# Series CA7 Contactors

Rugged, space saving and modular... Sprecher + Schuh's contactor for applications up to 75HP @ 460V







Over 100 years of design experience has produced Sprecher + Schuh's seventh generation contactor line. The CA7 represents the most modern and flexible power contactor available today, meeting the highest industrial application requirements.

# Big performance in a small package

A wide selection of contactors in four frame sizes covers the entire CA7 horsepower range (up to 75HP @ 460/575V). Six of the contactors are only 45mm wide, an extremely small footprint for such rugged performance. A number of design features account for this efficiency, including high contact pressure and "bouncefree" contacts, allowing the devices to handle the high starting currents typical of modern motors.

# Type 1 and Type 2 Coordination

Whether you're designing motor circuits for use in North America, Europe or any other part of the world, all CA7 contactors have been designed and tested with respect to Type 1 and Type 2 short circuit coordination. Find out more in the CA7 Technical Information section in this chapter.

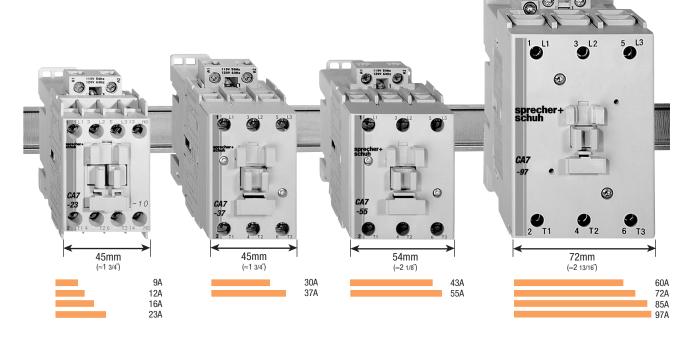
# Advanced safety and reliability features

The entire CA7 line features mechanically linked contacts, sometimes referred to as "positively guided contacts" or "force guided contacts". If a main power pole welds, adequate clearances exist (≥0.3mm) to ensure that the auxiliary contacts do not change state when coil power is removed and the device tries to open. This is a requirement in safety circuits per IEC 60947-5-1.

Reliability is further assured by "cross-stamped" auxiliary contacts, which provide multi-point reliability in low current, low voltage applications.

# Advantages of Electronic DC Coil

CA7-9E through CA7-55E are provided with DC coils that dramatically decrease wattage consumption during pull-in. This allows the use of smaller power supplies. The electronic DC coil design allows the height of the contactor to be the same size as the AC version. Larger CA7 contactors are available with a two-winding DC coil that also reduces the size of the contactor as well as the hold-in values.



# Modular accessories are common to all devices

All accessories are interchangeable among all CA7 contactors and CS7 control relays. This minimizes inventory requirements and maximizes flexibility. Top and side mount auxiliary contacts are available depending on your application. A mechanical interlock with two built-in NC auxiliaries also provides electrical interlocking if desired. Pneumatic and electronic timers, surge suppressors and electronic interface modules provide solutions for even the most complex applications.

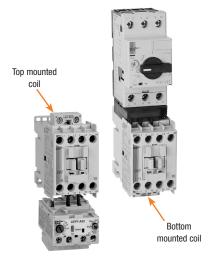


# Reversible coil provides total flexibility

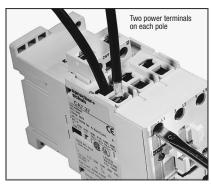
When shipped, both coil connections are normally located at the top of the contactor in preparation for mounting an overload relay at the bottom. For multi-starter panels, however, the coil can be reversed, which provides space to close-couple a KT7 Motor Circuit Controller on the top of the contactor. CA7 contactors can either be ordered with the coil reversed or may be easily reversed in the field.

# Dual power terminals speed wiring

CA7-30 through 97 contactors are designed with two power terminals for all three poles. This simplifies power wiring of interconnected contactors in reversing, reduced voltage and twospeed applications. Preformed power wiring connectors are also available for virtually instantaneous wiring in these labor intensive applications. Simplified wiring means less labor and less cost.



Reversible coils are standard on all CA7 contactors



Dual power terminals assure hassle-free wiring in complex control schemes

# Special use contactors for specialized applications

The CA7 line includes a number of contactors designed and labeled for specific industrial applications. In all cases, these devices are UL and CSA approved for these specialized uses.

# Lighting contactors

The CAL7 contactor can be used to control a wide variety of lighting loads. These contactors are well suited to handle the high inrush currents typical of this application as well as other non-motor (resistive) loads. Both mechanically held and electrically held models are available for lighting load applications up to 20A, 30A and 60A.



# NFMA Labeled Contactors

CAN7 contactors are UL Listed and rated in accordance with the requirements of NEMA standards publication ICS-2. These contactors are NEMA compliant and are labeled accordingly.

# Special purpose contactors

CNX contactors are standard CA7 contactors that have been tested, approved and labeled by UL for heating ventilation and air conditioning (HVAC) applications.

Sprecher + Schuh's CA7 line includes contactors designed and labeled for specific industrial applications



# Non-Reversing, Three Pole Contactors With AC Coil, Series CA7 (Open type only) •

			Ratings	s for S	witchi	ng AC	Motor	s (AC2	/ AC3	/ AC4)			Open Type		
l <sub>e</sub>	[A]		<b>kW</b> (5	0 Hz)			UL	/CSA	<b>HP</b> (60	Hz)			liary cts per		
•	D					1	Ø		3	Ø			actor		
AC-3	AC-1	230V	400V / 415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number	Price
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1 0	0 1	CA7-9-10-* CA7-9-01-*	116.51
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1 0	0	CA7-12-10-* CA7-12-01-*	150.23
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1 0	0	CA7-16-10-* CA7-16-01-*	168.63
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	0	CA7-23-10-*	189.07
												0	0	CA7-23-01-* CA7-30-00-*	220.75
30	65	10	15	15	15	2	5	7-1/2	10	20	25	1 0	0 1	CA7-30-10-* CA7-30-01-*	241.19 241.19
37	65	11	18.5/	20	18.5	3	5	10	10	25	30	0	0	CA7-37-00-* CA7-37-10-*	260.61 281.05
	00		20	20	10.0			"				0	1 0	CA7-37-01-*	281.05 279.01
43	85	13	22	25	22	3	7-1/2	10	15	30	30	1	0	CA7-43-10-*	299.45
												0	0	CA7-43-01-* CA7-55-00-*	299.45 318.86
55	85	15	30	30	22	5	10	15	20	40	40	1 0	0 1	CA7-55-10-* CA7-55-01-*	339.30 339.3
60	100	18.5	32	37	32	5	10	15	20	40	50	0	0	CA7-60-00-* CA7-60-10-*	344.41 364.85
												0	1 0	CA7-60-01-*	364.85 397.56
72	100	22	40	45	40	5	15	20	25	50	60	1	0	CA7-72-10-*	418.00
												0	0	CA7-72-01-* CA7-85-00-*	418.00 491.58
85	100	25	45	55	45	7-1/2	15	25	30	60	60	1 0	0 1	CA7-85-10-* CA7-85-01-*	512.02 512.02
97	130	30	55	55	55	10	20	30	30	75	75	0 1	0	CA7-97-00-* CA7-97-10-*	535.53 555.97
												0	1	CA7-97-01-*	555.97



CA7-9-10 contactor



CA7-55-00 contactor



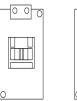
CA7-97-00 contactor

### Coil Codes @

AC	Voltage	Range
Coil Code	50 Hz	60 Hz
24Z	24V	24V
120	110V	120V
208	~	208V
220W	200V-220V	208V-240V
240	220V	240V
277	240V	277V
380	380V-400V	440V
480	440V	480V
600	550v	600V

#### **Coil Terminal Position**

All CA7 contactors are stocked and delivered with the coil terminals located on the line side (top) of the contactor. This is the typical configuration when using the contactor with an overload relay. When the contactor is used with the KT7 Motor Circuit Controller, the coil must be reversed, so that the coil terminals are located at the load side (bottom) of the contactor. CA7 coils can easily be reversed in the field, however, they are also available for order with the coils reversed from the factory. Contact your Sprecher+Schuh representative for more information about ordering CA7 contactors with reversed coils.





All CA7 contactors come with reversible coils.

Specify Catalog Number	
Replace (*) with Coil Code	See Coil Codes on this page.

- AC1 Resistive Ratings and UL/CSA Continuous Current Ratings may be increased by the use of Lug Kits or Paralleling Links. See CA7 Accessories section for applicable information.
- Other voltages available, see page A56.
- For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23-10-120 becomes CA7-23-10-U120.



## Non-Reversing, Four Pole Contactors With AC Coil, Series CA7 (Open type only)

		F	Ratings	for S	witchi	ng AC	Motor	s (AC2	2 / AC3	3 / AC4	l)	Con	tact	Open Type	
l <sub>e</sub>	[A]		<b>kW</b> (5	50 Hz)			UL	CSA H	<b>IP</b> (60	Hz)		Configu	ıration,		
						1	Ø		3	Ø		Main	Pole		
AC-3	AC-1	230V	400V 415V		690V	115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number	Price
												4	0	CA7-9-M40-*	116.51
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	3	1	CA7-9-M31-*	131.84
												2	2	CA7-9-M22-*	131.84
												4	0	CA7-12-M40-*	150.23
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	3	1	CA7-12-M31-*	165.56
												2	2	CA7-12-M22-*	165.56
												4	0	CA7-16-M40-*	168.63
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	3	1	CA7-16-M31-*	183.96
												2	2	CA7-16-M22-*	183.96
												4	0	CA7-23-M40-*	189.07
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	3	1	CA7-23-M31-*	204.40
												2	2	CA7-23-M22-*	204.40
37	75	11	18.5	20	18.5	3	5	10	10	25	30	4	0	CA7-40-M40-*	377.12
37	75	11	18.5/20	18.5	7.5	3	5	10	10	25	15	2	2	CA7-40-M22-*	377.12
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	CA7-90-M40-*	642.84
85	130	25	45	55	18.5	7-1/2	15	25	30	50	20	2	2	CA7-90-M22-*	642.84



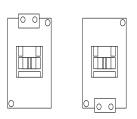
CA7-23-M22-120 contactor

#### Coil Codes O

AC	Voltage	Range
Coil Code	50 Hz	60 Hz
24Z	24V	24V
120	110V	120V
208	~	208V
220W	200V-220V	208V-240V
240	220V	240V
277	240V	277V
380	380V-400V	440V
480	440V	480V
600	550V	600V

#### **Coil Terminal Position 2**

All CA7 contactors are stocked and delivered with the coil terminals located on the line side (top) of the contactor. This is the typical configuration when using the contactor with an overload relay. When the contactor is used with the KT7 Motor Circuit Controller, the coil must be reversed, so that the coil terminals are located at the load side (bottom) of the contactor. CA7 coils can easily be reversed in the field, however, they are also available for order with the coils reversed from the factory. Contact your Sprecher+Schuh representative for more information about ordering CA7 contactors with reversed coils.



All CA7 contactors come with reversible coils.

Specify Catalog Number	
Replace (*) with Coil Code	See Coil Codes on this page.

- Other voltages available, see page A56.
- ₱ For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23-M40-120 becomes CA7-23-M40-U120.



## Non-Reversing, Three Pole Contactors With Electronic DC Coil, Series CA7 (Open type only) 029

No.				Ratin	gs for	Switch	ing AC	Motors	s (AC2	/ AC3 /	AC4)		Διινί	iliary	Open Type	
AC-3   AC-1   230V   415V   500V   690V   115V   230V   200V   230V   460V   575V   NO   NC   Catalog   Number   Price				<b>kW</b> (5	50 Hz)			UL	_/CSA H	<b>IP</b> (60 l	Hz)			-		
AC-3 AC-1 230V 415V 500V 690V 115V 230V 200V 230V 460V 575V NO NC Number Price  9 32 3 4 4 4 4 4 1/2 11/2 2 2 5 5 7-1/2 10 1 0 CA7-9E-10-*  12 32 4 5.5 5.5 5.5 1/2 2 3 3 7-1/2 10 1 0 CA7-12E-10-*  13 32 5.5 7.5 7.5 7.5 7.5 1 3 5 5 10 15 10 0 CA7-12E-10-*  23 32 7.5 11 13 10 2 3 5 7-1/2 15 15 1 0 CA7-12E-10-*  33 32 7.5 11 13 10 2 3 5 7-1/2 15 15 1 0 CA7-12E-10-*  34 32 7.5 11 13 10 2 3 5 7-1/2 15 15 1 0 CA7-12E-10-*  35 46 10 15 15 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-32E-10-*  36 65 10 15 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-32E-10-*  37 65 11 18.5/20 18.5 3 5 10 10 25 30 1 0 CA7-37E-10-*  38 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-10-*  43 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-10-*  44 85 15 30 30 30 22 5 10 15 20 40 40 40 1 0 CA7-35E-10-*  44 85 15 30 30 30 22 5 10 15 20 40 40 40 1 0 CA7-55E-10-*  44 253	•	D		4001//			1	Ø		3	Ø		Cont	actor		
9 32 3 4 4 4 4 1/2 11/2 2 2 5 7-1/2 0 1 CA7-9E-01-* 170.67  12 32 4 5.5 5.5 5.5 1/2 2 3 3 7-1/2 10 1 0 CA7-12E-10-* CA7-12	AC-3	AC-1	230V			690V	115V	230V	200V	230V	460V	575V	NO	NC		Price
12 32 4 5.5 5.5 5.5 1/2 2 3 3 7-1/2 10 1 0 CA7-12E-10-*  16 32 5.5 7.5 7.5 7.5 7.5 1 3 5 5 10 15 1 0 CA7-12E-01-*  23 32 7.5 11 13 10 2 3 5 7-1/2 15 15 1 0 CA7-12E-01-*  23 32 7.5 11 13 10 2 3 5 7-1/2 15 15 1 0 CA7-12E-01-*  30 65 10 15 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-30E-00-*  317.84  37 65 11 18.5/ 20 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-00-*  38 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-01-*  39 85 15 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-00-*  442.53	9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1 '	-		170.67
12       32       4       5.5       5.5       5.5       1/2       2       3       3       7-1/2       10       0       1       CA7-12E-01-*       211.55         16       32       5.5       7.5       7.5       7.5       1       3       5       5       10       15       1       0       CA7-16E-10-*       233.02         23       32       7.5       11       13       10       2       3       5       7-1/2       15       15       1       0       CA7-23E-10-*       253.46         30       65       10       15       15       15       2       5       7-1/2       10       20       25       1       0       CA7-30E-10-*       297.40         37       65       11       18.5/20       20       18.5       3       5       10       10       25       30       1       0       CA7-30E-10-*       372.01         43       85       13       22       25       22       3       7-1/2       10       15       30       30       1       0       CA7-37E-01-*       426.17         43       85       15       30       30 <td< td=""><td></td><td></td><td></td><td></td><td>·</td><td></td><td></td><td>,_</td><td></td><td></td><td></td><td></td><td>0</td><td>1</td><td>CA7-9E-01-*</td><td></td></td<>					·			,_					0	1	CA7-9E-01-*	
16 32 5.5 7.5 7.5 7.5 7.5 1 3 5 5 10 15 0 1 CA7-12E-01-*  23 32 7.5 11 13 10 2 3 5 7-1/2 15 15 0 1 CA7-23E-10-*  25 3.46  30 65 10 15 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-30E-00-*  31 18.5/20 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-10-*  43 85 13 22 25 22 3 7-1/2 10 15 30 30 30 22 5 10 15 30 30 1 0 CA7-43E-10-*  42 3 6 7-1/2 10 15 30 30 30 22 5 10 15 30 30 1 0 CA7-43E-10-*  43 85 15 30 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-*  44 42.53	12	32	<b>Ι</b> <sub>4</sub>	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	0	CA7-12E-10-*	211 55
16       32       5.5       7.5       7.5       7.5       1       3       5       5       10       15       0       1       CA7-16E-01-*       233.02         23       32       7.5       11       13       10       2       3       5       7-1/2       15       15       1       0       CA7-23E-10-*       253.46         30       65       10       15       15       15       2       5       7-1/2       10       20       25       1       0       CA7-30E-00-*       297.40         37       65       11       18.5/20       20       18.5       3       5       10       10       20       25       1       0       CA7-30E-10-*       317.84         37       65       11       18.5/20       20       18.5       3       5       10       10       25       30       1       0       CA7-37E-10-*       372.01         43       85       13       22       25       22       3       7-1/2       10       15       30       30       1       0       CA7-43E-00-*       426.17         43       85       13       22       25       <		02		0.0	0.0	0.0					,_		0	1	CA7-12E-01-*	211.00
23 32 7.5 11 13 10 2 3 5 7-1/2 15 15 1 0 CA7-3E-10-* 253.46  30 65 10 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-3E-10-* 317.84  37 65 11 18.5/ 20 18.5 3 5 10 10 25 30 1 0 CA7-3TE-01-* 372.01  43 85 13 22 25 22 3 7-1/2 10 15 20 40 40 1 0 CA7-3E-10-* 426.17  55 85 15 30 30 30 22 5 10 15 20 40 40 1 0 CA7-5E-10-* 426.17	16	32	5.5	7.5	7.5	7.5	,	2	5	5	10	15	1	0	CA7-16E-10-*	233 U2
23 32 7.5 11 13 10 2 3 5 7-1/2 15 15 0 1 CA7-23E-01-* 253.46  30 65 10 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-30E-00-* 297.40  317.84  37 65 11 18.5/ 20 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-01-* 372.01  43 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-01-* 426.17  55 85 15 30 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97	10	32	3.3	7.5	7.5	7.5		J .		J	10	13	0	1	CA7-16E-01-*	255.02
30 65 10 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-30E-00-* 297.40 317.84 37 65 11 18.5/ 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-10-* 372.01 43 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-43E-10-* 426.17 55 85 15 30 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97	22	20	7 5	11	10	10	,	9	_	7 1/2	15	15	1	0	CA7-23E-10-*	252.46
30 65 10 15 15 15 2 5 7-1/2 10 20 25 1 0 CA7-30E-10-* 317.84  37 65 11 18.5/ 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-00-* 372.01  43 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-10-* 426.17  55 85 15 30 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97	23	32	1.3	''	13	10		٥	"	1-1/2	13	13	0	1	CA7-23E-01-*	255.40
37 65 11 18.5/ 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-00-* 351.57 37 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-10-* 426.17  55 85 15 30 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97													0	0	CA7-30E-00-*	297.40
37 65 11 18.5/ 20 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-00-* 372.01  43 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-37E-10-* 426.17  55 85 15 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97	30	65	10	15	15	15	2	5	7-1/2	10	20	25	1	0		317.84
37 65 11 18.5/ 20 18.5 3 5 10 10 25 30 1 0 CA7-37E-10-* 372.01  43 85 13 22 25 22 3 7-1/2 10 15 30 30 1 0 CA7-43E-00-* 426.17  55 85 15 30 30 22 5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97													0	1		317.84
37     65     11     20     20     18.5     3     5     10     10     25     30     1     0     CA7-37E-10-*     372.01       43     85     13     22     25     22     3     7-1/2     10     15     30     30     1     0     CA7-43E-00-*     405.73       43     85     13     22     25     22     3     7-1/2     10     15     30     30     1     0     CA7-43E-10-*     426.17       55     85     15     30     30     22     5     10     15     20     40     40     1     0     CA7-55E-10-*     462.97				18.5/									0	0		351.57
43 85 13 22 25 22 <b>3 7-1/2 10 15 30 30 1</b> 0 0 CA7-43E-00-* 426.17 426.17 55 85 15 30 30 30 22 <b>5 10 15 20 40 40 1</b> 0 CA7-55E-10-* 462.97	37	65	11		20	18.5	3	5	10	10	25	30	1	0	-	
43 85 13 22 25 22 <b>3 7-1/2 10 15 30 30 1 0 CA7-43E-10-* 426.17</b> 6 85 15 30 30 22 <b>5 10 15 20 40 40 1 0 CA7-55E-10-* 462.97</b>													⊢ •	-		
55 85 15 30 30 22 <b>5 10 15 20 40 40 1</b> 0 CA7-43E-01-* 426.17							_						0	-		405.73
55 85 15 30 30 22 <b>5 10 15 20 40 40</b> 1 0 CA7-55E-10-* 462.97	43	85	13	22	25	22	3	7-1/2	10	15	30	30		-	' ' '	
55 85 15 30 30 22 <b>5 10 15 20 40 40 1</b> 0 <b>CA7-55E-10-* 462.97</b>													⊢ •	<u> </u>		
		٥٦	1.	20	20	00	_	40	4.5	00	40	40	0	1 -		
	່ວວ	85	15	30	30	22	5	10	15	20	40	40	0	1	CA7-55E-10-*	462.97



CA7-16E-10-110E contactor 4



CA7-23E-10-24E contactor



CA7-55E-00-24E contactor

#### Description

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E...55E has internal surge suppression. See page A69 for more information.

This new design results in:

- · Lighter, lower depth
- · More energy efficient contactors
- Easier wiring
- Uniform panel appearance.

#### **Applications**

Direct control from PLC:

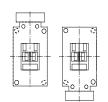
The low power consumption contactor designed to control motors and other loads is especially aligned to the specific requirement of electronic control circuits. The low power consumption of 1.7 allows direct control through PLC's without the need for interposing relays. Power dissipation is greatly reduced limiting the heat effect in control panels.

#### Coil Codes 24

DC Coil Codes	Voltage
12E	12V
24E	24V
36E <b>⑤</b>	36-48V
48E 🙃	48-72V
110E 😉	110-125V
220E @	220-250V

#### **Coil Terminal Position @**

All CA7 contactors are stocked and delivered with the coil terminals located on the line side (top) of the contactor. This is the typical configuration when using the contactor with an overload relay. When the contactor is used with the KT7 Motor Circuit Controller, the coil must be reversed, so that the coil terminals are located at the load side (bottom) of the contactor. CA7 coils can easily be reversed in the field, however, they are also available for order with the coils reversed from the factory. Contact your Sprecher+Schuh representative for more information about ordering CA7 contactors with reversed coils.



All CA7 contactors come with reversible coils. (48V DC shown)

- AC1 Resistive Ratings and UL/CSA Continuous Current Ratings may be increased by the use of Lug Kits or Paralleling Links. See CA7 Accessories section for applicable information.
- CA7-9E...55E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- See page A47-A48 for limitations on adding auxiliaries to Electronic DC Coil contacts.
- Ovoltages of 36V DC and greater are supplied with backpack module standard. See page A86.
- Not applicable with Electronic Timer accessories (CRZ\_7).
- For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23E-10-24E becomes CA7-23E-10-U24E.



#### Four Pole - Series CA7

### Non-Reversing, Four Pole Contactors With Electronic DC Coil, Series CA7 (Open type only) **12**

		ı	Rating	s for S	witchi	ng AC	Motor	s (AC2	2 / AC3	/ AC4	)	Con	tact	Open Type	
١	[A]		<b>kW</b> (5	60 Hz)			UL	/CSA H	<b>IP</b> (60	Hz)		Config	uration,		
		400V				1	Ø		3	Ø		Main Pole			
AC-3	AC-1	230V	415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number	Price
												4	0	CA7-9E-M40-*	170.67
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	3	1	CA7-9E-M31-*	186.00
												2	2	CA7-9E-M22-*	186.00
												4	0	CA7-12E-M40-*	211.55
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	3	1	CA7-12E-M31-*	226.88
												2	2	CA7-12E-M22-*	226.88
												4	0	CA7-16E-M40-*	233.02
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	3	1	CA7-16E-M31-*	248.35
												2	2	CA7-16E-M22-*	248.35
												4	0	CA7-23E-M40-*	253.46
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	3	1	CA7-23E-M31-*	268.79
												2	2	CA7-23E-M22-*	268.79
37	75	11	18.5	20	18.5	3	5	10	10	25	30	4	0	CA7-40E-M40-*	468.08
37	75	11	18.5/20	18.5	7.5	3	5	10	10	25	15	2	2	CA7-40E-M22-*	468.08



CA7-23E-M22-24E contactor

#### **Description**

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E...55E have internal surge suppression. See page A69 for more information. This design results in:

- · Lighter, lower depth
- More energy efficient contactors
- Easier wiring
- Uniform panel appearance

#### **Applications**

Direct control from PLC:

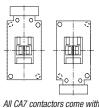
The low power consumption contactor designed to control motors and other loads is especially aligned to the specific requirement of electronic control circuits. The low power consumption of 1.7 allows direct control through PLC's without the need for interposing relays. Power dissipation is greatly reduced limiting the heat effect in control panels.

#### Coil Codes 00

DC Coil Codes	Voltage
12E	12V
24E	24V
36E <b>4</b>	36-48V
48E <b>4</b>	48-72V
110E <b>4</b>	110-125V
220E <b>4</b>	220-250V

#### Coil Terminal Position ©

All CA7 contactors are stocked and delivered with the coil terminals located on the line side (top) of the contactor. This is the typical configuration when using the contactor with an overload relay. When the contactor is used with the KT7 Motor Circuit Controller, the coil must be reversed, so that the coil terminals are located at the load side (bottom) of the contactor. CA7 coils can easily be reversed in the field, however, they are also available for order with the coils reversed from the factory. Contact your Sprecher+Schuh representative for more information about ordering CA7 contactors with reversed coils.



reversible coils. (48V DC shown)

- CA7-9E...55E with electronic coils are not interchangeable with non-electronic DC or AC coils
- See pages A47-A48 for limitations on adding auxiliaries to Electronic DC Coil contacts.
- Voltages of 36V DC and greater are supplied with backpack module standard. See page A86.
- Not applicable with Electronic Timer accessories (CRZ\_7).
- For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23E-M40-24E becomes CA7-23E-M40-U24E.



# Non-Reversing, Three Pole Contactors With Two Winding DC Coil, Series CA7 (Open type only) •

			Rating	s for S	witchi	ng AC		Auxi		Open Type					
<i>I</i> <sub>e</sub>	<b>I</b> <sub>e</sub> [A] <b>kW</b> (50 Hz)			UL/CSA HP (60 Hz)							cts per actor				
	400V/					1	Ø	3 Ø				00			
AC-3	AC-1	230V	415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number	Price
												0	0	CA7-60D-00-*	466.03
60	100	18.5	32	37	32	5	10	15	20	40	50	1	0	CA7-60D-10-*	486.47
												0	1	CA7-60D-01-*	486.47
												0	0	CA7-72D-00-*	519.18
72	100	22	40	45	40	5	15	20	25	50	60	1	0	CA7-72D-10-*	539.62
												0	1	CA7-72D-01-*	539.62
												0	0	CA7-85D-00-*	613.20
85	100	25	45	55	45	7-1/2	15	25	30	60	60	1	0	CA7-85D-10-*	633.64
												0	1	CA7-85D-01-*	633.64
												0	0	CA7-97D-00-*	702.11
97	130	30	55	55	55	10	20	30	30	75	75	1	0	CA7-97D-10-*	722.55
								l				0	1	CA7-97D-01-*	722.55



CA7-60D Contactor

#### Description:

Contactors with two winding DC coils have very low hold-in values and share the same dimensions with AC contactors. See page A57 for more information. See page A87 for dimensional information.

## Non-Reversing, Four Pole Contactors With Two Winding DC Coil, Series CA7 (Open type only) •

Ratings for Switchii  I <sub>e</sub> [A] kW (50 Hz)								(AC2 /				Contac figur	ation	Contacts per		Open Type	
			415V			1	Ø		3	Ø		Main	Pole	Contactor			
AC-3	AC-1	230V	400V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	NO	NC	Catalog Number	Price
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	0	0	CA7-90D-M40-*	762.41
85	130	25	45	55	18.5	7-1/2	15	25	30	50	20	2	2	0	0	CA7-90D-M22-*	762.41

### Coil Codes **200**

DC Coil Code	Voltage
24DD	24V
110DD	110V

Specify Catalog Number	
Replace (*) with Coil Code	See Coil Codes on this page.

- CA7-60D...CA7-97D have an internal auxiliary contact to transition from the start winding to the run winding.
- 2 Coils include an integrated diode surge suppressor.
- Other coil voltages are available, see page A57. Contact your Sprecher + Schuh Sales Representative to determine which coil voltages may be stocked.
- The coil codes shown are the most commonly stocked items. Contact your Sprecher + Schuh representative to determine if other voltages, i.e.., 12DD, 48DD, 220DD are on-hand or can be specially ordered in quantities.



# **Contactors, AC Coil – Reversing**

## Reversing, Three Pole Contactors With AC Coil, Series CAU7 (Open type only)

		Ratings for Switching AC Motors (AC2 / AC3 / AC4)											iliarv	Open Type	
<i>I</i> <sub>e</sub>	<b>I</b> <sub>e</sub> [A]		<b>kW</b> (50 Hz) <b>UL/CSA HP</b> (60 Hz)							UL/CSA HP (60 Hz)					
						1	Ø		3	Ø		Con	tactor		
AC-3	AC-1	230V	400V 415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC 🔞	Catalog Number	Price
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1	1	CAU7-9-22-*	328.06
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	CAU7-12-22-*	396.54
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	CAU7-16-22-*	437.42
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	CAU7-23-22-*	476.25
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0 1 <b>4</b>	1	CAU7-30-02-* CAU7-30-22-*	539.62 579.47
			18.5/			$\vdash$						0	1	CAU7-30-22-*	621.38
37	65	11	20	20	8.5	3	5	10	10	25	30	1 4	1	CAU7-37-22-*	661.23
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	1	CAU7-43-02-*	687.81
43	00	13	22	23	22	<u> </u>	1-1/2	10	13	30	30	1 🕢	1	CAU7-43-22-*	727.66
55	85	15	30	30	22	5	10	15	20	40	40	0	1	CAU7-55-02-*	762.41
	00	10	00	00		Ľ				70	70	1 4	1	CAU7-55-22-*	762.41
60	100	18.5	32	37	32	5	10	15	20	40	50	0	1	CAU7-60-02-*	871.77
	100	10.0	02	0,	02	Ľ						1 4	1	CAU7-60-22-*	871.77
72	100	22	40	45	40	5	15	20	25	50	60	0	1	CAU7-72-02-*	988.27
	100					Ľ						1 4	1	CAU7-72-22-*	1,032.22
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	CAU7-85-02-*	1,175.30
						ļ <u>.</u>						1 4	1	CAU7-85-22-*	1,216.18
97	130	30	55	55	55	10	20	30	30	75	75	0	1	CAU7-97-02-*	1,614.76
	. 30											1 4	1	CAU7-97-22-*	1,655.64



Three Pole - Series CAU7

CAU7-9-22-120 reversing contactor



CAU7-43-22-120 reversing contactor

#### Includes:

- Line side coil terminations
- Mechanical and electrical Interlock 6
- Reversing power wiring • (using Power Wiring Kit Cat.# CAUT7-PW...)
- Control wiring available; see footnote 2

#### Coil Codes 6

AC Coil	Voltage Range							
Code	50 Hz	60 Hz						
24Z	24V	24V						
120	110V	120V						
208	~	208V						
220W	200V-220V	208V - 240V						
240	220V	240V						
277	240V	277V						
380	380V-400V	440V						
480	440V	480V						
600	550V	600V						

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• For -LW Option Deduct the								
following from List Price								
CAU7-923 <b>10.22</b>								
CAU7-3037	12.26							
CAU7-4355	22.48							
<b>❷</b> For -CW Option Add the								
following to List Price								
CAU7-997	20.44							

Specify Catalog Number	
Replace (*) with Coil Code	See Coil Codes on this page.

- For Reversing Contactors without power wiring add suffix "-LW" to catalog number. For example: CAU7-9-22-\* becomes CAU7-9-22-\*-LW. CAU7-60...97 not available without power wiring.
- ❷ For control wiring, add suffix -CW to catalog number. Example: CAU7-9-22-\* becomes CAU7-9-22-\*-CW.
- 3 The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.
- 4 The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.
- Other voltages available, see page A56.

Three Pole - Series CAU7

# A

## Reversing, Three Pole Contactors With Electronic DC Coil, Series CAU7 (Open type only) @@

	Ratings for Switching AC Motors (AC2 / AC3 / AC4)													Open Type																											
<i>I</i> e	<i>I</i> <sub>e</sub> [A]		<b>kW</b> (50 Hz)				UL	/CSA I	<b>IP</b> (60	Hz)			iliary cts per																												
			400V			1	Ø		3 Ø		3 Ø		3 Ø		Ø		3 Ø		3 Ø		Ø		Ø		Ø		Ø		Ø		3 Ø		3 Ø		Ø		3 Ø		actor		
AC-3	AC-1	230V	415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC 🔞	Catalog Number	Price																										
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1	1	CAU7-9E-22-*	435.37																										
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	CAU7-12E-22-*	515.09																										
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	CAU7-16E-22-*	558.01																										
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	CAU7-23E-22-*	605.02																										
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	1	CAU7-30E-02-*	694.96																										
30	00	10	10	10	10			, .,_				1 4	1	CAU7-30E-22-*	734.82																										
37	65	11	18.5/	20	8.5	3	5	10	10	25	30	0	1	CAU7-37E-02-*	869.72																										
37	0.5	''	20	20	0.5		٦	10	10	23	30	1 🛭	1	CAU7-37E-22-*	909.58																										
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	1	CAU7-43E-02-*	931.04																										
43	00	13	22	20		٥	1-1/2	10	10	30	30	1 4	1	CAU7-43E-22-*	970.90																										
	0.5	1.	20	20	00	_	10	45	20	40	40	0	1	CAU7-55E-02-*	1,002.58																										
55	85	15	30	30	22	5	10	15	20	40	40	1 🗿	1	CAU7-55E-22-*	1,042.44																										



CAU7-9E-22-24E Reversing contactor



CAU7-37E-22-24E Reversing contactor

#### Description

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E...55E have internal surge suppression. See page A69 for more information.

This new design results in:

- Lighter, lower depth
- · More energy efficient contactors
- · Easier wiring
- Uniform panel appearance

#### **Applications**

Direct control from PLC:

The low power consumption contactor designed to control motors and other loads is especially aligned to the specific requirement of electronic control circuits. The low power consumption of 1.7 allows direct control through PLC's without the need for interposing relays. Power dissipation is greatly reduced limiting the heat effect in control panels.

#### Includes:

- Line side coil terminations
- Mechanical and electrical Interlock 3
- Reversing power wiring (using Power Wiring Kit Cat.# CAUT7-PW...)
- Control wiring available; see footnote 2
- CAU7-9E...55E has internal surge suppression.

#### Coil Codes @@

DC Coil Codes	Voltage
12E	12V
24E	24V
36E <b>③</b>	36-48V
48E <b>③</b>	48-72V
110E <sup>3</sup>	110-125V
220E <sup>3</sup>	220-250V

• For -LW Option Deduct the following from List Price							
CAU7-9E23E	10.22						
CAU7-30E37E	12.26						
CAU7-43E55E	22.48						
For -CW Option Add the following to List Price							
CAU7-9E55E	20.44						

- For Reversing Contactors without power wiring add suffix "-LW" to catalog number.
   For example CAU7-9E-22-24E becomes CAU7-9E-22-24E\_LW.
- For control wiring, add suffix -CW to catalog number. For example: CAU7-9E-22-24E becomes CAU7-9E-22-24E-CW.
- The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.
- The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.
- CA7-9E...55E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- See pages A47-A48 for limitations. on adding auxiliaries to Electronic DC Coil contacts.
- Voltages of 36V DC and greater are supplied with backpack module standard. See page A86.
- O Not applicable with Electronic Timer accessories (CRZ\_7).



#### Three Pole - Series CAU7

## Reversing, Three Pole Contactors With DC Coil, Series CAU7 (Open type only)

		Ratings for Switching AC Motors (AC2 / AC3 / AC4)											iliarv	Open Type	
<i> </i>   <sub>e</sub>	[A]		<b>kW</b> (5	50 Hz)			UL/CSA HP (6					1	cts per		
			400V			1	1 Ø		3 Ø		3 Ø		actor	Catalog	
AC-3	AC-1	230V	415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC @	Number	Price
60	100	18.5	20	37	32	5	10	15	20	40	50	0	1	CAU7-60D-02-*	1,093.54
60	100	18.5	32	37	32	) 3	10	15	20	40	50	1 <b>⊚</b>	1	CAU7-60D-22-*	1,134.42
72	100	22	40	45	40	5	15	20	25	50	60	0	1	CAU7-72D-02-*	1,195.74
12	100	22	40	40	40	"	10	20	23	30	00	1 <b>⊚</b>	1	CAU7-72D-22-*	1,236.62
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	CAU7-85D-02-*	1,410.36
00	100	25	45	) 55	45	1-1/2	10	23	30	00	00	1 <b>⊚</b>	1	CAU7-85D-22-*	1,451.24
0.7	100	20				10	20	30	30	75	75	0	1	CAU7-97D-02-*	1,808.94
97	130	30	55	55	55	10	20	30	30	15	/5	1 🔞	1	CAU7-97D-22-*	1,849.82



CAU7-85D Reversing (Typical)

**NOTE:** DC and AC coils are not interchangeable. CA7-60D...97D contactors have a two winding, 3-lead coil with built-in late break auxiliary contact and coil suppression. Refer to dimensions starting on page A87.

#### Includes:

- DC operating mechanism
- · Line side coil terminations
- Mechanical and electrical Interlock ②
- Reversing power wiring
- Control wiring available; see footnote

#### Coil Codes 46

<del></del>									
DC Coil Code	Voltage								
12DD	12V								
24DD	24V								
48DD	48V								
110DD	110V								
220DD	220V								

<ul><li>For -CW Option Add the</li></ul>							
following to List Price							
CAU7-60D97D	20.44						

Specify Catalog Number	
Replace (*) with Coil Code	See Coil Codes on this page.

- For control wiring, add suffix -CW to catalog number.
   For example: CAU7-60D-22-\* becomes CAU7-60D-22-\*-CW.
- The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.
- The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.
- 4 Other voltages available, see page A57.
- Goils for CAU7-60D...97D reversing contactors include an integrated diode surge suppressor.