



ALUMINIUM ELECTROLYTIC CAPACITORS

PG - 6DI with Screw Terminals

PG - 6DI range is designed for high reliability, high frequency and high ripple current applications like high frequency PWM inverters, high KVA on-line UPS systems, telecom SMPS.

- ▶ Small can size
- ▶ Low ESR
- ▶ Low leakage current
- ▶ High ripple current.

Specifications

- ▶ **Voltage range** : 50 VDC to 500 VDC
- ▶ **Can size** : 35 x 62mm to 90 x 220mm
- ▶ **Operating Temperature range** : -40°C to + 85°C
- ▶ **Capacitance** : 330 MFD to 250000 MFD
The value of capacitance is given in microfarads, and with a tolerance of ± 20%
- ▶ **Leakage current**: The maximum leakage current (Ir) is given by the formula:

$$I_r = 0.003 CV \text{ (microamps)}$$
 C = capacitance in microfarads
 V = DC rated voltage
 Pre-conditioning of the capacitors, prior to testing for leakage current, is essential (refer to page 5)
- ▶ **Ripple Current**: All capacitors withstand rms ripple current at 100 Hz at 85°C. When capacitors operate at temperatures other than 85°C, the permissible rms ripple current at 85°C should be multiplied by the factors given below

+40°C	+45°C	+50°C	+65°C
2.10	2.00	1.90	1.60

Where capacitors are required to operate at frequencies other than 100 Hz the multiplying factors given below, may be used to determine the ripple current capacity, at that frequency.

Frequency Hz	100	250	500	1k to10k	>10K
Multiplying Factor	1.0	1.05	1.20	1.32	1.35

- ▶ Can is negative, However, it is isolated with a PVC insulating sleeve and polypropylene end-disc.



Terminal styles

capacitors are available in screw terminals in two can styles


AEST -Screw terminals with plain insulated base

AEST-D -Screw terminals with stud mounting

Note : For details of dimensions see page 25

Marking on capacitors

Each capacitor will have the following ueinformation printed on it, sequentially:

- 1 . The Company's symbol  followed by the words ALCON ELECTROLYTIC
- 2 . The capacitor grade viz. PG-6DI
- 3 . The capacitance value MFD
- 4 . The rated voltage
- 5 . The surge voltage
- 6 . Capacity tolerance
- 7 . Temperature range
- 8 . Part number on non-standard capacitors



ALUMINIUM ELECTROLYTIC CAPACITORS

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Standard Capacitor Values

Rated Voltage (VDC)	Surge Voltage (VDC)	Capacitance Nominal (MFD)	MAX ESR at 100 Hz, 25°C (Ohms)	Impedance at 100 Hz, 25°C (Ohms)	Ripple at 100 Hz, 85°C (Amps)	Can size Nominal D x L mm
50	60	4700	0.082	0.343	4.29	35x62
		5000	0.078	0.322	4.4	35x62
		6800	0.069	0.238	4.68	35x62
		10000	0.047	0.162	6.05	35x80
		10000	0.051	0.162	7.26	50x80
		15000	0.022	0.107	9.7	35x105
		22000	0.020	0.073	11.66	50x80
		27000	0.016	0.060	13.11	50x80
		33000	0.012	0.049	16.24	50x105
		47000	0.011	0.035	19.67	63x105
		68000	0.012	0.025	21.45	76x105
		82000	0.011	0.021	22.55	76x120
		100000	0.009	0.017	23.96	76x120
		150000	0.009	0.012	27.12	76x146
200000	0.009	0.010	30.77	76x220		
63	75	4700	0.065	0.341	4.84	35x62
		5000	0.052	0.320	5.39	35x62
		6800	0.039	0.235	6.6	35x80
		10000	0.029	0.160	7.7	35x80
		10000	0.031	0.160	9.35	50x80
		15000	0.024	0.107	10.6	50x80
		22000	0.019	0.073	13.26	50x105
		27000	0.016	0.060	14.3	50x105
		33000	0.017	0.049	16.06	63x105
		47000	0.014	0.035	19.81	76x105
		68000	0.011	0.024	22.31	76x120
		82000	0.010	0.020	23.1	76x120
		100000	0.010	0.017	26.05	76x146
		75	90	4700	0.043	0.340
5000	0.040			0.319	5.53	35x80
6800	0.026			0.235	9.09	35x105
10000	0.023			0.160	10.79	50x80
10000	0.025			0.160	11.44	50x105
15000	0.019			0.107	13.26	50x105
22000	0.016			0.073	16.46	63x105
27000	0.015			0.060	17.05	63x105
33000	0.014			0.049	19.8	76x105
47000	0.012			0.035	20.96	76x120
68000	0.011			0.024	24.24	76x146
100000	0.011			0.017	28.3	76x220

Other Capacitor values and sizes available on request



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Standard Capacitor Values

Rated Voltage (VDC)	Surge Voltage (VDC)	Capacitance Nominal (MFD)	MAX ESR at 100 Hz, 25°C (Ohms)	Impedance at 100 Hz, 25°C (Ohms)	Ripple at 100 Hz, 85°C (Amps)	Can size Nominal D x L mm
100	115	2200	0.102	0.727	3.85	35x62
		2500	0.098	0.640	4.18	35x80
		3300	0.093	0.486	4.29	35x80
		4700	0.036	0.340	6.93	35x80
		5000	0.035	0.319	8.8	50x80
		6800	0.041	0.236	8.14	50x80
		10000	0.019	0.160	13.26	50x105
		15000	0.017	0.107	15.95	63x105
		20000	0.016	0.080	17.85	63x120
		22000	0.014	0.073	19.25	76x105
		27000	0.014	0.060	19.8	76x105
		33000	0.009	0.049	24.94	76x120
		47000	0.008	0.034	28.31	76x146
		68000	0.008	0.024	33.00	76x220
		100000	0.007	0.016	38.5	90x220
150	172	1000	0.207	1.598	3.19	35x105
		2000	0.074	0.798	6.05	50x80
		2200	0.071	0.725	6.19	50x80
		2500	0.063	0.638	7.22	50x105
		3300	0.053	0.484	8.99	63x105
		4700	0.039	0.340	10.92	63x105
		5000	0.038	0.319	10.63	63x105
		6800	0.029	0.235	12.1	63x105
		10000	0.019	0.160	16.5	63x145
		12000	0.016	0.133	20.34	76x146
		15000	0.014	0.107	21.54	76x146
		20000	0.013	0.080	22.77	76x146
		22000	0.013	0.073	25.51	76x220
		27000	0.009	0.059	30.8	76x220
33000	0.006	0.048	37.4	76x220		
		40000	0.006	0.040	39.6	90x220
200	230	1000	0.158	1.595	3.3	35x80
		1500	0.142	1.065	3.85	35x105
		2200	0.060	0.725	7.4	50x105
		3300	0.048	0.483	9.5	63x105
		4700	0.039	0.340	11.23	63x120
		5000	0.034	0.319	12.16	63x120
		5600	0.031	0.285	12.65	63x120
		6800	0.022	0.235	15.51	76x120
		8200	0.021	0.195	16.4	76x120
		10000	0.016	0.160	20.49	76x146
		12000	0.013	0.133	22.13	76x146
		15000	0.013	0.106	25.51	76x220
		22000	0.009	0.073	30.8	76x220
		27000	0.008	0.059	33.00	76x220
		33000	0.006	0.048	39.6	90x220

Other Capacitor values and sizes available on request





ALUMINIUM ELECTROLYTIC CAPACITORS

PG - 6DI with Screw Terminals

Standard Capacitor Values

Rated Voltage (VDC)	Surge Voltage (VDC)	Capacitance Nominal (MFD)	MAX ESR at 100 Hz, 25°C (Ohms)	Impedance at 100 Hz, 25°C (Ohms)	Ripple at 100 Hz, 85°C (Amps)	Can size Nominal D x L mm		
250	288	470	0.326	3.394	2.16	35x62		
		680	0.186	2.345	3.37	35x105		
		1000	0.133	1.595	4.51	50x80		
		2000	0.066	0.797	7.04	50x105		
		2200	0.059	0.725	7.45	50x105		
		2500	0.048	0.638	9.42	63x105		
		3300	0.047	0.483	9.58	63x105		
		4700	0.041	0.340	11.00	63x120		
		5000	0.034	0.319	12.1	63x120		
		5600	0.031	0.285	12.65	63x120		
		6800	0.018	0.234	19.16	76x146		
		8200	0.017	0.194	19.8	76x146		
		10000	0.014	0.159	21.54	76x146		
		12000	0.013	0.133	22.00	76x146		
		15000	0.012	0.106	26.4	76x220		
315	362	2200	0.072	0.725	7.7	63x105		
		3300	0.069	0.484	8.8	76x120		
		4700	0.044	0.340	11.00	76x120		
		5000	0.042	0.320	11.28	76x120		
		5600	0.037	0.285	12.1	76x146		
		6800	0.027	0.235	15.4	76x146		
		8200	0.027	0.195	17.88	76x220		
		10000	0.018	0.160	22.00	76x220		
		12000	0.016	0.133	23.1	76x220		
		15000	0.011	0.106	29.7	90x220		
		20000	0.009	0.080	33.00	90x220		
		350	385	330	0.406	4.832	2.06	35x80
				1000	0.124	1.594	5.15	50x105
				1500	0.102	1.63	6.5	63x105
				2200	0.056	0.725	9.37	63x120
3300	0.042			0.483	10.89	63x120		
3300	0.041			0.483	11.44	76x120		
4700	0.033			0.339	13.95	76x146		
5000	0.027			0.319	15.43	76x146		
5600	0.026			0.285	15.95	76x146		
6800	0.022			0.235	17.24	76x146		
8200	0.024			0.195	18.95	76x220		
10000	0.010			0.159	28.6	76x220		
15000	0.006			0.106	40.7	90x220		

Other Capacitor values and sizes available on request



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PG - 6DI with Screw Terminals

Standard Capacitor Values

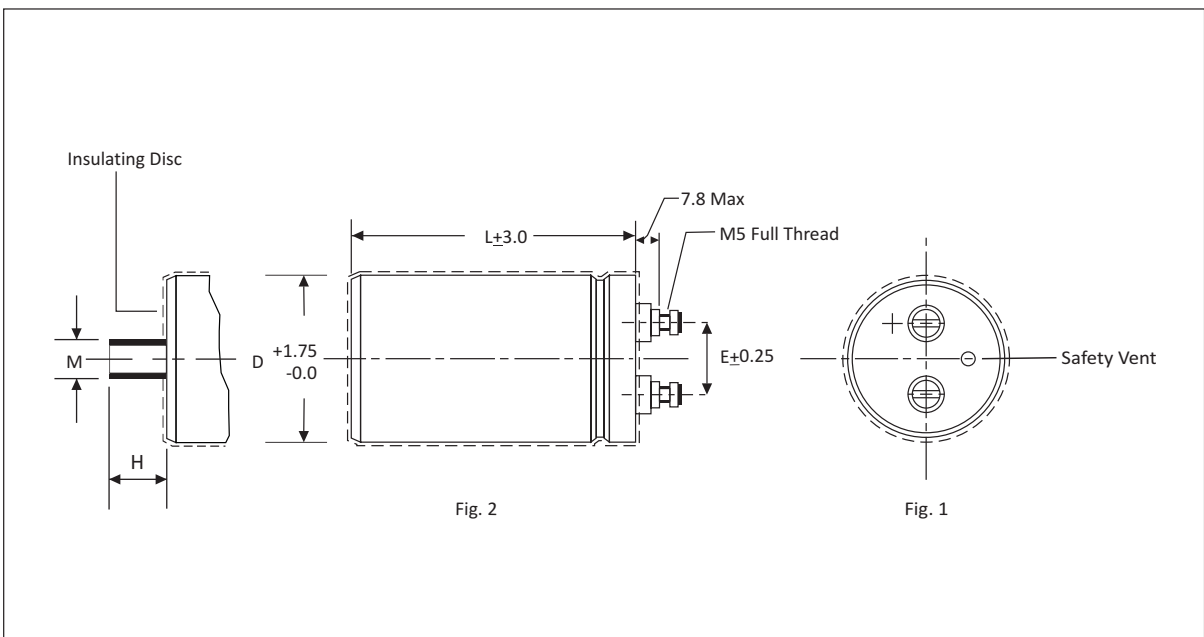
Rated Voltage (VDC)	Surge Voltage (VDC)	Capacitance Nominal (MFD)	MAX ESR at 100 Hz, 25°C (Ohms)	Impedance at 100 Hz, 25°C (Ohms)	Ripple at 100 Hz, 85°C (Amps)	Can size Nominal D x L mm
400	440	680	0.184	2.345	3.84	50x80
		1000	0.093	1.593	5.95	50x105
		1000	0.095	1.593	6.71	63x105
		1500	0.087	1.063	7.02	63x105
		2200	0.073	0.725	8.25	63x120
		3300	0.040	0.483	11.54	76x120
		4700	0.033	0.339	14.16	76x146
		5000	0.031	0.319	14.52	76x145
		5600	0.030	0.285	14.85	76x146
		6800	0.027	0.235	17.6	76x220
		8200	0.023	0.195	19.25	76x220
		10000	0.019	0.160	23.1	90x220
		15000	0.016	0.107	25.3	90x220
450	495	470	0.463	3.400	2.42	50x80
		680	0.157	2.344	4.58	50x105
		1000	0.140	1.595	5.54	63x105
		1500	0.129	1.065	6.2	63x120
		2200	0.097	0.740	7.15	63x120
		3300	0.063	0.484	10.19	76x146
		4700	0.041	0.340	12.65	76x146
		5000	0.037	0.319	13.2	76x146
		5600	0.034	0.285	13.75	76x146
		6800	0.033	0.235	15.95	76x220
		8200	0.027	0.195	17.6	76x220
		10000	0.023	0.160	20.9	90x220
		15000	0.012	0.106	28.6	90x220
500	550	820	0.154	1.944	4.95	50x105
		1000	0.138	1.595	5.23	50x105
		1500	0.100	1.064	7.02	63x105
		2200	0.069	0.725	9.44	76x105
		3300	0.051	0.484	12.1	76x145
		4700	0.041	0.340	14.88	90x145
		5600	0.035	0.285	15.95	90x145
		6800	0.033	0.235	18.7	90x220
		8200	0.028	0.195	20.35	90x220
		10000	0.020	0.160	22.00	90x220

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PG - 6DI with Screw Terminals

Screw Terminals type AEST/AEST-D



Dimension in mm.

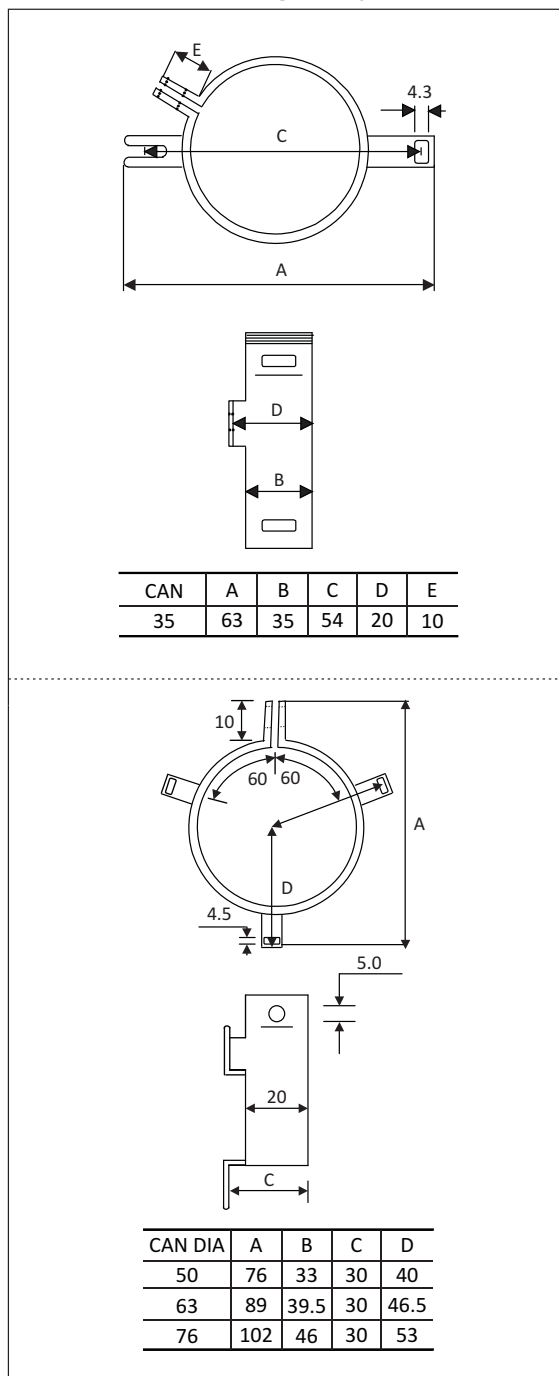
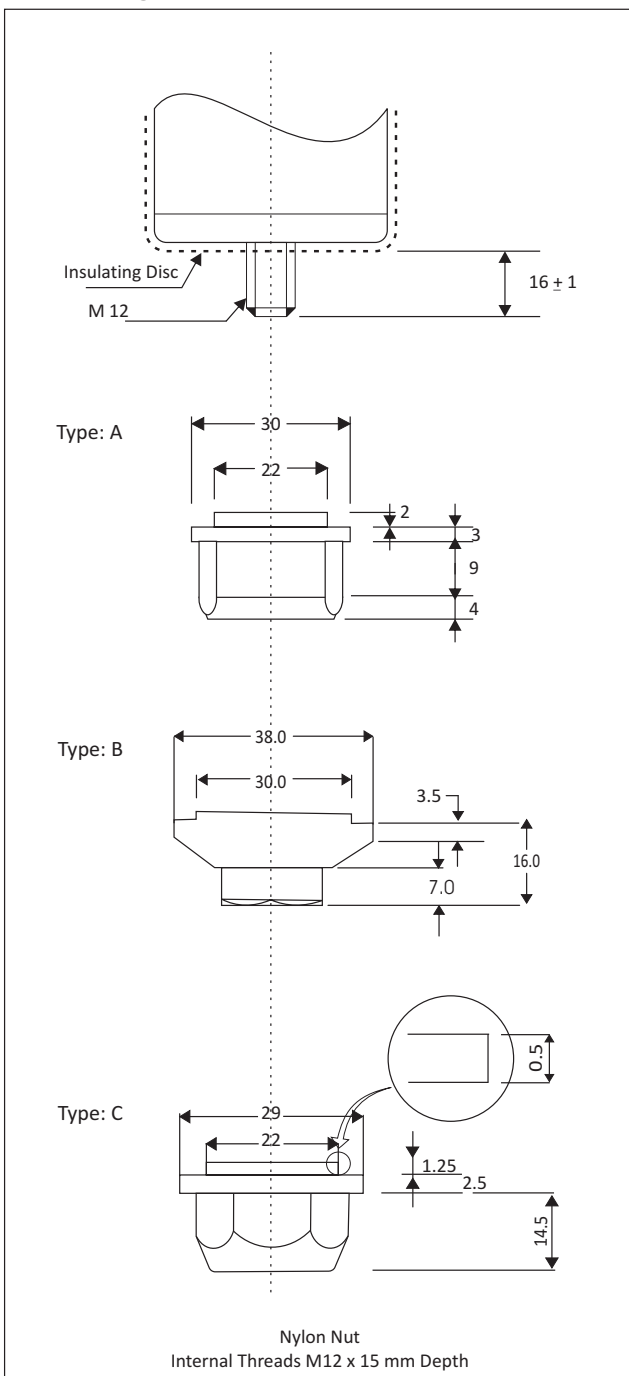
D	E	L	a (max)	b ± 0.1	Tapping
35	12.6	62	7.8	9.5	M5
35	12.6	80	7.8	9.5	M5
35	12.6	105	7.8	9.5	M5
50	22.1	80	7.8	9.5	M5
50	22.1	105	7.8	9.5	M5
63	28.5	105	7.8	12.0	M5
63	28.5	120	7.8	12.0	M5
63	28.5	146	7.8	12.0	M5
76	31.6	105	7.8	12.0	M5
76	31.6	120	7.8	12.0	M5
76	31.6	146	7.8	12.0	M5
76	31.6	175	7.8	12.0	M5
76	31.6	220	7.8	12.0	M5
90	32.0	146	5.3	16.0	M6
90	32.0	220	5.3	16.0	M6

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PG - 6DI with Screw Terminals

Mounting Accessories

- Mounting Nut and Washers for Cans with Bottom Stud ► Vertical Mounting Clamps



Dimension in mm

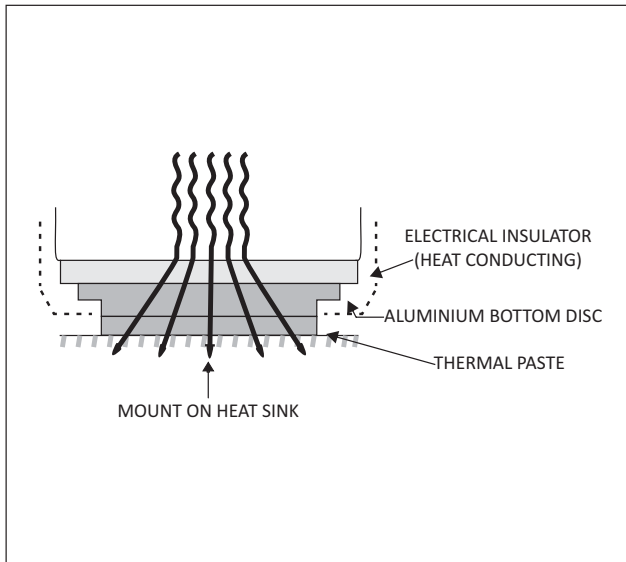


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Mounting Accessories

► Capacitor with Aluminium Bottom Disc



Dimension in mm



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Catalogue No.PG-6DI-00-00

The specification shown in this catalogue pertain to the current manufacturing range of the company. The Company reserves the right to change and /or modify any part of or whole of the specifications as a result of research and development and as may be necessary, without prior notice