

UA..RA 3-pole Contactors for Capacitor Switching

Unlimited Peak Current \hat{I}



Application

The **UA..RA** contactors can be used in installations in which the peak current far exceeds 100 times nominal rms current. The contactors are delivered complete with their damping resistors and must be used without additional inductances (see table below).

The capacitors must be discharged (maximum residual voltage at terminals ≤ 50 V) before being re-energized when the contactors are making.

Their electrical durability is 250 000 operating cycles for $U_e < 500$ V and 100 000 operating cycles for $500 \text{ V} \leq U_e \leq 690$ V.

Description

The **UA..RA** contactors are fitted with a special front mounted block, which ensures the serial insertion of 3 damping resistors into the circuit to limit the current peak on energization of the capacitor bank. Their connection also ensures capacitor precharging in order to limit the second current peak occurring upon making of the main poles.

Operating principle

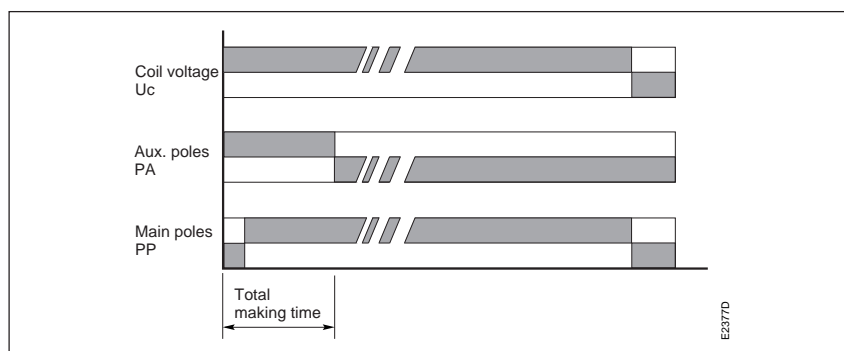
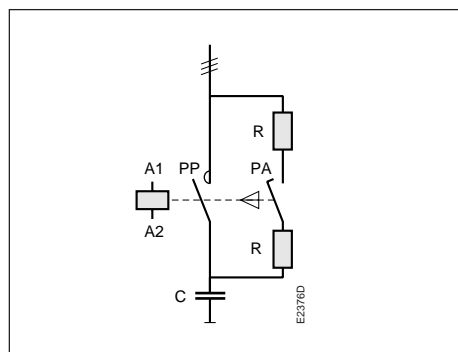
The front-mounted block mechanism of the **UA..RA** contactors ensures:

- early making of the auxiliary "PA" poles with respect to the main "PP" poles
- automatic return to the open position of the auxiliary "PA" poles after the main poles are closed.

When the coil is energized, the early making auxiliary poles connect the capacitor to the network via the set of 3 resistors. The damping resistors attenuate the first current peak and the second inrush current when the main contacts begin to make. Once the main poles are in the closed position, the auxiliary poles automatically break.

When the coil is de-energized, the main poles break ensuring the breaking of the capacitor bank.

The contactor can then begin a new cycle.



The insertion of resistors allows to damp the highest current peak of the capacitor when switching on, whatever its level.

Selection Table according to IEC

Type	Power in kvar – 50/60 Hz (AC-6b)															Max. permissible peak current \hat{I}	gG type fuses A max (*)
	230/240 V			400/415 V			440 V			500/550 V			690 V				
	40°C	55°C	70°C	40°C	55°C	70°C	40°C	55°C	70°C	40°C	55°C	70°C	40°C	55°C	70°C		
UA 16-30-10 RA	8	7.5	6	12.5	12.5	10	15	13	11	18	16	12.5	22	21	17	Unlimited	80
UA 26-30-10 RA	12.5	11.5	9	22	20	15.5	24	20	17	30	25	20	35	31	26		125
UA 30-30-10 RA	16	16	11	30	27.5	19.5	32	30	20.5	34	34	25	45	45	32		200
UA 50-30-00 RA	25	24	20	40	40	35	50	43	37	55	50	46	72	65	60		200
UA 63-30-00 RA	30	27	23	50	45	39	55	48	42.5	65	60	50	80	75	65		200
UA 75-30-00 RA	35	30	25	60	50	41	65	53	45	75	65	55	100	80	70		200
UA 95-30-00 RA	40	35	30	70	60	53	75	65	58	85	75	70	120	105	85		250
UA 110-30-00 RA	45	40	35	80	70	60	85	75	70	95	82	78	130	110	100		250

(*) The fuse ratings given in the column represent the maximum ratings ensuring type 1 coordination according to the definition of standard IEC 60947-4-1.

Selection Table according to UL/CSA

Type	Power in kvar – 60 Hz			Max permissible peak current \hat{I}
	240 V 40 °C	480 V 40 °C	600 V 40 °C	
UA 16-30-10 RA	8	16	20	Unlimited
UA 26-30-10 RA	11	22	27	
UA 30-30-10 RA	14	28	35	
UA 50-30-00 RA	25	50	62	
UA 63-30-00 RA	27.5	55	70	
UA 75-30-00 RA	32	64	80	
UA 95-30-00 RA (1)	40	80	100	
UA 110-30-00 RA (1)	45	95	120	

(1) UL Listed to U.S. and Canadian safety standards (cULus).

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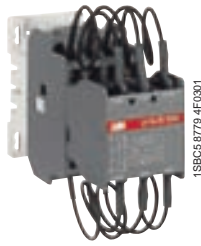
Ordering Details

IEC Rated power 400 V 40 °C kvar	UL/CSA Rated power 480 V 40 °C kvar	Auxiliary contacts fitted 	Type state coil voltage [][] (see table below)	Order code state coil voltage code [][] (see table below)	Weight kg Pack ^{ing} 1 piece
12.5	16	1 -	UA 16-30-10 RA [][]	1SBL 181 024 R [][]10	0.460
22	22	1 -	UA 26-30-10 RA [][]	1SBL 241 024 R [][]10	0.710
30	28	1 -	UA 30-30-10 RA [][]	1SBL 281 024 R [][]10	0.810
40	50	- -	UA 50-30-00 RA [][]	1SBL 351 024 R [][]00	1.350
50	55	- -	UA 63-30-00 RA [][]	1SBL 371 024 R [][]00	1.350
60	64	- -	UA 75-30-00 RA [][]	1SBL 411 024 R [][]00	1.350
70	80	- -	UA 95-30-00 RA [][]	1SFL 431 024 R [][]00	2.000
80	95	- -	UA 110-30-00 RA [][]	1SFL 451 024 R [][]00	2.000

Coil voltages and codes

Voltage [][] V - 50Hz	Voltage [][] V - 60Hz	Code [][]
24	24	8 1
48	48	8 3
110	110 ... 120	8 4
220 ... 230	230 ... 240	8 0
230 ... 240	240 ... 260	8 8
380 ... 400	400 ... 415	8 5
400 ... 415	415 ... 440	8 6

Other voltages: page 0/1 of the main catalogue .



UA 16-30-10 RA



UA 30-30-10 RA



UA 75-30-00 RA



UA 110-30-00 RA

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