

# EXLIM T

Surge Arrester - System Voltage 420 to 550 kV



**ABB**

## Metal Oxide Surge Arrester EXLIM T



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

### Application

The Exlim T 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 EXLIM T arrester is designed to meet the following performance data:

### Performance data

Maximum system voltages ( $V_M$ )	420 - 550 kV <sub>rms</sub>
Rated voltages ( $V_P$ )	360 - 468 kV <sub>rms</sub>
Classifying current (ANSI/IEEE)	10 - 15 kA peak
Discharge current withstand strength:	
High current 4/10 $\mu$ s	150 kA peak
Low current 2000 $\mu$ s	1900 A peak
Energy capability:	
2 impulses, (IEC Cl. 7.5.5)	19.2 kJ / kV of MCOV
Fulfills requirements of ANSI transmission-line discharge test for 550 kV systems.	
Short-circuit / Pressure relief capability: ratings 360 - 468 kV	65 kA rms sym
Cantilever strength (DIN 48113): 360 - 468 kV	12500 ft - lbs / 16950 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

# Nameplate

<b>ABB</b>		ABB Inc.	
TYPE EXLIM STATION CLASS SURGE ARRESTER			
STYLE NO.	SERIAL NO.	PRESSURE RELIEF CLASS	IA
RATING	IV	MCOV RATING	IV
UNIT STACKING ORDER		WEIGHT	
○	UNIT STYLE NO.	UNIT SERIAL NO.	MCOV KV
BOTTOM THIS UNIT			ALTIITUDE 6000 Ft.
2ND			GRADING RING ASSEMBLY
3RD			
BEFORE INSTALLING READ INSTRUCTIONS I. 38-336-1		MADE IN U.S.A.	

# Outlines

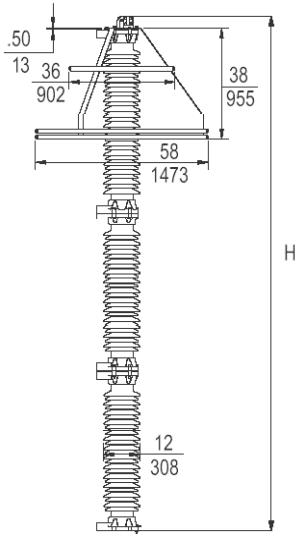


Figure 1

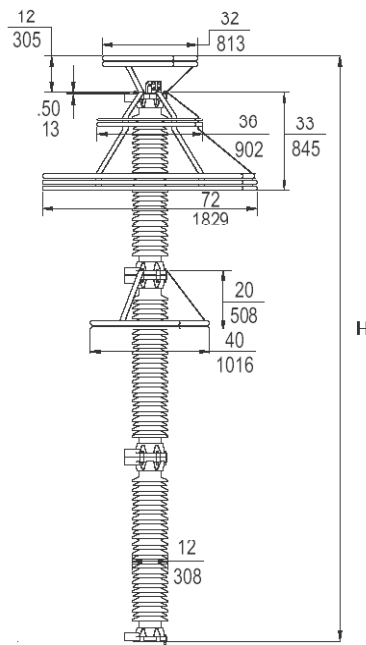


Figure 2

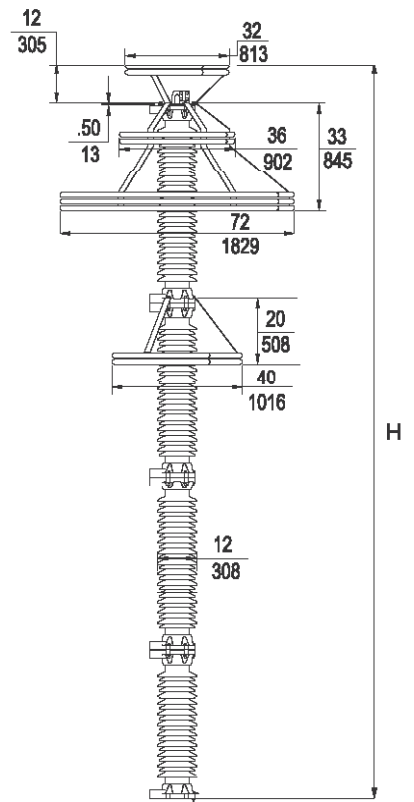


Figure 3

## Guaranteed Performance Data

Power frequency voltage, kV rms						Maximum residual voltage with current wave, kV peak						
Nom. V <sub>n</sub> (1)	Max. V <sub>m</sub> (2)	Rating V <sub>r</sub> (3)	MCOV (4)	TOV (5)		SPL (6) 30/60 μs 2 kA	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	
400	420	360	288	426	406	713	745	765	792	860	931	860
500	550	396	318	469	447	784	819	841	872	946	1024	946
500	550	420	335	497	474	832	869	892	924	1003	1086	1003
500	550	444	353	526	501	880	919	943	977	1060	1148	1060
500	550	468	372	554	528	927	968	994	1030	1118	1210	1118

- (1) V<sub>n</sub> = Nominal System Voltage per ANSI C84.1  
 (2) V<sub>m</sub> = Maximum System Voltage per ANSI C84.1  
 (3) V<sub>r</sub> = 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  
 (7) LPL = Lightning Protective Level  
 (8) FOW = Front of Wave

## Technical data for housings

Rating V <sub>r</sub>	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	
360	T360TA291A	173	4394	440	11176	1227	558	118	2997	170	4318	1
396	T396TA318A	189	4800	466	11836	1281	582	128	3251	176	4470	2
420	T420TA335A	197	5003	492	12496	1322	601	135	3429	180	4572	2
444	T444TA353A	197	5003	492	12496	1440	655	142	3607	184	4674	2
468	T468TA372A	216	5486	555	14097	1561	710	149	3785	188	4775	3

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

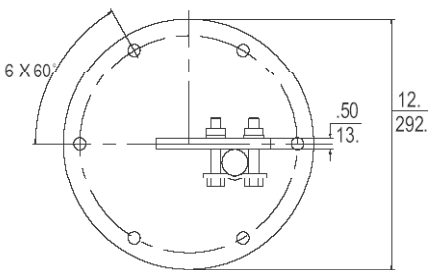
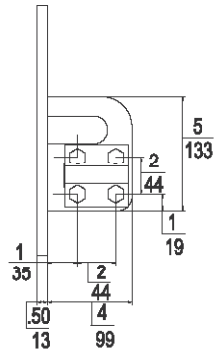
3) Minimum dimensions for arresters, other apparatus standards and other specifications or local codes may require greater spacing

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)

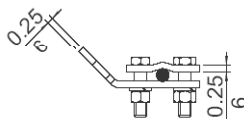
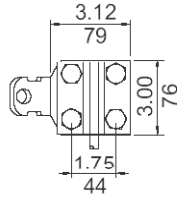
5) Height accuracy is: 360-444 kV + / - 3 in, 468 kV + / - 4 inches

# Standard Hardware

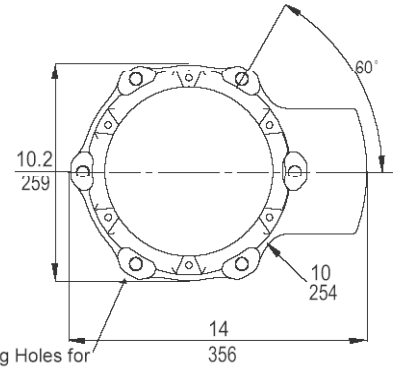
**Line terminal**



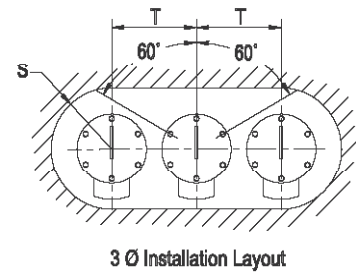
**Ground terminal**



**Drilling plan**



Mounting Holes for  
0.50" Dia. Hardware  
(6) Equally Spaced on  
10.0" Dia. B.C.  
Thickness of Lug = 1.50"



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.