

# IP RATINGS

## Enclosure Rating Definitions for IEC (International Electrotechnical Commission)

The IEC enclosure rating always starts with the letters "IP" and ends in two numbers. The first number describes the degree of contact prevention and guarding against foreign objects. The second number describes the degree of water protection.

First No.	Degrees of Contact Prevention and Guarding Against Foreign Objects
0	No protection of personnel from direct contact with active or moving parts. No protection from access of a solid foreign object.
1	Protection of personnel from accidental large area direct contact with active or internal moving parts but no guard against intentional access to such parts.
2	Protection from access of solid foreign object larger than 50mm in diameter.
2	Protection of personnel from finger contact with active or internal moving parts. Protection from access of solid foreign object larger than 12mm in diameter.
3	Protection of personnel from touching active or internal moving parts with tools, wires or similar foreign objects thicker than 2.5mm. Protection from access of solid foreign matter larger than 2.5mm in diameter.
4	Protection of personnel from touching active or internal moving parts with tools, wires or similar foreign objects thicker than 1mm.
5	Total protection of personnel from touching voltage carrying or internal moving parts. Protection from harmful deposit of dust. Access of dust is not completely prevented.
6	Total protection of personnel from touching voltage carrying or internal moving parts. Protection from access of dust.

Second No.	Degrees of Water Protection
0	No special protection
1	Water drops falling vertically must not have any harmful effect.
2	Water drops falling at any angle up to 15° from the vertical must not have any harmful effect.
3	Water hitting the object any any angle up to 60° with the vertical must not have any harmful effect.
4	Water splashing against the object from all directions must not have any harmful effect.
5	A jet of water nozzled from all directions must not have any harmful effect.
6	Water from a temporary floodings, such as heavy seas, must not enter in any harmful quantity.
7	If the object is dipped into water under the defined conditions of pressure and time, water must not enter it in any harmful quantity.
8	If the object is submerged in water, water must not enter in any harmful quantity.

USM 35X IP Rating 66