

IP Degrees of Protection Definition

IP stands for International Protection, the IP degrees of protection are determined by DIN 40050 part 9. This standard exists to specify the exact protection of electrical equipment against penetration by solid foreign matter, including dust and water. The exact degree of protection is achieved by various tests.

eg: The IP rating of the 8517 series deck floodlight is listed as IP 6K 9K.
This means dust tight and protected from high pressure cleaning.

IP 6K 9K

First numeral

– Protection against the ingress of solid foreign objects (table 1)

Second numeral

– Protection against the ingress of water (table 2)

Table 1:
Protection against the ingress of solid foreign objects (including dust)

X.....	not tested
0.....	not protected
1.....	solid foreign objects $\varnothing \geq 50$ mm
2.....	solid foreign objects $\varnothing \geq 12.5$ mm
3.....	solid foreign objects $\varnothing \geq 2.5$ mm
4.....	solid foreign objects $\varnothing \geq 1.0$ mm
5 and 5K....	dust protected
6 and 6K....	dust tight

Table 2:
Protection against the ingress of water

X.....	not tested
0.....	not protected
1.....	vertical dripping
2.....	dripping (inclined 15°)
3.....	spraying
4.....	splashing
4K.....	same with increased pressure
5.....	jetting
6.....	powerful jetting
6K.....	same at increased pressure
7.....	temporary immersion
8.....	continuous immersion
9K.....	high pressure/steam jet cleaning

