



## INSTRUCTIONS FOR USE AND MAINTENANCE FOR CONTACTORS УПАТСТВО ЗА УПОТРЕБА И ОДРЖУВАЊЕ UPUTSTVO ZA UPOTREBU I ODRŽAVANJE

CNNK 10, CNNK 12, CNNK 15, CNNK 20, CNNK 25E, CNNK 25,  
CNNK 30, CNNK 40, CNNK 50, CNNK 60, CNNK 70, CNKM 60, CNKM 75

IEC-EN 60947-4-1; VDE 0660



### Technical data / Технички податоци / Tehnički podatci

The contactor conform to the recommendations IEC-EN 60947-4-1. For the rated data see the rating plate on the contactor body side.  
Контакторите одговараат на стандардите MKC EN 60947-4-1. Номиналните големини и податоци за употреба се отпечатени на левата страна на кукиштето.  
Sklopnici odgovaraju po standardima IEC-EN 60947-4-1. Nominalne veličine i podatci za upotrebu dati su na levoj strani od kućišta sklopnika.

#### WARNING:

HAZARDOUS VOLTAGE CAN CAUSE ELECTRICAL SHOCK AND BURNS.  
DISCONNECT POWER BEFORE PROCEEDING WITH ANY WORK ON THIS EQUIPMENT.



WHEN THE SYSTEM VOLTAGE IS APPLIED AND THE LOAD IS CONNECTED, DO NOT OPERATE THE CONTACTOR BY PRESSING DOWN THE POSITION INDICATOR.



MANUAL OPERATION NOT PERMITTED FOR FUNCTION TESTING.  
SWITCH ONLY ON TO DISCHARGED CAPACITORS.  
DO NOT REMOVE PRECHARGING RESISTORS, AS THIS WOULD CAUSE THE CONTACTS TO BE DAMAGED IN SWITCHING OPERATIONS UNDER LOAD.

#### COIL CIRCUIT

The rated coil voltage is marked on the coil.  
The excitation voltage should not deviate from the value of rated voltage more than +10% or -15%. A voltage drop of more than 15% during the closing action is not permissible because might cause burning of contactor.

#### MOUNTING

The contactors CNNK 10, CNNK 12, CNNK 15, CNNK 20, CNNK 25E, CNNK 25 and CNNK 30 have possibility of snap-on fastening to 35mm mounting rail to DIN EN 50022, or screw mounting to plane surface using two M4 screws.

The contactors CNNK 40, CNNK 50, CNNK 60 and CNNK 70 have possibility of snap-on fastening to 35mm and 75mm mounting rail to DIN EN 50022, or screw mounting to plane surface using two M4 or M5 screws.

The contactors CNKM 60 and CNKM 75 has possibility of mounting to plane surface using two M5 screws.

The protection degree of contactors CNNK is IP20 to IEC 60529 which mean that contactor should be mounted in dry and clean rooms. Mount the contactor on a vertical plane surface so that the terminal markings are in normal position for reading.

Connect the contactor by using single wire or multi wire conductors:  
1-2,5mm<sup>2</sup> single wire conductor; 0,75 - 1,5 multi wire conductor for auxiliary contacts and 1,5-6mm<sup>2</sup> for main contacts for CNNK 10, CNNK 12 and CNNK 15; 2,5-10mm<sup>2</sup> for CNNK 20, CNNK 25E; 6-25 mm<sup>2</sup> CNNK 25 and CNNK 30; 16-50 mm<sup>2</sup> for CNNK 40, CNNK 50 and CNNK 60; 16-70 mm<sup>2</sup> for CNNK 70; 50/6 mm<sup>2</sup> for CNKM 60 and CNKM 75 for IP 20; 50-70/8 mm<sup>2</sup> for CNKM 60 and CNKM 75.

#### VERY IMPORTANT NOTE:

For single compensation air coils or 3-phase reactors (coils with magnetic core and air gap) are not necessary.

When the contactor is used for group (central) compensation we recommend to use appropriate 3-phase filter circuit reactors (coils with magnetic core and air gap).

At single compensation the power of selected contactor is according to capacitors rated power.

At group and central compensation the power of selected contactor has to be one step higher than capacitor's rated power (if you don't use reactors).

During exploitation, current value must not exceed the declared values. Use only HRC fuses gG type for each step for short circuit protection.

Use only halogen free connection wires.

#### OPERATION

Observe operating voltage (see rating plate of magnet coil).

Contact endurance: 2x10<sup>5</sup> make/break operations for CNNK 10 - CNNK 15; 1,5x10<sup>5</sup> for CNNK 20; 1x10<sup>5</sup> for CNNK 25E - CNNK 70; 75x10<sup>4</sup> for CNNK 75

Switching frequency: 240/h (1 make/break operation/15s) for CNNK 10 - CNNK 15

Switching frequency: 120/h (1 make/break operation/30s) for CNNK 20.

Switching frequency: 100/h (1 make/break operation/30s) for CNNK 25E - CNKM 75

Through the use of quick-discharge resistors, the danger of complete polarity reversal in the event of rapidly recurring closure can be excluded.



Before switching the contactor in the circuit, The capacitor must be discharged (the voltage at the terminal must be < 50 V).

#### MAINTENANCE

Remove dust with compressed air. Foreign bodies on the magnet pole faces causes humming. If necessary clean the pole faces carefully. Do not use a chemical substances or sharp object for cleaning.

If there is still hum, replace the contactor (it has worn out).

### Dimension drawings (mm)

#### Димензиски скици (mm)

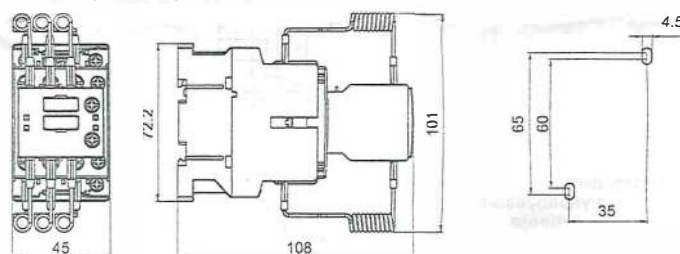
#### Merne skice (mm)

### Drilling plan (mm)

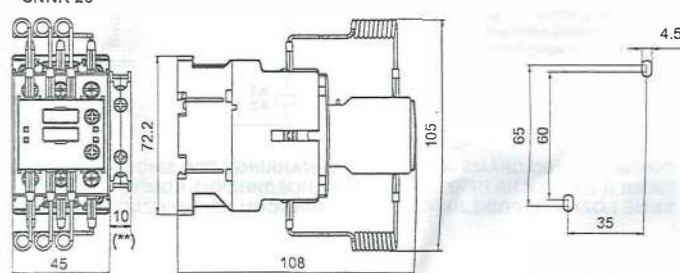
#### План за бушење (mm)

#### Plan bušenja (mm)

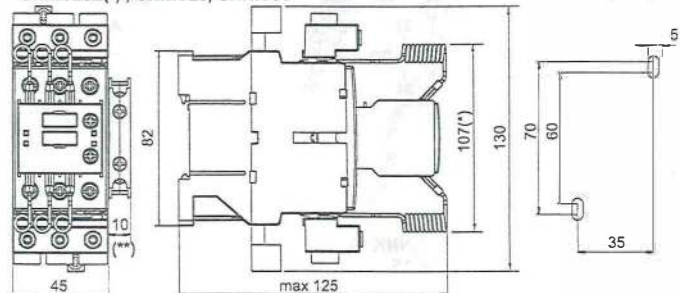
CNNK 10, CNNK 12, CNNK 15



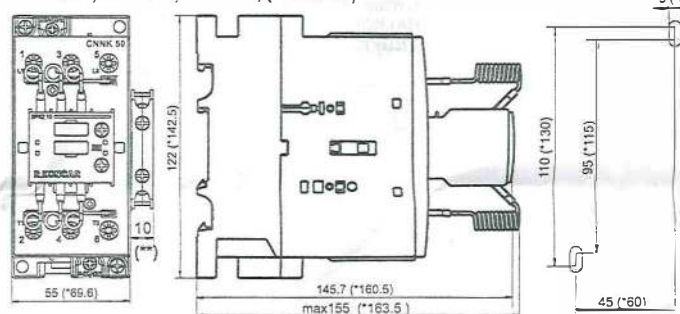
CNNK 20



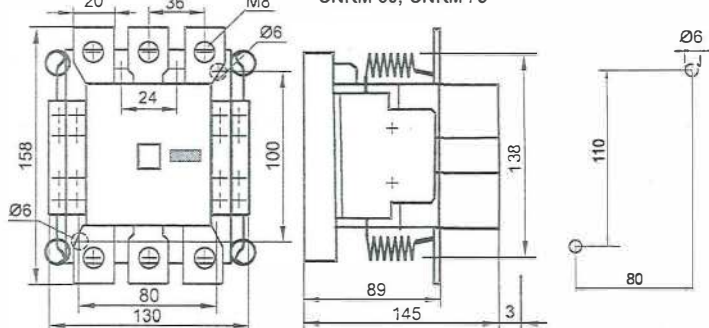
CNNK 25E(\*), CNNK 25, CNNK 30



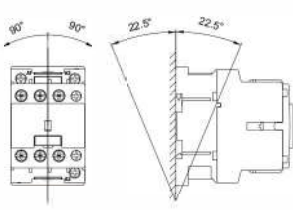
CNNK 40, CNNK 50, CNNK 60, (\*CNNK 70)



CNKM 60, CNKM 75

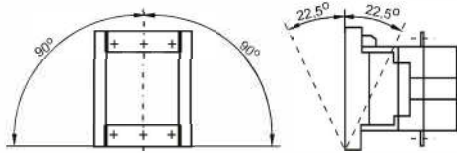


## Installation types

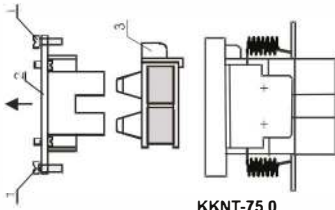


KKNT-10.0, KKNT-12.5, KKNT-15.0,  
KKNT-20.0, KKNT-25.0, KKNT-30.0  
KKNT-40.0, KKNT-50.0, KKNT-60.0

A = 60 - KKNT-10.0, KKNT-12.5,  
KKNT-15.0, KKNT-20.0,  
KKNT-25.0, KKNT-30.0,  
A = 75 - KKNT-40.0, KKNT-50.0,  
KKNT-60.0  
A = 145 - KKNT-75.0



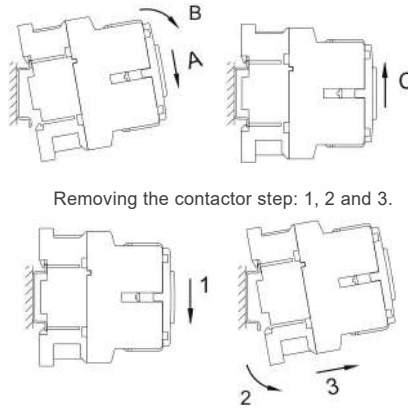
KKNT-75.0



KKNT-75.0

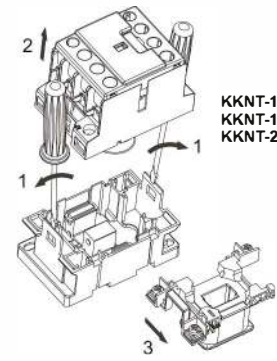
1. unscrew the screws
2. remove the plate
3. replace the coil

## Contactor assembly, step 1: A, B and C

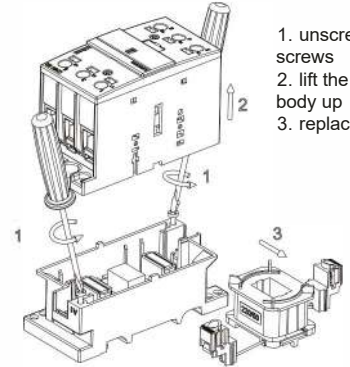


Removing the contactor step: 1, 2 and 3.

## RETURNING THE COIL



KKNT-10.0; KKNT-12.5;  
KKNT-15.0; KKNT-20.0;  
KKNT-25.0; KKNT-30.0,

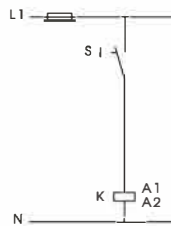


1. unscrew the screws
2. lift the upper body up
3. replace the coil

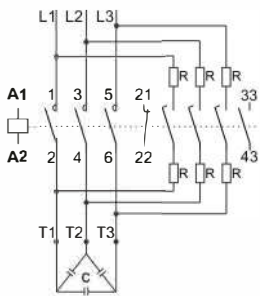
KKNT-40.0; KKNT-50.0; KKNT-60.0

## CONTROL DIAGRAM

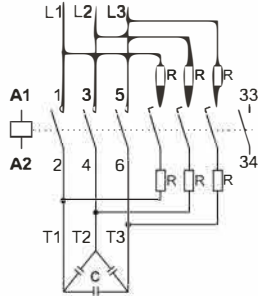
With permanent button



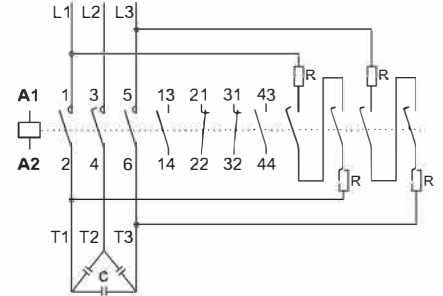
## CONNECTION DIAGRAM FOR SINGLE COMPENSATION



KKNT-10.0; KKNT-12.5  
KKNT-15.0



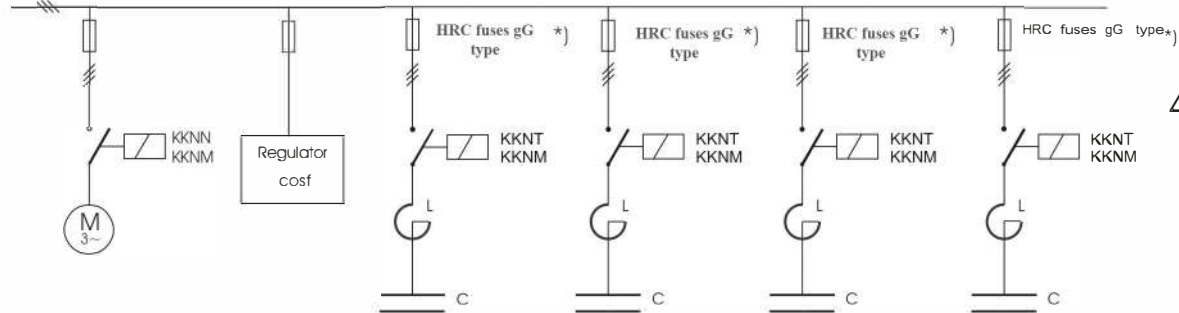
KKNT-20.0; KKNT-25.0; KKNT-30.0;  
KKNT-40.0; KKNT-50.0; KKNT-60.0



KKNT-75.0 22

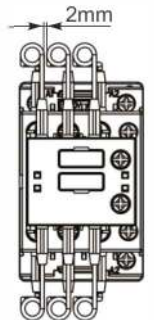
## CONTROL DIAGRAM FOR GROUP COMPENSATION

380/400 V / 50Hz



- \*) Fuses supplying the contactor must be selected between 1.6 times and 1.8 times the rated current  $I_e(A)/AC-6b$

minimum distance  
between resistors  
after installation



grup  
**ARGE**

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