

SWITCHGEAR



Polymer Surge Arresters

Class C, Medium Voltage

5 kA and 10 kA Duty Surge Arresters

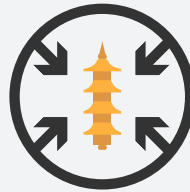


Insulect Class C MV Surge Arresters are designed to provide optimum protection for transformers and other medium voltage equipment against over voltage transients caused by lightning and switch surge events.



Made for extreme environments

Designed to exceed the demands of the most extreme environments and service conditions.



Compact and lightweight

Polymer surge arresters ensure ease of handling, and compact site installations.



20 year history in Australia

Widely used throughout Australia for their reliable performance.

KEY COMPONENT MATERIALS

BLOCK ENCLOSURE

Epoxy impregnated glass fibre filaments

VARISTOR BLOCKS

Metal oxide

EXTERNAL HOUSING

Moulded polymer

Polymer surge arrester construction offers tangible benefits over traditional porcelain designs.

SAFETY

Polymer surge arresters are superior over porcelain with regards to improved safety under failure and fire-retardancy. Unlike porcelain, the polymer housing will not shatter or scatter pieces when damaged and they are lighter making for easier, safer installation.

DURABILITY

High impact resistance of polymer housing significantly reduces housing damage losses typically associated with porcelain housing during transport and installation at site.

COMPACT

The compact design of polymer housing arresters allows for flexibility in installation space and ease of handling during installation.



See over for **Accessories**

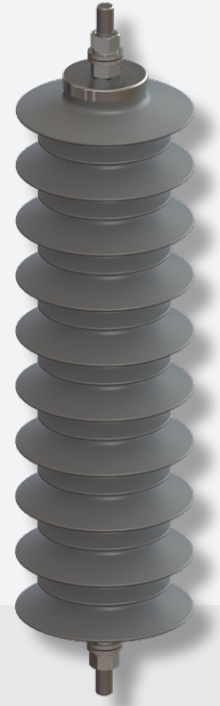


Field of application

Protection of transformers, switchgear and transmission lines against atmospheric and switching over-voltages. Selection of arresters has to be carried out according to IEC 60099-4/2004 and ANSI/IEEE C62.11/2005.

Normal operating conditions

Ambient temperature: -50°C to +55°C
Design altitude: max 1000m
Rated frequency: 15 Hz to 62 Hz
(different operating conditions available on inquiry)



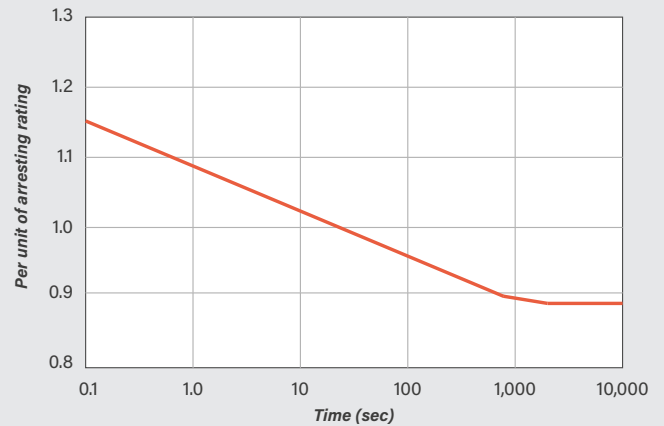
Technical Parameters

5kA Duty

Rated voltage U_r :	3 kV to 54 kV
Nominal discharge current:	5 kA
High current impulse:	65 kA
Long duration current impulse :	100 A / 2,000 μ s
Pressure relief class:	B (20 kA)
Energy withstand capability:	2.1 kJ/kV $_{Ur}$
Torsional strength (MML):	52 Nm
Bending strength (MML):	130 Nm
Tensile strength (MML):	800 N
(SML = 2.5 x MML)	

Power frequency voltage versus time characteristic (TOV)

Preheated to 60°C prestressed with 1 high current impulse 65kA

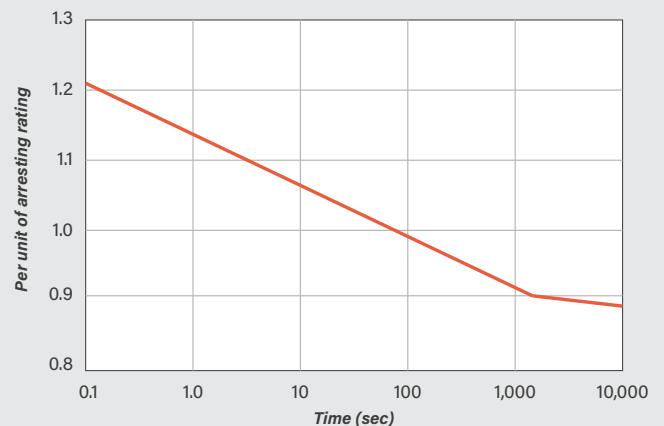


10kA Duty

Rated voltage U_r :	3 kV to 54 kV
Nominal discharge current:	10 kA
High current impulse:	100 kA
Long duration current impulse :	250 A / 2,000 μ s
Pressure relief class:	B (20 kA)
Line discharge class:	1 (2.8 kJ/kV $_{Ur}$)
Torsional strength (MML):	78 Nm
Bending strength (MML):	230 Nm
Tensile strength (MML):	1,400 N
(SML = 2.5 x MML)	

Power frequency voltage versus time characteristic (TOV)

Preheated to 60°C prestressed with 1 high current impulse 100kA



Got Questions?

CALL OUR CUSTOMER SUPPORT TEAM 1300 446 565

insulect

5 kA Duty Polymer Surge Arrester

Type	Rated Voltage	MCOV	Range of critical operating voltage V _{1mA} (DC)		TOV		Residual voltage at lightning impulse current (8/20 μ s)				Residual voltage at switching impulse current (30/75 μ s)	
					1 sec	10 sec	2.5 kA	5 kA	10 kA	20 kA	250 A	500 A
	kV	kV ms	Min	Max	kV	kV	2.5 kA	5 kA	10 kA	20 kA	250 A	500 A
CA03/05.0D	3	2.55	4.80	5.40	3.24	3.03	9.91	10.61	11.58	12.83	6.80	7.00
CA06/05.0D	6	5.10	9.60	10.80	6.48	6.06	18.82	20.22	22.17	24.65	13.60	14.00
CA00/05.0D	9	7.65	14.40	16.20	9.72	9.09	27.73	29.84	32.75	36.48	20.40	21.00
CA10/05.0D	10	8.50	16.00	18.50	10.80	10.10	31.53	33.93	37.26	41.52	22.70	23.30
CA12/05.0D	12	10.20	19.20	21.60	12.96	12.12	36.64	39.45	43.34	48.30	27.20	28.00
CA15/05.0D	15	12.75	24.00	27.00	16.20	15.15	45.55	49.06	53.92	60.13	34.00	35.00
CA18/05.0D	18	15.30	28.80	32.40	19.44	18.18	54.46	58.67	64.50	71.96	40.80	42.00
CA21/05.0D	21	17.85	33.60	37.80	22.68	21.21	63.37	68.28	75.09	83.78	47.60	49.00
CA24/05.0D	24	20.40	38.40	43.20	25.92	24.24	72.28	77.90	85.67	95.61	54.40	56.00
CA27/05.0D	27	22.95	43.20	48.60	29.16	27.27	81.19	87.51	96.26	107.43	61.20	63.00
CA30/05.0D	30	25.50	48.00	54.00	32.40	30.30	90.10	97.12	106.84	119.26	68.00	70.00
CA33/05.0D	33	28.05	52.80	59.40	35.64	33.33	99.01	106.73	117.42	131.09	74.80	77.00
CA36/05.0D	36	30.60	57.60	64.80	38.88	36.36	107.92	116.34	128.01	142.91	81.60	84.00
CA39/05.0D	39	33.15	62.40	70.20	42.12	39.39	116.83	125.96	138.59	154.74	88.40	91.00
CA42/05.0D	42	35.70	67.20	75.60	45.36	42.42	125.74	135.57	149.18	166.56	95.20	98.00
CA45/05.0D	45	38.25	72.00	81.00	48.60	45.45	134.65	145.18	159.76	178.39	102.00	105.00
CA48/05.0D	48	40.80	76.80	86.40	51.84	48.48	143.56	154.79	170.34	190.22	108.80	112.00
CA51/05.0D	51	43.35	81.60	91.80	55.08	51.51	152.47	164.40	180.93	202.04	115.60	119.00
CA54/05.0D	54	45.90	88.40	97.20	58.32	54.54	161.38	174.02	191.51	213.87	122.40	126.00

Type	Rated Voltage	Height	Weight	Creep	Insulation of arrester housing		
					PF Withstand Voltage (Dry) kV	PF Withstand Voltage (Wet) kV	LI Withstand Voltage kV
	kV	mm	kg	mm			
CA03/05.0D	3	112.0	2.70	323	11	9	14
CA06/05.0D	6	112.0	2.74	323	20	18	26
CA00/05.0D	9	162.5	3.06	442	30	26	39
CA10/05.0D	10	162.5	3.08	443	34	30	44
CA12/05.0D	12	162.5	3.10	442	39	35	51
CA15/05.0D	15	243.0	3.72	680	49	43	64
CA18/05.0D	18	243.0	3.76	680	58	52	76
CA21/05.0D	21	325.0	4.28	884	68	60	89
CA24/05.0D	24	325.0	4.32	884	77	69	101
CA27/05.0D	27	405.5	4.86	1122	87	77	114
CA30/05.0D	30	405.5	4.90	1122	96	85	126
CA33/05.0D	33	486.0	5.42	1360	106	94	139
CA36/05.0D	36	486.0	5.46	1360	115	102	151
CA39/05.0D	39	568.0	5.98	1564	125	111	164
CA42/05.0D	42	568.0	6.02	1564	134	119	176
CA45/05.0D	45	648.5	6.64	1802	144	128	189
CA48/05.0D	48	648.5	6.68	1802	153	136	201
CA51/05.0D	51	729.0	7.12	2040	163	145	214
CA54/05.0D	54	729.0	7.16	2040	172	153	226

Outdoor Distribution



Application: Insulect Surge Arrestors fitted to Insulect gas-insulated load break switch.

10 kA Duty Polymer Surge Arrester

Type	Rated Voltage	MCOV	Range of critical operating voltage VImA (DC)		TOV		Residual voltage at lightning impulse current (8/20 μ s)				Residual voltage at switching impulse current (30/75 μ s)	
					1 sec	10 sec						
	kV	kV ms	Min	Max	kV	kV	2.5 kA	5 kA	10 kA	20 kA	250 A	500 A
CA03/10.1D	3	2.55	4.80	5.40	3.39	3.18	9.07	9.88	10.91	12.37	6.80	7.00
CA06/10.1D	6	5.10	9.60	10.80	6.78	6.36	18.14	19.76	21.82	24.73	13.60	14.00
CA09/10.1D	9	7.65	14.40	16.20	10.17	9.54	27.22	29.65	32.72	37.10	20.30	21.00
CA10/10.1D	10	8.50	16.00	18.50	11.30	10.60	31.08	33.86	37.37	42.37	22.60	23.30
CA12/10.1D	12	10.20	19.20	21.60	13.56	12.72	36.29	39.53	43.63	49.46	27.10	27.90
CA15/10.1D	15	12.75	24.00	27.00	16.95	15.90	45.36	49.41	54.54	61.83	33.90	34.90
CA18/10.1D	18	15.30	28.80	32.40	20.34	19.08	54.43	59.29	65.45	74.20	40.70	41.90
CA21/10.1D	21	17.85	33.60	37.80	23.73	22.26	63.50	69.17	76.36	86.56	47.50	48.90
CA24/10.1D	24	20.40	38.40	43.20	27.12	25.44	72.58	79.06	87.26	98.93	54.20	55.90
CA27/10.1D	27	22.95	43.20	48.60	30.51	28.62	81.65	88.94	98.17	111.29	61.00	62.90
CA30/10.1D	30	25.50	48.00	54.00	33.90	31.80	90.72	98.82	109.08	123.66	67.80	69.80
CA33/10.1D	33	28.05	52.80	59.40	37.29	34.98	99.79	108.70	119.99	136.03	74.60	76.80
CA36/10.1D	36	30.60	57.60	64.80	40.68	38.16	100.86	118.58	130.90	148.39	81.40	83.80
CA39/10.1D	39	33.15	62.40	70.20	44.07	41.34	117.94	128.47	141.80	160.76	88.10	90.80
CA42/10.1D	42	35.70	67.20	75.60	47.46	44.52	127.01	138.35	152.71	173.12	94.90	97.80
CA45/10.1D	45	38.25	72.00	81.00	50.85	47.70	136.08	148.23	163.62	185.49	101.70	104.80
CA48/10.1D	48	40.80	76.80	86.40	54.24	50.88	145.15	158.11	174.53	197.86	108.50	111.70
CA51/10.1D	51	43.35	81.60	91.80	57.63	54.06	154.22	167.99	185.44	210.22	115.30	118.70
CA54/10.1D	54	45.90	86.40	97.20	61.02	57.24	163.30	177.88	196.34	222.59	122.00	125.70

Type	Rated Voltage	Height	Weight	Creep	Insulation of arrester housing		
					PF Withstand Voltage (Dry) kV	PF Withstand Voltage (Wet) kV	LI Withstand Voltage kV
	kV	mm	kg	mm			
CA03/10.1D	3	112.0	3.02	323	10	9	13
CA06/10.1D	6	112.0	3.10	323	20	17	26
CA09/10.1D	9	162.5	3.52	442	29	26	39
CA10/10.1D	10	162.5	3.54	443	34	30	44
CA12/10.1D	12	162.5	3.60	442	39	35	51
CA15/10.1D	15	243.0	4.45	680	49	43	64
CA18/10.1D	18	243.0	4.53	680	59	52	77
CA21/10.1D	21	325.0	5.29	884	68	61	90
CA24/10.1D	24	325.0	5.37	884	78	70	103
CA27/10.1D	27	405.5	6.12	1122	88	78	116
CA30/10.1D	30	405.5	6.20	1122	98	87	128
CA33/10.1D	33	486.0	6.93	1360	108	96	141
CA36/10.1D	36	486.0	7.01	1360	117	104	154
CA39/10.1D	39	568.0	7.77	1564	127	113	167
CA42/10.1D	42	568.0	7.85	1564	137	122	180
CA45/10.1D	45	648.5	8.70	1802	147	130	193
CA48/10.1D	48	648.5	8.78	1802	157	139	206
CA51/10.1D	51	729.0	9.41	2040	166	148	218
CA54/10.1D	54	729.0	9.49	2040	176	157	231



Surge Arresters

Optional Accessories



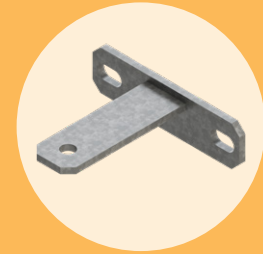
Bird/Wildlife Cap

UV stabilized PVC construction.



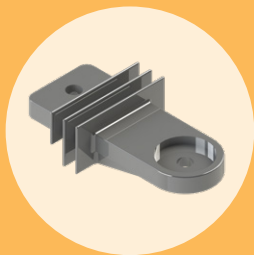
Leads

Available in various cable sizes and terminal lugs according to customer specification.



Steel Mounting Bracket

Available in galvanised steel or Gr.316 stainless steel.



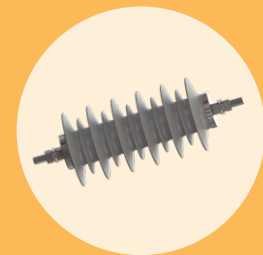
Insulated Mounting Bracket

UV stabilised glass-filled polyester construction.



Earth Lead Disconnect

Visual indicator for use in resonant earthing system. Provides visual and positive disconnection.



Custom Components

For more details on our range including custom components, contact our Switchgear team.

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