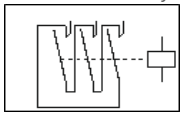
RADE KONCAR CONTACTOR **CNM110**
110A/55kW (AC3, 400V/50Hz); 115A(AC1)

Contactor type				**CNM 110**
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	300
	P.F.			0,5
	closed		VA	26
	P.F.			0,24
DC operated	closing		W	690
	closed		W	4
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	20 to 50
	opening time		ms	8 to 30
	duration of electric arc		ms	10 to 15
DC operated	closing time		ms	20 to 50
	opening time		ms	150 to 190
	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	500
		AC4	s/h	250
with thermal relay			s/h	15
Resistivity to shocks	(square shock)		g/ms	10/5 and 5/10
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	200
DIN VDE 0660 Part 102	Type of coord. "2"		A	125
Sizes of connection conductors for contact without thermal relay				
main circuit	Rigid solid		mm^2	
	standed		mm^2	-
	multi-wire conductor with cable shoe		mm^2	-
	standed with cable lug		mm^2	6-35 25-60
	flatbar		mm	15x2.5 15x3
	protective conductor with cable lug		mm^2	-
	Screw			M6
	Screw head			
	Tightening torque		Nm	2.5
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	115
AC1 utilization category			
rated current Ie/AC1		A	115
AC2 and AC3 utilization categories	for 230V	kW	37
(slip-ring and cage motors at 50Hz)	**400V**	**kW**	**55**
	690V	kW	90
AC4 utilization category			
(electrical endurance of contacts:120.000			
rated curent	Ie/AC4	A	42
ratings of squirrel-cage motors at 50Hz for	230V	kW	12
	400V	**kW**	**22**
	500V	kW	27
	690V	kW	36
Load carrying capacity of contactors at			
swiyching on and off of a.c. capacitors	Ie	A	58
(electrical endurance amounts to 0.1 milion switching operations)			
ratings of individual capacitors at 50 Hz for	230V	kvar	24
through one pole	400V	kvar	40
	500V	kvar	50
	690V	kvar	40
ratings of capacitor banks			
(minimum inductive reactance between two capacitors			
switched on in parallel amounts to 6µH;50 Hz			
for	230V	kvar	24
	400V	kvar	40
	500V	kvar	50
	690V	kvar	40
Application in stator circuit of motor			
intermitent operation AC2			
stator current at duty factor in intermitent periodic duty			
	20%	A	153
	40%	A	122
	60%	A	109
	80%	A	100
Application in rotor circuit of motor			
intermittent operation			
rotor current at duty factor in intermittent periodic duty			
	10%	A	293
	20%	A	242
	40%	A	193
	60%	A	173
	80%	A	158
continuous operation		A	158
permissible voltage of motionless rotor			
	starting	V	2000
	regulation	V	1000
	counter current breaking	V	880
Loadability by direct current			
DC1 utilization category,non-inductive loads LR≤1 ms			
rated operational current Ie 55°C			
through one pole	for 24 V	A	160
	60 V	A	80
	110 V	A	18
	220 V	A	3,4
	440 V	A	0,8
	600 V	A	0,5

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 55° C through one pole	for 24 V	A	16
	60 V	A	7,5
	110 V	A	2,5
	220 V	A	0,6
	440 V	A	0,17
	600 V	A	0,12
through three poles connected in series	for 24 V	A	100
	60 V	A	100
	110 V	A	100
	220 V	A	4
	440 V	A	0,8
	600 V	A	0,45

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