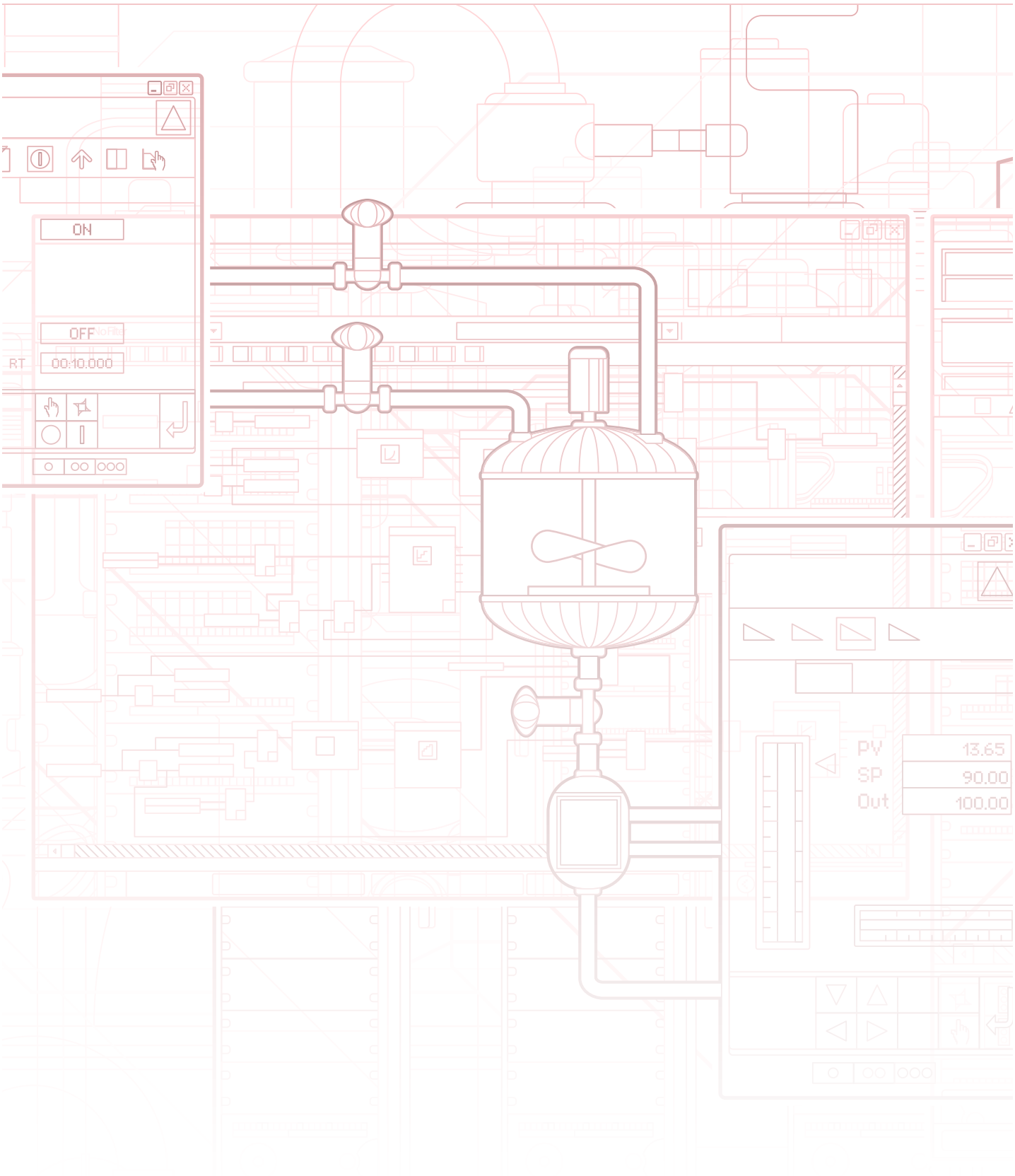
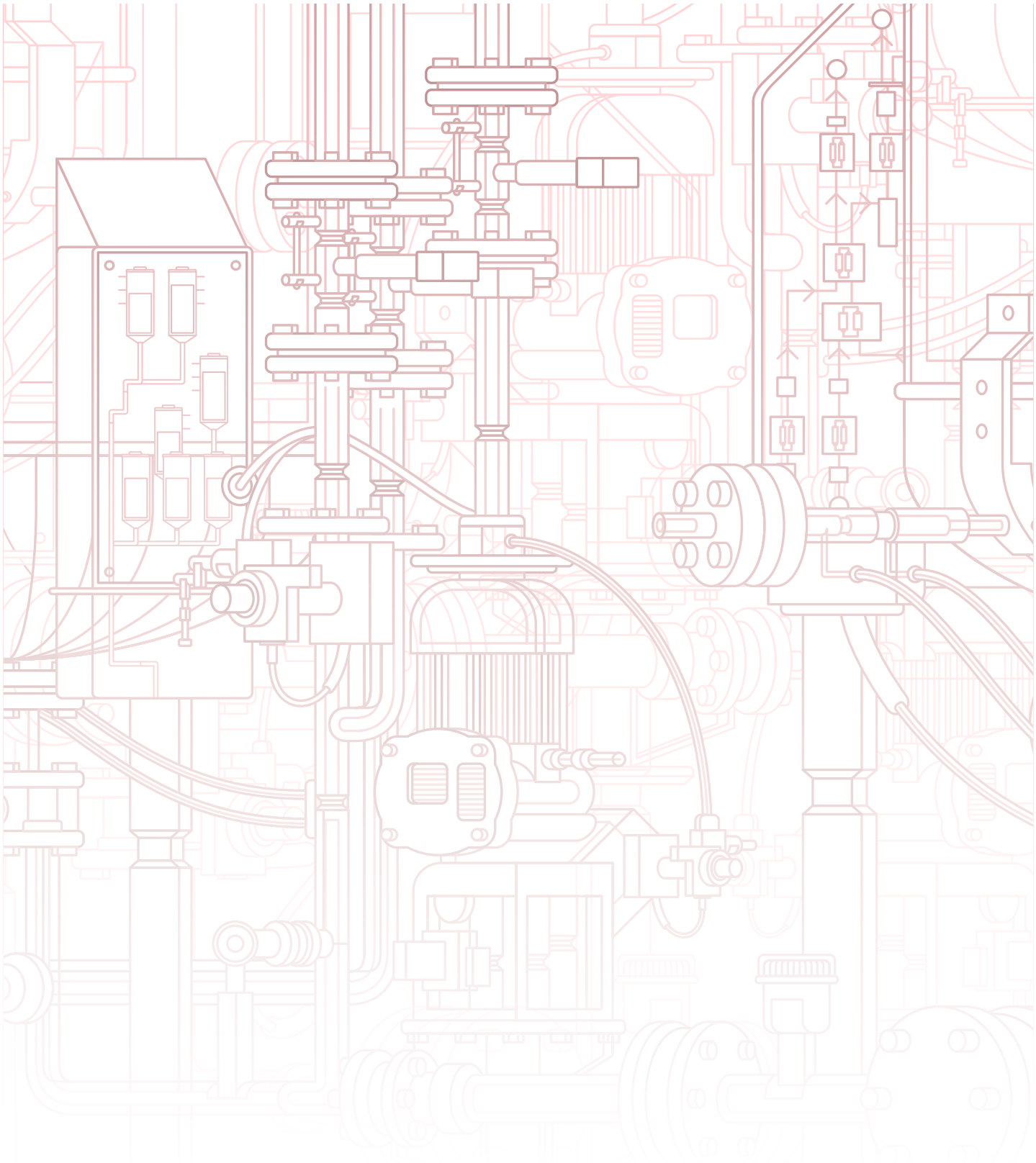

ON
OFF
RT
00:10.000
PV
13.65
SP
90.00
Out
100.00

NF Contactor Relays

1SBC 101 148 S0201



1SBC 101 134 S0201

Contactor Relays

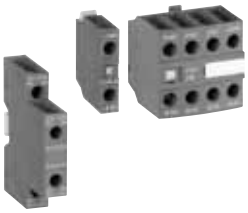
AC / DC control voltage

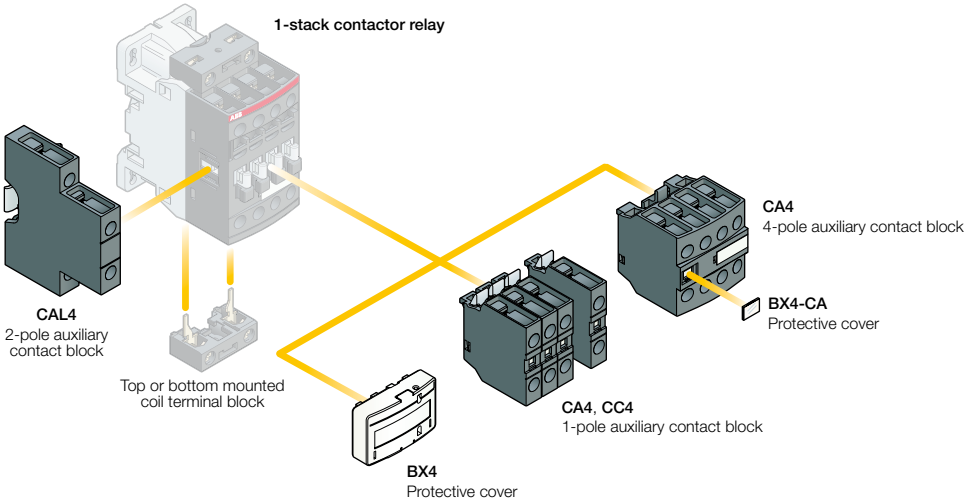
NF22E	NF31E	NF40E	NF44E	NF53E	NF62E	NF71E	NF80E
2 N.O. + 2 N.C.	3 N.O. + 1 N.C.	4 N.O.	4 N.O. + 4 N.C.	5 N.O. + 3 N.C.	6 N.O. + 2 N.C.	7 N.O. + 1 N.C.	8 N.O.

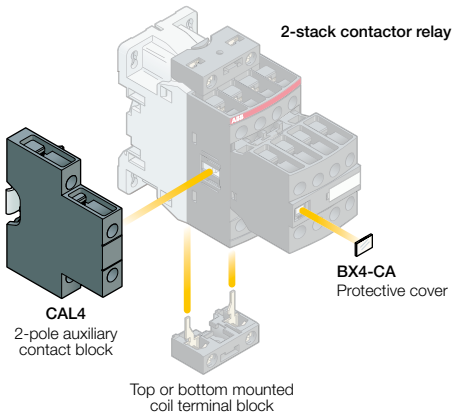
Control Circuit Switching

	Rated operational current		
IEC	**AC-15**	240 V	4 A
		400 V	3 A
		690 V	2 A
	DC-13	24 V	6 A / 144 W
		400 V	0.15 A / 60 W
UL/CSA	**Pilot Duty**		A600, Q600

Main Accessories

Auxiliary contact blocks	Front mounting		1-pole **CA4-10** or **CA4-01**, **CC4-10** or **CC4-01**	–
			4-pole **CA4**	–
	Side mounting		2-pole **CAL4**	





1SBC 101 131 S2201

NF Contactor Relays
AC / DC Operated - with Screw Terminals

cULus CE

NF22E

NF44E

Application

NF contactor relays are used for switching auxiliary and control circuits.

Description

- **NF** contactor relays include an electronic coil interface accepting a wide control voltage **U_c** min. ... **U_c** max. Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC
- **NF** contactor relays can manage large control voltage variations. One coil (i.e. 100...250 V 50/60 Hz - DC) can be used for different control voltages used worldwide without any coil change
- **NFZ** contactor relays equipped with a **Z** coil type allow direct control by 24 V DC 500 mA PLC-output and obtain a reduced holding coil consumption.
  NFZ contactor relays withstand short dips and voltage interruptions (SEMI F47-0706 compliance)
- **NF** contactor relays have built-in surge protection and do not require additional surge suppressors
- The contactor relays have mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 and include the "Mechanically Linked" symbol on their side
- 8-pole contactor relays are mounted with a non-removable auxiliary contact block (2nd stack).

Ordering Details

Number of contacts 1st stack	2nd stack	Control voltage U_c min. ... U_c max. V 50/60 Hz	V DC	Type	Order code		Weight Pack(ing) 1 piece kg
2 NO	2 NC	24...60	20...60	**NFZ22E-21**	**1SBH 136 001 R2122**		0.310
		48...130	48...130	**NF22E-12**	**1SBH 137 001 R1222**		0.270
		100...250	100...250	**NF22E-13**	**1SBH 137 001 R1322**		0.270
		250...500	250...500	**NF22E-14**	**1SBH 137 001 R1422**		0.310
3 NO	1 NC	24...60	20...60	**NFZ31E-21**	**1SBH 136 001 R2131**		0.310
		48...130	48...130	**NF31E-12**	**1SBH 137 001 R1231**		0.270
		100...250	100...250	**NF31E-13**	**1SBH 137 001 R1331**		0.270
		250...500	250...500	**NF31E-14**	**1SBH 137 001 R1431**		0.310
4 NO		24...60	20...60	**NFZ40E-21**	**1SBH 136 001 R2140**		0.310
		48...130	48...130	**NF40E-12**	**1SBH 137 001 R1240**		0.270
		100...250	100...250	**NF40E-13**	**1SBH 137 001 R1340**		0.270
		250...500	250...500	**NF40E-14**	**1SBH 137 001 R1440**		0.310
4 NO	4 NC	24...60	20...60	**NFZ44E-21**	**1SBH 136 001 R2144**		0.360
		48...130	48...130	**NF44E-12**	**1SBH 137 001 R1244**		0.320
		100...250	100...250	**NF44E-13**	**1SBH 137 001 R1344**		0.320
		250...500	250...500	**NF44E-14**	**1SBH 137 001 R1444**		0.360
5 NO	3 NC	24...60	20...60	**NFZ53E-21**	**1SBH 136 001 R2153**		0.360
		48...130	48...130	**NF53E-12**	**1SBH 137 001 R1253**		0.320
		100...250	100...250	**NF53E-13**	**1SBH 137 001 R1353**		0.320
		250...500	250...500	**NF53E-14**	**1SBH 137 001 R1453**		0.360
6 NO	2 NC	24...60	20...60	**NFZ62E-21**	**1SBH 136 001 R2162**		0.360
		48...130	48...130	**NF62E-12**	**1SBH 137 001 R1262**		0.320
		100...250	100...250	**NF62E-13**	**1SBH 137 001 R1362**		0.320
		250...500	250...500	**NF62E-14**	**1SBH 137 001 R1462**		0.360
7 NO	1 NC	24...60	20...60	**NFZ71E-21**	**1SBH 136 001 R2171**		0.360
		48...130	48...130	**NF71E-12**	**1SBH 137 001 R1271**		0.320
		100...250	100...250	**NF71E-13**	**1SBH 137 001 R1371**		0.320
		250...500	250...500	**NF71E-14**	**1SBH 137 001 R1471**		0.360
8 NO		24...60	20...60	**NFZ80E-21**	**1SBH 136 001 R2180**		0.360
		48...130	48...130	**NF80E-12**	**1SBH 137 001 R1280**		0.320
		100...250	100...250	**NF80E-13**	**1SBH 137 001 R1380**		0.320
		250...500	250...500	**NF80E-14**	**1SBH 137 001 R1480**		0.360

NF Contactor Relays - NFZ Additional Coils
AC / DC Operated - with Screw Terminals

cULus CE

NFZ22E

NFZ44E

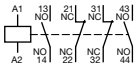
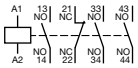
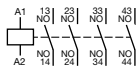
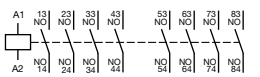
Application

NFZ contactor relays are used for switching auxiliary and control circuits.

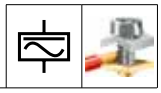
Description

- **NFZ** contactor relays include an electronic coil interface accepting a wide control voltage $\mathbf{U_c}$ min. ... $\mathbf{U_c}$ max. and managing large control voltage variations.
  NFZ contactor relays cover control voltages between 24...250 V 50/60 Hz or 12...250 V DC
- **NFZ** contactor relays allow direct control by PLC-output ≥ 24 V DC 500 mA and obtain a reduced holding coil consumption.
  NFZ contactor relays withstand short dips and voltage interruptions (SEMI F47-0706 compliance)
- **NFZ** contactor relays have built-in surge protection and do not require additional surge suppressors
- The contactor relays have mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 and include the "Mechanically Linked" symbol on their side
- 8-pole contactor relays are mounted with a non-removable auxiliary contact block (2nd stack).

Ordering Details

Number of contacts 1st stack	2nd stack	Control voltage U_c min. ... U_c max. V 50/60 Hz	V DC	Type	Order code		Weight Pack(ing) 1 piece kg
		-	12...20	NFZ22E-20	**1SBH 136 001 R2022**		0.310
		24...60	20...60	NFZ22E-21	**1SBH 136 001 R2122**		0.310
		48...130	48...130	NFZ22E-22	**1SBH 136 001 R2222**		0.310
		100...250	100...250	NFZ22E-23	**1SBH 136 001 R2322**		0.310
		-	12...20	NFZ31E-20	**1SBH 136 001 R2031**		0.310
		24...60	20...60	NFZ31E-21	**1SBH 136 001 R2131**		0.310
		48...130	48...130	NFZ31E-22	**1SBH 136 001 R2231**		0.310
		100...250	100...250	NFZ31E-23	**1SBH 136 001 R2331**		0.310
		-	12...20	NFZ40E-20	**1SBH 136 001 R2040**		0.310
		24...60	20...60	NFZ40E-21	**1SBH 136 001 R2140**		0.310
		48...130	48...130	NFZ40E-22	**1SBH 136 001 R2240**		0.310
		100...250	100...250	NFZ40E-23	**1SBH 136 001 R2340**		0.310
		-	12...20	NFZ44E-20	**1SBH 136 001 R2044**		0.360
		24...60	20...60	NFZ44E-21	**1SBH 136 001 R2144**		0.360
		48...130	48...130	NFZ44E-22	**1SBH 136 001 R2244**		0.360
		100...250	100...250	NFZ44E-23	**1SBH 136 001 R2344**		0.360
		-	12...20	NFZ53E-20	**1SBH 136 001 R2053**		0.360
		24...60	20...60	NFZ53E-21	**1SBH 136 001 R2153**		0.360
		48...130	48...130	NFZ53E-22	**1SBH 136 001 R2253**		0.360
		100...250	100...250	NFZ53E-23	**1SBH 136 001 R2353**		0.360
		-	12...20	NFZ62E-20	**1SBH 136 001 R2062**		0.360
		24...60	20...60	NFZ62E-21	**1SBH 136 001 R2162**		0.360
		48...130	48...130	NFZ62E-22	**1SBH 136 001 R2262**		0.360
		100...250	100...250	NFZ62E-23	**1SBH 136 001 R2362**		0.360
		-	12...20	NFZ71E-20	**1SBH 136 001 R2071**		0.360
		24...60	20...60	NFZ71E-21	**1SBH 136 001 R2171**		0.360
		48...130	48...130	NFZ71E-22	**1SBH 136 001 R2271**		0.360
		100...250	100...250	NFZ71E-23	**1SBH 136 001 R2371**		0.360
		-	12...20	NFZ80E-20	**1SBH 136 001 R2080**		0.360
		24...60	20...60	NFZ80E-21	**1SBH 136 001 R2180**		0.360
		48...130	48...130	NFZ80E-22	**1SBH 136 001 R2280**		0.360
		100...250	100...250	NFZ80E-23	**1SBH 136 001 R2380**		0.360

Note: Only NFZ contactor relays with DC control voltage 12...20 V DC need to respect the connection polarities indicated close to the coil terminals: A1+ for the positive pole and A2- for the negative pole



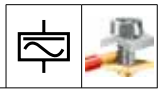
Contact Utilization Characteristics according to IEC

Contactor relay types		NF
Standards		IEC 60947-1 / 60947-5-1 and EN 60947-1 / 60947-5-1
Rated operational voltage U_e max.		690 V
Conventional free-air 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 AC-15		10 x **I_e** AC-15 acc. to IEC 60947-5-1
Breaking capacity AC-15		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 I_{cw}	**for 1.0 s**	100 A
	for 0.1 s	140 A
Minimum switching capacity		12 V / 3 mA
with failure rate acc. to IEC 60947-5-4		10^{-7}
Non-overlapping time between N.O. and N.C. contacts		≥ 2 ms
Heat dissipation per pole at 6 A		0.1 W
Max. electrical switching frequency	**AC-15**	1200 cycles/h
	DC-13	900 cycles/h

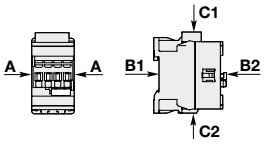
Main Pole - Utilization Characteristics according to UL / CSA

Contactor relay types	NF
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

NF Contactor Relays
Technical Data



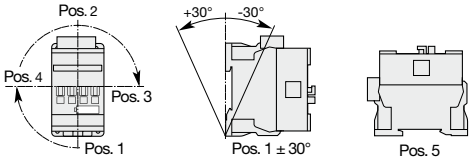
General Technical Data

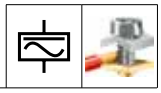
Contactor relay types			NF
Rated insulation voltage U_i			
acc. to IEC 60947-5-1			690 V
acc. to UL / CSA			600 V
Rated impulse withstand voltage U_{imp}			6 kV
Electromagnetic compatibility			Devices complying with IEC 60947-1 / EN 60947-1 - Environment A
Ambient air temperature close to contactor			
Operation in free air			-40 ... +70 °C
Storage			-60 ... +80 °C
Climatic withstand			Category B according to IEC 60947-1 Annex Q
Operating altitude			≤ 3000 m
Mechanical durability			
Number of operating cycles			20 millions operating cycles
Max. switching frequency			7200 cycles/h
Shock withstand acc. IEC 60068-2-27 and EN 60068-2-27			
Mounting position 1			
 Closed or open position		**Shock direction**	1/2 sinusoidal shock for 11 ms: no change in contact position
		A	30 g
		B1	25 g Closed position / 5 g Open position
		B2	15 g
		C1	25 g
		C2	25 g
Vibration withstand			5 ... 300 Hz
acc. to IEC 60068-2-6			4 g Closed position / 2 g Open position

Magnet System Characteristics

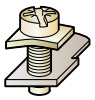
Contactor relay types			NF
Coil operating limits		**AC supply**	at θ ≤ 60°C 0.85 x **U_c** min ... 1.1 x **U_c** max at θ ≤ 70°C 0.85 x **U_c** min ... **U_c** max
acc. to IEC 60947-5-1		**DC supply**	at θ ≤ 60°C 0.85 x **U_c** min ... 1.1 x **U_c** max at θ ≤ 70°C (NF) 0.85 x **U_c** min ... **U_c** max - (NFZ) 0.85 x **U_c** min ... 1.1 x **U_c** max
AC control voltage	Rated control circuit voltage **U_c**		24 ... 500 V AC
50/60 Hz	Coil consumption	**Average pull-in value**	(NF) 50 VA - (NFZ) 16 VA
		Average holding value	(NF) 2.2 VA / 2 W - (NFZ) 1.7 VA / 1.5 W
DC control voltage	Rated control circuit voltage **U_c**		12 ... 500 V DC
	Coil consumption	**Average pull-in value**	(NF) 50 W - (NFZ) 12 ... 16 W
		Average holding value	(NF) 2 W - (NFZ) 1.7 W
PLC-Output control			(NFZ) ≥ 500 mA 24 V DC
Drop-out voltage in % of U_c min.			≤ 60 % **U_c** min
Voltage sag immunity according to SEMI F47-0706			(NFZ) conditions of use on request
Dips withstand (level 0% according to IEC 61000-4-11)			(NFZ) 22 ms average for **U_c** = 24 ... 250 V 50/60Hz
-20 °C ≤ θ ≤ +60 °C			
Operating time			
between coil energization and:		**N.O. contact closing**	40 ... 95 ms
		N.C. contact opening	38 ... 90 ms
between coil de-energization and:		**N.O. contact opening**	11 ... 95 ms
		N.C. contact closing	13 ... 98 ms

Mounting Characteristics

Contactor relay types	NF
Mounting positions	
	Max. add-on N.C. auxiliary contacts: see accessory fitting details for a NF contactor relay
Mounting distances	The contactor relays can be assembled side by side.
Fixing	
on rail according to IEC 60715, EN 60715	35 x 7.5 mm or 35 x 15 mm
by screws (not supplied)	2 x M4 screws placed diagonally



Connecting Characteristics

Contactor relay types		NF
Main terminals		 Screw terminals with cable clamp
Connecting capacity (min. ... max.)		
Pole and coil terminals		
Rigid	**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 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		
All terminals		IP20
Screw terminals		(delivered in open position, screws of unused terminals must be tightened)
All terminals		M3.5
Screwdriver type		Flat Ø5.5 / Pozidriv 2
Tightening torque		
Pole terminals		1.2 Nm / 11 lb.in
Coil terminals		1.2 Nm / 11 lb.in

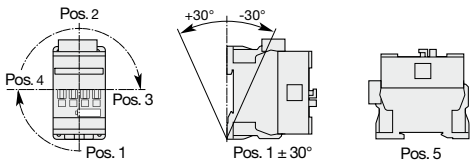
NF Contactor Relays
Main Accessories

Accessory fitting details for a NF contactor relay

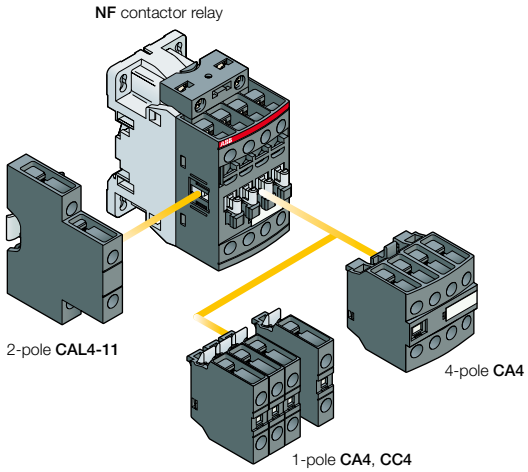
Many configurations of accessories are possible depending on whether these are front-mounted or side-mounted.

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	**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_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	**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 Icw	**for 1.0 s**	100 A
θ = 40 °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
	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

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 contactor relays	Type	Order code		Pack(ing) pieces	Weight kg (1 pce)
NF	**LDC4**	**1SBN 070 156 T1000**		10	0.010

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 contactor relays	Type	Order code		Pack(ing) pieces	Weight kg (1 pce)
All 1-stack contactor relays	**BX4**	**1SBN 110 108 T1000**		10	0.006
For 4-pole CA4 auxiliary contact blocks	**BX4-CA**	**1SBN 110 109 W1000**		50	0.001

BA4

Function markers

Description

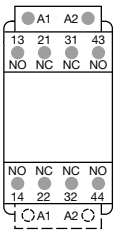
Box of 16 blank cards (16 markers by card) printable on HTP500 thermal transfer printer and AMS 500 marking table to identify your contactors, overload relays or manual motor starters.
Marker dimensions: 7 x 20 mm *(.276" x .787")*

Ordering Details

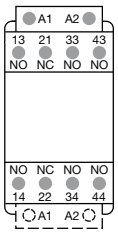
For contactor relays	Type	Order code		Pack(ing) pieces	Weight kg (1 pce)
Marker card	**BA4**	**1SNA 235 156 R2700**		16	0.011
AMS 500 support plate for 8 BA4	**SPRC 1**	**1SNA 360 010 R1500**		1	0.290
HTP500 support plate	**HTP500-BA4**	**1SNA 235 712 R2400**		1	0.220

NF Contactor Relays
Terminal Marking and Positioning

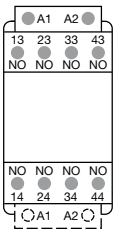
Standard devices without addition of auxiliary contacts



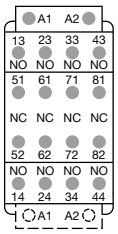
NF..22E



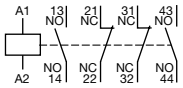
NF..31E



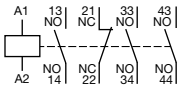
NF..40E



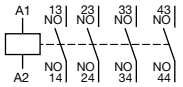
NF..44E



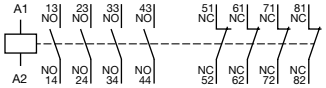
NF..22E



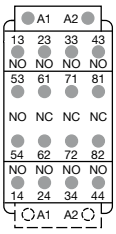
NF..31E



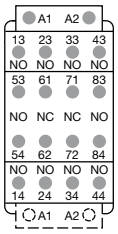
NF..40E



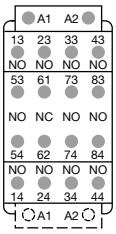
NF..44E



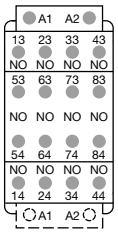
NF..53E



NF..62E

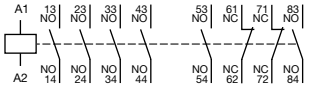


NF..71E

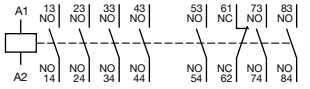


NF..80E

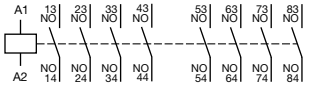
NF..53E



NF..62E

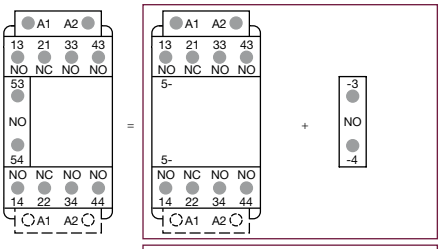


NF..71E

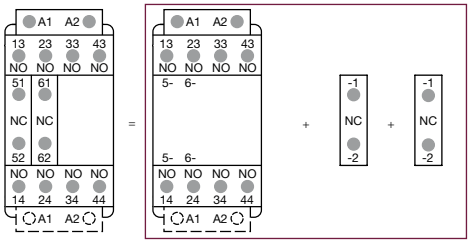


NF..80E

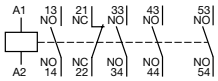
Other possible contact combinations with auxiliary contacts added by the user



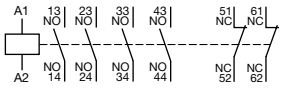
Combination 41 = **NF..31E + CA4-10**



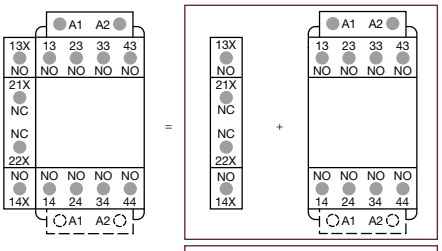
Combination 42 = **NF..40E + CA4-01+CA4-01**



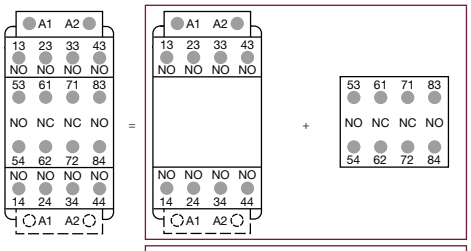
Combination 41 E



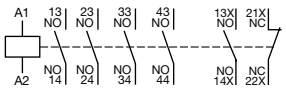
Combination 42 E



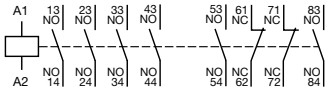
Combination 51 **=** **CAL4-11 + NF..40E**



Combination 62 = **NF..40E + CA4-22N**



Combination 51 E



Combination 62 E

Note: Only NFZ contactor relays with DC control voltage 12...20 V DC need to respect the connection polarities indicated close to the coil terminals: A1+ for the positive pole and A2- for the negative pole.

NF Add-on Auxiliary Contacts
Terminal Marking and Positioning

1-pole auxiliary contacts

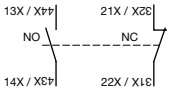
CA4-01

CA4-10

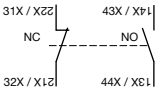
CC4-01

CC4-10

2-pole auxiliary contacts

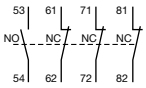


CAL4-11
(Left side-mounted)

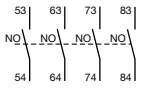


CAL4-11
(Right side-mounted)

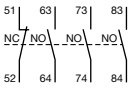
4-pole auxiliary contacts



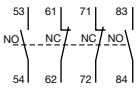
CA5-13N



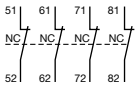
CA5-40N



CA5-31N



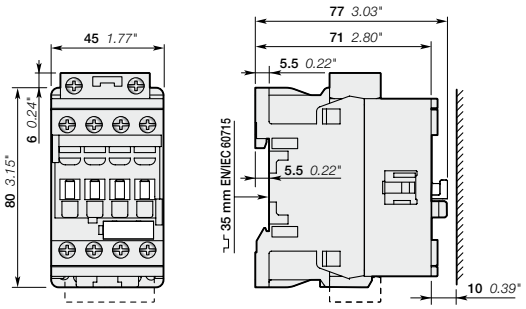
CA5-22N



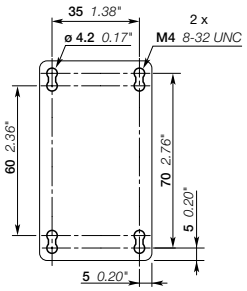
CA5-04N

NF Contactor Relays
AC / DC Operated - with Screw Terminals

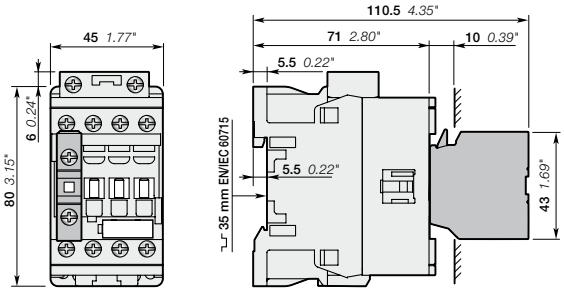
Dimensions mm, *inches*



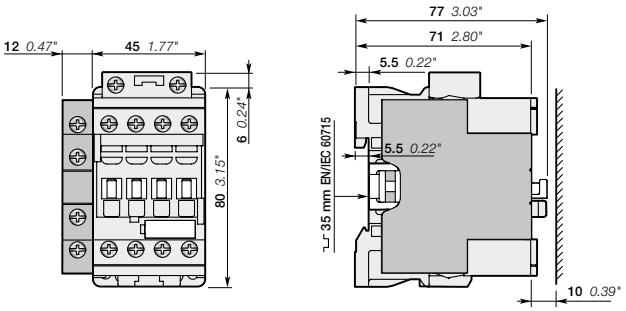
NF..22E, NF..31E, NF..40E



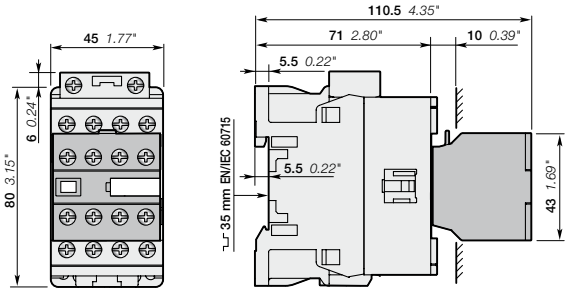
NF



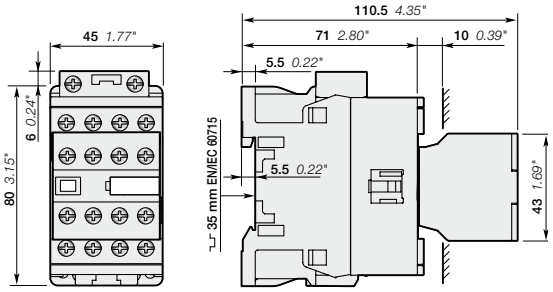
NF..22E, NF..31E, NF..40E
+ CA4, CC4 1-pole auxiliary contact block



NF..22E, NF..31E, NF..40E
+ CAL4-11 2-pole auxiliary contact block



NF..22E, NF..31E, NF..40E
+ CA4 4-pole auxiliary contact block



NF..44E, NF..53E, NF..62E, NF..71E, NF..80E

Note: contactor relay lateral distance to grounded component 2 mm *0.08*" min.

Contact us

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You can find the address of your local sales organisation on the ABB home page
http://www.abb.com/contacts -> Low Voltage products

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