

INSTALLATION AND OPERATING MANUAL

IP66 FLOOR-MOUNTED DATA RACKS (SD RANGE)

v1.0



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GENERAL INFORMATION

1. Introduction

IP Enclosures' IP66 Floor Mounted Data Racks are designed for protecting sensitive networking, server, and communication equipment in harsh industrial and outdoor environments. With ingress protection rating of IP66 and IK10 impact resistance, these racks combine secure housing, superior sealing, and durable powder-coated steel construction.

They are widely used for telecommunications, ITS, mining, industrial networks, and infrastructure projects requiring high protection levels.

This manual provides installation, handling, and maintenance instructions to ensure reliable performance and extended service life.

2. Safety Information

- Installation and wiring must be performed by qualified personnel.
- Follow national and site-specific electrical, mechanical, and safety regulations.
- Disconnect all power before servicing; apply lock-out/tag-out procedures.
- Wear PPE: safety footwear, gloves, and safety glasses.
- Anchoring mandatory: secure the rack to the floor to prevent tipping.
- Use lifting equipment rated for the load; never lift by doors, side panels, or roof.
- Doors and panels must be closed and locked during lifting/transport.
- Do not modify structure or sealing surfaces without manufacturer approval.

3. Product Description & Specifications

Typical features of IP66 Floor-Mounted Data Racks:

- Material: 2.0 mm galvanised steel frame and panels, powder-coated.
- Ingress Protection: IP66.
- Impact Rating: IK10.
- Doors: Front and rear lockable doors; concealed hinges; earth bonding studs.
- Side Panels: Removable and lockable for cable access.
- Rack Rails: 19" vertical rails, adjustable; supplied as standard.
- Gasket: Continuous polyurethane seal.
- Finish: Powder-coated epoxy-polyester, 80–120 µm, RAL 7035 (light grey).
- Accessories: Fan kits, filters, gland plates, sunshields, plinths, inner doors, cable management.

4. Handling, Storage & Transport

4.1 Handling

- Always close and lock doors/panels before lifting.
- Use forklifts from beneath base frame or crane + spreader bar and padded slings.
- Protect finish from strap abrasion with edge guards.

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4.2 Storage

- Store indoors or undercover; dry and ventilated environment.
- Keep off ground to prevent moisture exposure.
- Avoid stacking unless designed/package to allow it.

4.3 Transport

- Transport upright, secured with rated tie-downs.
- Anchor at base and mid-height; use padding at strap points.
- Inspect immediately upon delivery for shipping damage.

5. Pre-Installation Checks

- Confirm correct rack size, RU count, and accessories.
- Inspect coating, seals, hinges, and gasket condition.
- Ensure site floor is level and strong enough to support rack and installed equipment.
- Verify clearance for door swing, ventilation, and service access.

6. Installation Instructions

6.1 Positioning

- Place rack on prepared foundation.
- Confirm level alignment.

6.2 Anchoring

- Mandatory: secure rack using anchor bolts through base frame.
- Prevent tipping during installation or equipment loading.

6.3 Cable Entry

- Use gland plates for cable entry; fit appropriate IP-rated glands.
- Seal unused openings.

6.4 Rack Accessories

- Fit 19" rails, trays, or fan/filter kits before installing equipment.
- Ensure airflow paths are unobstructed.

6.5 Doors & Seals

Verify correct compression of gasket; lock system engages fully.

7. Wiring & Grounding

- All wiring must comply with national standards.
- Use strain relief on all cable entries.
- Earth-bond doors, side panels, and rack rails to the main earth stud.
- Verify continuity before energising.

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8. Environmental & Material Considerations

- Powder-coated galvanised steel protects against corrosion; still inspect for chips or scratches.
- For high UV/salt exposure, fit rain hoods or sunshields.
- Avoid corrosive chemical exposure.
- For thermal management, use fan/filter kits or air-conditioning units (when specified).

9. Routine Maintenance

Recommended schedule (adjust for environments):

Items	Action	Interval
Powder-coated surfaces	Inspect for damage; touch up as required	6–12 months
Seals/gaskets	Clean and inspect; replace if cracked or compressed	6 months
Hinges & locks	Check operation, lubricate	6 months
Rack rails & fixings	Inspect for corrosion/looseness	12 months
Earth Bonding	Test continuity	12 months
Interior	Remove dust; check for condensation	6 months

10. Powder-Coating Finish Care

- Clean with mild pH-neutral detergent and water.
- Rinse thoroughly and dry.
- Remove salt, chemicals or bird droppings promptly.
- Avoid abrasive pads, steel wool, or strong solvents.
- Touch up any coating chips immediately to prevent corrosion.

11. Troubleshooting

Issue	Likely Cause	Remedy
Water ingress	Seal damage, door misalignment, unsealed gland	Replace gasket, realign door, re-seal entries
Door/lock jammed	Lack of lubrication, dirt	Clean and lubricate
Corrosion at edges	Coating damage, harsh exposure	Touch up, increase inspections
Overheating inside	Insufficient ventilation, blocked fan/filter	Clean/replace filters, consider air-conditioning

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12. Disposal & End of Life

- Recycle steel components.
- Dispose of gaskets, seals, plastics, and electrical accessories per regulations.
- Recycle packaging materials.

13. Warranty & Support

- Warranty: 5 years against material/workmanship defects.
- Exclusions: damage from misuse, neglect, poor maintenance, modification.
- Support: Provide rack model, RU count, serial (if present), site details, and photos when requesting service.

14. Commissioning Checklist

- Rack anchored to floor securely
- Doors/gaskets intact, locks operate correctly
- Cable entries sealed, glands tight
- Earth bonding complete, continuity verified
- Powder coat intact, chips touched up
- Accessories installed correctly
- Maintenance schedule provided to operator
- Documentation and photos completed