

Auxiliary Contact Blocks

Front Mounting



CA 5-10



CA 5-40 E



CE 5-01 W

Application

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

Description

Types of auxiliary contact blocks in standard version for general use:

- **CA...** 1 or 4-pole block, instantaneous with N.O., N.C. contacts.
- **CC...** 1-pole block, with N.O. leading contact or N.C. lagging contact.

Type of auxiliary contact block for low current and voltage levels (PLC's outputs) and for use in dusty or humid environments:

- **CE...** 1-pole block, instantaneous with N.O. contact or N.C. contact, designed in 2 protection versions:
 - **CE 5-.. D** with built-in microswitch IP 40, degree of protection (IP 20 on terminals)
 - **CE 5-.. W** with built-in microswitch IP 67, degree of protection (IP 20 on terminals).

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

☞ Refer to the table below

For further information about fitting details compatibility with contactors and other types of accessories please refer to:

- page 4/37 for A... and AF... 3-pole contactors
- page 4/38 for AE..., TAE..., BC... and TBC... 3-pole contactors
- page 4/39 for AE... and TAE... 4-pole contactors
- page 4/40 for BC... and TBC... 4-pole contactors
- page 3/15 for N... and NE..., KC... and TKC... contactor relays

Ordering Details

For contactors	Max. number of blocks	Contacts blocks	Type	Order code	Pack ^{ing} pieces	Weight kg
1-pole auxiliary contact blocks						
A 9 ... A 26 ⁽¹⁾	4 blocks	1 – – –	CA 5-10	1SBN 01 0010 R1010	10	0.014
A 30, A 40 ⁽¹⁾	5 blocks		CA 5-01	1SBN 01 0010 R1001	10	0.014
A 45 ... A 110	6 blocks	– – 1 –	CC 5-10	1SBN 01 0011 R1010	10	0.014
AF 50 ... AF 110	6 blocks	– – – 1	CC 5-01	1SBN 01 0011 R1001	10	0.014
AE 9 ... AE 26	4 blocks	1 – – –	CE 5-10 D 0.1	1SBN 01 0015 R1010	1	0.020
AE 30, AE 40	5 blocks		CE 5-01 D 0.1	1SBN 01 0015 R1001	1	0.020
AE 45 ... AE 110	6 blocks	1 – – –	CE 5-10 D 2	1SBN 01 0017 R1010	1	0.020
TAE 45 ... TAE 110	6 blocks	– 1 – –	CE 5-01 D 2	1SBN 01 0017 R1001	1	0.020
BC 9 ... BC 30	4 blocks	1 – – –	CE 5-10 W 0.1	1SBN 01 0016 R1010	1	0.020
TBC 9 ... TBC 30	4 blocks		CE 5-01 W 0.1	1SBN 01 0016 R1001	1	0.020
KC ..., TKC	4 blocks	1 – – –	CE 5-10 W 2	1SBN 01 0018 R1010	1	0.020
N ... ⁽¹⁾ , NE	4 blocks	– 1 – –	CE 5-01 W 2	1SBN 01 0018 R1001	1	0.020
4-pole auxiliary contact blocks						
A 9 ... A 26-40-00	1 block	4 – – –	CA 5-40 E	1SBN 01 0040 R1040	2	0.060
A 45 ... A 110	1 block		3 1 – –	CA 5-31 E	1SBN 01 0040 R1031	2
AE 9 ... AE 26-40-00	1 block	2 2 – –	CA 5-22 E	1SBN 01 0040 R1022	2	0.060
AE 45 ... AE 110	1 block	0 4 – –	CA 5-04 E	1SBN 01 0040 R1004	2	0.060
BC 9 ... BC 25-40-00	1 block	1 1 1 1	CA 5-11/11 E	1SBN 01 0040 R1018	2	0.060
BC 30-30-00	1 block	3 1 – –	CA 5-31 M	1SBN 01 0040 R1131	2	0.060
A 9 ... A 40-30-10	1 block		2 2 – –	CA 5-22 M	1SBN 01 0040 R1122	2
BC 9 ... BC 25-30-10	1 block	0 4 – –	CA 5-04 M	1SBN 01 0040 R1104	2	0.060
		1 1 1 1	CA 5-11/11 M	1SBN 01 0040 R1118	2	0.060
N and KC 4-pole	1 block	4 – – –	CA 5-40 N	1SBN 01 0040 R1240	2	0.060
		3 1 – –	CA 5-31 N	1SBN 01 0040 R1231	2	0.060
		2 2 – –	CA 5-22 N	1SBN 01 0040 R1222	2	0.060
		0 4 – –	CA 5-04 N	1SBN 01 0040 R1204	2	0.060

(1) In mounting position 5, there should be no more than 2 N.C. front-mounted auxiliary contacts on types **A 9 to A 40-30-01**, **A 9 to A 26-22-00**, **A 30-30-32**, **A 40-30-32**, **N 22 E**, **N 31 E**. The side-mounted blocks offer additional N.C. contacts.

Whatever the mounting position, there should be no more than 2 N.C. front-mounted auxiliary contacts on types **A 45 to A 75-22-00**. The side-mounted blocks offer additional N.C. contacts.




Note: The auxiliary contact blocks provided for the A... contactors can be used for the UA..., GA... and GAE types.

>> Auxiliary Contacts for Safety Circuits page 7/4 >> Side Mounted Aux. Contact Blocks page 4/4
 >> Mounting and Compatibility of Accessories pages 4/37 to 4/40

Auxiliary Contact Blocks

Front Mounting

Technical Data

Types		1-pole CA 5, 4-pole CA 5, 1-pole CC 5	1-pole CE 5-..0.1	1-pole CE 5-..2
Compliance with standards		IEC 60947-5-1 and EN 60947-5-1		
Certification and approvals		☞ section 7		
Rated insulation voltage U_i according to IEC 60947-5-1	V	690	250	250
according to UL/CSA	V	600	250	250
Rated operational voltage U_e	V a.c.	24 to 690	125	250
Conventional thermal current I_{th}	A	16	0.1	2
Rated operational current I_e according to IEC 60947-5-1 in a.c.		AC-15	AC-14	AC-15
24 to 127 V	A	6	0.1	2
220 to 240 V	A	4	–	2
380 to 440 V	A	3	–	–
500 to 690 V	A	2	–	–
in d.c.		DC-13	DC-12	DC-12
24 V	A	6	0.1	2
48 V	A	2.8	0.1	1
72 V	A	1	0.1	0.3
110 V	A	0.55	0.1	0.2
125 V	A	0.55	–	0.2
220 V	A	0.3	–	0.1
250 V	A	0.3	–	–
Short circuit protection	A	10 (gG fuses)	0.1 (FF fuses*)	10 (FF fuses*)
Rated making capacity		10 x I_e AC-15	6 x I_e AC-14	10 x I_e AC-15
Rated breaking capacity		10 x I_e AC-15	6 x I_e AC-14	10 x I_e AC-15
Rated short-time withstand current I_{cw} 1 s	A	100	–	–
$\theta = 40^\circ\text{C}$ 0.1 s	A	140	–	–
Power loss per pole at 6 A	W	0.15	–	–
Min. switching capacity	V / mA	17 / 5 (A 9 ... A 75) - 24 / 50 (A 95, A 110)	3 / 1	17 / 5
Reliability for min. switching capacity		–	10 ⁻⁸	10 ⁻⁸
Mechanical durability – millions of operating cycles		10 (A 9 ... A 75) 3 (A 95, A 110)	5 for CE 5-.. D 2.5 for CE 5-.. W	5 for CE 5-.. D 2.5 for CE 5-.. W
– max. mech. switching frequency	cycles/h	3600	3600	3600
Electrical durability – millions of operating cycles		☞ page 4/35	2.5 for CE 5-.. D 0.1 0.7 for CE 5-.. W 0.1	1 for CE 5-.. D 2 0.3 for CE 5-.. W 2
– max. elec. switching frequency	cycles/h	1200	1200	1200
Connecting terminals (Delivered in open position. Screws of unused terminals should be tightened.)		M3.5 (+,-) pozidriv 2 screw with cable clamp		
Tightening torque – recommended	Nm	1.00		
– max.	Nm	1.20		
Connecting capacity (min. ... max.)				
– Rigid solid  1 or 2 x mm ²		1 ... 4		
– Flexible with cable end  1 or 2 x mm ²		0.75 ... 2.5		
– Lugs  L mm ≤		8		
I mm >		3.7		
Degree of protection acc. to IEC 60529, IEC 60144, DIN 40050 and NFC 20-010		IP 20 for the terminals		

* HRC fuses for very fast action (6.3 x 32 mm size)

Auxiliary Contact Blocks

Side Mounting



CAL 5-11

Application

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

Description

Types of auxiliary contacts blocks in standard version for general use:

- **CAL...** 2-pole block instantaneous N.O. + N.C. contacts.
- **CCL ...** 2-pole block N.O. leading + N.C. lagging contacts.

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

Clipped onto the right and/or lefthand side of the contactors.

The **CAL 5-11B** is a second block for mounting in addition to a first **CAL 5-11** block, right and/or lefthand of the A 145 ... A 300 and AF 145 ... AF 750 contactors.

☞ Refer to the table below

For further information about fitting details compatibility with contactors and other types of accessories please refer to:

- page 4/37 for A... and AF... 3-pole contactors
- page 4/38 for AE..., TAE... 3-pole contactors
- page 4/39 for AE... and TAE... 4-pole contactors
- page 3/15 for N... and NE... contactor relays

Ordering Details

For contactors	Max. number of blocks	Contacts blocks	Type	Order code	Pack ^{ing} pieces	Weight kg
						1 piece
2-pole auxiliary contacts N.O. + N.C.						
A 9 ... A 110 2 blocks	} 1 1 --		CAL 5-11	1SBN 01 0020 R1011	2	0.050
A 145 ... A 300 2 blocks ⁽¹⁾						
AF 50 ... AF 110 2 blocks						
AF 145 ... AF 750 ... 2 blocks ⁽¹⁾						
AE 9 ... AE 40 2 blocks						
AE 45 ... AE 110 1 block						
TAE 45 ... TAE 110 ... 1 block						
N 2 blocks						
NE 1 block						
A 145 ... A 300 2 blocks ⁽¹⁾	} 1 1 --		CAL 5-11B	1SBN 01 0420 R3311	2	0.050
AF 145 ... AF 750 ... 2 blocks ⁽¹⁾						
N.O. leading + N.C. lagging contacts						
A 9 ... A 16 2 blocks	} -- 1 1		CCL 5-11	1SBN 01 1421 R1008	2	0.050
AE 9 ... AE 16 2 blocks						
N 2 blocks						
NE 2 blocks						




⁽¹⁾ 2 blocks CAL 5-11 + 2 blocks CAL 5-11 B

Notes: The auxiliary contact blocks provided for the **A...** contactors can be used for the **UA...** and **UA..-R** contactors. Only one contact block can be mounted on **GA...** type.

Auxiliary Contact Blocks

Side Mounting

Technical Data

Types	CAL 5-11	CAL 5-11B	CCL 5-11 (1)
Compliance with standards	IEC 60947-5-1, EN 60947-5-1		
Certification and approvals	ES section 7		
Rated insulation voltage U_i according to IEC 60947-5-1	V	690	
according to UL/CSA	V	690	
Rated operational voltage U_e	V a.c.	24 to 690	
Conventional free air thermal current I_{th}	A	16	
Rated operational current I_e acc. to IEC 60947-5-1			
AC-15	24-127 V a.c.	A	6
	220-240 V a.c.	A	4
	380-440 V a.c.	A	3
	500-690 V a.c.	A	2
DC-13	24 V d.c.	A	6
	48 V d.c.	A	2.8
	72 V d.c.	A	1
	125 V d.c.	A	0.55
	250 V d.c.	A	0.3
Short-circuit protection - gG type fuses	A	10	
Rated making capacity	10 x I_e AC-15		
Rated breaking capacity	10 x I_e AC-15		
Rated short-time withstand current I_{cw} 1 s	A	100	
$\theta = 40^\circ\text{C}$ 0.1 s	A	140	
Power loss per pole at 6 A	W	0.15	
Min. switching capacity	V / mA	17 / 5 (A 9 ... A 75) - 24 / 50 (A 95 ... AF 750)	
Mechanical durability – millions of operating cycles – max. mech. switching frequency	cycles / h	10 millions (A 9 ... A 75), 3 millions (A 95 ... A 110), 2 millions (A 145 ... AF 750) 3600	
Electrical durability – millions of operating cycles – max. elec. switching frequency	cycles / h	ES page 4/35 1200	
Connecting terminals (Delivered in open position. Screws of unused terminals should be tightened.)	M3.5 (+,-) pozidriv 2 screw with cable clamp		
Tightening torque – recommended – max.	Nm Nm	1.00 1.20	
Connecting capacity (min. ... max.)			
Rigid solid 	1 or 2 x mm²	1 ... 4	
Flexible with cable end 	1 or 2 x mm²	0.75 ... 2.5	
Lugs 	L mm ≤ l mm >	8 3.7	
Degree of protection according to IEC 60529, IEC 60144, DIN 40050 and NFC 20-010	IP 20		

(1) CCL 5-11 auxiliary contact, only for A 9 ... A 16 and AE 9 ... AE 16 contactors and N... contactor relays.

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