

# GRAU DE PROTEÇÃO

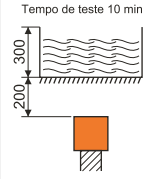
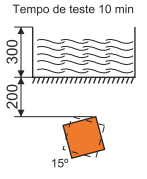
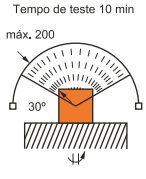
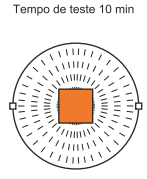
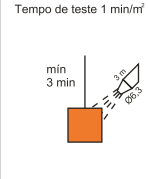
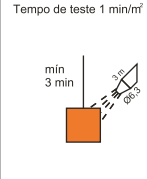
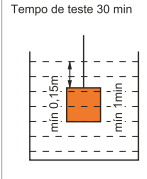
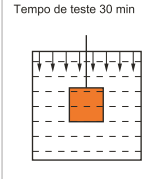
## 2º Numeral

### Grau de proteção contra água

### NEMA x IEC

NEMA	IP20	IP22	IP54	IP55	IP66	IP67
1	●					
2		●				
3				●		
3R		●				
4					●	
4X					●	
6						●
12			●			
13		●				

## 1º Numeral Grau de proteção contra objetos sólidos

	0	1	2	3	4	5	6	7	8
Não protegido									
	0	Tempo de teste 10 min	Tempo de teste 10 min	Tempo de teste 10 min	Tempo de teste 10 min	Tempo de teste 1 min/m <sup>2</sup>	Tempo de teste 1 min/m <sup>2</sup>	Tempo de teste 30 min	Tempo de teste 30 min
		300 200	300 200	máx. 200 30°		min 3 min 30° 60°	min 3 min 15° 90°	min 0,15m min 1min	
		IP 00	IP 01	IP 02	10 l/min 80 kN/m <sup>2</sup>	10 l/min 80 kN/m <sup>2</sup>	12,5 l/min 30 kN/m <sup>2</sup>	12,5 l/min 30 kN/m <sup>2</sup>	
Protegido contra objetos sólidos com Ø maior que 50mm	1	IP 10	IP 11	IP 12	IP 13				
Protegido contra objetos sólidos com Ø maior que 12mm	2	IP 20	IP 21	IP 22	IP 23				
Protegido contra objetos sólidos com Ø maior que 2,5mm	3	IP 30	IP 31	IP 32	IP 33	IP 34			
Protegido contra objetos sólidos com Ø maior que 1mm	4	IP 40	IP 41	IP 42	IP 43	IP 44	IP 45	IP 46	
Protegido contra poeira depressão: 200mm de coluna d'água Máxima aspiração de ar: 80 vezes o volume do invólucro	5					IP 54	IP 55	IP 56	
Totalmente protegido contra a poeira. Mesmo procedimento de teste	6					IP 65	IP 66	IP 67	IP 68