

# Professional Manufacturer in High Voltage Products field

Zno lightning arrester is one kind most world advanced over-voltage protector at present due to its core components of resistance applying Zno and other metal oxide to make of, comparing with traditional carborundum arrester, it improves greatly V-A characteristics of resistance, increases the getting through ability of resistance, thereby it brings fundamental change to features of arrester. Under normal working voltage, the current passing arrester only  $\mu$ A class, when bearing over voltage, the excellent non-linear V-A features of arrester would make effect, the current passing through the arrester increase high to thousands of Ampere instant the arrester is under getting through state, to release over-voltage energy, therefore it effective limits the damage to power transmission equipments due to over Voltage.



# B

**Zinc-oxide  
arrester**





# 避雷器系列

## Arrester Series



### • 基本原理 Main principle

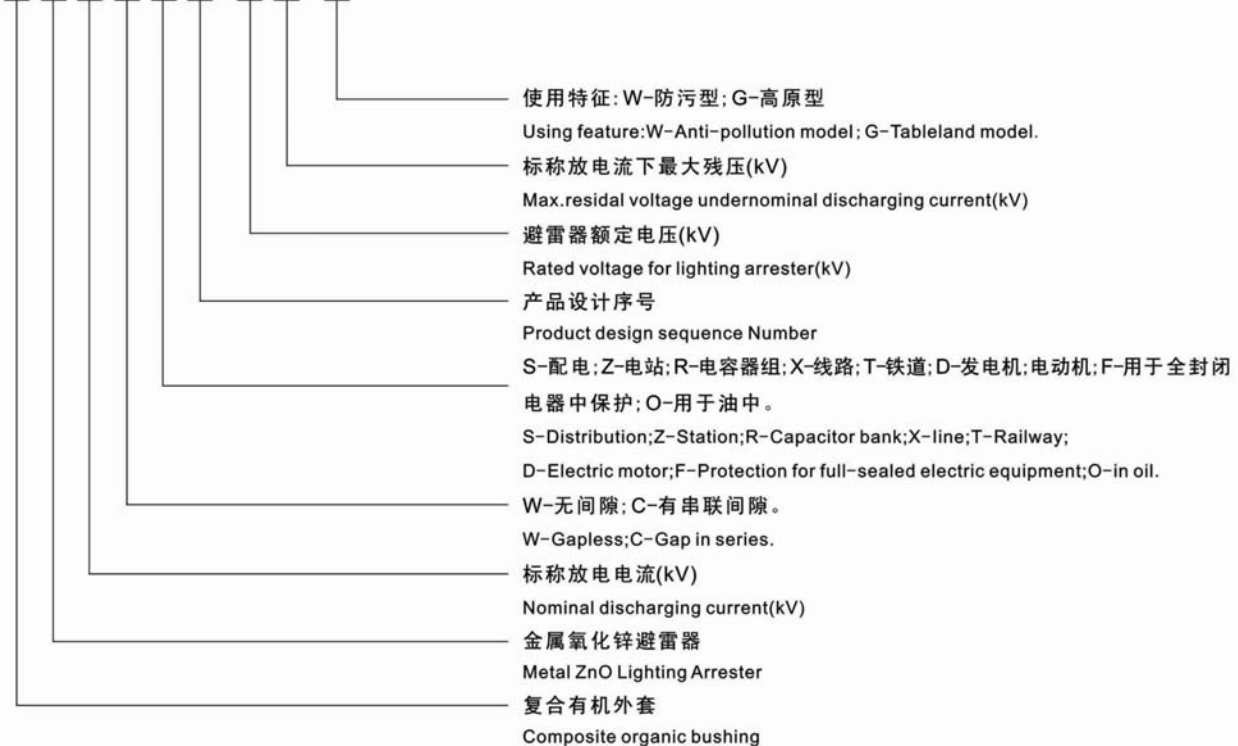
- 氧化锌避雷器，是目前国际最先进的过电压保护器。由于其核心元件电阻片采用氧化锌及多种金属氧化物制成，与传统碳化硅避雷器相比，大大改善了电阻片伏安特性，提高了电阻片的通流能力，从而带来避雷器特征的根本变化。
- 当避雷器在正常工作电压下，流过避雷器的电流仅有微安级，当遭受电压时，避雷器优异的非线性伏安特性发挥作用，流过避雷器的电流瞬间增大到数千安培，避雷器处于导通状态，释放过电压能量，从而有效地限制了过电压对输变电设备的侵害。
- ZnO lightning arrester is one kind most world advanced over-voltage protector at present, due to its core components of resistance applying ZnO and other metal oxide to make of, comparing with traditional carborundum arrester, it improves greatly V-A characteristics of resistance, increases the getting trough ability of resistance, thereby it brings fundamental change to features of arrester.
- Under normal working voltage, the current passing arrester only a class, when bearing over voltage, the excellent non-linear V-A features of arrester would make effect, the current passing through the arrester increase high to thousands of Ampere instant, the arrester is under getting through state, to release over-voltage energy, therefore it effectively limits the damage to power transmission equipments due to over voltage

### • 用途特点 Application and features

- 氧化锌避雷器，是保护交流电力系统的电气设备免受大气过电压和操作过电压危害的保护设备。
- ZnO lightning arrester is one kind protecting equipment preventing electric equipments in AC power system from high voltage and over-voltage operation.

### • 型号说明 Type definition

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# 避雷器系列

## Arrester Series



### • 5KA 无间隙避雷器 Gapless arrester electrical parameter

型号 Type	额定电压 Rated voltage (kV)	最大持续 运行电压 MCOV (kV)	残压 Residual voltge(KV)			方波冲击电流耐受 2000 $\mu$ s square wave impulse current withstand	大电流耐受 4/10 $\mu$ s high current impulse (kV)
			陡坡冲击电流 Steep current impulse	操作冲击电流 switching current impulse	8/20 $\mu$ s标准雷电冲击 Lightning current impulse		
HY5W-3	3	2.55	9.5	7.7	9	100	65
HY5W-6	6	5.1	19.5	15.4	18	100	65
HY5W-9	9	7.65	28.5	23.1	27	100	65
HY5W-10	10	8.4	36	30	23	150	65
HY5W-11	11	9.4	40	33	30	150	65
HY5W-12	12	10.2	38.0	30.8	36	100	65
HY5W-15	15	12.7	47.5	38.5	45	100	65
HY5W-18	18	15.3	57.0	46.2	54	100	65
HY5W-21	21	17.0	66.5	53.9	63	100	65
HY5W-24	24	19.2	76.0	61.6	72	100	65
HY5W-27	27	21.9	85.5	69.3	81	100	65
HY5W-30	30	24.4	95.0	76.5	90	100	65
HY5W-33	33	26.8	104.5	84.7	99	100	65
HY5W-36	36	29	114.0	92.4	108	100	65
HY5W-42	42	34.1	132.3	100.1	126	100	65

注：如果是瓷套避雷器，应去掉型号前的H.Note:if it is porcelain,without"H"

### • 10KA 无间隙避雷器 Gapless arrester electrical parameter

型号 Type	额定电压 Rated voltage (kV)	最大持续 运行电压 MCOV (kV)	残压 Residual voltge(KV)			方波冲击电流耐受 2000 $\mu$ s square wave impulse current withstand	大电流耐受 4/10 $\mu$ s high current impulse (kV)
			陡坡冲击电流 Steep current impulse	操作冲击电流 switching current impulse	8/20 $\mu$ s标准雷电冲击 Lightning current impulse		
HY10W-3	3	2.55	9.5	7.7	9	1	100
HY10W-6	6	5.1	19.5	15.4	18	1	100
HY10W-9	9	7.65	28.5	23.1	27	1	100
HY10W-10	10	8.4	36	30	23	250	100
HY10W-11	11	9.4	40	33	30	250	100
HY10W-12	12	10.2	38.0	30.8	36	1	100
HY10W-15	15	12.7	47.5	38.5	45	1	100
HY10W-18	18	15.3	57.0	46.2	54	1	100
HY10W-21	21	17.0	66.5	53.9	63	1	100
HY10W-24	24	19.2	76.0	61.6	72	1	100
HY10W-27	27	21.9	85.5	69.3	81	1	100
HY10W-30	30	24.4	95.0	76.5	90	1	100
HY10W-33	33	26.8	104.5	84.7	99	1	100
HY10W-36	36	29	114.0	92.4	108	1	100
HY10W-42	42	34.1	132.3	100.1	126	1	100
HY10W-48	48	39	152.0	126.0	150	1	100
HY10W-54	54	43	171.0	139.0	162	1	100
HY10W-60	60	48	208.0	160.0	180	1	100
HY10W-66	66	52.8	230.0	172.0	198	1	100

注：如果是瓷套避雷器，应去掉型号前的H.Note:if it is porcelain,without"H"



# 避雷器系列 Arrester Series



• HY10W, HY5W 复合绝缘避雷器 Polymer type lightning Arrester



RLA1  
33-36kV



RLA2  
27-30kV



RLA3  
24-27kV



RLA4  
21-24kV



RLA5  
15-18kV



RLA6  
33-36kV



RLA7  
24kV



RLA8  
15kV



RLA9  
12kV



RLA10  
9kV



RLA11  
12kV



RLA12  
6kV



# 避雷器系列

## Arrester Series



### • 5KA 串联间隙避雷器 Gapped arrester electrical parameter

型号 Type	额定电压 Rated voltage (kV)	最大持续 运行电压 MCOV (kV)	放电电压 sparkover voltage(kV)		8/20 μ s标准雷电冲击 Lightning Impulse residual voltage (kV)	方波冲击电流耐受 2000 μ s square wave impulse current withstand	大电流耐受 4/10 μ s high current impulse (kV)
			工额 Power frequency	1.2/50 μ s雷电冲击 Lighting impulse			
Y5C-3	3	2.55	5.0	7.8	9	100	65
Y5C-6	6	5.1	10.0	15.5	18	100	65
Y5C-9	9	7.65	16.5	24.5	27	100	65
Y5C-12	12	10.2	21.0	32.6	36	100	65
Y5C-15	15	12.7	25.0	38.8	45	100	65
Y5C-18	18	15.3	31.0	48.1	54	100	65
Y5C-21	21	17.0	34.0	52.7	63	100	65
Y5C-24	24	19.2	39.0	60.5	72	100	65
Y5C-27	27	21.9	45.0	69.8	81	100	65
Y5C-30	30	24.4	50.0	77.5	90	100	65
Y5C-33	33	26.8	55.0	85.3	99	100	65
Y5C-36	36	29	60.0	93.0	108	100	65
Y5C-42	42	34.1	70.0	108.5	126	100	65

### • 10KA 串联间隙避雷器 Gapped arrester electrical parameter

型号 Type	额定电压 Rated voltage (kV)	最大持续 运行电压 MCOV (kV)	放电电压 sparkover voltage(kV)		8/20 μ s标准雷电冲击 Lightning Impulse residual voltage (kV)	方波冲击电流耐受 2000 μ s square wave impulse current withstand	大电流耐受 4/10 μ s high current impulse (kV)
			工额 Power frequency	1.2/50 μ s雷电冲击 Lighting impulse			
Y10C-3	3	2.55	9.5	7.7	9	1	100
Y10C-6	6	5.1	19.5	15.4	18	1	100
Y10C-9	9	7.65	28.5	23.1	27	1	100
Y10C-12	12	10.2	38.0	30.8	36	1	100
Y10C-15	15	12.7	47.5	38.5	45	1	100
Y10C-18	18	15.3	57.0	46.2	54	1	100
Y10C-21	21	17.0	66.5	53.9	63	1	100
Y10C-24	24	19.2	76.0	61.6	72	1	100
Y10C-27	27	21.9	85.5	69.3	81	1	100
Y10C-30	30	24.4	95.0	76.5	90	1	100
Y10C-33	33	26.8	104.5	84.7	99	1	100
Y10C-36	36	29	114.0	92.4	108	1	100
Y10C-42	42	34.1	132.3	100.1	126	1	100



# 避雷器系列 Arrester Series



• Y5W, Y5C, Y10W, Y10C 瓷套避雷器 Porcelain lightning arrester



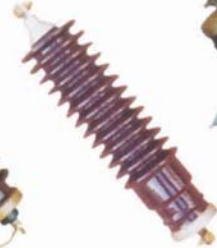
RLA13(36KV)



RLA14(33KV)



RLA15(33KV)



RLA16(18-21KV)



RLA17(24KV)



RLA18(24KV)



RLA19(18KV)



RLA20(24KV)



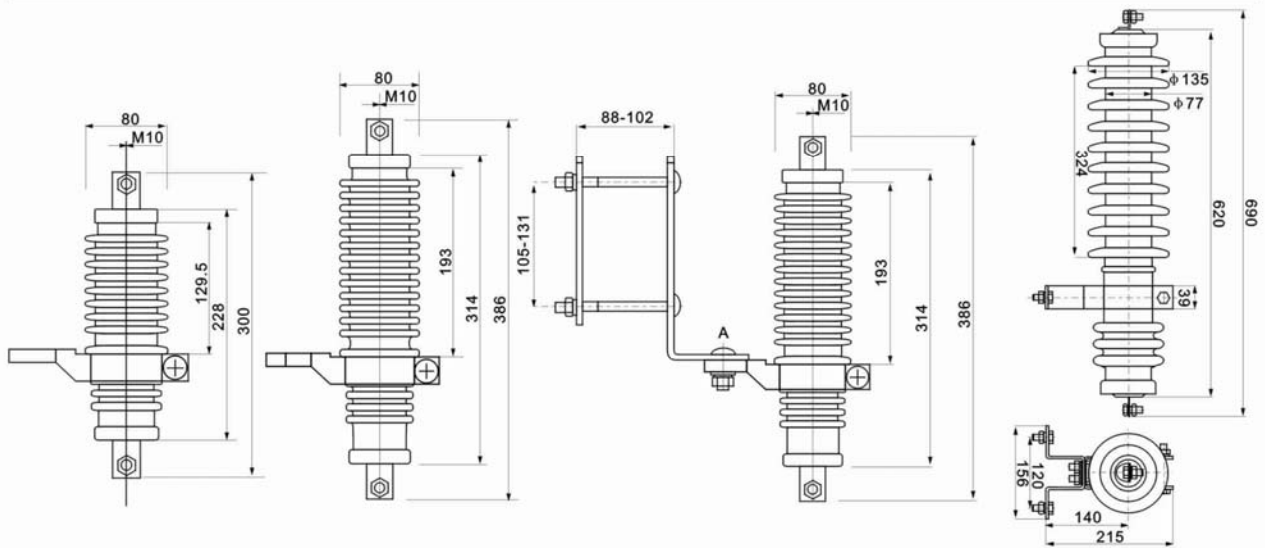
RLA21(9-15KV)



RLA22(9-10KV)



RLA23(3-6KV)





# 避雷器系列

## Arrester Series



### • 产品技术参数 Technology parameter

电压等级 voltage class	使用场所 Service scope	系统标称电压 (kV) 有效值 system of nominal voltage effective implant	避雷器国标型号 arrester chinese standard model	避雷器 额定电压 (kV) 有效值 arrester rated voltage effective implant	无间隙避雷器 no clearance arrester			有间隙避雷器 have clearance arrester			残压(kV)峰值(不大于) residual(kV)pressure peak value (not more than)			2000μs 方波通流 容量 (A) 2000μs square wave flow capacity (A)	4/10 大电流 耐受能力 (KA) 4/10 high current compression capacity (KA)
					避雷器 持续运行 电压 (kV) 有效值 arrester continuous voltage(kV)operating voltage	直流1mA 参考电压 (kV) 不小于 DC 1mA reference voltage(kV) not less	0.75倍 直流参考 电压下最 大泄漏 电流 (μA) 0.75 times of DC-voltage reference under the max.leakage	工频放 电电压 (kV) 有效值 不小于 Power frequency discharging voltage	1.2/50 冲击放电 电压(kV) 峰不大于 1.2/50 max. impact discharging voltage	最大电 导电流 (μA) max. Conduction (μA)	8/20 雷电流下 电流 (μA) 8/20 under the lighting current impulse	30/60 操作冲击 电流下 电流 (μA) 30/60 under switching current impulse	1/4 陡波冲击 电流下 电流 (μA) 1/4 under steep current impulse		
低压 low voltage	配电型 distribution model	0.22	YH1.5W-0.28/1.3	0.28	0.24	0.6	50	-	-	-	1.3	-	-	75	25
		0.38	YH1.5W-0.5/2.6	0.5	0.24	1.2	50	-	-	-	2.6	-	-	75	25
	电机型 motor model	0.66*	YH2.5WD-1.3/3.6	1.3	0.95	1.8	50	-	-	-	3.6	-	-	200	40
		1.14*	YH2.5WD-2.6/2.7	2.6	1.9	3.6	50	-	-	-	7.2	-	-	200	40
3kV	配电型 distribution model	3	YH5WS-3.8/15	3.8	2.0	7.5	50	-	-	-	15.0	12.8	17.3	75	40
		3	YH5WS-5/15	5	4.0	7.5	50	-	-	-	15.0	12.8	17.3	75	40
		3	YH5CS-3.8/13.5	3.8	-	-	-	9.0	13.5	20	13.5	11.4	15.0	75	40
	电站型 power model	3	YH5WZ-3.8/13.5	3.8	2.0	7.2	50	-	-	-	13.5	11.5	15.5	200	65
		3	YH5WZ-5/13.5	5	4.0	7.2	50	-	-	-	13.5	11.5	15.5	200	65
		3	YH5CZ-3.8/12.0	3.8	-	-	-	8.0	12.0	20	12.0	10.2	13.5	200	65
	电容型 capacitor model	3	YH5WR-3.8/13.5	3.8	2.0	7.2	50	-	-	-	13.5	10.5	-	400	65
		3	YH5WR-5/13.5	5	4.0	7.2	50	-	-	-	13.5	10.5	-	400	65
		3	YH5CR-3.8/12.0	3.8	-	-	-	8.0	12.0	20	12.0	9.6	-	400	65
	发电机型 generator model	3.15*	YH5WD-3.8/9.5	3.8	2.0	5.7	50	-	-	-	9.5	7.6	10.7	400	65
		3.15*	YH5WD-4/8.6	4	3.15	5.7	50	-	-	-	9.5	7.6	10.7	400	65
		3.15*	YH5CD-3.8/1.3	3.8	-	-	-	7.5	8.6	20	8.6	6.9	9.8	400	65
		3.15*	YH2.5WD-3.8/9.5	3.8	2.0	5.7	50	-	-	-	9.5	7.6	10.7	200	65
		3.15*	YH2.5WD-4/9.5	4	3.15	5.7	50	-	-	-	9.5	7.6	10.7	200	65
		3.15*	YH2.5CD-3.8/8.6	3.8	-	-	-	7.5	8.6	20	8.6	6.9	9.8	200	65
	6kV	配电型 distribution model	6	YH1.5W-2.4/6	7.6	4.0	15.0	50	-	-	-	30.0	25.6	34.6	75
6			YH5WS-7.6/30	10	8.0	15.0	50	-	-	-	30.0	25.6	34.6	75	40
6			YH5WS-10/30	7.6	-	-	-	16.0	27.0	20	27.0	22.5	30.0	75	40
电站型 power model		6	YH5CS-7.6/27	7.6	4.0	14.4	50	-	-	-	27.0	23.0	31.0	200	65
		6	YH5WZ-7.6/27	10	8.0	14.4	50	-	-	-	27.0	23.0	31.0	200	65
		6	YH5WZ-10/27	7.6	-	-	-	16.0	24.0	20	24.0	20.4	27.0	200	65
电容型 capacitor model		6	YH5CZ-7.6/24	7.6	4.0	14.4	50	-	-	-	27.0	21.0	-	400	65
		6	YH5WR-7.6/27	10	8.0	14.4	50	-	-	-	27.0	21.0	-	400	65
		6	YH5WR-10/27	7.6	-	-	-	16.0	24.0	20	24.0	19.5	-	400	65
发电机型 generator model		6.3*	YH5CR-7.6/24	7.6	4.0	11.2	50	-	-	-	18.7	15.0	21.0	400	65
		6.3*	YH5WD-7.6/18.7	8	6.3	11.2	50	-	-	-	18.7	15.0	21.0	400	65
		6.3*	YH5WD-8/18.7	7.6	-	-	-	15.0	17.0	20	17.0	13.8	19.6	400	65
		6.3*	YH5CD-7.6/17	7.6	4.0	11.2	50	-	-	-	18.7	15.0	21.0	200	65
		6.3*	YH2.5WD-7.6/18.7	8	6.3	11.2	50	-	-	-	18.7	15.0	21.0	200	65
		6.3*	YH2.5WD-8/18.7	7.6	-	-	-	15.0	17.0	20	17.0	13.8	19.6	200	65
10kV		配电型 distribution model	10	YH1.5W-4.8/12	4.8	3.8	6.8	50	-	-	-	12.0	10.0	-	200
	10		YH5WS-12.7/50	12.7	6.6	25	50	-	-	-	50	42.5	57.5	75	40
	10		YH5WS-17/50	17	13.6	25	50	-	-	-	50	42.5	57.5	75	40
	电站型 power model	10	YH5CS-12.7/45	12.7	-	-	-	26.0	45	20	45	38.4	51.0	75	40
		10	YH5WZ-12.7/45	12.7	6.6	24	50	-	-	-	45	38.3	51.8	200	65
		10	YH5WZ-17/45	17	13.6	24	50	-	-	-	45	38.3	51.8	200	65
	电容型 capacitor model	10	YH5CZ-12.7/41	12.7	-	-	-	26.0	41	20	41	35.0	46.0	200	65
		10	YH5WR-12.7/46	12.7	6.6	24	50	-	-	-	46	35.0	-	400	65
		10	YH5WR-17/46	17	13.6	24	50	-	-	-	46	35.0	-	400	65
	发电机型 generator model	10	YH5CR-12.7/41	12.7	-	-	-	26.0	41	20	41	33.0	-	400	65
		10.5*	YH5WD-12.7/31	12.7	6.6	18.6	50	-	-	-	31	25	34.7	400	65
		10.5*	YH5WD-13.5/31	13.5	10.5	18.6	50	-	-	-	31	25	34.7	400	65
		10.5*	YH5CD-12.7/28	12.7	-	-	-	25.0	28.0	20	28	22.5	32.0	400	65
		13.8*	YH5WD-17.5/40	17.5	13.8	24.4	50	-	-	-	40.0	32.0	44.8	400	65
		15.75*	YH5WD-20/45	20.0	15.75	28.0	50	-	-	-	45.0	36.0	50.4	400	65
		18.0*	YH5WD-23/51	23.0	18.0	31.9	50	-	-	-	51.0	40.8	57.2	400	65
20.0*		YH5WD-25/56.2	25.0	20.0	35.4	50	-	-	-	56.2	45.0	62.9	400	65	
10.5*		YH2.5WD-12.7/31	12.7	6.6	18.6	50	-	-	-	31	25	34.7	200	65	
电动机型 electric motor model	10.5*	YH2.5WD-13.5/31	13.5	10.5	18.6	50	-	-	-	31	25	34.7	200	65	
	10.5*	YH2.5CD-12.7/28	12.7	-	-	-	25.0	28.0	20	28	22.5	32.0	200	65	



# 避雷器系列

## Arrester Series



### • 产品技术参数 Technology parameter

电压等级 voltage class	使用场所 Service scope	系统标称电压 (kV) 有效值 system of nominal voltage effective implant	避雷器国标型号 arrester chinese standard model	避雷器额定电压 (kV) 有效值 arrester rated voltage effective implant	无间隙避雷器 no clearance arrester			有间隙避雷器 have clearance arrester			残压(kV)峰值(不大于) residual(kV)pressure peak value (not more than)			2000 $\mu$ s 方波通流容量 (A) 2000 $\mu$ s square wave flow capacity (A)	4/10 大电流耐受能力 (KA) 4/10 high current compression capacity (KA)	
					避雷器持续运行电压 (kV) 有效值 arrester continuous voltage (kV) operating voltage	直流1mA参考电压 (kV) 不小于 DC 1mA reference voltage(kV) not less	0.75倍直流参考电压下最大泄漏电流 ( $\mu$ A) 0.75 times of DC-voltage reference under the max.leakage	工频放电电压 (kV) 有效值 Power frequency discharging voltage	1.2/50冲击放电电压(kV) 峰不大于 1.2/50 impact discharging voltage	最大电导电流 ( $\mu$ A) max. Conduction current ( $\mu$ A)	8/20雷电冲击电流下 ( $\mu$ A) 8/20 under the lightning current impulse	30/60操作冲击电流下 ( $\mu$ A) 30/60 under switching current impulse	1/4陡波冲击电流下 ( $\mu$ A) 1/4 under steep current impulse			
10kV	中 型 点 型 neutral point model	10.5*	YH1.5W-8/19	8	6.4	11.4	50	-	-	-	19.0	15.9	-	200	65	
		13.8*	YH1.5W-10.5/23	10.5	8.4	14.9	50	-	-	-	23.0	19.2	-	200	65	
		15.75*	YH1.5W-12/26	12	9.6	17.0	50	-	-	-	26.0	21.6	-	200	65	
		18.0*	YH1.5W-13.7/29.2	13.7	11.0	19.2	50	-	-	-	29.2	24.3	-	200	65	
		20.0*	YH1.5W-15.2/31.7	15.2	12.2	21.6	50	-	-	-	31.7	26.4	-	200	65	
35kV	电 站 型 power model	35	YH5WZ-51/134	51	40.8	73	50	-	-	-	134	114	154	400	65	
		35	YH5WZ-42/134	42	23.4	73	50	-	-	-	134	114	154	400	65	
	电 容 型 capacitor model	35	YH5CZ-42/124	42	-	-	-	80.0	124	20	124	100	143	400	65	
		35	YH5WR-84/134	51	40.8	73	50	-	-	-	134	105	-	400	65	
		35	YH5WR-42/134	42	23.4	73	50	-	-	-	134	105	-	400	65	
		35	YH5CR-42/124	42	-	-	-	80.0	124	20	124	100	-	400	65	
		35	YH5WX-51/134	51	40.8	73	50	-	-	-	134	114	154	400	65	
		线 路 型 Line-type	35	YH5WX-54/150	54	43.2	77	50	-	-	-	150	128	169	400	65
			35	YH5CX-42/120	42	-	-	-	80.0	120	20	120	100	138	400	65
			35	YH5CX-42/150	42	-	-	-	80.0	150	20	150	128	169	400	65
35	YH1.5W-30/80		30	24	44	50	-	-	-	80	67.5	-	400	65		
66kV	电 站 型 power model	66	YH5WZ-84/221	84	67.2	121	50	-	-	-	221	188	254	600	65	
		66	YH5WZ-90/235	90	72.5	130	50	-	-	-	235	201	270	600	65	
		66	YH10WZ-84/221	84	67.2	121	50	-	-	-	221	188	248	600	100	
	线 路 型 Line-type	66	YH10WZ-90/235	90	72.5	130	50	-	-	-	235	201	264	600	100	
		66	YH5WX-96/250	96	75	140	50	-	-	-	250	213	288	600	65	
		66	YH5WX-96/275	96	75	154	50	-	-	-	275	234	316	600	65	
110kV	电 站 型 power model	110	YH5WZ-100/260	100	78	145	50	-	-	-	260	221	299	600	65	
		110	YH5WZ-102/266	102	79.6	148	50	-	-	-	266	226	305	600	65	
		110	YH5WZ-108/281	108	84	157	50	-	-	-	281	239	323	600	65	
		110	YH10WZ-100/260	100	78	145	50	-	-	-	260	221	291	600	100	
		110	YH10WZ-102/266	102	79.6	148	50	-	-	-	266	226	297	600	100	
		110	YH10WZ-108/281	108	84	157	50	-	-	-	281	239	315	600	100	
	线 路 型 Line-type	110	YH5WX-108/281	108	84	157	50	-	-	-	281	239	323	600	65	
		110	YH5WX-108/309	108	84	173	50	-	-	-	300	263	348	600	65	
		110	YH10WX-108/281	108	84	157	50	-	-	-	281	239	315	600	100	
		110	YH10WX-108/309	108	84	173	50	-	-	-	309	263	348	600	100	
		110	YH5CX-90/260	90	-	130	50	170*	525*	-	260	-	292	400	65	
		110	YH10CX-90/260	90	-	130	50	170*	525*	-	260	-	292	600	100	
		110	YH10CX-96/280	96	-	140	50	170*	525*	-	280	-	314	600	100	
		110	YH10CX-102/296	102	-	148	50	170*	525*	-	296	-	332	600	100	
220kV	中 型 点 型 neutral point model	110	YH1.5W-60/144	60	48	85	50	-	-	-	144	135	-	400	65	
		110	YH1.5W-72/186	72	58	103	50	-	-	-	186	174	-	400	65	
	电 站 型 power model	220	YH10WZ-192/500	192	150	280	50	-	-	-	500	246	560	800	100	
		220	YH10WZ-200/520	200	156	290	50	-	-	-	520	442	582	800	100	
		220	YH100WZ-204/532	204	159	296	50	-	-	-	532	452	594	800	100	
		220	YH10WZ-216/562	216	168.5	314	50	-	-	-	562	478	630	800	100	
		220	YH10WX-216/562	216	168	314	50	-	-	-	562	478	630	60	100	
		220	YH10WX-216/618	216	168	346	50	-	-	-	618	526	693	600	100	
		220	YH10CX-185/520	180	-	260	50	340*	900*	-	520	-	584	600	100	
		220	YH10CX-192/560	192	-	280	50	340*	900*	-	560	-	628	600	100	
中 型 点 型 neutral point model	220	YH10CX-204/592	204	-	296	50	340*	900*	-	592	-	664	600	100		
	220	YH1.5W-144/320	144	116	205	50	-	-	-	320	299	-	600	65		
27.5kV 55kV	铁 道 型 Railway type	27.5	YH5WT-42/120	42	34	65	50	-	-	-	120	98	138	400	65	
55	YH5WT-84/240	84	68	130	50	-	-	-	-	240	276	276	400	65		

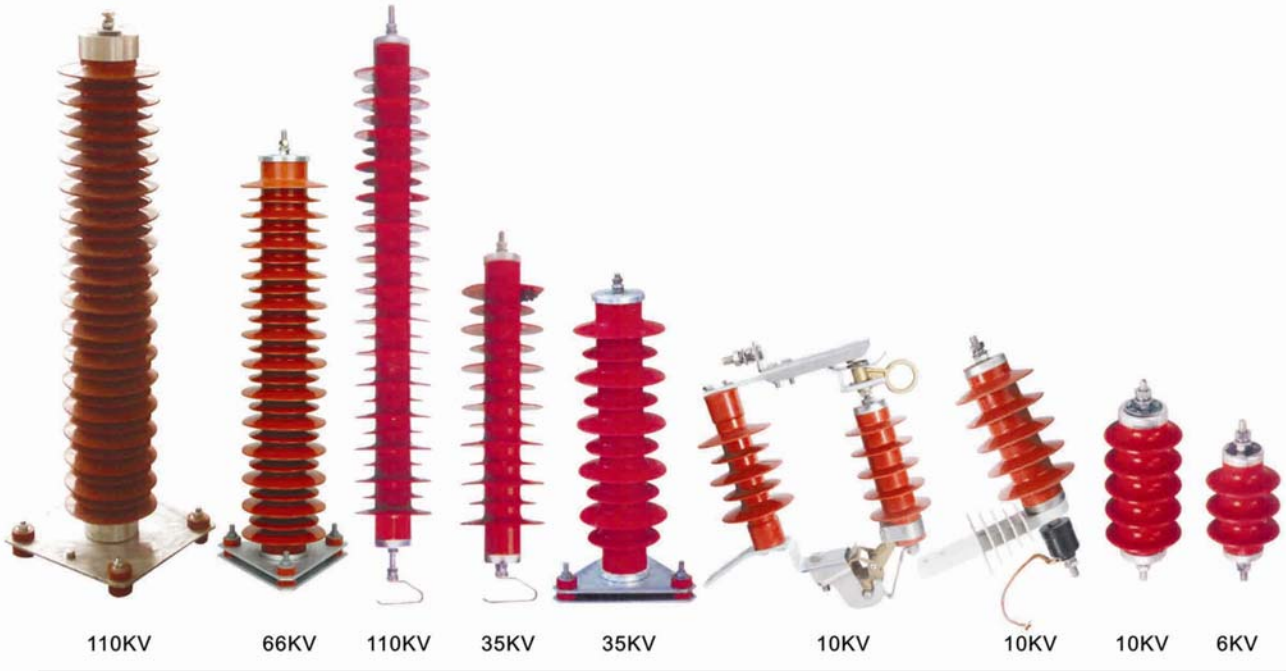
备注: 1. 每一种国标型号均可衍生数个型号的产品, 限于篇幅, 不一一列出, 用户如有型号上的疑问可直接咨询我公司技术部。  
 2. "系统标称电压" 栏带的数字, 为电机保护类避雷器对应的电机额定电压。  
 "工频标称电压" 栏带的数字, 为110kV以上高压避雷器工频耐受电压有效值。  
 "冲击放电电压" 栏带的数字, 为110kV以上高压避雷器50%雷电冲击放电电压。  
 3. 由于用途和电压等级较多, 未特别指明避雷器30/60操作冲击残压所对应的冲击电流值, 该电流值依相关标准选取。  
 4. 绝大多数产品可配脱离器、计数器及配件, 配计数器在型号后加 "J", 配脱离器加 "L"。  
 5. 如果是瓷避雷器, 应去掉型号里的 "H"。  
 note: 1. each kind of chinese standard model can be derived from several type of products, limited the space, so we don't list them one by one, you can contact with our technical department if have the problem.  
 2. a. "Nominal voltage system" of data, for the column of lightning protection of motor rated voltage motor. b. "Power frequency nominal voltage" of data, for the column of high voltage over 110kv arresters effective voltage tolerance. c. "Impact of discharging voltage" of data, for 110kv above 50% lightning shock pressure arrester discharging voltage.  
 3. due to the purpose and the voltage level more, not specified name arrester 30/60 operation residual pressure corresponding impact the impact of the current result in accordance with the relevant standards to select.  
 4. most products can match counter and disconnector etc.knits, match the counter should add "J", match the disconnector should add "L".  
 5. note: if its the porcelain arrester, without "H".



# 避雷器系列 Arrester Series



• YW、HYW型氧化锌避雷器 Zine oxide arrester





# 三相组合式过电压保护器

## Three-Phase Integrated Lightning Arrester



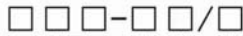
### • 概述 Summary

三相组合式过电压保护器是一种新颖的过电压保护设备，主要用于35kV及以下电力系统中，保护变压器，开关，母线，电动机，并联补偿电容器等电气设备，可限制大气过电压及各种真空断路器引起的操作过电压，相对地和相间的过电压均能引起到可靠的限制作用。三相组合式过电压保护器由四只避雷器组成四星型接法，从而使各相地，相间的过电压都得到保护。由于结构上的巧妙配合，使一台过电压器起到了6只避雷器的作用。同时克服了简单的三只避雷器星型接法不能更好保护相间过电压的缺点。三相组合式过电压保护器可以有串联间隙型，也可以是无间隙型。

Three-Phase integrated lightning arrester is a new type lightning arrester which mainly used to protect transformer, switch, bus bar, electromotor, parallel compensating capacitor in 35kV electric system, it also can limit over-voltage of air, vacuum circuit breaker, phase to earth, phase to phase.

Three-Phase integrated lightning arrester consists of our lightning arresters by four-stars type, so it can protect each phase to earth and phase to phase from over-voltage, because of its smart structure, its function is equal to six lightning arresters, it also solve the problem that lightning arresters can't protect phase to phase very well. Three-Phase integrated lightning arrester can be either gap or no series.

### • 型号说明 Type definition

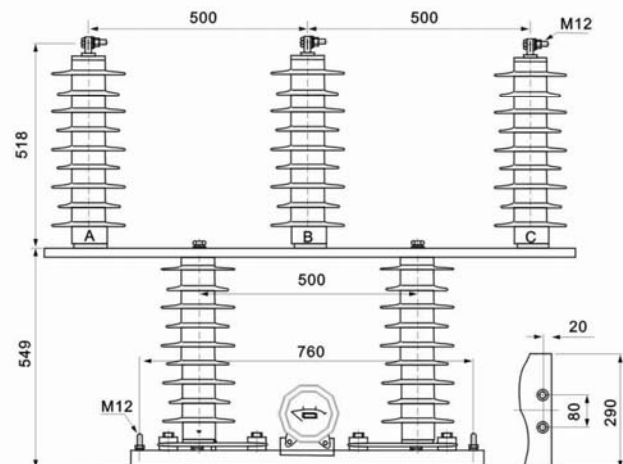


- /□
- 额定电压(kV)  
Rated voltage(kV)
- 使用场所(N:户内, W: 户外);  
Using Area(N:Indoor,W:Outdoor);
- 保护对象;  
The object of protection;
- 三相组合式过电压保护器。  
Three-Phase Integrated Lightning Arrester.



### • 正常使用条件 The normal conditions of use

- 适用于户内, 户外;
- 环境温度为-40℃~+40℃;
- 海拔高度不超过2500m;
- 电源频率不大于62Hz, 不小于48Hz;
- 最大风速不超过35m/s;
- 地震烈度7度及以下地区;
- 过电压保护器长期工作电压, 应不超过持续运行电压。
- Suitable for both indoor and outdoor;
- Ambient temperature:-40℃to40℃;
- Altitude:≤2500m;
- Power frequency: between 48Hz and 62Hz;
- Wind speed ≤35m/s;
- Earth quake: no more than seven grade;
- It can't operate long time in a voltage which over the continuous operation voltage.





# 三相组合式过电压保护器

## Three-Phase Integrated Lightning Arrester



### • 主要技术参数 Main technical parameters



表1 Table1

TBP-A系列(电动机型)TBP-A Series(Motor Type)			
电动机额定电压(kV) Electromotor Rated voltage(kV)		6.3	10.5
保护器额定电压(kV) Lightning Arrester Rated voltage(kV)	有效值 Virtual Value	7.6	12.7
工频放电电压不小于(kV) Power frequency discharge		15.0	25.0
直流U1mA参考电压不小于(kV) DC(U1mA)Ref.Voltage(≠kV)		11.2	29.0
1.2/50μs冲击放电电压不大于(kV) 1.2μs Impulse discharge voltage(≠kV)	峰值 Peak	17.0	18.6
100A操作冲击电流残压不大于(kV) Residual voltage of 100A operating impulse current(≠kV)		13.6	29.0
500A雷电冲击电流残压不大于(kV) Residual voltage of 500A lightning impulse current(≠kV)		17.0	23.0
2000μs方波冲击电流(A) 2000μs Square wave impulse current(A)		400	400
安全净距离不小于(mm) Safe net distance(≠mm)		95	120
沿面爬距不小于(mm) Surface creepage distance(≠mm)		140	235
最小相间距离(mm) Min, phase to phase distance(mm)		115	145



表2 Table2

TBP-B系列(真空断路器、开关型)TBP-B Series(Vacuum circuit breaker Switch Type)				
系统额定电压(kV) System Rated voltage(kV)		6	10	35
保护器额定电压(kV) Lightning Arrester Rated voltage(kV)	有效值 Virtual Value	7.6	12.7	42
工频放电电压不小于(kV) Power frequency discharge		16.0	26.0	80.0
直流U1mA参考电压不小于(kV) DC(U1mA)Ref.Voltage(≠kV)		14.4	24	73
1.2/50μs冲击放电电压不大于(kV) 1.2μs Impulse discharge voltage(≠kV)	峰值 Peak	24.0	41.0	124.0
500A雷电冲击电流残压不大于(kV) Residual voltage of 500A lightning impulse current(≠kV)		19.0	32.0	99.0
2000μs方波冲击电流(A) 2000μs Square wave impulse current(A)		400	400	400
安全净距离不小于(mm) Safe net distance(≠mm)		95	120	285
沿面爬距不小于(mm) Surface creepage distance(≠mm)		140	235	1020
最小相间距离(mm) Min, phase to phase distance(mm)		115	145	470



表3 Table3

TBP-C系列(电动机型)TBP-C Series(Capacitor Type)				
系统额定电压(kV) System Rated voltage(kV)		6	10	35
保护器额定电压(kV) Lightning Arrester Rated voltage(kV)	有效值 Virtual Value	7.6	12.7	42
工频放电电压不小于(kV) Power frequency discharge		16.0	26.0	80.0
直流U1mA参考电压不小于(kV) DC(U1mA)Ref.Voltage(≠kV)		14.4	24	73
500A操作冲击电流残压不大于(kV) Residual voltage of 500A operating impulse current(≠kV)	峰值 Peak	19.0	32.0	99.0
5A雷电冲击电流残压不大于(kV) Residual voltage of 5A lightning impulse current(≠kV)		24.0	41.0	124.0
2000μs方波冲击电流(A) 2000μs Square wave impulse current(A)		400	400	400
安全净距离不小于(mm) Safe net distance(≠mm)		95	120	285
沿面爬距不小于(mm) Surface creepage distance(≠mm)		140	235	1020
最小相间距离(mm) Min, phase to phase distance(mm)		115	145	470

表4 Table4

TBP-O系列(电机中性点型)TBP-O Series(Electromotor Neutral point Type)			
保护器额定电压有效值(kV) Lightning Arrester Rated voltage (Virtual Value)(kV)	电机额定电压有效值(kV) Lightning Arrester Rated voltage (Virtual Value)(kV)	8/20μs雷电冲击电流残压峰值不大于(kV) Residual voltage of 8/20μs lighting impulse current(Peak)(kV)	直流U1mA参考 电压峰值不大于(kV) DC(U1mA)Ref.Voltage (peak)(≠kV)
4.8	6.3	12.0	6.8
8	10.5	19.0	11.4



# 保护器放电计数

## Discharging counter



### • 概述 Summary

JS8、JS8A型放电计数器(以下简称计数器)是串联在避雷器下面,用来记录避雷器动作次数的一种装置,JS8型用于6kV-220kV电压等级;JS8A型用于330kV及以上电压等级的阀式避雷器,使用地点的环境条件与相连接的避雷器相同,海拔高度不超过4000米,环境温度为-40℃~+40℃,它不适用于有严重腐蚀金属及绝缘件的气体,有严重污染和有剧烈振动的地方。

JS8、JS8A discharging counter(hereinafter short for counter)is connected under the arrester in series used for recoding the operation times of arrester,JSBstyle is applied for 6kV-220kV arrester,and JS8Ais used for valve type arrester with330kV and/or above,the environment condition shall meet the requirement required by arrester,for example,the altitude doesn't,yexceed4000m,the environment temperature is-40℃~+40℃,This eounter can, tbe put in the place that includes gas eroding metal and insulation parts,seri-ous pollrtion and drastivibration



JS-8 放电计数器  
dis charge counter

### • 结构和性能 Structure and property

氧放电计数器主要由阀片,硅桥式整流器,电容器,电磁计数器等元件组成,它利用通过避雷器的能量(冲击电流和工频电流),在阀片(非线性电阻)上取压,经硅桥式整流器,单向对电容器充电,并以直流对电磁计数器线圈放电而使计数器吸动一次,既记录一次来实现记录动作次数。

Discharging counter is made up of valve element,silicon bridge type rectifier,capacitor,electromagnetic counter and soon,it mak-es use of the arrester energy(surge current and power frequency current)to fetch the voltage on valve element(non linear resistan-ce),then it charges to the capacitor in single direction through silicon bridge typerectifier,makes the coils of electromagnetic coun-ter discharge with form of DC power to move the counter,thus it can realize that the operating times can be recorded.

### • 概述 Summary

JCQ-C1型避雷器监测器,是串联在避雷器下面用来监测泄露电流和记录避雷器动作次数的一种装置,用于500kV及以下电压等级的氧化锌避雷器,使用的环境条件与相连接的避雷器相同,避雷器监测器的特点是电磁计数,电流指针指示,耐振动。

JCQ-C1 type monitor of arrester is connected under arrester in series,it is applied for Zno arrester with 500kV and/or below,used to monitor leakage current and record operation times of arrester,the environment condition shall meet the requirement required by arrester,the feature of monitor is anti-vibration, electromagnetic counting,indicating by current pointer.



JCQ-10 监测器  
Monitor

### • 结构和性能 Structure and property

监测器主要由阀片,整流器,电容器,电阻,电感,触发电路,保护器,计数电路,电磁计数量,磁电式指针电表,电流测量与转换电路,构件及壳体等部分组成,正常使用情况下,避雷器的泄露电流,直接由磁电式指针仪表显示出来,指示范围分为两档:0~5mA及0~2mA自动换档并有灯显示,在0~10mA档时,发光管亮,避雷器动作时,电磁计数器累加计数,显示器满度后,自动回零继续累加计数,无限循环工作,不清零。

Discharging counter is made up of valve element,silicon bridge type rectifier,capacitor,electromagnetic counter and so on,it mak-es use of the arrester energy(surgecurrent and power frequency current)to fetch the voltage on valve element(non linear resistanc-e),then it charges to the capacitor in single direction through silicon bridge type rectifier,makes the coils of electromagnetic count-er discharge with form of DCpower to move the counter,thus it can realize that the operating times can be recorded.



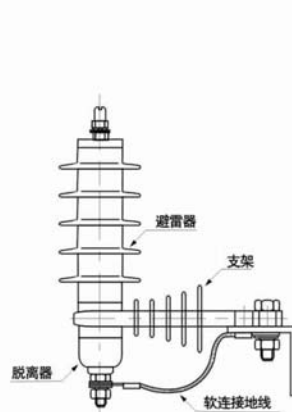
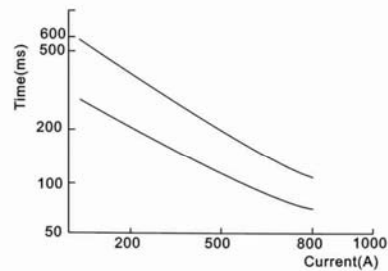
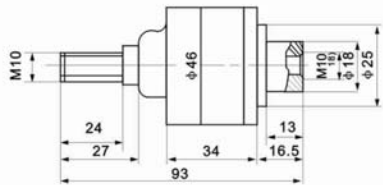
# 避雷器系列 Arrester Series



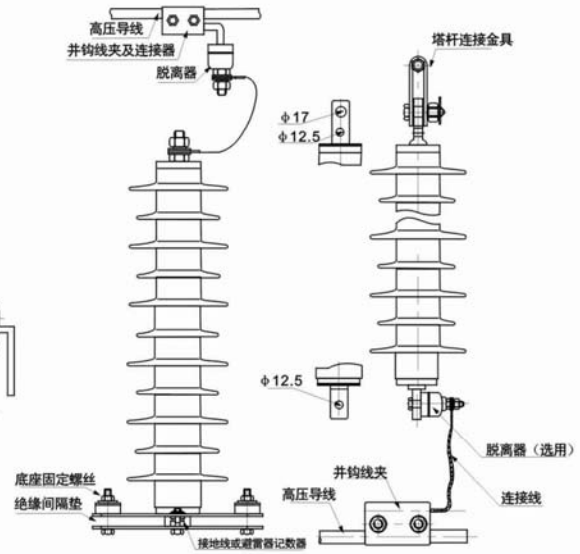
## • 避雷器脱离器 Arrester disconnector

避雷器脱离器是一种可以在避雷器损坏时,使避雷器引线与系统断开以排除系统持续故障,并给出事故避雷器可见标志的装置。TL-1型脱离器是一种热爆型脱离器,产品性能符合IEC60099-4的规定。

Arrester disconnector is a device for disconnecting an arrester from the system in the event of arrester failure, to prevent a persistent fault on the system and to give visible indication of the failed arrester, TL-1 is a thermal explode disconnector, our products as per IEC60099-4. standard.



35kV以下支架式安装图



电站型座桩式安装图

线路型悬挂式安装图

## • 避雷器脱离器的安秒特性 Arrester disconnector V-S charater

动作特性 Current levec	工频电流 Power frequency(A)			方波冲击电流耐受 2000 μs square wave Impulse current(A)	大电流耐受 4/10 μs hight current(KA)
	20	200	800	600	100
动作时间 operation time	<0.5	<0.04	<0.02	∞	∞



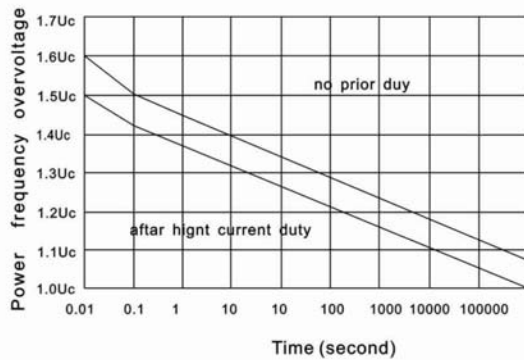
# 避雷器系列 Arrester Series



• 氧化锌电阻片 Zinc-oxide varistor



• 时间电压耐受特性 Temporary overvoltage capability



型号 Type	D35	D38	D42	D52
尺寸 Dimension(mm)	直径 diameter $\phi 35 \pm 0.5$	$\phi 38 \pm 0.5$	$\phi 42 \pm 0.5$	$\phi 52 \pm 0.5$
	高度 height 24±0.5	24±0.5	24±0.5	24±0.5
标称放电电流 Nominal standard discharge current(kV)	5	5	5	5
额定电压 Rated voltage(kV)	3-3.4	3-3.4	3-3.4	3-3.4
最大持续运行电压 MCOV(kV)	2.55	2.55	2.55	2.55
8 $\mu$ s残压 Lightning impulse residual volage(kV)	9.1	9.3	9.2	8.9
方波电流耐受200 $\mu$ s square wave impulse current withstand(A)	100	150	-	-
大电流耐受4/10 $\mu$ s hight curent impulse(kV)	65	100	100	100
线路放电等级 Line class	-	-	-	II