

# Capacitor Switching Contactors

For use with reactive or non-reactive capacitor banks



Rated Operational Power at 50/60Hz Ambient Temperature						Aux. Contacts		Type	Coil voltage <sup>1)</sup> 220-240V 50Hz	Pack pcs.	Weight kg/pc.
50°C		60°C		Built-in Add.		NO	NC				
380V	415V	660V	380V	415V	660V						
400V	440V	690V	400V	440V	690V						
kVAr	kVAr	kVAr	kVAr	kVAr	kVAr						
0-12,5	0-13	0-20	0-12,5	0-13	0-20	1	-	1 <sup>2)</sup>	<b>K3-18NK10</b> ...	1	0,34
0-12,5	0-13	0-20	0-12,5	0-13	0-20	-	1	1 <sup>2)</sup>	<b>K3-18NK01</b> ...	1	0,34
0-12,5	0-13	0-20	0-12,5	0-13	0-20	1	-	1 <sup>2)</sup>	<b>K3-18NBK10</b> ...	1	0,40
10-20	10,5-22	17-33	10-20	10,5-22	17-33	-	-	3 <sup>3)</sup>	<b>K3-24K00</b> ...	1	0,62
10-25	10,5-27	17-41	10-25	10,5-27	17-41	-	-	3 <sup>3)</sup>	<b>K3-32K00</b> ...	1	0,62
20-33,3	23-36	36-55	20-33,3	23-36	36-55	-	-	3 <sup>3)</sup>	<b>K3-50K00</b> ...	1	1,0
20-50	23-53	36-82	20-50	23-53	36-82	-	-	3 <sup>3)</sup>	<b>K3-62K00</b> ...	1	1,0
20-75 <sup>4)</sup>	23-75 <sup>4)</sup>	36-120 <sup>4)</sup>	20-60	23-64	36-100	-	-	3 <sup>3)</sup>	<b>K3-74K00</b> ...	1	1,0
33-80	36-82	57-120	33-75	36-77	57-120	-	-	6 <sup>5)</sup>	<b>K3-90K00</b> ... / VS <sup>7)</sup>	1	2,3
33-100 <sup>6)</sup>	36-103 <sup>6)</sup>	57-148 <sup>6)</sup>	33-90 <sup>6)</sup>	36-93 <sup>6)</sup>	57-148 <sup>6)</sup>	-	-	6 <sup>5)</sup>	<b>K3-115K00</b> ... / VS <sup>7)</sup>	1	2,3

**Specification:** Contactors K3-..K are suitable for switching low-inductive and low loss capacitors in capacitor banks (IEC70 and 831, VDE 0560) without and with reactors.

Capacitor switching contactors are fitted with early make contacts and damping resistors, to reduce the value of make current < 70 x I<sub>e</sub>.

**Operating Conditions:** Capacitor switching contactors are protected against contact welding for a prospective making current of 200 x I<sub>e</sub>.

**Technical Data** acc. to IEC 947-4-1, IEC 947-5-1, EN 60947-4-1, EN 60947-5-1, VDE 0660

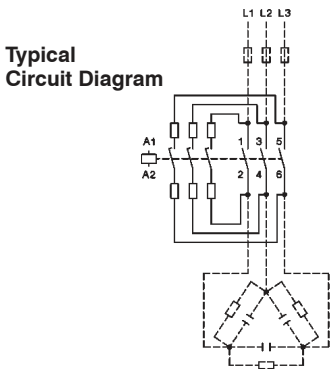
Type		K3-18NK	K3-18NBK <sup>8)</sup>	K3-24K	K3-32K	K3-50K	K3-62K	K3-74K	K3-90K	K3-115K
Max. frequency of operations z	1/h	120	120	120	120	120	120	80	80	80
Contact life non reactive cap. banks S x 10 <sup>3</sup> reactive cap. banks S x 10 <sup>3</sup>		250	250	150	150	150	150	120	120	120
		400	400	300	300	300	300	200	200	200
<b>Rated operational current I<sub>e</sub></b> <b>AC6b</b>	at 50°C A	<b>0-18</b>	<b>0-18</b>	<b>14-28</b>	<b>14-36</b>	<b>30-48</b>	<b>30-72</b>	<b>30-108</b>	<b>50-115</b>	<b>50-144</b>
	at 60°C A	<b>0-18</b>	<b>0-18</b>	<b>14-28</b>	<b>14-36</b>	<b>30-48</b>	<b>30-72</b>	<b>30-87</b>	<b>50-108</b>	<b>50-130</b>
Rated operational current I <sub>th</sub> AC1	at 50°C A	32	45	45	60	100	110	120	155	190
	at 60°C A	32	40	40	55	90	100	110	145	170
Overload factor acc. to EN 61921: 30% min.	at 50°C %	78	150	60	67	108	53	11	35	32
	at 60°C %	78	122	43	53	88	39	26	34	31
Fuses gL (gG)	from / to A	35 / 63	35 / 63	50 / 80	63 / 100	80 / 160	125 / 160	160/200	160/200	160/250

- 1) Coil voltage range and non-standard coil voltages see page 57
- 2) 1 HN.. or HA.. snap-on
- 3) 2HB.. for side mounting and 1 HN.. or HA.. snap-on
- 4) Consider the max. thermal current of the contactor K3-74A: I<sub>th</sub> 130A
- 5) 2 HB.. on the left or right side and 4 HN.. or HA.. snap-on
- 6) Consider the min. cross-section of conductor at max. load
- 7) Type 230 for AC- and DC-operating 220-240V 50/60Hz and 220V DC (with integrated coil suppressor)  
Type 230VS for AC-operating 220-240V 50Hz (with integrated coil suppressor)
- 8) Cable cross sections: 2,5 - 16mm<sup>2</sup>

# Capacitor Switching Contactors

Main Contacts (cULus)	Type	K3-18NK	K3-18NBK	K3-24K	K3-32K	K3-50K	K3-62K	K3-74K	K3-90K	K3-115K
Rated operational power of 3-phase cap. banks 110-120V at 60Hz (3ph)      200V	Ar	0-3,5	0-3,5	3-5,5	3-7	6,5-10	6,5-15	6,5-18 <sup>1)</sup>	10-24	10-28 <sup>2)</sup>
	Ar	0-6	0-6	4,5-10	4,5-12,5	10-16,7	10-25	10-32 <sup>1)</sup>	17-40	17-46 <sup>2)</sup>
	Ar	0-7	0-7	5,5-11	5,5-15	12,5-20	12,5-30	12,5-36 <sup>1)</sup>	20-47	20-56 <sup>2)</sup>
	Ar	0-15	0-15	11,5-25	11,5-30	25-40	25-60	25-72 <sup>1)</sup>	40-95	40-114 <sup>2)</sup>
550-	Ar	0-18	0-18	14,5-30	14,5-35	31-50	31-75	31-90 <sup>1)</sup>	50-120	50-143 <sup>2)</sup>
Fuse Class RK5 / Short-circuit current	A/kA	70/5	70/5	90/5	125/5	200/5	250/5	300/5	300/10	300/10
Fuse Class T / Short-circuit current Rated voltage		80/100 600	80/100 600	110/100 600	150/100 600	175/100 600	175/100 600	175/100 600	300/100 <sup>3)</sup> 600	300/100 <sup>3)</sup> 600
<b>Auxiliary Contacts (cULus)</b>		A600	A600	-	-	-	-	-	-	-

- 1) Consider the max. thermal current of the contactor K3-7 :  $I_m$  130A
- 2) Consider the min. cross-section of conductor at max. load
- 3) Class T and Class R

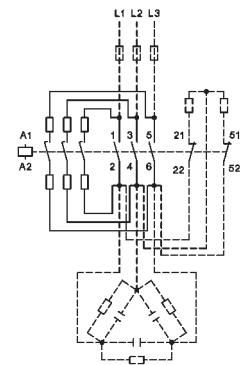


**Wiring Diagram for Quick Discharge Resistors**

Make sure that the current of the discharge resistors is not higher than the rated current (AC1) of the auxiliary contacts

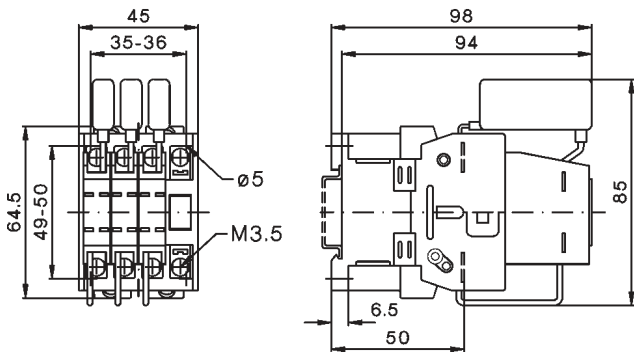
**Mounting instructions:**

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

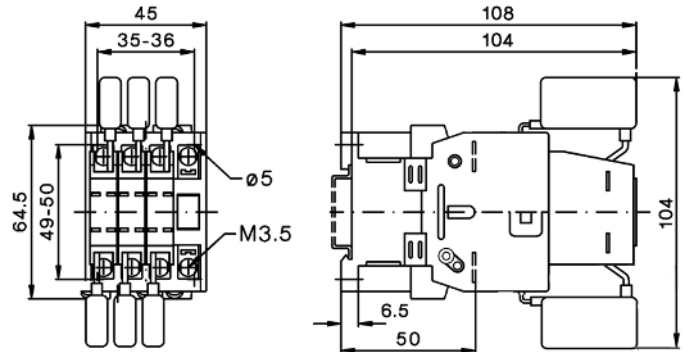


**Dimensions**

**K3-18NK..**

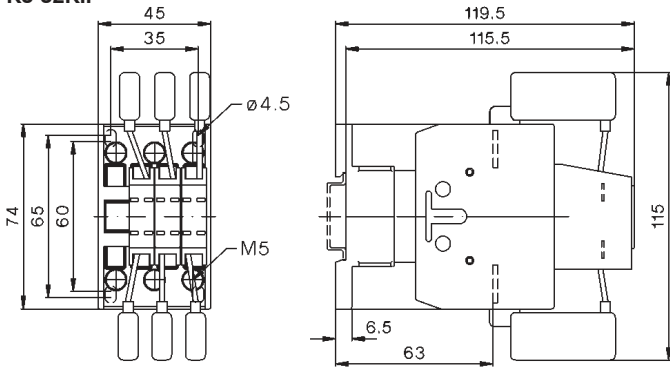


**K3-18NBK..**

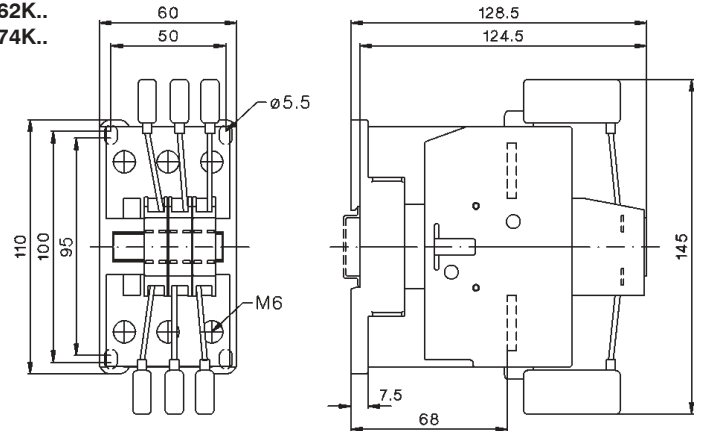


# DATA SHEET

**K3-24K..**  
**K3-32K..**



**K3-50K..**  
**K3-62K..**  
**K3-74K..**



**K3-90K..**  
**K3-115K..**

