

# ZiyaoPower S22-M-NX1 Oil-Immersed Transformer

## Technical Datasheet

### 1. Application

ZiyaoPower **S22-M-NX1 fully-sealed oil-immersed distribution transformers** are designed for outdoor and indoor power distribution networks. The hermetically-sealed corrugated tank design eliminates the need for a conservator, preventing oil oxidation and moisture ingress. These transformers are optimized for long service life (25+ years) in utility, industrial, and commercial power distribution applications.

**Efficiency:** Grade 1 Energy Efficiency (NX1, Top Tier), GB 20052-2020

Typical applications: utility distribution substations, industrial plants, mining operations, oil & gas facilities, commercial buildings, and renewable energy (wind/solar) step-up stations.

### 2. Technical Parameters

|                          |  |
|--------------------------|--|
| Rated High Voltage       | 10 kV (11 kV, 20 kV, 33 kV customizable)               |
| Rated Low Voltage        | 0.4 kV   |
| Rated Frequency          | 50 Hz / 60 Hz  |
| Tap Range (Off-circuit)  | +2 x 2.5% (standard)                                   |
| Vector Group             | Dyn11 / Yyn0   |
| Cooling Method           | ONAN (Oil Natural Air Natural)                         |
| Insulation Level (LI/AC) | 75 kV / 35 kV (10 kV class)                            |
| Tank Type                | Hermetically sealed, corrugated fin wall               |
| Dielectric Fluid         | Mineral oil (IEC 60296) / Natural ester (optional)     |
| Protection Devices       | Pressure relief valve, Buchholz relay, oil level gauge |
| Applicable Standards     | IEC 60076, IEEE C57.12.00, GB 1094, GB 20052           |

### 3. Loss & Performance Data

| Model         | kVA  | P0(W) | 75(V) | 0.8(%) | 4.0(%) | Oil(L) | W(mm) | H(mm) | mm   |
|---------------|------|-------|-------|--------|--------|--------|-------|-------|------|
| S22-M-30/10   | 30   | 45    | 510   | 0.8    | 4.0    | 190    | 910   | 520   | 970  |
| S22-M-100/10  | 100  | 84    | 1280  | 0.6    | 4.0    | 425    | 1100  | 600   | 1150 |
| S22-M-200/10  | 200  | 134   | 2211  | 0.4    | 4.0    | 632    | 1250  | 660   | 1300 |
| S22-M-315/10  | 315  | 190   | 3102  | 0.3    | 4.0    | 858    | 1350  | 740   | 1400 |
| S22-M-400/10  | 400  | 230   | 3661  | 0.25   | 4.0    | 1038   | 1400  | 780   | 1480 |
| S22-M-500/10  | 500  | 269   | 4382  | 0.25   | 4.0    | 1219   | 1500  | 820   | 1550 |
| S22-M-630/10  | 630  | 319   | 5022  | 0.2    | 4.5    | 1399   | 1600  | 860   | 1620 |
| S22-M-800/10  | 800  | 392   | 6075  | 0.2    | 4.5    | 1670   | 1700  | 900   | 1720 |
| S22-M-1000/10 | 1000 | 465   | 8343  | 0.2    | 4.5    | 1941   | 1800  | 950   | 1800 |
| S22-M-1250/10 | 1250 | 543   | 9720  | 0.15   | 4.5    | 2302   | 1900  | 1000  | 1900 |
| S22-M-1600/10 | 1600 | 661   | 11745 | 0.15   | 4.5    | 2798   | 2000  | 1050  | 2000 |
| S22-M-2000/10 | 2000 | 818   | 14823 | 0.15   | 5.0    | 3339   | 2150  | 1100  | 2100 |
| S22-M-2500/10 | 2500 | 974   | 17172 | 0.15   | 5.0    | 3971   | 2300  | 1150  | 2200 |

Oil volume and dimensions are approximate. Contact ZiyaoPower for certified data.

### 4. Key Features

1. Hermetically sealed corrugated tank: zero oil contact with atmosphere, extended oil life

2. High-grade grain-oriented silicon steel core: low no-load loss, meets GB 20052 efficiency tiers
3. Full-cover vacuum oil filling: eliminates internal air pockets for superior dielectric strength
4. Integrated pressure relief valve and Buchholz relay (gas + oil surge detection)
5. Highest efficiency, lowest TCO over lifecycle, ultra-low no-load loss
6. Corrugated fin cooling panels: maximized heat dissipation without external radiators
7. Drain valve + sampling valve for routine oil testing (DGA, moisture, breakdown voltage)
8. Hot-dip galvanized or painted steel tank with C3/C4 corrosion class options

## 5. Standards & Certifications

- IEC 60076: Power Transformers (all relevant parts)
- IEEE C57.12.00: Standard for Liquid-Immersed Distribution Transformers
- GB 1094 / GB 20052: Chinese national transformer standards
- ISO 9001: Quality Management System
- Type tested: temperature rise, lightning impulse, short-circuit withstand

## 6. How to Order

Specify: **S22-M-NX1-[kVA]/[HV kV]-[LV kV] [Vector Group] [Options]**

Example: **S22-M-NX1-1000/10-0.4 Dyn11 Natural Ester**

### Available options:

- Natural ester fluid (FR3 / MIDELE N) for enhanced fire safety and biodegradability
- Automatic tap changer (OLTC) for on-load voltage regulation (SZ13 model only)
- Winding temperature indicator (WTI) and oil temperature indicator (OTI)
- Bay-o-net fuse protection with remote alarm
- Off-circuit tap changer with padlock (standard)
- Special voltage ratios: 11 kV, 20 kV, 33 kV primary

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ZiyaoPower Electrical Co., Ltd.

[www.ziyaopower.com](http://www.ziyaopower.com) | [sales@ziyaopower.com](mailto:sales@ziyaopower.com)

This datasheet is for reference only. Specifications subject to change without notice.