



Film Capacitors – Power Factor Correction

Key Components – Capacitor Contactors

Series/Type: B44066S

Ordering code: B44066S....J230/J110/N230

Date: August 2009

Version: 8

Preliminary data

Series B44066S....J230 with precharging resistors

Characteristics

- Excellent damping of inrush current
- Improved power quality (e.g. avoidance of voltage sags)
- Longer useful life of main contacts of capacitor contactor
- Soft switching of capacitor and thus longer useful life
- Enhanced mean life expectancy
- Reduced ohmic losses
- Easy access for cable connection
- AC6b utilization category for switching 3-phase capacitors



B44066S....J230/J110

Features

Resistors	Tamper-proof and protected
Leading contacts	With wiper function
Pre-contacts	Snap function
Aux-contacts	For all types
Usage	In applications with or without reactors



B44066S9910J230

Series B44066S....N230 for de-tuned PFC-systems with reactors only

Characteristics

- Cost efficient
- Optimized for capacitor switching
- Long useful life of main contacts of capacitor contactor
- Easy access for cable connection of capacitors

Features

Aux-contacts	For all types
Usage	In applications with reactors only



B44066S....N230/N110

Preliminary data
Technical Data

To IEC 947-4-1, IEC 947-5-1, EN 60947-4-1, EN 60947-5-1, VDE 0660

Type/ Main contacts		...1810...	...2410...	...3210...	...5010...	...6210...	...7410...	...9910...
Capacitor power at 50 °C								
■ 380 ... 400 V	kvar	0 ... 12.5	10 ... 20	10 ... 25	20 ... 33.3	20 ... 50	20 ... 75	33 ... 100
■ 415 ... 440 V		0 ... 13	10.5 ... 22	10.5 ... 27	23 ... 36	23 ... 53	23 ... 75	36 ... 103
■ 660 ... 690 V		0 ... 20	17 ... 33	17 ... 41	36 ... 55	36 ... 82	36 ... 120	57 ... 148
Capacitor power at 60 °C								
■ 380 ... 400 V	kvar	0 ... 12.5	10 ... 20	10 ... 25	20 ... 33.3	20 ... 50	20 ... 60	33 ... 90
■ 415 ... 440 V		0 ... 13	10.5 ... 22	10.5 ... 27	23 ... 36	23 ... 53	23 ... 64	36 ... 93
■ 660 ... 690 V		0 ... 20	17 ... 33	17 ... 41	36 ... 55	36 ... 82	36 ... 100	57 ... 148
Coil operating voltage at 50 Hz:								
■ Type ... 230	V AC	187 - 264	187 - 264	187 - 264	187 - 264	187 - 264	187 - 264	187 - 264
■ Type ... 110		85 - 121	85 - 121	85 - 121	not available	85 - 121	85 - 121	not available
Coil operating voltage at 60 Hz:								
■ Type ... 230	V AC	196 - 290	196 - 290	196 - 290	196 - 290	196 - 290	196 - 290	187 - 264
■ Type ... 110		94 - 134	94 - 134	94 - 134	not available	94 - 134	94 - 134	not available
Rated op. current AC6b at 50/60 Hz	A	0 - 18	14 - 28	14 - 36	30 - 48	30 - 72	30 - 108	50 - 144
■ 50 °C		0 - 18	14 - 28	14 - 36	30 - 48	30 - 72	30 - 87	50 - 130
Power loss contactor at max. rated capacitor current	W	4.1	5.7	7.5	12.6	21	38.7	36
Rated insulation voltage	V AC	690 ¹⁾	1000 ¹⁾					
Max. frequency of operations:	1/h	120	120	120	120	120	80	80
Contact life:	Million operations	0.25	0.15	0.15	0.15	0.15	0.12	0.12
■ w/o reactors		0.40	0.30	0.30	0.30	0.30	0.20	0.20
Cable cross section								
■ Solid or stranded	mm ²	1.5 ... 6	2.5 ... 25	2.5 ... 25	4 ... 50	4 ... 50	4 ... 50	0.5 ... 95 / 10 ... 120
■ Flexible		1.5 ... 4	2.5 ... 16	2.5 ... 16	10 ... 35	10 ... 35	10 ... 35	0.5 ... 70 / 10 ... 95
■ Flexible with multicore cable end		1.5 ... 4	2.5 ... 16	2.5 ... 16	10 ... 35	10 ... 35	10 ... 35	0.5 ... 70 / 10 ... 95
Cables / clamp		2	1	1	1	1	1	2
2 cables per pole for cable cross section:								
■ Solid or stranded	mm ² (max.)	6/6	10/10	10/10	16/16	16/16	16/16	95/120
■ Flexible		4/4	10/10	10/10	25/25	25/25	25/25	70/95
Weight including auxiliary contact:								
■ Type ...N...	kg	0.26	0.51	0.51	0.88	0.88	0.88	2.23
■ Type ...J...		0.37	0.67	0.67	1.03	1.03	1.03	2.33
Fuses gL (gG) From / to	A	35 / 63	50 / 80	63 / 100	80 / 160	125 / 160	160 / 200	160 / 250

1) Suitable at 690 V for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $V_{imp} = 8 \text{ kV}$.
Data for other conditions on request.

Preliminary data

Type/ Auxiliary contacts		...1810...	...2410...	...3210...	...5010...	...6210...	...7410...	...9910...
Normal Open (NO)		1	1	1	1	1	1	1
Rated insulation voltage	V AC	690 ¹⁾						
Rated operational current AC15 at 230 V / 400 V	A	3 / 2	3 / 2	3 / 2	3 / 2	3 / 2	3 / 2	3 / 2
Rated operational current AC1 at 690 V	A	10	10	10	10	10	10	10

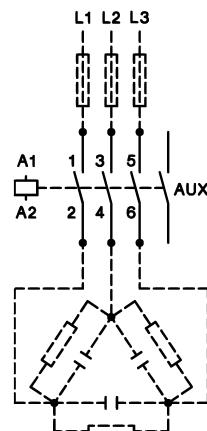
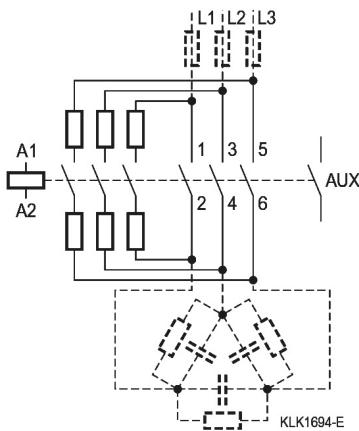
1) Suitable at 690 V for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $V_{imp} = 8 \text{ kV}$.
 Data for other conditions on request.

Connection diagram for all types B44066S...J...

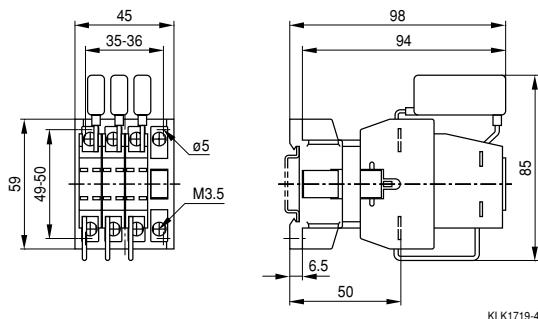
(with preload resistors). (B44066S1810J230 and B44066S1810J110 with wires on the bottom only, B44066S9910J230 with resistors inside housing).

Connection diagram for all types B44066S...N...

(without preload resistors).

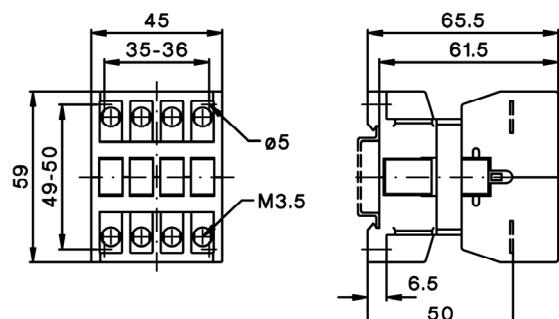

Dimensional drawings

B44066S1810J230, B44066S1810J110



B44066S2410J230, B44066S3210J230

B44066S1810N230



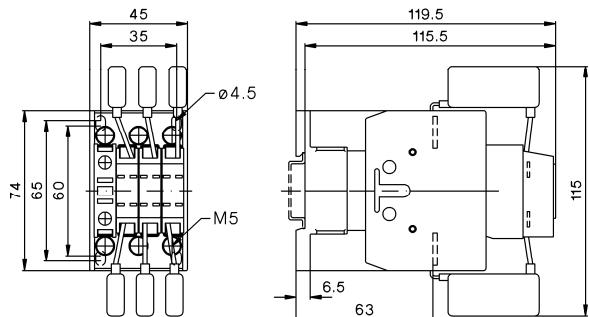
B44066S2410N230, B44066S3210N230

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Key Components – Capacitor Contactors

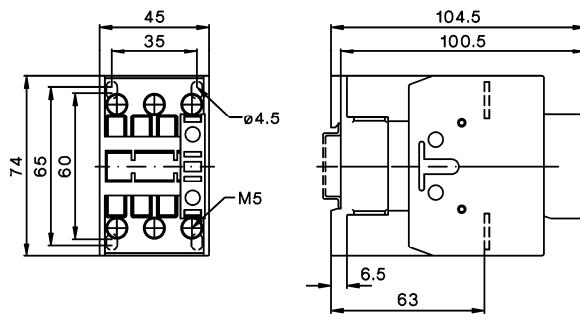
B44066S....J230/J110/N230
B44066S

Preliminary data

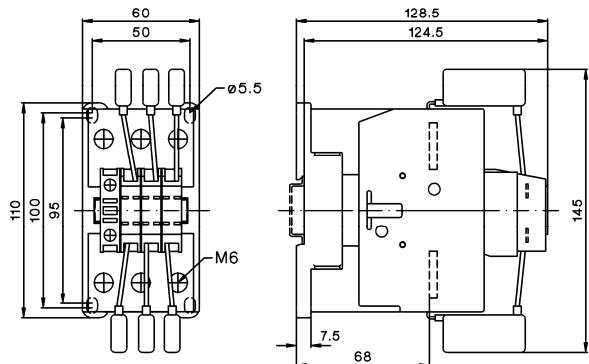
B44066S2410J110, B44066S3210J110



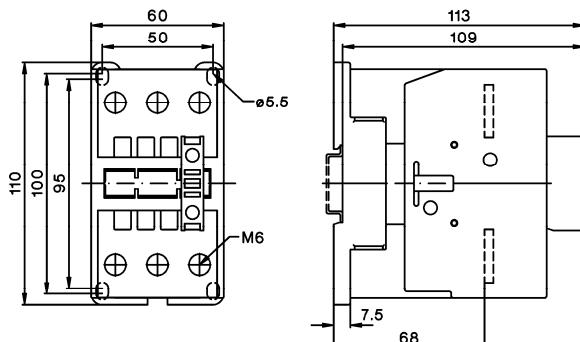
B44066S5010J230,
B44066S6210J230, B44066S6210J110,
B44066S7410J230, B44066S7410J110



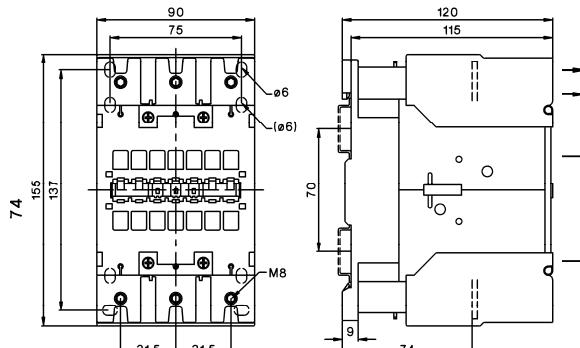
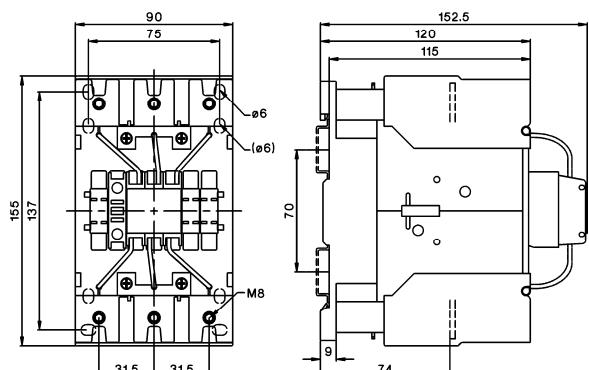
B44066S5010N230, B44066S6210N230
B44066S7410N230



B44066S9910J230



B44066S9910N230



Preliminary data

Cautions and warnings

In case auxiliary contacts are used for switching of discharge resistors (not in accordance with IEC 60831 standard), make sure that the current of the discharge resistors is not higher than the rated current of the auxiliary contacts.

Mounting instructions

In the area of capacitor switching contactors, difficultly inflammable and self-extinguishing materials may be used only, because abnormal temperatures within the area of the resistance spirals cannot be excluded.

Note

For detailed information about PFC key components and cautions, refer to the latest version of EPCOS PFC Product Profile.

Important: Please note that the „General Safety Recommendations for Power Capacitors“ by ZVEI (German Electrical and Electronic Manufacturers‘ Association (ZVEI) have to be observed in addition to the caution guidelines stated in the data sheet (Internet: www.epcos.com/pfc).

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

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