

EPCOS Product Profile

Power Factor Correction

Power Quality Solutions



PhiCap PFC Capacitors

Semi-dry biodegradable resin • Stacked winding • Dual safety system

General

PhiCap capacitors are a tried and tested series of MKP (metalized polypropylene) capacitors from EPCOS which have been used for PFC applications for more than 15 years.

The power range varies from 0.5 to 30.0 KVAR and 0.7 to 6.0 kvar per single capacitor can, depending on a three-phase or single-phase capacitor design.

The PhiCap capacitor is especially intended for power factor correction in industrial applications.

The capacitors are manufactured using metalized polypropylene film as the dielectric and housed in a cylindrical aluminum case.

Available in two designs

- Normal Duty (ND) for linear inductive loads.



Applications

- Power Factor Correction (PFC), automatic capacitor banks
- Fixed PFC applications, e.g. motor compensation
- Detuned PFC systems
- Dynamic PFC systems

Features

- Compact design in cylindrical aluminum can with stud
- Stacked winding
- MKP technology
- Voltage range 230 ... 525 V
- Output range 1... 33.1 KVAR

Electrical

- Up to 33.1 KVAR per case for three-phase applications
- Up to 6 KVAR per case for single-phase applications
- Long life expectancy of up to 115 000 hours
- High pulse current withstand capability (up to $200 \cdot I_R$)

Mechanical and maintenance

- Reduced mounting costs, easy installation and connection
- Mounting position upright
- Low weight and compact volume
- Maintenance-free

Safety

- Self-healing
- Overpressure disconnecter

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Technical data : PhiCap PFC Capacitors	
PhiCap-ND	
Series type	B32343L (plastic top up to 5 KVAR) B32344B (metal top- 6 KVAR and onwards)
Power-KVAR	1 to 33.1 KVAR
Rated voltage-V (AC)	230...525 V*
Frequency	50 Hz
Transient peak current maximum permissible	$200 \cdot I_R$
Maximum permissible temperature category	-10/D
Losses (without discharge resistor)	0.5 W/KVAR
Maximum permissible voltage	$V_R + 10\%$ (up to 8 h daily)/ $V_R + 15\%$ (up to 30 min daily)** $V_R + 20\%$ (up to 5 min daily)/ $V_R + 30\%$ (up to 1 min daily)**
Maximum permissible current	1.3 to $1.5 \cdot I_R$ ***
Safety	Self-healing, overpressure disconnecter
Impregnation	Non-PCB, semi-dry biodegradable resin
Life expectancy	Up to 100 000 hours
Cooling	Natural or forced
Case shape/finish	Extruded round aluminium can with stud
Terminal	6.3 mm fast-on terminals for plastic top -1 to 5 KVAR Screw terminal for metal top 6 KVAR and above
Mounting and grounding	Threaded stud at bottom of can (max. torque 4 Nm for M8 and 10Nm for M12)
Enclosure	IP 00, indoor mounting (optionally with terminal cap for IP54)
Discharge resistor	Provided with discharge resistor
Connection	Delta
Casing of capacitor cell	Extruded round aluminium can with stud
Dielectric	Polypropylene film (metallised)
No. of switching per annum	Max. 5000 switching
Reference standard	IS : 13340/41 (ISI mark applicable for 415 and 440V)

* Other voltages available on request

** V_R rated voltage

*** I_R : RMS line current that occurs at rated sinusoidal voltage and rated frequency, excluding transients.

Note : for capacitors with different features/parameters than above, please check with our nearest sales office

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PhiCap Normal Duty (ND) Capacitors - 3 Phase								
Rating KVAR	Voltage V (AC)	Material code	I_r A	C_N μ F	d x h mm	Packing units	MOQ	Approx. weight Kg
PhiCap Normal Duty - 415 V(AC) 3PH, 50Hz (Series B32343 and B32344)								
1	415	B32343L4012A 10	1.4	3 x 6.5	53 x 117	12	12	0.3
1.5	415	B32343L4012A510	2.0	3 x 9.5	53 x 117	12	12	0.3
2	415	B32343L4022A 10	2.7	3 x 12.5	53 x 117	12	12	0.4
2.5	415	B32343L4022A510	3.4	3 x 15.5	63.5 x 129	12	12	0.4
3	415	B32343L4032A 10	4.1	3 x 18.5	63.5 x 129	12	12	0.4
4	415	B32343L4042A 10	5.5	3 x 25	63.5 x 152	12	12	0.4
5	415	B32343L4052A 10	6.9	3 x 31	63.5 x 152	12	12	0.5
6.3	415	B32344B4071A510	8.8	3 x 39	75 x 195	1	6	0.6
7.5	415	B32344B4072A510	10.4	3 x 46.5	75 x 195	1	6	0.7
8.3	415	B32344B4082A310	11.5	3 x 51.5	75 x 195	1	6	0.7
9	415	B32344B4092A 10	12.5	3 x 55.5	75 x 195	1	6	0.7
10	415	B32344B4102A 10	13.9	3 x 62	85 x 195	1	4	0.7
12.5	415	B32344B4122A510	17.3	3 x 77	85 x 270	1	4	1.0
15	415	B32344B4152A 10	20.8	3 x 92.5	85 x 270	1	4	1.8
20	415	B32344B4202A 10	27.8	3 x 123.5	85 x 345	1	4	1.8
25	415	B32344B4252A 10	34.7	3 x 154	85 x 345	1	4	2.0
PhiCap Normal Duty - 440 V(AC) 3PH, 50Hz (Series B32343 & B32344)								
1	440	B32343L4012A 40	1.3	3 x 5.5	53 x 117	12	12	0.3
1.5	440	B32343L4012A540	1.9	3 x 8.5	53 x 117	12	12	0.3
2	440	B32343L4021A540	2.8	3 x 11.5	53 x 117	12	12	0.4
2.5	440	B32343L4022A540	3.2	3 x 14	63.5 x 129	12	12	0.4
3	440	B32343L4032A 40	3.9	3 x 16.5	63.5 x 129	12	12	0.5
4.2	440	B32343L4051A 40	5.5	3 x 23	63.5 x 129	12	12	0.5
5	440	B32343L4052A 40	6.5	3 x 27.5	63.5 x 152	12	12	0.6
5.6	440	B32343L4052A640	7.3	3 x 31	63.5 x 188	12	12	0.6
6	440	B32344B4071A540	7.8	3 x 33	75 x 195	1	6	0.6
7	440	B32344B4072A 40	9.2	3 x 38.5	75 x 195	1	6	0.6
7.5	440	B32344B4072A540	9.8	3 x 41	75 x 195	1	6	0.6
8.3	440	B32344B4101A 40	10.8	3 x 45.5	75 x 195	1	6	0.6
9	440	B32344B4092A 40	11.8	3 x 49.5	75 x 195	1	6	0.6
10	440	B32344B4102A 40	13.1	3 x 55	85 x 195	1	4	0.6
11.2	440	B32344B4112A240	14.6	3 x 61.4	85 x 195	1	4	0.8
12.5	440	B32344B4151A 40	16.4	3 x 68.5	85 x 270	1	4	0.8
14	440	B32344B4142A 40	18.3	3 x 76.4	85 x 270	1	4	1.0
15	440	B32344B4152A 40	19.6	3 x 82.5	85 x 270	1	4	1.2
16.7	440	B32344B4201A 40	21.9	3 x 91.5	85 x 345	1	4	1.2
19	440	B32344B4192A 40	24.9	3 x 104.5	85 x 345	1	4	1.2
20	440	B32344B4202A 40	26.2	3 x 110	85 x 345	1	4	1.2
20.8	440	B32344B4251A 40	27.3	3 x 114	85 x 345	1	4	1.2
25	440	B32344B4252A 40	32.8	3 x 137.5	90 x 345	1	4	1.5
28	440	B32344B4282A 40	36.7	3 x 153.5	90 x 345	1	4	1.6
30	440	B32344B4302A 40	39.4	3 x 164.5	90 x 345	1	4	1.

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PhiCap Normal Duty (ND) Capacitors - 3 Phase								
Rating KVA _r	Voltage V (AC)	Material code	I _r A	C _N μF	d x h mm	Packing units	MOQ	Approx. weight Kg
PhiCap Normal Duty - 480 V(AC) 3PH, 50Hz (Series B32344)								
5	480	B32344B4052A 80	6.0	3 x 23	75 x 195	1	6	0.6
8.3	480	B32344B4082A380	10	3 x 28.2	75 x 270	1	6	0.6
10.4	480	B32344B4121A580	12.5	3 x 48	85 x 270	1	4	0.8
11.1	480	B32344B4112A180	13.4	3 x 51.1	75 x 270	1	6	0.9
12.5	480	B32344B4151A 80	15.0	3 x 58	85 x 345	1	4	0.9
13.8	480	B32344B4132A880	16.6	3 x 63.6	85 x 270	1	4	1.0
15	480	B32344B4152A 80	18.0	3 x 69	85 x 345	1	4	1.5
16.6	480	B32344B4162A680	20	3 x 76.5	85 x 345	1	4	1.5
20.8	480	B32344B4251A 80	25.0	3 x 96	85 x 345	1	4	1.5
22.1	480	B32344B4222A180	26.6	3 x 101.8	90 x 345	1	4	1.8
25	480	B32344B4252A 80	30.0	3 x 115	90 x 345	1	4	1.8
27.7	480	B32344B4272A780	33.3	3 x 127.6	90 x 345	1	4	1.8
30	480	B32344B4302A 80	36.0	3 x 138	90 x 345	1	4	1.9
PhiCap Normal Duty - 525 V(AC) 3PH, 50Hz (Series B32344)								
5	525	B32344B5052A 20	5.5	3 x 19	75 x 195	1	6	0.4
6.3	525	B32344B5071A520	6.9	3 x 24	75 x 195	1	6	0.5
8.3	525	B32344B5082A320	9.1	3 x 32	85 x 270	1	4	0.6
9.9	525	B32344B5092A920	10.9	3 x 38.1	75 x 270	1	6	0.6
10.4	525	B32344B5102A420	11.4	3 x 40	85 x 270	1	4	0.8
12.5	525	B32344B5151A 20	13.7	3 x 48	85 x 270	1	4	1.2
13.2	525	B32344B5132A220	14.5	3 x 50.8	85 x 270	1	4	1.3
16.7	525	B32344B5162A720	18.3	3 x 64	85 x 345	1	4	1.3
20.8	525	B32344B5202A820	22.8	3 x 80	90 x 345	1	4	1.5
26.5	525	B32344B5262A520	29.5	3 x 102.1	116 x 325	1	2	1.8
33.1	525	B32344B5332A120	36.4	3 x 127.5	116 x 325	1	2	2.0

Other voltages available on request.

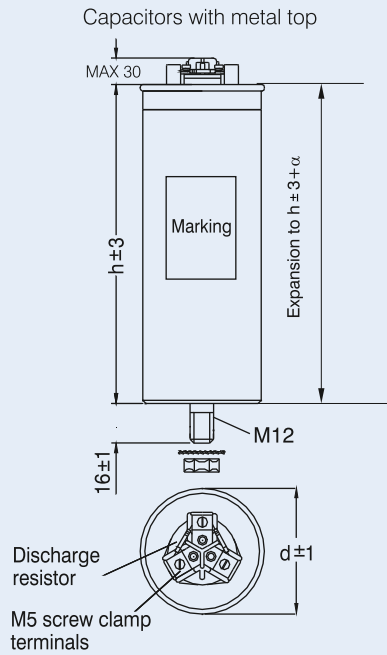
Packing units for capacitors equal minimum order quantity. Orders will be rounded up to packing unit or multiple thereof.

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Dimensional drawings:

Capacitor B32344 series



- 1) Seaming adds 5.5 mm in diameter
- 2) Expansion α max. 15 mm

Capacitor B32343 series

