

EPCOS Product Profile

Power Factor Correction

Power Quality Solutions



PhaseCap Super Heavy Duty PFC Capacitors

Semi-dry biodegradable resin • Stacked winding • Wavy cut • Triple safety system

General

The new PhaseCap Super Heavy Duty (SHD) PFC capacitor is based on the EPCOS MKK technology known for many years from the successful PhaseCap series with its unique stacked windings. Based on years of experience in PFC and millions of sold capacitors, EPCOS presents the next step in PFC capacitor evolution. Using polypropylene as dielectric and semi-dry biodegradable resin as impregnation agent, the PhaseCap Super Heavy Duty (SHD)

offers higher inrush current capability (up to $500 I_R$) and over current capability (up to $1.6...2.0 \cdot I_R$) even compared to PhaseCap. With an output of up to 33 KVAR at very small height it meets the dimensional requirements of panel builders. Its new enhanced terminals permit the connection of a broader variety of cables and cable sizes. Depending on the operating conditions PhaseCap SHD provides a life expectancy of up to 200 000 hours, more than any other capacitor in the EPCOS PFC



Applications

- Automatic PFC equipment, capacitor banks
- Individual fixed PFC (e.g. motors, transformers, lighting)
- Group fixed PFC
- Detuned capacitor banks
- Filter applications
- Dynamic PFC

Features

- Compact design in cylindrical aluminum can with stud
- Concentric winding
- MKK-technology with wavy cut and heavy edge
- Voltage range: 415 ... 1000 V
- Output range: 1.0 ... 33.0 KVAR

Electrical features

- Very high life expectancy
High inrush current capability (up to $500 \cdot I_R$)
- High overcurrent capability (up to $2.0 \cdot I_R$)

Mechanical and maintenance

- Reduced mounting costs
- Maintenance-free
- Compact dimensions
- Mounting position upright

Safety

- Self healing
- Overpressure disconnecter
- Shock hazard protected terminals
- Pre-mounted ceramic discharge resistor

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Technical data : PhaseCap Super Heavy Duty PFC Capacitors	
Series type	B25675L
Power-KVAr	1...33KVAr
Rated voltage-V (AC)	415...1000 V*
Frequency	50 Hz
Transient peak current maximum permissible	$500 \cdot I_R$
Maximum permissible temperature category	-40/60; max. temp. +60 °C; max. mean 24 h = +45 °C max. mean 1 year = +35 °C; lowest temperature = -40 °C
Losses (without discharge resistors)	0.45W/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	up to $1.6 \dots 2.0 \cdot I_R$ including combined effects of harmonics, overvoltages and capacitance tolerance ***
Safety	Self-healing, overpressure disconnecter
Impregnation	Non-PCB, semi-dry biodegradable resin
Life expectancy	up to 200 000 h (temp. class -40/D); up to 180 000 h (temp. class -40/60)
Cooling	Natural or forced
Case shape/finish	Extruded round aluminium can with stud
Terminal	Optimized capacitor safety terminals
Mounting and grounding	Threaded stud at bottom of can (max. torque for M12=Nm)
Enclosure	IP 20, 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. 15000 switching
Reference standard	IEC60831-1/2.

* 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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Rating KVAR	Voltage V (AC)	Material code	I _r A	C _N μF	d x h mm	Packing units	MOQ	Approx. weight Kg
PhaseCap SHD - 415 V(AC) 3PH, 50Hz (Series B25675L)								
5	415	B25675L4052J 15	7	3 x 30.8	75x164	1	4	0.9
6.3	415	B25675L4062J315	8.8	3 x 38.8	75x164	1	1	0.9
7.5	415	B25675L4072J515	10.4	3 x 46.2	75x200	1	1	1.1
10.4	415	B25675L4102J415	14.5	3 x 64.1	75x200	1	1	1.1
12.5	415	B25675L4122J515	17.4	3 x 77.0	85x200	1	1	1.3
15	415	B25675L4152J 15	20.9	3 x 92.4	85x200	1	1	1.3
20	415	B25675L4202J 15	27.8	3 x 123.2	100x207	1	1	1.9
25	415	B25675L4252J 15	34.8	3 x 154.0	116x192	1	1	2.4
28.1	415	B25675L4282J115	39.1	3 x 173.1	116x207	1	1	2.6
30	415	B25675L4302J 15	41.7	3 x 184.8	116x207	1	1	2.6
33	415	B25675L4332J 15	45.9	3 x 203.3	116x224	1	1	2.8
PhaseCap SHD - 440 V(AC) 3PH, 50Hz (Series B25675L)								
1	440	B25675L4012J 40	1.3	3 x 5.5	53x117	1	1	0.3
2	440	B25675L4022J 40	2.6	3 x 11.0	53x129	1	1	0.4
3	440	B25675L4032J 40	3.9	3 x 16.4	53x129	1	1	0.4
4	440	B25675L4042J 40	5.2	3 x 21.9	63.5x152	1	1	0.5
5	440	B25675L4052J 40	6.6	3 x 27.4	75x164	1	1	0.9
7.5	440	B25675L4072J540	9.8	3 x 41.1	75x200	1	1	1.1
10	440	B25675L4102J 40	13.1	3 x 54.8	75x200	1	1	1.1
10.4	440	B25675L4102J440	13.6	3 x 57	85x200	1	1	1.3
12.5	440	B25675L4122J540	16.4	3 x 68.5	85x200	1	1	1.3
15	440	B25675L4152J 40	19.7	3 x 82.2	85x218	1	1	1.5
20	440	B25675L4202J 40	26.2	3 x 109.6	100x207	1	1	1.9
25	440	B25675L4252J 40	32.8	3 x 137.0	116x192	1	1	2.4
28.1	440	B25675L4282J140	36.9	3 x 154.0	116x207	1	1	2.6
30	440	B25675L4302J 40	39.4	3 x 164.4	125x192	1	1	2.8
33.1	440	B25675L4332J140	43.4	3 x 181.4	116x224	1	1	2.8
PhaseCap SHD - 480 V(AC) 3Pz, 50Hz (Series B25675L)								
5	480	B25675L4052J 80	6	3 x 23.0	75x164	1	1	0.9
6.3	480	B25675L4062J380	7.6	3 x 29.0	75x164	1	1	0.9
8.3	480	B25675L4082J380	10	3 x 38.2	75x200	1	1	1.1
10.4	480	B25675L4102J480	12.5	3 x 47.9	75x200	1	1	1.1
11	480	B25675L4112J 80	13.2	3 x 50.7	85x200	1	1	1.3
12.5	480	B25675L4122J580	15	3 x 57.6	85x200	1	1	1.3
13.8	480	B25675L4132J880	16.6	3 x 63.5	85x200	1	1	1.3
15	480	B25675L4152J 80	18	3 x 69.1	100x207	1	1	1.9
16.7	480	B25675L4162J780	20.1	3 x 76.9	100x207	1	1	1.9
18.7	480	B25675L4182J780	22.5	3 x 86.1	100x207	1	1	1.9
20	480	B25675L4202J 80	24.1	3 x 92.1	100x207	1	1	1.9
20.8	480	B25675L4202J880	25	3 x 95.8	116x207	1	1	2.6
22	480	B25675L4222J 80	26.5	3 x 101.3	116x207	1	1	2.6
25	480	B25675L4252J 80	30.1	3 x 115.1	116x192	1	1	2.4
28.1	480	B25675L4282J180	33.8	3 x 129.4	116x207	1	1	2.6
31	480	B25675L4312J 80	37.3	3 x 142.7	116x224	1	1	2.8
33	480	B25675L4332J 80	39.7	3 x 152.0	116x224	1	1	2.8
PhaseCap SHD - 525 V(AC) 3Pz, 50Hz (Series B25675L)								
5	525	B25675L5052J 25	5.5	3 x 19.2	75x164	1	1	0.9
6.3	525	B25675L5062J325	6.9	3 x 24.2	75x164	1	1	0.9
8.3	525	B25675L5082J325	9.1	3 x 31.9	75x200	1	1	1.1
10.4	525	B25675L5102J425	11.4	3 x 40.0	85x185	1	1	1.2
12.5	525	B25675L5122J525	13.7	3 x 48.1	85x200	1	1	1.3
13.2	525	B25675L5132J225	14.6	3 x 50.8	85x200	1	1	1.3
15	525	B25675L5152J 25	16.5	3 x 57.7	85x218	1	1	1.5
16.7	525	B25675L5162J725	18.4	3 x 64.3	100x207	1	1	1.9
20	525	B25675L5202J 25	22	3 x 77.0	100x224	1	1	2.1
25	525	B25675L5252J 25	27.5	3 x 96.2	116x207	1	1	2.6
26.5	525	B25675L5262J525	29.1	3 x 102.0	116x207	1	1	2.6
30	525	B25675L5302J 25	33	3 x 115.5	125 x 207	1	1	3.0
33.1	525	B25675L5332J125	36.4	3 x 127.4	136x192	1	1	3.3

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PhaseCap Super Heavy Duty PFC 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
PhaseCap SHD - 690 V(AC) 3Pz, 50Hz (Series B25675L)								
5.3	690	B25675L6052J390	4.4	3 x 11.8	75x185	1	1	1.0
6.9	690	B25675L6062J990	5.8	3 x 15.4	75x200	1	1	1.1
10.4	690	B25675L6102J490	8.7	3 x 23.2	75x200	1	1	1.1
12.5	690	B25675L6122J590	10.5	3 x 27.9	85x200	1	1	1.3
14.6	690	B25675L6142J690	12.2	3 x 32.5	100x207	1	1	1.9
20	690	B25675L6202J 90	16.7	3 x 44.6	100x207	1	1	1.9
25	690	B25675L6252J 90	20.9	3 x 55.7	116x192	1	1	2.4
28	690	B25675L6282J 90	23.4	3 x 62.4	116x207	1	1	2.6
PhaseCap SHD - 800 V(AC) 3PH, 50Hz (Series B25673)								
5	800	B25673L8052A000	3.6	3 x 8.3	116 x 164	1	1	2.1
7.5	800	B25673L8072A500	5.4	3 x 12.4	116 x 164	1	1	2.1
10.0	800	B25673L8102A000	7.2	3 x 16.6	116 x 164	1	1	2.1
12.5	800	B25673L8122A500	9	3 x 20.7	116 x 164	1	1	2.1
15	800	B25673L8152A000	10.8	3 x 24.9	116 x 164	1	1	2.1
20	800	B25673L8202A000	15	3 x 33.2	136 x 200	1	1	3.2
25	800	B25673L8252A000	18	3 x 41.4	136 x 200	1	1	3.2
28	800	B25673L8252A000	20.2	3 x 46.4	136 x 200	1	1	3.2
PhaseCap SHD - 900 V(AC) 3PH, 50Hz (Series B25673)								
10.4	900	B25673L9102A400	6.7	3 x 13.6	116 x 164	1	1	2.0
12.5	900	B25673L9122A500	8	3 x 16.4	116 x 164	1	1	2.0
15	900	B25673L9152A000	9.6	3 x 19.7	116 x 200	1	1	2.4
20	900	B25673L9202A000	12.8	3 x 26.2	136 x 200	1	1	3.1
25	900	B25673L9252A000	16	3 x 32.7	136 x 200	1	1	3.1
PhaseCap SHD - 1000 V(AC) 3PH, 50Hz (Series B25673)								
10.4	1000	B25673L0102A400	6	3 x 11.0	116 x 164	1	1	2.0
12.5	1000	B25673L0122A500	7.2	3 x 13.3	116 x 164	1	1	2.0
15	1000	B25673L0152A000	8.7	3 x 15.9	116 x 200	1	1	2.4
20	1000	B25673L0202A000	11.6	3 x 21.2	136 x 200	1	1	3.1
25	1000	B25673L0252A000	14.4	3 x 26.5	136 x 200	1	1	3.1

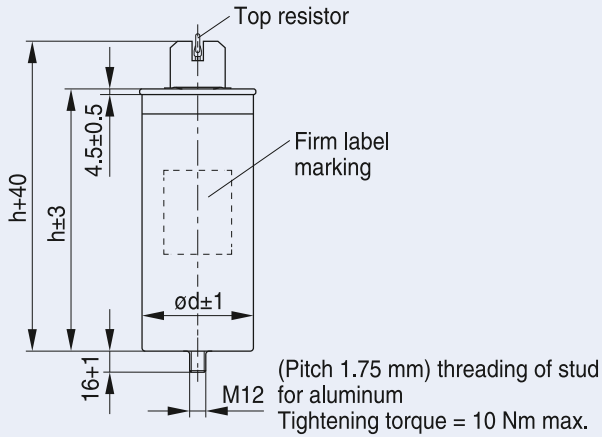
Packing units for capacitors equal minimum order quantity. Orders will be rounded up to packing unit or multiple thereof.

PhaseCap SHD PFC Capacitors

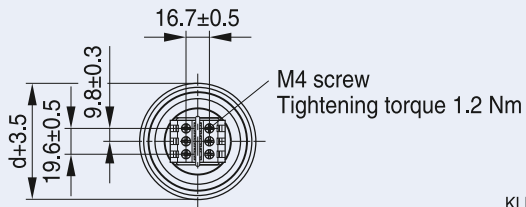
Semi-dry biodegradable resin • Stacked winding • Wavy cut • Triple safety system

Dimensional drawings

Terminal type A

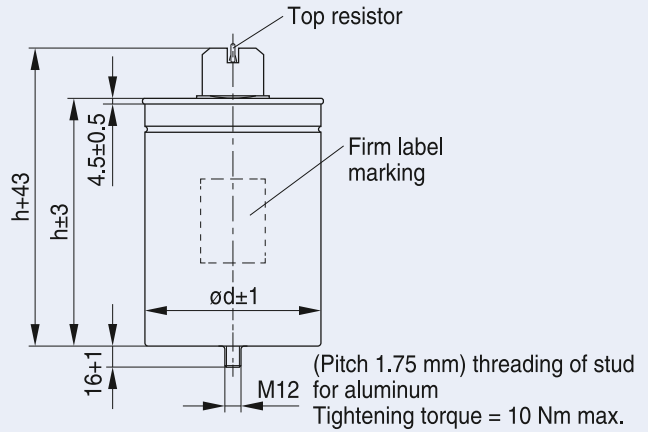


- Toothed lock washer
DIN 6797-J13
- Hexagonal nut DIN 439-BM12

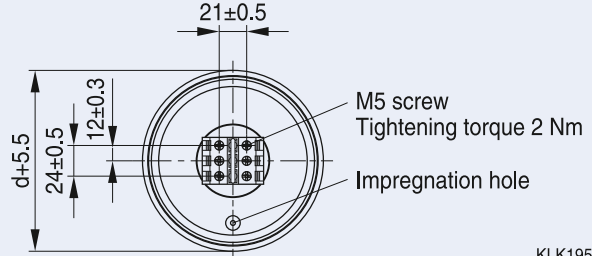


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Terminal type B



- Toothed lock washer
DIN 6797-J13
- Hexagonal nut DIN 439-BM12



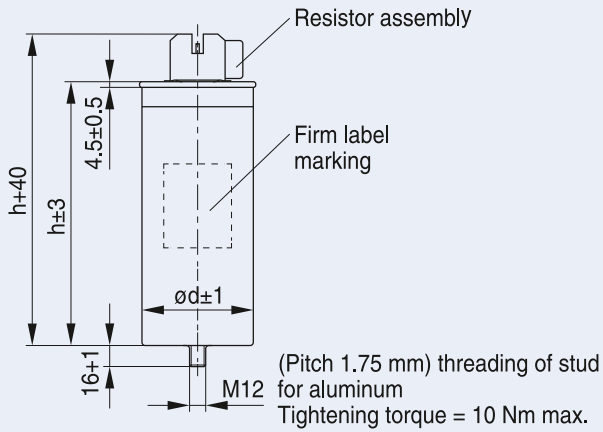
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PhaseCap SHD PFC Capacitors

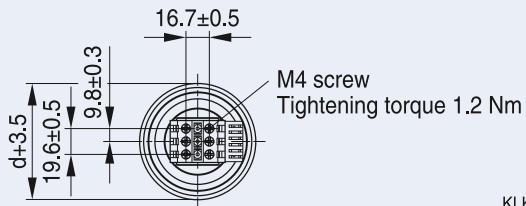
Semi-dry biodegradable resin • Stacked winding • Wavy cut • Triple safety system

Dimensional drawings

Terminal type C

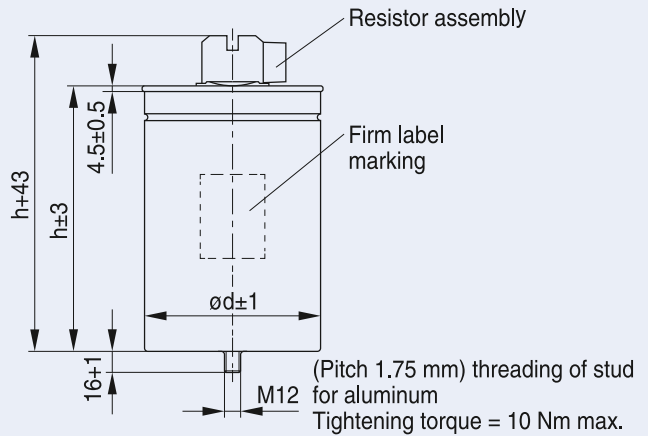


- Toothed lock washer
DIN 6797-J13
- Hexagonal nut DIN 439-BM12

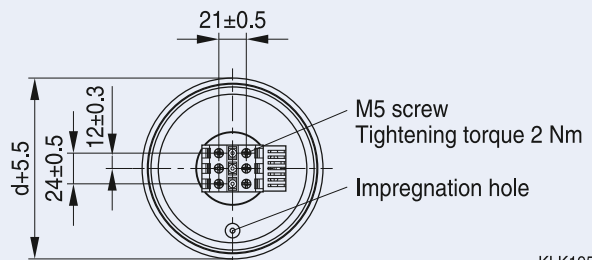


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Terminal type D



- Toothed lock washer
DIN 6797-J13
- Hexagonal nut DIN 439-BM12



KLK1957-T-E