

ZiyaoPower S20-M-NX2 Oil-Immersed Transformer

Technical Datasheet

1. Application

ZiyaoPower **S20-M-NX2 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 2 Energy Efficiency Premium (NX2), 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	kV	P0(W)	P75(W)	V0(%)	V75(%)	Oil(L)	W(mm)	H(mm)	W(mm)	H(mm)
S20-M-30/10	30	56	567	1.0	4.0	200	910	520	970	
S20-M-100/10	100	105	1422	0.7	4.0	447	1100	600	1150	
S20-M-200/10	200	168	2457	0.5	4.0	665	1250	660	1300	
S20-M-315/10	315	238	3447	0.4	4.0	903	1350	740	1400	
S20-M-400/10	400	287	4068	0.3	4.0	1093	1400	780	1480	
S20-M-500/10	500	336	4869	0.3	4.0	1283	1500	820	1550	
S20-M-630/10	630	399	5580	0.25	4.5	1473	1600	860	1620	
S20-M-800/10	800	490	6750	0.25	4.5	1758	1700	900	1720	
S20-M-1000/10	1000	581	9270	0.25	4.5	2043	1800	950	1800	
S20-M-1250/10	1250	679	10800	0.15	4.5	2423	1900	1000	1900	
S20-M-1600/10	1600	826	13050	0.15	4.5	2945	2000	1050	2000	
S20-M-2000/10	2000	1022	16470	0.15	5.0	3515	2150	1100	2100	
S20-M-2500/10	2500	1218	19080	0.15	5.0	4180	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. Amorphous core option available for extreme low-loss configurations
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: **S20-M-NX2-[kVA]/[HV kV]-[LV kV] [Vector Group] [Options]**

Example: **S20-M-NX2-1000/10-0.4 Dyn11 Natural Ester**

Available options:

- Natural ester fluid (FR3 / MIDELESTER) 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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This datasheet is for reference only. Specifications subject to change without notice.