

避雷器系列 Surge Arrester

产品种类

1. 避雷器的种类较多，根据其不同的用途，基本上可分为：配电型、电站型、保护电容器型、变压器中性点型、保护电机型、电气化铁道型、线路型避雷器等。

2. 线路型避雷器按结构可分为带串联间隙型及无间隙型。带串联间隙分为支撑间隙和纯空气间隙。

产品主要特点

1. 产品具有保护性能好、通流容量大、反应时间快、陡坡特性平坦等一系列优异特性。

2. 复合外套材料采用优质的硅橡胶材料，具有高耐腐蚀和抗老化性能，同时具有优良的憎水性和离子转移性，耐污能力更强。

3. 复合外套避雷器内部采用特殊的制作工艺和独特的内部结构，使其具有更高的机械强度和良好的防爆性能。

正常使用条件

1. 环境温度不高于+40℃，不低于-40℃；
 2. 海拔不超过1000m；
 3. 电源的频率不小于48Hz，不超过62Hz；
 4. 长期施加在避雷器上的工频电压不超过避雷器的持续运行电压；
 5. 地震烈度为7度及以下地区；
 6. 风速不超过35m/s；
- 异常使用条件，需供需方双协商。

Product Type

(1) Surge arrester can be divided into many types according to its application as below: Distribution type, Power station type, Protecting capacitor type, Transformer neutral point type, Protecting motor type, Electrified railway type, Line type, etc.

(2) Line type surge arrester can be divided into series spacing type and without spacing type. In series spacing type can be divided into supporting spacing and pure air spacing type.

Main Product Features

(1) It has a series of outstanding features such as good protection performance, high circulating capacity, less reaction time, smooth steep-wave characteristic.

(2) Excellent silicon rubber material is used in composite housing, possessing good anti-tracking and ageing-resistant performance as well as good hydrophobicity, ion transferring and high pollution proof.

(3) Special technique and internal structure are used in composite housing surge arrester, possessing higher technical strength and good explosion-proof performance.

Service Conditions

- (1) Ambient Temperature: $\leq +40^{\circ}\text{C}$, $\geq -40^{\circ}\text{C}$;
- (2) Altitude: $\leq 1000\text{m}$;

(3) Frequency of Power Source: $\geq 48\text{Hz}$, $\leq 62\text{Hz}$;

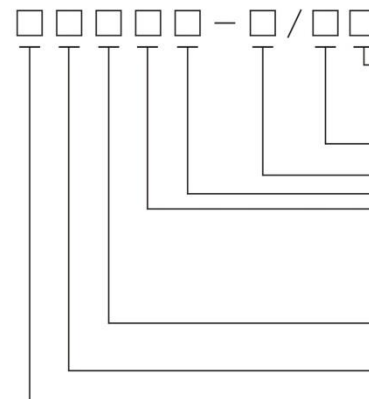
(4) Power Frequency Voltage exerted long-time on surge arrester shall not exceeds continuous operation voltage ;

(5) Earthquake intensity is not more than 7 grades ;

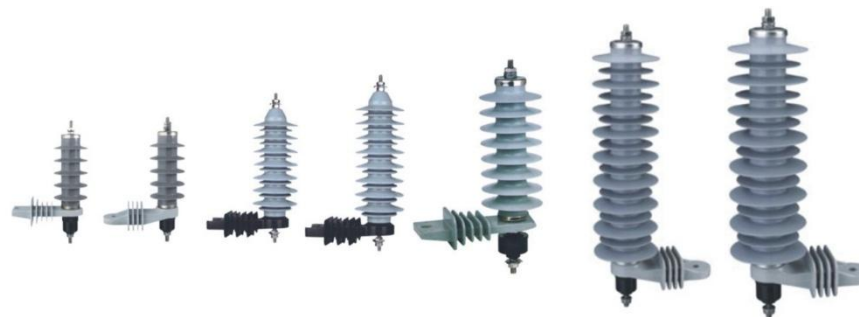
(6) Wind speed is not more than 35m/s ;

Usage under exceptional conditions shall be negotiated by both parties.

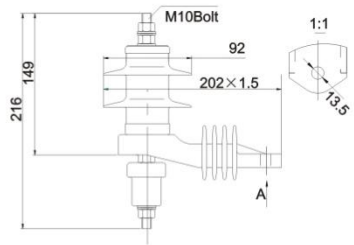
产品型号说明



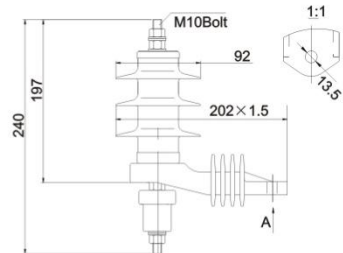
- 特殊标记 Special mark
 G: 高原型 Altiplano type
 S: 悬挂型 Suspension type
 W: 防污型 Antipollution type
 Z: 支撑间隙 Gap type suspension
 标称放电电流下的最大残压值KV
 Residual voltage nominal discharge current
 避雷器的额定电压值 KV Rated voltage KV
 产品设计序号 Design number
 使用场所 Arrester application
 Z: 电站 Substation
 S: 配电 Distribution
 R: 电容器 Capacitor bank protection
 T: 电气化铁路 Electrified railway
 X: 输电线路 Transmission line
 F: SF6气体的罐式氧化锌避雷器 SF6 gas breaker
 结构特征 Structure feature
 W: 无间隙 Gap less
 C: 带串联间隙 With series discharge gap
 避雷器的标称放电电流值 KA
 Nominal discharge current
 Y: 氧化锌避雷器 Porcelain housed surge arrester
 Yh: 复合外套氧化锌避雷器 Polymer housed surge arrester



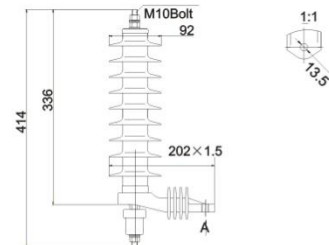
● 主要技术Main Technical Parameters



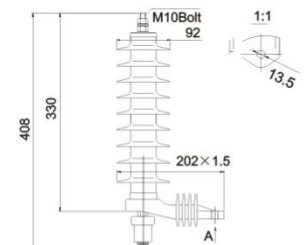
图形(Drg) 1



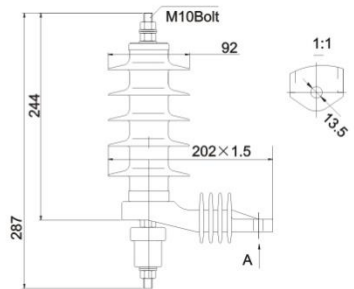
图形(Drg) 2



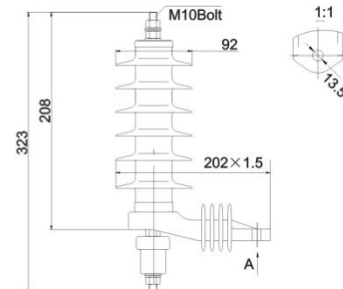
图形(Drg)7



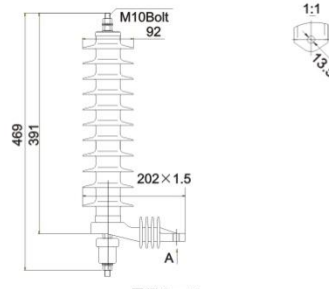
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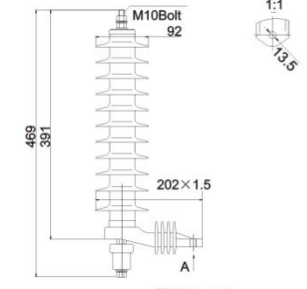
图形(Drg) 3



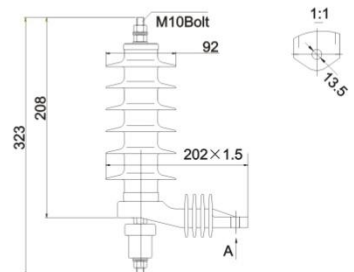
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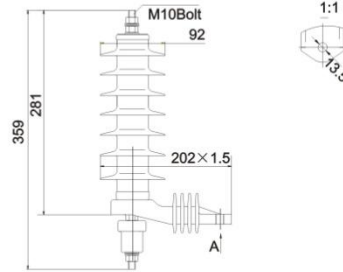
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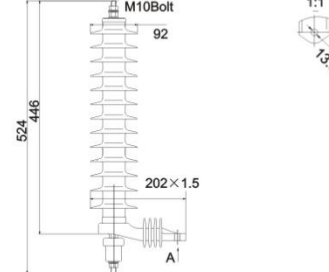
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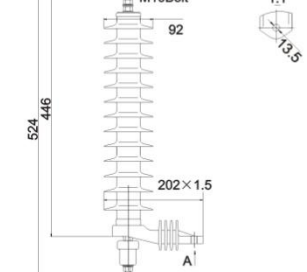
图形(Drg) 5



图形(Drg) 6



图形(Drg)11



图形(Drg)12

型号 Type	额定电压 Rated Voltage (kV)	持续操作 电压 Continuous operating voltage (kV \geq)	陡波电流 残余电压 1/4 Steep current residual voltage (kV \leq)	雷电电流 残压 8/20 Lightning current residual voltage (kV \leq)	开关电流 残余电压 30/605 switching current residual voltage (kV \leq)	方波电流 脉冲 2000 μ s Rectangular wave current impulse(A)	电流耐受 放电容量 4/10 Current withstand discharge capacity (kA)	结构图号 Drg No.
YH5W-3L	3	2.55	9.5	9	7.7	100	55	1
YH5W-6L	6	5.1	19	18	15.4			2
YH5W-6L	9	7.65	28.5	27	23.1			2
YH5W-12L	12	10.2	38	36	30.8			3
YH5W-15L	15	12.7	47.5	45	38.5			4
YH5W-18L	18	15.3	57	54	46.2			5
YH5W-21L	21	17	66.5	63	53.9			6
YH5W-24L	24	19.2	76	72	61.6			7
YH5W-27L	27	21.9	85.5	81	69.3			8
YH5W-30L	30	24.4	95	90	76.5			9
YH5W-33L	33	26.8	104.5	99	84.7			10
YH5W-36L	36	29	114	108	92.4			11
YH5W-42L	42	34.1	132.3	126	100.1	12		
YH10W-3L	3	2.55	9.5	9	7.7	255	100	1
YH10W-6L	6	5.1	19	18	15.4			2
YH10W-9L	9	7.65	28.5	27	23.1			2
YH10W-12L	12	10.2	38	36	30.8			3
YH10W-15L	15	12.7	47.5	45	38.5			4
YH10W-18L	18	15.3	57	54	46.2			5
YH10W-21L	21	17	66.5	63	53.9			6
YH10W-24L	24	19.2	76	72	61.6			7
YH10W-27L	27	21.9	85.5	81	69.3			8
YH10W-30L	30	24.4	95	90	76.5			9
YH10W-33L	33	26.8	104.5	99	84.7			10
YH10W-36L	36	29	114	108	92.4			11
YH10W-42L	42	34.1	132.3	126	100.1	12		

跌落式熔断器系列 Model Cut-fuse Series

适用范围及主要用途 Application Scope & Main Usage

跌落式熔断器及拉负荷跌落式熔断器，适用于频率为50Hz、额定电压为35kV及以下的电力系统中，它装置在配电变压器高压侧或配电支干线路路上，用作变压器和线路的短路、过载保护及分、合负荷电流，是户外高压保护电器。

Cut-out fuse and Load-off cut-out fuse, are suitable for power transformer and line short circuit, over-load protection as well as breaking and making load current using in power system which rated frequency 50Hz, rated voltage 35kV or less, installing high voltage side of power distribution transformer or distributing main line. They are one kind ideal outdoor protector.

结构特征及基本原理 Structure feature and main Principle

跌落式熔断器由绝缘支座、动静触头、熔丝管三部分组成。静触头安装在绝缘支座两端，动触头安装在熔丝管两端，熔丝管由内层的消弧管和外层的酚醛纸管或环氧玻璃纤维管组成。拉负荷跌落式熔断器增加了弹性辅助触头及灭弧罩，用以分、合负荷电流。跌落式熔断器在正常运行时，熔丝管借助熔丝张紧后形成闭合位置。当系统发生故障时，故障电流使熔丝迅速熔断，并形成电弧，消弧管受电弧灼热，分解出大量气体，使管内形成很高的压力，并沿管道强烈纵吹，电弧迅速被拉长而熄灭。熔丝熔断后，下部静触头失去张力而下翻，使锁紧机构释放熔丝管，熔丝管跌落，形成明显的断开位置。当需要拉负荷时，用绝缘杆拉开动触头，此时主动、静触头依然接触，继续用绝缘杆拉动触头，辅助触头也分离，在辅助触头之间产生电弧，电弧在灭弧罩狭缝中被拉长，同时灭弧罩产生气体，在电流过零时，将电弧熄灭。

Cut-out fuse is made of insulating base, live and fixed contact and fuse tube. Fixed contact installed on both sides of insulating base, and live contact installed on both sides of fuse tube, which is made of inner arc-quenching tube and out bakelite paper tube or epoxy-glass fiber fabric tube. Load-off cutout fuse is used for breaking & making load current with adding spring auxiliary contacts and arc-quenching cover. When cutout fuse under normal working condition, fuse tube forms close location with help of tight for fuse link. When any faults come out in system, fault current make fuse link melt promptly, and form arcing, arc-quenching tube heated by arc, decompose lot of gas, produce great pressure inside of tube, and blow vertically in high strength, the electric arc would be lengthened and quenched quickly. After melting of fuse link, fixed contact below turn down due to lost of tension, it makes locking mechanism to release fuse tube to fall down, it forms obvious breaking off location. When necessary to pull-off load, unhinge contact with insulating link, live and fixed contacts are still connected, to pull contacts continuous with insulating link, auxiliary switch also would be apart, it make electric arc between auxiliary switches, arc would be lengthened in narrow slot of arc-quenching cover, which produce gas at same time, to quench the arc when current over zero.

技术性能 Technical Performance

产品性能符合GB15166.3-94国家标准和IEC282-2国际标准技术要求。

*主要电气性能参见表

Product performance accords with technical requirements of GB15166.3-94 national standard and IEC282-2 international standard.

*Main electric features see following table