



The IEC (International Electrotechnical Commission) is an international committee that develops and publishes its recommendations for standardising international wiring devices and products. Ingress Protection (IP) is the grades of protection against external solids contacting the conductors of a wiring device and against the penetration of liquids into the wiring device.

The IP designation consists of the letters IP followed by two numerals. The first characteristic numeral indicates the degree of protection provided by the enclosure with respect to persons and solid foreign objects entering the enclosure. The second characteristic numeral indicates the degree of protection provided by the enclosure with respect to the harmful ingress of water. The degrees of protection are listed below:

**1st IP# Degree of protection against access to hazardous parts and ingress of solid objects**

- 0 No protection
- 1 Protected against solid foreign objects greater than 50mm diameter
- 2 Protected against solid foreign objects greater than 12.5mm diameter
- 3 Protected against solid foreign objects greater than 2.5mm diameter
- 4 Protected against solid foreign objects greater than 1.0mm diameter
- 5 Dust Protected
- 6 Dust tight

**2nd IP# Degree of protection against the ingress of water**

- 0 No protection
- 1 Protected against vertically falling water drops
- 2 Protected against vertically falling water drops when enclosure tilted up 15°
- 3 Protected against spraying water
- 4 Protected against splashing water
- 5 Protected against water jets
- 6 Protected against powerful jets from any direction
- 7 Protected against the effects of total water immersion up to 1M
- 8 Protected against the effects of total water immersion beyond 1M

Therefore an IP66 rated enclosure is “dust tight and protected against powerful jets of water from any direction.”

If you have any questions about BAPI enclosures please call your BAPI representative.

Reference: IEC Publication 60529 - Classification of Degrees of Protection Provided by Enclosures