



RADE KONCAR CONTACTOR **CNN9**
9A/4.5kW (AC3, 400V/50Hz); 25A(AC1)

Contactor type		CNN 9	
Mechanical endurance	make/brake operations	$\times 10^6$	5
Insulation rating		V	690
Permissible ambient temperature		°C	from -25 to +55
Consumption of electromagnet in cold state with U_n			
AC operated	closing	VA	62
	P.F.		0.75
	closed	VA	7
	P.F.		0.3
DC operated	closing	W	-
	closed	W	-
Coil voltage tolerance			0.85-1.1 U_n
duration of making and braking			
(values are also valid for voltages of electromagnet from 0.8 to 1.1 U_n for each in cold and warm state).			
Total breaking time is addition of opening time and duration of electric zrc.			
AC operated	closing time	ms	12 to 22
	opening time	ms	4 to 19
	duration of electric arc	ms	10
Frequency of switching operations			
without thermal relay			
utilization category	AC1	s/h	1000
	AC2, AC3	s/h	750
	AC4	s/h	250
		s/h	15
with thermal relay			
Resistivity to shock (square shock)			7/5 and 4.2/10
Short-circuit protection of contactors without overload relays			
Main circuit			
With fuse links			
acc. To IEC 60947-4-1	Type of coord. "1" gI/gG	A	25
DIN VDE 0660 Part 102	Type of coord. "2"	A	20
Size of connection conductors			
contactors without overload relays			
main circuit	single-wire conductors	mm ²	1.5-6
	multi-wire conductor with cable shoe	mm ²	1.5-6
	Screw		M4
	Screw head		PZ2
	Tightening torque	Nm	1.2
auxiliary circuit	single-wire conductor	mm ²	1-2.5
	multi-wire conductor with cable shoe	mm ²	0.75-1.5
	Screw		M3.5
	Screw head		PZ2
	Tightening torque	Nm	0.8
Loadability of auxiliary contacts of contactors CM1 and CNN			
Rated continuous current I_{th} ; 35°C			
rated operational current I_e /AC15	for 24V	A	10
	230V	A	6
	400V	A	6
	500V	A	4
	690V	A	2
		A	1
rated operational current I_e /DC13	for 24V	A	4
	110V	A	0.6
	230V	A	0.3

Load carrying capacity of the main contactsrated continuous current I_{th} ; 55C

AC1 utilization category

A 25

rated operational current $I_e/AC1$; 55C

A 25

AC2 and AC3 utilization categories for 230V

kW 3.2

(slip-ring and cage motors at 50Hz)

400V**kW 4.5**

690V

kW 5.5

AC4 utilization category (50.000 for CM1..N)

(electrical endurance of contacts:120.0 (80.000 for CM1))

rated current $I_e/AC4$

A 4.5

ratings of squirrel-cage motors at 50Hz for 230V

kW 0.75

400V**kW 1.9**

500V

kW 1.9

690V

kW 1.5

Loadability by direct current

DC1 utilization category, non-inductive loads L/R1 ms

rated operational current I_e , 55C for 24V

A 20

through one pole

48V

A 20

110V

A 2.1

220V

A 0.8

440V

A 0.6

600V

A 0.6

through three poles connected in series for 24V

A 20

48V

A 20

110V

A 20

220V

A 20

440V

A 1.3

600V

A 1

utilization category DC3 to DC5

series and shunt motors (L/R15 ms)

rated operational current I_e , 55C for 24V

A 20

through one pole

48V

A 5

110V

A 1.5

220V

A 0.75

440V

A -

600V

A -

through three poles connected in series for 24V

A 20

48V

A 20

110V

A 20

220V

A 1.5

440V

A 0.2

600V

A 0.2

Dimensions

A mm 45

B mm 72.2

C mm 71

Weight g 260