

AF09 ... AF38 3-pole contactors

4 to 18.5 kW, AC / DC operated



AF09-30-10





AF26-30-00

Description

AF09 ... AF38 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 VAC and 220 VDC. These contactors are of the block type design with 3 main poles.

- control circuit: AC or DC operated with electronic coil interface accepting a wide control voltage range (e.g. 100...250 VAC and DC), only 4 control voltage ranges covering 24...500 V50/60 Hz and 20...500 VDC
- can manage large control voltage variations
- reduced panel energy consumption
- very distinct closing and opening.
- built-in surge suppression
- add-on auxiliary contact blocks for front or side mounting and a wide range of accessories.

IEC Rated		Rated control voltage U _c		Auxiliary contacts fitted		Factory code	Order code
Power 400 V AC-3	Current θ ≤ 40 °C AC-1	50/60 Hz					
kW	A	V AC	V DC				
4	25	24...60	20...60	1	0	1SBL137001R1110	AF09301011
		24...60	20...60	0	1	1SBL137001R1101	AF09300111
		48...130	48...130	1	0	1SBL137001R1210	AF09301012
		48...130	48...130	0	1	1SBL137001R1201	AF09300112
		100...250	100...250	1	0	1SBL137001R1310	AF09301013
		100...250	100...250	0	1	1SBL137001R1301	AF09300113
		250...500	250...500	1	0	1SBL137001R1410	AF09301014
		250...500	250...500	0	1	1SBL137001R1401	AF09300114
5.5	28	24...60	20...60	1	0	1SBL157001R1110	AF12301011
		24...60	20...60	0	1	1SBL157001R1101	AF12300111
		48...130	48...130	1	0	1SBL157001R1210	AF12301012
		48...130	48...130	0	1	1SBL157001R1201	AF12300112
		100...250	100...250	1	0	1SBL157001R1310	AF12301013
		100...250	100...250	0	1	1SBL157001R1301	AF12300113
		250...500	250...500	1	0	1SBL157001R1410	AF12301014
		250...500	250...500	0	1	1SBL157001R1401	AF12300114
7.5	30	24...60	20...60	1	0	1SBL177001R1110	AF16301011
		24...60	20...60	0	1	1SBL177001R1101	AF16300111
		48...130	48...130	1	0	1SBL177001R1210	AF16301012
		48...130	48...130	0	1	1SBL177001R1201	AF16300112
		100...250	100...250	1	0	1SBL177001R1310	AF16301013
		100...250	100...250	0	1	1SBL177001R1301	AF16300113
		250...500	250...500	1	0	1SBL177001R1410	AF16301014
		250...500	250...500	0	1	1SBL177001R1401	AF16300114
11	45	24...60	20...60	0	0	1SBL237001R1100	AF26300011
		48...130	48...130	0	0	1SBL237001R1200	AF26300012
		100...250	100...250	0	0	1SBL237001R1300	AF26300013
		250...500	250...500	0	0	1SBL237001R1400	AF26300014
15	50	24...60	20...60	0	0	1SBL277001R1100	AF30300011
		48...130	48...130	0	0	1SBL277001R1200	AF30300012
		100...250	100...250	0	0	1SBL277001R1300	AF30300013
		250...500	250...500	0	0	1SBL277001R1400	AF30300014
18.5	50	24...60	20...60	0	0	1SBL297001R1100	AF38300011
		48...130	48...130	0	0	1SBL297001R1200	AF38300012
		100...250	100...250	0	0	1SBL297001R1300	AF38300013
		250...500	250...500	0	0	1SBL297001R1400	AF38300014

Other coil voltages and auxiliary contact arrangements available.

For more detailed product information, please refer to the Technical Catalogue: 1SBC100192C0206

- 1) For 24...60 V 50/60 Hz - 20...60 V DC, use AF.-30-.-11 (see voltage code table). AF.-30-.-11 not suitable for direct control by PLC-output.
- 2) For direct PLC control, please contact ABB.

AF40 ... AF96 3-pole contactors

18.5 to 45 kW, AC / DC operated



AF40-30-00





AF80-30-00

Description

AF40 ... AF96 contactors are mainly used for controlling 3-phase motors and power circuits up to 690 VAC and 220 VDC. AF80 and AF96 also suitable up to 1000 VAC applications. These contactors are of the block type design with 3 main poles.

- control circuit: AC or DC operated with electronic coil interface accepting a wide control voltage range (e.g. 100...250 VAC and DC), only 4 control voltage ranges covering 24...500 V 50/60 Hz and 20...500 VDC
- can manage large control voltage variations
- reduced panel energy consumption
- very distinct closing and opening.
- built-in surge suppression
- add-on auxiliary contact blocks for front or side mounting and a wide range of accessories.

IEC Rated		Rated control voltage U_c		Auxiliary contacts fitted		Factory code	Order code
Power 400 V AC-3	Current $\theta \leq 40^\circ\text{C}$ AC-1	50 Hz	60 Hz				
		kW	A				
18.5	70	24...60	20...60	0	0	1SBL347001R1100	AF40300011
		48...130	48...130	0	0	1SBL347001R1200	AF40300012
		100...250	100...250	0	0	1SBL347001R1300	AF40300013
		250...500	250...500	0	0	1SBL347001R1400	AF40300014
22	100	24...60	20...60	0	0	1SBL367001R1100	AF52300011
		48...130	48...130	0	0	1SBL367001R1200	AF52300012
		100...250	100...250	0	0	1SBL367001R1300	AF52300013
		250...500	250...500	0	0	1SBL367001R1400	AF52300014
30	105	24...60	20...60	0	0	1SBL387001R1100	AF65300011
		48...130	48...130	0	0	1SBL387001R1200	AF65300012
		100...250	100...250	0	0	1SBL387001R1300	AF65300013
		250...500	250...500	0	0	1SBL387001R1400	AF65300014
37	125	24...60	20...60	0	0	1SBL397001R1100	AF80300011
		48...130	48...130	0	0	1SBL397001R1200	AF80300012
		100...250	100...250	0	0	1SBL397001R1300	AF80300013
		250...500	250...500	0	0	1SBL397001R1400	AF80300014
45	130	24...60	20...60	0	0	1SBL407001R1100	AF96300011
		48...130	48...130	0	0	1SBL407001R1200	AF96300012
		100...250	100...250	0	0	1SBL407001R1300	AF96300013
		250...500	250...500	0	0	1SBL407001R1400	AF96300014

Other coil voltages and auxiliary contact arrangements available.

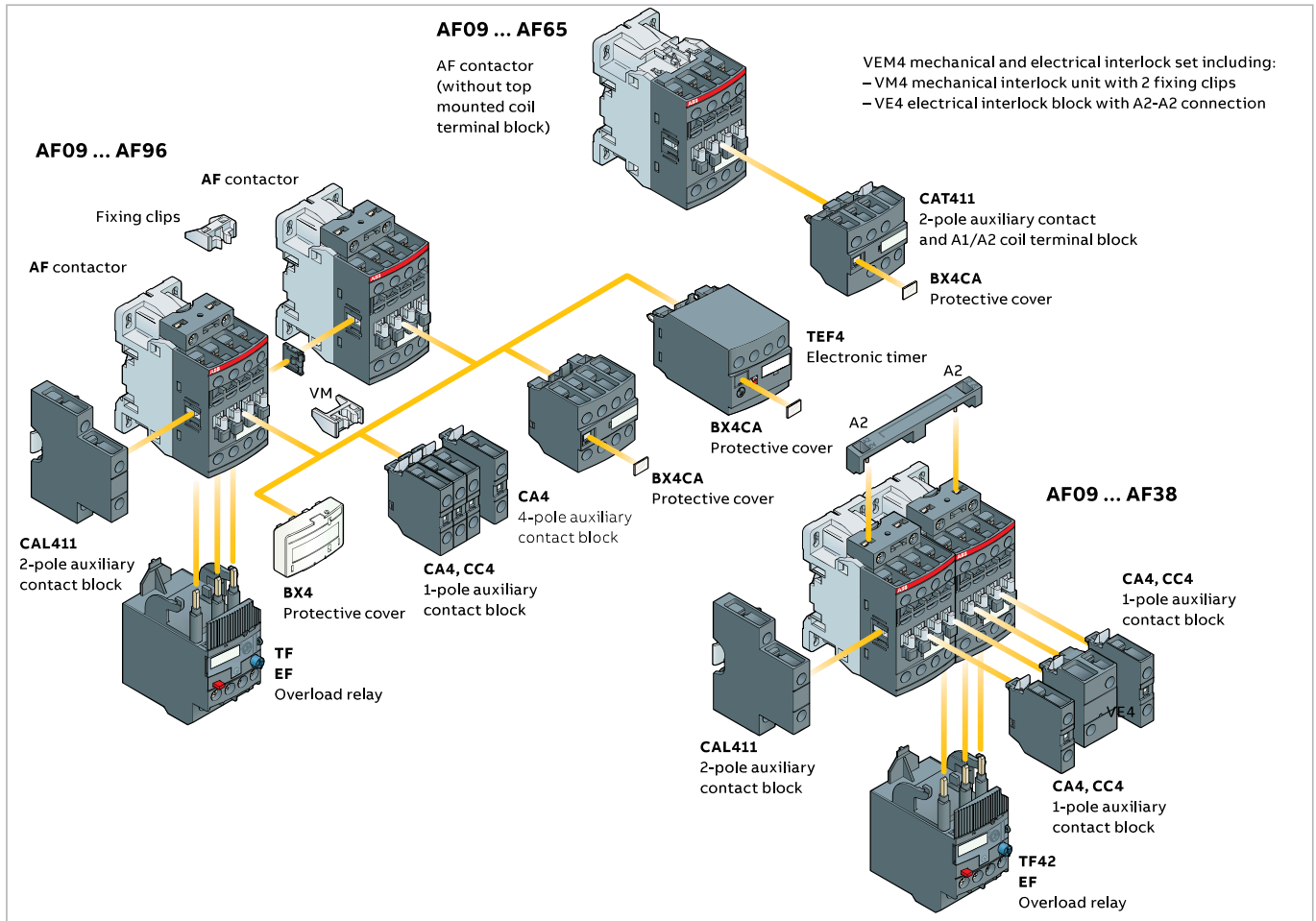
For more detailed product information, please refer to the Technical Catalogue: 1SBC100192C0206

- 1) AF.-30-.-11 not suitable for direct control by PLC-output.
- 2) For direct PLC control, please contact ABB.

AF09 ... AF96 3-pole contactors

Main accessories

Contactor and main accessories (other accessories available)



Main accessory fitting details

Many configurations of accessories are possible depending on whether these are front-mounted or side-mounted.

Contactor types	Main poles	Built-in auxiliary contacts	Front-mounted accessories				Electronic timer	Electrical and mechanical interlock set (between 2 contactors)	Side-mounted accessories	
			Auxiliary contact blocks						Auxiliary contact blocks	
			1-pole CA4	2-pole CAL411	4-pole CA4			Left side		Right side
			1-pole CC4	CAL411	CA4	TEF4	VEM4	2-pole CAL411		
Max. N.C. built-in and add-on N.C. auxiliary contacts: 4 N.C. max. on positions 1, 2, 3, 4 and 3 N.C. max. on positions 1 ±30°, 5										
AF09 ... AF16	3	0	4 max.	or 1	or 1	or 1	-	+ 1		-
AF09 ... AF16	3	0	2 max.	or 1	-	or 1	-	+ 1	+ 1	
AF26 ... AF38	3	0	3 max.	-	-	-	+ 1	+ 1	or 1	

AF40 ... AF65	0	0	0	0	4 max.	or 1	or 1	or 1	-	+ 1	1
AF80, AF96	02	0	0	0	4 max.	or -	or 1	or 1	-	+ 1	+ 1

Overload relays fitting details ⁽¹⁾

Contactor types	Thermal overload relays	Electronic overload relays
AF09 ... AF38	TF42 (0.10...38 A)	EF19 (0.10...19 A)
AF26 ... AF38	TF42 (0.10...38 A)	EF45 (9...45 A)
AF40 ... AF65	TF65 (22...67 A)	EF65 (25...70 A)
AF80, AF96	TF96 (40...96 A)	EF96 (20...100 A)

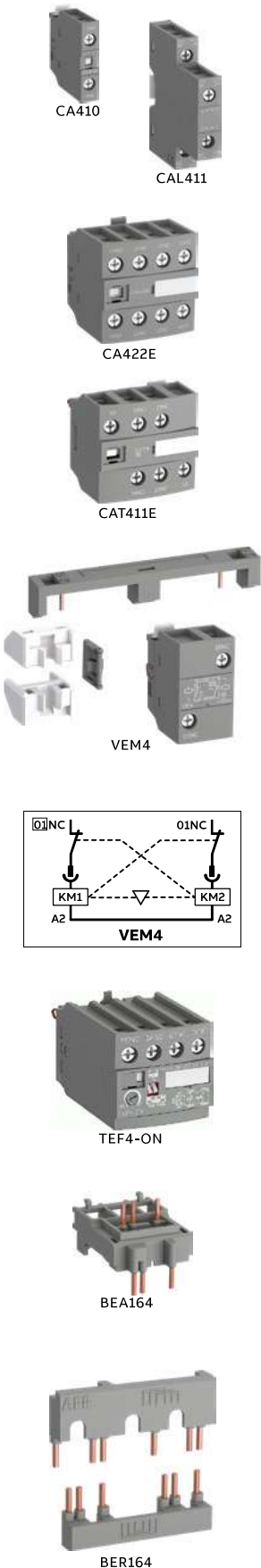
The addition of an overload relay on the contactor does not prevent fitting of many other accessories as shown above.

1) Direct mounting – No kit required.

For more detailed product information, please refer to the Technical Catalogue: 1SBC100192C0206

AF09 ... AF96 3-pole contactors

Main accessories



Ordering details ⁽¹⁾

For contactors	Auxiliary contacts		Factory code		Order code	
Front-mounted instantaneous auxiliary contact blocks						
AF09 ... AF96	1	0	-	-	1SBN010110R1010	CA410
	0	1	-	-	1SBN010110R1001	CA401
AF09 ... AF16...-30-10	2	2	-	-	1SBN010140R1122	CA422M
AF26 ... AF96...-30-00	2	2	-	-	1SBN010140R1022	CA422E
AF09 ... AF16...-30-01	2	2	-	-	1SBN010140R1322	CA422U
Front-mounted auxiliary contact blocks with N.O. leading contact and N.C. lagging contact						
AF09 ... AF96	-	-	1	0	1SBN010111R1010	CC410
	-	-	0	1	1SBN010111R1001	CC401
Side-mounted instantaneous auxiliary contact blocks						
AF09 ... AF96	1	1	-	-	1SBN010120R1011	CAL411
Front-mounted instantaneous auxiliary contact and A1/A2 coil terminal blocks						
AF09 ... AF16...-30-10	1	1	-	-	1SBN010151R1111	CAT411M
AF26 ... AF65...-30-00	1	1	-	-	1SBN010151R1011	CAT411E
AF09 ... AF16...-30-01	1	1	-	-	1SBN010151R1311	CAT411U
Note: CAT4 not suitable for AF..Z contactors with DC control voltage 12...20 V DC.						
Mechanical interlock unit						
AF09 ... AF38					1SBN030105T1000	VM4
AF40 ... AF96					1SBN033405T1000	VM96-4
Mechanical and electrical interlock set						
AF09 ... AF16	0	2	-	-	1SBN030111R1000	VEM4
AF26 ... AF38						
Terminal Shrouds						
AF40 ... AF65					1SBN123401R1000	LT6530
AF80 ... AF96					1SBN123901R1000	LT9630
Note:						
-VEM4 includes a VM4 mechanical interlock unit with 2 fixing clips (BB4), a VE4 electrical interlock block. VE4 block must be used with A2-A2 connection to respect the electrical connection diagram.						
-VEM4 not suitable for AF..Z contactors with DC control voltage 12...20 V DC.						
Diagram: VEM4 connection						
For contactors						
	Time delay range selected by switch	Delay type	Auxiliary contacts		Factory code	Order code
Electronic timers						
AF09 ... AF96	0.1...1 s	ON-delay	1	1	1SBN020112R1000	TEF4-ON
	1...10 s					
	10...100 s	OFF-delay	1	1	1SBN020114R1000	TEF4-OFF
Note: Rated control circuit voltage U _c 24...240 V 50/60 Hz or DC.						
Connecting links with manual motor starters						
AF09 ... AF16	with	MS116-0.16 ... MS116-25,	1SBN081306T1000		BEA164	
		MS132-0.16 ... MS132-25				
AF26 ... AF38	with	MS116-0.16 ... MS116-16,	1SBN082306T1000		BEA264	
		MS132-0.16 ... MS132-10				
	with	MS116-20 ... MS116-32,	1SBN082306T2000		BEA384	
		MS132-12 ... MS132-32				
Connection sets for reversing contactors						
AF09 ... AF16			1SBN081311R1000		BER164	
AF26 ... AF38			1SBN082311R1000		BER384	
AF40 ... AF65			1SBN083411R1000		BER654	
AF80 ... AF96			1SBN083911R1000		BER964	
Connection sets for star-delta starting						
AF09 ... AF16	With or without VM4		1SBN081313R2000		BEY164	
AF26 ... AF38	With or without VM4		1SBN082713R2000		BEY384	
AF40 ... AF65	With or without VM96-4		1SBN083413R2000		BEY654	
AF80 ... AF96	With or without VM96-4		1SBN083913R2000		BEY964	

1) For more information, refer to main catalog 'Accessories' section.