

보호기기 > 피뢰기

폴리머 써지 어레스터

Polymer Surge Arrester 3kV~42kV



• 용도

AC 전력계통에서 번개 또는 회로
개폐 서지를 제한하며 속류를
차단하는 보호장치

• 특징

1. 우수한 장기 신뢰성 / 우수한 디자인

- 실리콘 직사출 공법 적용
- 수분침투에 대한 완벽한 보호
- 우수한 부분방전 특성

2. 최상의 보호 선택

- 배전 계통에서의 3 ~ 42kV 다양한
모델 제공

3. 우수한 품질

- 고품질의 실리콘 고무 적용
- 우수한 발수성, 자외선 보호,
- 우수한 특성 소자 사용
- 이상전압에 대한 우수한 잔류제한값 제공

4. 우수한 안전성

- 실리콘 고무의 우수한 난연특성 및 자기소화 능력
- IEC60099-4 단락 내력 시험 통과

폴리머 써지 어레스터

Polymer Surge Arrester 3kV~42kV

• Polymer Surge Arrester 5kA , 10kA 선정기준

[Normally Recommended Arrester Ur, Uc for Various System Voltage]

System Line-to-Line Voltage (kV)		Surge Arrester Ur / Uc (Ur : Rated voltage, Uc : Continuous operating voltage)					
Nominal	Maximum	Solidly earthed neutral system (Grounded Neutral Circuit)		Isolated or resonant earthed neutral system (Ungrounded Circuit)		Impedance earthed neutral system	
		Ur (Uc) TYPE	Um/√3 (kV)	Ur (Uc)	Um (kV)	Ur (Uc)	Um/1.25 (kV)
2.40	2.52	3kV(2.55kV)	1.45	3kV(2.55kV)	2.52	3kV(2.55kV)	2.02
2.62	2.75		1.59	6kV(5.10kV)	2.75	6kV(5.10kV)	2.20
3.30	3.47		2.00		3.47		2.77
3.43	3.60		2.08		3.60		2.88
4.20	4.40		2.54		4.40		3.52
4.80	5.04	6kV(5.10kV)	2.91	9kV(7.65kV)	5.04	9kV(7.65kV)	4.03
5.24	5.50		3.18		5.50		4.40
6.60	6.93		4.00		6.93		5.54
6.90	7.25		4.18		7.25		5.80
7.86	8.25		4.76	12kV(10.20kV)	8.25	12kV(10.20kV)	6.60
8.30	8.74	9kV(7.65kV)	5.05		8.74		6.99
11.40	12.00		6.93	15kV(12.75kV)	12.00	12kV(10.20kV)	9.60
12.48	13.10	12kV(10.20kV)	7.56	18kV(15.30kV)	13.10	15kV(12.75kV)	10.48
13.20	13.90		8.03		13.90		11.12
14.76	15.50	15kV(12.75kV)	8.95	21kV(17.85kV)	15.50	18kV(15.30kV)	12.40
16.70	17.50		10.10		17.50		14.00
20.80	21.80	18kV(15.30kV)	12.59	27kV(22.95kV)	21.80	21kV(17.85kV)	17.44
22.00	23.10		13.34		23.10		18.48
22.90	24.00		13.86	30kV(25.50kV)	24.00	24kV(20.40kV)	19.20
23.81	25.00		14.43		25.00		20.00
24.95	26.20		15.13	33kV(28.05kV)	26.20	27kV(22.95kV)	20.96
25.71	27.00	21kV(17.85kV)	15.59		27.00		21.60
28.57	30.00		17.32	36kV(30.60kV)	30.00	30kV(25.50kV)	24.00
33.00	34.70	24kV(20.40kV)	20.03		34.70	33kV(28.05kV)	27.76
34.30	36.00	27kV(22.95kV)	20.78	-	36.00		28.80
36.19	38.00		21.94		38.00	36kV(30.60kV)	30.40
38.57	40.50	30kV(25.50kV)	23.38		40.50		32.40
46.00	48.30	33kV(28.05kV)	27.89		48.30	-	38.64
50.00	52.00	36kV(30.60kV)	30.02		52.00		41.60

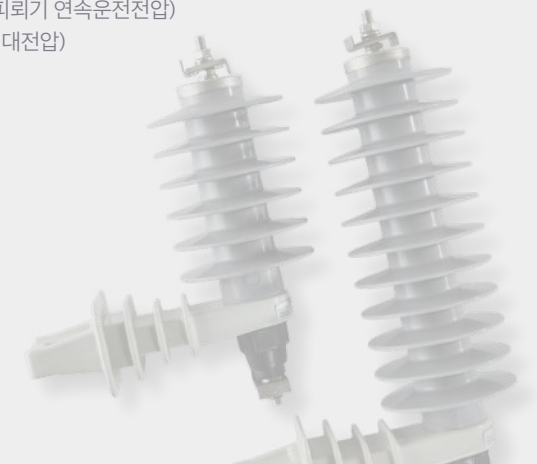
- Solidly earthed neutral system(중성점 직접 접지계통) : $U_c \geq U_m / \sqrt{3}$

- Isolated or resonant earthed neutral system(중성점 비접지 또는 리액터 접지계통) : $U_c \geq U_m$

- Impedance earthed neutral system(중성점 임피던스 접지계통) : $U_c \geq U_m / 1.25$

- Ur : Arrester Rated voltage, Uc : Arrester continuous operating voltage(COV, 피뢰기 연속운전전압)

- Us : Nominal voltage(계통 상간 공칭전압), Um : maximum voltage(계통 상간 최대전압)



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Polymer Surge Arrester 3kV~42kV

• Polymer Surge Arrester / Normal Duty 5kA

[Electrical Characteristics]

Rated voltage (Ur) kV	COV (Uc) kV	Model	Residual Voltage Ures (kV)					
			steep(1/20μs)	Lightning (8/20μs)				
			5kA	2.5kA	5kA	10kA	20kA	40kA
3	2.55	POSA05/03	12.2	9.8	10.6	11.6	13.6	16.5
6	5.1	POSA05/06	19.9	16.0	17.3	18.9	22.1	27.0
9	7.65	POSA05/09	32.1	25.8	27.9	30.5	35.7	43.5
12	10.2	POSA05/12	39.8	32.0	34.6	37.8	44.2	54.0
15	12.75	POSA05/15	52.0	41.8	45.2	49.4	57.8	70.5
18	15.3	POSA05/18	59.7	48.0	51.9	56.7	66.3	81.0
21	17.85	POSA05/21	71.9	57.8	62.5	68.3	79.9	97.5
24	20.4	POSA05/24	79.6	64.0	69.2	75.6	88.4	108.0
27	22.95	POSA05/27	91.8	73.8	79.8	87.2	102.0	124.5
30	25.5	POSA05/30	99.5	80.0	86.5	94.5	110.5	135.0
33	28.05	POSA05/33	111.7	89.8	97.1	106.1	124.1	151.5
36	30.6	POSA05/36	119.4	96.0	103.8	113.4	132.6	162.0
39	33.15	POSA05/39	131.6	105.8	114.4	125.0	146.2	178.5
42	35.7	POSA05/42	139.3	112.0	121.1	132.3	154.7	189.0

*cov : Continuous Operating Voltage

[Dimensions,Clearances and Insulation Withstands]

Model	Arrester Only	Leakage Distance	Strike Distance	Insulation Level			
	Height			IEC	Actual	IEC	Actual
	(H)			Required	Measured	Required	Measured
				P.F	P.F	L.I	L.I
				(Wet)	(Wet)	(Dry)	(Dry)
	mm	mm	mm	kV	kV	kV	kV
POSA05/03	156	415	165	31	45	46	115
POSA05/06							
POSA05/09							
POSA05/12							
POSA05/15	222	620	230	46	60	68	135
POSA05/18							
POSA05/21							
POSA05/24	266	755	275	61	75	91	155
POSA05/27							
POSA05/30	332	960	340	77	90	113	185
POSA05/33	376	1,100	385	92	105	135	195
POSA05/36							
POSA05/39	420	1,235	425	107	115	158	215
POSA05/42							

• Polymer Surge Arrester / Heavy Duty 10kA

[Electrical Characteristics]

Rated Voltage (Ur) kV	COV (Uc) kV	Model	Residual Voltage Ures (kV)							
			steep (1/20μs)	Lightning (8/20μs)					Switching surge (30/60μs)	
			10kA	2.5kA	5kA	10kA	20kA	40kA	125A	500A
3	2.55	POSA10/03	12.2	9.3	9.8	10.6	11.7	13.6	7.6	8.0
6	5.10	POSA10/06	19.9	15.2	15.9	17.3	19.1	22.1	12.5	13.1
9	7.65	POSA10/09	32.1	24.5	25.7	27.9	30.8	35.7	20.1	21.1
12	10.20	POSA10/12	39.8	30.4	31.8	34.6	38.2	44.2	25.0	26.2
15	12.75	POSA10/15	52.0	39.7	41.6	45.2	49.9	57.8	32.6	34.2
18	15.30	POSA10/18	59.7	45.6	47.7	51.9	57.3	66.3	37.5	39.3
21	17.85	POSA10/21	71.9	54.9	57.5	62.5	69.0	79.9	45.1	47.3
24	20.40	POSA10/24	79.6	60.8	63.6	69.2	76.4	88.4	50.0	52.4
27	22.95	POSA10/27	91.8	70.1	73.4	79.8	88.1	102.0	57.6	60.4
30	25.50	POSA10/30	99.5	76.0	79.5	86.5	95.5	110.5	62.5	65.5
33	28.05	POSA10/33	111.7	85.3	89.3	97.1	107.2	124.1	70.1	73.5
36	30.60	POSA10/36	119.4	91.2	95.4	103.8	114.6	132.6	75.0	78.6
39	33.15	POSA10/39	131.6	100.5	105.2	114.4	126.3	146.2	82.6	86.6
42	35.70	POSA10/42	139.3	106.4	111.3	121.1	133.7	154.7	87.5	91.7

*COV : Continuous Operating Voltage

[Dimensions,Clearances and Insulation Withstands]

Model	Arrester Only	Leakage Distance	Strike Distance	Insulation Level			
	Height			IEC	Actual	IEC	Actual
	(H)			Required	Measured	Required	Measured
				P.F	P.F	L.I	L.I
				(Wet)	(Wet)	(Dry)	(Dry)
	mm	mm	mm	kV	kV	kV	kV
POSA10/03	156	420	165	28	45	46	115
POSA10/06							
POSA10/09							
POSA10/12							
POSA10/15	222	630	230	42	60	69	135
POSA10/18							
POSA10/21							
POSA10/24	266	775	290	56	75	91	155
POSA10/27							
POSA10/30	332	975	340	70	90	113	185
POSA10/33	376	1,115	385	84	105	135	195
POSA10/36							
POSA10/39	420	1,250	430	98	115	158	215
POSA10/42							

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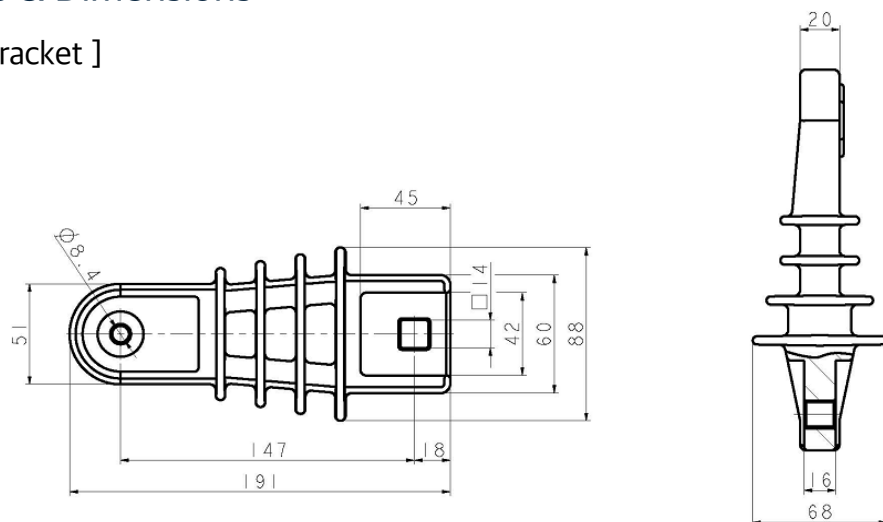
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• 제품사양

ITEM	UNIT	Arrester	
		Normal Duty	Heavy Duty
정격전압 (Rated voltage (Ur))	kV	3 ~ 42 (3step)	3 ~ 42 (3step)
공칭방전전류 (Nominal discharge current (In))	kA	5	10
기준전압 (Reference voltage (Uref))	kV	> Ur	
대전류 충격내력 (High current impulse withstand (4/10 μ s))	kA	65	100
장시간 충격전류 (Long duration current impulse withstand)	A	75	Class I
비틀림 강도 (Torsion moment)	N.m	20	
굽힘 강도 (Bending Load)	N	130	
Applied Standard	IEC-60099-4		
	Metal-oxide surge arrester without gaps for		
	A.C. systems.		

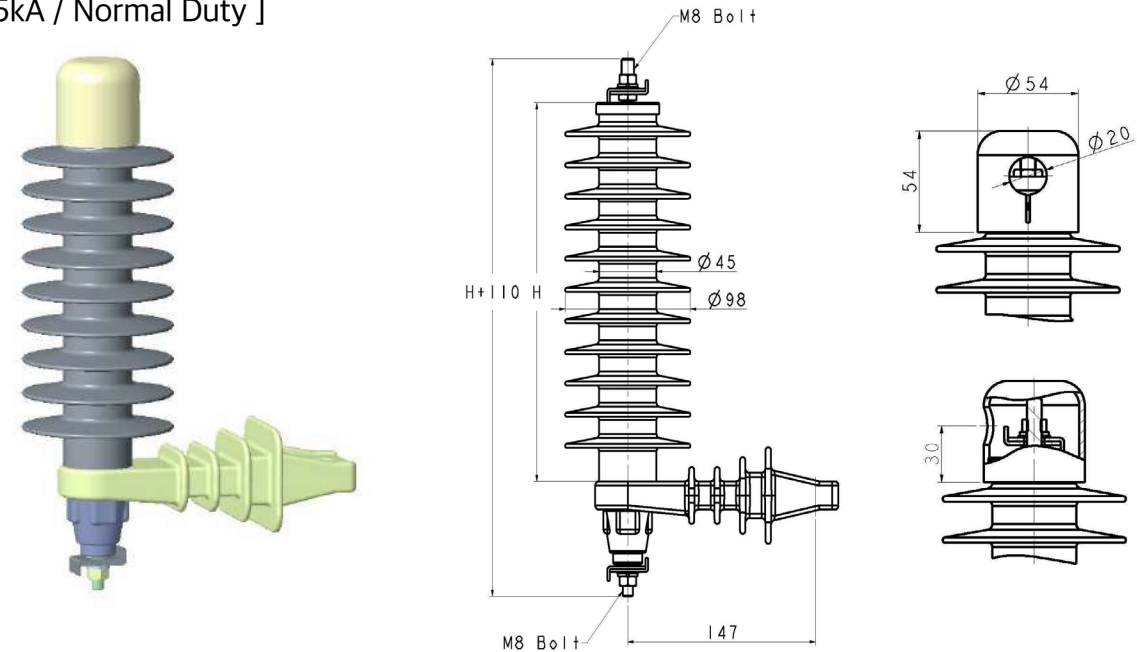
• Accessories & Dimensions

[Insulation Bracket]



• 제품구조

[5kA / Normal Duty]



[10kA / Heavy Duty]

