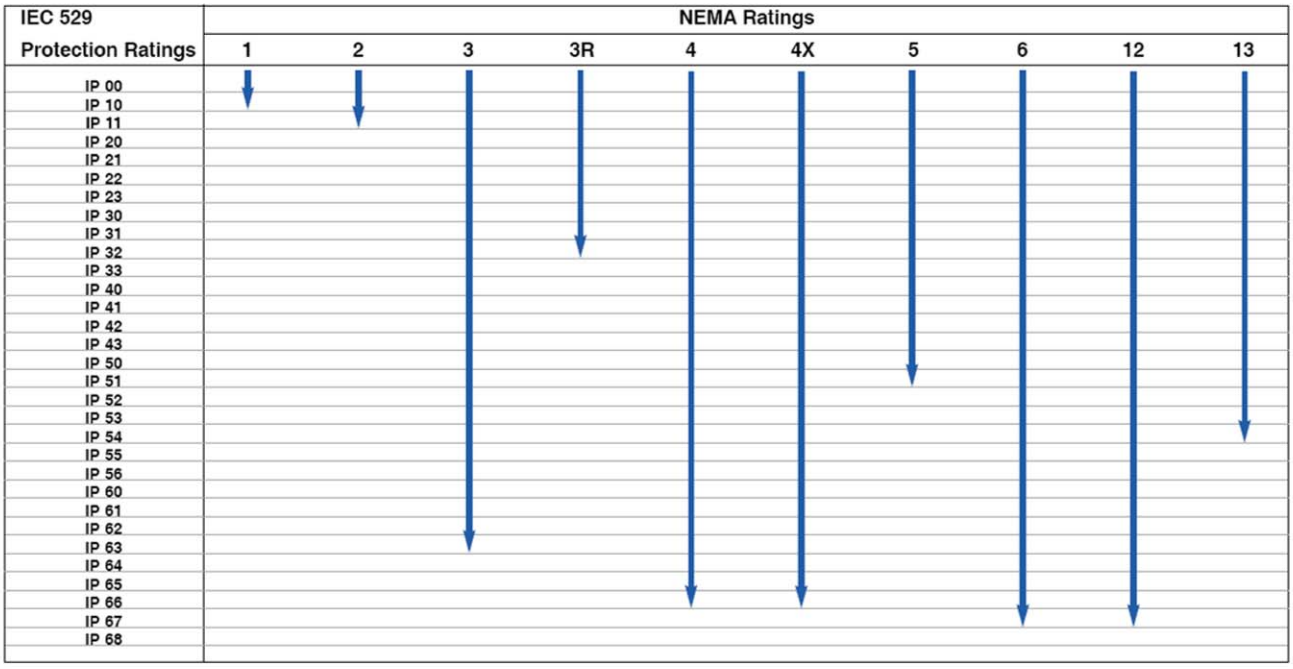
ตารางเปรียบเทียบและความหมายของ IP / NEMA

CHART I International Protection (IP) Ratings to IEC 529

Protection Modes to EN 60529 DIN VDE 0470 Part 1			Second Digit – Degree of Water Protection								
First Digit	Person touching	Protection against penetration of foreign bodies	IP X0 No Protection	IP X1 Protection against dripping water falling vertically	IP X2 Protection against dripping water even when tilted 15° vertically	IP X3 Protection against dripping water even when tilted 60°	IP X4 Protection against splashing water from any direction	IP X5 Protection against water jets from any direction	IP X6 Protection against heavy seas from any direction	IP X7 Protection against effects of immersion	IP X8 Protection against submersion
IP 0X	No protection	No protection	IP 00								
IP 1X	Protection against touching with the hand	Protection against large solid bodies > 50mm Ø	IP 10	IP 11	IP 12						
IP 2X	Protection against touching with the finger	Protect. against med., solid bodies > 12.5 mm Ø	IP 20	IP 21	IP 22	IP 23					
IP 3X	Protection against touching with tools, wires, etc., > 2.5 mm Ø	Protection against small, solid bodies > 2.5 mm Ø	IP 30	IP 31	IP 32	IP 33	IP 34				
IP 4X	Protection against touching with tools, wires, etc., > 1 mm Ø	Protection against small, solid bodies > 1 mm Ø	IP 40	IP 41	IP 42	IP 43	IP 44				
IP 5X	Protection against touching with tools, wires, etc., > 1 mm Ø	Protection against internal dust accumulation	IP 50				IP 54	IP 55			
IP 6X	Protection against touching with tools, wires, etc., > 1 mm Ø	Protection against all dust penetration	IP 60					IP 65	IP 66	IP 67	IP 68

In some countries a third digit is added. It gives information about the mechanical properties of the equipment.
This designation has not yet been standardized according to current DIN and IEC regulations.
Devices in this catalogue correspond to digit IP .7.

CHART II NEMA / IP Cross Reference

The chart below provides a cross-reference from NEMA to International Protection (IP) Ratings. This cross-reference is an approximation based on the most current information available. It is not sanctioned by NEMA, IEC, or any other regulatory body. This chart should be used only as a guideline.