

Degrees of protection to EN 60529 / DIN VDE 0470 Part 1

The following chart is a compilation from EN 60529 /DIN VDE 0470 Part 1, using the terminology of the standard.

First characteristic numeral		Second characteristic numeral Degree of protection against water										
		0	1	2	3	4	5	6	7	8		
		Protection against access to hazardous parts (Shock protection)	Protection against solid foreign bodies (foreign bodies)	Unprotected	Protected against dripping water	Protected against dripping water when the enclosure is up to 15° inclined	Protected against spraywater up to an angle of 60°C	Protected against spray-water from any direction	Protected against jet/hose-water from any direction	Protected against strong jet-water from any direction	Protected against the effects of temporary submersion	Protected against the effects of continuous submersion
0	Unprotected	Unprotected	IP 00									
1	Protected against access to hazardous parts by the back of the hand	Protected against solid foreign bodies > 50 mm in diam.	IP 10	IP 11	IP 12							
2	Protected against access to hazardous parts by a finger-touch	Protected against solid foreign bodies > 12.5 mm in diam.	IP 20	IP 21	IP 22	IP 23						
3	Protected against access to hazardous parts using a tool > 2.5 mm in diam.	Protected against solid foreign bodies > 2.5 mm in diam.	IP 30	IP 31	IP 32	IP 33	IP 34					
4	Protected against access to hazardous parts using a wire > 1 mm in diam.	Protected against solid foreign bodies > 1 mm in diam.	IP 40	IP 41	IP 42	IP 43	IP 44					
5	Protected against access to hazardous parts using a wire > 1 mm in diam.	dust-protected	IP 50			IP 54	IP 55	IP 56				
6	Protected against access to hazardous parts using a wire > 1 mm in diam.	dust-tight	IP 60			IP 65		IP 66	IP 67	IP 68		

Definitions (to EN 60529 / DIN VDE 0470 Part 1):

IP-Code

The IP code is an identification system used to indicate the degree of protection an enclosure provides against access to hazardous parts, ingress of solid foreign bodies and ingress of water.

First characteristic numeral :

The first characteristic numeral indicates that

- the enclosure provides persons with protection against access to hazardous parts by preventing or restricting the ingress of a part of the human body or of an object held by a person; and simultaneously that
- the enclosure provides the equipment with protection against the ingress of solid foreign bodies.

Second characteristic numeral :

The second characteristic numeral indicates the degree of protection the enclosure provides against harmful influences on the equipment as a result of the ingress of water.