

# Series CA7 Contactors

Rugged, space saving  
and modular...  
Sprecher + Schuh's  
newest 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 eleven 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 "bounce-free" 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.

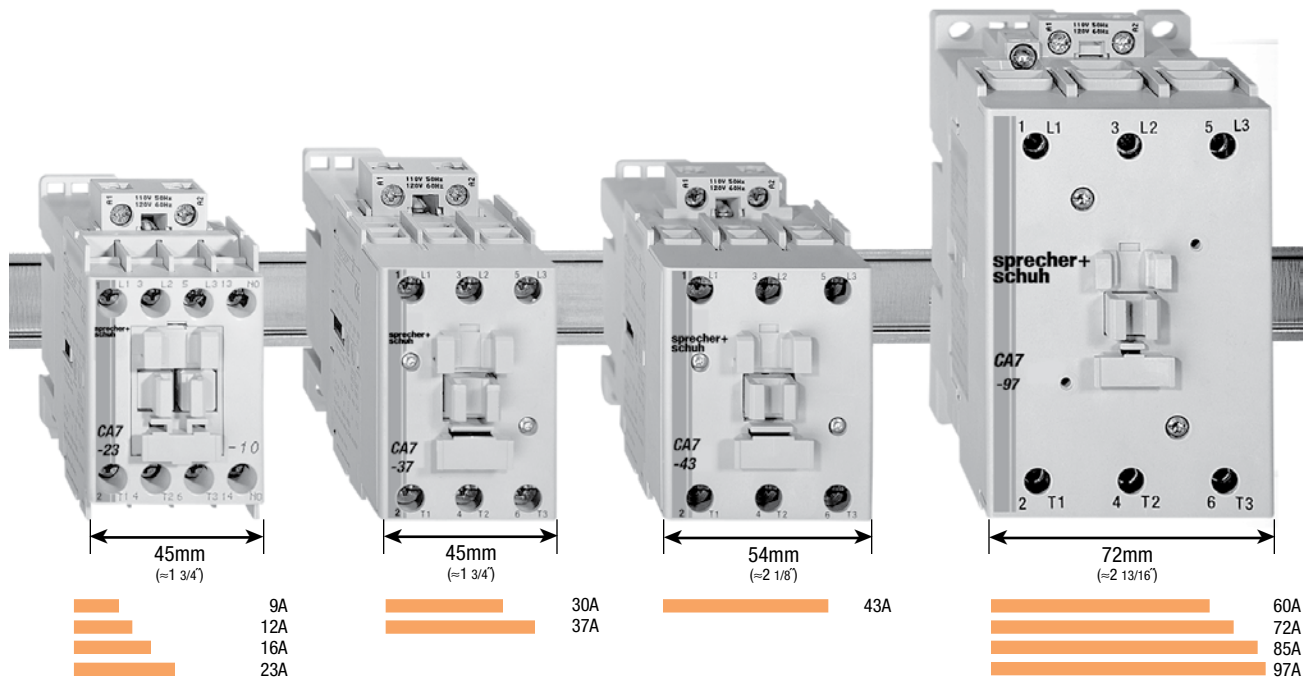
## Advanced safety and reliability features

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 ( $\geq 0.3\text{mm}$ ) 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.

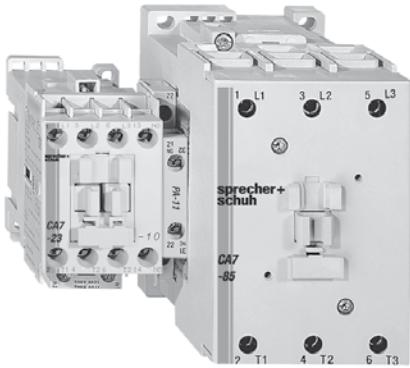
## Advantages of Electronic DC Coil

CA7-9E through CA7-43E 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 brings the height of the contactor back down to the same size as the AC version. Select CA7 contactors are also available with a two-winding DC coil that reduces the size of the contactor as well as the hold-in values.



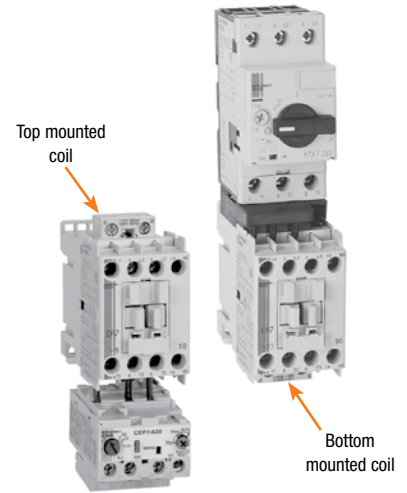
## Modular accessories are common to all devices

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

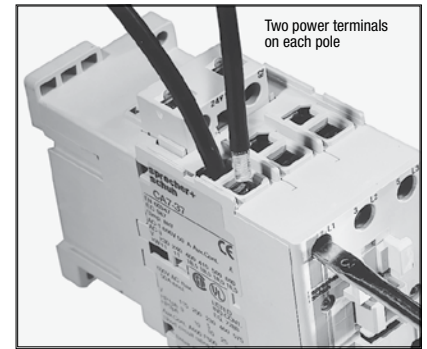
When shipped, both coil connections are normally located at the top of the contactor in preparation for mounting an overload relay at the bottom. For multi-starter panels, however, the coil can be reversed, which provides space to close-couple a KT7 Motor Circuit Controller on the top of the contactor.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



Reversible coils are standard on all CA7 contactors

## 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 two-speed 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.



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

## Special use contactors for specialized applications

The CA7 line has been expanded to include 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

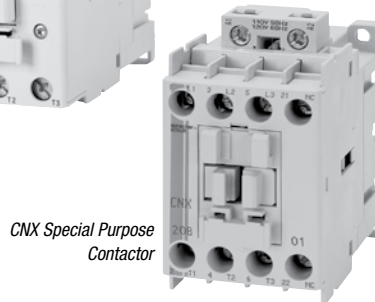
The CAL7 contactor can be used to control a wide variety of lighting loads. These contactors are well suited to handle the high inrush currents typical of this application as well as other non-motor (resistive) loads. Both mechanically held and electrically held models are available for lighting load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



CAL7 Lighting Contactor



CAN7 NEMA labeled contactor



CNX Special Purpose Contactor

## NEMA 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 expanded CA7 line includes contactors designed and labeled for specific industrial applications*

#### Non-Reversing, Three Pole Contactors With AC Coil, Series CA7 (Open type only) ①

I <sub>e</sub> [A] ①		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type  Catalog Number
		kW (50 Hz)				UL/CSA HP (60 Hz)								
		AC-3	AC-1	230V	400V / 415V	500V	690V	1 Ø		3 Ø				
115V	230V							200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1	0	CA7-9-10-*
												0	1	CA7-9-01-*
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	0	CA7-12-10-*
												0	1	CA7-12-01-*
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	0	CA7-16-10-*
												0	1	CA7-16-01-*
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	0	CA7-23-10-*
												0	1	CA7-23-01-*
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	0	CA7-30-00-*
												1	0	CA7-30-10-*
												0	1	CA7-30-01-*
37	65	11	18.5/ 20	20	18.5	3	5	10	10	25	30	0	0	CA7-37-00-*
												1	0	CA7-37-10-*
												0	1	CA7-37-01-*
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	0	CA7-43-00-*
												1	0	CA7-43-10-*
												0	1	CA7-43-01-*
60	100	18.5	32	37	32	5	10	15	20	40	50	0	0	CA7-60-00-*
												1	0	CA7-60-10-*
												0	1	CA7-60-01-*
72	100	22	40	45	40	5	15	20	25	50	60	0	0	CA7-72-00-*
												1	0	CA7-72-10-*
												0	1	CA7-72-01-*
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	0	CA7-85-00-*
												1	0	CA7-85-10-*
												0	1	CA7-85-01-*
97	130	30	55	55	55	10	20	30	30	75	75	0	0	CA7-97-00-*
												1	0	CA7-97-10-*
												0	1	CA7-97-01-*



CA7-9-10 contactor



CA7-43-00 contactor



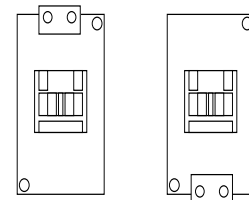
CA7-60-00 contactor

#### Coil Codes ②

AC Coil Code	Voltage Range	
	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.

#### Ordering Instructions

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

- ① 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.
- ② Other voltages available, see page A56. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

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

I <sub>e</sub> [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Contact Configuration, Main Pole		Open Type
		kW (50 Hz)				UL/CSA HP (60 Hz)								
		AC-3	AC-1	400V		500V	690V	1 Ø		3 Ø				
230V	415V			115V	230V			200V	230V	460V	575V	NO	NC	Catalog Number
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	4	0	CA7-9-M40-* CA7-9-M31-* CA7-9-M22-*
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	4	0	CA7-12-M40-* CA7-12-M31-* CA7-12-M22-*
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	4	0	CA7-16-M40-* CA7-16-M31-* CA7-16-M22-*
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	4	0	CA7-23-M40-* CA7-23-M31-* CA7-23-M22-*
37	75	11	18.5	20	18.5	3	5	10	10	25	30	4	0	CA7-40-M40-*
37	75	11	18.5/20	18.5	7.5	3	5	10	10	25	15	2	2	CA7-40-M22-*
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	CA7-90-M40-*
85	130	25	45	55	18.5	7-1/2	15	25	30	50	20	2	2	CA7-90-M22-*



CA7-23-M22-120 contactor

#### Coil Codes ①

AC Coil Code	Voltage Range	
	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

#### Ordering Instructions

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

① Other voltages available, see page A56. Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.

#### Non-Reversing, Three Pole Contactors With True DC Coil, Series CA7 (Open type only) ①④

I <sub>b</sub> [A] ①		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type
		kW (50 Hz)				UL/CSA HP (60 Hz)								
		AC-3	AC-1	230V	400V/ 415V	500V	690V	1 Ø		3 Ø				
115V	230V							200V	230V	460V	575V			
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1 0	0 1	CA7-9C-10-* CA7-9C-01-*
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1 0	0 1	CA7-12C-10-* CA7-12C-01-*
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1 0	0 1	CA7-16C-10-* CA7-16C-01-*
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1 0	0 1	CA7-23C-10-* CA7-23C-01-*
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0 1 0	0 0 1	CA7-30C-00-* CA7-30C-10-* CA7-30C-01-*
37	65	11	18.5/ 20	20	18.5	3	5	10	10	25	30	0 1 0	0 0 1	CA7-37C-00-* CA7-37C-10-* CA7-37C-01-*
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0 1 0	0 0 1	CA7-43C-00-* CA7-43C-10-* CA7-43C-01-*



CA7-9C contactor (typical)



CA7-43C-00-120 contactor

#### Description:

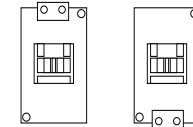
True DC coils have low inrush which allows the use of smaller power supplies. See page A62 for more information. DC and AC coils are not interchangeable. CA7-9C...43C contactors have increased dimensions to accommodate true DC coils.

#### Coil Codes ②

DC Coil Codes	Voltage
12D	12V
24D ③	24V
48D	48V
110D	110V
220D	220V

#### 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.

#### Ordering Instructions

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

① 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.

④ Surge suppressor coil with integrated diode available. Order coil code 24DD and add \$42 to list price. To order, change "C" in catalog number to "D".  
Ex: CA7-9C-10-24DD becomes CA7-9D-10-24DD. Check with customer service representative to determine stock availability.