

Standards, zone definitions & product markings

Index of ingress protection

IP suitability ratings are a system for classifying the degree of protection provided by enclosures of electrical equipment.

Protection against Solid Bodies

Degree of protection for persons against access to hazardous parts inside the enclosure and/or against the ingress of solid foreign objects.

	0	No protection
	1	Objects greater than 50 mm, accidental touch by hands
	2	Objects greater than 12 mm, accidental touch by fingers
	3	Objects greater than 2.5 mm, e.g. tools/wires
	4	Objects greater than 1 mm, e.g. tools/wires/small wires
	5	Protected against dust - limited ingress (no harmful deposits)
	6	Totally protected against dust (Dust-tight)

Protection against Water

Degree of protection of equipment inside enclosures against damage from the ingress of water.

	0	No protection
	1	Protected against vertically falling drops of water
	2	Protected against direct sprays of water 15° from vertical
	3	Protected against sprays of water to 60° from vertical
	4	Protected against water sprayed from all directions - limited ingress permitted
	5	Protected against low pressure jets of water from all directions - limited ingress permitted
	6	Protected against strong pressure jets of water, heavy seas - limited ingress permitted
	7	Protection against the effects of immersion between 15cm - 1 m
	8	Protection against long periods of immersion under a quoted pressure, e.g. 2 bar at 24 hours
	9	IP69 Automotive standard DIN40050 and signifies resistance to high pressure jets of water (up to 80bar) from any angle

IP Ratings

The higher the number, the greater the degree of protection; they apply ONLY to properly installed equipment.

