



优质玻璃绝缘子

HIGH QUALITY GLASS INSULATOR

以质量求生存 以信誉求发展

THE QUALITY OF SURVIVAL REPUTATION AND DEVELOPMENT



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PRODUCTS

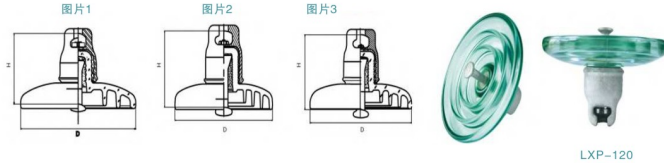
产品介绍



标准型系列 STANDARD SERIES

标准型盘形悬式玻璃绝缘子

Standard disc-shaped suspension glass insulator



标准型盘形悬式玻璃绝缘子主要技术参数

Main technical parameters of standard disc-shaped suspension glass insulator

通用序号	绝缘子型号	图号	公称直径 D	结构高度 H	公称爬电 距离L	连接标记	机械破坏 负荷	冲击负荷 破坏负荷	工频耐受 电压	雷电冲击 耐受电压	工频干态 电压	工频湿态 电压	无线电 干扰电压	无线电 干扰电压	工频电压 降	绝缘子 重量
Universal code	Insulator model	Drawing No	Nominal diameter D	structural height H	Nominal creepage distance L	Connection markers	Mechanical load	Switching overvoltage	Power frequency withstand voltage	Lightning impulse voltage	Impact air stroke voltage	Power frequency breakdown voltage	radio interference voltage	radio interference voltage	Power frequency drop	Insulator weight
			(mm)	(mm)	(mm)		(kN)	(kN)	(kV)	(kV)	(P.U)	(kV)	(kV)	(kV)		(kg)
U40B/110	LXP-40	1	175	110	190	11	40	20	25	50	2.8	130	50	18/22	0.12s/20kA	2.1
U70B/140	LXP-70	1	255	140	320	16	70	35	40	105	2.8	130	50	18/22	0.12s/20kA	3.6
U70B/146	LXP-70	1	255	146	320	16	70	35	40	105	2.8	130	50	18/22	0.12s/20kA	3.6
U100B/127	LXP-127	1	255	127	320	16	70	35	40	105	2.8	130	50	18/22	0.12s/20kA	3.5
U100B/146	LXP-140	1	255	146	320	16	100	50	40	105	2.8	130	50	18/22	0.12s/20kA	4
U100B/127	LXP-100	1	255	127	320	16	100	50	40	105	2.8	130	50	18/22	0.12s/20kA	4
U120B/146	LXP-120	1	255	146	320	16	120	60	40	105	2.8	130	50	18/22	0.12s/20kA	4
U120B/127	LXP-120	1	255	127	320	16	120	60	40	105	2.8	130	50	18/22	0.12s/20kA	4
U160B/170	LXP-160	1	280	170	400	20	160	80	45	110	2.8	130	50	18/22	0.12s/20kA	6.7
U160B/155	LXP-160	1	280	155	400	20	160	80	45	110	2.8	130	50	18/22	0.12s/20kA	6.6
U160B/146	LXP-160	1	280	146	400	20	160	80	45	110	2.8	130	50	18/22	0.12s/20kA	6.5
U210B/170	LXP-210	1	280	170	400	20	210	105	45	110	2.8	130	50	18/22	0.12s/20kA	7.2
	LXP-210	1	280	170	450	20	210	105	50	125	2.8	130	50	18/22	0.12s/20kA	7.3
U240B/170	LXP-240	2	280	170	400	20	240	120	45	110	2.8	130	50	18/22	0.12s/20kA	7.2
	LXP-240	2	280	170	400	24	240	120	45	110	2.8	130	50	18/22	0.12s/20kA	7.5
	LXP-240	2	280	170	450	24	240	120	50	125	2.8	130	50	18/22	0.12s/20kA	7.6
U300B/195	LXP-300	3	320	195	485	24	300	150	50	130	2.8	130	50	18/22	0.12s/20kA	10.6
U420B/205	LXP-420(400)	3	360	205	550	28	420(400)	210(200)	50	140	2.8	130	50	18/22	0.12s/20kA	16
U550B/240	LXP-550(530)	3	380	240	620	32	550(530)	275(285)	55	140	2.8	130	50	18/22	0.12s/20kA	21.5
U760B/280	LXP-760	3	390	240	710	32	760	380	55	140	2.8	130	50	18/22	0.12s/20kA	23.2
U900B/280	LXP-900	3	410	280	720	36	900	450	55	140	2.8	130	50	18/22	0.12s/20kA	28

Insulators with specific protection against corrosion are also available

(1) in accordance with IEC publication 60305

(2) in accordance with IEC publication 60120

(3) in accordance with IEC publication 60383-1

大盘径 LARGE PLATE DIAMETER

大盘径盘形悬式玻璃绝缘子

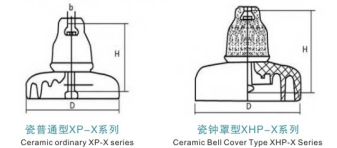
Large diameter disc-shaped suspension glass insulator

盘径绝缘子的性能

Performance of Disc Diameter Insulators

盘径绝缘子已安全运行100多年了，在20世纪70年代前，我国生产的盘径绝缘子基本采用盘径Φ254mm，爬电距离290mm或盘径Φ255mm，爬电距离300mm普通型，它的伞裙边缘与其他伞裙几乎在同一平面上，其下面伞裙空气动力涡流区小，即风攻角有阻流性能好，特别对钢索出下伞面距离较长，在劣化绝缘或带电作业更换时方便，得到了电力部门的认可。

Disc type insulators have been in safe operation for over 100 years. Prior to the 1970s, the disc type porcelain insulators produced in China mainly used the ordinary type with a diameter of Φ254mm, a creepage distance of 290mm or a diameter of Φ255mm, and a creepage distance of 300mm. Its umbrella edge edge is almost on the same plane as several other umbrella edges, and the aerodynamic eddy current zone on the lower surface of the umbrella edge is small, which means that it has good self-cleaning performance under wind and rain erosion. Especially, the steel foot is exposed for a long distance from the lower umbrella edge, making it easy to remove during the replacement of deteriorated pieces or live operations, and has been recognized by the power department.



随着环境污染和330KV、500KV线路的建设，需要160kN及以上机械强度的绝缘子，绝缘子生产厂家推出了盘径Φ270mm，爬电距离400mm或盘径Φ280mm，爬电距离450mm标准型绝缘子，同时许多厂家为电网防污要求，在Φ254mm或Φ255mm盘径的基础上，生产出爬电距离400mm爬电距离450mm的污型绝缘子。

With environmental pollution and the construction of 330KV and 500KV power lines, insulators with mechanical strength of 160kN or above are needed. The insulator manufacturer has launched a disc diameter of Φ270mm, creepage distance of 400mm, or a disc diameter of Φ280mm, creepage distance of 450mm. Standard insulators with a distance of 450mm, as well as many manufacturers' anti-pollution requirements for the power grid, are available in sizes of Φ254mm or Φ255mm. On the basis of the disc diameter, anti-pollution insulators with a creepage distance of 400mm and a



70KN-120KN

70KN-120KN

玻璃钟罩深爬型LXH-Y系列

Glass Bell Cover Deep Creepage LXH-Y Series

也是目前的钟罩深爬型，属伞裙增多，特别是伞裙边缘的第二伞裙远长过内伞裙，有的伞裙是内伞裙也很高，虽然爬电距离增大了，其伞下表面的空气动力涡流被控制在伞裙区域内，即运行中内伞裙冲刷的洁性能较好，在劣化绝缘子运行使用量还相对较低水平，均有普通绝缘子自洁性好，另外绝缘子钢脚距在伞裙平面内，在劣化更换或带电作业更换时方便，有时更换换开中钢脚距在伞裙平面内伞裙而将良好绝缘子损坏，此类防污型绝缘子看似几何爬电距离增大了，但使用在运行线路上，如90年代或2000年期间，为防止输电线路污闪事故，许多线路均将普通型更换为此类防污效果较差的钟罩深爬污型绝缘子后（部分线路更换成复合绝缘子），由于实际防污耐压值较差，仍频发上述多次线路污闪短路现象，另外生产厂家又生产出160kN爬电距离Φ320mm，爬电距离550mm的防污型绝缘子，仍属于防污型伞裙较高的产品，风攻角阻流效果较差。

That is to say, the current bell cover deep edge anti fouling type belongs to the umbrella groove with many deep grooves, especially the second umbrella edge at the edge of the umbrella plate is far away longer than the inner edge of the umbrella, some umbrella trays have high inner edges, although the creepage distance has increased. The table below shows the umbrella trays The aerodynamic vortex on the surface is trapped within the high umbrella edge area, which means that the self-cleaning performance of wind blown rain erosion during operation is relatively good. Poor, this type of insulator does not have the self-cleaning ability of ordinary insulators, whether using suspension strings or tension horizontal strings. Can be good. In addition, the steel feet of the insulator are recessed in the umbrella edge plane, and during deterioration replacement or live operation replacement, the steel feet is difficult to remove the steel cap connection, and sometimes the replacement and removal of the steel cap may cause damage to the good insulator by hitting the inner umbrella edge. Here the anti fouling type of sensing element may seem to have a larger geometric creepage distance, but it is used on operating lines, as in the 1990s or during the year 2000, in order to prevent pollution flashover accidents on transmission lines, many lines were replaced with this type of anti fouling material instead of ordinary ones. After the poor performance of the anti fouling type insulators with deep edges on the bell cover (some lines were replaced with composite insulators), due to practical reasons The international effective pollution withstand voltage value is poor, and there have still been multiple incidents of secondary line pollution flashover and tripping accidents. In addition, production in the 1990s The manufacturer has produced anti fouling insulators with a disc diameter of 160kN and a creepage distance of 550mm. It still belongs to the anti fouling type, that is, products with high umbrella edges, and the effect of wind and rain erosion is poor.



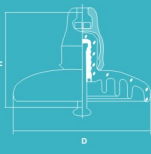
伞裙远长于其它伞裙的防污深爬型

Anti fouling deep edge type with outer umbrella edges much higher than other umbrella edges

防污深爬型

Anti fouling deep edge type

图片 4



图片 5



为此电力行业标委会发布了DL/T 1122《架空输电线路外绝缘配置技术导则》提出统一统一爬电比与其有效系数K，如普通型、空气动力型、双伞系数K为1.0；钟罩防污、钟罩深伞型在不同污秽区的k为0.8或0.9，线路外绝缘子串的爬电比距离换算为有效爬电比。

本公司根据普通盘型绝缘子风闪雨闪自洁性能，相同爬电距离下污耐压良好，运行单位更换方便的实际情况制定DL/T1122有效系数K，开发出70kN、100kN、120kN直径φ320mm、爬电距离490mm、160kN、210kN、240kN直径φ360mm、爬电距离550mm的大爬型普通型绝缘子，它的风雨雨闪自洁性能同普通型，有良好耐污性能。停电更换带电作业更换换开闭。钢臂连接方便，得到了线路运行单位的青睐。特别是70kN-120kN等级，其爬电距离比同等级的污型大，110kV-330kV电压等电压线路，若按相应电压等级的复合绝缘子结构高度来配置大直径普通型玻璃绝缘子，其有效爬电比例远大于严重污秽区的污等级，同时提高了线路的耐电水平，可取消目前不合理大面积使用复合绝缘子的弊端，免除运行10年后更换淘汰工作量。

The company has developed 70kN, 100kN, 120kN discs with φ320mm and creepage distance of 490mm according to the good self-cleaning performance of the original Baling disc insulator, good pollution and pressure resistance under the same creepage distance, convenient operation unit replacement and the effective factor K of DL/T1122. 160kN, 210kN, 240kN disc diameter φ360mm, creepage distance 550mm large climb distance ordinary type insulator, its wind-blown and rain-washed self-cleaning performance is the same as the original ordinary type, high effective pollution resistance, power failure replacement or live work replacement pick steel feet, steel hook connection is convenient, has been favored by the line operation unit. In particular, 70kN-120kN grade, its creepage distance is larger than the anti-pollution type of the same grade, 110kV-330kV voltage grade lines, if the composite insulator structure height of the corresponding voltage level is configured with large-diameter ordinary glass insulators, the effective leakage ratio is much greater than the pollution level of the serious pollution area, while improving the rest resistance level of the line. It can eliminate the drawbacks of the current unreasonable use of composite insulators in a large area and eliminate the workload of replacement after 8-10 years of operation.

For this reason, the Standardization Administration of Power industry, prepared and published DL/T 1122 Technical Guide Rules for External Insulation Configuration of Suspended Transmission Lines, which stipulates the unified specific creepage distance and its effective coefficient K that is 1.0 for common, aerodynamic and double-shed insulators, 0.8 or 0.9 for bell-shape anti-pollution insulators and bell-shape deep under-rib insulators in the different areas. In such cases, the specific leakage distance of the insulator string for transmission line external insulation has to be converted into the effective specific leakage distance.



120kN直径 φ320mm爬电距离490mm
creepage dist. diameter φ320mm
creepage distance 490mm

大直径盘形悬式玻璃绝缘子主要技术参数

Main technical parameters of large diameter disc-shaped suspension glass insulator

通用代号	绝缘子型号	图号	公称直径 D	结构高度 H	爬电距离 L	连接标记	机械破坏 负荷	工频湿态 破坏电压	工频干态 破坏电压	雷电冲击 破坏电压	冲击电压 破坏电压	工频电压 耐受电压	无线电 干扰电压	无线电 干扰电压	无线电 干扰电压	无线电 干扰电压	无线电 干扰电压
Universal code	Insulator model	Drawing No	Nominal diameter D (mm)	Structural height H (mm)	Nominal creepage distance L (mm)	Connection markers	Mechanical load (kN)	Power frequency wet breaking voltage (kV)	Power frequency dry breaking voltage (kV)	Lightning impulse voltage (kV)	Impact arctic voltage (kV)	Power frequency breakdown voltage (kV)	Radio interference voltage (kV)	Voltage test (kV)	Power frequency test (kV)	Radio interference test (kV)	Radio interference test (kV)
U70B/146	LXP6-70	6	320	146	500	16	70	35	40	100	2.8	130	50	18/22	0.12x/20kA	5.9	5.9
U100B/146	LXP6-100	4	320	146	500	16	100	50	40	100	2.8	130	50	18/22	0.12x/20kA	5.9	5.9
U120B/146	LXP6-120	4	320	146	500	16	120	60	40	100	2.8	130	50	18/22	0.12x/20kA	5.9	5.9
U160B/155	LXP6-160	5	360	155	550	20	160	80	45	110	2.8	130	50	18/22	0.12x/20kA	10.1	10.1
U210B/170	LXP6-210	5	360	170	550	20	210	105	45	110	2.8	130	50	18/22	0.12x/20kA	10.1	10.1
U240B/170	LXP6-240	5	360	170	550	24	240	120	45	110	2.8	130	50	18/22	0.12x/20kA	10.2	10.2

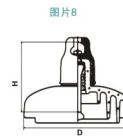
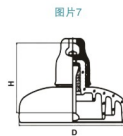
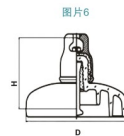
Insulators with specific protection against corrosion are also available

(1)In accordance with IEC publication 60306
(2)In accordance with IEC publication 60120
(3)In accordance with IEC publication 60363-1

耐污型系列 ANTI POLLUTION SERIES

耐污型盘形悬式玻璃绝缘子

Pollution resistant disc-shaped suspension glass insulator



LXHP-70

耐污型盘形悬式玻璃绝缘子主要技术参数

Main technical parameters of pollution resistant disc-shaped suspension glass insulator

通用代号	绝缘子型号	图号	公称直径 D	结构高度 H	爬电距离 L	连接标记	机械破坏 负荷	工频湿态 破坏电压	工频干态 破坏电压	雷电冲击 破坏电压	冲击电压 破坏电压	工频电压 耐受电压	无线电 干扰电压	无线电 干扰电压	无线电 干扰电压	无线电 干扰电压	无线电 干扰电压
Universal code	Insulator model	Drawing No	Nominal diameter D (mm)	Structural height H (mm)	Nominal creepage distance L (mm)	Connection markers	Mechanical load (kN)	Power frequency wet breaking voltage (kV)	Power frequency dry breaking voltage (kV)	Lightning impulse voltage (kV)	Impact arctic voltage (kV)	Power frequency breakdown voltage (kV)	Radio interference voltage (kV)	Voltage test (kV)	Power frequency test (kV)	Radio interference test (kV)	Radio interference test (kV)
U70BP/146H	LXHP6-70	6	255	146	400	16	70	35	45	110	2.8	130	50	18/22	0.12x/20kA	4.8	4.8
	LXHP5-70	6	280	146	450	16	70	35	50	125	2.8	130	50	18/22	0.12x/20kA	5.8	5.8
	LXHP6-70	6	320	146	550	16	70	50	55	140	2.8	130	50	18/22	0.12x/20kA	9.2	9.2
U100BP/146H	LXHP3-100	6	255	146	400	16	100	50	45	110	2.8	130	50	18/22	0.12x/20kA	5.4	5.4
	LXHP4-100	6	280	146	450	16	100	50	55	125	2.8	130	50	18/22	0.12x/20kA	5.8	5.8
	LXHP6-100	6	320	146	550	16	100	50	55	140	2.8	130	50	18/22	0.12x/20kA	9.2	9.2
U120BP/146H	LXHP3-120	6	255	146	400	16	120	60	45	110	2.8	130	50	18/22	0.12x/20kA	5.4	5.4
	LXHP4-120	6	280	146	450	16	120	60	50	125	2.8	130	50	18/22	0.12x/20kA	5.8	5.8
	LXHP6-120	6	320	146	550	16	120	80	55	140	2.8	130	50	18/22	0.12x/20kA	9.2	9.2
U160BP/155H	LXHP3-160	6	280	155	450	20	160	80	50	125	2.8	130	50	18/22	0.12x/20kA	7.1	7.1
	LXHP4-160	6	320	155	550	20	160	80	55	140	2.8	130	50	18/22	0.12x/20kA	9.5	9.5
U160BP/170H	LXHP4-160	6	280	170	450	20	160	80	50	125	2.8	130	50	18/22	0.12x/20kA	7.2	7.2
	LXHP6-160	6	320	170	550	20	160	80	55	140	2.8	130	50	18/22	0.12x/20kA	9.6	9.6
U210BP/170H	LXHP3-210	6	320	170	550	20	210	105	55	140	2.8	130	50	18/22	0.12x/20kA	10.2	10.2
U210BP/155H	LXHP4-210	6	320	155	550	24	210	105	55	140	2.8	130	50	18/22	0.12x/20kA	10.1	10.1
U240BP/170H	LXHP3-240	7	320	170	550	24	240	120	55	140	2.8	130	50	18/22	0.12x/20kA	10.2	10.2
	LXHP4-240	7	320	170	550	24	240	120	55	140	2.8	130	50	18/22	0.12x/20kA	10.4	10.4
U300BP/195H	LXHP-300	8	390	195	690	24	300	150	60	155	2.8	130	50	18/22	0.12x/20kA	15	15
	LXHP4-300	8	340	195	550	24	300	150	55	140	2.8	130	50	18/22	0.12x/20kA	12.5	12.5
	LXHP6-300	8	380	195	635	24	300	150	60	155	2.8	130	50	18/22	0.12x/20kA	14.5	14.5
U400BP/205	LXHP-400(420)/205	8	380	205	620	28	400(420)	200(210)	55	125	2.8	130	50	18/22	0.12x/20kA	15.2	15.2
U530BP/240	LXHP-530(550)/240	8	380	240	620	32	530(550)	265(275)	55	125	2.8	130	50	18/22	0.12x/20kA	21.5	21.5

Insulators with specific protection against corrosion are also available

(1)In accordance with IEC publication 60306
(2)In accordance with IEC publication 60120
(3)In accordance with IEC publication 60363-1

空气动力型系列 AERODYNAMIC SERIES

空气动力型盘形悬式玻璃绝缘子
Aerodynamic disc-shaped suspension glass insulator

图片9



Main technical parameters of aerodynamic disc-shaped suspension glass insulator

Insulators with specific protection against corrosion are also available

(1) In accordance with IEC publication 60305

(2) In accordance with IEC publication 60120

(3) In accordance with IEC publication 60383-1

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The parameters for the earthwire type toughed glass suspension insulator

(1) In accordance with IEC publication 60305
(2) In accordance with IEC publication 60120
(3) In accordance with IEC publication 60383-1

Figure 14 shows two green, circular, spiral-shaped components. The top component is labeled LXZY-160 and the bottom component is labeled LXAP-550. To the right of the components is a cross-sectional diagram of the LXZY-160 component, showing its internal structure and dimensions H and D.

The parameters for DC Toughened Glass Suspension Insulator

Insulators with specific protection against corrosion are also available

- (1) In accordance with IEC publication 60305
- (2) In accordance with IEC publication 60120
- (3) In accordance with IEC publication 60383-1

The model explanation of DC Toughened Glass Insulator



The model explanation of AC Toughened Glass Insulator

