

IEC Enclosures

IEC Enclosure Classification

The degree of protection is indicated by two letters (IP) and two numerals. International Standard IEC 529 contains descriptions and associated test requirements that define the degree of protection each numeral specifies. The following table indicates the *general* degree of protection—refer to Abridged Descriptions of IEC Enclosure Test Requirements below. **For complete test requirements refer to IEC 529.**

FIRST NUMERAL ①	SECOND NUMERAL ①
Protection of persons against access to hazardous parts and protection against penetration of solid foreign objects.	Protection against ingress of water under test conditions specified in IEC 529.
0 Nonprotected 1 Back of hand; objects greater than 50mm in diameter 3 Finger; objects greater than 12.5mm in diameter 5 Tools or objects greater than 2.5mm in diameter 7 Tools or objects greater than 1.0mm in diameter 9 Dust-protected (dust may enter during specified test but must not interfere with operation of the equipment or impair safety) 11 Dusttight (no dust observable inside enclosure at end of test)	0 Nonprotected 2 Vertically falling drops of water 4 Vertically falling drops of water with enclosure tilted 15° 6 Spraying water 8 Splashing water 10 Water jets 12 Powerful water jets 13 Temporary submersion 14 Continuous submersion
Example: IP41 describes an enclosure that is designed to protect against the entry of tools or objects greater than 1mm in diameter and to protect against vertically dripping water under specified test conditions.	
Note: All first numerals and second numerals up to and including characteristic numeral 6 , imply compliance also with the requirements for all lower characteristic numerals in their respective series (first or second). Second numerals 7 and 8 do not imply suitability for exposure to water jets (second characteristic numeral 5 or 6) unless dual coded; e.g., IP_5/IP_7 .	

① The IEC standard permits use of certain supplementary letters with the characteristic numerals. If such letters are used, refer to IEC 529 for the explanation.