



**DRY TYPE MINING EXPLOSION
ISOLATION MOVABLE
TRANSFORMER SUBSTATION**

矿用隔爆型移动变电站



PROFESSIONAL · PRODUCE

产品特点

Features of Products

矿用隔爆型移动变电站由矿用隔爆型干式变压器、矿用隔爆型移动变电站用高压负荷开关或矿用隔爆型移动变电站用高压真空开关和矿用隔爆型移动变电站用电缆连接器、矿用隔爆型移动变电站用低压馈电开关或矿用隔爆型移动变电站用低压保护箱组成。具有漏电、漏电闭锁、过载、短路、过压欠压等保护性能。

KBSGZY系列矿用隔爆型移动变电站是一种煤矿井下用可移动的成套供变电设备。它既适用于有甲烷混合气体和煤尘且有爆炸危险的矿井环境，也适用于不足以腐蚀金属和破坏绝缘的气体及蒸气环境中。

The mineral product separates the explode migration transformer substation separates the explode migration transformer substation by the mineral product with the do-like transformer, the high-pressured load switch either the high pressure and the low pressure switch or the low pressure guarantees is composed. Has the leakage, the leakage, the overload, short-circuits, the performance.

KBSGZY series dry type mining explosion isolation movable transformer substation is a kind of movable whole set distribution and transformation device. It is suitable for not only mines filled with firedamp mixed gas, grime and explosive gas, but also the gas and steam environment that can not erode metal and insulation.

使用环境和工作条件

Using environment and working condition

- 1、安装高度不超过海拔1000m，特殊环境另作说明；
- 2、环境温度：
 - 最高气温+40℃；
 - 最热月平均气温+30℃；
 - 最高年平均气温+20℃；
 - 最低气温-5℃。
- 3、周围空气相对湿度不超过95%（+25℃时）；
- 4、在有甲烷混合气体和煤尘，且有爆炸危险的矿井中；
- 5、无强烈颠簸、震动和垂直面的倾斜度不超过15°的环境中；
- 6、无足以腐蚀金属和破坏绝缘的气体和蒸汽；
- 7、无滴水的场所；
- 8、电源电压的波形近似于正弦波；
- 9、三相电源电压近似对称。

（超出本条件规定时，请另行说明）

- 1、The installment highly does not surpass elevation 1000m,the special environment gives the explanation in addition;
 - 2、Ambient temperature:
 - Highest air temperature +40℃;
 - Highest daily average air temperature+30℃;
 - Highest annual average air temperature+20℃;
 - Lowest outdoor air temperature-5℃.
 - 3、The surrounding air relative humidity is not bigger than 95% (+25℃when)
 - 4、In has the methane and the coal dust,also has the explosion hazard in the mine pit;
 - 5、Does not have,the vibration as well as with the gradient does not surpass in 15° environment;
 - 6、Does not have sufficiently the dipping and the insulation gas and the steam;
 - 7、No-water drop place;
 - 8、The supply voltage profile is approximate to the sine wave;
 - 9、The three-phase supply voltage approximate is symmetrical;
- (When extracts this condition stipulation,separate consultation)



矿用隔爆型移动变电站 DRY TYPE MINING EXPLOSION ISOLATION MOVABLE TRANSFORMER SUBSTATION

10kV级KBSGZY系列矿用隔爆型移动变电站技术参数

Tech data of 10kV KBSGZY series dry type mining explosion isolation movable transformer substation

额定容量 rated capacity kVA)	电压组合 Voltage group (kV)	联结方式 connection method	损耗(kW) dissipation		空载电流(%) no-load current	阻抗电压(%) impedance voltage	外形尺寸(mm) (长L×宽B×高H) outline dimension	重量(kg) weight	轨距(mm) Gauge
			空载 no-load	负载(145℃) load					
50	高压 (10±5%); 低压 0.693/0.4 1.2/0.693 1.2 3.45.	Yy0 (d11)	390	680	2.5	4	3140×800×1010	2100	600
100			560	1050	2.5	4	3290×845×1160	2480	
200			950	1800	2	4	3800×875×1400	3010	
250			1100	2100	2	4	3880×900×1435	3460	
315			1300	2500	1.8	4	3920×915×1505	3650	
400			1500	3000	1.8	4	3980×950×1520	3880	
500			1750	3500	1.5	4	4020×950×1535	4150	
630			2000	4100	1.5	4	4070×1060×1615	5300	
800		Yy0 (d11) Dyn11	2300	5100	1.2	4	4170×1060×1615	6270	600
1000			2600	6100	1.2	4.5	4325×1050×1615	7240	900
1250			3100	7400	1.0	4.5	4330×1050×1790	7700	
1600			3800	8500	1.0	5	4500×1220×1885	9280	
2000			4500	9700	0.7	5	4665×1220×1900	11880	
2500			5200	10800	0.7	5.5	4870×1390×1900	14930	
3150			6100	12800	0.7	5.5	4880×1310×1900	19350	
4000			7000	15000	0.7	6	5210×1450×1900	21910	

注：以上数据仅供参考，移动变电站的外形尺寸根据开关不同而不同。

Note: The above data provides a reference only, movable transformer substation the basis switch of the shape size of transformer substation different but different.





MINING EXPLOSION ISOLATION DRY TRANSFORMER

矿用隔爆型干式变压器



产品特点

Features of Products

KBSG矿用隔爆型干式变压器符合GB 8286-2005《矿用隔爆型移动变电站》标准的要求。绝缘材料热稳定性好，采用H级或C级绝缘，冷却方式采用ANAN，适用于有甲烷混合气体和煤尘，且有爆炸危险的矿井、矿山、隧道等环境，也适用于不足以腐蚀金属和破坏绝缘的气体及蒸汽环境中。在额定频率为50Hz，一次侧电压为6kV或10kV、中性点不接地的三相电力系统中运行，为使用环境中的各种动力设备和各种用电装置提供电源。

The KBSG series mining explosion isolation dry transformer conforms to new GB 8286 , mineral product separates explode migration transformer substation requests. Insulating the material adopts C class or H class to insulate, hot stability good, cooling off way a doption ANAN. be applicable to there are air and coal dust of the methane mixture, and there is the mineral well, mineral mountain, tunnel of explosion danger etc. environment, also be applicable to shortage with air and steam environment which decays metals and breakage to insulate. Settle the frequency as 50 Hz , a primary voltage is 6 kVs or 10 kVs, andneuter gender not to connect ground for the power system, for use various motive equipments in the environment with various use electricity device to provide power supply.

使用环境和工作条件

Using environment and working condition

- 1、安装高度不超过海拔1000m，特殊环境另作说明；
 - 2、环境温度：
 - 最高气温+40℃；
 - 最热月平均气温+30℃；
 - 最高年平均气温+20℃；
 - 最低气温-5℃。
 - 3、周围空气相对湿度不超过95%（+25℃时）；
 - 4、在有甲烷混合气体和煤尘，且有爆炸危险的矿井中；
 - 5、无强烈颠簸、震动和垂直面的倾斜度不超过15°的环境中；
 - 6、无足以腐蚀金属和破坏绝缘的气体 and 蒸汽；
 - 7、无滴水的场所；
 - 8、电源电压的波形近似于正弦波；
 - 9、三相电源电压近似对称。
- （超出本条件规定时，请另行说明）



- 1、The installment highly does not surpass elevation 1000m,the special environment gives the explanation in addition;
 - 2、Ambient temperature:
 - Highest air temperature +40℃;
 - Highest daily average air temperature+30℃;
 - Highest annual average air temperature+20℃;
 - Lowest outdoor air temperature-5℃.
 - 3、The surrounding air relative humidity is not bigger than 95%（+25℃when）
 - 4、In has the methane and the coal dust,also has the explosion hazard in the mine pit;
 - 5、Does not have,the vibration as well as with the gradient does not surpass in 15° environment;
 - 6、Does not have sufficiently the dipping and the insulation gas and the steam;
 - 7、No-water drop place;
 - 8、The supply voltage profile is approximate to the sine wave;
 - 9、The three-phase supply voltage approximate is symmetrical;
- (When extracts this condition stipulation,separate consultation)

型号含义

Type Meaning



产品标准

Product standard

- | | |
|-----------------|-------------|
| GB 8286-2005 | GB3836-2000 |
| GB/T 10228-1997 | GB6450-1986 |

6kV级KBSG系列矿用隔爆型干式变压器技术参数

Tech data of 6kV KBSG series mining explosion isolation dry type transformer

额定容量 rated capacity kVA	电压组合 Voltage group (kV)	联结方式 connection method	损耗(kW) dissipation		空载电流(%) no-load current	阻抗电压(%) impedance voltage	外形尺寸(mm) (长L×宽B×高H) outline dimension	重量(kg) weight	轨距(mm) Gauge
			空载 no-load	负载(145℃) load					
50	高压 (6±5%); 低压 0.693/0.4 1.2/0.693 1.2 3.45.	Yy0 (d11)	350	550	2.5	4	2150×780×910	1350	600
100			520	920	2.5	4	2200×800×1100	1480	
200			820	1550	2	4	2450×835×1285	1980	
250			950	1800	2	4	2550×885×1325	2670	
315			1100	2150	1.8	4	2585×895×1340	2850	
400			1300	2600	1.8	4	2700×895×1450	3050	
500			1500	3100	1.5	4	2750×945×1475	3590	
630			1800	3680	1.5	4	2770×960×1535	3860	
800		2050	4500	1.0	4	2770×990×1600	4975	600	
1000		2350	5400	1.0	4	2930×1060×1615	5900		900
1250		2750	6500	1.0	4	2965×1010×1640	6860		
1600		3350	8000	0.8	4	3010×1175×1760	8480		
2000		3800	9500	0.6	4.5	3225×1220×1790	9180		
2500		4500	10600	0.6	5	3580×1230×1850	13080		
3150		5300	12500	0.6	5.5	3820×1260×1890	16500		
4000		6100	14000	0.6	6	3930×1400×1890	19060		

10kV级KBSG系列矿用隔爆型干式变压器技术参数

Tech data of 10kV KBSG series mining explosion isolation dry type transformer

额定容量 rated capacity kVA	电压组合 Voltage group (kV)	联结方式 connection method	损耗(kW) dissipation		空载电流(%) no-load current	阻抗电压(%) impedance voltage	外形尺寸(mm) (长L×宽B×高H) outline dimension	重量(kg) weight	轨距(mm) Gauge
			空载 no-load	负载(145℃) load					
50	高压 (10±5%); 低压 0.693/0.4 1.2/0.693 1.2 3.45.	Yy0 (d11)	390	680	2.5	4	2250×800×1010	1450	600
100			560	1050	2.5	4	2400×845×1160	1830	
200			950	1800	2	4	2540×875×1400	2360	
250			1100	2100	2	4	2620×900×1435	2760	
315			1300	2500	1.8	4	2650×915×1505	2950	
400			1500	3000	1.8	4	2710×950×1520	3350	
500			1750	3500	1.5	4	2770×950×1535	3620	
630			2000	4100	1.5	4	2850×970×1660	4500	
800		2300	5100	1.2	4	2910×1060×1615	5580	600	
1000		2600	6100	1.2	4.5	3075×1050×1750	6450		900
1250		3100	7400	1.0	4.5	3145×1050×1790	6900		
1600		3800	8500	1.0	5	3160×1220×1885	8430		
2000		4500	9700	0.7	5	3665×1220×1900	11030		
2500		5200	10800	0.7	5.5	3780×1390×1900	14080		
3150		6100	12800	0.7	5.5	3880×1400×1900	18800		
4000		7000	15000	0.7	6	4210×1460×1900	21600		

注：以上数据仅供参考，移动变电站的外形尺寸根据开关不同而不同。

Note: The above data provides a reference only, movable transformer substation the basis switch of the shape size of transformer substation different but different.



THREE-PHASE OIL-IMMERSED DISTRIBUTING TRANSFORMER

三相油浸式矿用电力变压器



产品特点

Features of Products

KS9系列矿用变压器，作为矿井的配电设备，该产品具有体积小、易下井、结构合理、损耗低、散热性能好等特点。

本系列产品采用优质的晶粒取向优质高导磁性能硅钢片叠装而成，铁芯为芯式铁芯，全斜接缝迭积式铁芯，其铁芯柱为多级圆截面，确保低噪音低损耗。油箱结构坚固，箱壁两侧焊有高、低压电缆接线盒，作为电缆接线之用，高压线圈须有额定电压 $\pm 5\%$ 的分接电压，利用分接开关变换电压。变换电压时，必须先切断电源，然后去除箱壁上分接开关的风雨罩进行变换电压。变压器低压侧允许“Y”型接成693V或“D”型接成400V供电，在电缆接线盒内直接装次级端头引出六个瓷套供用户改接。变压器吊装利用焊在箱壁的吊攀，变压器箱底均装有拖撬，在拖撬上备有安装孔，可供矿井需要时加装矿车滚轮。

As one kind of distributing transformer for mining use, KS9 series transformer has many advantages, such as compacted body, reasonable structure, low in spoilage, good in heat-dispersion and, easy to go into a well.

This series of product adopt high-permeance cold-rolled grain-oriented silicon-steel plate of high-quality. The iron core applies echelon form iterative accumulation. The core pole which is multilevel circular cross-section can ensure of low noise and low spoilage. The structure of gasoline tank is very firm. Both side of tank are welded with cable junction boxes of high and low voltage which are used for wiring. High-voltage loops need tapping voltage that is $\pm 5\%$ of rated voltage. It is using the tap switch to change the voltage. When the voltage exchanges, the power must be cut off fist, then unveil the wind-rain cover on the tap switch to counterchange the voltage. The low voltage side of the transformer can be connect the type 'Y' of 693V or the type "D" of 400V to supply power. And inside the cable junction box has a secondary terminal which educes six insulators for users' option. The joint hinges that welded on the casing are available and drawing crow-plate is mounted beneath the base. There are mounting holes in the drawing crow-plate used for being addly-installed with mine-car' contact roller whenmine needing.

适用范围

Practicable Confines

适用于容量630KVA及以下，电压为10KV及以下的油浸式矿用电力变压器。此类型矿用变压器是一般型油浸式变压器，并无防爆要求，主要作为矿井配电时的矿用照明或电力拖动的电源。凡本系列变压器经运输后，不需作吊心检查，即可装配有关拆卸的零部件，做验收试验项目。

The oil-immersed distributing transformer is applied to the capacity 630KVA or below, and the voltage 10KV or below. This product is normal one which has no requirement of explosion - proof. The main function of the product is for mine illumination when distributing power for mining as well as for the driving power. This series of transformers will not need lift-machine examination after transportation. It is allowed to assemble the unshipped spare parts for checking and acceptance.

遵循标准

Comply Standards

本系列变压器所遵循的标准：

GB1094.1~2-1996、GB1094.3,5-2003、GB/T6451-1999、GB12173-1990。

Standards for this series of product:

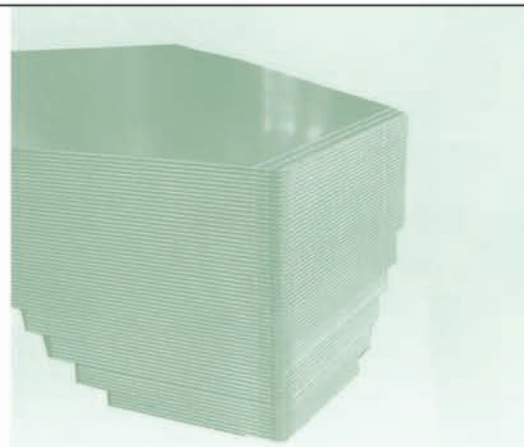
GB1094.1~2-1996、GB1094.3,5-2003、GB/T6451-1999、GB12173-1990。

使用环境和工作条件

Using environment and working condition

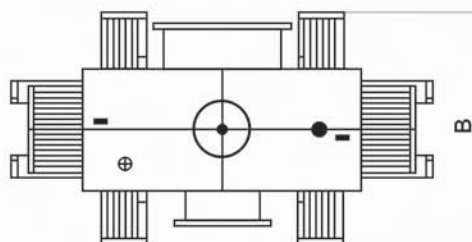
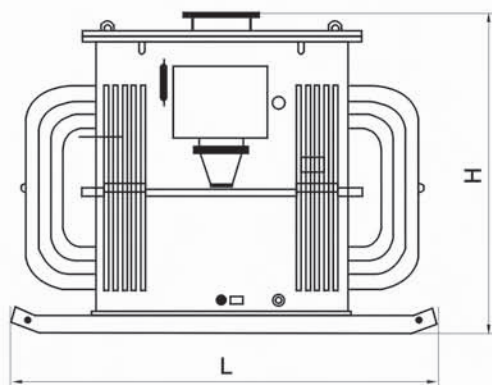
- 1、高度不超过海拔1000m，特殊环境另作说明；
- 2、环境温度：
 - 最高气温+40℃；
 - 最高日平均气温+25℃；
 - 最高年平均气温+20℃；
 - 户外最低气温-20℃。
- 3、周围空气相对湿度对不大于95%（+25℃时）；
- 4、安装在矿井下虽有煤尘、瓦斯，但无爆炸危险的场所；
- 5、电源电压的波形近似地正弦波；

- 1、The installment highly does not surpass elevation 1000m,the special environment gives the explanation in addition;
- 2、Ambient temperature:
 - Highest air temperature +40℃;
 - Highest daily average air temperature+25℃;
 - Highest annual average air temperature+20℃;
 - Lowest outdoor air temperature-20℃.
- 3、The surrounding air relative humidity is not bigger than 95%（+25℃when）
- 4、Installs under the mine pit although has the coal dust, the gas ,but non-explosion hazard place;
- 5、The supply voltage profile is approximate to the sine wave;



型号含义

Type Meaning



KS9系列矿用变压器技术参数

Tech data of KS9 series electric transformer

额定容量 rated capacity kVA)	电压组合 Voltage group (kV)	联结方式 connection method	损耗(kW) dissipation		空载电流(% no-load current	阻抗电压(% impedance voltage	重量(kg) weight			外形尺寸(mm) (长L×宽B×高H) outline dimension
			空载 no-load	负载(75°C) load			器身重 machine weight	油重 oil weight	总重 gross weight	
50	高压 10 6 低压 0.693/0.4	Yyo-d11	0.17	0.87	2.0	4	230	80	390	1200×950×900
80			0.25	1.25	1.8		310	100	530	1300×950×950
100			0.29	1.50	1.6		360	110	600	1300×950×1000
125			0.34	1.80	1.5		425	120	690	1300×950×1000
160			0.40	2.20	1.4		480	140	810	1350×950×1040
200			0.48	2.60	1.3		580	170	955	1400×970×1080
250			0.56	3.05	1.2		670	180	1100	1450×1000×1100
315			0.67	3.65	1.1		775	240	1305	1500×1000×1150
400			0.80	4.30	1.0		940	280	1570	1600×1050×1150
500			0.96	5.10	1.0		1155	300	1790	1650×1050×1200
630	1.20	6.20	0.9	4.5	1310	345	2150	1650×1120×1220		

矿用检验合格证编号

mining examination certificate serial number

产品名称 name	产品型号 type	合格证号 certificate number	发证单位 certificate issuer
油浸矿用 变压器 oil-immersed mining transformer	KS9-100/10	204040	煤炭工业上海电气 防爆检验站 coal industry Shanghai electric explosion-proof examination station
	KS9-250/10	204041	
	KS9-315/10	204042	
	KS9-400/10	204043	
	KS9-500/10	204044	
	KS9-630/10	204045	

订货需知

Notice to ordering Goods

选用我公司产品时，敬请提供下列数据，以便更好地为阁下提供服务：

Please provide the following data when placing an order, so that we can serve you well.

变压器型号 type of transformer:

额定容量 rated capacity

相数 phase number: 三相three-phase 单相single-phase

频率 frequency: 50Hz 60Hz

额定电压(高压/低压) rated voltage (high-volt. low-volt): _____/_____ kV

分接范围 tapping range: ± _____ × _____ %

绝缘水平 insulating level: LI _____ AC _____ /LI _____ AC _____

联结组标号 connection group: Dyn11 Yyn0 其它

阻抗电压 UK impedance voltage UK: _____ %

其它要求 other requirement:

使用条件 service condition : 海拔altitude _____ m

环境温度environmental temperature _____ °C

冷却方式cooling-down method: AN AF

外壳防护等级 protection grade of outer casing: IP00

IP20 其它 other

外壳颜色 color of shell: 微机色hoar color 其它other

高压进线方式Incoming line method of high-voltage:

顶部进线 incoming line to upper part

底部进线incoming line to lower part

低压出线方式Incoming line method of low-voltage:

顶部进线incoming line to upper part

底部进线incoming line to lower part

横排侧出线Outgoing line from side