



RADE KONÇAR MINI CONTACTOR **CM1**
 9A/4kW (AC3, 400V/50Hz); 20A(AC1)

Contactor type		CM1	
Mechanical endurance	make/brake operations	$\times 10^6$	5
Insulation rating		V	690
Permissible ambient temperature		$^{\circ}\text{C}$	from -25 to +55
Consumption of electromagnet in cold state with U_n			
AC operated	closing	VA	26
	P.F. closed	VA	0,8
	P.F. closed	VA	4
DC operated	closing	W	0,35
	closed	W	-
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 zrc.			
AC operated	closing time	ms	12 to 21
	opening time	ms	9 to 18
	duration of electric arc	ms	10
Frequency of switching operations			
without thermal relay			
	utilization category	AC1	s/h
		AC2, AC3	s/h
		AC4	s/h
with thermal relay			s/h
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" gI/gG	A	20
DIN VDE 0660 Part 102	Type of coord. "2"	A	16
Sizes of connecting conductors			
for contact without thermal relay			
main circuit	single-wire conductors	mm^2	1-2.5
	multi-wire conductor with cable shoe	mm^2	0.75-1.5
	Screw		M3.5
	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} ; 35 $^{\circ}\text{C}$		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	0,2
Load carrying capacity of the main contacts			
rated continuous current I _{th}			
AC1 utilization category		A	20
rated operational current I _e /AC1		A	20
AC2 and AC3 utilization categories			
(slip-ring and cage motors at 50Hz)	for 230V	kW	3
	400V	kW	4
	690V	kW	4
AC4 utilization category (80.000 for CM1))			
(electrical endurance of contacts:120.000)			
rated current	I _e /AC4	A	4
ratings of squirrel-cage motors at 50Hz	for 230V	kW	0,75
	400V	kW	1,5
	500V	kW	1,5
	690V	kW	1,5
Loadability by direct current			
DC1 utilization category, non-inductive loads L/R1 ms			
rated operational current I _e	for 24V	A	12
through one pole	48V	A	10
	110V	A	1,5
	220V	A	0,6
	440V	A	0,42
	600V	A	0,42
through three poles connected in series	for 24V	A	16
	48V	A	16
	110V	A	10
	220V	A	15
	440V	A	0,9
	600V	A	0,7
utilization category DC3 to DC5			
series and shunt motors (L/R15 ms)			
rated operational current I _e	for 24V	A	7
through one pole	48V	A	4
	110V	A	1
	220V	A	-
	440V	A	-
	600V	A	-
through three poles connected in series	for 24V	A	10
	48V	A	10
	110V	A	5
	220V	A	1,2
	440V	A	0,14
	600V	A	0,14

Drilling plan (mm)

