

## RADE KONCAR CONTACTOR CNN70 65A/33kW (AC3, 400V/50Hz); 90A(AC1)

Contactor type			CNN 70
Mechanical endurance	make/brake operations	x10 <sup>6</sup>	5
Insulation rating		V	1000
Permissible ambient ten		°C	from -25 to +55
	magnet in cold state with Un		
AC operated	closing	VA	155
	P.F.		0,6
	closed	VA	12
DCtl	P.F.	10/	0,29
DC operated	closing closed	W	90 3,5
Coil voltage tolerances	ciosed	V V	0.85-1.1Un
duration of making and	breaking		0.00 1.1.01.
(values are also valid for v 0.8 to 1.1 Un for each in c	oltages of electromagnet from		
or electric arc.			
AC operated	closing time	ms	10 to 24
	opening time	ms	7 to 10
	duration of electric arc	ms	10 to 15
DC operated	closing time	ms	15 to 40
	opening time	ms	100 to 120
	duration of electric arc	ms	10 to 15
Frequency of switching	operations		
without thermal reley			
utilizat	ion 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	9,2/5 and 5,4/10
Short-circuit protection contactors without overloa Main circuit With fuse links	id relays		3,4710
acc. To IEC 60947-4-1	Type of coord. "1" gl/gG	Α	125
DIN VDE 0660 Part 102	Type of coord. "2"	A	63
Sizes of connection con for contact without therma			
main circuit	Rigid solid	mm <sup>2</sup>	1x6-50
main circuit	standed	mm²	2x6-25
		mm <sup>2</sup>	
	multi-wire conductor with cable shoe		1x6-35
	standed with cable lug	mm²	2x6-16
	flatbar	mm	-
	protective conductor with cable lug Screw	mm²	- M6
	Screw head		PZ2
	Tightening torque	Nm	3-4
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 lth; 35C		А	16
AC			
rated operational current le/AC15	230V 400V	A A	6 4
	500V	A	2,5
	690V	Ä	2,5
DC			_,0
rated operational current le/DC1; L/R ≤1ms	24V	Α	10
	110V	A	3,2
	220V	A	0,9
	440V	A	0,33
	600V	A	0,22
rated operational current le/DC13	for 24V	Α	10
	110V	A	1,8
	220V	A	0,9
	440V	A	0,27
Lood coming consity of the main contests	600V	A	0,18
Load carrying capacity of the main contacts rated continuus current ith; 35C		A	125
AC1 utilization category		^	123
rated current le/AC1		А	90
AC2 and AC3 utilization categories	for 230V	kW	18,5
(slip-ring and cage motors at 50Hz)	400V	kW	33
	690V	kW	37
AC4 utilization category			
(electrical endurance of contacts:120.000 rated curent	le/AC4	А	30
rated Curent	IE/AU4	A	SU
ratings of squirrel-cage motors at 50Hz for	230V	kW	8,5
3	400V	kW	15,1
	500V	kW	18,4
	690V	kW	24,3
Load carrying capacity of contactors at	la.	Δ.	
swiyching on and off of a.c. capacitors (electrical endurance amounts to 0.1 milion swit	le	A	
ratings of individual capacitors at 50 Hz for	230V	kvar	
through one pole	400V	kvar	-
an eagir one pole	500V	kvar	
	690V	kvar	-
	000 V	KVai	
ratings of capacitor banks (minimum inductive reactance between two cap		ivui	
		kvar	-
(minimum inductive reactance between two cap	pacitors		- -
(minimum inductive reactance between two cap	pacitors	kvar	- - -
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz	pacitors for 230V 400V	kvar kvar	- - -
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2	for 230V 400V 500V 690V	kvar kvar kvar	- - - -
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor	for 230V 400V 500V 690V	kvar kvar kvar kvar	- - - -
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2	for 230V 400V 500V 690V	kvar kvar kvar kvar	- - - - - 98
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2	for 230V 400V 500V 690V	kvar kvar kvar kvar	98
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2	for 230V 400V 500V 690V dic duty 20% 40%	kvar kvar kvar kvar A A	
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period	for 230V 400V 500V 690V dic duty 20% 40% 60%	kvar kvar kvar kvar A A	98 87
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period application in rotor circuit of motor intermittent operation	for 230V 400V 500V 690V dic duty 20% 40% 60% 80%	kvar kvar kvar kvar A A	98 87
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period	for 230V 400V 500V 690V dic duty 20% 40% 60% 80%	kvar kvar kvar kvar A A A	98 87 80
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period application in rotor circuit of motor intermittent operation	for 230V 400V 500V 690V dic duty 20% 40% 60% 80%	kvar kvar kvar kvar A A A	98 87 80
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period application in rotor circuit of motor intermittent operation	for 230V 400V 500V 690V dic duty 20% 40% 60% 80%	kvar kvar kvar kvar A A A	98 87 80 163 163
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period application in rotor circuit of motor intermittent operation	for 230V 400V 500V 690V dic duty 20% 40% 60% 80%	kvar kvar kvar kvar A A A	98 87 80
Mapplication in stator circuit of motor intermittent operation rotor current at duty factor in intermittent operation rotor current at duty factor in intermittent period intermittent operation.	for 230V 400V 500V 690V dic duty 20% 40% 60% 80% dic duty	kvar kvar kvar kvar A A A A	98 87 80 163 163 155 138 127
Mapplication in stator circuit of motor intermitent operation at duty factor in intermitent operation and a population in rotor circuit of motor intermitent at duty factor in intermitent period intermitent operation are intermittent operation rotor current at duty factor in intermittent period intermittent operation rotor current at duty factor in intermittent period continuous operation	for 230V 400V 500V 690V dic duty  20% 40% 60% 80%  ic duty  10% 20% 40% 60%	kvar kvar kvar A A A A	98 87 80 163 163 155 138
Mapplication in stator circuit of motor intermittent operation rotor current at duty factor in intermittent operation rotor current at duty factor in intermittent period intermittent operation.	for 230V 400V 500V 690V dic duty 20% 40% 60% 80% ic duty 10% 20% 40% 60% 80%	kvar kvar kvar A A A A A	98 87 80 163 163 155 138 127 127
Mapplication in stator circuit of motor intermitent operation at duty factor in intermitent operation and a population in rotor circuit of motor intermitent at duty factor in intermitent period intermitent operation are intermittent operation rotor current at duty factor in intermittent period intermittent operation rotor current at duty factor in intermittent period continuous operation	for 230V 400V 500V 690V dic duty 20% 40% 60% 80% dic duty 10% 20% 40% 60% 80%	kvar kvar kvar A A A A A	98 87 80 163 163 155 138 127 127
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor	for 230V 400V 500V 690V dic duty  20% 40% 60% 80%  ic duty  10% 20% 40% 60% 80%  starting regulation	kvar kvar kvar A A A A A	98 87 80 163 163 155 138 127 127
(minimum inductive reactance between two cap switched on in parallel amounts to 6μH;50 Hz  Application in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor	for 230V 400V 500V 690V dic duty 20% 40% 60% 80% dic duty 10% 20% 40% 60% 80%	kvar kvar kvar A A A A A A A A A	98 87 80 163 163 155 138 127 127 1500 750
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermittent period intermittent operation active intermittent operation active intermittent operation rotor current at duty factor in intermittent period intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor counter Loadability by direct current DC1 utilization category,non-inductive loads LR	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking	kvar kvar kvar A A A A A A A A A	98 87 80 163 163 155 138 127 127 1500 750
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking	kvar kvar kvar A A A A A V V V	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermittent period intermittent operation active intermittent operation active intermittent operation rotor current at duty factor in intermittent period intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor counter Loadability by direct current DC1 utilization category,non-inductive loads LR	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking  t≤1 ms	kvar kvar kvar A A A A V V V V	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking	kvar kvar kvar kvar  A A A A V V V V	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking  for 24 V 60 V 110 V	kvar kvar kvar  A A A A V V V V	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking  ts1 ms  for 24 V 60 V 110 V 220 V	kvar kvar kvar A A A A V V V V	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking  for 24 V 60 V 110 V	kvar kvar kvar  A A A A V V V V	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking  **Starting **Starting **Tor 24 V 60 V 110 V 220 V 440 V 600 V	kvar kvar kvar  A A A A A V V V V A A A A A A A A A A	98 87 80 163 163 155 138 127 127 1500 750 660
Mapplication in stator circuit of motor intermitent operation AC2 stator current at duty factor in intermitent period intermittent operation rotor circuit of motor intermittent operation rotor current at duty factor in intermittent period continuous operation permissible voltage of motionless rotor    Counter   Co	for 230V 400V 500V 690V  dic duty 20% 40% 60% 80%  ic duty 10% 20% 40% 60% 80%  starting regulation current breaking  for 24 V 60 V 110 V 220 V 440 V	kvar kvar kvar  A A A A A V V V V A A A A A A A A A A	98 87 80 163 163 155 138 127 127 1500 750 660

	60 V 110 V 220 V 440 V 600 V	A A A A	70 70 3,5 0,6 0,35
	110 V 220 V	A A	70 3,5
	110 V	А	70
	60 V	A	70
connected in series	for 24 V	А	70
	600 V	A	0,08
	440 V	Α	0,1
	220 V	A	0,2
	110 V	А	0,75
	60 V	A	2
rrent le	for 24 V	A	5
tors (L/R ≤ 15 ms)			
DC2 to DCE	600 V	A	1
			3
			70
			70
	rrent le	tors (L/R ≤ 15 ms)  rrent le  for 24 V  60 V  110 V  220 V  440 V  600 V  connected in series  for 24 V	220 V A 440 V A 600 V A  DC3 to DC5 tors (L/R ≤ 15 ms)  Trent le  for 24 V A 60 V A 110 V A 220 V A 440 V A 600 V A  connected in series for 24 V A









