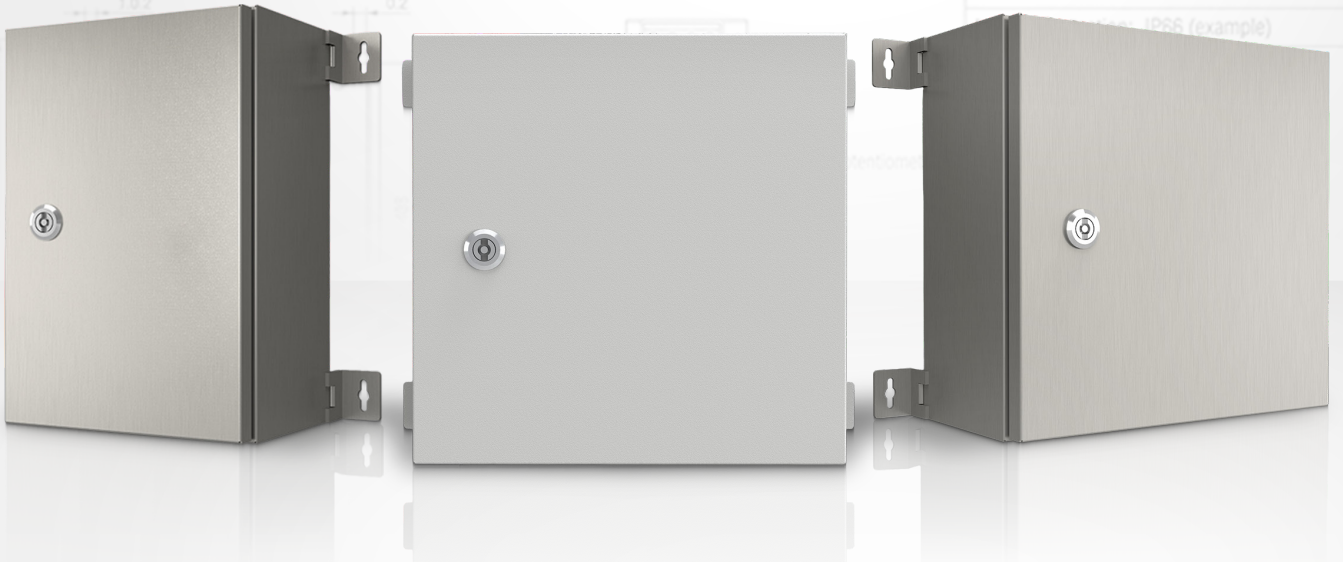


INSTALLATION AND OPERATING MANUAL

v1.0.0



ELECTRICAL ENCLOSURES VE - STEEL RANGE

Economy Essentials. Built to Standard.

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GENERAL INFORMATION

1. Introduction

- Nature of Supply: 1000V AC, 1000 Hz or 1500V DC for end unit (Empty Enclosure).
- This manual provides detailed instructions for the safe installation, operation, and maintenance of VERSCH steel electrical enclosures. These enclosures are engineered to protect low voltage electrical equipment, including switchgear and controlgear assemblies, against dust, water, and physical impact in a wide range of environments. By following this guidance, installers and operators can ensure long-term performance, compliance with international standards, and maximum protection of equipment.

2. Safety Information

- Installation and servicing must be performed by qualified personnel.
- Always follow local and national electrical regulations and safety codes.
- Before working on an enclosure, disconnect power and lock out all energy sources.
- Wear appropriate personal protective equipment (PPE), including gloves and eye protection.
- Never operate an enclosure with open doors in hazardous environments.
- Ensure doors, locks, and seals are properly secured before energising equipment.

3. Product Description

- Construction: Electro-galvanised steel 1.2mm fully welded body and 1.5mm removable door with powder coating (80–120 µm); earth studs provided.
- Protection Ratings: Up to IP66 ingress protection and IK10 impact resistance.
- Sealing: Continuous formed Polyurethane gasket seal.
- Hinges: Concealed hinges.
- Accessories: Gland plate, device mounting plate, and external wall-mount brackets.
- Compliance: IEC/EN 62208, IEC/EN/AS 60529.

4. Handling, Storage & Transport

- Transport: Secure doors to prevent swinging. Protect coated surfaces from scratches or abrasion. Avoid impacts.
- Storage: Store indoors or under cover, upright on a flat surface. Keep dry, dust-free, and shielded from UV until installation.
- Handling: Do not drag enclosures across surfaces. Lift using appropriate equipment or lifting points to prevent structural distortion.
- Any coating damage during transport must be repaired immediately before installation.

5. Pre-installation Checks

Before installation:

- Inspect for visible damage, dents, or scratches on coating and seals.
- Verify the model, size, and IP/IK rating match project requirements.
- Confirm accessories are present and in good condition.
- Ensure the mounting location provides adequate structural support and clearance for doors and cabling.
- Clean sealing surfaces if contaminated with dust or debris.

6. Installation Instructions

6.1 Mounting

- Use appropriate fixings (anchors, bolts) rated to support the enclosure plus equipment load.
- Maintain clearance for door swing and ventilation.
- Never drill additional holes into the body; use mounting holes and gland plates to preserve IP rating.

GENERAL INFORMATION

6.2 Orientation

- Position gland plates as intended to minimise water ingress.

6.3 Sealing

- Ensure gaskets are seated correctly and surfaces are undamaged.
- Ensure seals are clean and free from dirt and debris.

6.4 Door Hinges & Locks

- Confirm hinges are correctly secured and locks operate smoothly.
- Lubricate with non-corrosive lubricant if required.

6.5 Cable Entry

- Install cables via gland plates.
- Use suitable cable glands matched to cable size.
- Seal unused entries with blanks.

6.6 Device Mounting Plate

- Install the mounting plate before equipment.
- Allow clearance for wiring, airflow, and maintenance.

7. Wiring & Grounding

- All wiring must be carried out by licensed electricians.
- Route wiring neatly, using cable management accessories.
- Provide strain relief at entries to prevent cable stress.
- Connect enclosure body to earth via provided earth stud.
- Ensure bonding continuity between body, doors, and mounting plates.
- Test earth connection before energising.

8. Environmental Considerations

- Protect enclosures from mechanical damage and chemical attack.
- Powder coating provides UV and corrosion resistance. Harsh conditions require more frequent cleaning and inspection.
- For high-heat applications, use ventilation or thermal management (fan units, filters, or air conditioning).
- In coastal or corrosive atmospheres, rinse surfaces more frequently to remove salt or contaminants.

9. Routine Maintenance

| Items | Action | Frequency |
|----------------------|--|-------------|
| Exterior surfaces | Inspect for scratches, chips, corrosion | Semi-annual |
| Seals & gaskets | Inspect, clean, replace if cracked or deformed | Semi-annual |
| Locks & hinges | Check operation, lubricate | Semi-annual |
| Earth connection | Inspect and test continuity | Annual |
| Cable glands | Check tightness and sealing | Semi-annual |
| Internal cleanliness | Remove dust and debris | Semi-annual |

Ventilation accessories clean/replace filters as per accessory instructions Quarterly (if fitted)

GENERAL INFORMATION

10. Powder Coating Finish Care

- Durability: Powder coating is applied at 80–120 µm thickness, providing corrosion resistance and UV stability.
- Cleaning:
 - Indoor units: Clean once a year.
 - Outdoor/industrial/coastal units: Clean every 3–6 months.
 - Use mild pH-neutral detergent and warm water. Apply with a soft cloth or sponge, rinse thoroughly, and dry.
- Avoid: Harsh solvents, abrasive cleaners, or high-pressure water jets, which can damage the coating.
- Contaminants: Remove bird droppings, grease, or embedded rust to prevent staining.
- Repairs: For chips/scratches, treat exposed metal with zinc-rich primer and colour-matched touch-up paint.
- High exposure: in coastal/industrial locations, additional rinsing and protective coatings may extend coating life.

11. Troubleshooting

| Issue | Possible Cause | Remedy / Action |
|------------------------|---|--|
| Water ingress | Damage gasket, misaligned door, poor gland seal | Replace gasket, realign door, reseal entries |
| Rust / Corrosion | Coating damage, unsealed scratch | Clean, prime, and paint exposed area |
| Door difficult to open | Dirty hinges, misalignment | Clean, lubricate, realign |
| Lock failure | Wear, corrosion, dirt | Lubricate or replace lock |
| Overheating | Insufficient ventilation, blocked filters | Clean filters, add thermal management |
| Fading finish | UV exposure, improper cleaning | Clean regularly, avoid harsh chemicals, touch-up as required |

12. Disposal & End of Life

- Separate steel, aluminium, and stainless steel components for recycling.
- Dispose of gaskets, plastics, and coatings per local environmental regulations.
- Packaging materials are recyclable and should be disposed of responsibly.

13. Warranty & Support

- VERSCH provides a 1-year warranty against defects in materials and workmanship.
- Does not cover damage from misuse, improper installation, lack of maintenance, chemical abuse, or cross-contamination.
- For support, provide model number, serial (if applicable), date of purchase, and photos of the issue if possible.
- Contact VERSCH through their official channels or local sales agents.