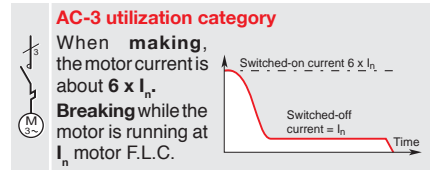


# A..., AF..., 3-pole Contactors



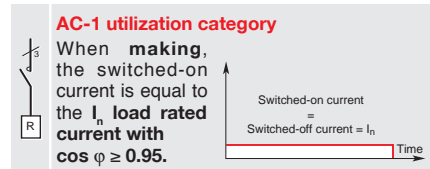
## a.c. Circuit Switching

### Switching of 3-phase Cage Motors



AC-3 Power rating	$\theta \leq 55^\circ\text{C}, 400\text{ V}$	kW	A9	A12	A16	A26	A30	A40
AC-3 Rated operational current	$\theta \leq 55^\circ\text{C}, 400\text{ V}$ $\theta \leq 55^\circ\text{C}, 415\text{ V}$ $\theta \leq 55^\circ\text{C}, 690\text{ V}$	A	4	5.5	7.5	11	15	18.5
		A	9	12	17	26	32	37
		A	9	12	17	26	32	37
		A	7	9	10	17	21	25

### Switching of Resistive Circuits



AC-1 Rated operational current	$\theta \leq 40^\circ\text{C}$ $\theta \leq 55^\circ\text{C}$ $\theta \leq 70^\circ\text{C}$	A	25	27	30	45	55	60
		A	22	25	27	40	55	60
		A	18	20	23	32	39	42
With conductor cross-sectional area		mm <sup>2</sup>	2.5	4	4	6	10	16
Rated operational voltage		V	690					

## 3-pole Contactors

### Selection & Ordering

- Select contactor type.
- Quote contactor coil voltage according to control circuit supply. (Please quote coil voltage in plain text).



a.c. Control circuit supply Types

A9-30-10	A12-30-10	A16-30-10	A26-30-10	A30-30-10	A40-30-10
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a.c. & d.c. Control circuit supply Types  
(Electronic coil interface)

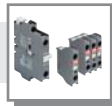
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## Contactor Main Accessories

### Selection & Ordering

- Select accessory type and quote required data in plain text.

#### Auxiliary contacts



CA5-..., 1-pole, CAL5-..., 2-pole  
CAL18-..., 2-pole

Types

CA5-10, 1-pole, front mounting 1 x N.O.	CA5-01, 1-pole, front mounting 1 x N.C.
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#### Timers



TP..., Pneumatic  
TE..., Electronic  
Supply voltages: 24 V a.c./d.c.,  
110 ... 120; 220 ... 240; 380 ... 440 V a.c.

Types

TP40DA, TP180DA Direct timing - Front mounting	TP40IA, TP180 IA Inver
TE5S Direct timing - Separate mounting	

#### Interlocks



VE 5-., Mechanical / Electrical  
VM..., Mechanical  
mounting between 2 contactors

Types

VE5-1  
VM5-1

#### Surge suppressors



RV..., (Varistor) a.c./d.c.  
RC..., (Capacitor) a.c.

Types

RV5  
RC5-1

## Protection of 3-phase motors

### Selection & Ordering

- Select O/L relay type and setting range according to motor F.L.C.

#### O/L relays



TA...DU..., Thermal O/L relay  
E...DU..., Electronic O/L relay  
Standard starting time 2 ... 10 s  
tripping class 10 A

Types & setting range in Amps

TA25DU...				TA42DU...	
0.10...0.16	1.0...1.4	3.5...5.0	13...19	22...32	
0.16...0.25	1.3...1.8	4.5...6.5	18...25	29...42	
0.25...0.40	1.7...2.4	6.0...8.5	24...32		
0.40...0.63	2.2...3.1	7.5...11			
0.63...1.0	2.8...4.0	10...14			
E16DU...-10					
0.1...0.32	0.9...2.7	5.7...18.9			
0.3...1.0	2...6.3				



<b>A50 A63 A75</b>	<b>A95 A110</b>	<b>A145 A185</b>	<b>A210 A260 A300</b>	<b>AF400 AF460</b>	<b>AF580 AF750</b>	<b>AF1350 AF1650</b>
22 30 37	45 55	75 90	110 140 160	200 250	315 400	475 560
50 65 75 50 65 75 35 43 46	96 110 96 110 65 82	145 185 145 185 120 170	210 260 305 210 260 300 210 220 280	400 460 400 460 350 400	580 750 580 750 500 650	860 1050 860 1050 - -
100 115 125 85 95 105 70 80 85	145 160 135 145 115 130	250 275 230 250 180 180	350 400 500 300 350 400 240 290 325	600 700 500 600 400 480	800 1050 700 800 580 720	1350 1650 1150 1450 1000 1270
35 50 50	50 70	120 150	185 240 300	2 x 185 2 x 240	2x240 bar/mm 2x80x5	bar/mm 2//100x5 3//100x5
1000		690			1000	

<b>A50-30-00</b> <b>A63-30-00</b> <b>A75-30-00</b>	<b>A95-30-00</b> <b>A110-30-00</b>	<b>A145-30-11</b> <b>A185-30-11</b>	<b>A210-30-11</b> <b>A260-30-11</b> <b>A300-30-11</b>	<b>AF400-30-11</b> <b>AF460-30-11</b>	<b>AF580-30-11</b> <b>AF750-30-11</b>	<b>AF1350-30-11</b> <b>AF1650-30-11</b>
AF ... typs also available. please consult us						

<b>CAL5-11</b> 2-pole, side mounting 1 x N.O. + 1 x N.C.	<b>CAL18-11</b> 2-pole, side mounting 1 x N.O. + 1 x N.C. (1 <sup>st</sup> block)	<b>CAL18-11 B</b> 1 x N.O. + 1 x N.C. (2 <sup>nd</sup> block)
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se timing - Front mounting	<b>TE5S</b> Sep. mounting	<b>TE5S</b> Direct timing - Separate mounting
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<b>VE5-2</b> -	<b>VM300H</b> -	<b>VM750H</b> -	<b>VM1650H</b> -
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<b>RV5</b> <b>RC5-2</b>	<b>RC5-2</b>	The built-in coil interface eliminates the need of extra surge suppressors on these sizes
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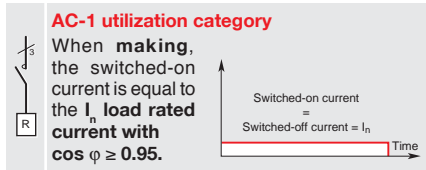
<b>TA75DU...</b> 29...42 36...52 45...63 60...80	<b>TA80DU</b> 60...80  <b>TA110DU</b> 65...90 80...110	<b>TA 200 DU...</b> 130...175 150...200  <b>E 200 DU</b> 60...200	<b>TA450DU...</b> 165...235 220...310  <b>E320DU</b> 100...320	<b>E500DU</b> 150...500	<b>E800DU</b> 250...800	<b>E1250DU</b> 375...1250
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# A..., EK..., 4-pole Contactors



## a.c. Circuit Switching

### Switching of Resistive Circuits



<b>AC-1</b>	Rated operational current	$\theta \leq 40^\circ\text{C}$ $\theta \leq 55^\circ\text{C}$ $\theta \leq 70^\circ\text{C}$
	With conductor cross-sectional area	<b>mm<sup>2</sup></b>
	Rated operational voltage	<b>V</b>

	<b>A 9</b>	<b>A 16</b>	<b>A 26</b>
<b>A</b>	25	30	45
<b>A</b>	22	27	40
<b>A</b>	18	23	32
With conductor cross-sectional area	2.5	4	6
Rated operational voltage	690		

## 4-pole Contactors

### 4 N.O. main poles

#### Selection & Ordering

- ▶ Select 4 N.O. or 2 N.O. + 2 N.C. main poles
- ▶ Select contactor type.
- ▶ Quote contactor coil voltage according to control circuit supply. (Please quote coil voltage in plain text).



a.c. Control circuit supply

Types

<b>A 9-40-00</b>	<b>A 16-40-00</b>	<b>A 26-40-00</b>
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d.c. Control circuit supply

Types

-	-	-
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### 2 N.O. + 2 N.C. main poles



a.c. Control circuit supply

Types

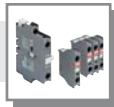
<b>A 9-22-00</b>	<b>A 16-22-00</b>	<b>A 26-22-00</b>
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## Contactor Main Accessories

#### Selection & Ordering

- ▶ Select accessory type and quote required data in plain text.

#### Auxiliary contacts



**CA 5-...**, 1-pole  
**CAL ...**, 2-pole

Types

<b>CA 5-10</b> 1-pole, front mounting 1 x N.O.	<b>CA 5-01</b> 1-pole, front mounting 1 x N.C.
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#### Timers



**TP...**, Pneumatic  
**TE...**, Electronic  
Supply voltages: 24 V a.c./d.c.,  
110 ... 120; 220 ... 240; 380 ... 440 V a.c.

Types

<b>TP 40 DA, TP 180 DA</b> Direct timing - Front mounting <b>TE5S</b> Direct timing - Separate
---

#### Interlocks



**VE 5-...**, Mechanical / Electrical  
**VM...**, **VH...** Mechanical  
mounting between 2 contactors

Types

<b>VE 5-1</b> <b>VM 5-1</b>
--------------------------------

#### Surge suppressors



**RV...**, (Varistor) a.c./d.c.  
**RC...**, (Capacitor) a.c.

Types

<b>RV 5</b> <b>RC 5-1</b>
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A 45			A 50			A 75			EK 110		EK 150		EK 175		EK 210		EK 370		EK 550		EK 1000		
70	100	125	200	250	300	350	550	800	1000														
60	85	105	180	230	270	310	470	650	800														
50	70	85	155	200	215	250	400	575	720														
25	35	50	95	150	185	240	2 x 185	2 x 240	2 x 300														
	690																						

A 45-40-00	A 50-40-00	A 75-40-00	EK 110-40-11	EK 150-40-11	EK 175-40-11	EK 210-40-11	EK 370-40-11	EK 550-40-11	EK 1000-40-11
	-		EK 110-40-21	EK 150-40-21	EK 175-40-21	EK 210-40-21	EK 370-40-21	EK 550-40-21	EK 1000-40-21

A 45-22-00	-	A 75-22-00	-	-	-	-	-	-	-
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CAL 5-11 2-pole, side mounting 1 x N.O. + 1 x N.C.	CAL 16-11 2-pole, side mounting 1 x N.O. + 1 x N.C.
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TP 40 IA, TP 180 IA Inverse timing - Front mounting	TE5S Direct timing - Separate mounting (interpose an N.. contactor relay for EK 370 ... EK 1000)
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VE 5-2	VH 145 (Mechanical / Electrical)	VH 300 (Mechanical / Electrical)	VH 800
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RV 5 RC 5-2	RC-EH 300	RC-EH 800 (Varistor + RC)
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# AL.. Contactors - d.c. Coil - Low Consumption

## 3-pole Contactors



**AC-3** Power rating  $\theta \leq 55^\circ\text{C}$ , 400 V

**kW**

4      5.5      7.5      11      15      18.5

**AC-3** Rated operational current  $\theta \leq 55^\circ\text{C}$   
400 V  
415 V  
690 V

**A**

**AL 9**      **AL 12**      **AL 16**      **AL 26**      **AL 30**      **AL 40**

**AC-1** Rated operational current  $\theta \leq 40^\circ\text{C}$

**A**

9      12      17      26      32      37  
9      12      17      26      32      37  
7      9      10      13      18      21

Type (State coil voltage)



25      27      30      45      55      60

Coil consumption, pull-in and holding at 20°C

**W**

AL 9-30-10      AL 12-30-10      AL 16-30-10      AL 26-30-10      AL 30-30-10      AL 40-30-10  
3      3      3      3.5      3.5      3.5

## O/L relays



**TA 25 DU**      0.4 ...0.63      2.2...3.1      7.5 ...11  
0.63 ...1.0      2.8...4.0      10 ...14  
0.10...0.16      1.0 ...1.4      3.5...5.0      13 ...19  
0.16...0.25      1.3 ...1.8      4.5...6.5      18 ...25  
0.25...0.4      1.7 ...2.4      6.0...8.5      24 ...32

**TA 42 DU**  
22...32  
29...42

## Auxiliary contacts



Front mounting      1 N.O. CA 5-10      1 N.C. CA 5-01      4-pole CA 5  
Side mounting      1 N.O. + 1 N.C. CAL 5-11

## Timers



Electronic TE5S

## Interlocks



Mechanical VM 5-1 / Electrical VE 5-1

## Surge suppressors



Varistor RV5  
Transil Diode RT5

## 4-pole Contactors



**AC-1** Rated operational current  $\theta \leq 40^\circ\text{C}$

**A**

25      30      45

**AL 9**      **AL 16**      **AL 26**

Type (State coil voltage)



AL 9-40-00      AL 16-40-00      AL 26-40-00