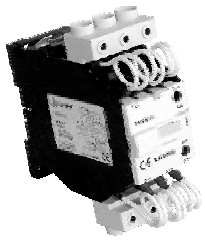
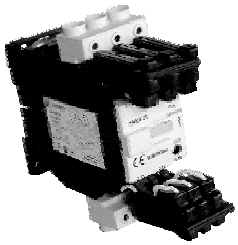
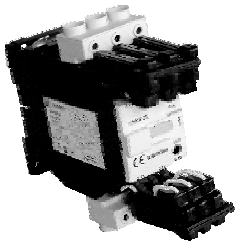
CAPACITOR CONTACTORS type CNKN 12 -CNKN 25

Features

- In conformity with: IEC 60947-1, IEC 60947-4
- Switching of 3 phase capacitors
- Ambient temperature of 55 ^{0}C
- Available in other AC voltages on request

Selection and ordering data

AC coil operation

	AC-6b utilization category For switching three-phase capacitors			Auxiliary contacts		Type	Weights
	Capacitor rating at operating voltage 50 Hz		Ie (A)				kg
	230 V kVAr	**400 V kVAr**	400 V/50 Hz	NO	NC		
	6,7	**12**	**18**	1	0	**CNKN 12 10**	0.49
				0	1	**CNKN 12 01**	
	8.5	**15**	**22**	1	0	**CNKN 15 10**	0.67
				0	1	**CNKN 15 01**	
	11	**20**	**28**	1	0	**CNKN 20 10**	0.68
				0	1	**CNKN 20 01**	
	14	**25**	**35**	1	0	**CNKN 25 10**	0.71
				0	1	**CNKN 25 01**	

These CNKN contactors are equipped with early-make contacts.
This special type of contact has the purpose of connecting for a very brief interval, 2-3ms, during the contactor closing, resistors which limit the connecting current of the capacitors.

CAPACITOR CONTACTORS type CNKM 30 -CNKM 60

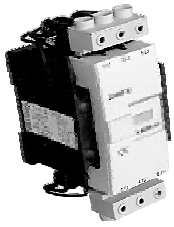
Features

- In conformity with: IEC 60947-1, IEC 60947-4
- Switching of 3 phase capacitors
- Ambient temperature of 55 ^{0}C
- Available in other AC voltages on request

1

Selection and ordering data

AC coil operation

	AC-6b utilization category For switching three-phase capacitors Capacitor rating at operating voltage 50 Hz		Ie (A)	Auxiliary contacts	Type	Weights
	230 V kVAr	**400 V kVAr**	400 V/50 Hz			kg
	20	**30**	**44**	0 0	**CNKM 30 00**	0.94
	25	**40**	**58**	0 0 2 2	**CNKM 40 00** **CNKM 40 22**	1.58
	29	**50**	**72**	0 0 2 2	**CNKM 50 00** **CNKM 50 22**	1.6
	34	**60**	**87**	2 2	**CNKM 60 22**	2.4

These CNKM contactors are equipped with early-make contacts.
This special type of contact has the purpose of connecting for a very brief interval, 2-3ms, during the contactor closing, resistors which limit the connecting current of the capacitors. These resistors are then excluded when the closing operation is complete and the current capacity is conveyed to the main contacts. With this type of circuit, it is possible to obtain minor wear of all the components of the system especially fuses and capacitors ensuring a longer life and better reliability.

TECHNICAL INFORMATION

CAPACITOR CONTACTORS TYPE
CNKN 12 - CNKN 25, CNKM 30 - CNKM 50

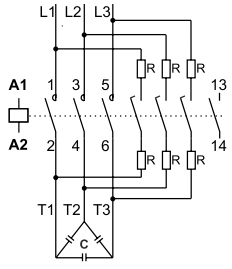
Special contactors for power factor correction capacitors

Main characteristics

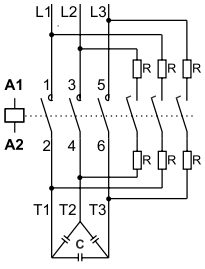
These contactors are equipment with early - make contacts. This special type of contact has the purpose of connecting for a very brief interval, 2-3 ms, during the contactor closing, resistances which limit the connecting current of the capacitors. These resistances are then excluded when the closing operation is complete and the current capacity is conveyed to the main contacts.

Type designation		**CNKN 12 10 CNKN 12 01**	**CNKN 15 10 CNKN 15 01**	**CNKN 20 10 CNKN 20 01**	**CNKN 25 10 CNKN 25 01**	**CNKM 30 00**	**CNKM 40 00 CNKM 40 22**	**CNKM 50 00 CNKM 50 22**	**CNKM 60 22**
Capacitor rating at 230V	kvar	6,7	8,5	11	14	20	25	29	34
400V	**kvar**	**12**	**15**	**20**	**25**	**30**	**40**	**50**	**60**
Rated operational current Ie/AC6b et 400 V	A	**18**	**22**	**28**	**35**	**44**	**58**	**72**	**87**
Insulation rating	V	690					750		1000
Permissible ambient temperature	°C	- 25 to + 55							
Coil voltage tolerances		0,85 - 1,1 Un							
Maximum permissible fuse ratings main circuit gL/gG auxilliary circuit	A A	25 16	35 16	40 16	50 16	63 16	80 16	125 16	160 16
Frequency of switching operations	s/h	240	120	120	120	100	100	100	100
Electrical endurance	x10^6	0,1							
Sizes of connecting conductors main circuit multi-wire conductor multi-wire cond. with cable shoe	mm^2	2,5-4	6-25	6-25	6-25	6-25	16-35	16-35	50/8

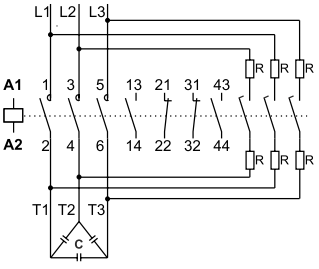
CONNECTION DIAGRAMS AND TERMINAL MARKINGS



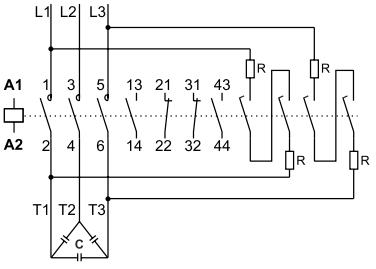
CNKN 12 10, CNKN 15 10
CNKN 20 10, CNKN 25 10



CNKM 30 00, CNKM 40 00
CNKM 50 00



CNKM 40 22, CNKM 50 22



CNKM 60 22

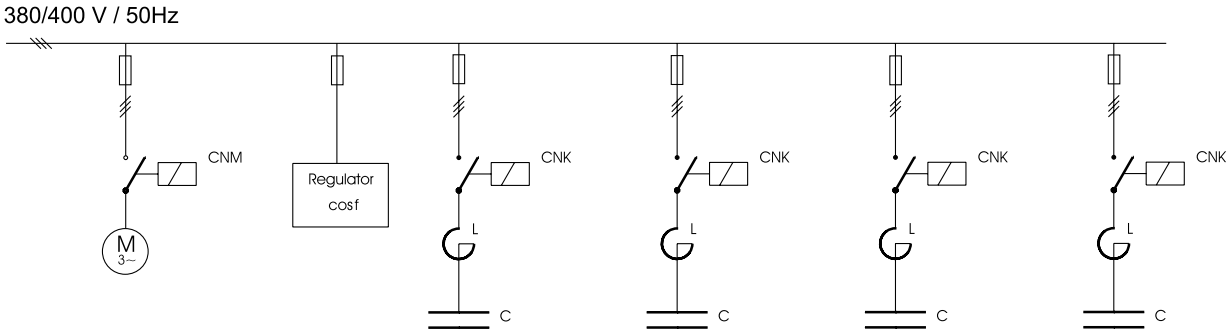
VERY IMPORTANT NOTE:

For single compensattion air coils or 3 - phase reactors (coils with magnetic core and air gap) are not necessary.
When the contactor is used for group compensation it's recommendable to use appropriate 3-phase filter circuit reactors (coils with magnetic core and air gap).
This will reduce the value of higher harmonics and will prevent resonant current to prevail.
At single compensation the power of selected contactor is according to capacitor rated power.
At group and central compensation, when reactors are not in use, one step higher rating of the contactor is recommendable.

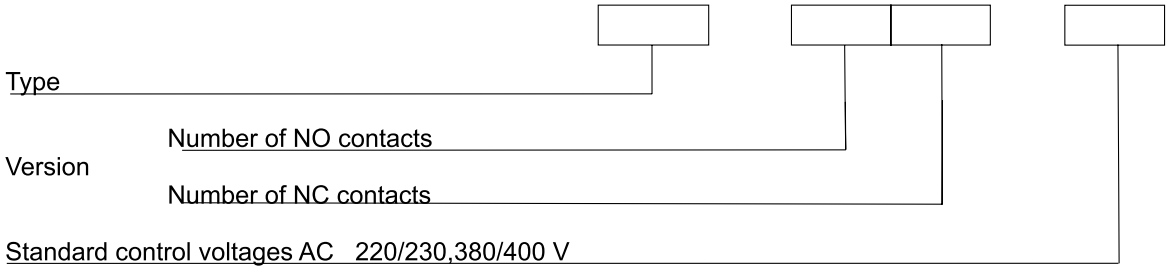
Before switch the contactor in the circuit, capacitor must be discharged (the voltage at the terminals must be < 50 V).

During explotation, current value must not exceed the declared values.

CONECTION DIAGRAM FOR GROUP (CENTRAL) COMPENSATION



ORDER FOR CAPACITOR CONTACTORS



Example: Capacitor contactor type CNKM 50 with two NO and two NC auxiliary contacts, control voltage 220 V, 50 Hz

CNKM 50	2	2	220 V	50 Hz.