

K11 TYPE -40°C +85°C 15000H

RoHS Compliant

- Surge-proof capacitor in aluminium can with insulation sleeve.
- To be mounted with ring clips or with threaded stud.
- Design optimized for parallel connection and high density of energy.

APPLICATIONS

Energy Storage, Bulk.

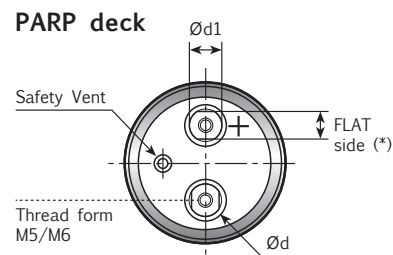
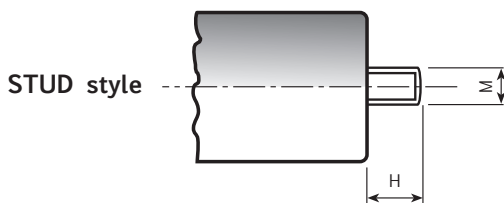
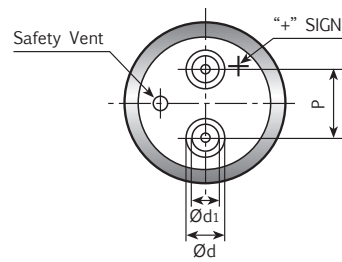
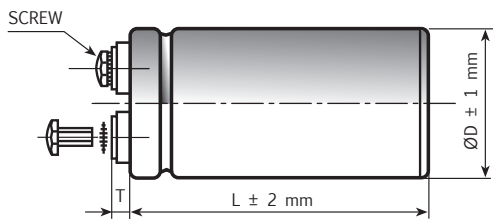


Diagram of dimensions (unit=mm) - Insert and screw threads: Metric (mm), UNF (inches)

ØD	d ±0.3	d1 ±0.3	P ±0.5	T ±2.0	STUD		INSERT	SCREW	INSERT STYLE CODE
					M	H			
35	11.6	7.9	12.7	6.5	M8	12	M5	5MA x 9.5	0
51	18.2	13	22.2	5	M12	16	M5	5MA x 9.5	H
63	18.2	13	28.5	5	M12	16	M5	5MA x 9.5	H
76	18.2	13	31.8	4.5	M12	16	M5	5MA x 9.5	H
76	18.2	13	31.8	6.5	M12	16	M5 long	5MA x 9.5	L
76	23.2	17.7	31.8	5	M12	16	M6	6MA x 10	6
90	23.2	17.7	31.8	5	M12	16	M6	6MA x 10	H
51	13	13(10)*	22.2	5	M12	16	PARP M5	5MA x 9.5	K
63	13	13(10)*	28.5	5	M12	16	PARP M5	5MA x 9.5	B
63	19	15(13)*	28.5	6	M12	16	PARP M5	5MA x 9.5	K
76	19	15(13)*	31.8	6	M12	16	PARP M5	5MA x 9.5	K
76	19	15(13)*	31.8	6	M12	16	PARP M6	6MA x 10	Q
90	19	15(13)*	31.8	6	M12	16	PARP M6	6MA x 10	Q
35	11.6	7.9	12.7	6.5	M12	16	UNF 10-32 High Post	10-32 x 3/8"	U
63	17.3	17.3	28.5	2.5	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	W
63	17.3	17.3	28.5	6	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	R
63	7.9	7.9	28.5	2	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	Z
63	12	7.9	28.5	6.5	M12	16	UNF 10-32 High Post	10-32 x 3/8"	U
76	17.3	17.3	31.8	2.5	M12	16	UNF 1/4-28 Low Post	1/4-28 x 3/8"	W
76	17.3	17.3	31.8	6	M12	16	UNF 1/4-28 High Post	1/4-28 x 1/2"	R
76	7.9	7.9	31.8	2	M12	16	UNF 10-32 Low Post	10-32 x 1/4"	Z
76	12	7.9	31.8	6.5	M12	16	UNF 10-32 High Post	10-32 x 3/8"	U

Note: (*) quote on the PARP deck of the flat side (PARP = Protection Against Reverse Polarity).

K11 TYPE SPECIFICATIONS

Temperature Range	Operating: -40°C +85°C Storage : Preferably below +25°C, not exceeding +40°C																																			
Rated Voltage Range (V_r)	from 350V to 450V DC																																			
Surge Voltage (V_p)	V _p = 1.10 V _r (V _r ≥ 250V DC)																																			
Rated Capacitance Range	from 12000 μF to 34000 μF																																			
Capacitance Tolerance	±20% at 100 Hz, 20°C [M class IEC-62] on request: -10% +30% at 100 Hz, 20°C [Q class IEC-62]																																			
Leakage Current (I_L) (mA, 5 min, 20°C)	max I _L = 0.006 C _r V _r + 4 μA Kendeil product limit: I _L = 0.003 C _r V _r At 85°C max I _L = 0.04 C _r V _r μA																																			
Ripple current (I_r)	Refer to table at 85°C and 100Hz: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>FREQUENCY</th> <th>50Hz</th> <th>100 Hz</th> <th>500Hz</th> <th>1000Hz</th> <th>>10kHz</th> </tr> </thead> <tbody> <tr> <td>MULTIPLIER</td> <td>0.8</td> <td>1.0</td> <td>1.2</td> <td>1.3</td> <td>1.5</td> </tr> <tr> <td>AMBIENT TEMP</td> <td>35°C</td> <td>45°C</td> <td>55°C</td> <td>65°C</td> <td>75°C</td> <td>85°C</td> <td>95°C</td> </tr> <tr> <td>MULTIPLIER</td> <td>2.2</td> <td>2.1</td> <td>1.8</td> <td>1.6</td> <td>1.4</td> <td>1.0</td> <td>0.5</td> </tr> </tbody> </table> Due to the current load capability of the contact elements, the following limits must not be exceeded: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>CAPACITOR DIAMETER</th> <th>76mm</th> <th>90mm</th> </tr> </thead> <tbody> <tr> <td>Maximum current</td> <td>50A</td> <td>70A</td> </tr> </tbody> </table>		FREQUENCY	50Hz	100 Hz	500Hz	1000Hz	>10kHz	MULTIPLIER	0.8	1.0	1.2	1.3	1.5	AMBIENT TEMP	35°C	45°C	55°C	65°C	75°C	85°C	95°C	MULTIPLIER	2.2	2.1	1.8	1.6	1.4	1.0	0.5	CAPACITOR DIAMETER	76mm	90mm	Maximum current	50A	70A
FREQUENCY	50Hz	100 Hz	500Hz	1000Hz	>10kHz																															
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CAPACITOR DIAMETER	76mm	90mm																																		
Maximum current	50A	70A																																		
Insulation Resistance	At 100V DC for 1 min is >100 MΩ across insulating sleeve and terminals.																																			
Vibration Resistance	Frequency range: 10 Hz to 55 Hz max acceleration 0.75mm or 10g for 3x2 h																																			
Withstand voltage (between terminals bundled and plate)	2500 VAC for 1 min																																			
Life test	After 2,000 hours application of rated voltage at 85°C capacitors meet characteristics aside	Cap change ≤ 10% tan δ ≤ 130% Leakage current (I _L) < initial limit Impedance (Z) ≤ 130%																																		
Shelf life	After leaving capacitors under no load for 500 hours at 85°C when restored at 20°C meet specifications aside	Cap change ≤ ±15% tan δ ≤ 150% Leakage current (I _L) < initial limit																																		
Useful life (V _n , Temp rated I ripple applied)	> 15000 h at 85°C																																			
Failure percentage Failure rate	≤ 1% (during useful life) ≤ 33 fit (33 10 ⁻⁹ /h)																																			
Self inductance	Approx. 20 nH																																			
Damp heat test (V _n applied, 2000 hours, 85% RH)	Stable electrical parameters in humidity ambient condition 85°C																																			
Electrolyte	All the capacitors of this series have self-extinguishing electrolyte in accordance with IEC EN 60695-11-10																																			
Reference standards	CECC 30.300 IEC 60384-4 LONG LIFE GRADE																																			

K11 TYPE STANDARD RATINGS

Cap μF	$\varnothing \times L$ mm	Tan δ MAX 100 Hz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER stud and insert style excluded
19000	76x214	0,25	18	K11350193_M0J214
20000	76x240	0,25	18	K11350203_M0J240
22000	76x214	0,25	18,4	K11350223_M0J214
24000	76x240	0,25	18,5	K11350243_M0J240
27000	90x220	0,25	21	K11350273_M0L220
30000	90x220	0,25	21,4	K11350303_M0L220
30000	90x240	0,25	22	K11350303_M0L240
34000	90x240	0,25	22,5	K11350343_M0L240

**RATED
VOLTAGE
VDC**

350V

Cap μF	$\varnothing \times L$ mm	Tan δ MAX 100 Hz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER stud and insert style excluded
12000	76x214	0,2	16	K11400123_M0J214
13000	76x240	0,2	17,5	K11400133_M0J240
15000	76x214	0,2	16,4	K11400153_M0J214
16000	76x240	0,2	18	K11400163_M0J240
17000	90x220	0,2	20,9	K11400173_M0L220
18000	90x240	0,2	22,5	K11400183_M0L240
20000	90x220	0,2	21,6	K11400203_M0L220
23000	90x240	0,2	23,1	K11400233_M0L240

**RATED
VOLTAGE
VDC**

400V

Cap μF	$\varnothing \times L$ mm	Tan δ MAX 100 Hz 20°C	Ir a.c. A max 100 Hz 85°C	PART NUMBER stud and insert style excluded
15000	76x214	0,25	16	K11450153_M0J214
16000	76x240	0,25	17,7	K11450163_M0J240
18000	76x214	0,25	16,3	K11450183_M0J214
20000	76x240	0,25	18,1	K11450203_M0J240
21000	90x220	0,25	21,5	K11450213_M0L220
23000	90x240	0,25	23,2	K11450233_M0L240
25000	90x220	0,25	21,9	K11450253_M0L220
29000	90x240	0,25	23,7	K11450293_M0L240

**RATED
VOLTAGE
VDC**

450V