

AF09 ... AF38 3-pole Contactors

Main Accessories



Accessory fitting details for a 3-pole contactor AF09 ... AF38

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				Auxiliary contact blocks	
			1-pole CA4			Electrical and mechanical interlock set (between 2 contactors)	Left side	Right side
			1-pole CC4	2-pole CAT4-11	4-pole CA4	VEM4	2-pole CAL4-11	
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 AF26 ... AF38	3 0 1 0 3 0 0 0		4 max.	or 1	or 1	–	+ 1	–
			2 max.	or 1	–	–	+ 1	+ 1
			3 max.	–	–	+ 1	+ 1	or 1

Mounting positions

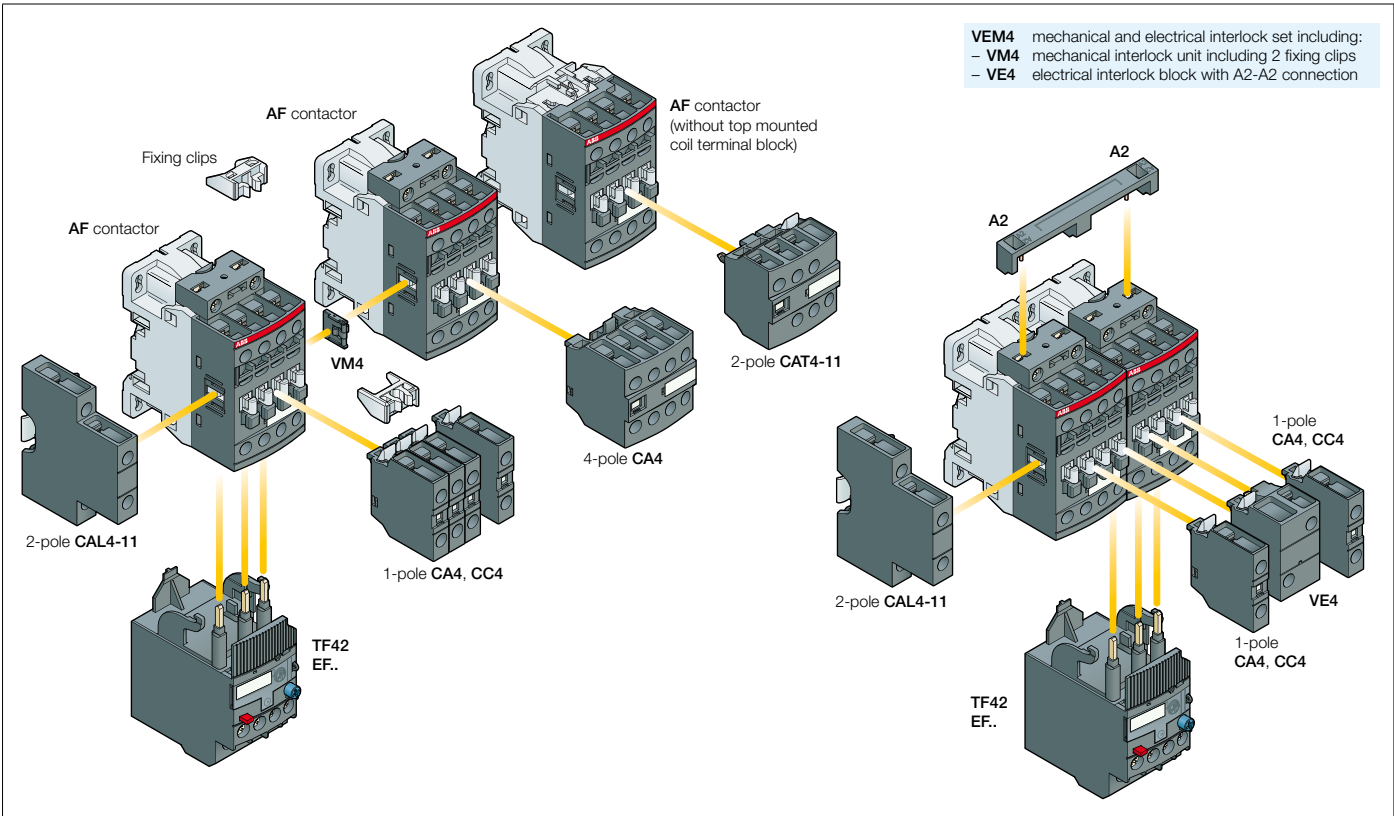


Protection against overloads with thermal or electronic overload relays

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 ... AF38	TF42 thermal overload relay
AF09 ... AF38	EF19 electronic overload relay
AF26 ... AF38	EF45 electronic overload relay

Contactors and main accessories (other accessories available)





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	Type	Order code	Pack ^(ing) pieces	Weight kg (1 pce)
	 				

Front-mounted instantaneous auxiliary contact blocks

AF09 ... AF38	1 0 - -	CA4-10	1SBN 010 110 R1010	1	0.014
	1 0 - -	CA4-10-T	1SBN 010 110 T1010	10	0.014
	0 1 - -	CA4-01	1SBN 010 110 R1001	1	0.014
	0 1 - -	CA4-01-T	1SBN 010 110 T1001	10	0.014
AF09 ... AF16...30-10	2 2 - -	CA4-22M	1SBN 010 140 R1122	1	0.055
	3 1 - -	CA4-31M	1SBN 010 140 R1131	1	0.055
	1 3 - -	CA4-13M	1SBN 010 140 R1113	1	0.055
	0 4 - -	CA4-04M	1SBN 010 140 R1104	1	0.055
AF26 ... AF38...30-00	2 2 - -	CA4-22E	1SBN 010 140 R1022	1	0.055
	3 1 - -	CA4-31E	1SBN 010 140 R1031	1	0.055
	4 0 - -	CA4-40E	1SBN 010 140 R1040	1	0.055
	0 4 - -	CA4-04E	1SBN 010 140 R1004	1	0.055
AF09 ... AF16...30-01	2 2 - -	CA4-22U	1SBN 010 140 R1322	1	0.055
	3 1 - -	CA4-31U	1SBN 010 140 R1331	1	0.055
	4 0 - -	CA4-40U	1SBN 010 140 R1340	1	0.055

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

AF09 ... AF38	- - 1 0	CC4-10	1SBN 010 111 R1010	1	0.014
	- - 0 1	CC4-01	1SBN 010 111 R1001	1	0.014

Side-mounted instantaneous auxiliary contact blocks

AF09 ... AF38	1 1 - -	CAL4-11	1SBN 010 120 R1011	1	0.040
	1 1 - -	CAL4-11-T	1SBN 010 120 T1011	10	0.040

Front-mounted instantaneous auxiliary contact and A1/A2 coil terminal blocks

AF09 ... AF16...30-10	1 1 - -	CAT4-11M	1SBN 010 151 R1111	1	0.040
AF26 ... AF38...30-00	1 1 - -	CAT4-11E	1SBN 010 151 R1011	1	0.040
AF09 ... AF16...30-01	1 1 - -	CAT4-11U	1SBN 010 151 R1311	1	0.040

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



Technical Data

Types	1-pole CA4, 1-pole CC4, 4-pole CA4, 2-pole CAT4, 2-pole CAL4
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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 operational voltage U_o max.	24 ... 690 V
Conventional thermal current I_{th} - $\theta \leq 40^\circ\text{C}$	16 A
Rated frequency limits	25 ... 400 Hz
Rated operational current I_o / AC-15	24-127 V 50/60 Hz 6 A
acc. to IEC 60947-5-1	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	24 V DC 6 A / 144 W
acc. to IEC 60947-5-1	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_{cw}	for 1.0 s 100 A
$\theta = 40^\circ\text{C}$	for 0.1 s 140 A
Minimum switching capacity	12 V / 3 mA
with failure rate acc. to IEC 60947-5-4	10^{-7}
Heat dissipation per pole at 6 A	0.1 W
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 mm²
Flexible with non insulated ferrule	2 x 1 ... 2.5 mm²
Flexible with insulated ferrule	1 x 0.75 ... 2.5 mm²
Flexible with insulated ferrule	2 x 0.75 ... 2.5 mm²
Flexible with insulated ferrule	1 x 0.75 ... 2.5 mm²
Flexible with insulated ferrule	2 x 0.75 ... 1.5 mm²
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	IP20
acc. to IEC 60947-1 / EN 60947-1 and IEC 60529 / EN 60529	
Screwdriver type	Flat Ø5.5 / Pozidriv 2
Tightening torque	1.2 Nm / 11 lb.in