

Bowthorpe EMP Open Cage Polymeric series arresters OCP2

Application:

Protection of MV networks, sensitive equipment and substations from lightning and switching surge related over-voltages in areas with relatively high iso-keraunic levels.

Generic technical data:

OCP2 series	3-29kV Uc
Rated discharge current (8/20µs):	10kA
Line discharge class 2 according to	IEC 60099-4
Operating duty impulse withstand current (4/10µs):	100kA
Long duration current impulse (2000µs):	530A
High current short circuit: (pre-failing method) (Safe non-shattering failure mode)	40kA
Energy 2 Long duration impulses:	6.0kJ/kVUc



Bowthorpe OCP benefits:

Tested in accordance with IEC60099-4 at independent accredited laboratories

Superior protection margins

Direct molded housing to prevent moisture ingress

Low residual voltages

High-energy handling

Superior TOV performance

Safe non-shattering short circuit behavior to higher current levels

Maintenance free

Hydrophobic silicone housing: (Tracking and erosion resistant)

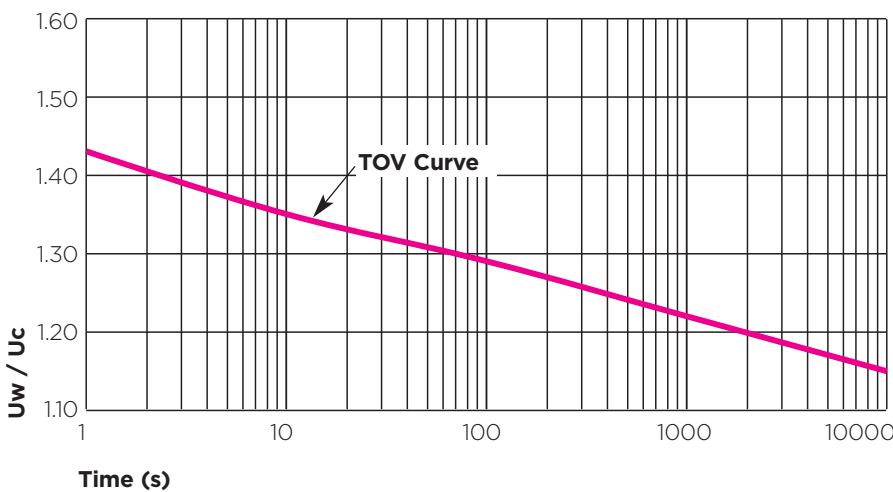
Excellent cantilever and tensile performance

Excellent mechanical, vibration and impact withstand capability

Quality design and manufacturing, ISO 9001 and 14001 compliant

TRUST Bowthorpe Surge Arresters

TOV for OCP2 with prior energy



Temperature of samples (pre-heated): 60° C according to IEC 60099-4, Ed 2.0 2004. TOV Curve applies to an arrester which has a pre-stress applied prior to TOV verification. This pre-stress is equivalent to two long duration current impulses having duration of 2000µs and total energy equal to 6.0 kJ/kV Uc.

Uw = TOV withstand voltage; Uc = continuous operating voltage



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OCP2	U continuous kV(r.m.s)	U rated kV(r.m.s)	U residual in kV when tested to the following impulse waveforms					
			Lightning (8/20 μ s)			Steep lightning (1/20 μ s)		Switching (30/60 μ s)
			5kA	10kA	20kA	10kA	125A	500A
3	3	3.7	9.18	9.72	10.84	10.10	7.37	7.76
4	4	5.0	12.24	12.96	14.46	13.47	9.83	10.35
5	5	6.2	15.30	16.20	18.07	16.84	12.29	12.94
6	6	7.5	18.36	19.44	21.68	20.21	14.75	15.53
8	8	10.0	24.48	25.92	28.91	26.94	19.66	20.70
9	9	11.2	27.54	29.16	32.53	30.31	22.12	23.29
10	10	12.5	30.60	32.40	36.14	33.68	24.58	25.88
12	12	15.0	36.72	38.88	43.37	40.42	29.50	31.06
15	15	18.7	45.90	48.60	54.21	50.52	36.87	38.82
18	18	22.5	55.08	58.32	65.05	60.62	44.24	46.58
20	20	25.0	61.20	64.80	72.28	67.36	49.16	51.76
21	21	26.2	64.26	68.04	75.89	70.73	51.62	54.35
22	22	27.5	67.32	71.28	79.51	74.10	54.08	56.94
24	24	30.0	73.44	77.76	86.74	80.83	58.99	62.11
29	29	36.3	88.74	93.96	104.81	97.67	71.28	75.05

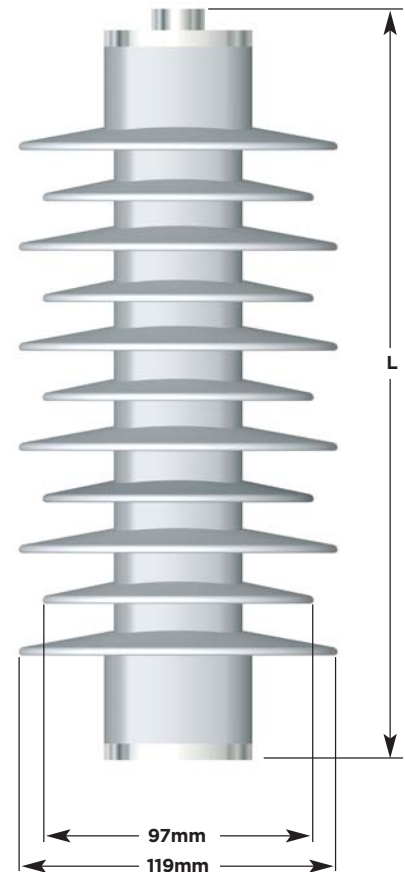
OCP2-xxS; Standard housing parameters

OCP2	Sheds	Impulse voltage 1.2/50 μ s (kV)	Power frequency voltage withstand, wet (kV)	Flash over distance (mm)	Creepage (mm)	Height L (mm)
3	5	145	47	176	380	183
4	5	145	47	176	380	183
5	5	145	47	176	380	183
6	5	145	47	176	380	183
8	5	145	47	176	380	183
9	5	145	47	176	380	183
10	5	145	47	176	380	183
12	5	145	47	176	380	183
15	7	165	57	214	505	220
18	9	180	70	254	632	260
20	9	180	70	254	632	260
21	11	200	80	293	758	299
22	11	200	80	293	758	299
24	11	200	80	293	758	299
29	13	230	95	334	885	340

OCP2-xxL; Extended housing parameters

OCP2	Sheds	Impulse voltage 1.2/50 μ s (kV)	Power frequency voltage withstand, wet (kV)	Flash over distance (mm)	Creepage (mm)	Height L (mm)
3	7	165	57	214	505	220
4	7	165	57	214	505	220
5	7	165	57	214	505	220
6	7	165	57	214	505	220
8	7	165	57	214	505	220
9	7	165	57	214	505	220
10	7	165	57	214	505	220
12	7	165	57	214	505	220
15	9	180	70	254	632	260
18	11	200	80	293	758	299
20	11	200	80	293	758	299
21	13	230	95	334	885	340
22	13	230	95	334	885	340
24	13	230	95	334	885	340

Tested in accordance with IEC 60099-4, Ed 2.0 2004



Notes:

Mechanical strength data:

Cantilever	Nm	350
Tensile	kN	2
Torque	Nm	50

For accessory and ordering information, please refer to page 10