

# UA..RA 3-pole Contactors for Capacitor Switching

## Unlimited Peak Current $\hat{I}$



### UA..RA Contactors for Capacitor Switching (UA 16..RA to UA 110..RA) with insertion of damping resistors.

The insertion of damping resistors protects the contactor and the capacitor from the highest inrush currents.

### 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  $\leq 50$  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  $500$  V  $\leq U_e \leq 690$  V.

### Description

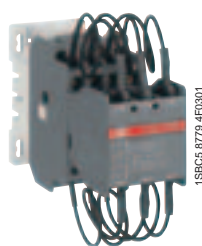
The **UA..RA** contactors are fitted with a special front mounted block, which ensures the serial insertion of 3 damping resistors into the circuit to limit the current peak on energization of the capacitor bank. Their connection also ensures capacitor precharging in order to limit the second current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

### Ordering Details

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

#### Coil voltages and codes

Voltage <input type="text"/> <input type="text"/> <input type="text"/> V - 50Hz	Voltage <input type="text"/> <input type="text"/> <input type="text"/> V - 60Hz	Code <input type="text"/> <input type="text"/>
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



UA 16-30-10 RA

1SBC5 8779 4F0301



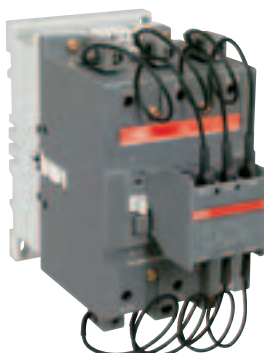
UA 30-30-10 RA

1SBC5 8777 4F0301



UA 75-30-00 RA

1SBC5 8776 4F0301



UA 110-30-00 RA

1SBC5 9144 4F0302

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### 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	Unlimited	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	Unlimited	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.

### Technical Data

Types	UA 16..RA	UA 26..RA	UA 30..RA	UA 50..RA UA 63..RA UA 75..RA	UA 95..RA UA 110..RA	
<b>Short-circuit protection</b> gG type fuses	sized 1.5 ... 1.8 $I_n$ of the capacitor					
<b>Max. electrical switching frequency</b> Operating cycles/h	240					
<b>Electrical durability AC-6b</b> – operating cycles at $U_e \leq 440$ V	250 000					
– operating cycles at $500$ V $\leq U_e \leq 690$ V	100 000					
<b>Connecting capacity</b> (min. ... max.) Main conductors (poles)						
Rigid: solid ( $\leq 4$ mm <sup>2</sup> )	1 x mm <sup>2</sup>	1 ... 4	1.5 ... 6	2.5 ... 16	6 ... 50	10 ... 95
stranded ( $\geq 6$ mm <sup>2</sup> )	2 x mm <sup>2</sup>	–	–	2.5 ... 16 + 2.5 ... 6	6 ... 25 + 6 ... 16	6 ... 35
Flexible with cable end	1 x mm <sup>2</sup>	0.75 ... 2.5	1.5 ... 4	2.5 ... 10	6 ... 35	10 ... 70
	2 x mm <sup>2</sup>	–	–	2.5 ... 10 + 2.5 ... 4	6 ... 16 + 6 ... 10	6 ... 35
Lugs	L mm $\leq$ l mm $>$	7.7 3.7	10 4.2	– –	– –	– –
<b>Auxiliary conductors</b> (built-in auxiliary terminals + coil terminals)						
Rigid solid	1 x mm <sup>2</sup>	1 ... 4			0.75 ... 2.5	
	2 x mm <sup>2</sup>	1 ... 4			0.75 ... 2.5	
Flexible with cable end	1 x mm <sup>2</sup>	0.75 ... 2.5			1 ... 2.5	0.75 ... 2.5
	2 x mm <sup>2</sup>	0.75 ... 2.5				
Lugs	L mm $\leq$ l mm $>$	7.7 3.7	10 4.2	8 3.7	– –	– –
Built-in aux. terminals						
Coil terminals						
<b>Degree of protection</b> acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529	Protection against direct contact in acc. with EN 50274					
– Main terminals	IP 20		IP 10			
– Coil terminals	IP 20					
– Built-in auxiliary terminals	IP 20			–		

Other technical characteristics are the same as those of standard A... contactors.