

AF09 ... AF30 3-pole Contactors

Main Accessories

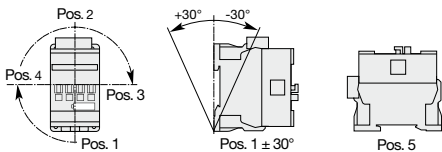


Accessory fitting details for a 3-pole contactor AF09 ... AF30

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				Side-mounted accessories	
			Auxiliary contact blocks			Electrical and mechanical interlock set (between 2 contactors)	Auxiliary contact blocks	
			1-pole CA4 1-pole CC4	2-pole CAT4-11	4-pole CA4	VEM4	Left side 2-pole CAL4-11	Right side
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 0 1	4 max.	or 1	or 1	-	+ 1	-
			2 max.	-	-	-	+ 1	+ 1
			3 max.	-	-	+ 1	+ 1	or 1
AF09 ... AF16	3	0 1 0	4 max.	or 1	or 1	-	+ 1	-
			2 max.	or 1	-	-	+ 1	+ 1
AF26 ... AF30	3	0 0 0	3 max.	-	-	+ 1	+ 1	or 1

Mounting positions

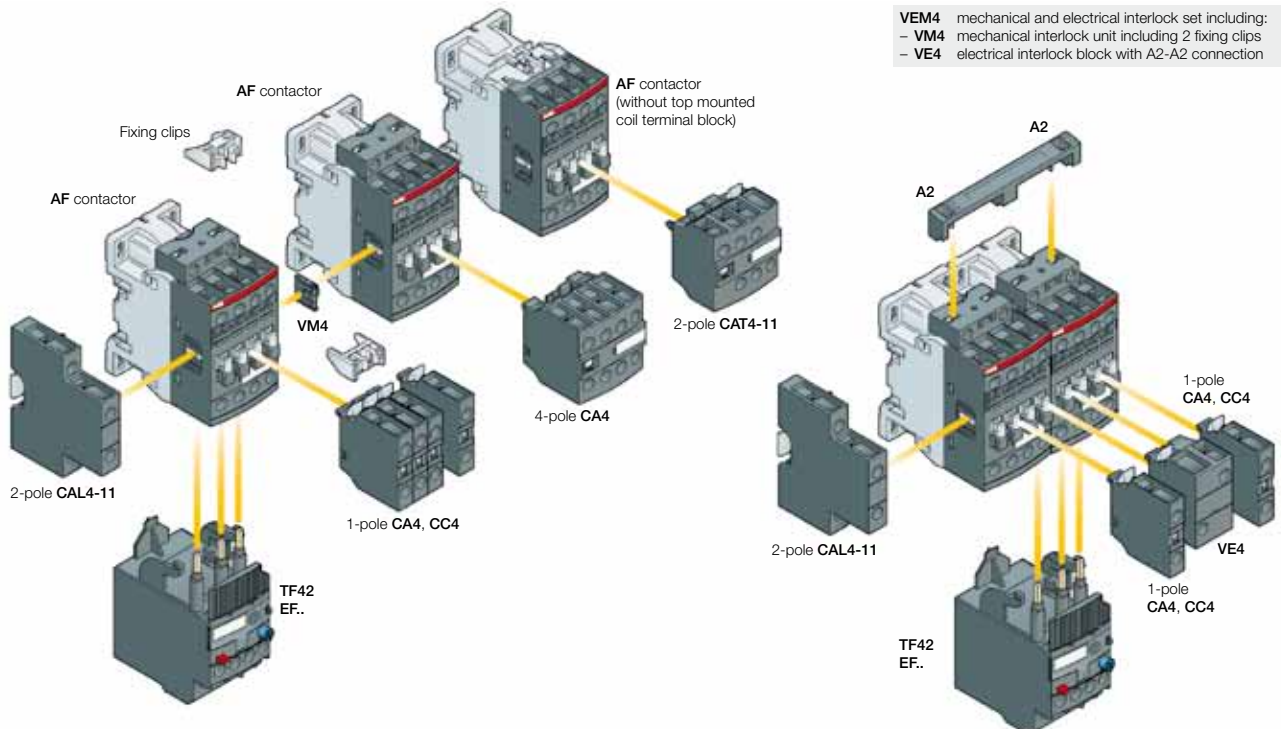


Protection against overloads with thermal or electronic overload relays

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

Contactor types	Overload relays - direct mounting - no kit required
AF09 ... AF30	TF42 thermal overload relay
AF09 ... AF30	EF19 electronic overload relay
AF26 ... AF30	EF45 electronic overload relay

Contactors and main accessories (other accessories available)



Auxiliary Contact Blocks

Accessories for AF09 ... AF30 3-pole Contactors



CA4-10



CA4-22M



CAL4-11



CAT4-11E

Application

The auxiliary contact blocks are used for the operation of auxiliary circuits and control circuits.

Description

Types of auxiliary contact blocks for standard industrial environments:

- **CA4** 1 or 4-pole block, front-mounted, instantaneous with N.O., N.C. contacts
- **CC4** 1-pole block, front-mounted, with N.O. leading contact or N.C. lagging contact
- **CAT4** 2-pole block, front-mounted, instantaneous N.O. + N.C. contacts with A1 / A2 coil terminal connection on front face
- **CAL4** 2-pole block instantaneous N.O. + N.C. contacts clipped onto the right and/or left side of the contactors.

Select the type of 2 or 4-pole auxiliary contact blocks CAT4 or CA4-..E, CA 4-..M or CA 4-..U, according to the contactor type for compliance with the standard requirements (see terminal and marking positioning).

The auxiliary contact blocks are equipped with screw type connecting terminals delivered open, protected against accidental direct contact and bear the corresponding function marking.

Fitting Details - For each contactor refer to "Accessory Fitting Details" table.

Ordering Details

For contactors	Auxiliary contacts	Catalog number	List price	Pack ^(log) pieces	Weight kg/lbs (1 pce)

Front-mounted instantaneous auxiliary contact blocks

AF09 ... AF30	1	0	-	-	CA4-10	1	0.014/0.03
	0	1	-	-	CA4-01	1	0.014/0.03
AF09 ... AF16..-30-10	2	2	-	-	CA4-22M	1	0.055/0.12
	3	1	-	-	CA4-31M	1	0.055/0.12
	1	3	-	-	CA4-13M	1	0.055/0.12
	0	4	-	-	CA4-04M	1	0.055/0.12
AF26 ... AF30..-30-00	2	2	-	-	CA4-22E	1	0.055/0.12
	3	1	-	-	CA4-31E	1	0.055/0.12
	4	0	-	-	CA4-40E	1	0.055/0.12
	0	4	-	-	CA4-04E	1	0.055/0.12
AF09 ... AF16..-30-01	2	2	-	-	CA4-22U	1	0.055/0.12
	3	1	-	-	CA4-31U	1	0.055/0.12
	4	0	-	-	CA4-40U	1	0.055/0.12

Front-mounted auxiliary contact blocks with N.O. leading contact and N.C. lagging contact

AF09 ... AF30	-	-	1	0	CC4-10	1	0.014/0.03
	-	-	0	1	CC4-01	1	0.014/0.03

Side-mounted instantaneous auxiliary contact blocks

AF09 ... AF30	1	1	-	-	CAL4-11	1	0.040/0.09
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Front-mounted instantaneous auxiliary contact and A1/A2 coil terminal blocks

AF09 ... AF16..-30-10	1	1	-	-	CAT4-11M	1	0.040/0.09
AF26 ... AF30..-30-00	1	1	-	-	CAT4-11E	1	0.040/0.09
AF09 ... AF16..-30-01	1	1	-	-	CAT4-11U	1	0.040/0.09

Note: CAT4 not fittable on AF.Z contactors with DC control voltage 12...20 V DC.

Auxiliary Contact Blocks

Accessories for AF09 ... AF30 3-pole Contactors



Technical Data

Types : 1-pole CA4, 1-pole CC4, 4-pole CA4, 2-pole CAT4, 2-pole CAL4








Contact Utilization Characteristics according to IEC

Standards	IEC 60947-5-1 and EN 60947-5-1	
Rated insulation voltage U_i acc. to IEC 60947-5-1	690 V	
Rated impulse withstand voltage U_{imp}	6 kV	
Rated operational voltage U_o max.	24 ... 690 V	
Conventional thermal current I_{th} - $\theta \leq 40$ °C	16 A	
Rated frequency limits	25 ... 400 Hz	
Rated operational current I_o / AC-15 acc. to IEC 60947-5-1	24-127 V 50/60 Hz	6 A
	220-240 V 50/60 Hz	4 A
	400-440 V 50/60 Hz	3 A
	500 V 50/60 Hz	2 A
	690 V 50/60 Hz	2 A
Making capacity acc. to IEC 60947-5-1	10 x I_o AC-15 acc. to IEC 60947-5-1	
Breaking capacity acc. to IEC 60947-5-1	10 x I_o AC-15 acc. to IEC 60947-5-1	
Rated operational current I_o / DC-13 acc. to IEC 60947-5-1	24 V DC	6 A / 144 W
	48 V DC	2.8 A / 134 W
	72 V DC	1 A / 72 W
	110 V DC	0.55 A / 60 W
	125 V DC	0.55 A / 69 W
	220 V DC	0.27 A / 60 W
	250 V DC	0.27 A / 68 W
	400 V DC	0.15 A / 60 W
	500 V DC	0.13 A / 65 W
	600 V DC	0.1 A / 60 W
	Short-circuit protection gG type fuse	10 A
Rated short-time withstand current I_{sc} $\theta = 40$ °C	for 1.0 s	100 A
	for 0.1 s	140 A
Minimum switching capacity with failure rate acc. to IEC 60947-5-4	12 V / 3 mA	
Heat dissipation per pole at 6 A	10 ⁷	
Mechanical durability	Number of operating cycles	10 millions operating cycles
	Max. switching frequency	3600 cycles/h
Max. electrical switching frequency	for AC-15	1200 cycles/h
	for DC-13	900 cycles/h

Contact Utilization Characteristics according to UL / CSA

Standards	UL 508, CSA C22.2 N°14
Rated insulation voltage U_i	600 V
Max. rated voltage	600 V AC, 600 V DC
Pilot duty	A600, Q600
AC thermal rated current	10 A
AC maximum volt-ampere making	7200 VA
AC maximum volt-ampere breaking	720 VA
DC thermal rated current	2.5 A
DC maximum volt-ampere making-breaking	69 VA

Connecting Characteristics

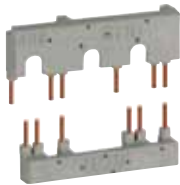
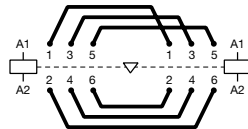
Screw terminals	(delivered in open position, screws of unused terminals must be tightened)	
All terminals	M3.5	
Connecting capacity (min. ... max.)		
 Rigid solid	1 x	1 ... 2.5 mm ²
 Flexible with non insulated ferrule	2 x	1 ... 2.5 mm ²
 Flexible with insulated ferrule	1 x	0.75 ... 2.5 mm ²
 Flexible with insulated ferrule	2 x	0.75 ... 2.5 mm ²
 Flexible with insulated ferrule	1 x	0.75 ... 2.5 mm ²
 Flexible with insulated ferrule	2 x	0.75 ... 1.5 mm ²
 Bars or lugs	L <	8 mm
Capacity acc. to UL/CSA	1 or 2 x	AWG 18 ... 14
Stripping length	10 mm	
Degree of protection acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529	IP20	
Screwdriver type	Flat Ø5.5 / Pozidriv 2	
Tightening torque	1.2 Nm / 11 lb.in	

Connection Accessories for Starting Solutions

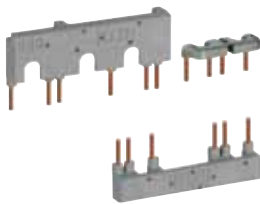
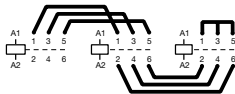
Accessories for AF09 ... AF30 3-pole Contactors



BEA16-4



BER16-4



BEY16-4

Connecting links with manual motor starters

Description

The **BEA..-4** connecting links are used to connect AF09 ... AF30 contactors with the MS116 or MS132 manual motor starters.

The **BEA..-4** insulated 3-pole connecting links ensure the electrical and mechanical connection between the contactor and the associated manual motor starter.

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF16 with MS116 and MS132	BEA16-4		10	0.025/0.05
AF26 ... AF30 with MS132-12 ... MS132-32	BEA38-4		10	0.030/0.07

Connection sets for reversing contactors

Description

BER16-4 and **BER38-4** connection sets between the main poles of two 3-pole contactors mounted side by side.

The connection sets are made up of 1 upstream and 1 downstream connections: insulated, solid copper bars.

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF16	BER16-4		1	0.045/0.10
AF26 ... AF30	BER38-4		1	0.100/0.22

Connection sets for WYE-Delta starting

Description

BEY16-4 and **BEY38-4** connection sets between the main poles of the Line, Delta and WYE contactors of a WYE-Delta starter.

The connection sets are made up of:

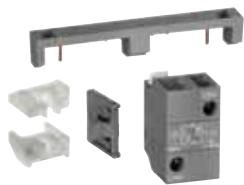
- Line contactor / Delta contactor: upstream phase-to-phase connection
- Delta contactor / WYE contactor: downstream connection in parallel
- WYE contactor: WYE point upstream.

Ordering Details

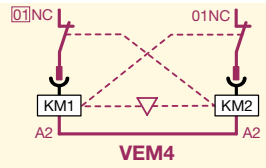
For Line, Delta and WYE contactors	Interlock unit between Delta & WYE contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF16	With or without	BEY16-4		1	0.05/0.11
AF26 ... AF30	VM4 or VEM4	BEY38-4		1	0.11/0.24



VM4



VEM4



BB4

Mechanical interlock unit

Description

VM4 mechanical interlock unit for the interlocking of two AF contactors.

When mounted between two contactors without additional width, the VM4 mechanical interlock unit prevents one of the contactors from closing as long as the other contactor is closed.

The mechanical interlock unit includes 2 fixing clips (BB4).

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF30	VM4		10	0.005/0.01

Mechanical and electrical interlock set

Description

VEM4 mechanical and electrical interlock set for the interlocking of two AF contactors.

VEM4 set includes a mechanical interlock unit VM4 with 2 fixing clips (BB4) and a VE4 electrical interlock block with A2-A2 connection.

Fixing the electrical interlock block to the contactor front face connects the 2 built-in N.C. interlocking contacts with the two coils. VE4 block must be used with A2-A2 connection to respect the electrical connection diagram.

Ordering Details

For contactors	Auxiliary contacts	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF16 AF26 ... AF30	1 1 	VEM4		1	0.035

Note: VEM4 not fittable on AF..Z contactors with DC control voltage 12...20 V DC.

Fixing clips

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF30	BB4		50	0.002/0.004

Interlocks

Accessories for AF09 ... AF30 3-pole Contactors



Technical Data

Interlock types	VM4
Mechanical durability	
Number of operating cycles	5 million operating cycles
Max. switching frequency	1800 cycles/h

Interlock types	VEM4
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Contact Utilization Characteristics according to IEC

Standards	IEC 60947-5-1 and EN 60947-5-1
Rated insulation voltage U_i acc. to IEC 60947-5-1	690 V
Rated impulse withstand voltage U_{imp}	6 kV
Rated control circuit voltage U_c	AC 50/60 Hz control voltage: 24 ... 500 V AC DC control voltage: 20 ... 500 V DC
Conventional thermal current $I_{th} - \theta \leq 40 \text{ °C}$	16 A
Mechanical and electrical durability	
Number of operating cycles	5 million operating cycles
Max. mechanical switching frequency	1800 cycles/h
Max. electrical switching frequency	1200 cycles/h

Contact Utilization Characteristics according to UL / CSA

Standards	UL 508, CSA C22.2 N°14
Max. rated voltage	500 V AC, 500 V DC

Connecting Characteristics

Screw terminals	
All terminals	M3.5
Connecting capacity (min. ... max.)	
 Rigid Solid	1 x : 1 ... 2.5 mm ² 2 x : 1 ... 2.5 mm ²
 Flexible with non insulated ferrule	1 x : 0.75 ... 2.5 mm ² 2 x : 0.75 ... 2.5 mm ²
 Flexible with insulated ferrule	1 x : 0.75 ... 2.5 mm ² 2 x : 0.75 ... 1.5 mm ²
 Bars or lugs	L < 8 mm
Capacity according to UL/CSA	1 or 2 x : AWG 18 ... 14
Stripping length	10 mm
Degree of protection	
acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529	IP20
Screwdriver type	Flat Ø5.5 / Pozidriv 2
Tightening torque	1.2 Nm / 11 lb.in



LDC4

Additional coil terminal block

Description

Additional coil terminal block for a bottom access to the coil terminals of contactors or contactor relays.

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
AF09 ... AF30	LDC4		10	0.010/0.022



BX4



BX4-CA

Protective covers

Description

Sealable and transparent protective covers BX4 and non-removable BX4-CA to protect the devices against accidental contact.

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
All 1-stack contactors	BX4		10	0.006/0.013
For 4-pole CA4 and 2-pole CAT4 auxiliary contact blocks	BX4-CA		50	0.001/0.002



BA4

Function markers

Description

Box of 16 blank cards (16 markers per card) printable on HTP500 thermal transfer printer and AMS 500 marking table to identify your contactors, overload relays or manual motor starters.

Marker dimensions: 7 x 20 mm (.276" x .787")

Ordering Details

For contactors	Catalog number	List price	Pack ^(ing) pieces	Weight kg/lbs (1 pce)
Marker card	BA4		16	0.011/0.024
AMS 500 support plate for 8 BA4	XUSP02633		1	0.220/0.48
HTP500 support plate	1SNA235712R2400		1	0.290/0.64