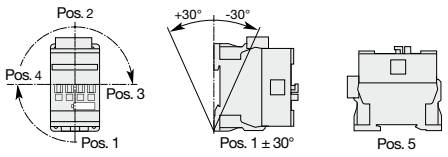
NF Contactor Relays
Main Accessories

Accessory fitting details for a NF contactor relay

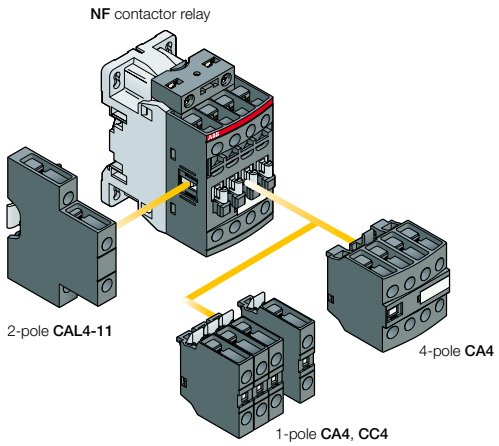
Many configurations of accessories are possible depending on whether these are front-mounted or side-mounted.

Contactor relay types	Main poles	Front-mounted accessories Auxiliary contact blocks 1-pole **CA4** 1-pole **CC4**		4-pole **CA4**		Side-mounted accessories Auxiliary contact blocks 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	+	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	+	1
NF..	4 4 E							
NF..	5 3 E							
NF..	6 2 E	–		–		1		–
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


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
	1 3	- -	**CA4-13N**	**1SBN 010 140 R1213**		1	0.055
NF..40E	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
Accessories for NF Contactor Relays

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_e 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_e / 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_e** AC-15 acc. to IEC 60947-5-1
Breaking capacity acc. to IEC 60947-5-1			10 x **I_e** AC-15 acc. to IEC 60947-5-1
Rated operational current I_e / 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 Icw θ = 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 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