

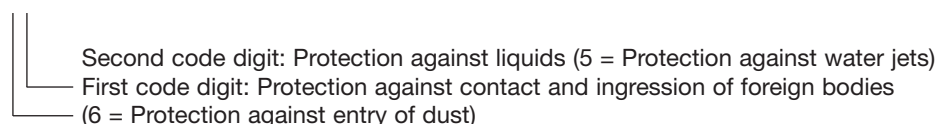
IP protection classes according to DIN 40050

Definition of the protection classes according to DIN 40050: The protection classes are indicated by an abbreviation which is made up of the two constant code letters IP and two code digits for the level of protection, e.g. IP 54.

Protection levels for protection against contact and foreign bodies		
First code digit	Designation	Explanation of the scope of protection
0	No protection	No special protection of persons against direct contact with live or moving parts. No protection of equipment against ingress of solid foreign bodies.
1	Protection against large foreign objects	Protection against unintentional large surface contact with live and internal moving parts. e.g. for hands, but no protection against intentional access to these parts. Protection against ingress of solid foreign bodies with a diameter greater than 50 mm
2	Protection against medium-sized foreign bodies	Protection against finger contact with live or internal moving parts. Protection against ingress of solid foreign objects with a diameter greater than 12 mm.
3	Protection against small foreign bodies	Protection against contact with live or internal moving parts for tools, wires or the like of a thickness greater than 2.5 mm. Protection against ingress of solid foreign bodies with a diameter greater than 2.5 mm.
4	Protection against granular foreign bodies	Protection against contact with live or internal moving parts for tools, wires or the like of a thickness greater than 1 mm.
5	Protection against dust deposits	Complete protection against contact with live or internal moving parts, protection against damaging dust deposits. Ingression of dust is not completely prevented, but dust may not penetrate in such quantities as to impair the function.
6	Protection against entry of dust	Complete protection against contact with live or internal moving parts. Protection against dust penetration.

Protection levels for protection against water		
Second code digit	Designation	Explanation of the scope of protection
0	No protection	
1	Protection against vertically dripping water	Water drops falling vertically must have no damaging effect.
2	Protection against water dripping at an angle	Water drops falling at an any angle of 15° to the vertical must have no damaging effect.
3	Protection against spray water	Water falling at any angle up to 60° to the vertical must have no damaging effect.
4	Protection against splashing water	Water splashing on the equipment from all directions must have no damaging effect.
5	Protection against water jets	A water jet from a nozzle pointed at the equipment from any direction must have no damaging effect.
6	Protection against flooding	Water, in the event of temporary flooding, e.g. by heavy seas, must not penetrate the equipment in harmful amounts.
7	Protection during immersion	Water must not penetrate in harmful amounts when the equipment is immersed in water under the specified pressure and time conditions.
8	Protection when submerged	Water must not penetrate in harmful amounts when the equipment is submerged in water.

Example: Code letters IP 65



Detailed meaning: There must be complete protection against contact with live or internal moving parts. The equipment must be protected against dust penetration. A water jet from a nozzle pointed from all directions against the equipment must have no damaging effect.