

POLY PRO

Surge Arresters



FEATURES

Safe non-shattering short circuit behavior to higher current levels.

Shock and vibration withstand capability.

Silicone rubber and the fiberglass-reinforced structure core.

High fire-retardant & self-extinguishing.

High hydrophobic ability keeps away conductive moisture from forming on the surface.

Designed and tested according to IEC 60099-4.

3.3 to 36 kV

STATION &
DISTRIBUTION
CLASS



POLY-PRO* Surge Arresters is a state-of-the-art product using the most advanced silicon rubber technology for its Surge Arresters in the medium voltage range. The Surge Arrester are manufactured in a well defined quality management system and complies to all International Standards such as IEC, DIN, IS, ANSI, etc.

Polymeric Surge Arresters

POLY-PRO Arresters are available from 3.3 kV to 36 kV for both distribution & station class application. The active parts are non linear metal oxide blocks which vary instantaneously from an isolating state to a conductive state in the case of over voltage. The Composite Structure is made of a fibre class reinforced synthetic resin which is designed to give maximum mechanical strength. The silicon rubber housing also provides very high insulation withstand strength of the arrester.

Salient Features

- ◆ Easy mounting of Installation.
- ◆ High Energy absorption capability.
- ◆ Improved values of residual voltages for superior over voltage protection.
- ◆ Minimum power loss.
- ◆ Long form stability characteristics.
- ◆ Enhanced safety.

Applicable Standards

- ◆ IEC - 60099 - 4 (1999)
- ◆ IEC - 60099 - 5 (2000)
- ◆ IS - 3070

Accessories

- ◆ Split Clamp or Standard Bracket
- ◆ NEMA Type Bracket

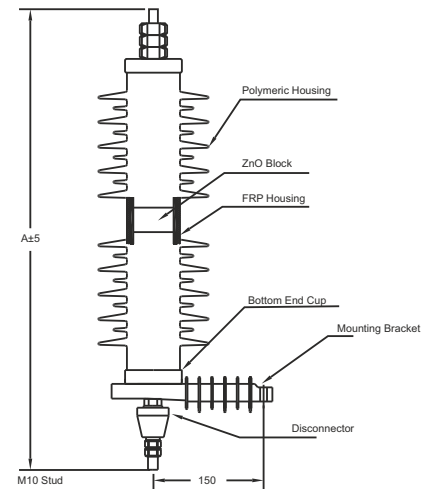
*Patent Pending



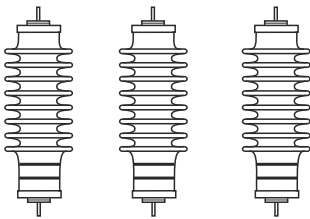
Dimensions

(in mm)

Rated Voltage (kV)	No. of Sheds	A	B	Min. Creepage Distance
3.3 - 6.6	3	230	120	335
9	4	261	151	450
12 - 15	5	290	180	550
18	6	319	209	650
21	7	348	238	750
24	8	377	267	850
27	9	406	296	950
30	10	435	325	1060
33	11	464	354	1160
36	11	464	354	1160



Installation of Mounting



Our arresters are generally recommended for pole or panel mounting in a vertical position. However, for mounting arrangements, kindly consider our special instruction and assistance available upon request.

Failure due to flashovers and electrical overstress may be avoided by following recommended clearance between the arrester and any adjacent equipment must be observed. The mounting clearances may be followed as per the following table.

Arrester Rating in kV	3.3	6.6	9	12	15	18	21	24	27	30	33	36
Min. Phase to Clearance. (mm) (R)	123	155	193	212	255	319	319	369	369	396	396	396
Min. Phase to Earth Clearance (mm) (E)	81	106	138	157	185	248	248	286	286	309	309	309

Arresters Selection

The method of arrester selection Mount include the following steps.

- (I) Review of all system stresses and service conditions expected at the point where arresters are to be mounted.
- (ii) The detailed study of system stresses containing continuous operating voltage (MCOV), temporary over-voltage and lightning surges.

From the above, there are different criteria are required to meet these individual selection process, the highest resulting rating must be chosen.



Table : 1

Nominal Discharge Current	5 kAp	High Current impulse withstand (4/10/sec)	65 kAp
Reference Current	1 mA	Long decretion current impulse withstand	As per IEC 99-4

CHARACTERISTICS OF 5KA DISTRIBUTION ARRESTERS

Sl.	Particulars	Units	Characteristics											
			3.3	6.6	9	12	15	18	21	24	27	30	33	36
1	Rated Voltage (Ur) kV	kV/rms	3.3	6.6	9	12	15	18	21	24	27	30	33	36
2	Continuous operating voltage (Uc)	kV/rms	2.55	5.1	7.65	10.2	12.75	15.3	17.0	20.0	22.9	24.0	24.4	30
3a	Maximum Residual voltage at 2.5kA (8/20μ impulse)	kVp	8.6	17.3	25.9	34.6	43.2	51.9	57.7	65.9	74.1	82.4	90.6	98.8
3b	Maximum Residual voltage at 5kA (8/20μ impulse)	kVp	9.4	18.8	28.2	37.6	47.0	56.4	62.7	71.6	80.6	89.5	98.5	107.4
3c	Maximum Residual voltage	kVp	10.3	20.7	31.0	41.3	51.7	62.0	68.9	78.8	88.6	98.5	108.3	118.2
4	Maximum steep current impulse residual voltage at 5kA (1/20μ impulse)	kVp	10.3	20.7	31.0	41.3	51.7	62.0	68.9	78.8	88.6	98.5	108.3	118.2
5	Insulation withstand (1.2/50μ impulse)	kVp	40	60	75	75	95	95	125	125	125	170	170	170
6	Creepage distance	mm	180	335	450	550	550	650	750	850	950	1050	1160	1160

Table : 2

Nominal Discharge Current	10 kAp	High Current impulse withstand (4/10/sec)	100 kAp
Reference Current	1.5 mA	Long decretion current impulse withstand	As per IEC 99-4

CHARACTERISTICS OF 10KA CLASS 1&2 HEAVY DUTY DISTRIBUTION ARRESTERS

Sl.	Particulars	Units	Characteristics											
			3.3	6.6	9	12	15	18	21	24	27	30	33	36
1	Rated Voltage (Ur) kV	kV/rms	3.3	6.6	9	12	15	18	21	24	27	30	33	36
2	Continuous operating voltage (Uc)	kV/rms	2.55	5.1	7.65	10.2	12.75	15.3	17.0	20.0	22.9	24.0	24.4	30
3a	Maximum Residual voltage at 5kA (8/20μ impulse)	kVp	9.1	18.1	27.2	33.2	45.3	54.3	60.4	69.0	77.7	86.3	94.9	103.5
3b	Maximum Residual voltage at 10kA (8/20μ impulse)	kVp	9.8	19.7	29.5	36.0	49.2	59.1	65.7	72.0	84.4	93.8	103.2	108.0
3c	Maximum Residual voltage at 20kA (8/20μ impulse)	kVp	10.8	21.7	32.5	43.3	54.1	65.0	72.2	82.5	92.9	103.2	113.5	123.8
4	Maximum switching impulse residual voltage at 500A (30/60μ impulse)	kVp	6.9	13.8	20.7	32.0	34.4	41.3	46.0	64.0	69.1	75.7	82.2	96.0
5	Maximum steep current impulse residual voltage at 10kA (1/20μ impulse)	kVp	10.8	21.7	32.5	43.3	54.1	65.0	72.2	82.5	92.9	103.2	113.5	123.8
6	Insulation withstand (1.2/50μ impulse)	kVp	40	60	75	75	95	95	125	125	125	170	170	170
7	Creepage distance	mm	180	335	450	550	550	650	750	850	950	1050	1160	1160

Eswari Electricals Pvt. Ltd.

CORPORATE OFFICE & UNIT I - FUSEGEAR DIVISION

#64, Industrial Estate, Perungudi, Chennai-600 096, India.

UNIT II - SWITCHGEAR DIVISION

#102A, Industrial Estate, Perungudi, Chennai - 600 096, India.

UNIT III - SWITCH BOARD DIVISION

#227, Siruseri Village, Chennai - 603103, India.

UNIT IV - EXPORT HOUSE (SEZ)

NCTPL, Light Engineering Sectors - SEZ, Chengalpattu 603305, India.

MARKETING OFFICE

No. 285, LBS Marg, Bhandup (W), Mumbai - 400 078, India.

OVERSEAS BRANCHES

Eswari Lanka (Pvt.) Ltd.

54A, Pambankada Lane, Wellawatte,
Colombo - 06, Sri Lanka.

Eswari Electricals Pvt. Ltd.

PO BOX 159-00623, Nairobi, Kenya.

Vinayak electro tech

9396225939

Vinayaketech@yahoo.com



☎ +91 44 4215 2122 | 4215 2123
+91 44 2496 1693 | 2496 4752
+91 73972 26726

✉ info@eswari.in

🌐 www.eswari.in


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