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IP54 INDOOR WALL-MOUNT ENVIRONMENT CABINETS

TECHNICAL SPECIFICATION (Applicable to All Manufacturers)

1. SCOPE

- It covers the design, manufacturing, certification, cable entry, ventilation, lock, and installation requirements of wall-mount environment cabinets suitable for indoor use with IP54 performance. They shall be used for housing 19-inch equipment in industrial facilities, production lines, and technical areas.

2. DEFINITIONS AND ABBREVIATIONS

- IP54:** Refers to dust protection and protection against water splashes from all directions according to EN 60529 standard.
- Zamak:** Zinc-based die-cast metal lock material.
- PG Gland:** Watertight cable entry gland.
- Gland Plate:** Flat cable entry panel.
- DIN Rail:** Refers to the **35 mm** electrical panel standard rail.
- PDU:** Refers to the power distribution unit.

3. APPLICABLE STANDARDS

- EN 60529 (minimum IP54), IEC 60297, TS EN IEC 61587-1:2022, DIN EN 10130, TS EN ISO 9227 / ASTM B117, TS EN ISO 2409 / ASTM D3359, TS EN ISO 2178 / ASTM B499, and TS EN 13501-1 standards shall be taken as the basis.

4. CERTIFICATION

- The manufacturer shall hold an ISO 9001:2015 certificate.
- An IP55 / IP54 test report in compliance with EN 60529 standard shall be obtained from an accredited laboratory for the product.
- The product shall hold a UL product safety certificate.
- The product shall hold a CE certificate of conformity.
- The product shall hold a RoHS 2 declaration of conformity.
- A corrosion test report showing a minimum **900-hour** performance shall be submitted for the product.

5. DIMENSIONS AND CAPACITY

- The cabinets shall comply with IEC 60297 standard.
- Internal capacity shall be available in **7U, 9U, 12U, and 16U** options.
- External width shall be **600 mm**.
- External depth shall be **450 mm or 600 mm**.



6. MAIN BODY STRUCTURE

- The cabinet shall be fully welded and of monoblock construction.
- The body shall have multi-layer bending technology and shall provide a minimum static load capacity of **100 kg**.

7. FRONT DOOR AND GASKET SYSTEM

- The front door shall be available in full-metal or glazed option and shall have a cast polyurethane gasket structure.
- The front door shall have a minimum **3-point** espagnolette rod system and shall support EN 60529 IP55 standard.
- The handle lock shall be manufactured from Zamak or equivalent die-cast metal material and shall be resistant to corrosion and vandalism.
- The front door shall be openable by minimum **135°**.

8. CANOPY AND VENTILATION

- The canopy shall be designed to cover the fan module for protection against dripping water.
- There shall be a minimum **10 mm** hot air discharge clearance between the fan and the canopy.
- The canopy shall be externally screw-fastened, hinged, and openable/closable.
- The fan system shall be of **2-fan** or **4-fan** ball-bearing type and thermostat controlled on the top chassis.
- Each fan shall have a maximum noise level of **47 dBA** and a minimum airflow rate of **2.3 m3/min**.
- Fans shall be available with **-48V DC** or **220V AC** supply options.
- A filtered plastic ventilation panel shall be provided on the top chassis.

9. WALL MOUNTING KITS

- Wall mounting brackets with a minimum thickness of **4 mm** shall be supplied as standard.

10. PAINTING AND SURFACE TREATMENT

- The cabinets shall be coated with electrostatic RAL 7035 White / Light Grey powder paint.
- The manufacturer's coating application shall have a minimum **900-hour** or higher salt spray test performance.
- The powder paint to be used shall be non-ignitable and flame non-propagating in accordance with TS EN 13501-1 A1 or equivalent standard.
- Paint surface performance shall comply with TS EN ISO 2409 / ASTM D3359 standards.
- Corrosion resistance shall comply with TS EN ISO 9227 / ASTM B117 standards.



11. 19-INCH MOUNTING RAILS

- The cabinets shall include **2** front, depth-adjustable 19-inch mounting rails with a minimum thickness of **1.5 mm** and screen-printed U markings.

12. CABLE ENTRY SYSTEM

- The cabinet bottom chassis shall include **2 pcs PG 21**, **1 pc PG 48**, and **2 pcs 28 mm** gland-compatible entry points with blind plugs that can be opened.
- As standard, **1 pc** Gland Plate shall be included in the product and shall be field-drillable according to site requirements.

13. GROUNDING

- All metal components shall be in electrical continuity, and grounding resistance shall not exceed **0.1 ohm** in compliance with IEC 61010-1 standard.

14. MATERIAL STANDARDS

- DKP sheet steel shall comply with DIN EN 10130 DC01 standard and RoHS requirements.
- Powder paint shall meet ISO 9001, ISO 2178, ISO 2813, ISO 6272, ISO 8130 series, and RoHS requirements.
- Fasteners shall comply with DIN 7985, DIN 965, DIN 7981, DIN 934, DIN 985, and DIN 933 standards and RoHS requirements.
- Locks shall comply with DIN 1743 and DIN 53571 standards and RoHS requirements.

15. ACCESSORIES

- The fan unit shall be of **2-fan** or **4-fan** ball-bearing type and thermostat controlled.
- Each fan shall have a maximum noise level of **47 dBA** and a minimum airflow rate of **2.3 m3/min**.
- The fan unit shall comply with CE 2006/42/EC, 2014/35/EU, and 2014/30/EU directives.
- The fan unit shall also comply with EN ISO 12100, EN 55032, EN IEC 62368-1, EN 60204-1, and EN IEC 61000-6-1 / -3 standards.
- An accredited test report shall be submitted; CE declaration alone shall not be accepted.
- The PDU shall have an aluminium body.
- The PDU shall be **1x16 A** fused, **1U** type, and shall have a minimum of **6** socket outlets.
- The PDU shall be CE certified.

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