YH(HY)

Composite zinc oxide arrester

Overview

Lightning arresters are the basis for insulation coordination of various electrical equipment in the power system (transformers, reactors, capacitors, generators, motors, PTs, CTs, circuit breakers, contactors, etc.). The protection performance of lightning arresters determines the internal and external insulation indicators of all electrical equipment in the power system (short-time power frequency withstand voltage, lightning impulse withstand voltage, and operating impulse withstand voltage, etc.).

The core working element of this product is sintered with multi-metal oxide powder mainly composed of zinc oxide, which has excellent nonlinear volt-ampere characteristics, fast steep wave response, and large current capacity. The gapped product adopts a self-blowing gap with a voltage-equalizing irradiation structure, which reduces the dispersion of discharge and has a small impact coefficient.

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Model meaning

YH	□	□	□	□	□	/	□	□
↓	↓	↓	↓	↓	↓		↓	↓
Composite jacket insulation, oxide valve plate	Nominal discharge current (kA)	Structural features: W-no gap, C-series gap, B-parallel gap	Place of use: S-distribution type, Z-power station type, R-capacitor type, D-motor type, T-railway type, L-DC type, X-line type, F-GIS type, O-oil type	Design serial number (customized by the manufacturer)	Rated voltage of lightning arrester (kV)		Maximum residual voltage under nominal discharge current (kV)	Additional characteristic code: G-highland type, W-anti-fouling type, K-seismic type, T-wet heat type

Main technical parameters

The following is a typical parameter table of conventional lightning arresters, arranged in ascending order of voltage level, for the convenience of users to search.

Note:

Each national standard model can be derived into several models of products. Due to space limitations, they are not listed one by one. If users have any questions about the models, they can directly consult our company's technical department.

In the "System Nominal Voltage" column, the data marked with * represents the rated voltage of the motor corresponding to the motor protection type lightning arrester. In the "Power Frequency Discharge Voltage" column, the data marked with * represents the effective value of the power frequency withstand voltage of high-voltage arresters above 110kV.

Due to the variety of uses and voltage levels, the impulse current value corresponding to the 30/60 operation impulse residual voltage of the lightning arrester is not specifically specified.

The vast majority of products can be equipped with accessories such as disconnectors and counters. If a disconnector is used, add "L"; if a counter is used, add "J" after the model number.

Voltage level	Place of use	The effective value of the nominal voltage (kV) of the system	National standard model of lightning arrester	Rated voltage of lightning arrester (kV) Effective value	Gapless lightning arrester			Gap arrester			Peak residual voltage (kV) (not greater than)			2000μs square wave current-carrying capacity (A)	4/10 High current endurance capacity (kA)
					Continuous operating voltage (kV) of lightning arrester Effective value	Dc 1mA reference (kV) Not less than	Maximum leakage (μA) at 0.75 times the DC reference voltage	The effective value of the power frequency discharge voltage (kV) shall not be less than	The peak value of 1.2/50 impulse discharge voltage (kV) shall not be greater than	Maximum conductive current (μA)	Under the lightning impulse current on August 20th	At 30/60 operating impulse current	Under a quarter of a steep slope impact current		
Low pressure	Distribution type	0.22	YH1.5W -0.28/13	0.28	0.24	0.6	50	-	-	-	1.3	-	-	75	25
Low pressure	Distribution type	0.38	YH1.5W -0.5/2.6	0.5	0.42	1.2	50	-	-	-	2.6	-	-	75	25
Low pressure	Electric motor type	0.66*	YH2.5WD -1.3/3.6	1.3	0.95	1.8	50	-	-	-	3.6	-	-	200	40
Low pressure	Electric motor type	1.14*	YH2.5WD -2.6/7.2	2.6	1.9	3.6	50	-	-	-	7.2	-	-	200	40
3kV	Distribution type	3	YH5WS -3.8/15	3.8	2.0	7.5	50	-	-	-	15.0	12.8	17.3	75	40

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Voltage level	Place of use	The effective value of the nominal voltage (kV) of the system	National standard model of lightning arrester	Rated voltage of lightning arrester (kV) Effective value	Gapless lightning arrester		
					Continuous operating voltage (kV) of lightning arrester Effective value	Dc 1mA reference (kV) Not less than	Maximum leakage (μA) at 0.75 times the DC reference voltage
10	Distribution type	10	YH5CS-12.7/45	12.7	-	-	-
10	Power station type	10	YH5WZ-12.7/45	12.7	6.6	24	50
10	Power station type	10	YH5WZ-17/45	17	13.6	24	50
10	Power station type	10	YH5CZ-12.7/41	12.7	-	-	-
10	Capacitor type	10	YH5WR-12.7/46	12.7	6.6	24	50
10	Capacitor type	10	YH5WR-17/46	17	13.6	24	50
10	Generator	10	YH5CR-12.7/41	12.7	-	-	-
10	Generator	10.5*	YH5WD-12.7/31	12.7	6.6	18.6	50
10	Generator	10.5*	YH5WD-13.5/31	13.5	10.5	18.6	50
10	Generator	10.5*	YH5CD-12.7/28	12.7	-	-	-
10	Generator	13.8*	YH5WD-17.5/40	17.5	13.8	24.4	50
10	Generator	15.75*	YH5WD-20/45	20	15.75	28	50
10	Generator	18.0*	YH5WD-23/51	23	18	31.9	50
10	Generator	20.0*	YH5WD-25/56.2	25	20	35.4	50
10	Motor type	10.5*	YH2.5WD-12.7/31	12.7	6.6	18.6	50
10	Motor type	10.5*	YH2.5WD-13.5/31	13.5	10.5	18.6	50
10	Motor type	10.5*	YH2.5CD-12.7/28	12.7	-	-	-
10	Neutral point type	10.5*	YH1.5W-8/19	8	6.4	11.4	50
10	Neutral point type	13.8*	YH1.5W-10.5/23	10.5	8.4	14.9	50
10	Neutral point type	15.75*	YH1.5W-12/26	12	9.6	17	50
10	Neutral point type	18.0*	YH1.5W-13.7/29.2	13.7	11	19.5	50
10	Power station type	20.0*	YH1.5W-15.2/31.7	15.2	12.2	21.6	50
35	Power station type	35	YH5WZ-51/134	51	40.8	73	50
35	Capacitor type	35	YH5WZ-42/134	42	23.4	73	50
35	Capacitor type	35	YH5CZ-42/124	42	-	-	-
35	Line type	35	YH5WR-51/134	51	40.8	73	50
35	Line type	35	YH5WR-42/134	42	23.4	73	50
35	Line type	35	YH5CR-42/124	42	-		-
35	Line type	35	YH5WX-51/134	51	40.8	73	50
35	Neutral point type	35	YH5WX-54/150	54	43.2	77	50
35	Tipo de línea	35	YH5CX-42/120	42	-	-	-
35	Tipo de línea	35	YH5CX-42/150	42	-	-	-
35	Tipo de punto neutro	35	YH1.5W-30/80	30	24	44	50

	Gap arrester			Peak residual voltage (kV) (not greater than)				
	The effective value of the power frequency discharge voltage (kV) shall not be less than	The peak value of 1.2/50 impulse discharge voltage (kV) shall not be greater than	Maximum conductive current (μA)	Under the lightning impulse current on August 20th	At 30/60 operating impulse current	Under a quarter of a steep slope impact current	2000μs square wave current-carrying capacity (A)	4/10 High current endurance capacity (kA)
	26	45	20	45	38.4	51	75	40
	-	-	-	45	38.3	51.8	200	65
	-	-	-	45	38.3	51.8	200	65
	26	41	20	41	35	46	200	65
	-	-	-	46	35	-	400	65
	-	-	-	46	35	-	400	65
	26	41	20	41	33	-	400	65
	-	-	-	31	25	34.7	400	65
	-	-	-	31	25	34.7	400	65
	25	28	20	28	22.5	32	400	65
	-	-	-	40	32	44.8	400	65
	-	-	-	45	36	50.4	400	65
	-	-	-	51	40.8	57.2	400	65
	-	-	-	56.2	45	62.9	400	65
	-	-	-	31	25	34.7	200	65
	-	-	-	31	25	34.7	200	65
	25	28	20	28	22.5	32	200	65
	-	-	-	19	15.9	-	400	65
	-	-	-	23	19.2	-	400	65
	-	-	-	26	21.6	-	400	65
	-	-	-	29.2	24.3	-	400	65
	-	-	-	31.7	26.4	-	400	65
	-	-	-	134	114	154	400	65
	-	-	-	134	114	154	400	65
	80	124	20	124	100	143	400	65
	-	-	-	134	105	-	400	65
	-	-	-	134	105	-	400	65
	80	124	20	124	100	-	400	65
	-	-	-	134	114	154	400	65
	-	-	-	150	128	169	400	65
	80	120	20	120	100	138	400	65
	80	150	20	150	128	169	400	65
	-	-	-	80	67.5	-	400	65

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Voltage level	Place of use	The effective value of the nominal voltage (kV) of the system	National standard model of lightning arrester	Rated voltage of lightning arrester (kV) Effective value	Gapless lightning arrester		
					Continuous operating voltage (kV) of lightning arrester Effective value	Dc 1mA reference (kV) Not less than	Maximum leakage (μA) at 0.75 times the DC reference voltage
66	Power station type	66	YH5WZ-84/221	84	67.2	121	50
66	Power station type	66	YH5WZ-90/235	90	72.5	130	50
66	Power station type	66	YH10WZ-84/221	84	67.2	121	50
66	Line type	66	YH10WZ-90/235	90	72.5	130	50
66	Line type	66	YH5WX-96/250	96	75	140	50
66	Line type	66	YH5WX-96/275	96	75	154	50
110	Power station type	110	YH5WZ-100/260	100	78	145	50
110	Power station type	110	YH5WZ-102/266	102	79.6	148	50
110	Power station type	110	YH5WZ-108/281	108	84	157	50
110	Power station type	110	YH10WZ-100/260	100	78	145	50
110	Power station type	110	YH10WZ-102/266	102	79.6	148	50
110	Power station type	110	YH10WZ-108/281	108	84	157	50
110	Power station type	110	YH5WX-108/281	108	84	157	50
110	Power station type	110	YH5WX-108/309	108	84	173	50
110	Line type	110	YH10WX-108/281	108	84	157	50
110	Line type	110	YH10WX-108/309	108	84	173	50
110	Line type	110	YH5CX-90/260	90	-	130	50
110	Line type	110	YH10CX-90/260	90	-	130	50
110	Line type	110	YH10CX-96/280	96	-	140	50
110	Line type	110	YH10CX-102/296	102	-	148	50
110	Line type	110	YH1.5W-60/144	60	48	85	50
110	Neutral point type	110	YH1.5W-72/186	72	58	103	50
220	Neutral point type	220	YH10WZ-192/500	192	150	280	50
220	Power station type	220	YH10WZ-200/520	200	156	290	50
220	Power station type	220	YH10WZ-204/532	204	159	296	50
220	Power station type	220	YH10WZ-216/562	216	168.5	314	50
220	Power station type	220	YH10WX-216/562	216	168	314	50
220	Line type	220	YH10WX-216/618	216	168	346	50
220	Line type	220	YH10CX-185/520	180	-	260	50
220	Line type	220	YH10CX-192/560	192	-	280	50
220	Line type	220	YH10CX-204/592	204	-	296	50
220	Neutral point type	220	YH1.5W-144/320	144	116	205	50
27.5	Railway type	27.5	YH5WT-42/120	42	34	65	50
55	Railway type	55	YH5WT-84/240	84	68	130	50

	Gap arrester			Peak residual voltage (kV) (not greater than)				
	The effective value of the power frequency discharge voltage (kV) shall not be less than	The peak value of 1.2/50 impulse discharge voltage (kV) shall not be greater than	Maximum conductive current (μA)	Under the lightning impulse current on August 20th	At 30/60 operating impulse current	Under a quarter of a steep slope impact current	2000μs square wave current-carrying capacity (A)	4/10 High current endurance capacity (kA)
	-	-	-	221	188	254	600	65
	-	-	-	235	201	270	600	65
	-	-	-	221	188	248	600	100
	-	-	-	235	201	264	600	100
	-	-	-	250	213	288	600	65
	-	-	-	275	234	316	600	65
	-	-	-	260	221	299	600	65
	-	-	-	266	226	305	600	65
	-	-	-	281	239	323	600	65
	-	-	-	260	221	291	600	100
	-	-	-	266	226	297	600	100
	-	-	-	281	239	315	600	100
	-	-	-	281	239	323	600	65
	-	-	-	309	263	348	600	65
	-	-	-	281	239	315	600	100
	-	-	-	309	263	348	600	100
	170*	525*	-	260	-	292	400	65
	170*	525*	-	260	-	292	600	100
	170*	525*	-	280	-	314	600	100
	170*	525*	-	296	-	332	600	100
	-	-	-	144	135	-	400	65
	-	-	-	186	174	-	400	65
	-	-	-	500	426	560	800	100
	-	-	-	520	442	582	800	100
	-	-	-	532	452	594	800	100
	-	-	-	562	478	630	800	100
	-	-	-	562	478	630	600	100
	-	-	-	618	526	693	600	100
	340*	900*	-	520	-	584	600	100
	340*	900*	-	560	-	628	600	100
	340*	900*	-	592	-	664	600	100
	-	-	-	320	299	-	600	65
	-	-	-	120	98	138	400	65
	-	-	-	240	276	276	400	65

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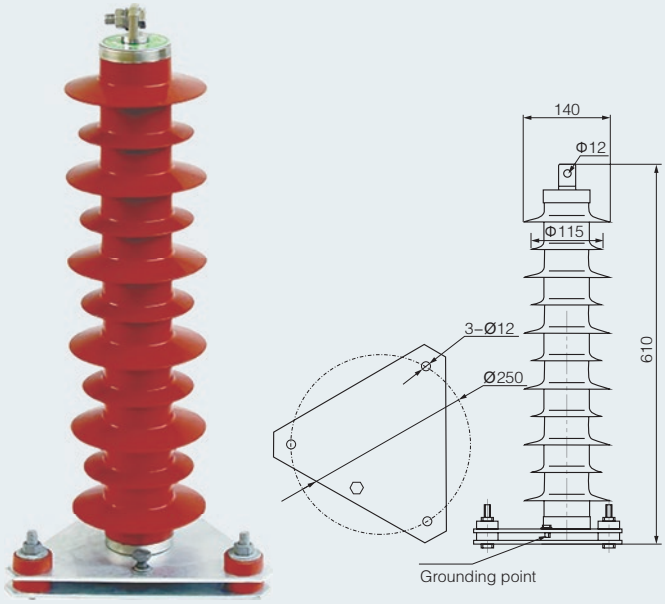
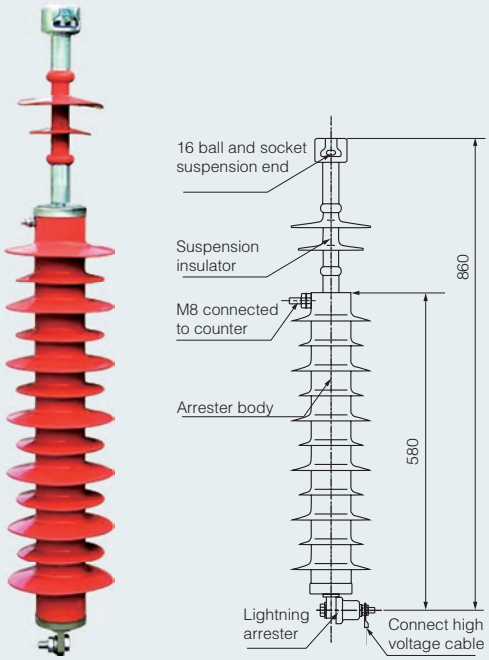
Composite zinc oxide arrester

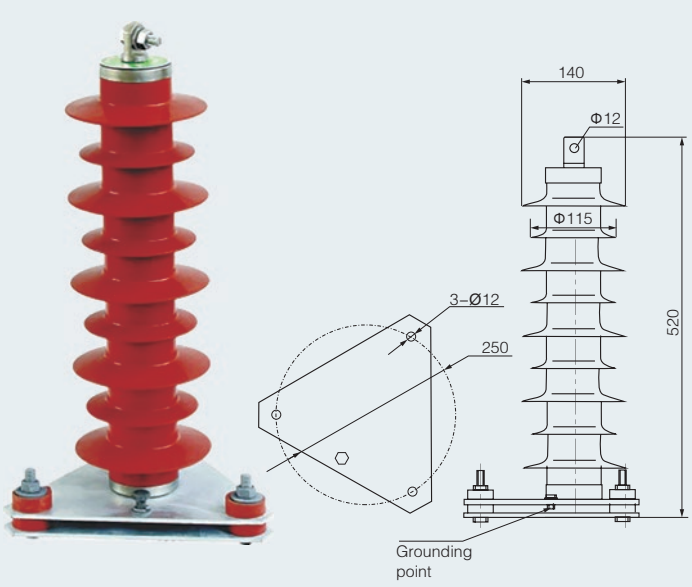
Dimensions and mounting dimensions (mm)



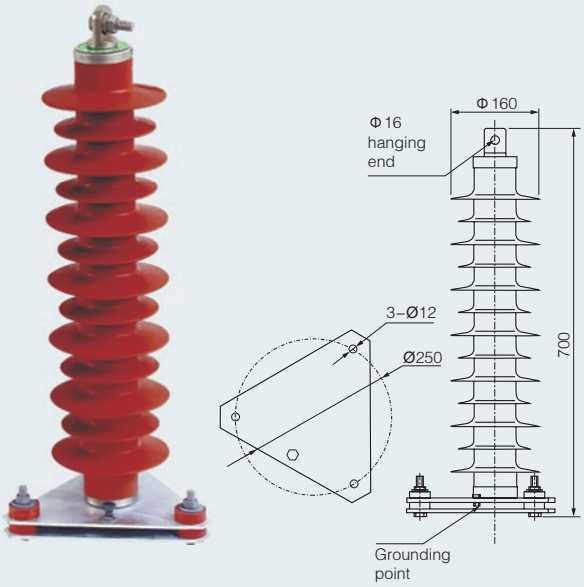
35kV Z-Type



35kV X-Type

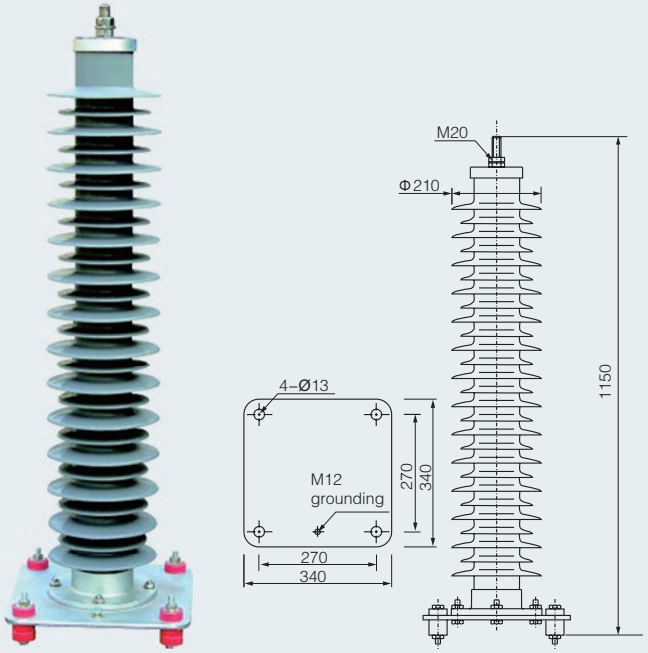


30/80 type for neutral point

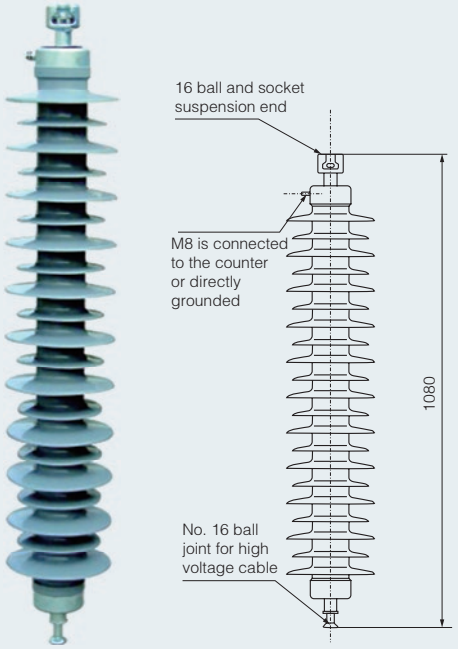


60/144 type for neutral point

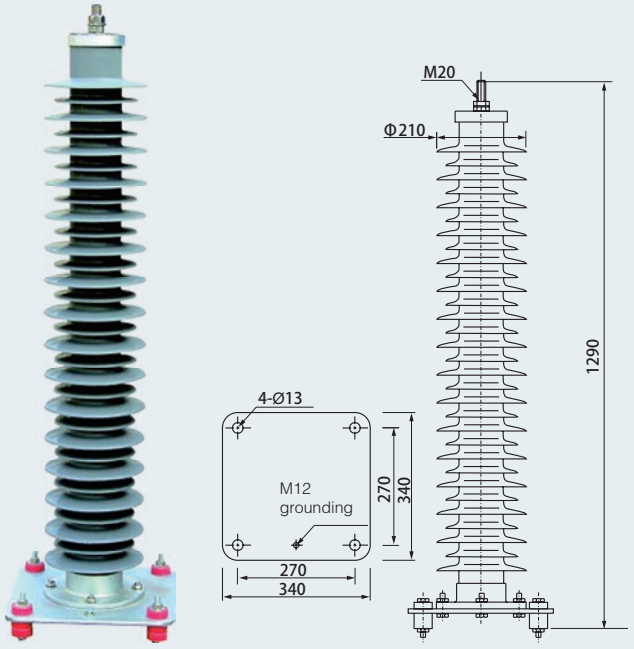
Dimensions and mounting dimensions (mm)



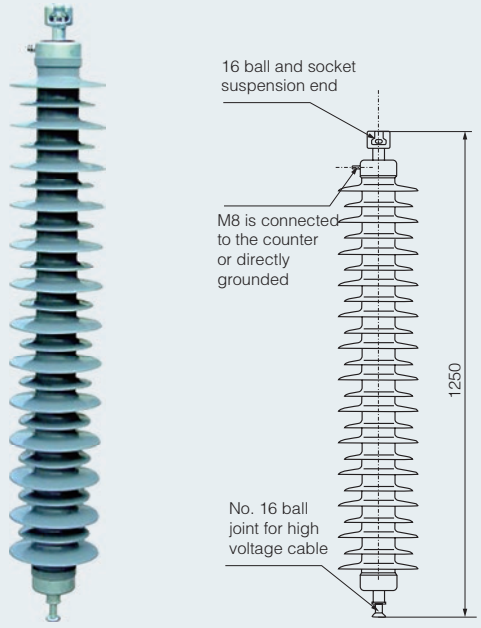
66kV Z-Type



66kV X-Type



110kV Z-Type



110kV X-Type