Top (Front) Mount Auxiliary Contact Blocks ❶

Top mount auxiliary contact blocks snap-on to the top (front) of any CA7 contactor

4-pole auxiliary

2-pole auxiliary contact block (typical)

Auxiliary Contact Blocks for Top Mounting -

- 2 and 4 pole
- Snap on design - mounts without tools
- Electronic compatible contacts
- Mutual positive guidance to the main contactor poles (excluding L types)
- Several terminal numbering choices even for models wit equal function
- Late break /early make (L) available

Bifurcated Contacts

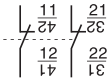
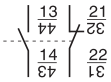
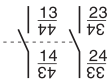
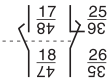
Bifurcated auxiliary contacts provides a higher degree of reliability than the standard cross-stamped auxiliary contacts because it H-bridge divides each movable contact into two sections at the tip of the spanner. Typical application is low-voltage low-current applications (i.e.: PLC). Cross-stamped contacts are good for a minimum of 5mA at 17v while bifurcated contacts are good for a minimum of 3mA at 5v.

Contact Block	NO	NC	Contact Arrangement	For use with...	Standard Contacts Catalog Number	Price	Bifurcated Contacts Catalog Number ❷	Price
	0	2	51 61 / 52 62	CA7 all	**CS7-PV-02**	27	**CS7-PVB-02**	42
			11 21 / 12 22	CA7-30...97-✱-00	**CA7-PV-02**	27	**CA7-PVB-02**	42
	1	1	53 61 / 54 62	CA7 all	**CS7-PV-11**	27	**CS7-PVB-11**	42
			13 21 / 14 22	CA7-30...97-✱-00	**CA7-PV-11**	27	**CA7-PVB-11**	42
			23 31 / 24 32	CA7-9...23-✱-10 CA7-9...23-✱-01	**CA7-PV-S11**	27	**CA7-PVB-S11**	42
	2	0	53 63 / 54 64	CA7 all	**CS7-PV-20**	27	**CS7-PVB-20**	42
			13 23 / 14 24	CA7-30...97-✱-00	**CA7-PV-20**	27	**CA7-PVB-20**	42
	1EM	1LB	17 25 / 18 26	CA7-30...97-✱-00	**CA7-PV-L11**	37	**NOT AVAILABLE**	~
	1	3	53 61 71 81 / 54 62 72 82	CA7-30...97-✱-00	**NOT AVAILABLE**	~	**CA7-PVB-13**	79
	2	2	53 61 71 83 / 54 62 72 84	CA7 all	**CS7-PV-22**	53	**CS7-PVB-22**	79
			13 21 31 43 / 14 22 32 44	CA7-30...97-✱-00	**CA7-PV-22**	53	**CA7-PVB-22**	79
			21 31 43 53 / 22 32 44 54	CA7-9...23-✱-10 CA7-9...23-✱-01	**CA7-PV-S22**	53	**CA7-PVB-S22**	79
	3	1	53 61 73 83 / 54 62 74 84	CA7 all	**CS7-PV-31**	53	**CS7-PVB-31**	79
			21 31 43 53 / 22 32 44 54	CA7-9...23-✱-10 CA7-9...23-✱-01	**CA7-PV-S31**	53	**CA7-PVB-S31**	79
	1	3	53 61 71 81 / 54 62 72 82	CA7 all	**CS7-PV-13**	53	**CS7-PVB-13**	79
	4	0	53 63 73 83 / 54 64 74 84	CA7 all	**CS7-PV-40**	53	**CS7-PVB-40**	79
	0	4	51 61 71 81 / 52 62 72 82	CA7 all	**CS7-PV-04**	53	**CS7-PVB-04**	79
	1+1EM	1+1LB	53 61 75 87 / 54 62 76 88	CA7 all	**CS7-PV-L22**	74	**NOT AVAILABLE**	~

❶ Max. number of auxiliary contacts that may be mounted:
- AC Coil and Electronic DC Coil contactors - max. 4 N.O. contacts on the front of the contactor, 2-N.O. contacts on the side, 4-N.C. front or side: 6 total.
- True DC Coil contactors - max. 4 N.O. contacts on the front of the contactor, or max. 2-N.O. contacts on side, 4-N.C. front or side: 4 total.

❷ Detailed ratings can be found on page A74.

Side Mount Auxiliary Contact Blocks (1 & 2 Pole) ❶

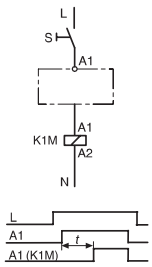
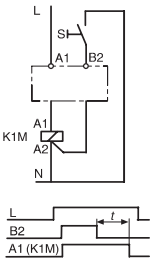
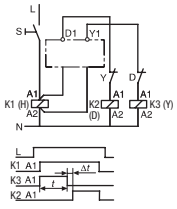
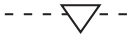
Contact Block	Description	NO	NC	Contact Arrangement	For use with...	Catalog Number ❸	Price
 *1-pole (typical)*  *2-pole (typical)*	**Auxiliary Contact Blocks for Side Mounting - ❶** • 1 and 2-pole • Two way numbering for right or left mounting on the contactor • Snap-on design - mounts without tools • Electronic compatible contacts down to 24V, 20mA • Late break / early make (L) available • Mutual positive guidance to the main contactor poles (excluding L-types)	0	1		CA7 all	**CA7-PA-01**	**17**
		1	0		CA7 all ❷	**CA7-PA-10**	**17**
		0	2		CA7 all	**CA7-PA-02**	**27**
		1	1		CA7 all ❷	**CA7-PA-11**	**27**
		2	0		CA7 all ❷	**CA7-PA-20**	**27**
		1EM	1LB		CA7 all	**CA7-PA-L11**	**37**

❶ Max. number of auxiliary contacts that may be mounted:
- AC Coil contactors - max. 4 N.O. contacts on the front of the contactor, 2-N.O. contacts on the side, 4-N.C. front or side: 6 total.
- DC Coil contactors - max. 4 N.O. contacts on the front of the contactor, or max. 2-N.O. contacts on side, 4-N.C. front or side: (4) total.

❷ Left mounting only is recommended when using with CA7-9…CA7-23 contactors. These contactors have built-in auxiliaries, which will result in duplicate terminal markings if mounted on the right.

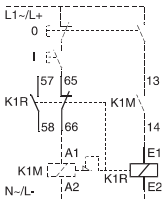
❸ Detailed ratings can be found on page A74.

Control Modules ❶

Module	Description	For use with. . .	Connection Diagrams	Function	Catalog Number	Price
	**Pneumatic Timing Module –** The contacts in the Pneumatic Timing Element switch after the delay time. The contacts on the main contactor continue to operate without delay. • Continuous adjustment range	CA7 all		**ON-Delay** 0.3…30s 1.8…180s	**CZE7-30** **CZE7-180**	160
		CA7 all		**OFF-Delay** 0.3…30s 1.8…180s	**CZA7-30** **CZA7-180**	160
	**Electronic Timing Module –** **ON-Delay** The contactor is energized at the end of the delay time.	CA7 all		110…240V 50/60Hz 110…250V DC 0.1…3s 1…30s 10…180s	**CRZE7-3-110/240** **CRZE7-30-110/240** **CRZE7-180-110/240**	98
				24…48V DC 0.1…3s 1…30s 10…180s	**CRZE7-3-24/48VDC** **CRZE7-30-24/48VDC** **CRZE7-180-24/48VDC**	104
	**Electronic Timing Module –** **OFF-Delay** After interruption of the control signal, the contactor is de-energized at the end of the delay time.	CA7 all		110…240V 50/60Hz 0.3…3s 1…30s 10…180s	**CRZA7-3-110/240** **CRZA7-30-110/240** **CRZA7-180-110/240**	112
		CA7-9… CA7-37		24V AC 50/60Hz 0.3…3s 1…30s 10…180s	**CRZA7-3-24VAC** **CRZA7-30-24VAC** **CRZA7-180-24VAC**	112
	**Electronic Timing Module –** **Wye-Delta Transition Timer** Contactor K3 (Y) is de-energized and contactor K2 (D) is energized after the end of the set transition time. Switching delay at 50ms. • Continuous adjustment range • High repeat accuracy	CA7 all		110…240V 50/60Hz 1…30s	**CRZY7-30-110/240**	112
	**Mechanical/Electrical Interlocks –** • Common to all CA7 contactors; interlocks different contactor sizes • Mechanical and electrical interlocking possible in one module by means of integrated auxiliary contacts • Dovetail (CA7-S9) connector included (9mm)	CA7 all ❶		**Mechanical** Without auxiliaries	**CM7**	34
				**Mechanical/ Electrical** Two NC aux contacts	**CM7-02**	40

❶ Not for use with CA7-40 or CA7-90 (4-pole) Contactors.

Control Modules *(continued)*

Module	Description	For use with…	Connection Diagrams	Catalog Number	Price
	**Mechanical Latch –** Following contactor latching, the contactor coil is immediately de-energized by the NC auxiliary contact (65-66). • Electrical or manual release • 1 NO + 1 NC auxiliary switch • Suitable for all CA7 contactors	CA7-9…97		**CV7-11-✱** *Replace ✱ with coil code below (See Application Note below)*	**94**

CV7 Mechanical Latch Coil Codes ❶❷❹

Coil Code	Application Range			Latch & Contactor Coil Rating
	50 Hz	60 Hz	VDC	
24Z	**24 VAC**	24 VAC	12 VDC	24V 50/60 Hz
48Z	48 VAC	48 VAC	**24 VDC**	48V 50/60 Hz
110	100 VAC	110 VAC	48 or 60VDC	110V50/110V60
120	110 VAC	**120 VAC**	~	110V50/120V60
220W	~	**208…240 VAC**	~	208…240V60
230Z	230 VAC	230 VAC	110 VDC	230V 50/60 Hz
240Z	**240 VAC**	**240 VAC**	125 VDC	240V 50/60 Hz
277	240 VAC	277 VAC	~	240V50/277V60
380	380…400 VAC	440 VAC	~	380…400V50/440V60
400Z	400 VAC	400 VAC	220 VDC	400V 50/60 Hz
415	400…415 VAC	~	~	400…415 V50 Hz
480	440 VAC	**480 VAC**	~	440V50/480V60
600 ❸	550 VAC	600 VAC	~	550V50/600V60

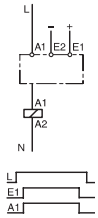
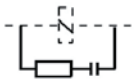
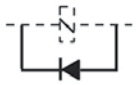
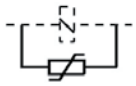
APPLICATION NOTE:

The CV7 Mechanical Latch for CA7 may be used for both AC and DC applications; however when using DC control circuit the user must apply the following rules for coil selection of the contactor and latch combination:

- When DC control circuits are required use CA7-9…43 contactors with AC coil and latch with AC coil. From column "VDC" in the table on the left, identify the required application DC control voltage and then select its specific Coil Code. Enter this Coil Code to complete the catalog numbers for both the contactor and latch (i.e.: 125V DC control circuit should use a 240Z coil code in both the CA7-9…43 and CV7). This works because both coils are only momentary energized and coil clearing contacts breaks the circuit after closing or opening.
- The above statement does NOT apply to applications CA7-60D…97D two-winding DC coil contactors. When DC control circuits are required use CA7-60D…97D contactors with standard two winding DC coil and the CV7 latch with AC coil selected from the table, top left. (i.e.: 125V DC control circuit should use 125DD coil code in the contactor and 240Z AC coil code in the CV7 latch).
- The CA7-9E…43E contactor uses an electronic DC coil and the CV7 latch coil code should be chosen from the table on the left. (i.e.: 24V DC control circuit select CA7-9E…43E with code 24E and CV7 latch uses a 48Z AC coil code).

❶ Other voltages available. Contact your Sprecher + Schuh representative.
❷ CV7 must be wired for momentary operation only.
❸ Use 600V AC when 575 V is required.
❹ Command duration 0.03…10 seconds.

Control Modules *(continued)*

Module	Description	For use with…	Connection Diagrams	Function		Catalog Number	Price
				Input	Output		
	**Electronic Interface –** Interface between the DC control signal from a PLC and the AC operating mechanism of the contactor. • Requires no additional surge suppression for the coils • Switching capacity 200VA • Suitable for all CA7 contactors ❷	CA7 all (with AC control)		**24V DC** ❶ 12V DC 48V DC	110… 240V AC	**CRI7E-24** **CRI7E-12** **CRI7E-48** *Indicates special order*	**72**
	**Surge Suppressors -** Limits coil switching transients. • Plug-in, coil mounted • Suitable for all CA7 contactors	CA7 all		**RC Module -** AC Control (50/60Hz) 24…48V 110…280V 380…480V		**CRC7-48** **CRC7-280** **CRC7-480**	**34**
				**Diode Module -** DC Control 12-250VDC		**CRD7-250** ❸	**34**
				**Varistor Module -** AC/DC Control 12…55VAC/ 12…77VDC 56…136VAC/ 78…180VDC 137…277VAC/ 181…350VDC 278…575VAC		**CRV7-55** ❸ **CRV7-136** ❸ **CRV7-277** ❸ **CRV7-575** ❸	**34**

❶ Control voltage 18…30V DC (10…15mA)

❷ Minimum actuation current is 5 volts, 2ma. The leakage current is <1MA for the following:
- CRI7E-12 @ 2.5 VDC input
- CRI7E-24 @5 VDC input
- CRI7E-48 @ 10 VDC input.

❸ Electronic DC Contactors (CA7-9E…43E) include internal surge protection and do not require additional external surge protection.