

# IP (Ingress Protection) Ratings Guide

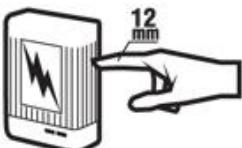
## SOLIDS

**1**



Protected against a solid object greater than 50 mm such as a hand.

**2**



Protected against a solid object greater than 12.5 mm such as a finger.

**3**



Protected against a solid object greater than 2.5 mm such as a screwdriver.

**4**



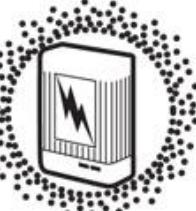
Protected against a solid object greater than 1 mm such as a wire.

**5**



Dust Protected.  
Limited ingress of dust permitted. Will not interfere with operation of the equipment.  
Two to eight hours.

**6**



Dust tight.  
No ingress of dust.  
Two to eight hours.

Rating Example:

**IP65**

INGRESS PROTECTION

## WATER

**1**



Protected against vertically falling drops of water.  
Limited ingress permitted.

**2**



Protected against vertically falling drops of water with enclosure tilted up to 15 degrees from the vertical.  
Limited ingress permitted.

**3**



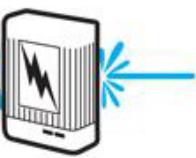
Protected against sprays of water up to 60 degrees from the vertical.  
Limited ingress permitted for three minutes.

**4**



Protected against water splashed from all directions.  
Limited ingress permitted.

**5**



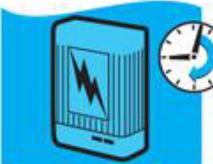
Protected against jets of water.  
Limited ingress permitted.

**6**



Water from heavy seas or water projected in powerful jets shall not enter the enclosure in harmful quantities.

**7**



Protection against the effects of immersion in water between 15 cm and 1 m for 30 minutes.

**8**



Protection against the effects of immersion in water under pressure for long periods.