

ADM GUIDE: ELECTRICAL ENCLOSURES & CABINETS

STEP 1: EVALUATING ENVIRONMENTAL RATINGS



INGRESS PROTECTION (IP) RATINGS

Code measures protection against solids (0-6) & liquids (0-9). IP20 for dry indoor; IP69 for high-pressure hot water.



IK IMPACT & UL94 FLAME RATINGS

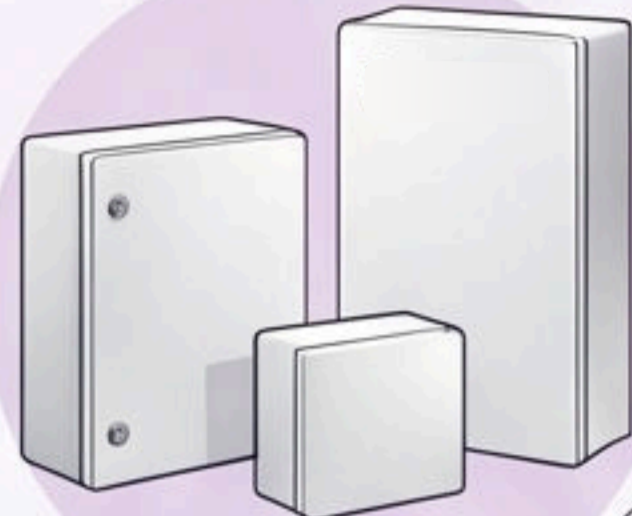
IK00 to IK10 (5kg mass impact). UL94 (HB, V, or 5V) determines burning duration after exposure.



IEC AND AUSTRALIAN STANDARDS

International IEC ratings recognised by Australian regulators; typically have reciprocal AS rating for local compliance.

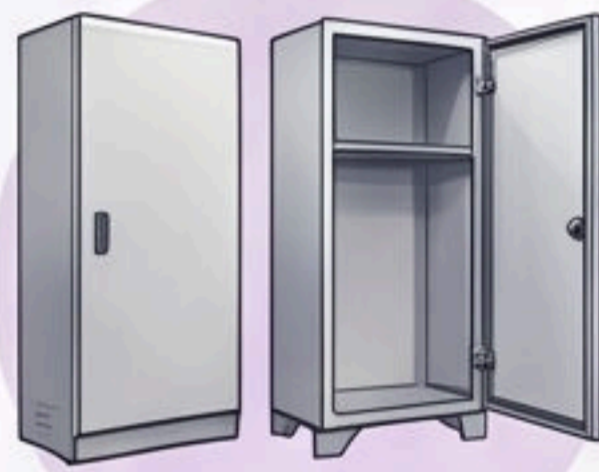
STEP 2: SELECTING THE MATERIAL SUBSTRATE



PowerNex ABS

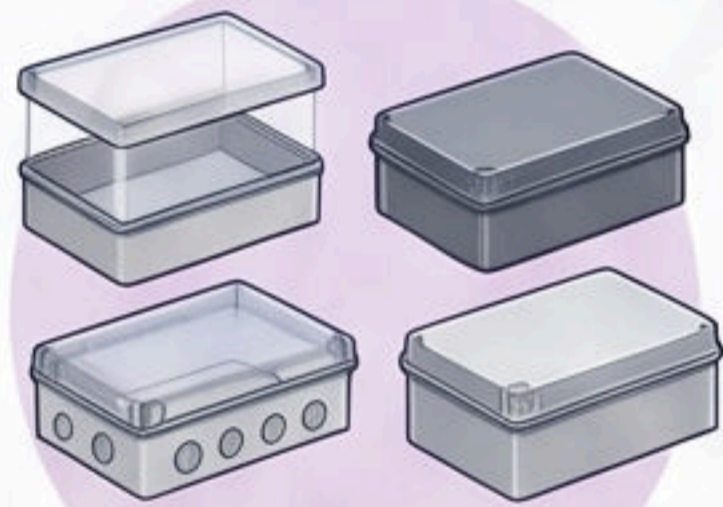
ABS PLASTIC (Indoor Utility)

Cost-effective, rust-resistant; best for server rooms (typically IP66/IK08). Susceptible to UV.



METALLIC SUBSTRATE (Industry Standard)

| Feature | ABS Plastic | Polycarbonate | Mild Steel (Metal) |
|-----------------|--------------------------|---------------------|-------------------------|
| Best Use | Indoor / General | Outdoor / High-Heat | Heavy Industrial |
| UV Resistance | Low (can become brittle) | High | High (Powder Coated) |
| Impact Rating | IK08 | IK09 | IK10 |
| Heat Sink | No | No | Yes |
| RF Transparency | Yes (Good for IoT) | Yes (Good for IoT) | No (Requires shielding) |



POLYCARBONATE (CLEAR LID) POLYCARBONATE (SOLID COVER)

POLYCARBONATE

(The Gold Standard)

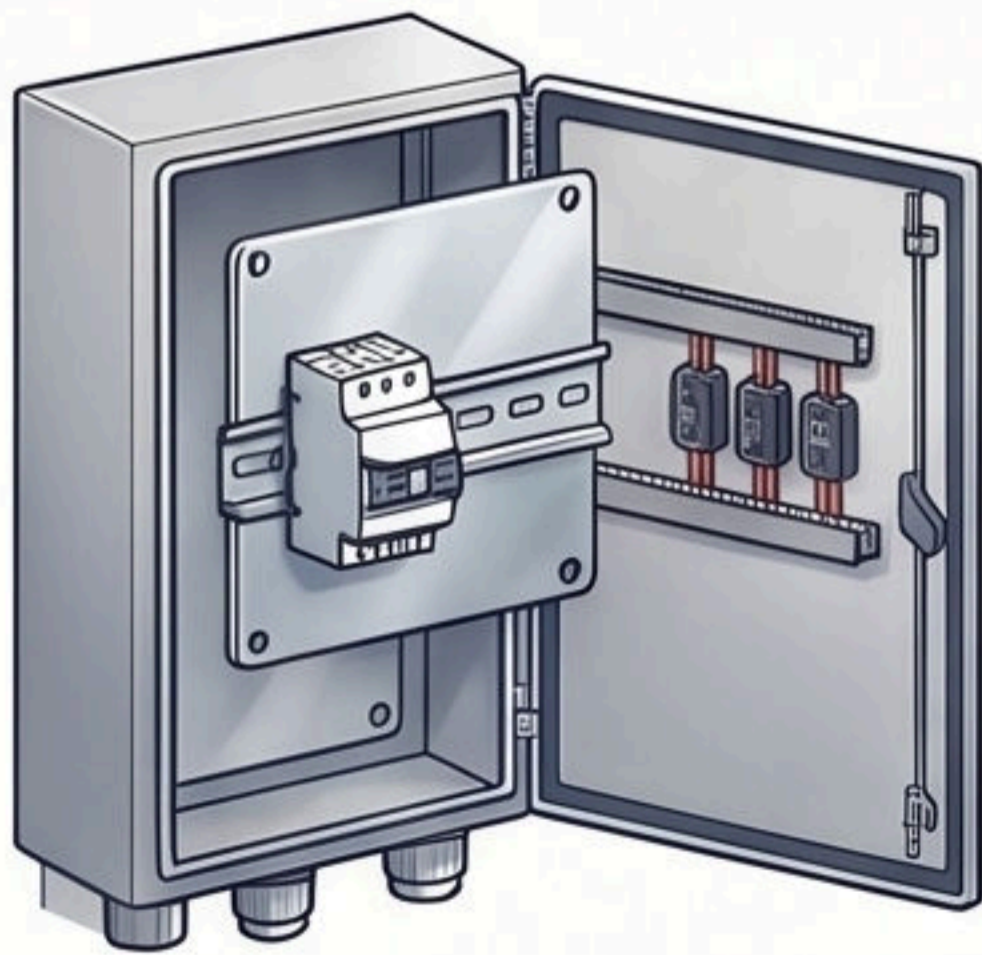
UV-stable, comparable in strength to metal; ideal for outdoor, high heat & impact (typically IP66/IK09).

STEP 3: INSTALLATION & CUSTOMISATION



CABLE GLAND SELECTION

Use appropriate glands (nylon for plastic, metal for metal) to maintain IP66 seals.



MOUNTING & DIN RAILS

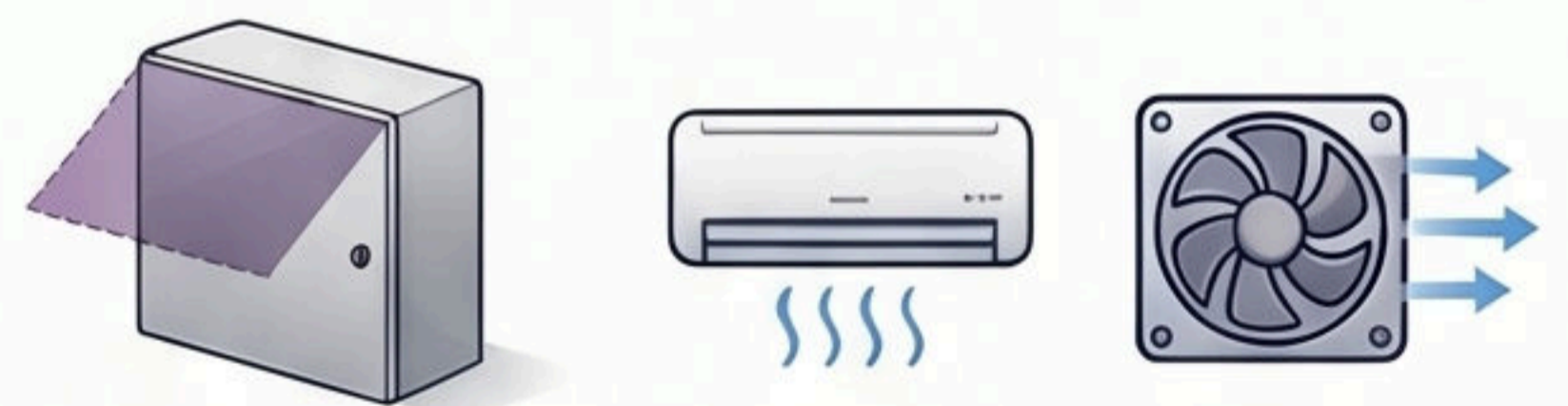
For metal, use removable 2mm galvanised steel mounting plate to securely fasten TS-35 DIN rails and components.



ESSENTIAL ACCESSORIES

Enhance functionality with custom switches, sensors, alarms, buzzers, and cooling fans to suit specific application demands.

STEP 4: THERMAL MANAGEMENT & CONDENSATION

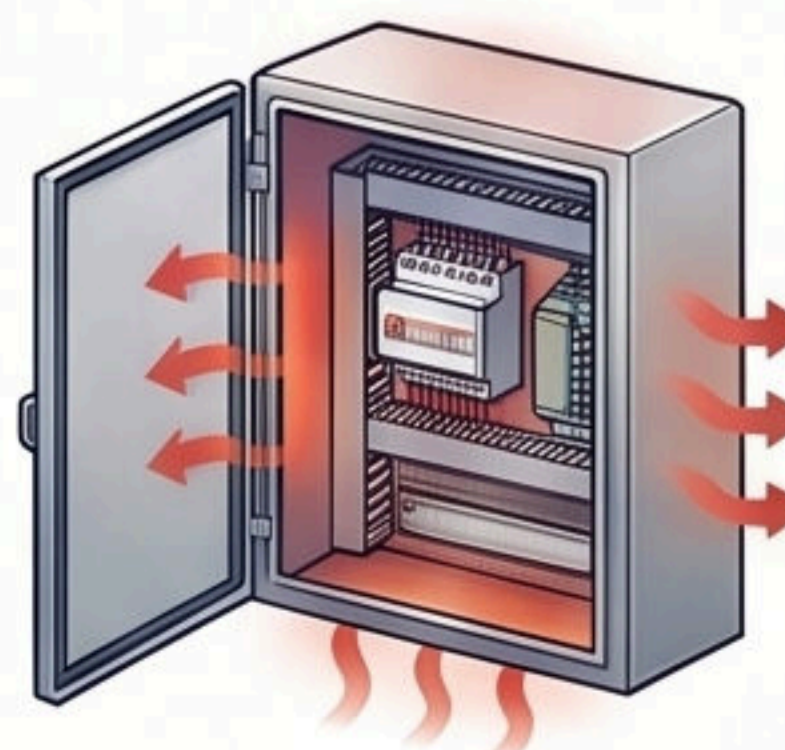


ACTIVE COOLING: Manage heat via shading, air conditioners, or fan systems for indoor units.



COMBATting INTERNAL CONDENSATION

Pressure differentials suck in cool air; use vents or heaters to prevent moisture buildup.



METAL AS A HEAT SINK

Powder-coated steel enclosures naturally assist in thermal management by transferring heat away from power supplies.