



**WE TRANSFORM  
ENERGY INTO  
SUSTAINABLE GROWTH**



# TECHNICAL SHEET **NETWORK TRANSFORMERS**



**F-MKT-06.E.1**



## TECHNICAL SHEET NETWORK TRANSFORMERS

### Application:

Sub-way type and Vault-type network transformers are used mainly in underground distribution circuits that are susceptible to corrosive environments and temporary or extended flooding conditions.

Network transformers are built to operate in an underground chamber or vault subject to potential flooding under a set of predetermined pressure and time conditions (24 hours under a 40 cm water column measured from the upper part of the transformer).



### Scope of the offer:

Designed and manufactured radial or loop configurations, depending on the customer's requirements.

Manufactured in compliance with NTC standards (occasionally submersible transformers), ANSI and EDC standards (submersible transformers) and/or individual customer specifications.



### Ratings (kVA):

Three-phase: 30 kVA to 2500 kVA.

### Basic Insulation Level:

From BIL 95 kV to BIL 150 kV

### Typical construction type:

Transformers typically consist of an active composed of the core (magnetic circuit), the coil (electric circuit) and the yoke clamp, which is determined in accordance with the type of transformer and placed inside a tank that provides the equipment with specific features, depending on its intended application.

#### Coils:

Rectangular section with copper or aluminum windings.

Insulation: High-quality paper with epoxy resin coatings.

#### Cores:

Shell Type or Core Type, wound, set up in groups for easy assembly and disassembly without loss of dimensional characteristics, guaranteeing low losses and excitation currents.

Materials: Cold-rolled grain-oriented silicon electrical steel sheet with insulating coating on both sides, low core loss and high permeability.

## Yoke clamps:

Made of ASTM A36 steel, they clamp the core, with individual bolted caps enabling easy disassembly for maintenance purposes.

They guarantee high resistance to short circuit mechanical stresses and low noise levels

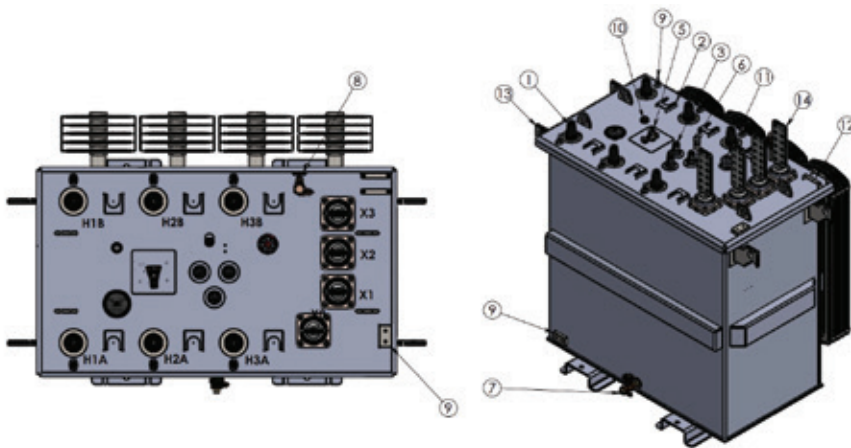
## Tanks:

The TANKS are made of corrosion-resistant material. They are made of AISI 304 Stainless steel (SAE 316L as optional) and include with a single coating of finishing paint for appearance.

Radiators: Depending on the voltage, a radiation system with vertical blades may be used, enabling a more compact construction of the tank.

## Accessories and protection devices:

In order to ensure superior operational safety and reliability for underground applications, the connection at the high voltage end includes dead front components, such as vertical bayonet sets, canister fuses, long-shank bushing wells that can be immersed in oil, ON-OFF vertical loadbreak switches, oil level gauges, and any additional accessories requested by the customer.



DESCRIPTION	
1	Bushing wells
3	Parking stands
4	Bayonet-type fuse holder set
5	Bayonet fuses
7	Loadbreak switch
9	Pressure relief valve
10	Drain valve with sampling device
11	Filling plug
12	Grounding pads
13	Oil level indicator
14	De-energized tap changer
15	Nameplate
16	Lifting lugs
17	Low voltage bushings

## Optional accessories

- Insert bushings
- Current limiting fuses
- Elbow loadbreak connectors



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