



RADE KONCAR CONTACTOR CNN9
 9A/4.5kW (AC3, 400V/50Hz); 25A(AC1)
 In conformity with standard IEC 60947-4-1

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. closed		VA	0.75
DC operated	closing		W	7
	P.F. closed		W	0.3
				-
				-
Coil voltage tolerances			0.85-1.1 U_n	
duration of making and breaking				
(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 arc.				
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
with thermal relay				
			s/h	15
Resistivity to shocks (square shock)			g/ms	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" gl/gG		A	25
DIN VDE 0660 Part 102	Type of coord. "2"		A	20
Sizes of connection conductors				
for contact without thermal relay				
main circuit	single-wire conductors		mm ²	1.5-6
	multi-wire conductir with cable shoe		mm ²	1.5-6
	Screw			M4
	Screw head			PZ2
auxiliary circuit	Tightening torque		Nm	1.2
	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				
Rated continuous current I_{th} ; 40 °C			A	10
rated operational current I_e /AC15	for 24V		A	6
	230V		A	6
	400V		A	4
	500V		A	2
	690V		A	1
	for 24V		A	4
rated operational current I_e /DC13			A	4

	110V	A	0.6
	230V	A	0.3
Load carrying capacity of the main contacts			
rated continuous current Ith			
AC1 utilization category		A	25
rated operational current Ie/AC1		A	25
AC2 and AC3 utilization categories			
(slip-ring and cage motors at 50Hz)	for 230V	kW	3.2
	400V	kW	4.5
	690V	kW	5.5
AC4 utilization category			
(electrical endurance of contacts:120.000)			
rated current	Ie/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 Ie	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 Ie	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



