



Oil immersed transformer

Make life better

PRODUCT CATALOG



CATALOGUE

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About HENGFENGYOU

Qingdao Hengfengyou Electrical Engineering Co., Ltd. belongs to Hengfengshuai Group. It is an export-oriented enterprise mainly engaged in power transmission and distribution industry, integrating product research and development, manufacturing and trade. Its main products are power transformers, medium and low voltage switchgear, switchboard, circuit breaker and other power distribution equipment and power engineering services.

Hengfengyou Electric always adheres to the service concept of "passing on the artisan manufacturing spirit for a century, making world-class electrical products", and is committed to providing the best quality power distribution solutions for global customers.

CERTIFICATION



Certificate - 證明書 - 證書 - Сертификат





PRODUCT FEATURES

- Lower loss, more energy saving, compared with the S11 transformer loss of 35%
- Product actual measurement is better than GB and IEC standards, CB CCC KEMA SASO certification
- More than 50 countries and regions around the world run verification of high reliability
- It is mainly used in 33KV distribution network of State Grid, power supply and distribution system of industrial and mining enterprises and civil buildings
- Products are mainly sold to Southeast Asia, the Middle East, Africa, South America and other countries and regions
- Executive standard: IEC 60076 series, IEC 6013, IEC 60214-1, IEC 60296;GB1094 series, GB/T6451-2015, GB/T7597-2007, etc



Leading technology

- High voltage copper tape winding technology to improve lightning resistance
- Low voltage copper foil winding technology, high quality A grade insulation material insulation
- Small magnetic leakage, high mechanical strength, short circuit resistance
- Core 45° fully inclined joint step laminated structure

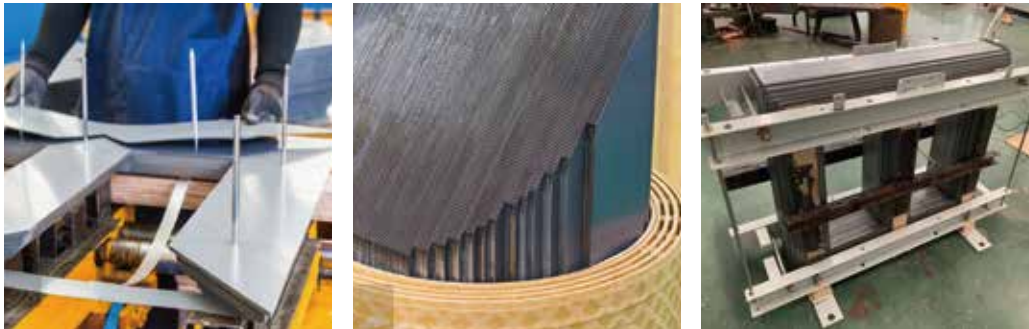
PRODUCT ADVANTAGE

The shell

- ABB robot automatic welding, laser detection, avoid leakage, pass rate of 99.99998%
- Electrostatic spray treatment, 50 years without removing paint (coating corrosion resistance within 100h, hardness ≥ 0.4)
- Fully sealed structure, maintenance free, normal operation service life of more than 30 years

The iron core

- The iron core is made of high quality cold-rolled grain oriented silicon steel sheet with mineral oxide insulation (from Baosteel and WISCO of China).
- By controlling the cutting and stacking process of silicon steel sheet, the loss level, no-load current and noise can be minimized
- The iron core is specially reinforced to ensure the structure of the transformer is firm during normal operation and transportation



Winding

- The low voltage winding is made of high quality copper foil with excellent insulation resistance
- High voltage winding is usually made of insulated copper wire, using hengfengyou electric patented technology



PRODUCT ADVANTAGE



High quality material

- Baosteel and WISCO produce silicon steel sheets
- China's high quality oxygen free copper
- CNPC (Kunlun Petroleum) High quality transformer oil (25#)

Patent technology

- Thanks to hengfengyou Electric "ultra-low loss energy-saving power transformer" patent technology, can achieve 5% material savings, transformer loss than similar products in the market reduced 10-20%, more energy saving and environmental protection.



Other instructions

- The low-voltage outlet terminal is a tin-plated copper bar
High voltage outlet terminals are tin-plated ring bolts
- Default no-load voltage regulation (can be customized) tap switch 5 or 7 gear adjustment
- Transformer above 630KVA is equipped with gas relay protection.



OUR ADVANTAGE

- Authoritative certification: ISO, ANSI, CB, SASO etc
 - Perfect SQA quality management system and patented technology to ensure high quality products
 - Efficient production equipment and low raw material prices to ensure the price advantage
 - Sufficient inventory, short delivery time and fast delivery worldwide
 - Perfect after-sales service system, allowing customers to buy worry-free
- Provide **OEM/ODM** services. Welcome clients to visit our factory.



ODM/OEM



 The above transformers are customized and produced by hengfengyou electric

CONDITIONS OF USE

Altitude less than 1000m, air temperature -25°C~40°C, humidity less than 90% (+25°C)
Vertical inclination shall not exceed 5°, no violent vibration, outdoor wind speed shall not exceed 35m/s

No gas or conductive dust that seriously affects transformer insulation; Where there is no explosion hazard and no corrosion of electrical components

If it exceeds the above normal use environment conditions, customers can contact our company to customize the solution separately



STANDARD

The actual measurement of products is better than GB and IEC standards, CB, CCC, KEMA certification

High reliability of operation verification in more than 50 countries and regions worldwide
Mainly used in 10kV distribution network, power supply and distribution system of industrial and mining enterprises and civil buildings

The products are mainly sold to central Asia (Pakistan, Uzbekistan, Kazakhstan, Russia), Southeast Asia (Indonesia, Malaysia, Vietnam), South Asia (Nepal, Bangladesh) and other developing countries and regions

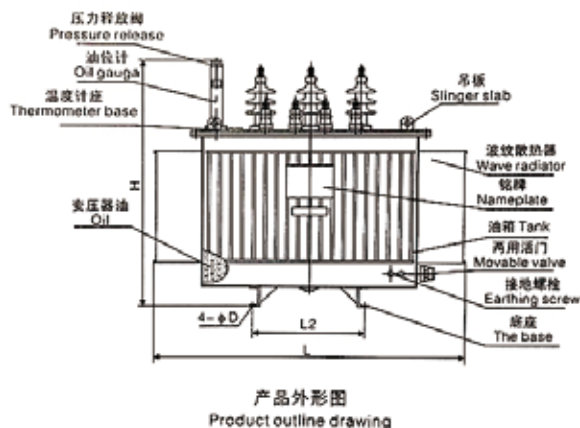
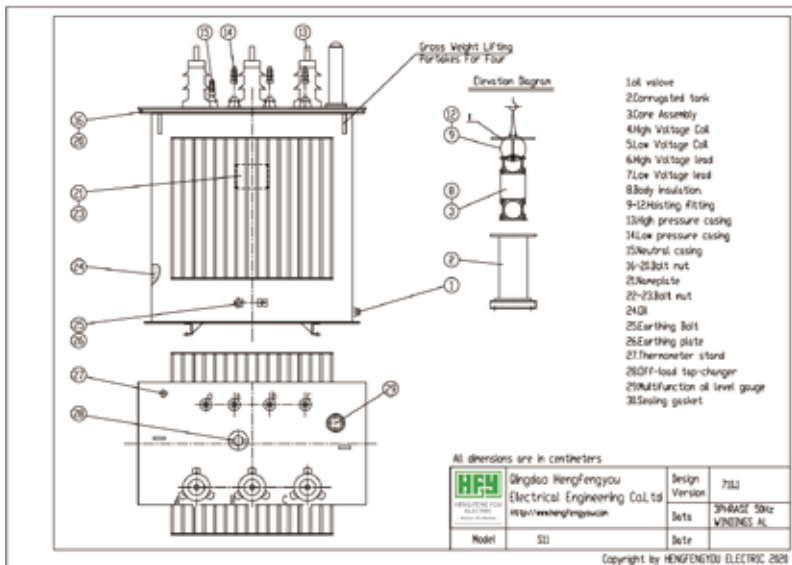
Implementation standards: IEC 60076 series, IEC 6013, IEC 6024-1, IEC 60296; Gb1094-1996, GB/T6451-2008, GB/ T7537-2007



TECHNICAL PARAMETERS

SL9 series 11kv distribution transformer technical parameters

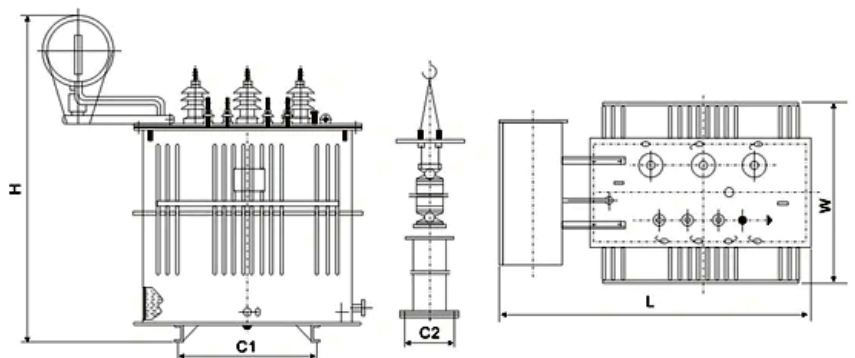
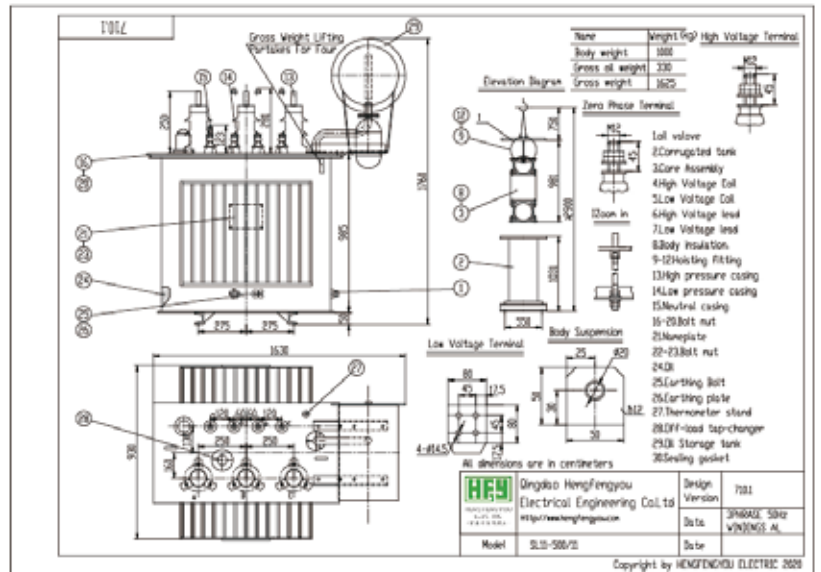
额定容量 Capacity	额定电压及分接范围 Rated voltage & Off-load tapping			联结组别号 Vector Group Symbol	空载损耗 NO-load loss (W)	负载损耗 Load loss (W)	空载电流 NO-load current	短路阻抗 Short circuit impedance (%)	测试电压 Applied test voltage (1min/50 Hz)		初级绕组冲击试验电压 Impulse test voltage primary	温升 Temperature rise in			高压端子直径 High pressure diameter (mm)	低压端子直径 Low pressure diameter (mm)	轨距 gauge (mm)
	高压 H.V (kv)	高压分接范围 High pressure Tap range (%)	低压 L.V (kv)						Primary winding	Secondary winding		线圈 Winding	变压器油 Ton oil	铁芯 Core			
30	11 10.5 10 6.3 6	±5% ±2x2.5%	0.4 0.69	Dyn11 Yyn0	130	630/600	2.3	4	35	5	75	65	55	75	12	12	400
50					170	910/870	2	4	35	5	75	65	55	75	12	12	400
63					200	1090/1040	1.9	4	35	5	75	65	55	75	12	12	400
80					250	1310/1250	1.9	4	35	5	75	65	55	75	12	12	400
100					290	1580/1500	1.8	4	35	5	75	65	55	75	12	12	400
125					340	1890/1800	1.7	4	35	5	75	65	55	75	12	12	400
160					400	2310/2200	1.6	4	35	5	75	65	55	75	12	12	400
200					480	2730/2600	1.5	4	35	5	75	65	55	75	12	12	550
250					560	3200/3050	1.4	4	35	5	75	65	55	75	12	20	550
315					670	3830/3650	1.4	4	35	5	75	65	55	75	12	20	550
400					800	4520/4300	1.3	4	35	5	75	65	55	75	12	20	550
500					960	5410/5150	1.2	4	35	5	75	65	55	75	12	24	550
630					1200	6200	1.1	4.5	35	5	75	65	55	75	12	24	660
800					1400	7500	1	4.5	35	5	75	65	55	75	12	30	660
1000					1700	10300	1	4.5	35	5	75	65	55	75	12	38	660
1250					1950	12000	0.9	4.5	35	5	75	65	55	75	12	42	820
1600					2400	14500	0.8	4.5	35	5	75	65	55	75	12	48	820
2000					2840	18300	0.75	5.5	35	5	75	65	55	75	12	48	1070
2500					3360	21200	0.7	5.5	35	5	75	65	55	75	12	48	1070



TECHNICAL PARAMETERS

SL9 series 33kv distribution transformer technical parameters

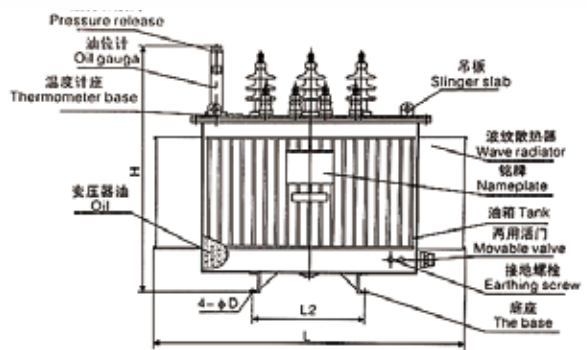
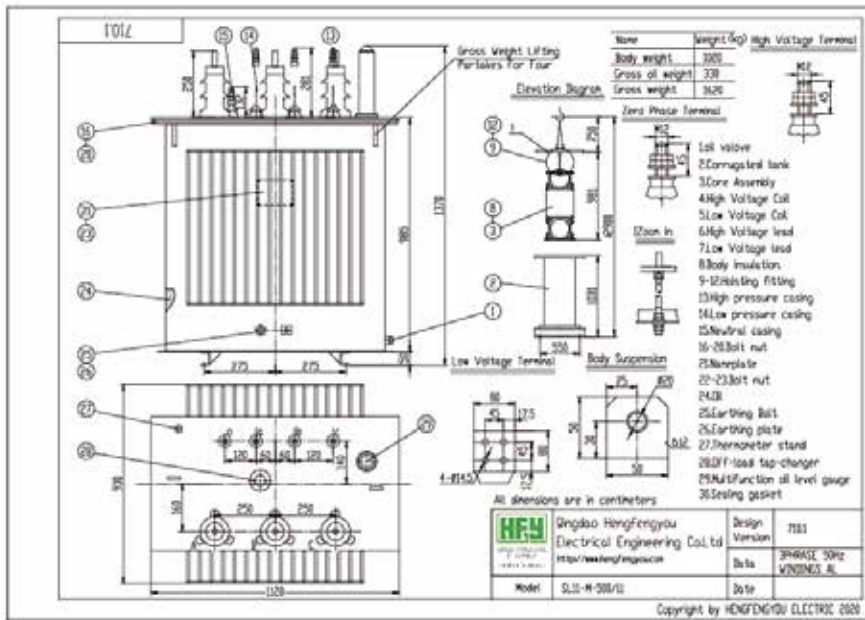
额定容量 Capacity	额定电压及分接范围Rated voltage&Off-load tapping			联结组标号 Vector Group Symbol	空载损耗 NO-load loss (W)	负载损耗 Load loss (W)	空载电流 NO-load current (%)	短路阻抗 Short circuit impedance (%)	测试电压 Applied test voltage (1min/50 Hz)		初级绕组冲击试验电压 Impulse test voltage primary	温升 Temperature rise in			高压端子直径 High pressure diameter (mm)	低压端子直径 Low pressure diameter (mm)	轨距 gauge (mm)
	高压 H.V (kv)	高压分接范围 High pressure Tap range (%)	低压 L.V (kv)						Primary winding	Secondary winding		线圈Winding	变压器油 Top oil	铁芯 Core			
50	33kV 35kV 38.5kV	±5%	0.4	Dyn11 Yyn0	210	1270/1210	2.0	6.5	85	5	200	65	55	75	16	12	550
100					290	2120/2020	1.8	6.5	85	5	200	65	55	75	16	12	550
125					340	2500/2380	1.7	6.5	85	5	200	65	55	75	16	12	550
160					360	2970/2380	1.6	6.5	85	5	200	65	55	75	16	12	550
200					430	3500/3330	1.5	6.5	85	5	200	65	55	75	16	16	550
250					510	4160/3960	1.4	6.5	85	5	200	65	55	75	16	20	550
315					610	5010/4770	1.4	6.5	85	5	200	65	55	75	16	20	550
400					730	5050/5760	1.3	6.5	85	5	200	65	55	75	16	20	660
500					860	7280/6930	1.2	6.5	85	5	200	65	55	75	16	20	660
630					1040	8280	1.1	6.5	85	5	200	65	55	75	16	30	660
800					1230	9900	1.0	6.5	85	5	200	65	55	75	16	38	880
1000					1440	12150	1.0	6.5	85	5	200	65	55	75	16	38	880
1250					1760	14670	0.9	6.5	85	5	200	65	55	75	16	42	1070
1600					2120	17550	0.8	6.5	85	5	200	65	55	75	16	48	1070
2000					2490	20740	0.8	6.5	85	5	200	65	55	75	16	48	1070
2500					2950	24420	0.8	6.5	85	5	200	65	55	75	16	52	1320
3150					3510	29050	0.7	6.5	85	5	200	65	55	75	16	62	1320
4000					4200	34940	0.7	6.5	85	5	200	65	55	75	16	62	1320
5000					4960	41160	0.7	6.5	85	5	200	65	55	75	16	68	1320



TECHNICAL PARAMETERS

SL18 series 11kv distribution transformer technical parameters

额定容量 Capacity	额定电压及分接范围 Rated voltage & Off-load tapping			联结组标号 Vector Group Symbol	空载损耗 NO-load loss (W)	负载损耗 Load loss (W)	空载电流 NO-load current (%)	短路阻抗 Short circuit impedance (%)	测试电压 Applied test voltage (1min/50 Hz)		初级浪涌冲击试验电压 Primary winding full wave (kv)	温升 Temperature rise in (K)			高压端子直径 High pressure diameter (mm)	低压端子直径 Low pressure diameter (mm)	空分重量 Untanking mass (kg)	油重 Oil weight (kg)	总重 gross weight (kg)	长x宽x高 LengthxWidthxHigh (mm)	轨距 gauge (mm)
	高压 H.V (kv)	高压分接范围 High pressure Tap range (%)	低压 L.V (kv)						Primary winding	Secondary winding		线圈 Winding	变压器油 Top oil	铁芯 Core							
30	11 10.5 10.5 6.3 6	±5% ±2x2.5%	0.4 0.69	Dyn11 Yyn0	100	630/600	1.5	4	35	5	75	65	55	75	12	12	125	80	280	780x500x870	400
50					130	910/870	1.3	4	35	5	75	65	55	75	12	12	215	100	385	820x540x980	400
63					150	1090/1040	1.2	4	35	5	75	65	55	75	12	12	245	110	435	830x600x1040	400
80					180	1310/1250	1.2	4	35	5	75	65	55	75	12	12	290	125	495	880x630x1060	400
100					200	1580/1500	1.1	4	35	5	75	65	55	75	12	12	335	135	555	890x640x1080	400
125					240	1890/1800	1.1	4	35	5	75	65	55	75	12	12	375	160	630	910x720x1100	400
160					280	2310/2200	1	4	35	5	75	65	55	75	12	12	450	180	750	950x740x1160	400
200					340	2730/2600	1	4	35	5	75	65	55	75	12	12	540	200	850	980x750x1220	550
250					400	3200/3050	0.9	4	35	5	75	65	55	75	12	20	635	220	1030	1030x830x1220	550
315					480	3830/3650	0.9	4	35	5	75	65	55	75	12	20	750	280	1250	1030x860x1250	550
400					570	4520/4300	0.8	4	35	5	75	65	55	75	12	20	890	310	1400	1100x890x1320	550
500					680	5410/5150	0.8	4	35	5	75	65	55	75	12	24	1020	330	1620	1120x930x1370	550
630					810	6200	0.6	4.5	35	5	75	65	55	75	12	24	1230	370	1910	1210x960x1380	660
800					980	7500	0.6	4.5	35	5	75	65	55	75	12	30	1470	430	2320	1260x1170x1450	660
1000					1150	10300	0.6	4.5	35	5	75	65	55	75	12	38	1580	510	2560	1280x1210x1560	660
1250					1360	12000	0.5	4.5	35	5	75	65	55	75	12	42	1780	550	2840	1330x1260x1580	820
1600					1640	14500	0.5	4.5	35	5	75	65	55	75	12	48	2280	620	3640	1390x1360x1700	820
2000					1940	18300	0.4	5	35	5	75	65	55	75	12	48	2530	710	3990	1480x1430x1780	1070
2500	2290	21200	0.4	5	35	5	75	65	55	75	12	48	3180	865	5160	1540x1730x1880	1070				



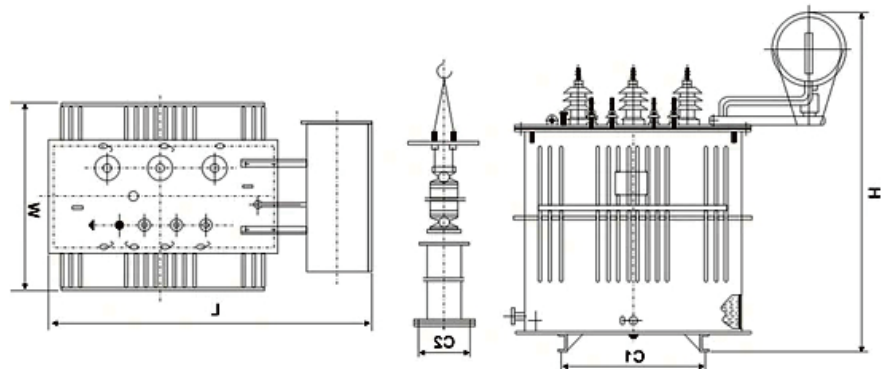
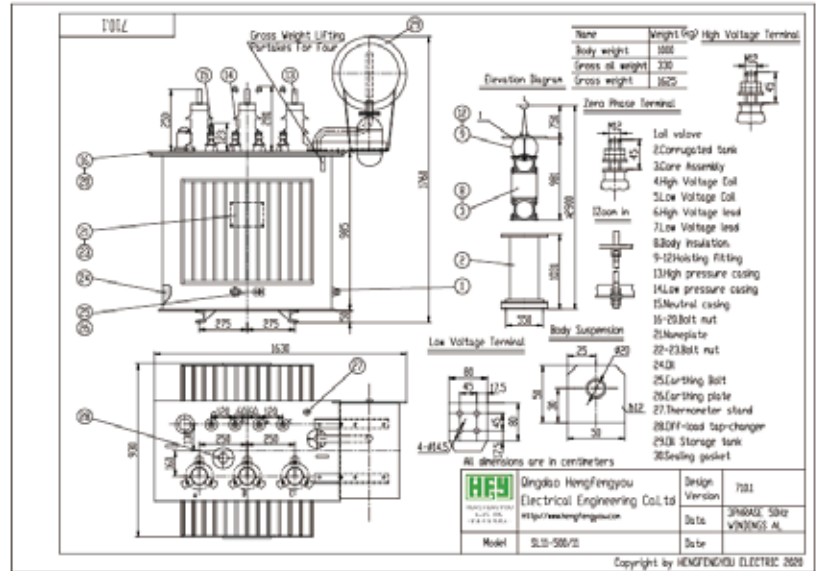
产品外形图
Product outline drawing



TECHNICAL PARAMETERS

SL18 series 33kv distribution transformer technical parameters

额定容量 Capacity	额定电压及分接范围 Rated voltage & Off-load tapping			联结组别号 Vector Group Symbol	空载损耗 No-load loss (W)	负载损耗 Load loss (W)	空载电流 No-load current (%)	短路阻抗 Short circuit impedance (%)	测试电压 Applied test voltage (1min/50 Hz)		初级绕组冲击试验电压 Primary test voltage	温升 rise in Temperature			高压端子直径 High pressure diameter (mm)	低压端子直径 Low pressure diameter (mm)	器身重量 Untanking mass (kg)	油重 Oil weight (kg)	总重 gross weight (kg)	长x宽x高 LengthxWidthxHigh (mm)	轨距 gauge (mm)
	高压 H.V (kv)	高压分接范围 High pressure Tap range (%)	低压 L.V (kv)						Primary winding	Secondary winding		线圈Winding	变压器油 Top oil	铁芯 Core							
50	33kV 35kV 38.5kV	±5% ±2x2.5%	0.4	Dyn11 Yyn0	160	1200/1140	1.3	6.5	85	5	200	65	55	75	16	12	270	415	1005	1560x970x1710	550
100					230	2010/1910	1.1	6.5	85	5	200	5	200	75	16	12	380	460	1200	1580x980x1780	550
125					270	2370/2260	1.1	6.5	85	5	200	65	55	75	16	12	455	505	1350	1600x990x1840	550
160					280	2820/2680	1.0	6.5	85	5	200	65	55	75	16	12	560	580	1550	1640x1005x1930	550
200					340	3320/3160	1.0	6.5	85	5	200	65	55	75	16	16	655	615	1690	1715x1015x2065	550
250					400	3950/3760	0.95	6.5	85	5	200	65	55	75	16	20	730	650	1810	1745x1030x2070	550
315					480	4750/4530	0.95	6.5	85	5	200	65	55	75	16	20	860	715	2110	1765x1040x2180	550
400					580	5740/5470	0.85	6.5	85	5	200	65	55	75	16	20	1070	790	2480	1805x1110x2215	660
500					680	6910/6580	0.85	6.5	85	5	200	65	55	75	16	20	1265	900	2830	1855x1125x2280	660
630					830	7860	0.65	6.5	85	5	200	65	55	75	16	30	1410	975	3080	1910x1140x2395	660
800					980	9400	0.65	6.5	85	5	200	65	55	75	16	38	1655	1040	3685	2030x1360x2425	880
1000					1150	11500	0.65	6.5	85	5	200	65	55	75	16	38	2035	1285	4485	2145x1860x2435	880
1250					1400	13900	0.6	6.5	85	5	200	65	55	75	16	42	2385	1430	5210	2215x2130x2450	1070
1600					1690	16600	0.6	6.5	85	5	200	65	55	75	16	48	2905	1580	5950	2230x2330x2520	1070
2000					1990	19700	0.55	6.5	85	5	200	65	55	75	16	48	3345	1880	7070	2490x1860x2630	1070
2500					2360	23200	0.55	6.5	85	5	200	65	55	75	16	52	3610	2010	8110	2580x2150x2740	1320
3150					2810	27600	0.5	6.5	85	5	200	65	55	75	16	62	4290	2260	9590	2630x2250x2870	1320
4000					3380	33000	0.5	6.5	85	5	200	65	55	75	16	62	4930	2500	10890	2680x2460x2960	1320
5000					3970	39100	0.5	6.5	85	5	200	65	55	75	16	68	5580	2730	11600	2760x2750x2960	1320



TECHNICAL PARAMETERS

SL20 series 11kv distribution transformer technical parameters

额定容量 Capacity	额定电压及分接范围 Rated voltage & Off-load tapping			联结组标号 Vector Group Symbol	空载损耗 NO-load loss (W)	负载损耗 Load loss (W)	空载电流 NO-load current	短路阻抗 Short circuit impedance (%)	测试电压 Applied test voltage (1min/50 Hz)		初级绕组冲击试验电压 Impulse test voltage primary	温升 Temperature rise in			高压端子直径 High pressure diameter (mm)	低压端子直径 Low pressure diameter (mm)	轨距 gauge (mm)
	高压 H.V (kv)	高压分接范围 High pressure Tap range (%)	低压 L.V (kv)						Primary winding	Secondary winding		线圈 Winding	变压器油 Top oil	铁芯 Core			
30	11 10.5 10 6.3 6	±5% ±2x2.5%	0.4 0.69	Dyn11 Yyn0	80	630/600	1.3	4	35	5	75	65	55	75	12	12	400
50					100	910/870	1.1	4	35	5	75	65	55	75	12	12	400
63					110	1090/1040	1.1	4	35	5	75	65	55	75	12	12	400
80					130	1310/1250	1	4	35	5	75	65	55	75	12	12	400
100					150	1580/1500	1	4	35	5	75	65	55	75	12	12	400
125					170	1890/1800	0.95	4	35	5	75	65	55	75	12	12	400
160					200	2310/2200	0.95	4	35	5	75	65	55	75	12	12	400
200					240	2730/2600	0.85	4	35	5	75	65	55	75	12	12	550
250					290	3200/3050	0.85	4	35	5	75	65	55	75	12	20	550
315					340	3830/3650	0.65	4	35	5	75	65	55	75	12	20	550
400					410	4520/4300	0.65	4	35	5	75	65	55	75	12	20	550
500					480	5410/5150	0.65	4	35	5	75	65	55	75	12	24	550
630					570	6200	0.6	4.5	35	5	75	65	55	75	12	24	660
800					700	7500	0.6	4.5	35	5	75	65	55	75	12	30	660
1000					830	10300	0.55	4.5	35	5	75	65	55	75	12	38	660
1250					970	12000	0.55	4.5	35	5	75	65	55	75	12	42	820
1600					1170	14500	0.5	4.5	35	5	75	65	55	75	12	48	820
2000					1550	18300	0.4	5	35	5	75	65	55	75	12	48	1070
2500					1830	21200	0.4	5	35	5	75	65	55	75	12	48	1070

Technical Data of Oil-immersed Transformer Hermetically Sealed Type

Model (order code) : OTAR35-10 SK-2500K-A
Reference standard : IEC 60076

Rating

- Rated power : 2500 (kVA)
- Number of phases : 3 (Ø)
- Rated frequency : 50 (Hz)
- Rated primary voltage (±2x2.5%) : 10500 (V)
- Rated secondary voltage : 415/2400 (V)
- Rated primary current : 137.5 (A)
- Rated secondary current : 3478 (A)
- Insulation class : A (105) (°C)
- Connection symbol : Dyn11

Service condition and installation

- Ambient temperature : 40 (°C)
- Altitude (above sea level) : ≤1000 (m)
- Type of cooling : ONAN
- Substation installation : Outdoor

Technical particulars (PSC)

- No-load loss : 3200 (W)
- Load loss : 3080 (W)
- Short-circuit impedance : 6.0 (%)
- Efficiency at 50% of rated power and P.F.=1.0 : 99.21 (%)
- Efficiency at 100% of rated power and P.F.=1.0 : 98.81 (%)
- Voltage regulation at full load and P.F.=1.0 : 1.25 (%)
- Sound level : 62 (dB(A))

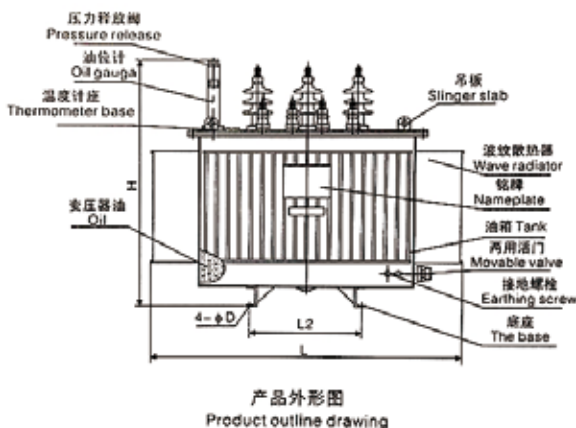
Routine test

- Measurement of winding resistance
- Measurement of insulation resistance
- Measurement of no-load loss and check of phase displacement
- Measurement of no-load loss and no-load current
- Measurement of load loss
- Measurement of short-circuit impedance
- Induced overvoltage withstand test
- Super-temperature voltage-withstand test (Hot test)
- Dielectric strength test
- Physical leakage test
- Type test (optional)

No.	Description	No.	Description
1	High voltage bushing	12	Oil level gauge
2	Voltage marking plate	13	Name plate
3	Crack stop wedge	14	Spring terminal
4	Drain eye	15	Low voltage bushing
5	Capacity plate	16	BTU guard cap
6	Trade mark plate	17	High voltage terminal
7	Compass marker	18	Access trim
8	Oil sign valve	19	Size adjustment for rising tank
9	Transformer base	20	Thermometer with contacts
10	Pressure relief valve with 40kg oil bag	21	Inclusive adjustment plate for tap changer
11	Low voltage terminal		

Approximate overall dimension in millimeter

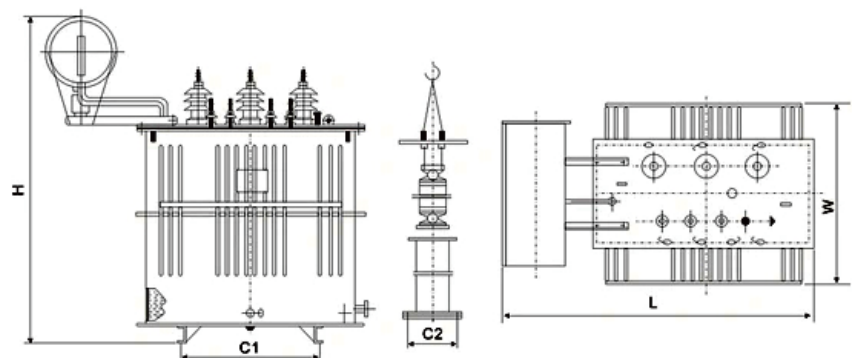
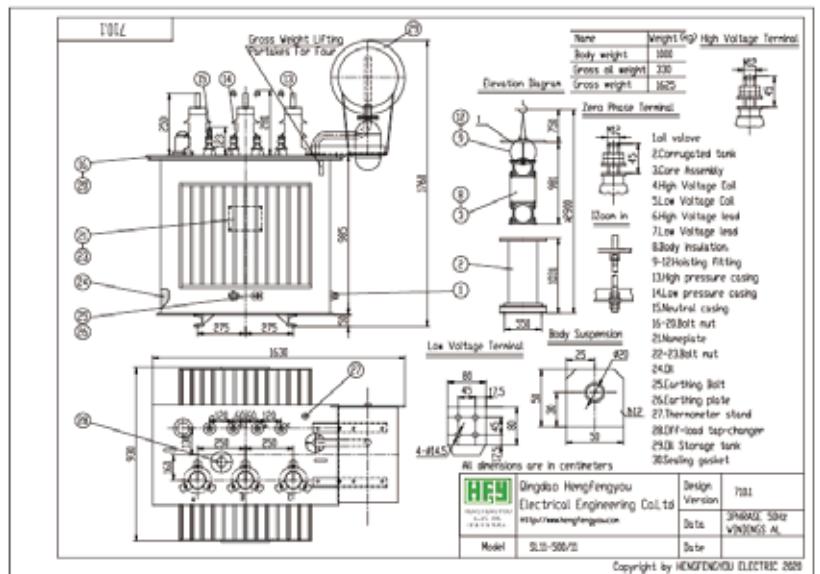
W	D	H	α (assembly)	Total mass (kg)
2250	1180	1930	1375	5550



TECHNICAL PARAMETERS

SL20 series 33kv distribution transformer technical parameters

额定容量 Capacity	额定电压及分接范围 Rated voltage & Off-load tapping			联结组别号 Vector Group Symbol	空载损耗 NO-load loss (W)	负载损耗 Load loss (W)	空载电流 NO-load current	短路阻抗 Short circuit impedance (%)	测试电压 Applied test voltage (1min/50 Hz)		初级绕组冲击 试验电压 Impulse test voltage primary	温升 rise in Temperature			高压端子直径 High pressure diameter (mm)	低压端子直径 Low pressure diameter (mm)	轨距 gauge (mm)
	高压 H.V (kv)	高压分接范围 High pressure Tap range (%)	低压 L.V (kv)						Primary winding	Secondary winding		线圈 Winding	变压器油 Top oil	铁芯 Core			
50	33kv 35kv 38.5kv	±5% ±2x2.5%	0.4	Dyn11 Yyn0	130	1200/1140	1.3	6.5	85	5	200	65	55	75	16	12	550
100					185	2010/1910	1.1	6.5	85	5	200	65	55	75	16	12	550
125					215	2370/2260	1.1	6.5	85	5	200	65	55	75	16	12	550
160					225	2820/2680	1.0	6.5	85	5	200	65	55	75	16	12	550
200					270	3320/3160	1.0	6.5	85	5	200	65	55	75	16	16	550
250					320	3950/3760	0.95	6.5	85	5	200	65	55	75	16	20	550
315					385	4750/4530	0.95	6.5	85	5	200	65	55	75	16	20	550
400					465	5740/5470	0.85	6.5	85	5	200	65	55	75	16	20	660
500					545	6910/6580	0.85	6.5	85	5	200	65	55	75	16	20	660
630					665	7860	0.65	6.5	85	5	200	65	55	75	16	30	660
800					785	9400	0.65	6.5	85	5	200	65	55	75	16	38	880
1000					920	11500	0.65	6.5	85	5	200	65	55	75	16	38	880
1250					1120	13900	0.6	6.5	85	5	200	65	55	75	16	42	1070
1600					1350	16600	0.6	6.5	85	5	200	65	55	75	16	48	1070
2000					1590	19700	0.55	6.5	85	5	200	65	55	75	16	48	1070
2500					1890	23200	0.55	6.5	85	5	200	65	55	75	16	52	1320
3150					2250	27600	0.5	6.5	85	5	200	65	55	75	16	62	1320
4000					2690	33000	0.5	6.5	85	5	200	65	55	75	16	62	1320
5000					3180	39100	0.5	6.5	85	5	200	65	55	75	16	68	



TEST



COMPREHENSIVE EXPERIMENTAL PLATFORM FOR POWER TRANSFORMER

● DELIVERY TEST (OR ROUTINE TEST)

These tests verify the electrical performance specified in the contract. And submit a formal test report.

characteristic measurement

- Winding resistance;
- Transformation ratio and vector group;
- Impedance voltage;
- Load loss;
- No load loss and no-load current.

insulation test:

- Power frequency withstand voltage test- Inductive voltage withstand test.
- Partial discharge measurement ensures that the expected service life of transformer less than 5pc is closely related to the initial partial discharge level measured during manufacturing.



NOISE TESTING CHAMBER

● SPECIAL TEST

These tests will be arranged at customer's request at customer's expense.

Short circuit test

These tests were carried out on a special test bench in accordance with IEC 60076-5. A total of three tests were performed on each transformer column, each lasting 0.5 seconds.

Noise level measurement

- Noise level measurement is part of a special test.
- Transformer noise is mainly caused by magnetostriction of magnetic circuit.
- Noise levels can be expressed in two ways: Sound pressure level L_p , measured in accordance with IEC 551 at 1m from the transformer in no-load operation



TRANSFORMER TEST

TEST

OVERLOAD CAPACITY

General information

The transformer is designed to operate at rated capacity at ambient temperatures specified in IEC 60076 and GB:

- Maximum temperature +40°C;
- Average temperature of the hottest month +30°C;
- Maximum annual average temperature +20°C.

Unless otherwise specified, the reference temperature is an annual average of 20°C

P If it is a normal load within the rated capacity, meet the conditions of overload capacity and time in the left figure

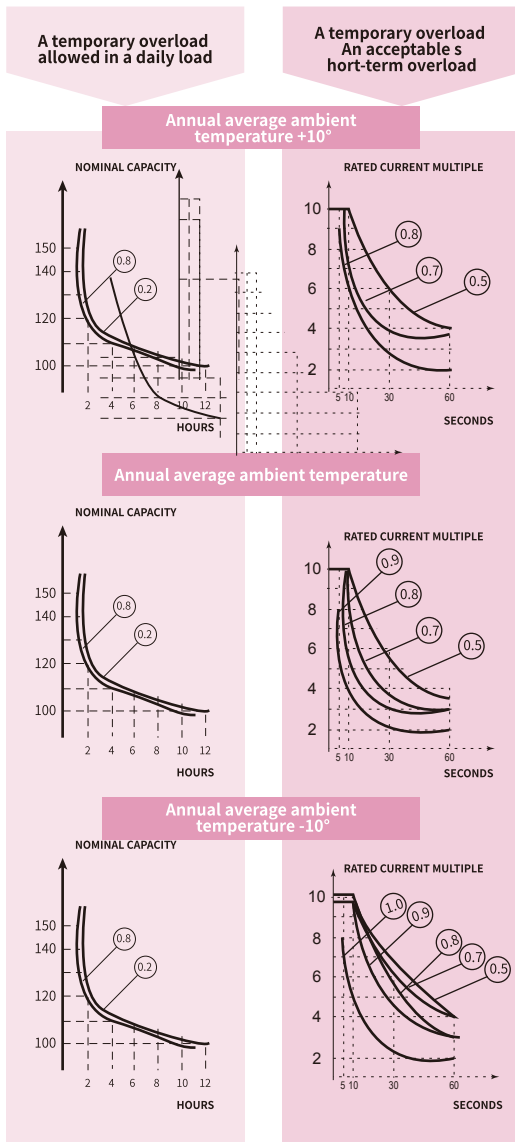
Under, overload operation is allowed and does not affect the life of the transformer

The allowable overload is also subject to the average ambient temperature.

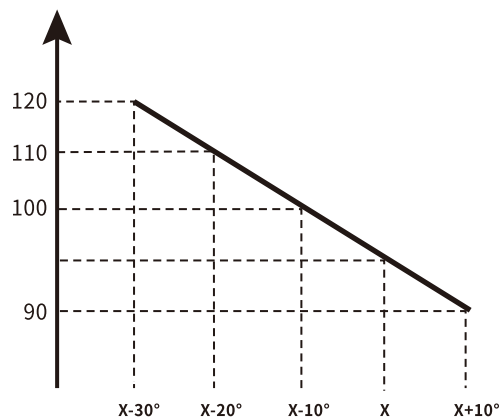
The first column on the left gives the allowed value for the daily overload of the loop.

Column 2 shows acceptable short-time overloads.

P The following figure shows the ambient temperature as a function of the acceptable long-term load during the normal life



Overload curves at different ambient temperatures



INSTALLATION AND AFTER-SALES SERVICE



1

Avoid debris falling into live parts

2

Keep a good distance from the ground to allow ventilation

3

The transformer is equipped with devices for safe handling

4

Ensure that the power supply voltage is not higher than the rated voltage

5

The transformer should be cleaned regularly, especially if it is installed in the polluted environment

6

Secure high voltage and low voltage cables to prevent movement

7

Connect the protection circuit to the monitoring system. Check whether the grounding is effective

8

Check the tightening torque of the high pressure tap connection rod and the high pressure connection

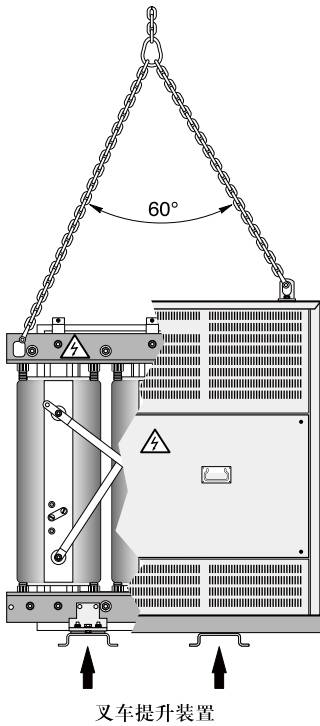
9

Connect the protection circuit to the monitoring system. Check whether the grounding is effective

10

Ensure good ventilation

INSTALLATION AND AFTER-SALES SERVICE



CARRY

Use the 4 lifting lugs of the transformer (it must be lifted vertically, not obliquely); For the transformer with 2 lifting lugs in the center of the top of the shell, use 2 lifting lugs. The included angle formed by the sling shall not be greater than 60 °.

First, check the forklift's forking capacity. If appropriate, the fork arm shall be inserted into the base channel after removing the roller.

The transformer with or without enclosure shall be hauled from the base. For this purpose, holes with a diameter of 27mm are opened on each side of the base. It can be dragged from two directions: the axial direction of the base and the direction perpendicular to this axis.

STORAGE

Hengfengyou transformer shall avoid being polluted by dripping water and sand dust (such as masonry and sand blasting) during storage. If hengfengyou transformer is supplied with a plastic cover, it shall be covered on the equipment during storage. Hengfengyou transformer can be stored in an environment with a minimum room temperature of - 25 ° C and a maximum room temperature of 50 ° C.



No gas or conductive dust that seriously affects the insulation of the transformer; No explosion hazard, no corrosion of electrical components

INSTALLATION AND AFTER-SALES SERVICE



INSTALLATION SITE

The transformer shall be installed in a dry, flat place where water is not easy to enter. The installation site shall have sufficient ventilation to ensure that all heat of the transformer can be dissipated



No load shall be supported anywhere on the enclosure except the power supply cable of the transformer. In addition to correctly installing the connecting cable according to the relevant drawings, facilities or accessories not supplied by the manufacturer or without permission are not allowed to be installed in the shell, otherwise, the user shall bear the risk. For the transformation, connection and installation of any accessories, please consult our hengfengyou technicians. Under no circumstances shall HV and LV connecting cables be fixed on the transformer core and winding. The distance between high-voltage cable, low-voltage cable, or low-voltage bus and the surface of high-voltage winding shall be at least 120mm; However, the minimum distance on the high pressure side refers to the distance to the outermost triangular connecting rod. Special attention shall be paid to the grounding of the shielding layer of high-voltage cable.



INSTALLATION AND AFTER-SALES SERVICE

INSPECTION BEFORE OPERATION

Auxiliary wiring

The auxiliary wiring on the transformer (connected to plug-in connector) shall be fixed on a fixed support (without any binding) and have sufficient clearance from live parts. The minimum clearance to be considered depends on the voltage level shown on the nameplate.

Parallel operation

Check whether the high voltage and low voltage of these transformers are the same, and check whether the performance parameters are the same, especially whether the connection group and impedance voltage are the same.

Make sure the tapping positions are the same

Among the transformers in parallel operation, the capacity of the transformer with the largest capacity shall not exceed more than twice that of the transformer with the smallest capacity.

Insulation test

Use a 2500V insulation resistance megger to check the insulation of high voltage and low voltage to ground. The insulation of high voltage to low voltage (the insulation resistance value is about: high voltage to ground $\geq 250\text{m}$, low voltage to ground $\geq 50\text{m}$, high voltage to low voltage $\geq 250\text{m}$). If the measured value is significantly lower than the above value, check whether the transformer is damp. In case of moisture, dry it and repeat the above inspection.

Transformer cleaning

Check the general cleanliness of the transformer and all cable and bus interfaces to ensure that they meet the relevant protection grade

Inspection in operation

Under normal use and environmental conditions, check the transformer once a year, dust around the transformer and accessories, and fasten lead terminals, pins, grounding screws, connecting bus screws, etc.

INSTALLATION AND AFTER-SALES SERVICE

QUALITY CONTROL:

We have established strict working procedures and ISO standards in the development, production, sales and after-sales of electrical products, so as to provide customers with first-class products and the best service.

Our team:

1. Our electrical engineer has more than 10 years of working experience
Our workshop workers are all skilled industrial workers who have received three months 'pre-job training
3. Our sales team has been extensively trained by management consultants to provide professional solutions for customers
4. Our technical team can provide customers with 24-hour technical support world wide
5. Our customer service team ensures that orders are delivered on time.
6. professional after-sales service technicians can ensure the correct commissioning and operation of the transformer.



TRANSFORMER PACKAGING AND TRANSPORTATION

INSTALLATION AND AFTER-SALES SERVICE

PRE-SALE SERVICE:

1. ISO certified excellent Manufacturer
2. Third-party authoritative certifications: SGS, CE, CB, SASO, CCC, etc
3. Flexible payment: T/T, LC, O/A
4. Sufficient inventory, fast delivery time and long validity of the price
5. The whole process of picture tracking can be realized in production and transportation
6. Experienced professional sales team and a strong technical team
7. Sincerely invite customers to visit the company for guidance

AFTER-SALES SERVICE:

1. If there is any quality problem after receiving the goods, you can return the goods free of charge or ship new products
2. We provide our customers with a 1-year product warranty
3. Provide 24-hour, 365-day technical guidance worldwide
4. The VIP customers enjoy our promotional activity
5. Our technical team, trained by management consultants, is able to provide professional solutions for customers.
4. Our technical team is ready for 24-hour technical support worldwide.
5. Our customer service team ensures on time delivery.



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questions or requests
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