

HS Pexlim P

Surge Arrester - System Voltage 170 to 550 kV



ABB

Metal Oxide Surge Arrester HS Pexlim P



Protection of switchgear, transformers and other equipment in high voltage systems against atmospheric and switching overvoltages. For use when requirements of lightning intensity, energy capability and pollution are heavy.

Application

The HS Pexlim P gapless metal oxide arrester meets or exceeds all Station Class requirements of ANSI C62.11 (IEEE Standards for Metal Oxide Surge Arresters for AC Power Circuits). The HS Pexlim P arrester is designed to meet the following performance data:

Performance data

Maximum system voltages (V_M)	170 - 550 kVrms
Duty Cycle Rated voltages (V_P)	180 - 420 kVrms
Classifying current (ANSI/IEEE)	10 - 15 kA peak
Discharge current withstand strength:	
High current 4/10 μ s	100 kA peak
Low current 2000 μ s	1350 A peak
Energy capability:	
2 impulses, (IEC Cl. 7.5.5)	13.6 kJ / kV of MCOV
Fulfills requirements of ANSI transmission-line discharge test for 550 kV systems.	
Short-circuit / Pressure relief capability:	80 kA rms sym
Cantilever strength (DIN 48113):	14000 ft - lbs / 19000 Nm
Service conditions:	
Ambient temperature	-40 °C to + 45 °C
Design altitude	6000 ft / 1830 m
Frequency	15 - 62 Hz

1) Higher strength designs available on request

2) Higher altitude designs available on request

Outlines

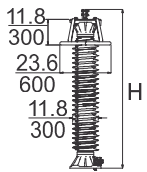


Figure 1

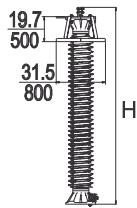


Figure 2

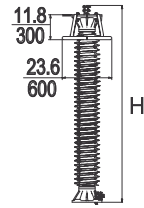


Figure 3

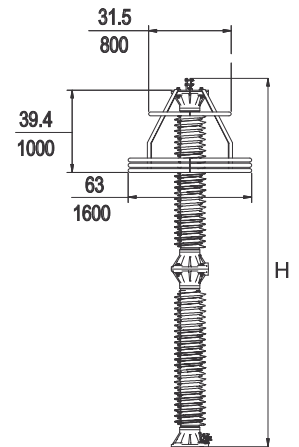


Figure 4

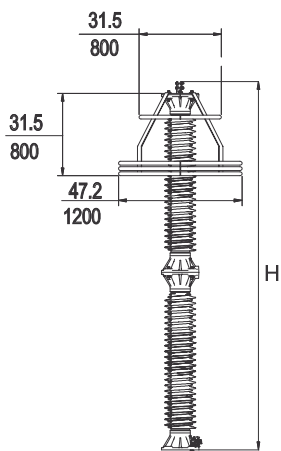


Figure 5

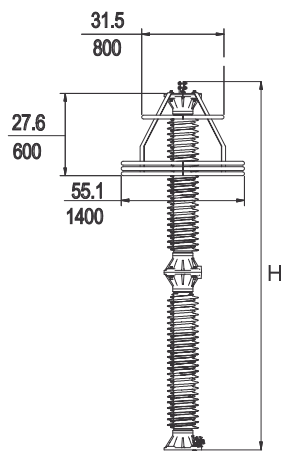


Figure 6

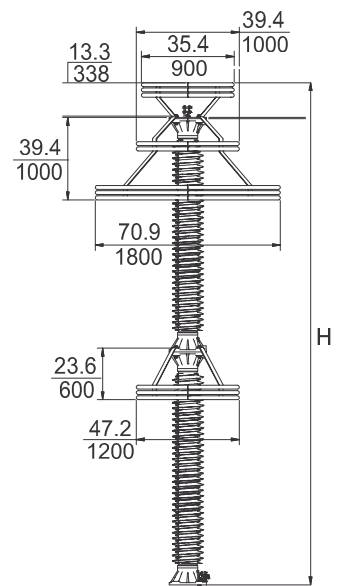


Figure 7

Guaranteed Performance Data

Power frequency voltage, kV rms					Maximum residual voltage with current wave, kV peak							
Nom. V _n (1)	Max. V _m (2)	Rating V _r (3)	MCOV (4)	TOV (5)		SPL (6) 30/60 μs	LPL (7) 8/20 μs				FOW (8) 0.5 μs 10 kA	
				1 s	10 s		3 kA	5 kA	10 kA	20 kA		40 kA
161	170	180	144	215	205	357	381	394	414	456	497	441
161	170	192	152	222	211	380	407	420	442	486	530	471
230	245	180	144	215	205	357	381	394	414	456	497	441
230	245	192	152	222	211	380	407	420	442	486	530	471
230	245	228	180	272	259	451	483	499	525	577	630	559
345	362	258	209	308	294	529	546	564	594	653	713	632
345	362	264	212	315	300	541	559	577	608	668	729	647
345	362	276	220	329	314	565	585	604	635	699	762	677
345	362	288	230	344	328	590	610	630	663	729	795	706
500	550	396	318	473	451	811	838	866	911	1002	1093	971
500	550	420	335	493	462	860	889	918	966	1063	1160	1029

- (1) V_n = Nominal System Voltage per ANSI C84.1
- (2) V_m = Maximum System Voltage per ANSI C84.1
- (3) V_r = Duty Cycle Rated Voltage per ANSI C62.11
- (4) MCOV = Maximum Continuous Operating Voltage per ANSI C62.11
- (5) TOV = Temporary Overvoltage with No Prior Energy

- (6) SPL = Switching Protective Level
1,000 A 144 - 240 kV
2,000 A 258 - 444 kV
- (7) LPL = Lightning Protective Level
- (8) FOW = Front of Wave

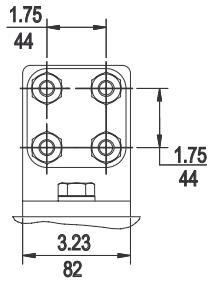
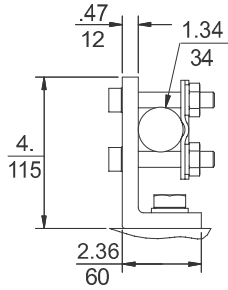
Technical data for housings

Rating V _r	Style No.	Height H		Creepage		Weight		Phase to Ground S		Phase to Phase T		Figure
		in	mm	in	mm	lb	kg	in	mm	in	mm	
245	P180TM245A	73	1854	194	4950	306	139	85	2159	101	2566	1
245	P192TM245A	73	1854	194	4950	308	140	85	2159	101	2566	1
245	P180TH245A	94	2392	271	6900	372	169	85	2159	101	2566	2
245	P192TH245A	94	2392	271	6900	372	169	85	2159	101	2566	2
245	P228TH245A	94	2392	271	6900	372	169	85	2159	101	2566	3
362	P258TH362A	141	3580	389	9900	575	261	114	2896	147	3734	4
362	P264TH362A	141	3580	389	9900	57	262	114	2896	147	3734	4
362	P276TH362A	141	3580	389	9900	579	263	114	2896	147	3734	5
362	P288TH362A	141	3580	389	9900	601	273	114	2896	147	3734	6
550	P396TH550A	193	4902	543	13800	808	367	135	3429	180	4572	7
550	P420TH550A	193	4902	543	13800	812	369	135	3429	180	4572	7

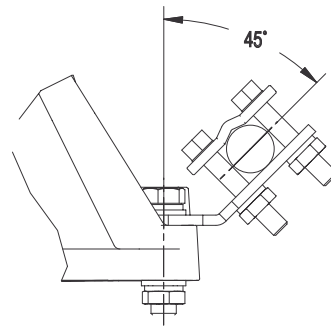
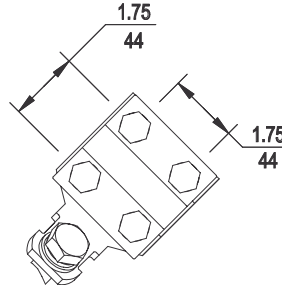
- 1) Increase clearances "S" and "T", 3% per each 1000 ft / 305 m over 6000 ft / 1830 m
- 2) Arrester assembly consists of arrester unit, line, ground terminals and grading rings
- 3) Minimum dimensions for arresters, other apparatus standards and other specifications or local codes may require greater spacing
- 4) Line and ground terminals can accommodate Cu or Al cable size Number 2 to 1000 MCM, (0.25 / 6.35 mm to 1.19 / 30 mm diameter)

Standard Hardware

Line terminal

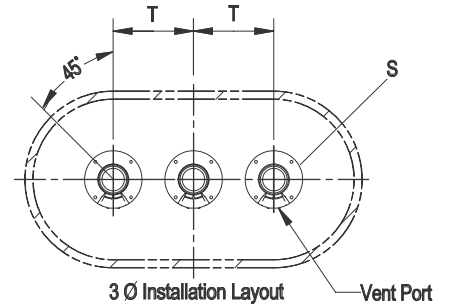
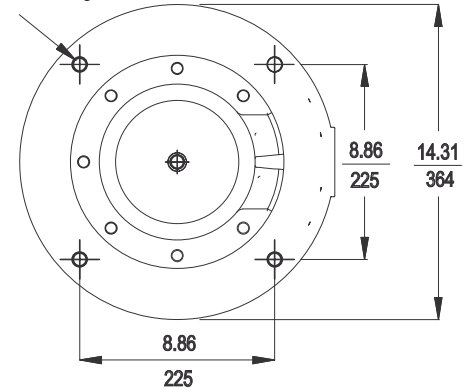


Ground terminal



Drilling plan

Mounting Holes for
0.625" Dia. Hardware
(4) Equally Spaced on
12.53" Dia. B.C.
Thickness of Lug = 1.40"



1) Line and ground terminals can accommodate copper or aluminum cable size Number 2 to 1000 MCM / 0.25 to 1.19 in / 6 to 30 mm diameter. Ground terminal can be located on any lug.

Nameplate

ABB		MADE IN USA	DATE
PEXLIM STATION CLASS SURGE ARRESTER			
STYLE NO.		SERIAL NO.	
PRESSURE RELIEF CLASS		GRADING kA RING	
kV RATING	MCOV RATING	WEIGHT	
UNIT STACKING ORDER			
⊕	UNIT STYLE NO.	UNIT SERIAL NO.	⊕
BOTTOM UNIT			kV
2ND			kV
3RD			kV
4400A100H01		BEFORE INSTALLING READ INSTRUCTIONS IL 38-339	

Notes