
India	
Israel	
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Japan	
North America	
Switzerland	
IEC 906-1	

IP Codes (Ingress Protection)

IEC 529 outlines an international classification system for the sealing effectiveness of enclosures of electrical equipment against the intrusion into the equipment of foreign bodies (i.e., tools, dust, fingers) and moisture. This classification system utilises the letters 'IP' (Ingress Protection) followed by two digits. An 'X' is used for one of the digits if there is only one class of protection; i.e., IPX4, which addressed moisture resistance only.

Degrees of Protection – First Digit

The first digit of the IP code indicates the degree that persons are protected against contact with moving parts (other than rotating shafts, etc.) and the degree that equipment is protected against solid bodies intruding into an enclosure.

Degrees of Protection – Second Digit

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

1st Digit	Protection from Solid Objects
0	No Protection
1	Protected against solid objects greater than 50 mm
2	Protected against solid objects greater than 12 mm
3	Protected against solid objects greater than 2.5 mm
4	Protected against solid objects greater than 1.0 mm
5	Dust Protected
6	Dust Tight

2nd Digit	Protection from Moisture
0	No Protection
1	Protected against vertically dripping water
2	Protected against dripping water when tilted up to 15°
3	Protected against spraying water @ up to 60° from vertical
4	Protected against splashing water from all directions
5	Protected against water jets
6	Protected against heavy seas & streaming water
7	Protected against effects of short-term immersion
8	Protected against submersion