



EPOXY RESIN CAST DRY-TYPE TRANSFORMERS

INTEGRATED SOLUTIONS

As manufacturers of dry and oil-filled transformers, we offer the most suitable technology for each application, providing technical advice to customers to ensure safety, reliability, and efficiency throughout the entire service life of the equipment.



FOHAMA

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1. Technical description

Three-phase dry-type distribution transformers, with aluminum windings encapsulated in epoxy resin, **represent a technical solution particularly suited to specific applications**, depending on installation requirements, safety considerations, and environmental conditions.

Available with or without protective enclosure and with **AN (natural air)** or **FN (forced air)** cooling, they are designed for voltage levels up to **36 kV**.

They are commonly used in **indoor transformer stations**, compact substations, and prefabricated units, especially where site conditions recommend the use of equipment **without insulating liquids**, such as public buildings, specific industrial facilities, and environments with particular operational safety requirements.

MAIN FEATURES

- Dry-type design with epoxy resin encapsulated windings.
- Suitable for continuous operation in indoor installations.
- Good performance under humidity, dust, and demanding environments.
- AN or FN cooling depending on power rating and load conditions.
- Robust and reliable construction.

SERVICE CONDITIONS

- Maximum ambient temperature: 40 °C
- Minimum ambient temperature: -5 °C
- Relative humidity: up to 100%

STANDARDS AND CERTIFICATIONS

- IEC 60076 / IEC 76 – Power transformers
- IEC 726 – Dry-type transformers
- IEC 60270 – Partial discharge
- IEC 60551 – Cast resin dry-type transformers

C2 – E2 – F1 certification, issued by CESI (Italy), confirming suitability for operation under severe environmental and climatic conditions, and verifying the self-extinguishing properties of the transformers according to IEC 60076-11:2004.



2. Design and construction

- Epoxy resin encapsulated windings with high electrical and mechanical strength.
- Smooth and homogeneous coil surfaces.
- Ferrous parts surface-treated for corrosion protection.
- Design capable of withstanding thermal and dynamic short-circuit stresses.

No-load and load losses comply with IEC standards and tolerances and are detailed in the corresponding technical documentation.

3. Voltage Regulation

- Medium voltage tap changer
- Adjustment via removable links
- Operation with the transformer de-energized

4. Standard equipment

- Tinned copper HV terminals
- LV terminals with aluminum bars and bimetallic washers
- Grounding terminal
- Bidirectional wheels for mobility
- Lifting lugs and anchoring points
- PT100 thermal sensors in LV windings
- Electronic temperature control unit
- Stainless steel nameplate

5. Tests

- Routine tests performed on 100% of units
- Test reports supplied with each transformer
- Tests carried out in accordance with IEC standards and client specifications



6. Typical applications

- Indoor transformer substations
- Compact substations and prefabricated units
- Industrial and commercial installations
- Public and service buildings