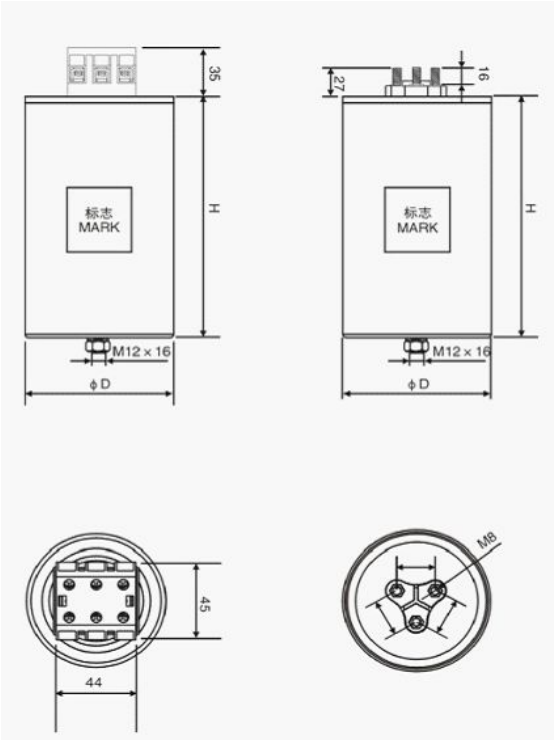
▲Features

Self-Healing
Metallized polypropylene
Anti-explosion design, overpressure tear-off fuse more safety
Suitable for power factor correction and LCL filter

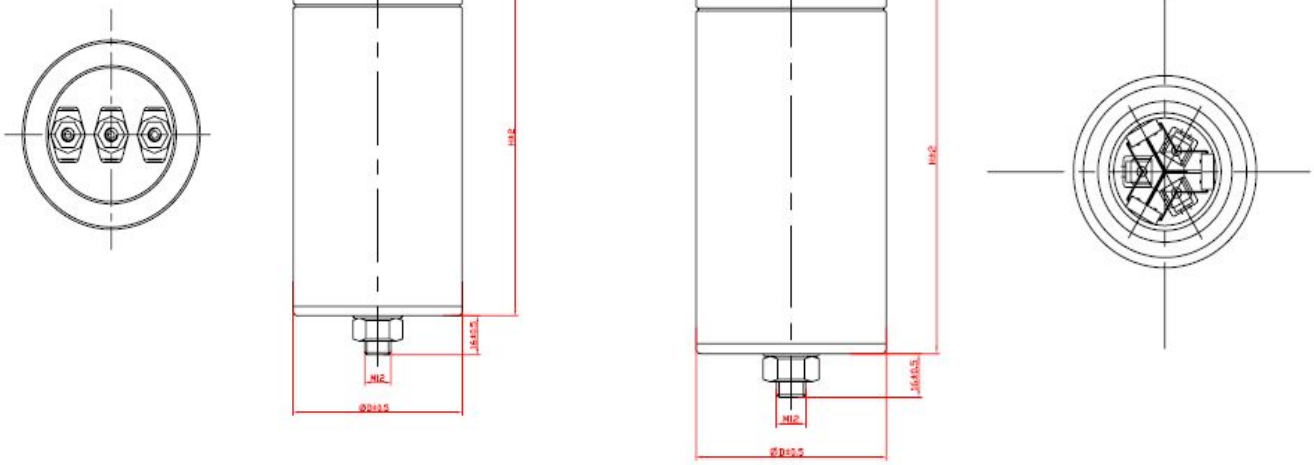
▲TECHNICAL DATA

Reference standards	GB/T 17702.1/2 (IEC61071) Optional: GB/T 12747.1/2(IEC 60831	
Overvoltages	Urms+10%, uo to 8h daily; 1.15Urms, 30min/24h; 1.20Urms for 5 min or 1.3Urms for 1min during life 200 time;	
Climatic category	-40/D	
Max hotspot temperature	85℃	
Frequency	50/60Hz	
Capacitance Tolerance	J= ±5% K= ±10%	
Capacitance internal connection	Connect triangle (△)	
Max allowable inrush current	200IN	
Overcurrnt	1.3IN	
Storage Temperature	-40℃~70℃	
Case	Aluminium can	
Voltage Proof	Between Terminals;	2.15UN (Vac) (10s)
	Between Terminals to Case;	1 000+2 UN (Vac) (60s) (min 2 000 Vac)
Dissipation Factor	See table 1 (50Hz,20℃)	
Explosion-proof device	Three phase overpressure disconnector	
Lnternal stuffing	Oil or resin (Non PCB)	
Life Expectancy	100 000 hours under rated conditions @50℃| △C/C| ≤ 5%	
Mounting position	Vertical	
Max. Torque of Installation	10Nm (12)	
Max Torque of terminals	2.5Nm(M5)	
Cooling	Naturally air-cooled (or forced cooling)	



Type FH Type FHB

Principal circuit diagram



Type FHC Type FHE

▲Part Numbering System

FH	415	*	30-3	HK
Type	Voltage	Tolerance	Capacitance	Size code
FH FHB FHC FHE	415=415vac 450=450vac 1000=1000vac	K= ±10% J= ±5%	30-3=3*30uf 65-3=3*65uf 110-3=3*110u	

D	code	H	code
65	E	145	K
76	H	155	T
86	G	200	F
116	B	230	N
136	C	275	X

▲Technical data

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 415V Us 1200V Ur570V AC									
3*30	76	155	1.1	3*10	3*1.02	83	3.81	14.3	FH415*30-3HT
3*40	86	155	1.6	3*14	3*0.81	83	3.49	19.1	FH415*40-3GT
3*45	76	200	1.8	3*16	3*1.28	93	3.09	21.5	FH415*45-3HF
3*55	76	230	2.2	3*20	3*1.45	103	3.75	26.3	FH415*55-3HN
3*60	86	200	2.4	3*22	3*1.01	93	3.85	28.7	FH415*60-3GF
3*72	86	230	3.0	3*26	3*1.15	103	3.54	34.5	FH415*72-3GN
3*90	86	275	3.6	3*33	3*1.37	113	3.18	43.1	FH415*90-3GX
3*100	116	200	4.0	3*37	3*0.68	93	3.31	47.9	FH415*100-3BF
3*110	116	200	4.5	3*40	3*0.64	93	3.31	52.7	FH415*110-3BF
3*120	116	230	5.0	3*45	3*0.68	103	3.07	59.2	FH415*120-3BN
3*135	116	230	5.5	3*50	3*0.70	103	3.07	64.7	FH415*135-3BN
3*165	116	200	5.9	3*53	3*0.72	103	3.12	66.2	FH415*165-3BF
3*200	136	200	6.2	3*60	3*0.79	103	3.35	70.5	FH415*200-3CF

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FH series

Three-phase AC-filter capacitors (single case)

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 450V Us 1350V Ur640V AC									
3*6	65	145	0.8	3*8	3*1.6	83	3.81	13.9	FH450*6-3EK
3*8	65	145	0.8	3*8	3*1.6	83	3.81	13.9	FH450*8-3EK
3*13	76	145	0.8	3*9.9	3*1.6	83	3.81	13.9	FH450*13-3HK
3*16	76	145	1.0	3*9.9	3*1.3	83	3.81	13.9	FH450*16-3HK
3*23	76	155	1.0	3*9.9	3*1.15	83	3.81	13.9	FH450*23-3HT
3*30	86	155	1.3	3*12	3*0.93	83	3.49	18.1	FH450*30-3GT
3*35	76	200	1.5	3*14	3*1.43	93	3.09	21.2	FH450*35-3HF
3*43	76	230	2.0	3*17	3*1.63	103	2,75	26.0	FH450*43-3HN
3*47	86	200	2.1	3*19	3*1.12	93	2.85	28.5	FH450*47-3GF
3*57	86	230	2.6	3*23	3*1.27	103	2.55	34.5	FH450*57-3GN
3*70	86	275	3.2	3*29	3*1.54	113	2.18	42.4	FH450*70-3GX
3*80	116	200	3.6	3*33	3*0.73	93	2.31	48.5	FH450*80-3BF
3*90	116	200	4.1	3*37	3*0.67	93	2.31	54.6	FH450*90-3BF
3*110	116	230	5.0	3*46	3*0.75	103	2.07	66.7	FH450*110-3BN
3*125	116	230	5.5	3*49	3*0.75	103	2.07	72.7	FH450*125-3BN
3*135	116	230	5.5	3*49	3*0.75	103	2.07	72.7	FH450*135-3BN
3*155	116	230	6.2	3*58	3*0.72	83	2.30	83.5	FH450*155-3BN
3*165	116	230	6.2	3*63	3*0.72	83	2.30	84.5	FH450*165-3BN
3*180	136	200	7.3	3*71	3*0.70	83	1.9	92.2	FH450*180-3CF
3*200	136	230	8.9	3*78	3*0.69	60	1.9	92.2	FH450*200-3CN

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 550V Us 1650V Ur780V AC									
3*10	76	155	0.5	3*6	3*1.53	83	3.81	11.2	FH550*10-3HT
3*12.5	76	155	0.5	3*7	3*1.53	83	3.81	11.2	FH550*12.5-3HT
3*17	86	155	0.8	3*10	3*1.17	83	3.49	15.3	FH550*17-3GT
3*19	76	200	1.0	3*11	3*1.93	93	3.09	17.1	FH550*19-3HF
3*24	76	230	1.1	3*15	3*2.14	103	2.75	21.7	FH550*24-3HN
3*25	86	200	1.2	3*15	3*1.51	93	2.85	22.6	FH550*25-3GF
3*30	86	230	1.5	3*18	3*1.75	103	2.54	27.1	FH550*30-3GN
3*40	86	275	2.0	3*25	3*1.98	113	2.18	36.2	FH550*40-3GX
3*45	116	200	2.2	3*28	3*0.92	93	2.31	40.7	FH550*45-3BF
3*50	116	200	2.5	3*31	3*0.85	93	2.31	45.3	FH550*50-3BF
3*60	116	230	3.0	3*38	3*0.97	103	2.07	54.4	FH550*60-3BN

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FH series

Three-phase AC-filter capacitors (single case)

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 630V Us 1900V Ur890V AC									
3*17	76	200	1.0	3*12	3*1.14	93	3.09	20.1	FH630*17-3HF
3*22	76	230	1.2	3*15	3*1.24	103	2.75	26.1	FH630*22-3HN
3*23	86	200	1.4	3*16	3*0.90	93	2.85	27.3	FH630*23-3GF
3*29	86	230	1.6	3*21	3*0.98	103	2.54	24.4	FH630*29-3GN
3*38	86	275	2.2	3*27	3*1.13	113	2.18	45.1	FH630*38-3GX
3*45	116	200	2.6	3*32	3*0.55	93	2.31	53.5	FH630*45-3BF
3*50	116	230	2.9	3*36	3*0.65	103	2.07	59.4	FH630*50-3BN
3*57	116	230	3.3	3*41	3*0.59	103	2.07	67.8	FH630*57-3BN
3*74	116	275	4.3	3*54	3*0.67	113	1.80	88.0	FH630*74-3BX

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 690V Us 2050V Ur950V AC									
3*28	86	230	3.15	3*10.5	3*0.98	103	2.54	24.4	FH690*28-3GN
3*35	86	275	3.75	3*12.5	3*1.13	113	2.18	45.1	FH690*35-3GX
3*45	86	275	5.01	3*16.7	3*0.55	93	2.31	53.5	FH690*45-3GX
3*55	86	275	6.27	3*20.9	3*0.65	103	2.07	59.4	FH690*55-3GX
3*85	116	155	9.40	3*10.6	3*0.59	103	2.07	67.8	FH690*85-3BT
3*100	116	200	11.28	3*12.5	3*0.67	113	1.80	88.0	FH690*100-3BF
3*135	116	200	15.03	3*16.7	3*0.67	113	1.80	92.3	FH690*135-3BF
3*165	116	200	18.82	3*20	3*0.67	113	1.80	95.6	FH690*165-3BF

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 760V Us 2300V Ur1080V AC									
3*12.5	76	200	0.8	3*12	3*1.30	93	3.09	21.6	FH760*12.5-3HF
3*15	76	230	1.0	3*15	3*1.51	103	2.75	25.9	FH760*15-3HN
3*17	86	200	1.1	3*17	3*1.01	93	2.85	29.4	FH760*17-3GF
3*21	86	230	1.4	3*22	3*1.13	103	2.54	36.3	FH760*21-3GN
3*27	86	275	1.8	3*28	3*1.32	113	2.18	46.7	FH760*27-3GX
3*33.4	116	200	2.3	3*35	3*0.60	93	2.30	57.8	FH760*33.4-3BF
3*41	116	230	2.8	3*43	3*0.67	103	2.07	70.9	FH760*41-3BN

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FH series

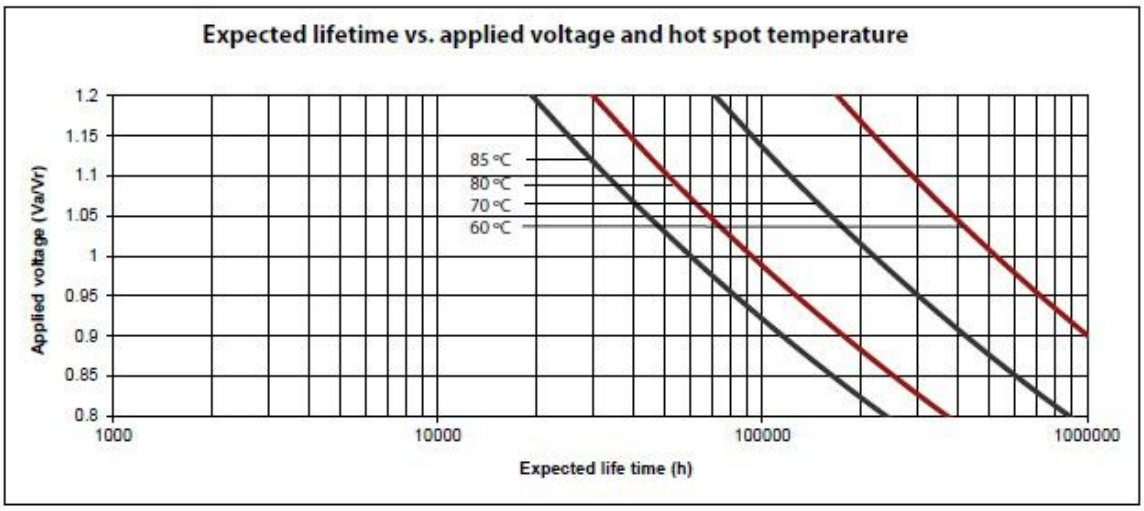
Three-phase AC-filter capacitors (single case)

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 850V Us 2600V Ur1200V AC									
3*9	76	200	0.6	3*10	3*1.51	93	3.09	19.4	FH850*9-3HF
3*12	76	230	1.0	3*13	3*1.61	103	2.75	25.9	FH850*12-3HN
3*13	86	200	1.0	3*15	3*1.10	93	2.85	28.1	FH850*13-3GF
3*16	86	230	1.2	3*18	3*1.25	103	2.54	34.6	FH850*16-3GN
3*21	86	275	1.6	3*24	3*1.44	113	2.18	45.4	FH850*21-3GX
3*25	116	200	1.9	3*29	3*0.65	93	2.31	54.1	FH850*25-3BF
3*32	116	230	2.5	3*37	3*0.71	103	2.07	69.3	FH850*32-3BN
3*41.5	116	275	3.2	3*49	3*0.81	113	1.79	90.0	FH850*41.5-3BX
3*55.7	136	275	4.5	3*50	3*0.52	100	1.83	120	FH850*55.7-3CX

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 1000V Us 3000V Ur1400V AC									
3*10	86	230	1.2	3*20	3*1.55	103	2.54	30.0	FH1000*10-3GN
3*16	116	200	2.0	3*31	3*0.78	93	2.31	47.9	FH1000*16-3BF
3*20	116	230	2.4	3*39	3*0.86	103	2.07	60.0	FH1000*20-3BN

Cap (uF)	D (mm)	H (mm)	Ipeak (KA)	Irms max (A)	ESR (mΩ)	Ls (nH)	Rth (k/W)	Wn (Ws)	Part Number
Urms 1200V Us 3600V Ur1700V AC									
3*11	116	200	1.6	3*24	3*0.90	93	2.31	47.4	FH1200*11-3BF
3*14	116	230	2.0	3*31	3*1.01	103	2.07	60.4	FH1200*14-3BN

▲Special design available to meet your requirements。



▲Connection of the supply cable

Keep enough space on the top of the capacitors and do not fix any mounting components at the top. The connection cable shall be of flexible type and keep slack , do not use hard core cable.

Maximum cable cross section is 16 mm² , according to actual result to choose the appriate cable.

▲Ambiennt temperature

The ambient temperature category is -40 /D , means ambient temperature up to max. 55 ℃. Under forced cooling conditions highe rambient temperature is possible, but should guarantee the capacitor shell temperature point no more no more than 60℃.Temperature is one of the main stress factors for polypropylene type capacitors, means it has a major infliences on the life cycle of the capacitor.

▲Lnrush current limitation

Switching PFC capacitors, especially switching in parallel to other already energixed ones cause high inrush currents up to 200 times the rated current. This may cause additional stress to contactors as well as capacitors and reduce their life cycle. On top of that high inrush currents have a negative effect on power, e. g. Transients, voltage drop.

▲Harmonics

Harmonics result from the operation of electrical loads with non-linear voltage-current characteristics. They are caused by loads operated with modern power electronic, such as converters, electrical drives, welding machines and stand-by power supplies. Harmonics are sinusoidal voltages and currents with frequencies that are multiples of a 50Hz or 60HZ power supply frequency.

▲Lnstallation & commissioning procedures

1 Unpack Capacitor Do not touch capacitor terminals by hand directly while taking them.

2 Check Physically.

3 Fixed capacitors.

4 Ensure for correctness of supply voltage, frequency, temperature.

5 Connect Capacitor.

6 Switch on supply.

7 Check main supply Voltage & current.

8 Capacitor is commissioned.