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## Ingress Protection (IP Rating) Reference Chart

In the latest standards **SFS - EN 60529 4 1992** concerning the IP degrees of enclosure protection of electrical equipment there are some changes particularly with regard to the testing and identification of protection against liquids. Up to the degree 6 the protection is understood to also cover the lower protection degrees. In degrees higher than 6, each degree is to be tested separately and marked accordingly, e.g. **IP67 / IP66**

First Number Protection against solid objects			Second Number Protection against liquids			Third Number Protection against mechanical impact		
IP 0		Test No Protection	IP 0		Test No Protection	IP 0		Test No Protection
1		Protected against solid objects up to 50mm e.g. accidental touch by hands.	1		Protected against vertical drops of water.	1		150g @ 15cm Impact 0.225 joule
2		Protected against solid objects up to 12.5mm e.g. fingers.	2		Protected against direct sprays of water up to 15° from the vertical.	2		250g @ 15cm Impact 0.375 joule
3		Protected against solid objects over 2.5mm e.g. tools, small wires.	3		Protected against direct sprays of water up to 60° from the vertical.	3		250g @ 20cm Impact 0.50 joule
4		Protected against solid objects over 1mm e.g. tools, small wires.	4		Protected against water sprayed from all directions - limited ingress permitted.	5		500g @ 40cm Impact 2.00 joule
5		Protected against dust-limited ingress permitted (no harmful deposit).	5		Protected against low pressure jets of water from all directions - limited ingress permitted.	7		1.5kg @ 40cm Impact 6.00 joule
6		Totally protected against dust.	6		Protected against strong jets of water e.g. for use on ship decks - limited ingress permitted.	9		5kg @ 40cm Impact 20.00 joule
			7		Protected against the affects of immersion between 15cm and 1m.			
			8		Protected against long periods of immersion under pressure.			