

# GENERAL PURPOSE CAPACITORS



## GP 84 Series

Rated AC Voltage	240÷1000V
Range capacitance	10÷600 µF
Capacitance tolerance	±5% / ±10%
Max. RMS current	80 A
Series resistance (R <sub>s</sub> )	< 8 mΩ
Thermal resistance natural cooling (R <sub>THC</sub> )	< 3,0 °C/W
Max. voltage raise of rise (dV/dT)	≤ 100 V/µs
Terminals	M6 or M10 screw-type bolts or double tag 6,3 x 0,8 mm
Working temperature	-40 / + 70 °C
Storage temperature	-40 / + 85 °C
Test voltage	U= 3kV /15kV
Filling	Dry polyurethane resin
Dielectric	Metallized PPMh film
Cylindrical case	Aluminum
Life expectancy	100.000 h (*)
Failure quota	300/10E9
Reference standard	IEC 60831-1/2
Integrated overpressure protection	
M12 Theaded fixing bolt	10 Nm
Maximum fixing torque for M6 terminals	3 Nm
Maximum fixing torque for M10 terminals	6 Nm (***)

### (\*) Life Derating at operating voltage

Life expectancy	4.16.84.xxxx Series	4.16.84.xxxx Series	4.16.84.xxxx Series	4.16.84.xxxx Series	4.16.84.xxxx Series	4.16.84.xxxx Series
100.000 h (rated)	240 V	330 V	450 V	550 V	690 V	930 V
50.000 h	275 V	360 V	500 V	575 V	760 V	1025 V
25.000 h	300 V	400 V	540 V	630 V	830 V	1120 V
12.500 h	330 V	450 V	600 V	690 V	930 V	1250 V

(\*\*) UL Approved for A, C and F solution (excepted series 690 V - 930 V solution A).

(\*\*\*) To avoid breaking, complete the tightening of the nuts using two wrenches.

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Cn [μF]	I <sub>MAX</sub> * [A]	I <sub>PK</sub> C <sub>W</sub> [A]	I <sub>PK</sub> I <sub>W</sub> [kA]	I <sub>S</sub> [kA]	R <sub>THC</sub> [°C/W]	L <sub>ESR</sub> [nH]	Tan δ <sub>MAX</sub> @50Hz [10 <sup>-4</sup> ]	Ø [mm]	H [mm]	Weight [g]	Mechanical solution	Part. n. 416.84.	Pcs. X box	Box type
<b>Urms = 240 V</b>				<b>Un<sub>AC</sub> = 350 V</b>				<b>Un<sub>DC</sub> = 490 V</b>		<b>Us = 950 V</b>				
66	22	33	1,7	9	2,7	130	5,0	55	115	300	A / C	0304	28	1
88	22	33	1,7	9	2,7	130	5,0	55	115	340	A / C	0314	28	1
111	25	38	1,9	11	2,2	160	5,0	55	150	370	A / C	0324	21	1
138	25	38	1,9	11	2,2	160	5,0	60	150	390	A / C	0305	21	1
166	32	48	2,4	13	2,0	160	5,5	60	150	450	A / C	0315	18	1
193	36	54	2,7	16	1,8	170	6,0	65	150	520	A / C	0325	16	1
221	38	57	2,9	12	1,7	180	6,5	65	165	580	A / C	0335	16	1
249	40	60	3,0	20	1,3	200	7,0	75	180	820	F	0345	6	2
276	40	60	3,0	20	1,3	200	7,0	75	180	830	F	0306	6	2
332	40	60	3,0	20	1,3	200	7,0	75	180	860	F	0316	6	2
414	45	68	3,4	20	1,1	210	7,5	85	180	980	F	0326	6	2
442	45	68	3,4	20	1,1	210	7,5	85	180	1050	F	0336	6	2
553	78	117	5,9	20	0,9	230	8,5	85	280	1400	F	0307	6	3
663	80	120	6,0	18	0,8	300	9,0	85	280	1700	F	0317	6	4
<b>Urms = 330 V</b>				<b>Un<sub>AC</sub> = 470 V</b>				<b>Un<sub>DC</sub> = 600 V</b>		<b>Us = 1150 V</b>				
58	22	33	1,7	7	2,7	160	5,0	55	115	320	A / C	1324	28	1
73	26	39	2,0	8	2,2	160	6,0	55	150	390	A / C	1305	21	1
88	26	39	2,0	8	2,2	160	6,0	55	150	400	A / C	1315	21	1
102	30	45	2,3	10	2,0	160	6,0	60	150	460	A / C	1325	18	1
117	34	51	2,6	13	1,8	170	6,5	65	150	540	A / C	1335	16	1
132	38	57	2,9	10	1,7	180	7,0	65	165	600	A / C	1345	16	1
146	40	60	3,0	14	1,3	200	7,5	75	180	860	F	1306	6	2
175	40	60	3,0	14	1,3	200	7,5	75	180	860	F	1316	6	2
219	45	68	3,4	18	1,1	210	7,5	85	180	1100	F	1326	6	2
234	70	105	5,3	16	1,0	230	8,0	85	210	1350	F	1336	6	3
292	75	113	5,6	18	0,9	230	8,5	85	280	1450	F	1307	6	3
351	80	120	6,0	13	0,8	300	9,0	85	280	1750	F	1317	6	4
<b>Urms = 450 V</b>				<b>Un<sub>AC</sub> = 630 V</b>				<b>Un<sub>DC</sub> = 825 V</b>		<b>Us = 1600 V</b>				
31	20	30	1,5	4	2,7	130	5,0	55	115	250	A / C	2324	28	1
39	20	30	1,5	4	2,7	130	5,0	55	115	300	A / C	2305	28	1
47	24	36	1,8	4,5	2,2	160	6,0	55	150	370	A / C	2315	21	1
55	24	36	1,8	4,5	2,2	160	6,0	55	150	400	A / C	2325	21	1
63	28	42	2,1	6,8	1,8	170	6,5	65	150	530	A / C	2335	16	1
71	28	42	2,1	6,8	1,8	170	6,5	65	150	550	A / C	2345	16	1
79	32	48	2,4	5,2	1,7	180	7,0	65	165	590	A / C	2306	16	1
94	38	57	2,9	7,4	1,3	200	7,5	75	180	860	F	2316	6	2
118	42	63	3,2	9,9	1,1	210	8,0	85	180	1100	F	2326	6	2
126	70	105	5,3	9,7	0,9	230	8,5	90	210	1450	F	2336	6	3
157	75	113	5,6	7,9	0,8	300	9,0	85	280	1710	F	2307	6	4
189	78	117	5,9	9,1	0,7	300	9,0	90	280	1920	F	2317	6	4

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<b>Urms = 525 V</b>				<b>Un<sub>AC</sub> = 790 V</b>				<b>Un<sub>DC</sub> = 940 V</b>		<b>Us = 1800 V</b>				
14	18	27	1,4	2,9	2,7	130	5,0	55	115	300	A / C	5564	28	1
23	20	30	1,5	3,3	2,2	160	5,5	55	150	350	A / C	5565	21	1
29	20	30	1,5	3,3	2,2	160	5,5	55	150	390	A / C	5566	21	1
35	22	33	1,7	4,1	2,0	160	6,0	60	150	460	A / C	5567	18	1
40	26	39	2,0	3,9	1,7	180	7,0	65	165	590	A / C	5568	16	1
46	34	51	2,6	5,3	1,3	200	7,5	75	180	820	F	5569	6	2
52	38	57	2,9	7,2	1,1	210	8,0	85	180	950	F	5570	6	2
60	38	57	2,9	7,2	1,1	210	8,0	85	180	1050	F	5571	6	2
70	70	105	5,3	5,7	0,8	300	8,5	85	280	1550	F	5572	6	4
90	70	105	5,3	5,7	0,8	300	8,5	85	280	1700	F	5573	6	4
115	76	114	5,7	8,3	0,6	320	9,0	100	280	2100	F	5574	6	5
139	76	114	5,7	8,3	0,6	320	9,0	100	280	2400	F	5575	6	5
<b>Urms = 690 V</b>				<b>Un<sub>DC</sub> = 990 V</b>				<b>Un<sub>DC</sub> = 1350 V</b>		<b>Us = 2600 V</b>				
13	20	30	1,0	1,8	2,2	160	5,0	55	150	310	A / C	6564	21	1
17	20	30	1,0	1,8	2,2	160	5,0	55	150	350	A / C	6565	21	1
20	22	33	1,1	2,8	1,8	170	5,0	65	150	500	A / C	6566	16	1
23	26	39	1,3	2,9	1,7	180	5,0	65	165	560	A / C	6567	16	1
27	30	45	1,5	4,0	1,3	200	5,5	75	180	780	F	6568	6	2
30	30	45	1,5	4,0	1,3	200	5,5	75	180	850	F	6569	6	2
33	34	51	1,7	4,9	1,0	210	6,0	85	210	1150	F	6570	6	3
40	36	54	1,8	5,5	0,9	220	6,5	90	210	1400	F	6571	6	3
50	38	57	1,9	7,1	0,8	220	7,0	100	210	1680	F	6572	6	5
53	40	60	2,0	4,2	0,7	300	7,5	90	280	1860	F	6573	6	4
67	45	68	2,3	5,3	0,6	300	8,0	100	280	2150	F	6574	6	5
80	45	68	2,3	5,3	0,6	300	8,0	100	280	2360	F	6575	6	5
<b>Urms = 930 V</b>				<b>Un<sub>AC</sub> = 1300 V</b>				<b>Un<sub>DC</sub> = 1700 V</b>		<b>Us = 3250 V</b>				
7	18	27	0,9	1,2	2,2	160	4,5	55	150	360	A / C	7564	21	1
9	20	30	1,0	1,8	1,8	170	4,7	65	150	480	A / C	7565	16	1
11	22	33	1,1	1,8	1,7	180	5,0	65	165	550	A / C	7566	16	1
13	24	36	1,2	2,6	1,3	200	5,3	75	180	840	F	7567	6	2
15	28	42	1,4	2,3	1,1	210	5,5	75	210	980	F	7568	6	3
17	30	45	1,5	3,1	1,0	210	5,5	85	210	1150	F	7569	6	3
18	30	45	1,5	3,1	1,0	210	5,5	85	210	1220	F	7570	6	3
22	30	45	1,5	3,1	1,0	210	5,5	85	210	1280	F	7571	6	3
28	34	51	1,7	3,5	0,9	220	5,7	90	210	1380	F	7572	6	3
29	38	57	1,9	4,5	0,8	220	5,7	100	210	1720	F	7573	6	5
37	42	63	2,1	2,7	0,7	300	6,0	90	280	1840	F	7574	6	4
44	45	68	2,3	3,4	0,6	300	6,5	100	280	2250	F	7575	6	5

(Cn) Standard values, other values on request.

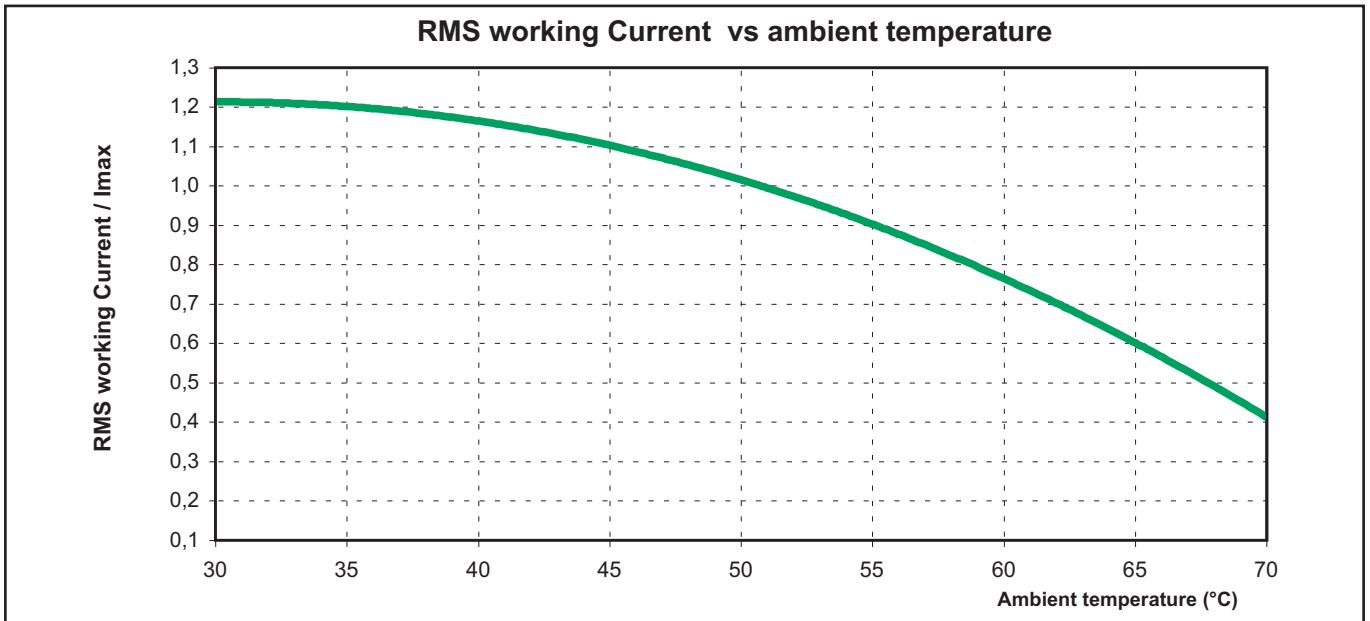
(\*) The maximum rms current is referred to A or F solutions. I<sub>max</sub> ≤ 16 A for C solution.

Box TYPE	Standard box dimensions
1	mm 250 x 386 x 190
2	mm 190 x 285 x 265
3	mm 190 x 285 x 325
4	mm 190 x 285 x 375
5	mm 335 x 220 x 375

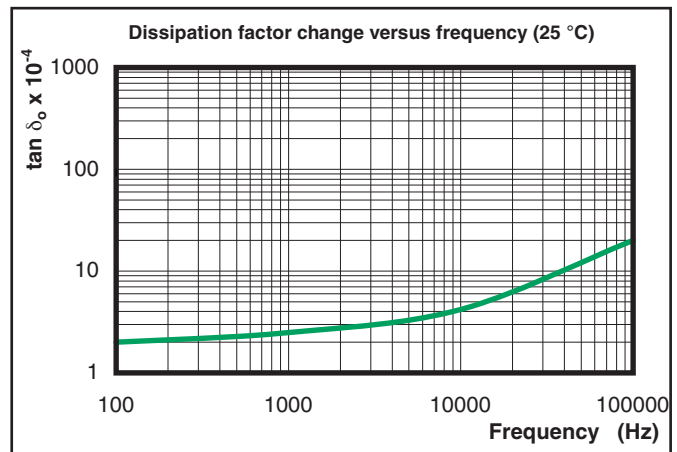
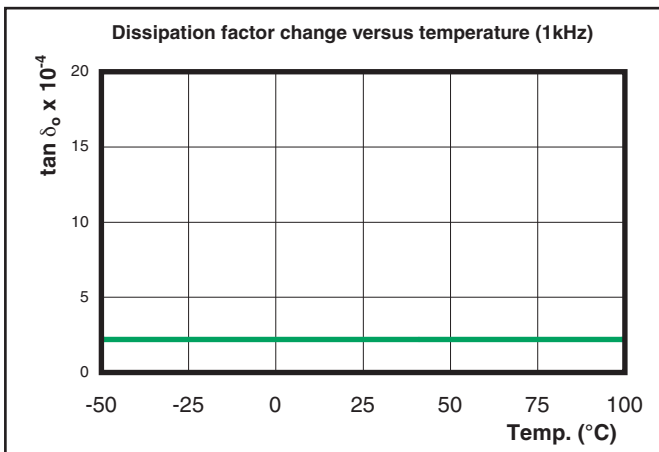
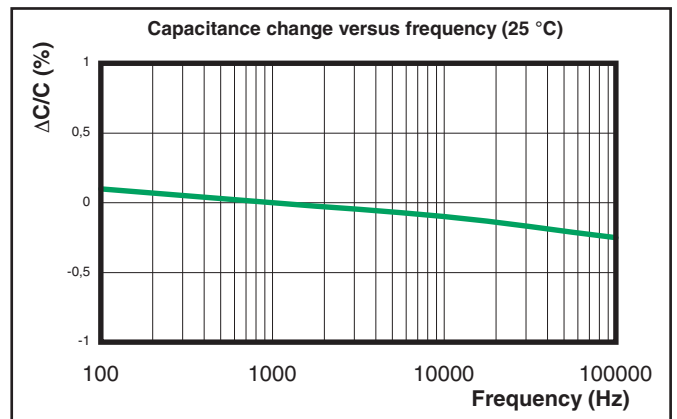
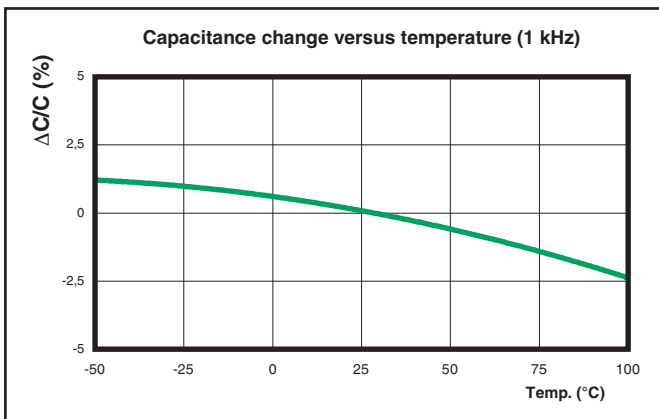
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General technical information:  
maximum current ( $I_{max}$ ) versus temperature.



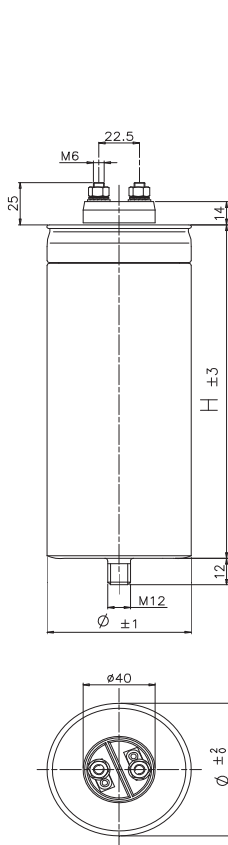
General technical information:  
typical curves for metallized polypropylene.



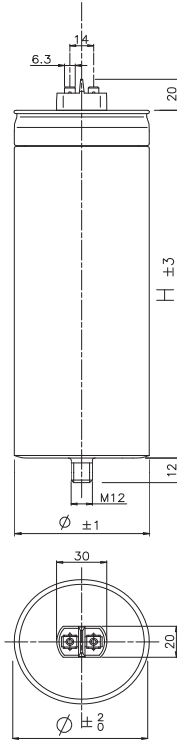
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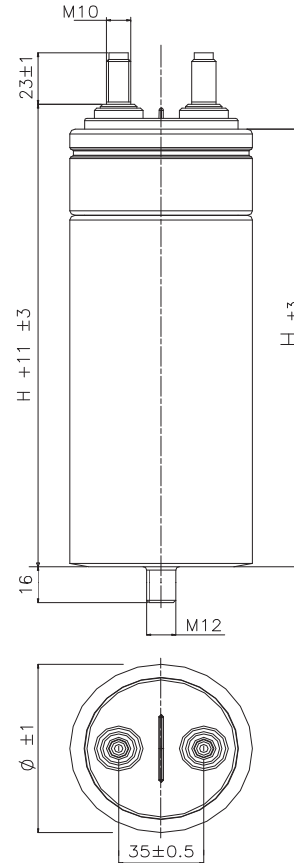
### Mechanical Configurations



**A solution**  
M6 Screw-type bolts  
CODE: 41684.xxxx



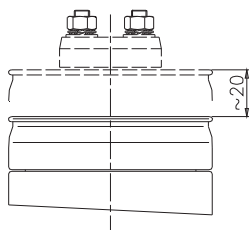
**C solution**  
Double tag 6,3x0,8 mm  
CODE: 41684.xxxx



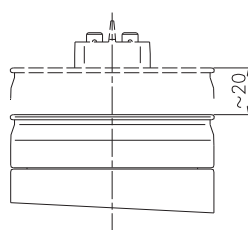
**F solution**  
M10 Screw-type bolts  
CODE: 41684.xxxx

### Overpressure safety device

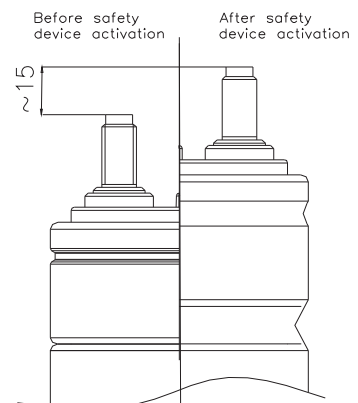
In order to ensure proper device operation, when the capacitor is installed, a clearance of at least the values given on drawing below must be left above terminals.



Dimension with overpressure device activated



Dimension with overpressure device activated



Dimension with overpressure device activated