

Aluminium Electrolytic Capacitors - Screw Terminals

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**RoHS
Compliant**


Specifications

- Voltage range: 50 V DC to 550 V DC
- Can size: 35φ × 62mm to 90φ × 240mm
- Operating Temperature range : -40°C to +85°C
- Capacitance: 330μF to 470000μF Tolerance ±20%
- Leakage current: The max. leakage current (IL) is given by the formula:

$$I_L = 0.003 CV \text{ (microamps)}$$

C = capacitance in microfarads

V = DC rated voltage

Pre-conditioning of the capacitors prior to testing for leakage current is essential.

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
2.2	2.1	1.9	1.6

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 to 10k	>10K
Multiplying Factor	1.0	1.05	1.20	1.32	1.35

Notes:

1. Can is negative, However, it is isolated with a PVC insulating sleeve and polypropylene end-disc.
2. Maximum ripple current for each capacitor diameter.

Capacitor Diameter (mm)	35	50	63	76	90
Max. Ripple Current (Amps)	20	20	40	40	72

Capacitor mounting

Capacitors are available in screw terminals in three mounting styles

AEST - Screw terminals with plain insulated base.

AEST-D - Screw terminals with stud mounting.

AEST-AL - Capacitor with aluminium bottom disc.

Capacitor Terminal Style

Capacitors are available in two different terminal style, round and across flat. Below table summarizes the available terminal styles in different capacitors diameter

Capacitors Diameter (mm)	35	50	63	76	90
Terminal Style - Round					
Terminal Style - Across Flat					

Marking on capacitors

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

- The Company's symbol f followed by the words ALCON ELECTROLYTIC
- The capacitor grade viz. PG-6DI
- The capacitance value_ μF, rated voltage_ V DC
- The surge voltage
- Capacity tolerance
- Climatic category
- Part number on non-standard capacitors
- CE marking

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Usefullife

Useful life is a period of time which the capacitor takes to reach "end of life".

For PG-601 capacitors the useful life is estimated as 12000 hours at maximum rated temperature, ripple current and voltages.

End of the defined as follows:

1. Catastrophic failure: capacitor short or open circuit
2. Mechanical failure: operation of safety vent or sleeve damage
3. Parametric failure:
 - a. Capacitance change $\pm 30\%$
 - b. ESR exceed three times specified value
- c. Leakage current exceed specified value

The useful life for a known ripple current load and ambient temperature (T_a) °C is determined on the basis of the "Life graph" shown below

Manufacturing Date Code Chart

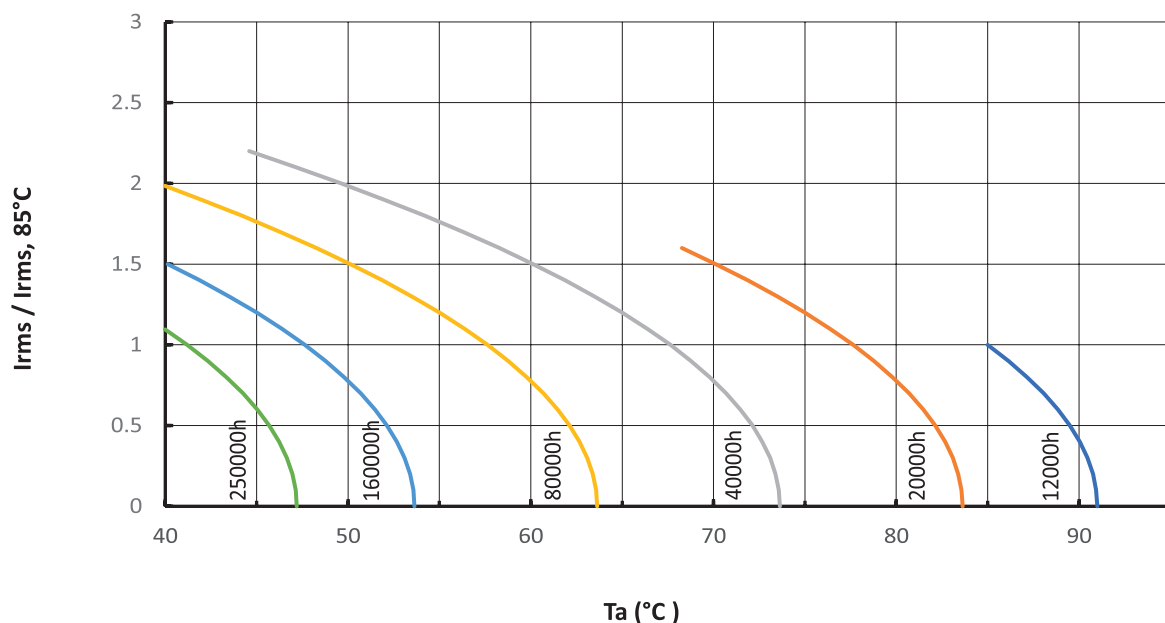
The manufacturing code shall consists of four digits (alphanumeric). The first two shall denote the date (numeric). The third stands for the month (alpha numeric). The fourth stands for the year (alphabet)

First two spaces DATE	Third space MONTH	Fourth space YEAR
01	1 = JANUARY	A = 2012
02	2 = FEBRUARY	B = 2013
03	3 = MARCH	C = 2014
.	4 = APRIL	D = 2015
.	5 = MAY	E = 2016
.	6 = JUNE	F = 2017
10	7 = JULY	G = 2018
11	8 = AUGUST	H = 2019
.	9 = SEPTEMBER	J = 2020
.	X = OCTOBER	K = 2021
.	Y = NOVEMBER	L = 2022
31	Z = DECEMBER	M = 2023

For example:

1. Manufacturing code 023A will mean 2nd March, 2012
2. Manufacturing code IOXA will mean 10111 October, 2012

LIFE GRAPH
PG -6DI


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Standard Capacitor Values

Rated Voltage (VDC)	Surge Voltage (VDC)	Capacitance Nominal (µF)	MAX ESR at 100Hz, 25°C (Ohms)	Ripple Current (Irms, 85°C) at 100Hz, 85°C(Amps)	Can size Nominal D × L mm	Case code	Part Number
400		2200	62.5	8.49	63 × 120	039	MP004243
350		10000	15.0	25.30	76 × 220	092	MP004244
350							MP004245
350		2200	51.2	9.37	63 × 120	039	MP004246
450		2200	72.7	7.87	63 × 120	039	MP004247
450							MP004248
500		2200	68.0	9.44	76 × 105	028	MP004249
500							MP004250
350		2200	51.2	9.37	63 × 120	039	MP004251
400		2200	62.5	8.49	63 × 120	039	MP004252
500		3300	54.6	12.10	76 × 146	081	MP004253
500							MP004254
350		3300	37.9	10.89	63 × 120	039	MP004255
350							MP004256
400		3300	51.5	10.39	76 × 120	041	MP004257
400							MP004258
450		3300	52.1	11.20	76 × 146	081	MP004259
450							MP004260
500		4700	41.7	13.30	90 × 105	093	MP004261
500							MP004262
350		4700	33.6	13.95	76 × 146	081	MP004263
350							MP004264
400		4700	40.3	12.74	76 × 146	081	MP004265
400							MP004266
450		4700	33.8	13.92	76 × 146	081	MP004267
450							MP004268
450		5600	28.6	15.35	90 × 120	097	MP004269
450							MP004270
500		5600	39.7	14.40	90 × 120	097	MP004271
500							MP004272
350		5600	25.7	15.95	76 × 146	081	MP004273
350							MP004274
400		5600	36.6	13.37	76 × 146	081	MP004275
400							MP004276
350		6800	22.0	17.25	76 × 146	081	MP004277
350							MP004278
400		6800	38.2	15.84	76 × 220	092	MP004279
400							MP004280

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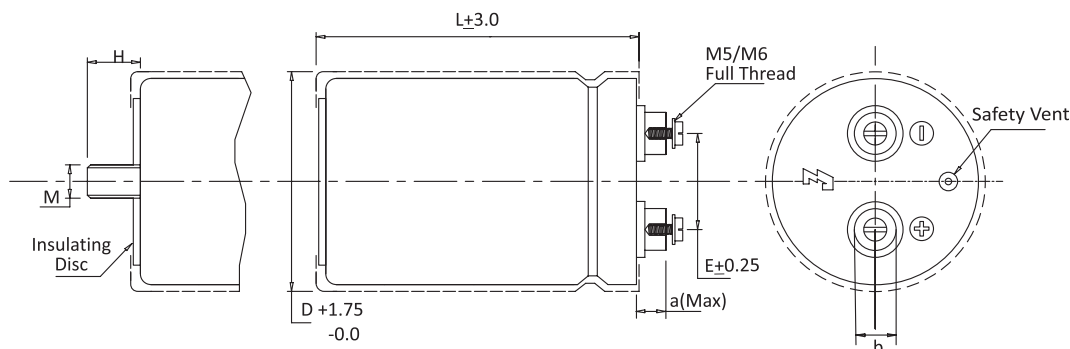
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Terminal Style And Dimension With Round Insert

Screw Terminal Type AEST/AEST-D


AEST -Screw terminals with plain insulated base.

AEST-D - Screw terminals with stud mounting.

Dimensions : Millimetres

Terminal	D	E	L	a (Max)	b ±0.1	M	H ±1.0
MS	35	12.6	62	7.8	9.5	-	-
MS	35	12.6	80	7.8	9.5	-	-
MS	35	12.6	105	7.8	9.5	-	-
MS	50	22.1	80	7.8	9.5	MU	17
MS	50	22.1	105	7.8	9.5	MU	17
MS	50	22.1	120	7.8	9.5	MU	17
MS	63	28.5	105	7.8	12	MU	17
MS	63	28.5	120	7.8	12	MU	17
MS	63	28.5	146	7.8	12	MU	17
MS	76	31.6	105	7.8	12	MU	17
MS	76	31.6	120	7.8	12	MU	17
MS	76	31.6	146	7.8	12	MU	17
MS	76	31.6	175	7.8	12	MU	17
MS	76	31.6	220	7.8	12	MU	17
MS	76	31.6	240	7.8	12	MU	17
M6	76	31.6	105	5.3*	16	MU	17
M6	76	31.6	120	5.3*	16	MU	17
M6	76	31.6	146	5.3*	16	MU	17
M6	76	31.6	175	5.3*	16	MU	17
M6	76	31.6	220	5.3*	16	MU	17.0
M6	76	31.6	240	5.3*	16	MU	17.0
M6	90	32	105	5.3*	16	MU	17.0
M6	90	32	146	5.3*	16	MU	17.0
M6	90	32	175	5.3*	16	MU	17.0
M6	90	32	220	5.3*	16	MU	17.0
M6	90	32	240	5.3*	16	MU	17.0

* Low Post Design

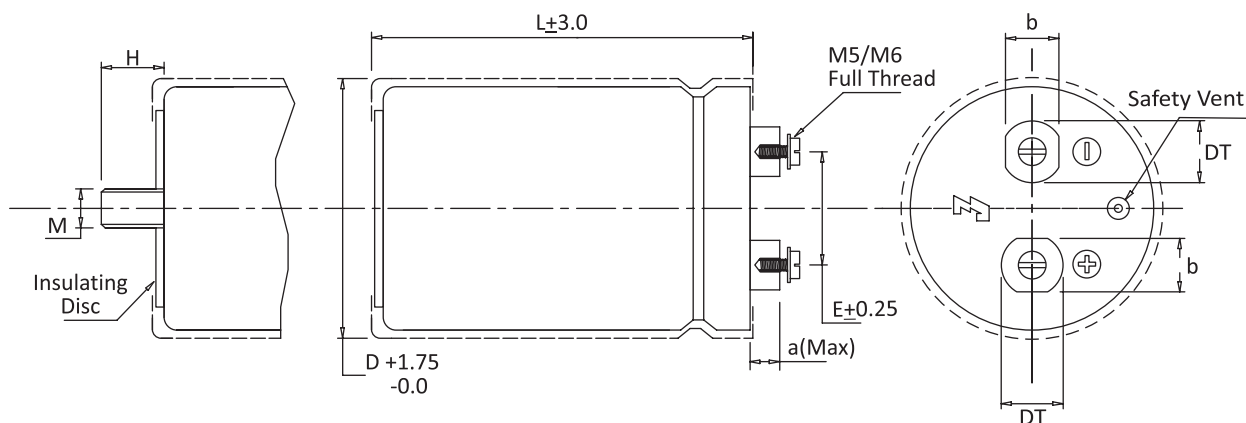
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Terminal Style And Dimension With A/F Insert

Screw Terminal Type AEST/AEST-D



AEST -Screw terminals with plain insulated base.

AEST-D - Screw terminals with stud mounting.

Dimensions : Millimetres

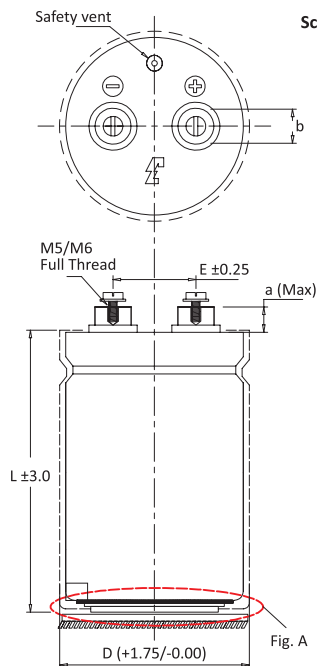
Terminal	D	E	L	a (Max)	b (-0.2/+0.1)	DT (±0.1)	M	H ±1.0
M6	63	28.5	105	6.5	13	15	12	17
M6	63	28.5	120	6.5	13	15	12	17
M6	63	28.5	146	6.5	13	15	12	17
M6	76	31.6	105	6.5	13	15	12	17
M6	76	31.6	120	6.5	13	15	12	17
M6	76	31.6	146	6.5	13	15	12	17
M6	76	31.6	175	6.5	13	15	12	17
M6	76	31.6	220	6.5	13	15	12	17
M6	76	31.6	240	6.5	13	15	12	17
M6	90	32	105	6.5	13	15	12	17
M6	90	32	120	6.5	13	15	12	17
M6	90	32	146	6.5	13	15	12	17
M6	90	32	175	6.5	13	15	12	17
M6	90	32	220	6.5	13	15	12	17
M6	90	32	240	6.5	13	15	12	17
M6	100	32	105	6.5	13	15	12	17
M6	100	32	120	6.5	13	15	12	17
M6	100	32	146	6.5	13	15	12	17
M6	120	41.5	105	6.5	13	15	12	17
M6	120	41.5	120	6.5	13	15	12	17
M6	120	41.5	146	6.5	13	15	12	17

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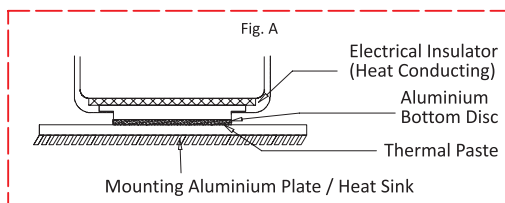
Terminal Style And Dimension



Screw Terminal Type AEST-AL

Note :

Ripple current rating of a capacitor with AEST-AL mounting can increase 20-30% with efficient cooling of the aluminum mounting plate / heat sink



Dimensions : Millimetres

Terminal	D	E	L	a (Max)	b ±0.1
M5	63	28.5	105	7.8	12
M5	63	28.5	120	7.8	12
M5	63	28.5	146	7.8	12
M5	76	31.6	105	7.8	12
M5	76	31.6	120	7.8	12
M5	76	31.6	146	7.8	12
M5	76	31.6	175	7.8	12
M5	76	31.6	220	7.8	12
M5	76	31.6	240	7.8	12
M6	76	31.6	105	5.3*	16
M6	76	31.6	120	5.3*	16
M6	76	31.6	146	5.3*	16
M6	76	31.6	175	5.3*	16
M6	76	31.6	220	5.3*	16
M6	76	31.6	240	5.3*	16
M6	90	32	105	5.3*	16
M6	90	32	146	5.3*	16
M6	90	32	175	5.3*	16
M6	90	32	220	5.3*	16
M6	90	32	240	5.3*	16

* Low Post Design

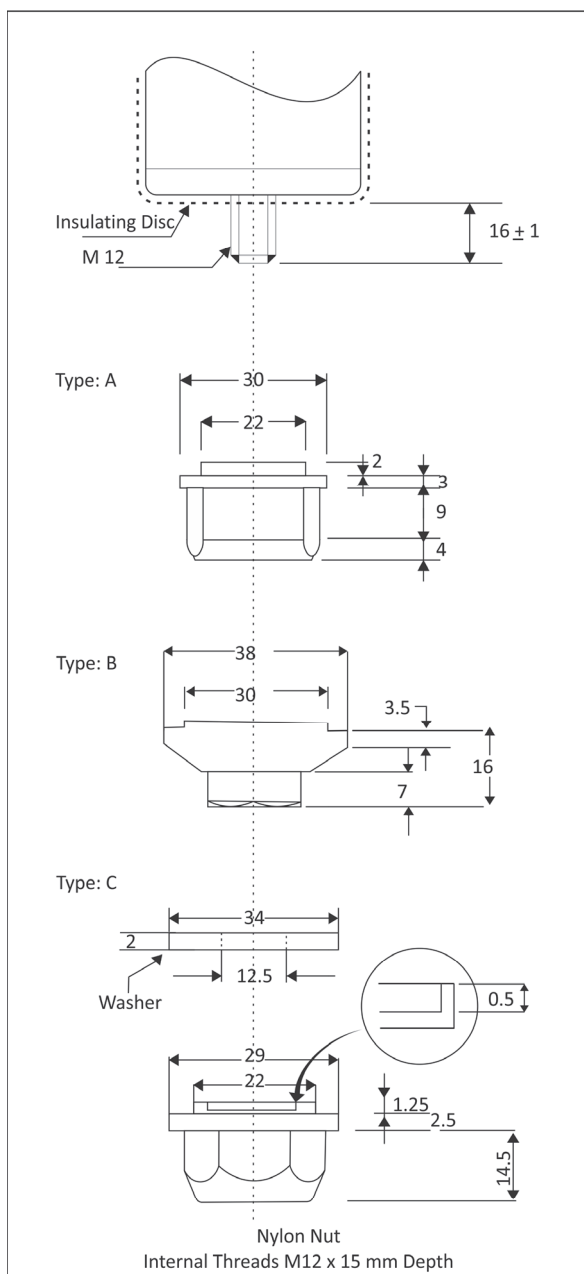
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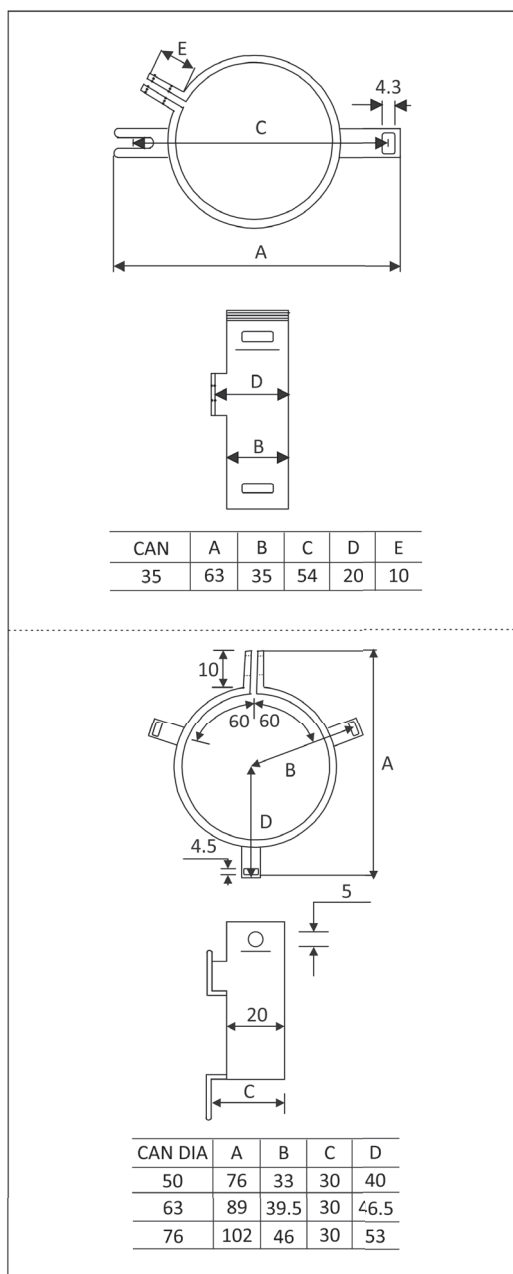
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Mounting Accessories

Mounting Nut and Washers for Cans with Bottom Stud



Vertical Mounting Clamps



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