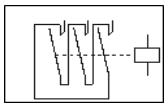
Product technical information

RADE KONCAR CONTACTOR **CNN80**
80A/37kW (AC3, 400V/50Hz); 90(135)A(AC1)

Contactor type				**CNN 80**
Mechanical endurance	make/brake operations		$x10^6$	5
Insulation rating			V	1000
Permissible ambient temperature			^oC	from -25 to +55
Consumption of electromagnet in cold state with Un				
AC operated	closing		VA	204
	P.F.			0,54
	closed		VA	16
	P.F.			0,26
DC operated	closing		W	200
	closed		W	3,5
Coil voltage tolerances				0.85-1.1Un
duration of making and breaking (values are also valid for voltages of electromagnet from 0.8 to 1.1 Un 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	9 to 35
	opening time		ms	9 to 15
	duration of electric arc		ms	10 to 15
DC operated	closing time		ms	20 to 50
	opening time		ms	120 to 150
	duration of electric arc		ms	10 to 15
Frequency of switching operations without thermal reley				
utilization category		AC1	s/h	1000
		AC2, AC3	s/h	600
		AC4	s/h	200
with thermal relay			s/h	15
Resistivity to shocks	(square shock)		g/ms	9.6/5 and 5.2/10
Short-circuit protection contactors without overload relays				
Main circuit With fuse links				
acc. To IEC 60947-4-1	Type of coord. "1" gl/gG		A	125/160/160
DIN VDE 0660 Part 102	Type of coord. "2"		A	63/80/100
Sizes of connection conductors for contact without thermal relay				
main circuit	Rigid solid		mm^2	
	standed		mm^2	25-70
	multi-wire conductor with cable shoe		mm^2	-
	standed with cable lug		mm^2	25-50
				-
	flatbar		mm	-
				-
	protective conductor with cable lug		mm^2	-
	Screw			M8
	Screw head			⬡
	Tightening torque		Nm	4-4.5
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			
Reated continuous current Ith ; 35C		A	16
AC			
rated operational current Ie/AC15	230V	A	6
	400V	A	4
	500V	A	2,5
	690V	A	2,5
DC			
rated operational current Ie/DC1; L/R ≤1ms	24V	A	10
	110V	A	3,2
	220V	A	0,9
	440V	A	0,33
	600V	A	0,22
rated operational current Ie/DC13	for 24V	A	10
	110V	A	1,8
	220V	A	0,9
	440V	A	0,27
	600V	A	0,18
Load carrying capacity of the main contacts			
rated continuus current ith ; 35C		A	135/135/135
AC1 utilization category			
rated current Ie/AC1		A	95/105/115
AC2 and AC3 utilization categories	for 230V	kW	22/26/30
(slip-ring and cage motors at 50Hz)	**400V**	**kW**	**37/45/55**
	690V	kW	55/67/67
AC4 utilization category			
(electrical endurance of contacts:120.000			
rated curent	Ie/AC4	A	32/34/36
ratings of squirrel-cage motors at 50Hz for	230V	kW	8.7/10.4
	400V	**kW**	**17/18**
	500V	kW	21/24
	690V	kW	20/30
Load carrying capacity of contactors at			
swiyching on and off of a.c. capacitors	Ie	A	
(electrical endurance amounts to 0.1 milion switching operations)			
ratings of individual capacitors at 50 Hz for	230V	kvar	-
through one pole	400V	kvar	-
	500V	kvar	-
	690V	kvar	-
ratings of capacitor banks			
(minimum inductive reactance between two capacitors			
switched on in parallel amounts to 6µH;50 Hz			
for	230V	kvar	-
	400V	kvar	-
	500V	kvar	-
	690V	kvar	-
Application in stator circuit of motor			
intermitent operation AC2			
stator current at duty factor in intermitent periodic duty			
	20%	A	135
	40%	A	110
	60%	A	100
	80%	A	90
Application in rotor circuit of motor			
intermittent operation			
rotor current at duty factor in intermittent periodic duty			
	10%	A	193
	20%	A	193
	40%	A	173
	60%	A	158
	80%	A	138
continuous operation		A	138
permissible voltage of motionless rotor			
starting		V	1800
regulation		V	880
counter current breaking		V	750
Loadability by direct current			
DC1 utilization category,non-inductive loads LR≤1 ms			
rated operational current Ie			
through one pole	for 24 V	A	90
	60 V	A	75
	110 V	A	12
	220 V	A	2,5
	440 V	A	0,6
	600 V	A	0,48
through three poles connected in series	for 24 V	A	100
	60 V	A	100

	110 V	A	100
	220 V	A	100
	440 V	A	6
	600 V	A	3,4
utilization categories DC3 to DC5 series and shunt motors (L/R ≤ 15 ms)			
rated operational current Ie through one pole	for 24 V	A	6
	60 V	A	3
	110 V	A	1,25
	220 V	A	0,35
	440 V	A	0,15
	600 V	A	0,1
through three poles connected in series	for 24 V	A	90
	60 V	A	90
	110 V	A	90
	220 V	A	3,8
	440 V	A	0,7
	600 V	A	0,4