

CAPACITOR



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AKMJ-MC
AC-filter

POWER LINKS SUCCESS

AC - filter AKMJ - MC series

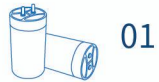
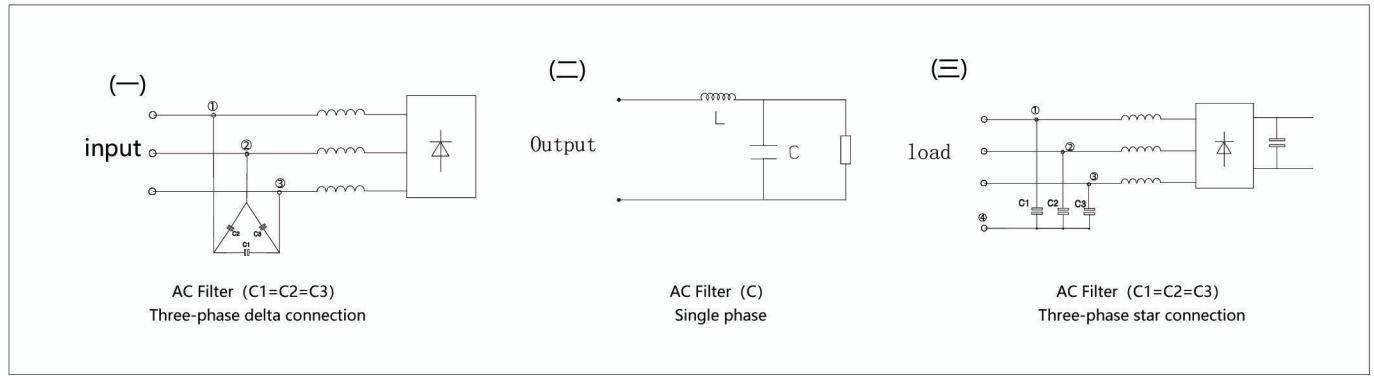
Metalized film capacitor



Application

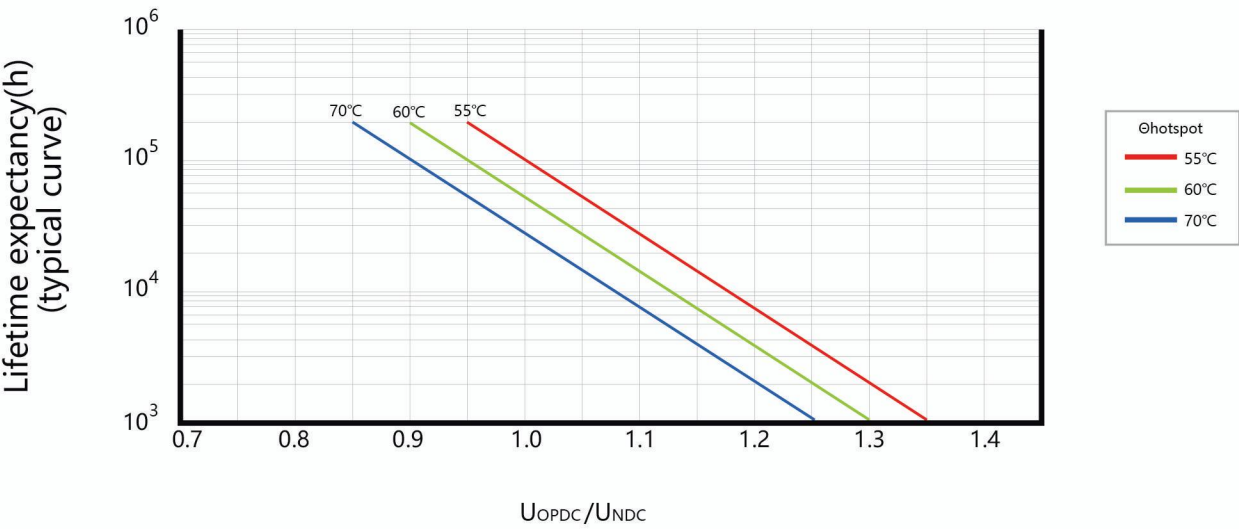
- Widely used in power electronic equipment used for the AC filter.
- In the high-power UPS,switching power supply,inverter and other equipment for the AC filter,harmonics and improve power factor control.

Typical circuit diagram



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Life expectancy in the graph



Technical data

Operating temperature range		Max.Operating temperature,Top,max : + 85°C
		Upper category temperature : + 70°C
		Lower category temperatu re:- 40°C
(C _N) /Capacitance range	single phase	20μF - 500μF
	three phase	3×40μF - 3×200μF
(U _N) / Rated voltage		330V. AC / 50Hz - 1140V. AC / 50Hz
Cap.tol		±5% (J) ;±10% (K)
Withstand voltage	vt - t	2.15U _N / 10s
	vt - c	1000 + 2×U _N V. AC 60s (min3000V. AC)
Over voltage	1.1U _N (30% of on - load - dur.)	
	1.15U _N (30min / day)	
	1.2U _N (5min / day)	
	1.3U _N (1min / day)	
	1.5U _N (100ms every time,1000 times during the lifetime)	
Dissipation factor		tgδ≤0.002 f = 100Hz
		tgδ ₀ ≤ 0.0002
Insulation resistance		Rs×C≥ 10000s (at20°C 100V.DC)
Withstand strike current		See the specification sheet
I _{rms}		See the specification sheet
Flame retardation		UL94V -0
Maximum altitude		2000m
		Derating should be considered when the altitude is between 2000m -5000m. (For each increase of 1000m, voltage and current will be reduced by 10%)
Life expectancy		100000h (U _N ; $\theta_{\text{hotspot}} \leq 55^\circ\text{C}$)
Reference standard		IEC61071 ; IEC60831

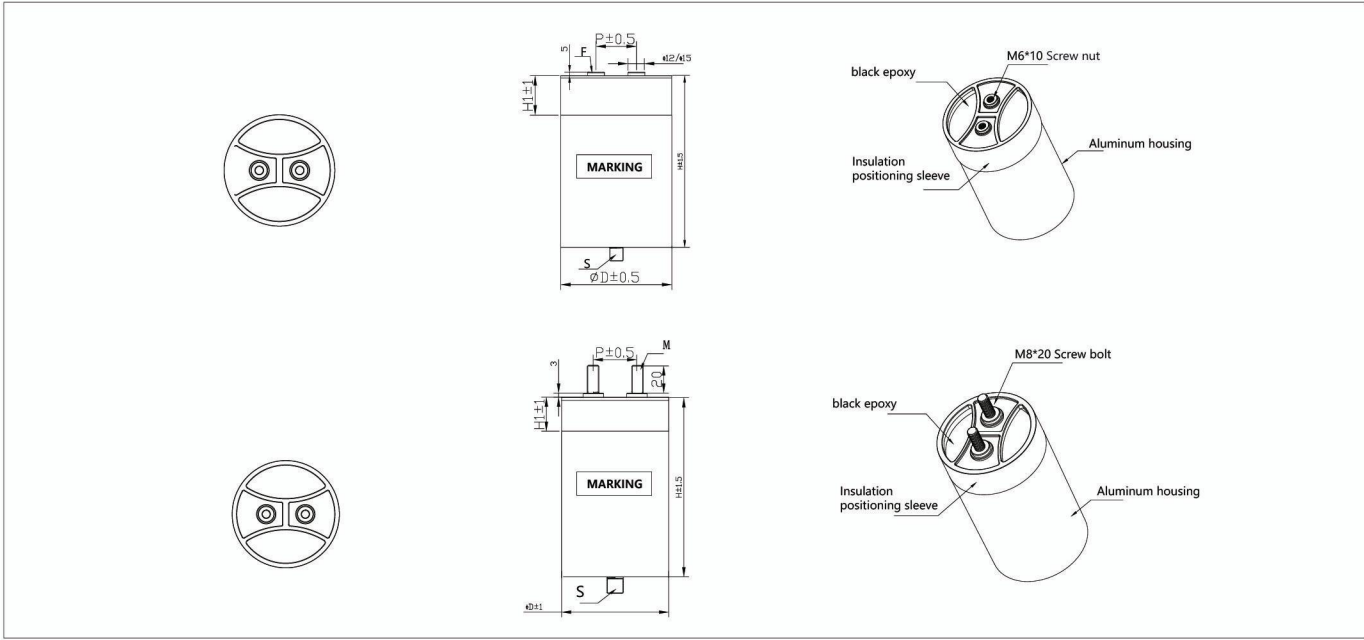


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AC - filter AKMJ - MC series
Metalized film capacitor

The contour map

θD(mm)	P(mm)	H1(mm)	S	F	M
76	32	20	M12 x 16	M6 x 10	M8 x 20
86	32	20	M12 x 16	M6 x 10	M8 x 20
96	45	20	M12 x 16	M6 x 10	M8 x 20
116	50	30	M12 x 16	M6 x 10	M8 x 20
136	50	30	M16 x 25	M6 x 10	M8 x 20



Part number system

Model				Capacitance		UN(AC)				Cap. tol	diameter	Height			Lead	Bottom mount	Shell Oxidization	Internal feature code		Structure
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
A	M	C	3	0	7	0	3	3	0	J	E	1	3	0	*	*	*	*	*	
1 ~ 3 digits: Model																				
4 ~ 6 digits: Nominal Capacity																				
				e.g. 307= 30×10 ⁷ pF= 300μF																
7 ~ 10 digits: UN(AC)																				
				e.g. 0330=330V.AC																
11 digits: Capacitance Tolerance																				
				±5% (J) ; ±10% (K)																
12 digits: Shell diameter																				
				A=φ55mm																
				B=φ65mm																
				C=φ76mm																
				D=φ86mm																
				E=φ96mm																
				F=φ116mm																
				G=φ136mm																
13 ~ 15 digits: Shell height																				
				e.g. 130=130mm																
16 digits: Lead																				
				M: M8x20 Screw bolt																
				F: M6x10 Screw nut																
17 digits: Bottom mounted type																				
				S: Screw fixed																
				T: Flat base																
18 digits: Shell surface treatment																				
				0: Anode-free gasification treatment																
				1: Silver anodized finish																
19 ~ 20 digits: Internal feature code																				
21 digits: Structure																				
				D: Three-phase delta connection (The capacity is now 3×××)																
				When it is single-phase output, this code is not identified (that is, single-phase only has 20 bits of code)																

Specification table

C _N (μF)	φD (mm)	H (mm)	ESL (nH)	dv/dt (V/μS)	I _p (kA)	I _s (kA)	I _{rms} 50°C (A)	ESR @1kHz (mΩ)	R _{th} (K/W)	P (mm)	Weight (kg)	Part number
U _N = 330V.AC U _{rms} 250V.AC U _s = 1200V												
80	76	80	40	80	6.4	19.2	30	4	4.2	32	0.5	AMC8060330*C080****
120	86	80	40	70	8.4	25.2	40	2.8	3.3	32	0.7	AMC1270330*D080****
150	96	80	45	70	10.5	31.5	50	3.5	1.7	45	0.75	AMC1570330*E080****
170	76	130	50	60	10.2	30.6	60	3.2	1.3	32	0.75	AMC1770330*C130****
230	86	130	50	60	13.8	41.4	70	2.4	1.3	32	1.1	AMC2370330*D130****
300	96	130	50	50	15.0	45.0	75	2.8	1.0	45	1.2	AMC3070330*E130****
420	116	130	60	50	21.0	63.0	80	1.9	1.2	50	1.6	AMC4270330*F130****
U _N =450V.AC U _{rms} 330V.AC U _s = 1520V												
50	76	80	40	90	4.5	13.5	30	4	4.2	32	0.5	AMC5060450*C080****
65	86	80	50	80	5.2	15.6	40	2.8	3.3	32	0.7	AMC6560450*D080****



AC - filter AKMJ - MC series
Metalized film capacitor

AC - filter AKMJ - MC series
Metalized film capacitor (Single phase)

Specification table

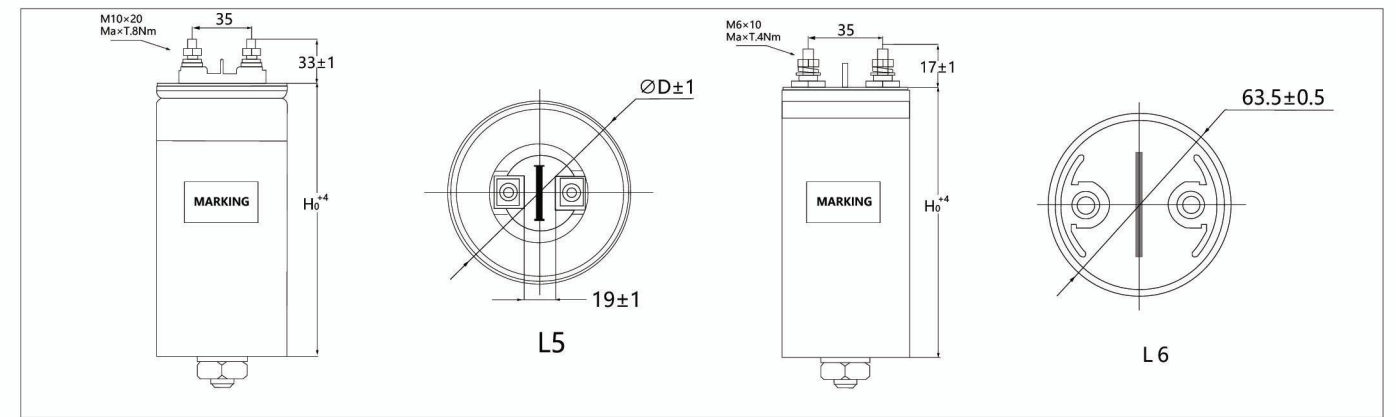
C _N (μF)	φD (mm)	H (mm)	ESL (nH)	dv/dt (V/μS)	I _p (kA)	I _s (kA)	I _{rms} 50°C (A)	ESR @1kHz (mΩ)	R _{th} (K/W)	P (mm)	Weight (kg)	Part number
U _N = 450V.AC Urms 330V.AC U _s = 1520V												
80	96	80	45	80	6.4	19.2	50	3.5	1.7	45	0.75	AMC8060450*E080*****
100	76	130	50	70	7.0	21.0	60	3.2	1.3	32	0.75	AMC1070450*C130*****
130	86	130	45	60	7.8	23.4	70	2.4	1.3	32	1.1	AMC1370450*D130*****
160	96	130	50	50	8.0	24.0	75	2.8	1.0	45	1.2	AMC1670450*E130*****
250	116	130	60	50	12.5	37.5	80	1.9	1.2	50	1.6	AMC2570450*F130*****
U _N = 690V.AC Urms 500V.AC U _s = 2100V												
40	76	130	50	100	4.0	12.0	30	2.8	6.0	32	0.75	AMC4060690*C130*****
50	76	150	45	90	4.5	13.5	35	2.4	5.1	32	0.85	AMC5060690*C150*****
60	86	130	45	80	4.8	14.4	40	2.2	4.3	32	1.1	AMC6060690*D130*****
65	86	150	50	80	5.2	15.6	45	1.8	4.1	32	1.2	AMC6560690*D150*****
75	96	130	50	80	6.0	18.0	50	1.5	4.0	45	1.2	AMC7560690*E130*****
80	96	150	55	75	6.0	18.0	60	1.2	3.5	45	1.3	AMC8060690*E150*****
110	116	130	60	70	7.7	23.1	65	0.8	4.4	50	1.6	AMC1170690*F130*****
120	116	150	65	50	6.0	18.0	75	0.6	4.4	50	1.8	AMC1270690*F150*****
U _N = 850V.AC Urms 600V.AC U _s = 2850V												
25	76	130	50	110	2.8	8.3	35	1.5	8.2	32	0.75	AMC2560850*C130*****
30	76	150	60	100	3.0	9.0	40	1.2	7.8	32	0.85	AMC3060850*C150*****
32	86	130	45	100	3.2	9.6	50	1.15	5.2	32	1.1	AMC3260850*D130*****
45	86	150	50	90	4.1	12.2	50	1.05	5.7	32	1.2	AMC4560850^D150*****
40	96	130	50	90	3.6	10.8	50	1	6.0	45	1.2	AMC4060850*E130*****
60	96	150	60	85	5.1	15.3	60	0.9	4.6	45	1.3	AMC6060850*E150*****
60	116	130	60	80	4.8	14.4	65	0.85	4.2	50	1.6	AMC6060850*F130*****
90	116	150	65	75	6.8	20.3	75	0.8	3.3	50	1.8	AMC9060850*F150*****



Application

- Widely used in power electronic equipment used for the AC filter.
- In the high-power UPS,switching power supply,inverter and other equipment for the AC filter,harmonics and improve power factor control.

Typical circuit diagram



AC - filter AKMJ - MC series

Metalized film capacitor (Single phase)

Technical data

Operating temperature range	Max.Operating temperature,Top,max : + 85°C	
	Upper category temperature : + 70°C	
	Lower category temperatur re:- 40°C	
(C _N) /Capacitance range	20μF - 200μF	
(U _N) / Rated voltage	200V.AC~1000V.AC	
Cap.tol	±5% (J) ; ±10% (K)	
Withstand voltage	vt - t	1.5Urms / 10s
	vt -c	3000V.AC / 2S,50/60Hz
Over voltage	1.1U _{rms} (30% of on – load – dur.)	
	1.15U _{rms} (30min / day)	
	1.2U _{rms} (5min / day)	
	1.3U _{rms} (1min / day)	
Dissipation factor	tgδ≤0.002 f = 100Hz	
Self inductance	< 70 nH per mm of lead spacing	
Insulation resistance	Rs×C≥ 10000s (at20°C 100V.DC)	
Withstand strike current	See the specification sheet	
Irms	See the specification sheet	
Flame retardation	UL94V -0	
Life time expectancy	Useful life time: > 100000h at U _{NDC} and 70°C	
	FIT: < 10×10 ⁻⁹ /h(10 per 10 ⁹ component h) at 0.5×U _{NDC} ,40°C	
Dielectric	Metallized polypropylene	
Construction	Filling with inert gas/ silicone oil, Non-inductive, over-pressure	
Case	Aluminum case	
Reference standard	IEC61071,GB17702,UL810	

Specification table

C _N (μF)	φD (mm)	H (mm)	I _{max} (A)	I _p (A)	I _s (A)	ESR (mΩ)	R _{th} (K/W)	P (mm)
Urms=300V.AC,U _N =420V.AC								
150	76	175	29	1270	3810	2.83	5.21	35
200	76	235	28	1300	3900	2.2	6.63	35
Urms=330V.AC,U _N =460V.AC								
80	76	105	20	890	2670	2.45	7.38	35
100	76	105	26	980	2940	2.68	6.52	35
200	86	175	33	1750	5250	1.5	5	35
Urms=400V.AC,U _N =560V.AC								
50	76	110	29	785	2355	3.5	9.53	35
100	86	150	41	2648	7944	2.82	6.26	35
200	86	240	49	3467	10401	2.53	4.89	35
350	116	210	68	3200	9600	1	4.2	35
Urms=480V.AC,U _N =680V.AC								
70	76	145	50	4000	12000	2	6.23	35
100	96	125	80	3500	10500	2	3.9	35
160	86	200	36	3000	9000	1.5	4.8	35
250	96	240	55	2700	8100	1.21	4.25	35
300	86	285	78	2500	7500	1.2	3.85	35



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Specification table

C _N (μF)	φD (mm)	H (mm)	I _{max} (A)	I _p (A)	I _s (A)	ESR (mΩ)	R _{th} (K/W)	P (mm)
Urms=500V.AC,U _N =700V.AC								
33	76	115	29	752	2256	3.86	9.05	35
60	76	150	33	953	2859	3.72	7.23	35
100	76	200	37	1047	3141	3.05	6.78	35
133	86	200	40	1392	4176	2.87	6.41	35
200	96	220	45	3800	11400	1.25	3.89	35
250	96	240	50	4000	12000	1.15	3.56	35
Urms=550V.AC,U _N =780V.AC								
22	63.5	90	24	500	1500	4.01	12.4	35
50	63.5	140	34	980	2940	3.58	7.1	35
100	76	200	50	3500	10500	1.6	6.84	35
133	86	200	55	4000	12000	1.5	6.84	35
Urms=600V.AC,U _N =850V.AC								
150	96	240	52	3000	9000	2.1	3.87	35
200	116	240	55	3200	9600	1.89	3.12	35
Urms=640V.AC,U _N =900V.AC								
15	63.5	90	22	350	1050	5.7	10.74	35
2	76	130	29	680	2040	4.28	7.93	35
33	76	130	33	800	2400	3.56	7.39	35
68	86	240	45	1496	4488	2.56	5.61	35
Urms=850V.AC,U _N =1200V.AC								
50	96	240	62	2700	8100	1	4.05	35
Urms=1000V.AC,U _N =1400V.AC								
30	86	175	38	650	1950	3.68	5.44	35
Urms=1400V.AC,U _N =1900V.AC								
15	116	150	35	740	2220	2.5	5.21	35

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AC - filter AKMJ - MC series

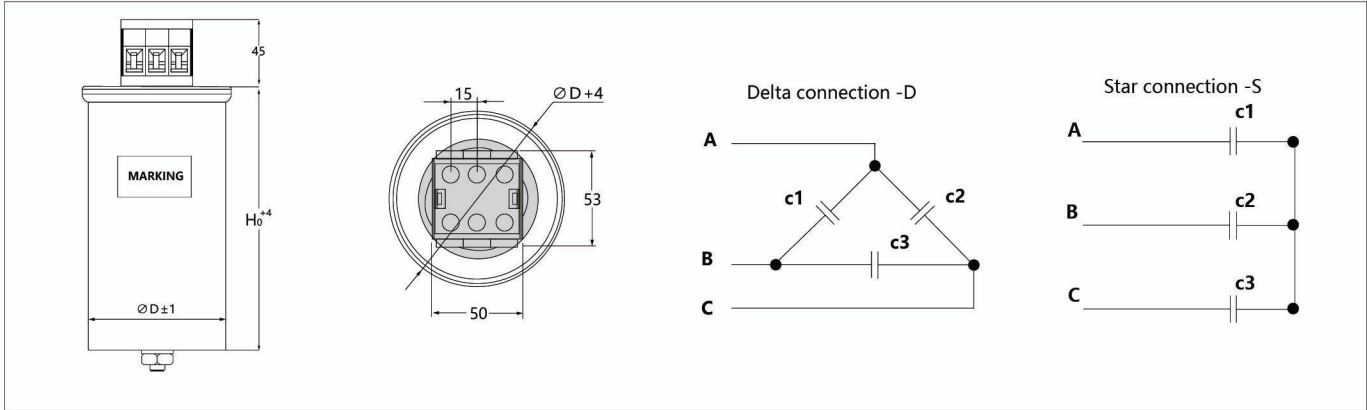
Metalized film capacitor (Three phase)



Application

- Widely used in power electronic equipment used for the AC filter.
- In the high-power UPS,switching power supply,inverter and other equipment for the AC filter,harmonics and improve power factor control.

Typical circuit diagram



Technical data

Operating temperature range	Max.Operating temperature,Top,max : + 85°C
(C _N) /Capacitance range	Upper category temperature : + 70°C
(U _N) / Rated voltage	Lower category temperatur re: - 40°C
Cap.tol	3*17~3*200µF
Withstand voltage	400V.AC~850V.AC
Over voltage	±5% (J) ; ±10% (K)
Dissipation factor	vt - t 1.25U _N (AC) / 10s or 1.75U _N (DC) / 10s
Self inductance	vt - c 3000V.AC / 2s, 50/60Hz
Insulation resistance	1.1Urms (30% of on – load – dur.)
Withstand strike current	1.15Urms (30min / day)
Irms	1.2Urms (5min / day)
Flame retardation	1.3Urms (1min / day)
Life time expectancy	tgδ≤0.002 f = 100Hz
Dielectric	< 70 nH per mm of lead spacing
Construction	Rs×C≥ 10000s (at20°C 100V.DC)
Case	See the specification sheet
Reference standard	See the specification sheet
	UL94V -0
	Useful life time: > 100000h at U _{NDC} and 70°C
	FIT: < 10×10 ⁹ h(10 per 10 ⁹ component h) at 0.5×U _{NDC} ,40°C
	Metallized polypropylene
	Filling with inert gas/ silicone oil, Non-inductive, over-pressure
	Aluminum case
	IEC61071,UL810

Specification table

C _N (µF)	φD (mm)	H (mm)	I _{max} (A)	I _p (A)	I _s (A)	ESR (mΩ)	R _{th} (K/W)
Urms=400V.AC							
3*17	65	150	20	450	1350	3*1.25	6.89
3*30	65	175	25	890	2670	3*1.39	6.25
3*50	76	205	33	1167	3501	3*1.35	4.85
3*66	76	240	40	1336	4007	3*1.45	3.79
3*166.7	116	240	54	1458	4374	3*0.69	3.1
3*200	136	240	58	2657	7971	3*0.45	2.86
Urms=450V.AC							
3*50	86	205	30	802	2406	3*1.35	4.36
3*80	86	285	46	1467	4401	3*1.89	3.69
3*100	116	210	56	2040	6120	3*1.5	3.8
3*135	116	240	58	2680	8040	3*1.6	3.1
3*150	136	205	67	3060	9180	3*2.5	3.2
3*200	136	240	60	3730	11190	3*2	3.46



AC - filter AKMJ - MC series

Metalized film capacitor (Three phase)

Specification table

C _N (μF)	φD (mm)	H (mm)	I _{max} (A)	I _p (A)	I _s (A)	ESR (mΩ)	R _{th} (K/W)
Urms=530V.AC							
3*50	86	240	32	916	2740	3*1.75	3.64
3*66	96	240	44	1547	4641	3*1.36	3.32
3*77	106	240	48	1685	5055	3*1.16	3.21
3*100	116	240	65	2000	6000	3*1.87	4.2
Urms=690V.AC							
3*25	86	240	29	697	2091	3*2.22	3.54
3*33.4	96	240	36	837	2511	3*1.81	3.21
3*55.7	116	240	44	1395	4185	3*1.24	3.04
3*75	136	240	53	2100	6300	3*1.31	2.87
Urms=850V.AC							
3*25	96	240	30	679	2037	3*1.95	3.25
3*31	106	240	36	906	2718	3*1.57	2.98
3*55.7	136	240	49	1721	5163	3*0.9	2.56
Urms=1200V.AC							
3*12	116	245	56	1300	3900	3*3.5	3.6
3*20	136	245	56	3300	9900	3*4	2.29

