

# AF50 - AF1650

## General information

### AC & DC operated, UL rated, 3 phase

#### Application

A-Line contactors are mainly used for controlling 3-phase motors and for controlling power circuits corresponding to their operating characteristics up to 690 and even 1000 VAC. and 440 VDC.

#### Description of 3 pole contactors AF50 - AF1650

All AF contactors can be assembled side by side. The add-on auxiliary contacts are suitable for low level currents.

#### Control circuit types

- AF types: AC/DC operated with laminated magnetic circuit.

#### Contact or types

- 3 pole contactors with 1 NO or 1 NC factory assembled auxiliary contacts for AF50 - AF1650 contactors

Quick mounting on DIN rail: EN 50022 and EN 50023 standards:

35 x 15mm for AF50 - AF75  
75mm for AF50 - AF110

Location of side mounted accessories: on right or left hand side. Factory mounted on left hand side for CAL5 on AF50 - AF1650

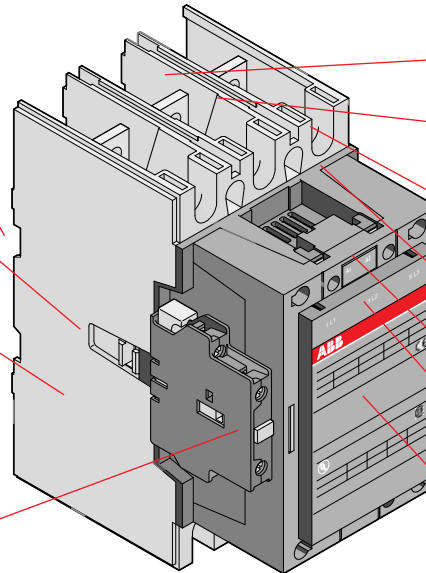
Holes for screw mounting (screws not supplied). Distance between holes according to EN 50003.

Terminals delivered in open position with captive screws (screws of unused terminals must be tightened).

Screwdriver guidance for all terminals makes it possible to use motorized screwdrivers.

All terminals provide protection against accidental direct contact with live parts according to VDE0106 - Part. 100.

All AF50- AF110 contactor terminals as well as AF50 - AF1650 contactor auxiliary contact and coil terminals ensure IP20 degree of protection according to IEC 947-1.



AF50 - AF1650

Surge suppressors built in as standard on the printed circuit board.

Clear marking of coil voltages and frequencies.

Connecting point for control leads in top part of main terminals of AF50 - AF75 contactors. For AF95 & AF110 contactors these are additional power connections.

Terminal marking according to IEC 947-4-1, EN 50005, EN 50012 and NEMA standards.

Location of function marker.

Stops for attaching front mounted accessories.

Terminal screws:

- Posidrive (+,-) No 2 for all AF50 - AF75
- M8 hex threaded socket screw for AF95 - AF1650 main terminals.

## Catalog number explanation

**AF50 - 30 - 11 - 70**

Frame size

Power pole

30 = 3 NO  
40 = 4 NO  
22 = 2 NO & 2 NC

Coil voltage

(see coil voltage selection chart)

Auxiliary contacts

11 = 1 NO & 1 NC  
00 = No auxiliary provided  
22 = 2 NO & 2 NC

#### Coil voltage selection – AF50 to AF1650

AC/DC VOLTS, 40 - 60 Hz				
24 - 60 DC	20 - 60 DC	48 - 130 AC/DC	100 - 250 AC/DC	250 - 500 AC/DC
68 ①	72 ②	69	70 ③	71 ④

① AF400 - AF750, DC only.

② AF50 - AF300, DC only.

③ Only option for AF1350 / AF1650.

④ AF400 - AF750 only.

## AF50 - AF1650

Non-reversing, mechanically interlocked, reversing  
AC & DC operated, UL rated, 3 phase

Across the line  
contactors

1



AF63-30-11-70



AF95-30-11-70



AF400-30-11-70



AF750-30-11-70

### 3 Pole

General purpose current	UL motor switching current	Maximum UL Listed motor horsepower ratings				Standard auxiliary contacts		Non-reversing		Mechanically interlocked		Reversing	
		208V	240V	480V	575/600V	NO	NC	Catalog number	List price	Catalog number	List price	Catalog number	List price
80	54	15	20	40	50	1	1	AF50-30-11-70	\$ 450	AF50M-30-11-70	\$ 953	AF50R-30-11-70	\$ 1,050
90	65	20	25	50	60	1	1	AF63-30-11-70	495	AF63M-30-11-70	1,116	AF63R-30-11-70	1,259
105	80	25	30	60	75	1	1	AF75-30-11-70	535	AF75M-30-11-70	1,399	AF75R-30-11-70	1,542
125	95	30	30	60	75	1	1	AF95-30-11-70	570	AF95M-30-11-70	1,470	AF95R-30-11-70	1,665
140	110	30	40	75	100	1	1	AF110-30-11-70	600	AF110M-30-11-70	1,605	AF110R-30-11-70	1,868
230	130	40	50	100	125	1	1	AF145-30-11-70	1,110	AF145M-30-11-70	2,655	AF145R-30-11-70	2,670
250	156	50	60	125	150	1	1	AF185-30-11-70	1,635	AF185M-30-11-70	3,870	AF185R-30-11-70	3,375
300	192	60	75	150	200	1	1	AF210-30-11-70	1,980	AF210M-30-11-70	4,545	AF210R-30-11-70	4,560
350	248	75	100	200	250	1	1	AF260-30-11-70	2,235	AF260M-30-11-70	5,055	AF260R-30-11-70	5,070
400	302	100	100	250	300	1	1	AF300-30-11-70	2,385	AF300M-30-11-70	6,030	AF300R-30-11-70	6,045
550	414	125	150	350	400	1	1	AF400-30-11-70	3,120	AF400M-30-11-70	6,705	AF400R-30-11-70	6,720
650	480	150	200	400	500	1	1	AF460-30-11-70	4,425	AF460M-30-11-70	13,275	AF460R-30-11-70	13,290
750	602	200	250	500	600	1	1	AF580-30-11-70	6,900	AF580M-30-11-70	18,375	AF580R-30-11-70	18,390
900	810	250	300	600	700	1	1	AF750-30-11-70	7,200	AF750M-30-11-70	19,725	AF750R-30-11-70	19,740
1260	—	—	—	—	—	1	1	AF1250-30-11-70	8,120	—	—	—	—
1350	960	—	400	800	900	1	1	AF1350-30-11-70	8,490	—	—	—	—
1650	1080	—	450	900	1000	1	1	AF1650-30-11-70	10,230	—	—	—	—
2050	—	—	—	—	—	1	1	AF2050-30-11-70	12,820	—	—	—	—

### Coil voltage selection – wide range AC/DC coils

All catalog numbers include a 100-250V AC/DC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 24V coil is required for a AF110 contactor: AF110-30-11-72

### Coil voltage selection – AF50 to AF1650

AC/DC VOLTS, 40 - 60 Hz				
24 - 60 DC	20 - 60 DC	48 - 130 AC/DC	100 - 250 AC/DC	250 - 500 AC/DC
68 ①	72 ②	69	70 ③	71 ④

① AF400 – AF1250, DC only.

② AF50 – AF300, DC only.

③ Only option for AF1350 - AF2050.

④ AF400 - AF750 only.

## A/AF/AL9 - A/AF/AL110

### Contactors for ring tongue termination

### AC & DC operated, UL rated, 3 phase

UL general purpose current AC1	UL Motor switching current	UL/CSA horsepower ratings			Auxiliary contacts		AC operated		DC operated	
		240V	480V	575/600V	NO	NC	Catalog number	List price	Catalog number	List price
21	9	2	5	7.5	1 0	0 1	A93010RT-84 A93001RT-84	<b>\$ 83</b>	AL93010RT-81 AL93001RT-81	<b>\$ 152</b>
25	11	3	7.5	10	1 0	0 1	A123010RT-84 A123001RT-84	<b>90</b>	AL123010RT-81 AL123001RT-81	<b>186</b>
30	17	5	10	15	1 0	0 1	A163010RT-84 A163001RT-84	<b>122</b>	AL163010RT-81 AL163001RT-81	<b>207 211</b>
40	28	10	20	25	1 0	0 1	A263010RT-84 A263001RT-84	<b>172</b>	AL263010RT-81 AL263001RT-81	<b>262</b>
80	54	20	40	50	0	0	A503000RT-84	<b>363</b>	AF503000RT-70	<b>582</b>
90	65	25	50	60	0	0	A633000RT-84	<b>417</b>	AF633000RT-70	<b>647</b>
105	80	30	60	75	0	0	A753000RT-84	<b>475</b>	AF753000RT-70	<b>687</b>
125	95	30	60	75	0	0	AF95B3011RT-70	<b>927</b>	AF95B3011RT-70	<b>927</b>
140	110	40	75	100	0	0	AF110B3011RT-70	<b>986</b>	AF110B3011RT-70	<b>986</b>

#### Coil voltage selection – AC coils

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the AC coils Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 contactor: A753000RT-80

#### Coil voltage selection – DC coils

All DC operated catalog numbers include a 24VDC coil. To select other coil voltages, substitute the code from the DC coils Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 110V coil is required for an AE75 contactor: AE753000RT-86

#### Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$ 20 to list price for each additional auxiliary, and see page 1.32 for available combinations. Only side-mounted blocks are allowed to be factory installed.

#### Auxiliary contact block with ring tongue termination

Positioning	Maximum number of contact blocks	Contact description	Catalog number	List price
Front mounting (C4-pole)	1 block A/AE9 – A/AE110	2 NO & 2 NC 3 NO & 1 NC 4 NO	CA5-22ERT CA5-31ERT CA5-40ERT	<b>\$ 35</b>

#### Coil voltage selection chart – AC coils

Hz	Cntr. type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84				80			85	86			55	

For other voltages, see page 1.24.

#### Coil voltage selection chart – DC coils

Hz	Contr. type	Volts					
		24	48	110	125	220	240
DC	AE	81	83	86	87	88	89

For other voltages, see page 1.24.

# A9 – AF1650

Non-reversing, mechanically interlocked, reversing  
NEMA rated, AC operated, 3 phase

Across the line  
contactors



NEMA size	Continuous current	Maximum motor horsepower ratings			Standard Aux. contacts		Non-reversing		Mechanically interlocked		Reversing	
		200V	230V	460/575V	NO	NC	Catalog number	List price	Catalog number	List price	Catalog number	List price
<b>NEMA rated</b>												
00	9	1.5	1.5	2	1	0	A9N00-30-10-84	\$ 78	A9N00M-10-84	\$ 255	A9N00R-10-84	\$ 315
0	18	3	3	5	1	0	A16N0-30-10-84	102	A16N0M-10-84	345	A16N0R-10-84	413
1	27	7.5	7.5	10	1	0	A26N1-30-10-84	183	A26N1M-10-84	405	A26N1R-10-84	480
2	45	10	15	25	1	1	A50N2-30-11-84	330	A50N2M-11-84	713	A50N2R-11-84	810
3	90	25	30	50	1	1	A75N3-30-11-84	413	A75N3M-11-84	1,155	A75N3R-11-84	1,298
4	135	40	50	100	1	1	A145N4-30-11-84	825	A145N4M-11-84	2,235	A145N4R-11-84	2,250
5	270	75	100	200	1	1	A260N5-30-11-84	1,815	A260N5M-11-84	4,485	A260N5R-11-84	4,500
6	540	150	200	400	1	1	AF460N6-3011-70	4,425	AF460N6M-11-70	13,275	AF460N6R-11-70	13,290
7	810	—	300	600	1	1	AF750N7-3011-70	7,200	AF750N7M-11-70	19,725	AF750N7R-11-70	19,740
8	1215	—	450	900	1	1	AF1650N83011-70	10,230	—	—	—	—

### Coil voltage selection – A contactors

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 contactor: A75N3-30-11-80

### Coil voltage selection – wide range AC/DC coils

The NEMA size 6,7 and 8 contactors are provided with a wide range coil voltage. They are shown with the standard 100-250V AC/DC coil. To select other ranges substitute the code from the coil voltage selection chart for the two digits after the last dash in the catalog number.

Ex.: A 24V coil is required for the AF460N6 contactor: AF460N6-3011-68

### Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$ 20 to list price for each additional auxiliary, and see page 1.32 for available combinations.

### Mechanical interlock

Mechanically interlocked contactors are designed for reversing, 2 speed, reduced voltage, etc. type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- A9 - A16 — mounted on 35mm DIN rail
- A26 - A750 — mounted on common baseplate

Power wiring is not included.

For A9 - A110 contactors the NC electrical interlock is provided with the mechanical interlock.

### Reversing

Reversing contactors are designed for reversing type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- A9 - A16 — mounted on 35mm DIN rail
- A26 - A750 — mounted on common baseplate

For A9 - A750 contactors the NC electrical interlock is provided with the mechanical interlock.

### Coil voltage selection – A contactors

Hz	Cntr type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84				80			85	86			55	

For other voltages, see page 1.24.

### Coil voltage selection – AF460N6 to AF1650N8

AC/DC VOLTS, 40 - 60 HZ			
24 - 60 DC	48 - 130 AC/DC	100 - 250 AC/DC	250-500 AC/DC
68 ①	69	70 ③	71 ②

① AF400 – AF750, DC only.

② AF400 - AF750 only.

③ Only option for AF1650.

# AE9 – AF1650, AL9 – AL26

Non-reversing, mechanically interlocked, reversing  
NEMA rated, DC operated, 3 phase



AE26N1-30-11-81



AF145N4-30-11-68



AF460N6R-11-68

## AE & AF Contactors

NEMA size	Continuous current	Maximum motor horsepower ratings			Standard Aux. contacts		Non-reversing		Mechanically interlocked		Reversing	
		200V	230V	460/575V	NO	NC	Catalog number	List price	Catalog number	List price	Catalog number	List price
<b>NEMA rated</b>												
00	9	1.5	1.5	2	1	0	AE9N00-30-11-81	\$ 118	AE9N00M-11-81	\$ 325	AE9N00R-11-81	\$ 395
0	18	3	3	5	1	0	AE16N0-30-11-81	142	AE16N0M-11-81	425	AE16N0R-11-81	493
1	27	7.5	7.5	10	1	0	AE26N1-30-11-81	223	AE26N1M-11-81	485	AE26N1R-11-81	560
2	45	10	15	25	1	1	AE50N2-30-11-81	375	AE50N2M-11-81	803	AE50N2R-11-81	930
3	90	25	30	50	1	1	AE75N3-30-11-81	518	AE75N3M-11-81	1,365	AE75N3R-11-81	1,493
4	135	40	50	100	1	1	AF145N4-3011-70	1,110	AF145N4M-11-70	2,655	AF145N4R-11-70	2,670
5	270	75	100	200	1	1	AF260N5-3011-70	2,235	AF260N5M-11-70	5,055	AF260N5R-11-70	5,070
6	540	150	200	400	1	1	AF460N6-3011-70	4,425	AF460N6M-11-70	13,275	AF460N6R-11-70	13,290
7	810	—	300	600	1	1	AF750N7-3011-70	7,200	AF750N7M-11-70	19,725	AF750N7R-11-70	19,740
8	1215	—	450	900	1	1	AF1650N83011-70	10,230	—	—	—	—

## AL Contactors

NEMA size	Continuous current	Maximum motor horsepower ratings			Standard Aux. contacts		Non-reversing		Mechanically interlocked		Reversing	
		208V	240V	460/575V	NO	NC	Catalog number	List price	Catalog number	List price	Catalog number	List price
<b>NEMA rated</b>												
00	9	1.5	1.5	2	1	0	AL9N00-30-10-81	\$ 155	AL9N00M-10-81	\$ 319	AL9N00R-10-81	\$ 379
0	18	3	3	5	1	0	AL16N0-30-10-81	205	AL16N0M-10-81	441	AL16N0R-10-81	501
1	27	7.5	7.5	10	1	0	AL26N1-30-10-81	253	AL26N1M-10-81	473	AL26N1R-10-81	533

## Coil voltage selection – AE contactors

All DC operated catalog numbers include a 24VDC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 125V coil is required for an AE75 contactor: AE75N3-30-11-87

## Coil voltage selection – AF wide range AC/DC coils

All catalog numbers include a 100-250V AC/DC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 24V coil is required for a AF145 contactor: AF145N4-30-11-72

## Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$ 20 to list price for each additional auxiliary, and see page 1.32 for available combinations.

## Mechanical interlock

Mechanically interlocked contactors are designed for reversing, 2 speed, reduced voltage, etc. type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- AE9 - AE16 — mounted on 35mm DIN rail
- AE26 - AE75 — mounted on common baseplate

Power wiring is not included.

For AE9 - AE75 contactors the NC electrical interlock is provided with the mechanical interlock.

## Reversing

Reversing contactors are designed for reversing type starter applications. The complete assembly consists of two mechanically and electrically interlocked contactors mounted as follows with line and load terminals:

- AE9 - AE16 — mounted on 35mm DIN rail
- AE26 - AE75 — mounted on common baseplate

For AE9 - AE75 contactors the NC electrical interlock is provided with the mechanical interlock.

## Coil voltage selection – AF50 to AF1650

AC/DC VOLTS, 40 - 60 Hz				
24 - 60 DC	20 - 60 DC	48 - 130 AC/DC	100 - 250 AC/DC	250 - 500 AC/DC
68 ①	72 ②	69	70 ③	71 ③

## Coil voltage selection – AE & AL contactors

Hz	Contactor type	Volts						
		12	24	48	110	125	220	240
DC	AE, AL	—	81	83	86	87	88	89

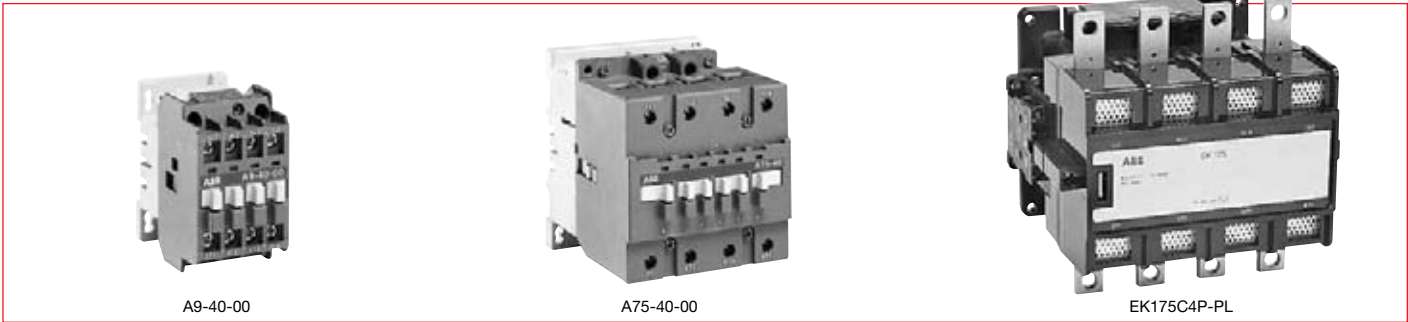
① AF400 – AF750, DC only.  
② AF50 – AF300, DC only.

③ AF400 - AF750 only.  
④ Only option for AF1650.

# A9 – A/AE75 , EK110 – EK1000, AL9 – AL26 AC & DC operated, UL rated, 4 pole

Across the line  
contactors

1



## 4 Pole – 4 NO power poles

UL general purpose current		AC operated		DC operated	
AC operated	DC operated	Catalog number	List price	Catalog number	List price
21	21	A9-40-00-84	\$ 120	AL9-40-00-81	\$ 141
30	30	A16-40-00-84	165	AL16-40-00-81	192
40	40	A26-40-00-84	228	AL26-40-00-81	246
65	65	A45-40-00-84	360	AE45-40-00-86	420
80	80	A50-40-00-84	413	AE50-40-00-86	473
105	105	A75-40-00-84	525	AE75-40-00-86	570
150	150	EK110C4P-1L	743	EK110C4P-PL	953
200	200	EK150C4P-1L	1,013	EK150C4P-PL	1,238
250	250	EK175C4P-1L	1,763	EK175C4P-PL	1,988
300	300	EK210C4P-1L	2,025	EK210C4P-PL	2,280
400	400	EK370C4P-1L	4,650	EK370C4P-PL	5,010
600	600	EK550C4P-1L	6,510	EK550C4P-PL	7,005
1000 ①	1000 ①	EK1000C4P-1L	9,000	EK1000C4P-PL	9,700

## 4 Pole – 4 NC power poles

UL general purpose current	AC operated	
AC operated	Catalog number	List price
30	A16-04-00-84	\$ 165

## 4 Pole – 2 NO & 2 NC power poles

UL general purpose current		AC operated		DC operated	
AC operated	DC operated	Catalog number	List price	Catalog number	List price
21	21	A9-22-00-84	\$ 120	AL9-22-00-81	\$ 141
30	21	A16-22-00-84	165	AL16-22-00-81	215
40	30	A26-22-00-84	228	AL26-22-00-81	278
65	65	A45-22-00-84	360	AE45-22-00-86	420
105	105	A75-22-00-84	525	AE75-22-00-86	570

## Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. All DC operated catalog numbers include a 110VDC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 240V coil is required for an A75 contactor: A75-30-00-80

## Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$ 20 to list price for each additional auxiliary, and see page 1.32 for available combinations.

## Accessories for EK

Please consult factory.

## Coil voltage selection – A contactors

Hz	Contr.	Volts																
		type	12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55	
50	A		81	83	84					80			85	86			55	

For other voltages, see page 1.24.

## Coil voltage selection – EK contactors

Hz	Contr.	Volts																
		type	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600	
60	EK	F	G		1		B		2	C	Z			3	4		6	
50	EK	N			1				J			3	M				5	
DC	EK	Y	W	P		Q		R						T				

- For other voltages, consult factory.
- 24 & 48VAC coils are not available for sizes EK550. For these applications, use an interposing control relay.

## Coil voltage selection – AE & AL contactors

Hz	Contr.	Volts							
		type	12	24	48	110	125	220	240
DC	AE, AL	-	81	83	86	87	88	89	

For other voltages, see page 1.24.

① Not UL Listed. IEC value AC1 for 40°C.

# AF45 - AF75

## AC & DC operated, UL rated, 4 pole

### Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.8. Add \$ 20 to the list price for each additional auxiliary and see page 1.32 for available combinations. If auxiliary contacts are required for AF50 – AF750 contactors, add \$ 40 to the list price and change the 8th & 9th digits in the catalog number from "00" to "11".

### 4 Pole – 4 NO power poles

General purpose	Auxiliary contacts		Catalog number	List price
	NO	NC		
AC1				
65	0	0	AF45-40-00-70	\$ 385
80	0	0	AF50-40-00-70	435
105	0	0	AF75-40-00-70	645

### 4 Pole – 2 NO - 2 NC power poles

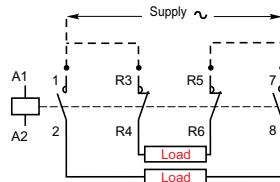
General purpose	Auxiliary contacts		Catalog number	List price
	NO	NC		
AC1				
65	0	0	AF45-22-00-70	\$ 385
105	0	0	AF75-22-00-70	645

These contactors (2 NO & 2 NC power poles) can be used for controlling either 2 separate circuits, i.e. 2 loads with 2 separate supplies, or 1 circuit comprising 2 separate loads with 1 single supply (see diagrams below).

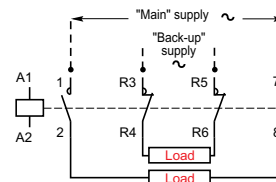
When the contactor operates, there is no mechanical overlapping between the NO main poles and NC main poles: Break before Make.

These contactors (2 NO & 2 NC power poles) are not suitable for a reversing starter or a wye-delta starter or for controlling a single load from 2 separate supplies.

1 single supply and 2 separate loads



2 separate supplies and 2 separate loads



### Coil voltage selection – wide range AC/DC coils

All catalog numbers include a 100-250V AC/DC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

Ex.: A 24V coil is required for a AF45 contactor: AF45-22-00-72

### Coil voltage selection – AF50 to AF75

AC/DC VOLTS, 40 - 60 HZ			
24 - 60 DC	20 - 60 DC	48 - 130 AC/DC	100 - 250 AC/DC
68 ①	72 ②	69	70

① AF400 – AF750, DC only.  
② AF50 – AF300, DC only.

# UA26 – UA110

for 3 phase capacitor switching, 3 phase  
AC operated

Across the line  
contactors

1



UA75-30-00-84



UA95-30-00-84

Max kvar switching capacity			Standard auxiliary contacts		Catalog number	List price
240V	480V	575/600V	NO	NC		
12.5	25	30	1	0	UA26-30-10-84	\$ 225
16	32	40	1	0	UA30-30-10-84	338
20	40	50	0	0	UA50-30-00-84	345
			1	1	UA50-30-11-84	375
27.5	55	70	0	0	UA75-30-00-84	450
			1	1	UA75-30-11-84	480
35	70	75	0	0	UA95-30-00-84	465
			1	1	UA95-30-11-84	495
40	80	85	0	0	UA110-30-00-84	525
			1	1	UA110-30-11-84	570

For 3 phase capacitors carrying out single bank or stepped bank compensation.  
Max. peak current  $\hat{I}$ : 100 times the capacitor nominal r.m.s. current at  $U_e \leq 500V$  or 90 times for  $U_e > 500V$   
Electrical durability: 100,000 operating cycles.

## Power in kvar

Contactor	208V	240V	480V	600V	Max amps
UA26	3.5	4.0	8.0	10.0	10
UA30	7.0	8.0	16.5	20.5	20
UA50	10.5	12.5	25.0	31.0	30
UA75	21.5	25.0	50.0	62.0	60
UA95	25.0	29.0	58.0	72.0	70
UA110	28.5	33.0	66.0	83.0	80
A145	43	50	100	125	120
A185	57	66	133	166	160
A210	66	77	153	192	185
A260	75	87	174	218	210
A300	88	101	203	254	245
AF400	119	137	274	343	330
AF460	142	164	329	410	396
AF580	178	205	411	514	495
AF750	214	247	495	618	595

## Coil voltage selection

All AC operated catalog numbers include a 120VAC coil. To select other coil voltages, substitute the code from the Coil Voltage Selection Chart for the two digits after the last dash in the catalog number.

## Auxiliary contact blocks

For additional auxiliary contact blocks, see catalog number explanation on page 1.2. Add \$20 to list price for each additional auxiliary, and see page 1.32 for available combinations.

## Coil voltage selection chart

Hz	Cntr type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84				80			85	86			55	

For other voltages, see page 1.24.



## Accessories for A/AF/AL & AE contactors



CAL5-11



CA5-10

### Auxiliary contact blocks – Standard

Positioning	Maximum number of contact blocks	Contact Description	Catalog number	List price
Front mounting (single pole)	4 blocks: A9 – A26 AE9 – AE26 AL9 – AL26	1 N.O. 1 N.C.	CA5-10 CA5-01	<b>\$ 15</b>
	5 blocks: A30, A40, AE30, AE40, AL30, AL40 6 blocks: A45 – A110 AE45 – AE110 AF45 – AF110		1 N.O. Early make 1 N.C. Late break	
Front mounting (4 pole)	1 block: A9 – A26-40-00 A30 – A110 AE9 – AE110	4 N.O. 3 N.O. & 1 N.C. 2 N.O. & 2 N.C. 4 N.C. 2 N.O./2 N.C.Ⓣ	CA5-40E CA5-31E CA5-22E CA5-04E CA5-11/11E	<b>30</b>
	1 block: A9 – A40-30-10 AL9 – AL40-30-10		3 N.O. & 1 N.C. 2 N.O. & 2 N.C. 1 N.O. & 3 N.C. 4 N.C. 4 N.O. 2 N.O./2 N.C.Ⓣ	
Side mounting (2 pole)	2 blocks: A9 – A75, AE9-AE45 1 block: AE50 – AE75, AL9 – AL40	1 N.O. & 1 N.C.	CAL5-11	
	1 block: A/AE/AF95 – A/AE/AF110		CAL18-11	
	2 blocks: A145 – A300, AF145-AF2050 2 blocks: A145 – A300, AF145-AF2050		1 N.O. & 1 N.C. (inside L or R) 1 N.O. & 1 N.C. (outside, L or R)	

### Auxiliary contact blocks – Front mounting, switching low voltage and low current

Positioning	Maximum number of contact blocks	Contact Description	Degree of protection	Catalog number	List price
Front mounting (single pole)	4 blocks: A9 – A26 AE9 – AE26 AL9 – AL26	1 N.O. 1 N.C.	IP40 IP40	CE5-10D0.1 CE5-01D0.1	<b>\$ 38</b>
				1 N.O. 1 N.C.	
Front mounting (single pole)	5 blocks: A30, A40, AE30, AE40, AL30, AL40 6 blocks: A45 – A110 AE45 – AE110 AF45 – AF110	1 N.O. 1 N.C. 1 N.O. 1 N.C.	IP67 IP67 IP67 IP67	CE5-10W0.1 CE5-01W0.1	<b>42</b>
				CE5-10W2 CE5-01W2	

Ⓣ Includes 1 N.O. &amp; 1 N.C. overlapping

# Accessories

## Auxiliary contact block technical data

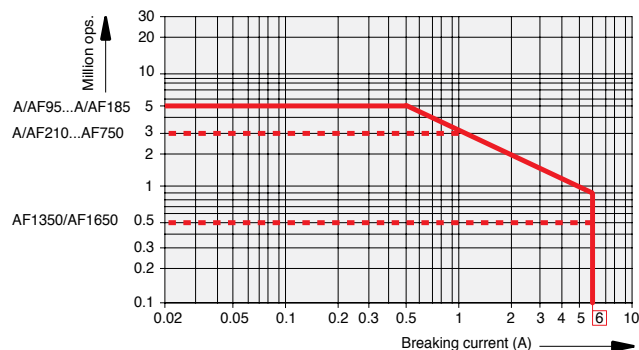
### CA5/CAL5-11/CAL18-11/CC5

Across the line  
contactors

1

Types	1-pole CA5, 4-pole CA5 2-pole CAL5-11 and 1-pole CC5		CAL18-11 CAL18-11B
<b>Standards</b>	IEC 947-5-1 and EN 60947-5-1		
<b>Rated insulation voltage <math>U_i</math></b> according to IEC 947-5-1	V	690	690
according to UL/CSA	V	600	690
<b>Rated operational voltage <math>U_e</math></b>	~ V	24 to 690	
<b>Conventional thermal current <math>I_{th}</math></b>	A	16	
<b>Rated operational current <math>I_e</math></b> in AC-15 acc. to IEC 947-5-1	24 to 127 V 220 to 240 V 380 to 440 V 500 to 690 V	A A A A	6 4 3 2
in DC-13 acc. to IEC 947-5-1	24 V 48 V 72 V 125 V 250 V	A A A A A	6 2.8 1 0.55 0.3
<b>Connecting terminals</b> (delivered in open position. Screws of unused terminals should be tightened).	M 3.5 (+,-) pozidriv 2 screw with cable clamp		
<b>Connecting capacity</b>	1 to 4		
• Rigid solid	1 or 2 x mm <sup>2</sup>		
• Flexible with cable end	1 x mm <sup>2</sup> 2 x mm <sup>2</sup>	0.75 to 2.5 0.75 to 2.5	
<b>Mechanical durability</b>	cycles	10 million, A9 - A75;	5 million, A/AF95 - A/AF185; 3 million, A/AF210 - AF750; 0.5 million, AF1350 & AF1650
<b>Max. switching frequency</b>	cycles/h	3600	
<b>Electrical durability</b>	See curve below		
<b>Max. switching frequency</b>	cycles/h	1200	
<b>Rated making capacity</b>	10 x $I_e$ AC-15		
<b>Rated breaking capacity</b>	10 x $I_e$ AC-15		
<b>Rated short-time withstand current <math>I_{cw}</math></b> q = 40°C	1 s 0.1 s	A A	100 140
<b>Min. switching capacity</b>	17 V / 1 mA		24V / 50 mA
<b>Short-circuit protection - gG (gl) fuses</b>	A	10	
<b>Power loss per pole at 6 A</b>	W	0.15	
<b>Degree of protection</b> according to IEC 529, IEC 144, DIN 40 050 and NFC 20-010	IP 20		

#### CAL18



#### Electrical durability

AC-15 according to IEC 947-5-1

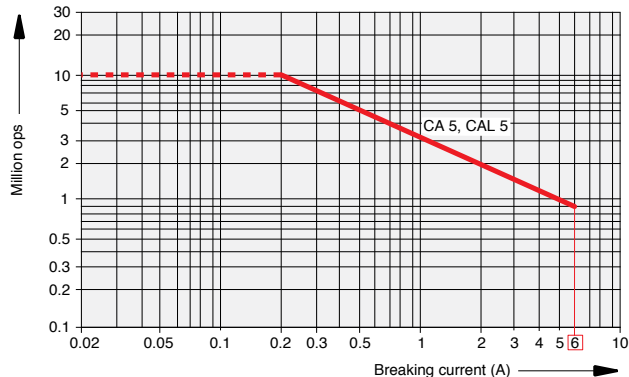
making current:  $10 \times I_e$  where  $\cos \phi = 0.7$  and  $U_e$

breaking current:  $I_e$  where  $\cos \phi = 0.4$  and  $U_e$

The curves opposite show the electrical durability of the auxiliary contact blocks according to breaking current  $I_c$ .

These curves have been plotted for resistive and inductive loads up to 690 V, 40 to 60 Hz.

#### CA5, CAL5



## Accessories

### Auxiliary contact block technical data

#### CE5

#### Auxiliary contact blocks for switching low level voltage and current

Types		CE5-10D0.1 CE5-01D0.1 CE5-10W0.1 CE5-01W0.1 Version 100 mA	CE5-10DZ CE5-01DZ CE5-10WZ CE5-01WZ Version 2 A
<b>Standards</b>		IEC 947-5-1 and EN 60947-5-1	
<b>Approvals</b>		UL / CSA	
<b>Rated insulation voltage <math>U_i</math></b> according to IEC 947-5-1	<b>V</b>	250	250
according to UL/CSA	<b>V</b>	125	250
<b>Rated operational voltage <math>U_e</math></b>	<b>V</b>	125	250
<b>Rated operational current <math>I_e</math></b> in AC-15 or AC-14 acc. to IEC 947-5-1	<b>A</b>	0.1	2
in DC-12 acc. to IEC 947-5-1	<b>A</b>	0.1	2
24 V	<b>A</b>	0.1	0.5
60 V	<b>A</b>	0.1	0.2
110 V	<b>A</b>	0.1	0.1
220 V	<b>A</b>	0.1	
<b>Minimal switching</b>		3 V / 1 mA	17 V / 1 mA
<b>Reliability for the minimal switching</b>		10 <sup>-8</sup>	
<b>Connecting terminals</b>		M3.5 (+,-) posidriv 2 screw with cable clamp	
<b>Connecting capacity</b> • Rigid solid • Flexible with cable end		1 ou 2 (1...4) mm <sup>2</sup> 1 ou 2 (0.75... 2.5) mm <sup>2</sup>	
<b>Short circuit protection</b>		100 mA	10 A
<b>Degree of protection</b> according to IEC529, IEC 144, DIN 40 050, NFC 20-010	IP 20		
<b>Mounting</b>		Front mounting on contactors: A, AE, TAE9...110, AL, AF, GA, N, NE	
<b>Dimensions</b>		Identical to those of CA5 single pole	

# Accessories for A/AF/AL & AE contactors

Across the line  
contactors

1



TP40DA



VE5-1



VM300H



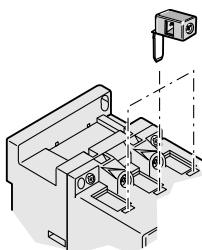
LK75-L



LK75-F



LK110



## Pneumatic timers

Mounting on	Timing range	Contacts		Catalog number	List price
		N.O.	N.C.		
A9 – A75	On delay 0.1 – 40 s	1	1	TP40DA	<b>\$ 108</b>
AE9 – AE75	On delay 10 – 180 s	1	1	TP180DA	
AL9 – AL40	Off delay 0.1 – 40 s	1	1	TP40IA	
	Off delay 10 – 180 s	1	1	TP180IA	

## Interlocks for two horizontally mounted contactors – A9 - A110

Feature	Mounting on	Contacts		Catalog number	List price
		N.O.	N.C.		
Mechanical/electrical	A/AE/AL9 – A/AE/AL40	–	2	VE5-1	<b>\$ 45</b>
Mechanical/electrical	A45 – A110	–	2	VE5-2 <sup>①</sup>	<b>45</b>
Mechanical	A/AE/AL9 – A/AE/AL40	–	–	VM5-1	<b>21</b>

## Interlocks for two horizontally mounted contactors – A95 - AF1250 contactors

Feature	Left contactors	Right contactors	Catalog number	List price
Mechanical	A210 – A300	AF400 – AF460	VM300/460H	<b>130</b>
Mechanical	AF400 – AF1250	AF400 – AF1250	VM750H	<b>150</b>

## Interlocks for two vertically mounted contactors – A95 - AF1250 contactors

Feature	Top contactor	Bottom Contactor	Catalog number	List price
Mechanical	A210 – A300	AF400 – AF460	VM300/460V	<b>250</b>
Mechanical	AF400 – AF1250	AF400 – AF1250	VM750V	<b>270</b>

## Interlocks for two horizontally mounted contactors – AF1350 - AF2050 contactors

Feature	Left contactor	Right Contactor	Catalog number	List price

## Auxiliary lead terminals

Connections	Mounting on	Catalog number	List price
Connects from top	A50 – A75	LK75-F	<b>15</b>
Connects from side	A95 – A110	LK110	<b>23</b>

<sup>①</sup> Use type VE 5-2 for mechanical and electrical interlocking between A30/A40 and A50 - A75 contactors.

## Accessories for A/AE/AL/AF contactors



### Terminal lug kits (Set of 3)

Wire range	For contactor	Catalog number	List price
6 – 300 MCM	A145 – A185	ATK185	\$ 45
4 – 400 MCM	A210 – A300	ATK300	68
(2) 4-500 MCM	A210 – A300	ATK300/2	110
(2) 2/0 – 500 MCM	AF400 – AF580	ATK580/2	150
(3) 2/0 – 500 MCM	AF580 – AF1250	ATK750/3	225
(4) 4/0 – 500 MCM	AF1350	ATK1350/4	235
(4) 1/0 – 750 MCM	AF1350 – AF2050	ATK1650/4	335
(6) 1/0 – 750 MCM	AF1350 – AF2050	ATK1650/6	560

### Contact kits

For contactors	Catalog number	List price
<b>3 Pole</b>		
A/AE/AF50	ZL50	\$ 113
A/AE/AF63	ZL63	135
A/AE/AF75	ZL75	158
A/AE/AF95	ZL95	225
A/AE/AF110	ZL110	255
A/AF145	ZL145	300
A/AF185	ZL185	420
A/AF210	ZL210	525
A/AF260	ZL260	855
A/AF300	ZL300	1,020
AF400	ZL400	1,716
AF460	ZL460	2,434
AF580	ZL580	3,795
AF750	ZL750	3,960
AF1250	ZL1250	5,280
AF1350	ZL1350	4,255
AF1650	ZL1650	4,890
AF2050	ZL2050	6,290
<b>4 Pole</b>		
A/AE45	ZLT45	150
A/AE50	ZLT50	150
A/AE75	ZLT75	210
<b>3 Pole</b>		
UA50	ZLU50	150
UA75	ZLU75	215
UA95	ZLU95	306
UA110	ZLU110	347

### Mechanical latches

For contactors	Catalog number	List price
A9 - A75, AE45 - AE75, & AL9 - AL40	WB75A-Δ	\$ 84

Δ - Coil voltage suffix. Refer to Coil Voltage Selection chart and substitute the desired coil voltage suffix for the Δ.

### Coil voltage selection chart – mechanical latches for A, AE & AL contactors

50 Hz (AC/DC)	60 Hz (AC)	Voltage code	50 Hz (DC)	60 Hz (AC)	Voltage code
24	24 – 28	<b>01</b>	220 – 230	220 – 255	<b>06</b>
42	42 – 48	<b>02</b>	230 – 240	230 – 277	<b>05</b>
48	48 – 55	<b>03</b>	380 – 415	380 – 440	<b>07</b>
110	110 – 127	<b>04</b>	415 – 440	440 – 480	<b>08</b>

**Range:** WB75A for contactors A9 – A75, AL9 – AL40, AE45 – AE75 and control relays N and NL.

**Description:** WB75A block: contains a mechanical latching device with electromagnetic impulse unlatching (AC or DC) or manual unlatching. Captive screw type connecting terminals, built-in cable clamps, M 3.5 (=, -) posidrive 1 screw with screwdriver guidance, delivered untightened and protected against accidental direct contact.

**Operation:** After closing, the contactor continues to be held in the closed position by the latching mechanism should the supply voltage fail at the contact coil terminals.

Contactor opening can be controlled:

- Electrically by an impulse\* (AC or DC) on the WB75A block coil. The coil is not designed to permanently energized.
- Manually by pressing the pushbutton on the front face of the WB75A block.

**Mounting:** WB75A is clipped onto the front face of the contactor.

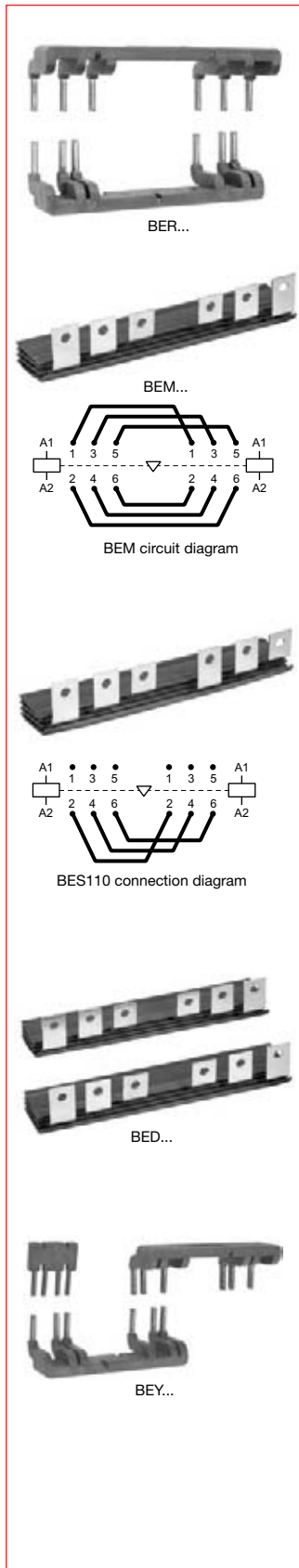
### Identification markers

Mounting on	Coil voltage	Catalog number	List price
A/AE/AL/AF9 – A/AE/AL/AF110	Pack of 50	BA5-50	\$ 15

# Accessories for A/AE/AL/AF contactors

Across the line  
contactors

1



## Connection kits for reversing

Mounting on 3 pole contactors	Catalog number	List price
A/AE/AL9 – A/AE/AL16 A/AE/AL26 – A/AE/AL40	BER16V BER40V	\$ 35 49
A/AE/AF50 – A/AE/AF75 A/AE/AF95, A/AE/AF110 A/AF145 – A/AF185 A/AF210 – A/AF300	BEM75-30 BEM110-30 BEM185-30 BEMA300-30	165 180 260 470
AF400 – AF460 AF580 – AF750	BEM460-30 BEM750-30	850 1,200

### Application

Connections between the main poles of **two 3 pole contactors** mounted side by side so that they operate as reversing contactors.

### Description

The connection kits for reversing contactors are made up of three reversing connections and three phase to phase connections.

- BER16V – Molded plastic, solid copper bars
- BER40V – Molded plastic, solid copper bars
- BEM75 and 110-30 – Insulated, solid copper bars

## Connection kits for phase to phase

Mounting on 3 pole contactors	Catalog number	List price
A/AE/AF50, A/AE/AF75 A/AE/AF95, A/AE/AF110 A/AF145 – A/AF185 A/AF210 – A/AF300	BES75-30 BES110-30 BES185-30 BESA300-30	\$ 75 90 130 200
AF400 – AF460 AF580 – AF750	BES460-30 BES750-30	425 650

The connection kit for phase to phase contactors is made up of three phase to phase bus bars.

## Connection kits for wye-delta starters

Mounting on contactors		Catalog number	List price
Line and delta contactor	Wye contactor		
A9	A9	BEY16V-2	\$ 46
A12	A9		
A16	A12		
A26	A16	BEY26-2	76
A30	A26	BEY40-2	76
A40	A26		
A50	A30	BED50U	165
A63	A40		
A75	A50		
A95	A75	BED75U	180
A110	A95	BED95U	195
A145	A110	BED110U	225
A185	A145	BED145U	250
A210	A185	BED185U	290
A260/A300	A185	BED210U	375
AF400/AF460	A210	BED300U	500
AF460	A260/A300	BED400U	850
AF580	AF400	BED460U	900
AF750	AF400/AF460	BED580U	1,250
	AF580	BED750U	1,450

### Application

Connections between the main poles of a wye-delta starter.

### Description

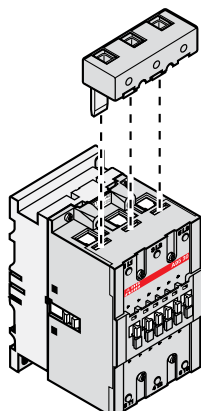
- The connection kits for wye-delta starters are made up of:
  - Three line contactor/wye contactor connections – line side.
  - Three wye contactor/delta contactor connections – load side.
  - The shorting connection for the “S” contactor.

BEY16V-2, BEY26-2, BEY40-2 – Molded plastic, solid copper bars

BED50U thru BED750U – Insulated, solid copper bars.

The above connection sets allow a mechanical interlock unit to be mounted between the wye and delta contactors if required.

## Accessories for A/AE/AL/AF contactors



LD110



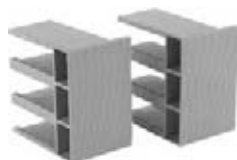
BEXT-75



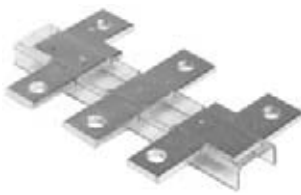
LX...



LT185-AC



LT185-AL



LW...

### Additional terminal blocks

Mounting on 3 pole contactors	Wire range	Catalog number	List price
A/AE/AL9 – A/AE/AL16 (set of 2)	16 – 6	LD-16	<b>\$ 20</b>
A/AE/AL26 (set of 2)	14 – 6	LD-26	<b>22</b>
A/AE/AL30 – A/AE/AL40	12 – 4	LD-40	<b>26</b>
A/AE/AF50 – A/AE/AF75	10 – 2	LD-75	<b>28</b>
A/AE/AF95 – A/AE/AF110	8 – 1	LD-110	<b>30</b>

Utilization – The LD series terminal block is designed to increase the connection capacity of the contactor on which it is mounted. The LD 75 and LD110 terminal blocks are mounted in the three independent apertures located above the built-in connectors.

### Terminal extensions

Mounting on contactors	Catalog number	List price
A/AE/AF50 – A/AE/AF75	BEXT-75	<b>\$ 15</b>
A/AE/AF95, A/AE/AF110	LW110	<b>95</b>
A/AF145 – A/AF185	LX185	<b>90</b>
A/AF210 – A/AF300	LX300	<b>140</b>
AF400 – AF460	LX460	<b>195</b>
AF580 – AF750	LX750	<b>225</b>

### Application

They are designed to increase the width of the contactor terminal pads to allow larger connectors to be mounted.

### Description

Terminal extension sets contain 3 bars.

### Terminal shrouds – two pieces

For contactor	Catalog number	List price
A/AF145 – A/AF185 for flush mount A/AF145 – A/AF185 for extended mount A/AF145 – A/AF185 for shorting bar LY... between A(F)145 / A(F)185 & TA200DU A/AF210 – A/AF300 for flush mount A/AF210 – A/AF300 for extended mount A/AF210 – A/AF300 for shorting bar LY300	LT185-AC LT185-AL LT185-AY LT300-AC LT300-AL LT300-AY	<b>\$ 10</b>
AF400 – AF460 for flush mount AF400 – AF460 for extended mount AF580 – AF1250 for flush mount AF580 – AF1250 for extended mount	LT460-AC LT460-AL LT750-AC LT750-AL	<b>20</b>

### Terminal enlargements

For contactor	Catalog number	List price
A/AF95 – A/AF110 A/AF145 – A/AF185 A/AF210 – A/AF300 AF400 – AF460 AF580 – AF750 AF1250	LW110 LW185 LW300 LW460 LW750 LW1250	<b>\$ 95</b> <b>120</b> <b>130</b> <b>295</b> <b>355</b> <b>375</b>

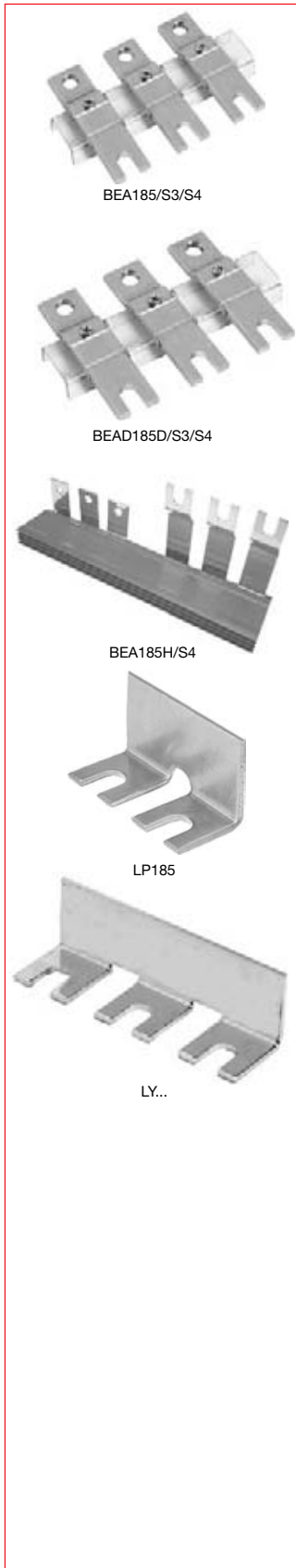
### Arc chutes

For contactor	Catalog number	List price
A/AF145 – A/AF185 A/AF210 – A/AF300 A/AF400 – A/AF460 A/AF580 – A/AF750 AF1350 – AF1650	ZW185 ZW300 ZW460 ZW750 ZW1650	<b>\$ 130</b> <b>180</b> <b>190</b> <b>230</b> <b>215</b>

# Accessories for A/AE/AF contactors

Across the line  
contactors

1



## Vertical connection bars between contactor and MCCB – three bars

MCCB	For contactor	Catalog number	List price
T1	A/AE/AF50 – A/AE/AF75	BEA75/T1	\$ 85
T3	A/AE/AF95 – A/AE/AF110	BEA110/T3	95
T3	A/AF145 – A/AF185	BEA185/T3	60
S3, S4	A/AF145 – A/AF185	BEA185/S3/S4	60
T4	A/AF145 – A/AF185	BEA185/T4	70
T4	A/AF210 – A/AF300	BEA210/T4	70
T5	A/AF210 – A/AF300	BEA300/T5	75
T5	A/AF400 – A/AF750	BEA750/T5	115
S5	A/AF210 – A/AF300	BEA300/S5	75
S5 <sup>①</sup>	AF400 – AF460	BEA400/S5	95
S6	AF400 – AF750	BEA750/S6	115

## Vertical connection bars between contactor and MCCB – three bars

MCCB	For contactor	Catalog number	List price
S3, S4	A/AF145 – A/AF185	BEA185D/S3/S4	\$ 70
S4	A/AF210 – A/AF300	BEA210D/S4	80
S5	A/AF210 – A/AF300	BEA300D/S5	85
S5	AF400 – AF460	BEA400D/S5	105
S6	AF400 – AF750	BEA750D/S6	125

To be used when power take off is needed (IP00) or with other bus bars. (EX: Reversing, IP20)

## Horizontal connection busbars between contactor and MCCB – three bars

MCCB	For contactor	Catalog number	List price
S3, S4	A/AF145 – A/AF185	BEA185H/S4	\$ 150
S4	A/AF210 – A/AF300	BEA210H/S4	220
S5	A/AF210 – A/AF300	BEA300H/S5	220
S5	AF400 – AF460	BEA400H/S5	435
S6	AF400 – AF460	BEA460H/S6	660
S6	AF580 – AF750	BEA750H/S6	670

## Shorting bars, 2 pole

For contactor	Catalog number	List price
A/AF145 – A/AF185	LP185	\$ 35
A/AF210 – A/AF300	LP300	50
AF400 – AF460	LP460	50
AF580 – AF750	LP750	50

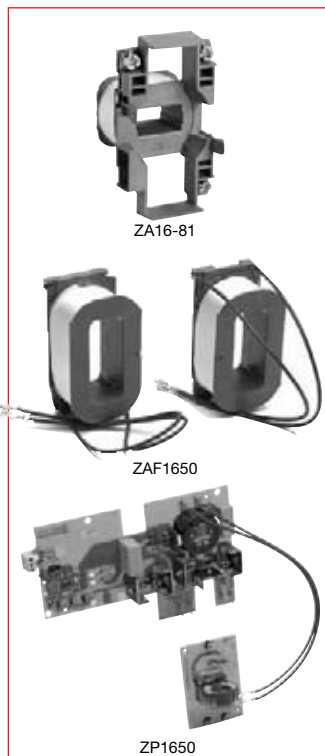
## Shorting bars, 3 pole

For contactor	Catalog number	List price
A/AE45 – A/AE/AF75	LF75	\$ 40
A/AE/AF95 – A/AE/AF110	LY110	40
A/AE/AF145 – A/AE/AF185	LY185	40
A/AE/AF210 – A/AE/AF300	LYA300	60
AF400 – AF460	LY460	60
AF580 – AF750	LY750	60

① Not for use with flange handles.



## Accessories for A/AE/AL/AF contactors Coils & coil voltage codes



### Coils – AC operated

For contactors	Catalog number	List price
A9 – A16	ZA16-Δ	\$ 24
A26 – A40	ZA40-Δ	30
A45 – A75	ZA75-Δ	57
A95 – A110	ZA110-Δ	60
A145 – A185	ZA185-Δ	150
A210 – A300	ZA300-Δ	180

### Coils – DC operated

AE9 – AE16	ZAE16-Δ	24
AE26 – AE40	ZAE40-Δ	30
AE45 – AE75	ZAE75-Δ	57
AE95 – AE110	ZAE110-Δ	90
Auxiliary including an insertion contact and a varistor for DC operated contactors AE95 – AE110	CCL18-01	45

### Coils – AC/DC operated (coil and printed circuit board except ZAF1650)

AF45 – AF75	ZAF75-Δ	120
AF95, AF110	ZAF110-Δ	165
AF145 – AF185	ZAF185-Δ	200
AF210 – AF300	ZAF300-Δ	240
AF400, AF460	ZAF460-Δ	450
AF580, AF750, AF1250	ZAF750-Δ	525
AF1350, AF2050 (Set of 2 coils only)	ZAF1650-Δ	920

### Printed circuit board – AC/DC operated

AF1350 – AF2050	ZP1650	1,620
-----------------	--------	-------

Δ – Coil voltage suffix. Refer to Coil Voltage Selection charts below and substitute the desired coil voltage code for the Δ.

### Coil voltage selection – AC operated for A9 – A300; UA26 – UA110

VAC (50Hz)	VAC (60Hz)	Voltage Code
24	24	81
26	28	16
28	32	17
42	42	82
48	48	83
60	60	73
100	100 – 110	74 ②
110	110 – 120	84
110 – 115	115 – 127	89 ③
120	140	29
125 – 127	150	30
175	208	34
190	220	36
200	200 – 220	75 ②
220 – 230	230 – 240	80
230 – 240	240 – 260	88
230 – 240	277	42
230/400	–	62 ①
–	230/400	63 ①
380 – 400	400 – 415	85
400 – 415	415 – 440	86
–	480	51
440	500	53
500	600	55
550	–	56
660 – 690	–	58

### Coil voltage selection – DC operated for AE contactors

VDC	Voltage code AE contactors
12	80
24	81
42	82
48	83
50	21
60	84
75	85
110	86
125	87
220	88
240	89
250	38

### Coil voltage selection – AC/DC operated for AF50 – AF2050

VAC & VDC 40-60 Hz	Suffix Code
24 – 60 VDC	68 ④
20 – 60 VDC	72 ⑤
48 – 130 VAC/VDC	69
100 – 250 VAC/VDC	70 ⑦
250 – 500 VAC/DC	71 ⑥

① Only for A9 – A16.  
② Not for A145 – A300  
③ A145 – A300 at 60 Hz, 115V only  
④ AF400 – AF1250, DC only  
⑤ AF45 – AF300  
⑥ AF400 – AF750 only  
⑦ Only option for AF2050 – AF1650

# Accessories for EK contactors Coils & coil voltage codes

Across the line  
contactors

1

## Coils – AC & DC operated

Contactor size	AC Coils		DC Coils	
	Catalog number	List price	Catalog number	List price
EK110, EK150	KH210-Δ	\$ 200	KH210-Δ	\$ 200
EK175, EK210	KH300-Δ	240	KH300-Δ	240
EK370, EK550	KH800-Δ	580	KH800-Δ	580

Δ – Coil voltage suffix. Refer to the Coil Voltage Selection chart and substitute the desired coil voltage suffix for the Δ. AC and DC operated contactors DO NOT have the same magnet structure. Therefore, DC coils will not fit on an AC magnet structure and vice versa.

## Coil voltage selection – AC operated for EK110 – EK550

VAC (50Hz)	VAC (60Hz)	Voltage Code
–	24	<b>F</b>
24	–	<b>N</b>
–	48	<b>G</b>
110	120	<b>1</b>
–	208	<b>B</b>
–	240	<b>2</b>
220 – 230	–	<b>J</b>
–	380	<b>Z</b>
380 – 400	440	<b>3</b>
400 – 415	–	<b>M</b>
–	480	<b>4</b>
500	–	<b>5</b>
–	600	<b>6</b>

Consult factory if other voltages are required.

## Coil voltage selection – DC operated for EK110 – EK550

VDC	Voltage Code
24	<b>Y</b>
48	<b>W</b>
110	<b>P</b>
125	<b>Q</b>
220	<b>R</b>
440	<b>T</b>

Consult factory if other voltages are required.