

## Grommets Ltd

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### Ingress Protection (IP)

#### *Ingress Protection (IP) and what it means*

The IP Code (or **International Protection Rating**, sometimes also interpreted as **Ingress Protection Rating**) consists of the letters IP followed by two digits and an optional letter. As defined in international standard IEC 60529, it classifies the degrees of protection provided against the intrusion of solid objects (including body parts like hands and fingers), dust, accidental contact, and water in electrical enclosures. The standard aims to provide users more detailed information than vague marketing terms such as waterproof. The digits (characteristic numerals) indicate conformity with the conditions summarised in the tables below. For example, an electrical socket rated IP22 is protected against insertion of fingers and will not be damaged or become unsafe during a specified test in which it is exposed to vertically or nearly vertically dripping water. IP22 or 2X are typical minimum requirements for the design of electrical accessories for indoor use.

#### *Grommets Ltd do not IP rate products*

This is because we have no control over or knowledge of the intended use of our products. We are happy to provide samples to be incorporated into customer's designs and customers to test for the intended purpose, which they can arrange to be IP rated.

#### **First Digit: Solids**

Level	Object Size Protected Against	Effective Against
0	-	No protection against contact and ingress of objects
1	>50mm	Accidental touch by the hands
2	>12.5mm	Accidental touch by the fingers
3	>2.5mm	Tools and small wires etc.
4	>1mm	Tools and thick wires etc.
5	Dust Protected	Limited ingress permitted (No harmful deposit)
6	Dust Tight	No ingress of dust, complete protection against contact

#### **Second Digit: Liquids**

Level	Protected Against	Effective Against
0	No protection	-
1	Dripping Water	Protection against Vertically falling liquids
2	Dripping water when tilted up to 15°	Protection against direct sprays up to 15° from vertical
3	Spraying Water	Protection against direct sprays up to 60° from vertical
4	Splashing Water	Protection against direct sprays from all directions (Limited ingress)
5	Water jets	Protection against direct low pressure jets from all directions (Limited ingress)
6	Powerful water jets	Protection against high pressure jets (Limited ingress)
7	Immersion up to 1m	Protection against immersion between 15cm and 1m
8	Immersion beyond 1m	Protection against long periods of immersion under pressure



**Our Products** Grommets • Sleeved Grommets • Cable Entry Sleeves • Plugs • Bungs • Bushes  
Washers • Feet • Grips • Cord Rings • Ferrules • Discs • Edging Strip • Custom Moulding

[www.grommets.co.uk](http://www.grommets.co.uk)

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We are an ISO 9001:2008 registered company