

# ZiyaoPower SCB13 Dry-Type Transformer

## Technical Datasheet

### 1. Application

ZiyaoPower **SCB series dry-type transformers** are manufactured using **epoxy-resin vacuum casting** (thin insulating tape encapsulation with degassed resin poured under high vacuum). The cast resin process produces a solid, void-free winding block with excellent moisture resistance, partial discharge <10 pC, and a design service life exceeding 30 years.

Typical applications: hospitals, data centers, commercial complexes, airports, metro/subway stations, industrial plants, high-rise buildings, and renewable energy substations.

**Efficiency Classification:** GB20052-2013 Grade 1 ■ Equivalent to IEC high-efficiency class ■

Note: SCB13 is a GB20052-2013 classification. For GB20052-2020 NX2 compliance, specify SCB14.

### 2. Technical Parameters

Rated High Voltage	10 kV (11/20/33 kV customizable)
Rated Low Voltage	0.4 kV
Rated Frequency	50 Hz / 60 Hz
Tap Range (HV Side)	±2×2.5%
Vector Group	Dyn11 / Yyn0
Insulation Class	F (155°C) / H (180°C)
Cooling Method	AN (Natural Air) / AF (Forced Air, 40-50% overload)
Enclosure Protection	IP00 / IP20 / IP23
Applicable Standards	GB 20052-2020, IEC 60076-11, GB/T 10228

### 3. Loss & Performance Data

Model	kVA	P0(W)	P120(W)	η(%)	Uk(%)	Nk(%)	Noise(dB)	kg	mm	mm	mm	mm
SCB13-30/10	30	215	1000	2.2	4.0	55	135	1000	600	900		
SCB13-50/10	50	295	1380	1.7	4.0	55	225	1100	650	950		
SCB13-80/10	80	320	1570	1.7	4.0	55	260	1100	700	1000		
SCB13-100/10	100	375	1850	1.5	4.0	55	360	1200	720	1050		
SCB13-125/10	125	430	2130	1.5	4.0	55	400	1250	750	1100		
SCB13-160/10	160	495	2530	1.3	4.0	58	512	1300	800	1150		
SCB13-200/10	200	575	2760	1.3	4.0	58	640	1350	820	1200		
SCB13-250/10	250	705	3470	1.1	4.0	58	800	1400	850	1250		
SCB13-315/10	315	785	3990	1.1	4.0	60	1008	1500	900	1300		
SCB13-400/10	400	930	4880	1.1	4.0	60	1280	1600	950	1350		
SCB13-500/10	500	1070	5880	0.9	4.0	60	1250	1700	1000	1400		
SCB13-630/10	630	1230	6960	0.9	6.0	62	1512	1800	1050	1450		
SCB13-800/10	800	1430	8400	0.8	6.0	62	1760	1900	1100	1500		
SCB13-1000/10	1000	1550	9870	0.8	6.0	64	2500	2000	1150	1550		
SCB13-1250/10	1250	1950	11670	0.7	6.0	64	2750	2100	1200	1600		
SCB13-1600/10	1600	2300	14020	0.7	6.0	65	3520	2200	1300	1700		
SCB13-2000/10	2000	2800	16620	0.6	6.0	65	4000	2400	1400	1800		
SCB13-2500/10	2500	3300	19790	0.6	6.0	68	5000	2600	1500	1900		

Weight and dimensions are approximate. Contact ZiyaoPower for certified outline drawings.

## 4. Key Features

1. Epoxy-resin vacuum-cast winding: void-free solid block, superior moisture resistance, zero delamination risk
2. Low partial discharge (<10 pC): long-term insulation integrity in humid environments
3. Fire-safe and self-extinguishing: no toxic gas emission, suitable for occupied buildings
4. Maintenance-free: no oil change, no leakage, no gasket degradation
5. Low-noise design: 10~15 dB below JB/T 10088 limits at rated load
6. Built-in PT100 temperature sensors with optional fan control relay
7. Tropicalization available: anti-condensation heaters for >95% RH environments
8. Lifting lugs, bi-directional rollers, vibration damping pads included

## 5. Standards & Certifications

- IEC 60076-11: Power Transformers - Dry-type
- GB/T 10228: Technical specification for dry-type power transformers
- GB 20052-2020: Minimum allowable values of energy efficiency
- ISO 9001: Quality Management System
- CCC: China Compulsory Certification
- CE: European Conformity Marking
- Type tested: temperature rise, lightning impulse, and short-circuit withstand

## 6. How to Order

Specify: **SCB13-[kVA]/[HV kV]-[LV kV] [Vector Group] [Cooling] [IP]**

Example: **SCB13-1000/10-0.4 Dyn11 AN IP20**

### Available options:

- Forced-air cooling (AF) for 40% overload
- Temperature controller with RS485
- IP23 weatherproof enclosure
- Custom voltage: 11/20/33 kV
- Anti-vibration pads
- 5-year extended warranty

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