

NF Contactor Relays

Main Accessories

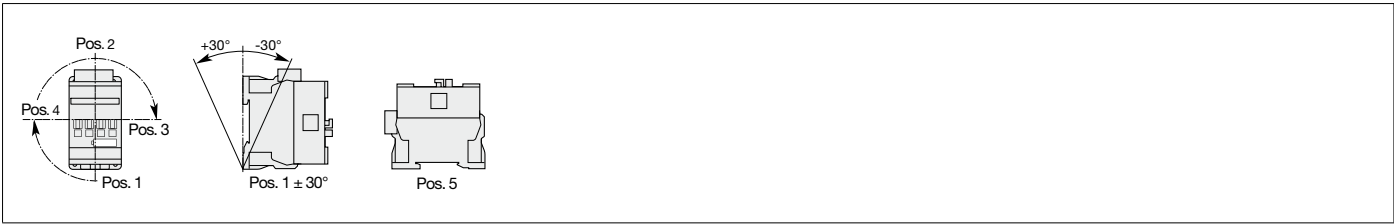


Accessory fitting details for a NF contactor relay

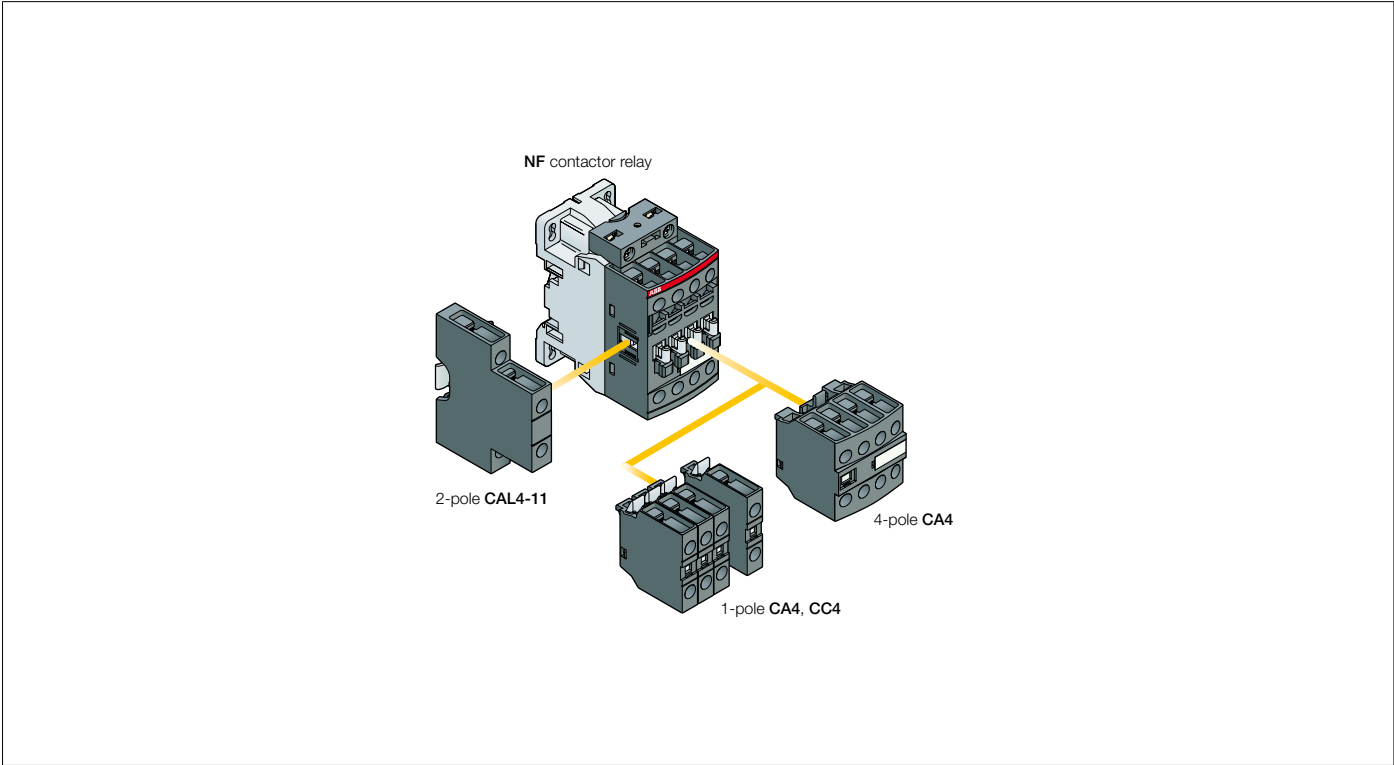
Many configurations of accessories are possible depending on whether these are front-mounted or side-mounted.

Contactor relay types	Main poles	Front-mounted accessories			Side-mounted accessories	
		Auxiliary contact blocks			Auxiliary contact blocks	
		1-pole CA4 1-pole CC4		4-pole CA4	Left side 2-pole CAL4-11	Right side
		Max. add-on N.C. auxiliary contacts: 3 N.C. max. on positions 1, 2, 3, 4 and 2 N.C. max. on positions 1 ±30°, 5				
NF..	2 2 E	4 max.	or	1	+	1
NF..	3 1 E	2 max.		–	+	1
		Max. 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				
NF..	4 0 E	4 max.	or	1	+	1
		2 max.		–	+	1
NF..	4 4 E					
NF..	5 3 E					
NF..	6 2 E					
NF..	7 1 E					
NF..	8 0 E					

Mounting positions



Contactor relays and main accessories (other accessories available)



Auxiliary Contact Blocks

Accessories for NF Contactor Relays

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CA4-10



CA4-22N



CAL4-11

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.
- **CAL4** 2-pole block instantaneous N.O. + N.C. contacts clipped onto the right and/or left side of the contactors.

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 relay type, refer to "Accessory Fitting Details" table.

Ordering Details

For contactor relays	Auxiliary contacts	Type	Order code		Pack ^(ing) pieces	Weight kg (1 pce)
	 					

Front-mounted instantaneous auxiliary contact blocks

4-pole NF	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
	4 0 - -	CA4-40N	1SBN 010 140 R1240	1	0.055
	3 1 - -	CA4-31N	1SBN 010 140 R1231	1	0.055
	2 2 - -	CA4-22N	1SBN 010 140 R1222	1	0.055
NF..40E	1 3 - -	CA4-13N	1SBN 010 140 R1213	1	0.055
	0 4 - -	CA4-04N	1SBN 010 140 R1204	1	0.055

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

4-pole NF	- - 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

NF	1 1 - -	CAL4-11	1SBN 010 120 R1011	1	0.040
	1 1 - -	CAL4-11-T	1SBN 010 120 T1011	10	0.040

Auxiliary Contact Blocks

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Technical Data

Types		1-pole CA4, 1-pole CC4, 4-pole CA4, 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} - $\theta \leq 40\text{ }^{\circ}\text{C}$		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_{cw} $\theta = 40\text{ }^{\circ}\text{C}$	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 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
		2 x	1 ... 2.5 mm²
	Flexible with non insulated ferrule	1 x	0.75 ... 2.5 mm²
		2 x	0.75 ... 2.5 mm²
	Flexible with insulated ferrule	1 x	0.75 ... 2.5 mm²
		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			
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	