

UL & IEC enclosure standards comparison

IEC definition	Protection to IEC 144/BS5420	Protection to UL 50 enclosure type	UL 50 definition
Protected against solid objects greater than 12mm	IP 20	1 (ventilated)	General purpose indoor
Protected against solid objects greater than 2.5mm	IP 30	1	General purpose indoor
Protected against solid objects greater than 12mm and dripping water	IP 21	2 (ventilated)	Falling water and dirt, indoor
Protected against solid objects greater than 2.5mm and dripping water	IP 24	3R (ventilated)	Rain proof, sleet (ice) resistant, outdoor use
Protected against solid objects greater than 2.5mm and dripping water	IP 34	3R	Rain proof, sleet (ice) resistant, outdoor use
Protected against dust & splashing liquid	IP 54	—	—
Dusttight, protected against waterjets	IP 65	12	Indoor use, dusttight and driptight
Dusttight, protected against heavy seas	IP 66	3S	Dusttight, driptight
Dusttight, protected against heavy seas	IP 66	4	Dusttight, watertight
—	—	4X	Dusttight, watertight, corrosion resistant
Dusttight, protected against heavy submersion	IP 68	6	Submersible, watertight, dust-tight, sleet (ice), resistant indoor or outdoor
—	—	13	Oiltight and dusttight, indoor
Protected against dust & splashing liquid	IP 54	5	Protection against settling airborne dust, falling dirt and dripping noncorrosive liquids, indoor

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