Accessories
for A/AF/BC & 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 – AE30 BC9 – BC30 5 blocks: A30, A40 6 blocks: A45 – A110 AE45 - AE110	1 N.O. 1 N.C. 1 N.O. Early make 1 N.C. Late break	CA5-10 CA5-01 CC5-10 CC5-01	$ 15
Front mounting (4 pole)	1 block: A9 – A26-40-00 A30 – A110 AE9 – AE110 BC9 – BC30	4 N.O. 3 N.O. & 1 N.C. 2 N.O. & 2 N.C. 4 N.C. 2 N.O./2 N.C.①	CA5-40E CA5-31E CA5-22E CA5-04E CA5-11/11E	30
	1 block: A9 – A40-30-10 BC9 – BC25-30-10	3 N.O. & 1 N.C. 2 N.O. & 2 N.C. 4 N.C. 2 N.O./2 N.C.①	CA5-31M CA5-22M CA5-04M CA5-11/11M	
Side mounting (2 pole)	2 blocks: A9 – A110 1 block: AE9 – AE110	1 N.O. & 1 N.C.	CAL5-11	
	2 blocks: A145 – AF750 2 blocks: A145 – AF750	1 N.O. & 1 N.C. (inside L or R) 1 N.O. & 1 N.C. (outside, L or R)	CAL5-11 CAL5-11B	

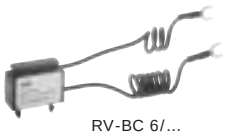
Auxiliary contact blocks – Front mounting, switching low voltage and low current

Positioning	Maximum number of contact blocks	Contact Description	Degree of protection	Catalog number	List price
Front mounting (single pole)	4 blocks: A9 – A26 AE9 – AE30 BC9 – BC30	1 N.O. 1 N.C. 1 N.O. 1 N.C.	IP40 IP40 IP40 IP40	CE5-10D0.1 CE5-01D0.1 CE5-10D2 CE5-01D2	$ 38
	5 blocks: A30, A40 6 blocks: A45 – A110 AE45 - AE110	1 N.O. 1 N.C. 1 N.O. 1 N.C.	IP67 IP67 IP67 IP67	CE5-10W0.1 CE5-01W0.1 CE5-10W2 CE5-01W2	42

① Includes 1 N.O. & 1 N.C. overlapping

Accessories
Surge suppressors for A/AE/BC/EK contactors


RT 7/...


RV-BC 6/...

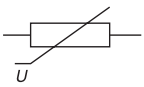
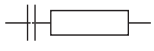
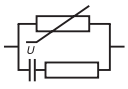

RV 5/50


RC 5-1/150

Surge suppression device

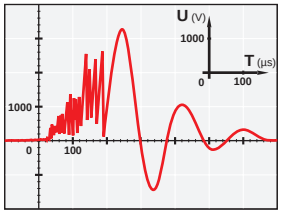
Mounting on	Voltage range	Catalog number	List price
BC9 to BC30	12 – 32 VDC	RT7/32	$ 26
	25 – 65 VDC	RT7/65	
	50 – 90 VDC	RT7/90	
	77 – 150 VDC	RT7/150	
	150 – 264 VDC	RT7/264	
BC9 to BC30	24 – 60 VDC	RV-BC6/60	
	50 – 127 VDC	RV-BC6/127	
	110 – 250 VDC	RV-BC6/250	
	200 – 420 VDC	RV-BC6/380	
AE9 to AE110	12 – 32 VDC	RT5/32	30
	25 – 65 VDC	RT5/65	
	50 – 90 VDC	RT5/90	
	77 – 150 VDC	RT5/150	
	150 – 264 VDC	RT5/264	
A9 to A110 and AE9 to AE110	24 – 50 VAC/VDC	RV5/50	
	50 – 133 VAC/VDC	RV5/133	
	110 – 250 VAC/VDC	RV5/250	
	250 – 440 VAC/VDC	RV5/440	
A9 to A40	24 – 50 VAC	RC5-1/50	
	50 – 133 VAC	RC5-1/133	
	110 – 250 VAC	RC5-1/250	
	250 – 440 VAC	RC5-1/440	
A45 to A300	24 – 50 VAC	RC5-2/50	
	50 – 133 VAC	RC5-2/133	
	110 – 250 VAC	RC5-2/250	
	250 – 440 VAC	RC5-2/440	
EK110 to EK210	24 – 48 VAC	RC-EH250/48	26
	110 – 415 VAC	RC-EH250/415	
EK370 to EK550	48 – 110VAC	RC-EH800/110	
EK110 to EK550	24 – 125VAC	RC-EH800/110	
EK370 to EK550	220 – 600VAC	RC-EH800/600	

Technical data

Type		Control circuit	Opening time growth factor	Residual overvoltage or clipping voltage	Remarks	
RT 7 or RT 5 /... transil diode					Advantages	• Good energy absorption
	32	DC		50 V		• Unpolarized system
	65	DC		100 V		• Simple, reliable system
	90	DC	2.5 to 3	150 V	Drawback	• A certain delay on drop out which does not however reduce contactor breaking capacity.
	150	DC		210 V		
	264	DC		390 V		
Varistor	**RV-BC 6 /...**				Advantages	• High energy absorption: good damping
	60	DC		137 V		• Unpolarized system
	127	DC	1.1 to 1.5	305 V		
	250	DC		510 V		
	380	DC		730 V	Drawback	• Clipping as from U_{vdr}*, thus voltage front up to this point.
	RV 5/...					
	50	AC/DC		132 V		
	133	AC/DC	1.1 to 1.5	270 V		
	250	AC/DC		480 V		
	440	AC/DC		825 V		
RC 5-1/... or RC 5-2/... **RC-EH 300/...** }	see table above	AC	1.2 to 3	2 to 3 x U_C	Advantages	• Very fast clipping • Attenuation of steep fronts and thus of high frequencies • No operating delays
						
Varistor + RC	**RC-EH ...**				Advantages	• High energy absorption: good damping
	800/110	AC/DC	1.1 to 1.5	205 V		• Unpolarized system
	800/600	AC		1100 V		• The RC system damps the voltage front under the U_{vdr}* threshold.

*U_{vdr} = Varistor operating voltage (voltage dependent resistor), tolerance ± 10%

Accessories
Surge suppressors for A/AE/BC/EK contactors



General

The operation of inductive circuits causes overvoltages, in particular on opening of the contactor coil.

The electromagnetic energy stored by the coil during contactor closing is restored on opening in the form of surges, the slope and amplitude of which may rise to several kilovolts. A number of drawbacks are observed ranging from interference on the electronic devices to breakdown of insulators and even destruction of certain sensitive components.

The graph opposite reproduces the oscillogram showing voltage discharges at the terminals of a 42V/50Hz coil without peak clipping. The coil was switched by 8 series-connected poles of a contactor relay.

Following a burst of discharges with a very steep slope a damped oscillation emerges with a peak value of 3500V.

Overvoltage factor

The overvoltage factor k is defined as the ratio of the maximum overvoltage peak value $\hat{U}_S$ to the peak value $\hat{U}_C$ of the coil rated control voltage U_C:

$$k = \frac{\hat{U}_s \text{ max.}}{\hat{U}_c}$$ in DC: $$k = \frac{\hat{U}_s \text{ max.}}{U_c}$$ or in AC: $$k = \frac{\hat{U}_s \text{ max.}}{U_c\sqrt{2}}$$

For example the following is obtained for the above graph: $$k = \frac{3500}{42\sqrt{2}} \approx 60$$

Surge suppressors

To guard against the harmful effects of these overvoltages, ABB has developed a range of surge suppressors designed to reduce the k factor defined above and to limit or even completely eliminate the high pre-damping voltage frequencies.

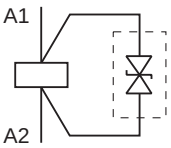
Each case is different, but the technical data tolerances and the generous sizing of parts have enabled us to reduce the number of variants.

We have chosen the following solutions: transil diodes, varistors and RC blocks.

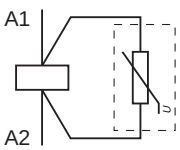
Note: A varistor is a resistor whose value increases to a very large extent when a certain voltage is applied at its terminals.

Wiring diagrams

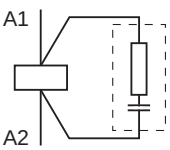
Transil diode



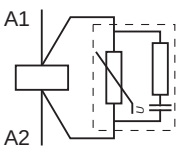
Varistor (only)



RC type



Varistor + RC



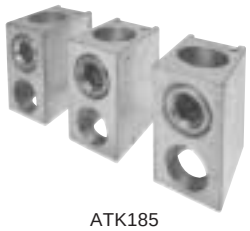
General technical data

The housings and impregnation resins of the surge suppressors are made of flame-resistant materials in accordance with the UL 94 standard.

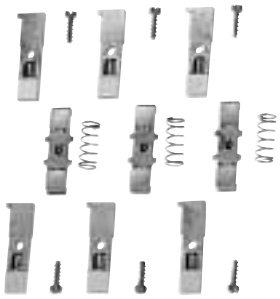
These systems are not polarized, i.e. d.c. operated devices do not have to be connected in a specific direction.

- Operating temperature: -20 to +70 °C
- Connection to the coil terminals (parallel mounting)
  - For **RT 7**, **RV-BC 6** and **RC-EH**: flexible, accessible leads, equipped with forked lugs. Except for the **RV-BC 6 F** variant: 2.8mm faston.
  - For **RT 5**, **RV 5**, **RC 5-1** and **RC 5-2**: clip-on for both fixing and connection.
- Mounting:
  - **RV-BC 6** and **RT 7**: dovetail mounting on both the top and bottom part of the contactor base. Alternatively, they can be clipped onto the front part of the contactor head.
  - **RT 5**, **RV 5** and **RC 5**: clipped onto the top part of the contactor base. This mounting method prevents any projections and change in contactor dimensions.
  - **RC-EH**: glued to the top part of the contactor base.

Accessories
for A/AE/AF contactors



ATK185



ZL75

WB75A-04

BA5-50

Terminal lug kits

Wire range	For contactor	Catalog number	List price
6 – 250 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	AF400 – AF750	ATK750/3	**225**

Contact kits

	For contactors	Catalog number	List price
3 Pole			
	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	**1020**
	AF400	ZL400	**1716**
	AF460	ZL460	**2434**
	AF580	ZL580	**3795**
	AF750	ZL750	**3960**
4 Pole			
	A/AE45	ZLT45	**150**
	A/AE50	ZLT50	**150**
	A/AE75	ZLT75	**210**

Mechanical latches

For contactors	Catalog number	List price
A9 - A75 & AE45 -AE75	WB75A-★	**$ 84**

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

Coil voltage selection chart — mechanical latches for A & AE contactors

50 Hz	60 Hz	Voltage code
24	24 – 28	**01**
42	42 – 48	**02**
48	48 – 55	**03**
110	110 – 127	**04**
220 – 230	220 – 255	**06**
230 – 240	230 – 277	**05**
380 – 415	380 – 440	**07**
415 – 440	440 – 480	**08**

Range: WB75A for contactors A9 – A75, AC9 – AC30, AE45 – AE75 and control relays N and KC.

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 mechanisim 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 marker

Mounting on	Coil voltage	Catalog number	List price
A9 – A110	Pack of 50	BA5-50	**$ 15**

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

ZA16-81

Coils — AC operated

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

Coils — DC operated

AE9 – AE16	ZAE16-★	24
AE26 – AE40	ZAE40-★	30
AE45 – AE75	ZAE75-★	57
AE95 – AE110	ZAE110-★	90
BC9 – BC30	KBC30G-★	36
Auxiliary including an insertion contact and a varistor for DC operated contactors		
AE45 – AE75	CDL5-01	45
AE95 – AE110	CCL5-01	

Coils — AC/DC operated

AF45 – AF75	ZAF75-★	120
AF95, AF110	ZAF110-★	165
AF145 – AF185	ZAF185-★	200
AF210 – AF300	ZAF300-★	240
AF400, AF460	ZAF460-★	450
AF580, AF750	ZAF750-★	525

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

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 — DC operated
for BC contactors

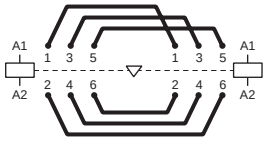
VDC	Voltage code AE contactors
12	07
24	01
42	02
48	16
50	17
60	03
75	22
110	04
125	27
220	05
240	33
250	34

Coil voltage selection — AC/DC operated for AF50 – AF750

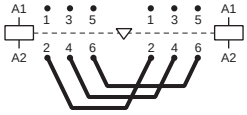
VAC & VDC 40-60 Hz	Suffix Code
24 – 60 VDC	68 ④
20 – 60 VDC	72 ⑤
48 – 130 VAC/VDC	69
100 – 250 VAC/VDC	70
200 – 500 VAC/VDC	71

① Only for A9 – A16.
② Not for A145 – A300
③ A145 – A300 at 60 Hz, 115V only.
④ AF400 – AF750.
⑤ AF145 – AF300.

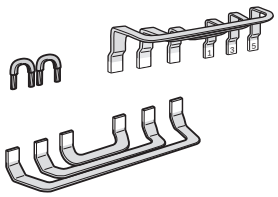
Accessories
for A/AE/AF contactors



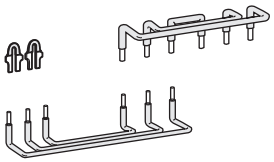
BEM circuit diagram



BES110 connection diagram



BED40U



BED75U

Connection kits for reversing

Mounting on 3 pole contactors	Catalog number	List price
A/AE9 – A/AE16	BEM16-30	$ 23
A/AE26	BEM26-30	30
A/AE30, A/AE40	BEM40-30	45
A/AE/AF50 – A/AE/AF75	BEM75-30	165
A/AE/AF95, A/AE/AF110	BEM110-30	180
A/AF145 – A/AF185	BEM185-30	260
A/AF210 – A/AF300	BEMA300-30	470
AF400 – AF460	BEM460-30	850
AF580 – AF750	BEM750-30	1200
BC9, BC16	BSM16-30	23
BC25	BSM25-30BC	30
BC30	BSM30-30BC	45

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.

BEM16-30 — Insulated, solid, rigid copper wires
BEM26 and 40-30 — Insulated, stranded, rigid copper wires
BEM75 and 110-30 — Insulated, solid copper bars
BSM16-30, BSM25 and 30-30BC — Insulated, solid, rigid copper wires

Connection kits for phase to phase

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

Description
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		
A30 A40	A26 A26	BED40U	$ 53
A50 A63	A30 A40	BED50U	165
A75	A50	BED75U	180
A95	A75	BED95U	195
A110	A95	BED110U	225
A145	A110	BED145U	250
A185	A145	BED185U	290
A210	A185	BED210U	375
A260/A300	A210	BED300U	500
AF400/AF460	A260/A300	BED400U	850
AF460	AF400	BED460U	900
AF580	AF400/AF460	BED580U	1250
AF750	AF580	BED750U	1450

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

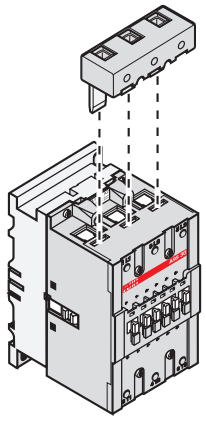
Description
The connection kits for wye-delta starters are made up of:
- Three line contactor/wye contactor connections — line side.
- Three wye contactor/delta contactor connections — load side.
- The shorting connection for the “S” contactor.

BED40U – Insulated, stranded, rigid copper wires.

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/AF contactors



LD110

BEXT-75

ZL145

LT185-AC

LT185-AL

Additional terminal block

Mounting on 3 pole contactors	Catalog number	List price
A/AE/AF75	LD-75	**$ 28**
A/AE/AF95 and A/AE/AF110	LD-110	**30**

Application

The LD110 terminal block is designed to increase the connection capacity of the contactor on which it is mounted: A(E)95 or A(E)110.

Description

Block housing three connectors: 1 per phase. Each connector is equipped with an HC, M8 socket head screw and has the following connection details:

- Stranded conductor (1) 6–2/0 OR (2) 4–1/0
- Busbar max. width 12 mm

Mounting

The LD110 terminal block can be mounted in the terminal slots located on line or load side of contactor.

Terminal extensions

Mounting on contactors	Catalog number	List price
A/AE/AF50 – A/AE/AF75	BEXT-75	**$ 15**
A/AE/AF95, A/AE/AF110	LW-110	**15**
A/AF145 – A/AF185	LX185	**90**
A/AF210 – A/AF300	LX300	**140**
AF400 – AF460	LX460	**195**
AF580 – AF750	LX750	**225**

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	LT185-AC	
A/AF145 – A/AF185 for extended mount	LT185-AL	
A/AF145 – A/AF185 for shorting bar LY...between A(F)145 / A(F)185 & TA200DU	LT185-AY	**$ 10**
A/AF210 – A/AF300 for flush mount	LT300-AC	
A/AF210 – A/AF300 for extended mount	LT300-AL	
A/AF210 – A/AF300 for shorting bar LY300	LT300-AY	
AF400 – AF460 for flush mount	LT460-AC	
AF400 – AF460 for extended mount	LT460-AL	**20**
AF580 – AF750 for flush mount	LT750-AC	
AF580 – AF750 for extended mount	LT750-AL	

Terminal enlargements

For contactor	Catalog number	List price
A/AF145 – A/AF185	LW185	**$ 120**
A/AF210 – A/AF300	LW300	**130**

Accessories
for A/AE/AF contactors

BEA185/S3/S4

LP185

Vertical connection bars between contactor and MCCB — three bars

MCCB	For contactor	Catalog number	List price
S3, S4	A/AF145 – A/AF185	BEA185/S3/S4	$ 60
S4	A/AF210 – A/AF300	BEA210/S4	70
S5	A/AF210 – A/AF300	BEA300/S5	75
S5	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

Vertical connection bars between contactor and disconnect switch

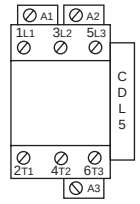
Disconnect switch	For contactor	Catalog number	List price
OS160	A/AF145	OSZA15	$ 200
OESA250	A/AF185	BEF185V/OESA250	260
OESA250 - OESA400	A/AF210 - A/AF300	BEF300V/OESA400	270
OESA400	AF400 - AF460	BEF460V/OESA400	300
OESA630 - OESA800	AF460 - AF750	BEF750V/OESA800	320

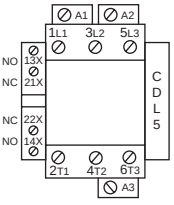
Horizontal connection bars between contactor and disconnect switch

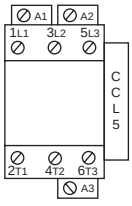
Disconnect switch	For contactor	Catalog number	List price
OESA250	A/AF145 - A/AF185	BEF185H/OESA250	$ 515
OESA250 - OESA400	A/AF210 - A/AF300	BEF300H/OESA400	595
OESA400	AF400 - AF460	BEF460H/OESA400	615

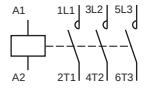
Accessories
Terminal marking and positioning for AE/AC contactors

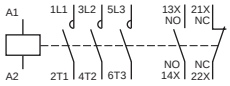
AE Contactors — D.C. operated

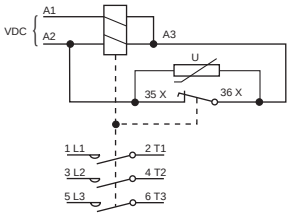

AE50 – AE75-30-00

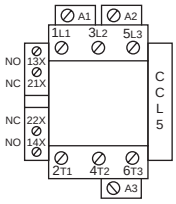

AE50 – AE75-30-11

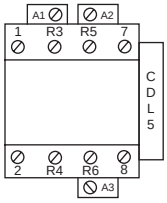

AE95 – AE110-30-00

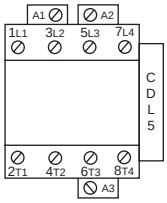

AE50 – AE110-30-00

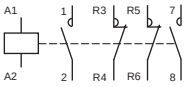

AE50 – AE110-30-11

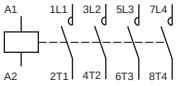

Coil wiring

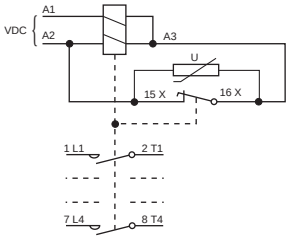

AE95 – AE110-30-11


AE45 – AE75-22-00

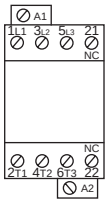

AE45 – AE75-40-00

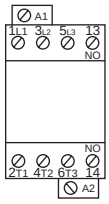

AE45 – AE75-22-00

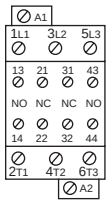

AE45 – AE75-40-00

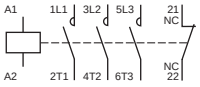

Coil wiring

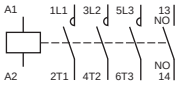
AC Contactors — D.C. operated
Standard devices without addition of auxiliary contacts

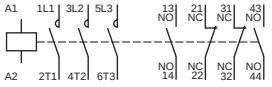

BC9 – BC25-30-01

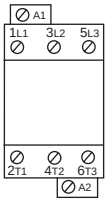

BC9 – BC25-30-10

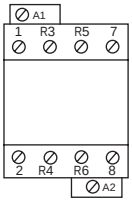

BC30-30-22

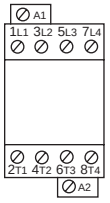

BC9 – BC25-30-01

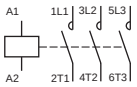

BC9 – BC25-30-10

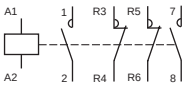

BC30-30-22

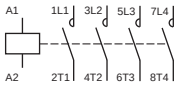

BC30-30-00


BC9 – BC25-22-00

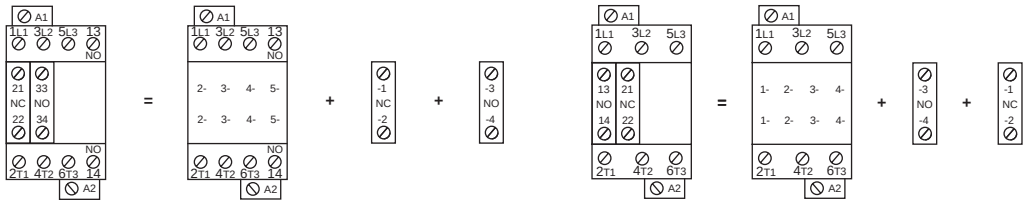

BC9 – BC25-40-00


BC30-30-00

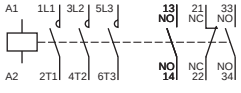

BC9 – BC25-22-00

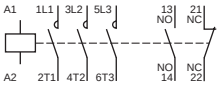

BC9 – BC25-40-00

Other possible contact combinations with auxiliary contacts added by the user


Combination 21 = BC9 – BC25-30-10 + CA5-01 + CA5-10

Combination 11 = BC30-30-00 + CA5-10 + CA5-01


Combination 21


Combination 11

UL & CSA Technical data
A/AE9 – A/AE/AF110
AC & DC operated

ABB contactor frame size		A/AE 9	A/AE 12	A/AE 16	A/AE 26	A/AE 30	A/AE 40	A/AE/AF 45	A/AE/AF 50	A/AE/AF 63	A/AE/AF 75	A/AE/AF 95	A/AE/AF 110
NEMA size		00	—	0	1	1P	—	—	2	—	3	—	—
Number of poles		3 OR 4	3	3 OR 4	3 OR 4	3	3	4	3 OR 4	3	3 OR 4	3	3
AC rating information													
NEMA cont. amp rating	thermal current	9	—	18	27	36	—	—	45	—	90	—	—
NEMA maximum H.P. ratings	1 phase												
115	VAC	1/3	—	1	2	3	—	—	3	—	—	—	—
230	VAC	1	—	2	3	5	—	—	7.5	—	—	—	—
NEMA maximum H.P. ratings	3 phase												
200	VAC	1.5	—	3	7.5	—	—	—	10	—	25	—	—
230	VAC	1.5	—	3	7.5	—	—	—	15	—	30	—	—
460/575	VAC	2	—	5	10	—	—	—	25	—	50	—	—
U.L. general purpose current	40°C	21	25	30	40	50	60	65	80	90	105	125	140
Max. 3 Ph Switching motor loads	A	9	11	17	28	34	42	54	65	80	95	110	
U.L. maximum H.P. ratings	1 phase												
115	VAC	1/2	3/4	1	2	3	3	—	3	5	7.5	7.5	10
230	VAC	2	2	3	5	7.5	7.5	—	7.5	10	15	20	25
U.L. maximum H.P. ratings	3 phase												
200-208	VAC	2	3	5	7.5	10	10	—	15	20	25	30	30
220-240	VAC	2	3	5	10	10	15	—	20	25	30	30	40
440-480	VAC	5	7.5	10	20	25	30	—	40	50	60	60	75
550-600	VAC	7.5	10	15	25	30	40	—	50	60	75	75	100
U.L. maximum H.P. ratings													
120	VDC	1	1.5	2	3	3	5	—	7.5	10	10	—	—
240	VDC	2	3	3	5	7.5	10	—	15	20	25	—	—
Lighting — ballast and incandescent	600VAC	15	15	20	35	50	60	65	65	85	105	—	—
Resistive heating applications	600VAC	15	15	20	35	50	60	65	65	85	105	—	—
CSA Elevator ratings													
220 – 240VAC	3 phase	—	—	5	—	—	10	—	15	—	20	—	—
440 – 480VAC	3 phase	—	—	10	—	—	20	—	30	—	30	—	—
550 – 600VAC	3 phase	—	—	10	—	—	20	—	30	—	40	—	—
230VAC	1 phase	—	—	2	—	—	5	—	7.5	—	10	—	—
Auxiliary contacts													
NEMA rating	AC	A600	A600	A600	A600	A600	A600	—	A600	A600	A600	A600	A600
AC rated voltage	VAC	600	600	600	600	600	600	—	600	600	600	600	600
AC thermal rated current	A	10	10	10	10	10	10	—	10	10	10	10	10
AC maximum volt-ampere making	VA	7200	7200	7200	7200	7200	7200	—	7200	7200	7200	7200	7200
AC maximum volt-ampere breaking	VA	720	720	720	720	720	720	—	720	720	720	720	720
NEMA rating	DC	P600	P600	P600	P600	P600	P600	—	P600	P600	P600	P600	P600
DC rated voltage	VDC	600	600	600	600	600	600	—	600	600	600	600	600
DC thermal rated current	A	5	5	5	5	5	5	—	5	5	5	5	5
DC Maximum make-break	A	0.2	0.2	0.2	0.2	0.2	0.2	—	0.2	0.2	0.2	0.2	0.2
Approximate weight													
Contactor	lbs.	0.7	0.7	0.7	1.01	1.2	2.25	2.25	2.25	2.25	2.25	3.5	5
Starter	lbs.	1.04	1.04	1.04	1.35	1.54	3	—	3	3	3	6	7
Terminal wire range	AWG	18-10	18-10	18-10	12-8	8-4	8-4	8-1	8-1	8-1	8-1	6-2/0	6-2/0
Number of wires per phase		2	2	2	2	2	2	1	1	1	1	1	1
Maximum short circuit ratings													
MCCB,MCP,Amps/kA	480VAC	50/35	50/35	50/35	100/35	150/65	150/65	—	150/85	250/85	250/85	250/85	250/85
MCCB,MCP,Amps/kA	600VAC	10/35	10/35	—	100/35	150/25	150/25	—	—	—	—	250/35	250/35
Fuse,Amps — type/kA	600VAC	30J/200	30J/200	30J/200	60J/200	60J/200	100J/200	—	100J/200	200J/200	200J/200	200J/200	200J/200

Mounting positions