Series CA7 Contactors

Rugged, space saving and modular… Sprecher + Schuh's newest contactor for applications up to 60HP

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 ten contactors in four frame sizes covers the entire CA7 horsepower range (up to 60HP @ 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.

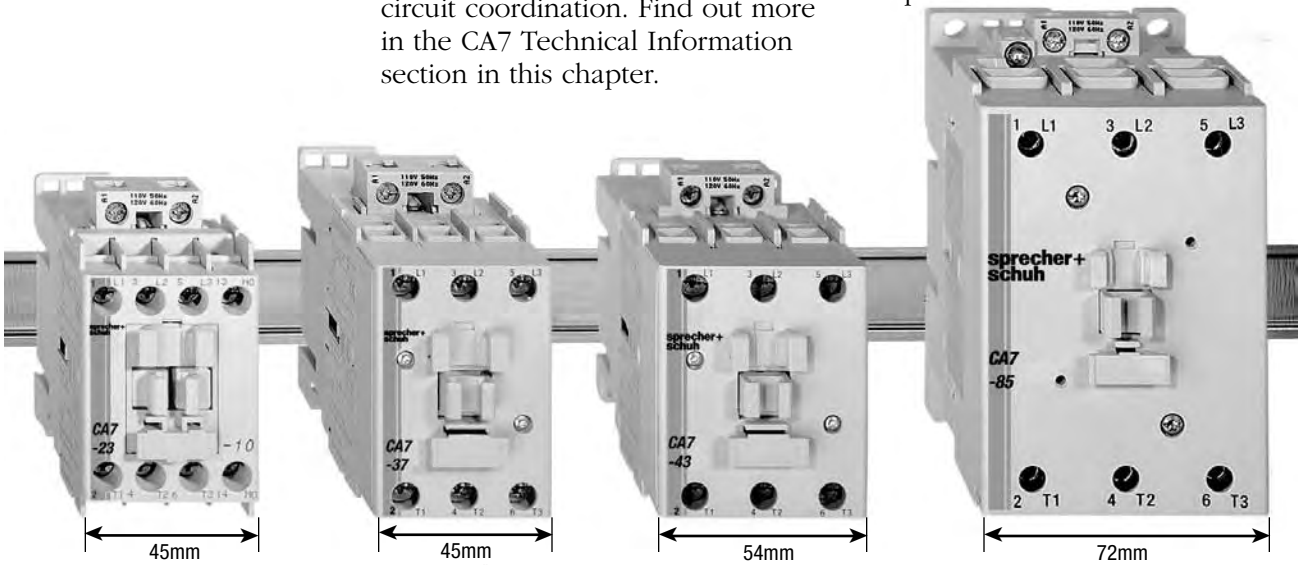
Advanced safety and reliability features

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 (≥0.3mm) to ensure that the auxiliary contacts do not change state w hen 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.

Two types of DC coils available

CA7-9C through 43C contactors are available with true DC coils that dramatically decrease wattage consumption during pull-in. This allows the use of smaller power supplies. The entire CA7 line is also available with a two winding DC coil that reduces the size of the contactor, as well as the hold-in values. Two winding coils include built-in coil suppression and an internal contact that bypasses the pull-in coil to the hold-in coil.



SSCDN850OE

Modular accessories are common to all devices

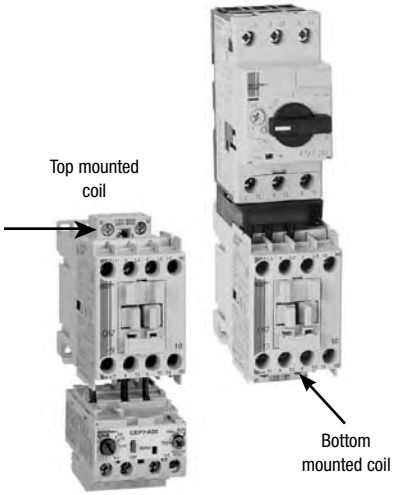
All accessories are interchangeable among all CA7 contactors and CS7 control relays. This minimizes inventory requirements and maximizes flexibility. Top and side mount auxiliary contacts are available depending on your application. A mechanical interlock with two built-in NC auxiliaries also provides 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

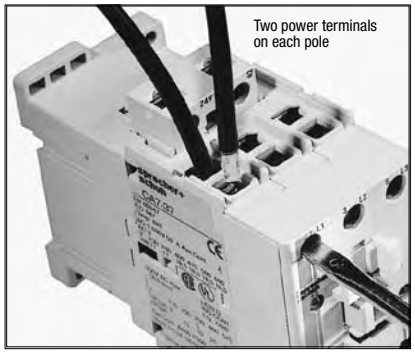
When shipped, both coil connections are normally located at the top of the contactor in preparation for mounting an overload relay at the bottom. For multi-starter panels, however, the coil can be reversed, which provides space to close-couple a KT7 Motor Circuit Controller on the top of the contactor. 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 85 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.



Reversible coils are standard on all CA7 contactors



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

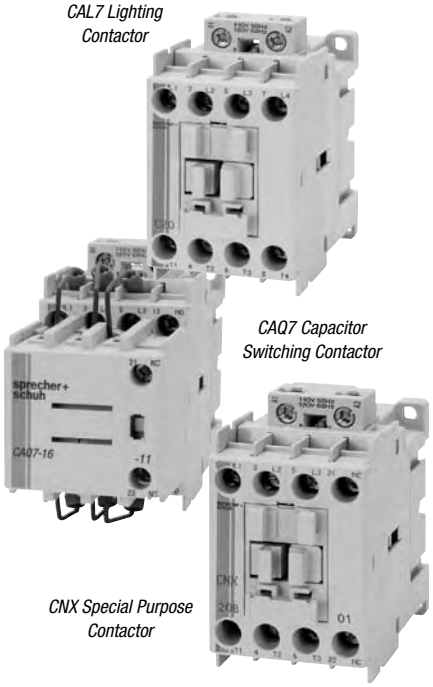
Special use contactors for specialized applications

The CA7 line 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, 30 A and 60 A.

Capacitor contactors



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

CAQ7 contactors manage the peak in-rush common with capacitor switching by incorporating a built-in set of resistors and early-make contacts, wired in parallel with the power contacts, to pre-charge the capacitors. Selection is based on applied KVAR.

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.

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

I_e [A] ❶		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	CA7-9-10-✱	120
												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-✱	155
												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-✱	174
												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-✱	193
												0	1	CA7-23-01-✱	
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	0	CA7-30-00-✱	222
												1	0	CA7-30-10-✱	244
												0	1	CA7-30-01-✱	244
37	65	11	18.5/ 20	20	18.5	3	5	10	10	25	30	0	0	CA7-37-00-✱	266
												1	0	CA7-37-10-✱	288
												0	1	CA7-37-01-✱	288
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	0	CA7-43-00-✱	286
												1	0	CA7-43-10-✱	308
												0	1	CA7-43-01-✱	308
60	100	18.5	37	37	32	5	10	15	20	40	50	0	0	CA7-60-00-✱	350
												1	0	CA7-60-10-✱	372
												0	1	CA7-60-01-✱	372
72	100	22	40	45	40	5	15	20	25	50	60	0	0	CA7-72-00-✱	403
												1	0	CA7-72-10-✱	425
												0	1	CA7-72-01-✱	425
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	0	CA7-85-00-✱	460
												1	0	CA7-85-10-✱	482
												0	1	CA7-85-01-✱	482

CA7-9-10-120 contactor

CA7-43-00-120 contactor

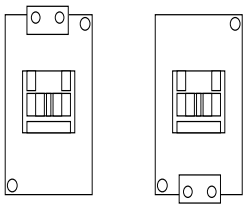
CA7-85-00-120 contactor

Coil Codes ❷

A.C. Coil Code	Voltage Range	
	50 Hz	60 Hz
24Z	24V	24V
120	110V	120V
208	~	208V
220W	~	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 Code table on this page for codes.**

❶ 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.

❷ Other voltages available, see page A37. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

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

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Contact Configuration, Main Pole		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	4 3 2	0 1 2	CA7-9-M40-∗ CA7-9-M31-∗ CA7-9-M22-∗	120 132 132
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	4 3 2	0 1 2	CA7-12-M40-∗ CA7-12-M31-∗ CA7-12-M22-∗	157 167 167
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	4 3 2	0 1 2	CA7-16-M40-∗ CA7-16-M31-∗ CA7-16-M22-∗	176 186 186
23	32	7.5	11	13	11	2	3	5	7-1/2	15	15	4 3 2	0 1 2	CA7-23-M40-∗ CA7-23-M31-∗ CA7-23-M22-∗	194 206 206
37	75	11	18.5	20	18.5	3	5	10	10	25	30	4	0	CA7-40-M40-∗	385
37	75	11	18.5/20	18.5	7.5	3	5	10	10	25	15	2	2	CA7-40-M22-∗	385
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	CA7-90-M40-∗	657
85	130	25	45	55	18.5	7-1/2	15	25	30	50	20	2	2	CA7-90-M22-∗	657

CA7-23-M22-120 contactor

Coil Codes ❶

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

Ordering Instructions

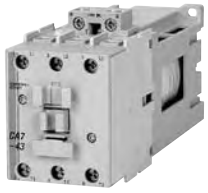
Specify Catalog Number	
Replace (∗) with Coil Code	**See Coil Code table on this page for codes.**

❶ Other voltages available, see page A37. *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) ❶❹

I_e [A] ❶		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	CA7-9C-10-✱ CA7-9C-01-✱	155
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-✱	200
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-✱	225
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-✱	250
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-✱	290 312 312
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-✱	350 372 372
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-✱	410 432 432

CA7-9C contactor (typical)



CA7-43C-00-120 contactor

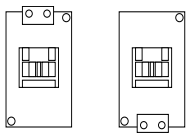
Description:
True DC coils have very low inrush which allows the use of smaller power supplies. See page A48 for more information. DC and AC coils are not interchangeable. CA7-9C…43C contactors have increased dimensions to accommodate true DC coils.

Coil Codes ❷

D.C Coil Codes	Voltage
12D	12V
24D ❸	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 Code table on this page for codes.**

❶ 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.

❷ Other voltages available, see page A38. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

❸ 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: CA7-9**C**-10-24DD becomes CA7-9**D**-10-24DD. Check with customer service representative to determine stock availability.

❹ See pages A29-A30 for limitations on adding auxiliaries to true DC contacts.

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

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Contact Configuration, Main Pole		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	4	0	CA7-9C-M40-✱	156
												3	1	CA7-9C-M31-✱	168
												2	2	CA7-9C-M22-✱	168
12	32	1	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	4	0	CA7-12C-M40-✱	198
												3	1	CA7-12C-M31-✱	210
												2	2	CA7-12C-M22-✱	210
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	4	0	CA7-16C-M40-✱	222
												3	1	CA7-16C-M31-✱	235
												2	2	CA7-16C-M22-✱	235
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	4	0	CA7-23C-M40-✱	248
												3	1	CA7-23C-M31-✱	260
												2	2	CA7-23C-M22-✱	260
37	75	11	18.5	20	18.5	3	5	10	10	25	30	4	0	CA7-40C-M40-✱	475
37	75	11	18.5/20	18.5	7.5	3	5	10	10	25	15	2	2	CA7-40C-M22-✱	485

CA7-9C contactor (typical)

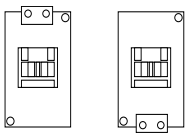
Description:
True DC coils have very low inrush which allows the use of smaller power supplies. See page A48 for more information. DC and AC coils are not interchangeable. CA7-9C…40C contactors have increased dimensions to accommodate true DC coils.

Coil Codes ❶

D.C Coil Codes	Voltage
12D	12V
24D ❷	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 Code table on this page for codes.**

❶ Other voltages available, see page A38. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

❷ 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: CA7-9**C**-M40-24DD becomes CA7-9**D**-M40-24DD.

Non-Reversing, Three Pole Contactors With Electronic 24VDC Coil, Series CA7 (Open type only) ❶❷❸

I_e [A] ❶		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	CA7-9E-10-24E CA7-9E-01-24E	197
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1 0	0 1	CA7-12E-10-24E CA7-12E-01-24E	242
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1 0	0 1	CA7-16E-10-24E CA7-16E-01-24E	267
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1 0	0 1	CA7-23E-10-24E CA7-23E-01-24E	292
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0 1 0	0 0 1	CA7-30E-00-24E CA7-30E-10-24E CA7-30E-01-24E	332 354 354
37	65	11	18.5/ 20	20	18.5	3	5	10	10	25	30	0 1 0	0 0 1	CA7-37E-00-24E CA7-37E-10-24E CA7-37E-01-24E	392 414 414
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0 1 0	0 0 1	CA7-43E-00-24E CA7-43E-10-24E CA7-43E-01-24E	455 475 475

CA7-23E-10-24E contactor

CA7-37E-00-24E contactor

Description

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E…37E has internal surge suppression. See page A48 for more information.
This new design results in:

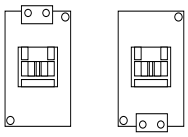
- Lighter, lower depth
- More energy efficient contactors
- Easier wiring
- Uniform panel appearance.

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 1.5 W/60 mA 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 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.

❶ 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.
❷ DC and AC coils are not interchangeable. CA7-9E…43E are only available in 24VDC.
❸ See pages A29-A30 for limitations on adding auxiliaries to Electronic DC Coil contacts.

Non-Reversing, Four Pole Contactors With Electronic 24VDC Coil, Series CA7 (Open type only) ❶❷

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Contact Configuration, Main Pole		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	4 3 2	0 1 2	CA7-9E-M40-24E CA7-9E-M31-24E CA7-9E-M22-24E	198 210 210
12	32	1	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	4 3 2	0 1 2	CA7-12E-M40-24E CA7-12E-M31-24E CA7-12E-M22-24E	240 252 252
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	4 3 2	0 1 2	CA7-16E-M40-24E CA7-16E-M31-24E CA7-16E-M22-24E	264 277 277
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	4 3 2	0 1 2	CA7-23E-M40-24E CA7-23E-M31-24E CA7-23E-M22-24E	290 302 302
37	75	11	18.5	20	18.5	3	5	10	10	25	30	4	0	CA7-40E-M40-24E	520
37	75	11	18.5/20	18.5	7.5	3	5	10	10	25	15	2	2	CA7-40E-M22-24E	535

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…37E has internal surge suppression. See page A48 for more information.

This new design results in:

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

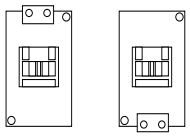
Applications

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 1.5 W/60 mA 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 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.

❶ DC and AC coils are not interchangeable. CA7-9E…43E are only available in 24VDC.

❷ See pages A29-A30 for limitations on adding auxiliaries to Electronic DC Coil contacts.

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

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor ❶❷❸		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
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	**CA7-9Y-D11-✱**	211
												0	2	CA7-9Y-D02-✱	
												2	0	CA7-9Y-D20-✱	
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	**CA7-12Y-D11-✱**	254
												0	2	CA7-12Y-D02-✱	
												2	0	CA7-12Y-D20-✱	
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	**CA7-16Y-D11-✱**	278
												0	2	CA7-16Y-D02-✱	
												2	0	CA7-16Y-D20-✱	
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	**CA7-23Y-D11-✱**	305
												0	2	CA7-23Y-D02-✱	
												2	0	CA7-23Y-D20-✱	
30	65	10	15	15	15	2	5	7-1/2	10	20	25	1	0	**CA7-30Y-E10-✱**	345
												0	1	**CA7-30Y-E01-✱**	
37	65	11	18.5/ 20	20	18.5	3	5	10	10	25	30	1	0	**CA7-37Y-E10-✱**	404
												0	1	CA7-37Y-E01-✱	
43	85	13	22	25	22	3	7-1/2	10	15	30	30	1	0	**CA7-43Y-E10-✱**	461
												0	1	CA7-43Y-E01-✱	
60	100	18.5	32	37	32	5	10	15	20	40	50	0	0	**CA7-60D-00-✱**	475
												1	0	**CA7-60D-10-✱**	497
												0	1	**CA7-60D-01-✱**	497
72	100	22	40	45	40	5	15	20	25	50	60	0	0	**CA7-72D-00-✱**	530
												1	0	**CA7-72D-10-✱**	552
												0	1	**CA7-72D-01-✱**	552
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	0	**CA7-85D-00-✱**	590
												1	0	**CA7-85D-10-✱**	612
												0	1	**CA7-85D-01-✱**	612

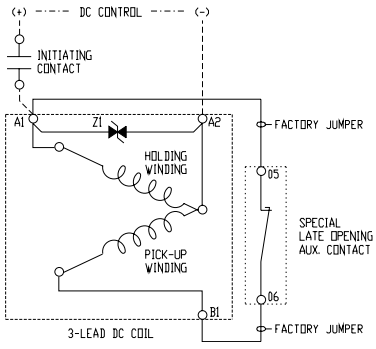
NOTE: Items in gray are special order.

CA7-16Y contactor (typical)

Description:
Contactors with two winding DC coils have very low hold-in values and share the same dimensions with AC contactors. See page A48 for more information. See page A58 for dimensional information.

Coil Codes ❹❺❻

D.C. Coil Code	Voltage
24DD	24V
110DD	110V



CA7-9Y…43Y Contactors with Two Winding, 3-lead Coils

1) The two winding, 3-lead DC coil consists of a "pick-up" winding and a "hold-in" winding.
2) The contactor pulls-in through the lower resistance pick-up winding and holds-in through a higher resistance holding winding.
3) The pick-up winding is not designed for continuous operation and must be disconnected by the special late opening auxiliary contact immediately after the contactor pulls-in and seals.
4) Z1 is a built-in bi-directional diode (surge suppressor) for voltages up to 220V, which is located below the coil terminal cover at A1 & A2. For coil voltages 230/250V, an externally mounted CRD7-250 must be used for surge suppression.

❶ CA7-9Y…23Y-D11(D20) contactors are supplied with one NO auxiliary in the base. CA7-9Y…23Y-D02 contactors are supplied with one NC auxiliary in the base.
❷ All CA7-9Y…43Y contactors are supplied with an extra right side mounted block, that includes one auxiliary available for customer use, in addition to a 50ms late opening auxiliary contact for transition from pick-up winding to hold-in winding.
❸ CA7-60D…CA7-85D have an internal auxiliary contact to transition from the start winding to the run winding.
❹ Coils include an integrated diode surge suppressor.
❺ Other coil voltages are available, see page A38. Contact your Sprecher + Schuh Sales Representative to determine which coil voltages may be stocked. *Non-standard coil voltages (non-stock) must be ordered and installed separately as renewal parts.*
❻ 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.

Ordering Instruct ions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

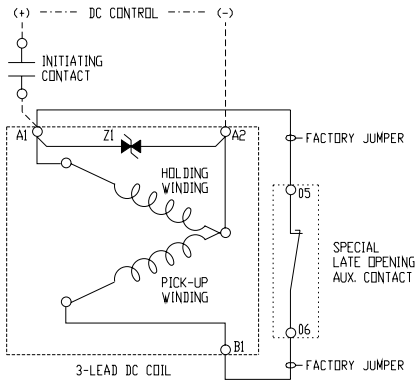
SSCDN850OE

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

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Contact Configuration Main Pole		Auxiliary Contacts Per Contactor ❶		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)											
						1 Ø		3 Ø									
AC-3	AC-1	230V	415V 400V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	NO	NC	Catalog Number	Price
9	32	3	4	4	4	1/2	1-1/2	2	2	5	7-1/2	4	0	1	0	**CA7-9Y-M40-D10-✱**	**211**
												4	0	0	1	CA7-9Y-M40-D01-✱	211
												3	1	1	0	**CA7-9Y-M31-D10-✱**	**224**
												3	1	0	1	CA7-9Y-M31-D01-✱	224
												2	2	1	0	**CA7-9Y-M22-D10-✱**	**224**
												2	2	0	1	CA7-9Y-M22-D01-✱	224
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	4	0	1	0	**CA7-12Y-M40-D10-✱**	**255**
												4	0	0	1	CA7-12Y-M40-D01-✱	255
												3	1	1	0	**CA7-12Y-M31-D10-✱**	**268**
												3	1	0	1	CA7-12Y-M31-D01-✱	268
												2	2	1	0	**CA7-12Y-M22-D10-✱**	**268**
												2	2	0	1	CA7-12Y-M22-D01-✱	268
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	4	0	1	0	**CA7-16Y-M40-D10-✱**	**278**
												4	0	0	1	CA7-16Y-M40-D01-✱	278
												3	1	1	0	**CA7-16Y-M31-D10-✱**	**291**
												3	1	0	1	CA7-16Y-M31-D01-✱	291
												2	2	1	0	**CA7-16Y-M22-D10-✱**	**291**
												2	2	0	1	CA7-16Y-M22-D01-✱	291
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	4	0	1	0	**CA7-23Y-M40-D10-✱**	**305**
												4	0	0	1	CA7-23Y-M40-D01-✱	305
												3	1	1	0	**CA7-23Y-M31-D10-✱**	**317**
												3	1	0	1	CA7-23Y-M31-D01-✱	317
												2	2	1	0	**CA7-23Y-M22-D10-✱**	**317**
												2	2	0	1	CA7-23Y-M22-D01-✱	317
85	130	25	45	55	45	7-1/2	15	25	30	60	50	4	0	0	0	**CA7-90D-M40-✱**	**781**
85	130	25	45	55	18.5	7-1/2	15	25	30	60	20	2	2	0	0	**CA7-90D-M22-✱**	**781**

Description: See opposite page.

NOTE: Items in gray are special order.



CA7-9Y…23Y Contactors with Two Winding, 3-lead Coils

1) The two winding, 3-lead DC coil consists of a "pick-up" winding and a "hold-in" winding.
2) The contactor pulls-in through the lower resistance pick-up winding and holds-in through a higher resistance holding winding.
3) The pick-up winding is not designed for continuous operation and must be disconnected by the special late opening auxiliary contact immediately after the contactor pulls-in and seals.
4) Z1 is a built-in bi-directional diode (surge suppressor) for voltages up to 220V, which is located below the coil terminal cover at A1 & A2. For coil voltages 230/250V, an externally mounted CRD7-250 must be used for surge suppression.

Coil Codes ❸❹

D.C. Coil Code	Voltage
24DD	24V
110DD	110V

❶ All CA7-9Y…23Y contactors are supplied with an extra right side mounted block, that includes one auxiliary available for customer use, in addition to a 50ms late opening auxiliary contact for transition from pick-up winding to hold-in winding.

❷ CA7-90D...contactors have an internal auxiliary contact to transition from the start winding to the run winding.

❸ Coils include an integrated diode surge suppressor.

❹ Other coil voltages are available, see page A38. Contact your Sprecher + Schuh Sales Representative to determine which voltage may be stocked. *Non-standard coil voltages (non-stocked) must be ordered and installed separately as renewal parts.*

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

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

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
AC-3	AC-1	230V	400V 415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC ❸	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-✱	338
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	CAU7-12-22-✱	409
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	CAU7-16-22-✱	451
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	CAU7-23-22-✱	491
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	1	CAU7-30-02-✱	553
												1 ❹	1	CAU7-30-22-✱	597
37	65	11	18.5/ 20	20	8.5	3	5	10	10	25	30	0	1	CAU7-37-02-✱	640
												1 ❹	1	CAU7-37-22-✱	684
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	1	CAU7-43-02-✱	710
												1 ❹	1	CAU7-43-22-✱	754
60	100	18.5	32	37	32	5	10	15	20	40	50	0	1	CAU7-60-02-✱	895
												1 ❹	1	CAU7-60-22-✱	939
72	100	22	40	45	40	5	15	20	25	50	60	0	1	CAU7-72-02-✱	1010
												1 ❹	1	CAU7-72-22-✱	1054
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	CAU7-85-02-✱	1125
												1 ❹	1	CAU7-85-22-✱	1169

CAU7-9-22-120 reversing contactor

CAU7-43-22-120 reversing contactor

Includes:

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

Coil Codes ❺

A.C. Coil Code	Voltage Range	
	50 Hz	60 Hz
24Z	24V	24V
120	110V	120V
208	~	208V
220W	~	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 Code table on this page for codes.**

❶ For Reversing Contactors *without* power wiring add suffix "**-LW**" to catalog number and deduct the following amount:

CAU7-9…23 deduct $10
CAU7-30…37 deduct $12
CAU7-43 deduct $22

CAU7-60…85 without power wiring not available
Ex: CAU7-9-22-✱ becomes CAU7-9-22-✱**-LW.**

❷ For control wiring, add suffix **-CW** to catalog number and add $20.
Example: CAU7-9-22-✱ becomes CAU7-9-22-✱**-CW.**

❸ The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.

❹ The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.

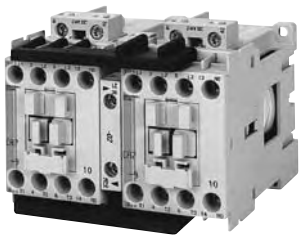
❺ Other voltages available, see page A37. *Nonstandard coil voltages not listed here must be ordered and installed separately as renewal parts.*

SSCDN850OE

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

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
AC-3	AC-1	230V	400V 415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC ❸	Catalog Number	Price
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1	1	CAU7-9C-22-✱	400
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	CAU7-12C-22-✱	495
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	CAU7-16C-22-✱	545
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	CAU7-23C-22-✱	595
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0	1	CAU7-30C-02-✱	692
												1 ❹	1	CAU7-30C-22-✱	736
37	65	11	18.5/ 20	20	8.5	3	5	10	10	25	30	0	1	CAU7-37C-02-✱	890
												1 ❹	1	CAU7-37C-22-✱	934
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0	1	CAU7-43C-02-✱	938
												1 ❹	1	CAU7-43C-22-✱	982
60	100	18.5	32	37	32	5	10	15	20	40	50	0	1	CAU7-60D-02-✱	1115
												1 ❹	1	CAU7-60D-22-✱	1159
72	100	22	40	45	40	5	15	20	25	50	60	0	1	CAU7-72D-02-✱	1240
												1 ❹	1	CAU7-72D-22-✱	1284
85	100	25	45	55	45	7-1/2	15	25	30	60	60	0	1	CAU7-85D-02-✱	1360
												1 ❹	1	CAU7-85D-22-✱	1410

NOTE: DC and AC coils are not interchangeable. CA7-9C…43C contactors have increased dimensions to accommodate true DC coils. CA7-60D…85D contactors have a two winding, 3-lead coil with built-in late break auxiliary contact and coil suppression. Refer to page A64-A65 for dimensions.



CAU7-9C-22 reversing contactor

CAU7-43C-02 reversing contactor

Includes:

- DC operating mechanism
- Line side coil terminations
- Mechanical and electrical Interlock ❸
- Reversing power wiring ❶ (using Power Wiring Kit Cat.# CAUT7-PW…)
- Control wiring available; see footnote ❷

Coil Codes ❺❻

CAU7-9C...43C	CAU7-60D...85D	
D.C. Coil Code	D.C. Coil Code	Voltage
12D	12DD	12V
24D ❼	24DD	24V
48D	48DD	48V
110D	110DD	110V
220D	220DD	220V

❶ For Reversing Contactors *without* power wiring add suffix "**-LW**" to catalog number and deduct the following amount:
CAU7-9C…23C deduct $10
CAU7-30C…37C deduct $12
CAU7-43C deduct $22
CAU7-60D…85D without power wiring not available
Ex: CAU7-9-22-✱ becomes CAU7-9-22-✱**-LW.**

❷ For control wiring, add suffix **-CW** to catalog number and add $20.
Example: CAU7-9-22-✱ becomes CAU7-9-22-✱**-CW.**

❸ The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.

❹ The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.

❺ Other voltages available, see page A38. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

❻ Coils for CAU7-60D…85D reversing contactors include an integrated diode surge suppressor.

❼ Surge suppressor coil with integrated diode available. Order coil code **24DD** and add $84 to list price ($25 x two contactors). To order, change "C" in catalog number to "D". Ex: CAU7-9**C**-22-24D becomes CAU7-9**D**-22-24DD.

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

SSCDN8500E

Reversing, Three Pole Contactors With Electronic 24VDC Coil, Series CAU7 (Open type only) ❺❻

I_e [A]		Ratings for Switching AC Motors (AC2 / AC3 / AC4)										Auxiliary Contacts per Contactor		Open Type	
		kW (50 Hz)				UL/CSA HP (60 Hz)									
						1 Ø		3 Ø							
AC-3	AC-1	230V	400V 415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC ❸	Catalog Number	Price
9	32	3	4	4	4	1/2	1 1/2	2	2	5	7-1/2	1	1	CAU7-9E-22-24E	484
12	32	4	5.5	5.5	5.5	1/2	2	3	3	7-1/2	10	1	1	CAU7-12E-22-24E	597
16	32	5.5	7.5	7.5	7.5	1	3	5	5	10	15	1	1	CAU7-16E-22-24E	629
23	32	7.5	11	13	10	2	3	5	7-1/2	15	15	1	1	CAU7-23E-22-24E	679
30	65	10	15	15	15	2	5	7-1/2	10	20	25	0 1 ❹	1 1	CAU7-30E-02-24E CAU7-30E-22-24E	780 820
37	65	11	18.5/ 20	20	8.5	3	5	10	10	25	30	0 1 ❹	1 1	CAU7-37E-02-24E CAU7-37E-22-24E	971 1018
43	85	13	22	25	22	3	7-1/2	10	15	30	30	0 1 ❹	1 1	CAU7-43E-02-24E CAU7-43E-22-24E	1050 1090

CAU7-9E-22-24E reversing contactor

CAU7-37E-02-24E reversing contactor

Description

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E…37E has internal surge suppression. See page A48 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 1.5 W/60 mA 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 ❸
- Reversing power wiring ❶ (using Power Wiring Kit Cat.# CAUT7-PW…)
- Control wiring available; see footnote ❷
- CAU7-9E…37E has internal surge suppression.

❶ For Reversing Contactors *without* power wiring add suffix "**-LW**" to catalog number and deduct the following amount:

CAU7-9E…23E deduct $10

CAU7-30E…37E deduct $12

Ex: CAU7-9E-22-24E becomes CAU7-9E-22-24E**-LW.**

❷ For control wiring, add suffix **-CW** to catalog number and add $20.
Example: CAU7-9E-22-24E becomes CAU7-9E-22-24E**-CW.**

❸ The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.

❹ The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.

❺ DC and AC coils are not interchangeable. CA7-9E…43E are only available in 24VDC.

❻ See pages A29-A30 for limitations on adding auxiliaries to Electronic DC Coil contacts.

Series CA7 Special Use Contactors

Contactors designed and labeled for specific industrial applications

Special Use Contactors

Capacitor switching contactors

HVAC rated contactors

NEMA labeled contactors

Lighting contactors

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. Where appropriate, contactors also carry approval by specific industry associations such as ARI (Air Conditioning and Refrigeration Institute).

CAQ7 Capacitor Switching Contactors

Capacitor Switching Contactors are often used in power factor correction. Single capacitor switching and capacitor bank switching results in peak inrush currents greater than the six times FLA experienced in motor starting applications. Managing the peak inrush of capacitor switching can involve the use of coils of wire to reduce the harmful inrush currents. CAQ7 contactors offer a simple alternative solution by combining a built-in set of resistors and early-make contacts, factory wired in parallel with the power contacts in the body of a CA7 contactor. CAQ7 contactors are cUL rated and labeled for capacitor switching applications.

CNX Special Purpose Contactors

CNX Special Purpose Contactors are rated by FLA & LRA as well as resistive current rated - primarily to meet the demands of the HVAC and compressor markets. CNX contactors have all the flexibility of a CA7 contactor like easy coil change out, DIN rail mounting and field installable auxiliaries as well as mechanical interlocks not normally associated with true definite

purpose contactors. CNX contactors may also be combined with CEP7 or CT7 overload relays to make a special purpose starter. CNX starters are cUL rated and labeled as well as ARI (Air Conditioning and Refrigeration Institute) approved.

CAN7 and CAN6 NEMA size labeled contactors

CAN7 & CAN6 contactors are UL Listed in accordance with the requirements of NEMA standards publication ICS-2. Standard CA7, as well as CA6 contactors bear a UL maximum horsepower rating as well as an IEC KW rating on the label. CAN7 and CAN6 contactors are UL labeled for application under IEC KW, as well as NEMA Size, for specified horsepower at various voltages. CAN7 & CAN6 contactors have been purposely selected larger to increase the life of the device. Only the devices listed here are available with the NEMA size on the UL label. CAN7 & CA6 NEMA sized contactors may be combined with all Sprecher + Schuh overload relays to make a NEMA sized starters.

SSCDN8500E

Three Pole Capacitor Switching Contactors With AC Coil, Series CAQ7 (Open type only)

For Applications per UL / CSA

UL/CSA Ratings for Switching Capacitor Banks						Auxiliary Contacts per Contactor		Open Type	
1-phase 60 Hz (kVar)		3-phase 60 Hz (kVar)							
115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number	Price
2.2	4.5	6.5	7.5	15	18.5	1	1	**CAQ7-16-11-✱**	**225**
						2	0	**CAQ7-16-20-✱**	**225**
3.6	7.5	11	12.5	20	25	1	1	**CAQ7-37-11-✱**	**327**
						2	0	**CAQ7-37-20-✱**	**327**

CAQ7-16-11-120
Capacitor Switching contactor

For Applications per IEC 60947-4 (AC-6b)

IEC Ratings for Switching Capacitor Bank										Auxiliary Contacts per Contactor		Open Type	
1-phase 50 Hz - (kVar)					3-phase 50 Hz - (kVar)								
230V 240V	400V	415V	500V	690V	230V 240V	400V	415V	500V	690V	NO	NC	Catalog Number	Price
Switching Capacitor Banks at 40°C													
5	8.5	9	10.5	15	8.5	15	15.5	18.5	25	1	1	**CAQ7-16-11-✱**	**225**
										2	0	**CAQ7-16-20-✱**	**225**
8	14	14.5	17.5	24	14	25	25	30	40	1	1	**CAQ7-37-11-✱**	**327**
										2	0	**CAQ7-37-20-✱**	**327**
Switching Capacitor Banks at 60°C													
5	8.5	9	10.5	15	8.5	15	15.5	18.5	25	1	1	**CAQ7-16-11-✱**	**225**
										2	0	**CAQ7-16-20-✱**	**255**
7	12.5	13	16	22	12.5	21.5	22.5	27	37.5	1	1	**CAQ7-37-11-✱**	**327**
										2	0	**CAQ7-37-20-✱**	**327**

NOTE: DC and AC coils are not interchangeable. CAQ7-16C…37C contactors have increased dimensions to accommodate DC coils.

Description

CAQ7 contactors incorporate a built-in set of resistors and early-make contacts, wired in parallel with the power contacts, to pre-charge the capacitors. This manages the peak inrush common with capacitor switching. The circuitry is housed in a front mounted add-on deck.

Coil Codes ❶

A.C. Coil Code	Voltage Range	
	50 Hz	60 Hz
24Z	24V	24V
120	110V	120V
208	~	208V
220W	~	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 Code table on this page for codes.**

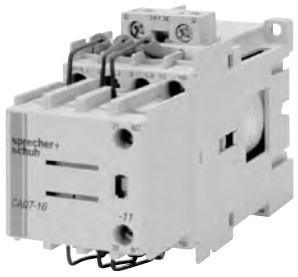
❶ Other voltages available, see page A37. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

SSCDN850OE

Three Pole Capacitor Switching Contactors With DC Coil, Series CAQ7 (Open type only)

For Applications per UL / CSA

UL/CSA Ratings for Switching Capacitor Banks						Auxiliary Contacts per Contactor		Open Type	
1-phase 60 Hz (kVar)		3-phase 60 Hz (kVar)							
115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number	Price
2.2	4.5	6.5	7.5	15	18.5	1	1	**CAQ7-16C-11-✱**	**264**
						2	0	**CAQ7-16C-20-✱**	**264**
3.6	7.5	11	12.5	20	25	1	1	**CAQ7-37C-11-✱**	**400**
						2	0	**CAQ7-37C-20-✱**	**400**



CAQ7-16C-11-24D
Capacitor Switching contactor

For Applications per IEC 60947-4 (AC-6b)

IEC Ratings for Switching Capacitor Bank										Auxiliary Contacts per Contactor		Open Type	
1-phase 50 Hz - (kVar)					3-phase 50 Hz - (kVar)								
230V 240V	400V	415V	500V	690V	230V 240V	400V	415V	500V	690V	NO	NC	Catalog Number	Price
Switching Capacitor Banks at 40°C													
5	8.5	9	10.5	15	8.5	15	15.5	18.5	25	1	1	**CAQ7-16C-11-✱**	**264**
										2	0	**CAQ7-16C-20-✱**	**264**
8	14	14.5	17.5	24	14	25	25	30	40	1	1	**CAQ7-37C-11-✱**	**400**
										2	0	**CAQ7-37C-20-✱**	**400**
Switching Capacitor Banks at 60°C													
5	8.5	9	10.5	15	8.5	15	15.5	18.5	25	1	1	**CAQ7-16C-11-✱**	**264**
										2	0	**CAQ7-16C-20-✱**	**264**
7	12.5	13	16	22	12.5	21.5	22.5	27	37.5	1	1	**CAQ7-37C-11-✱**	**400**
										2	0	**CAQ7-37C-20-✱**	**400**

Description

CAQ7 contactors incorporate a built-in set of resistors and early-make contacts, wired in parallel with the power contacts, to pre-charge the capacitors. This manages the peak inrush common with capacitor switching. The circuitry is housed in a front mounted add-on deck.

NOTE: DC and AC coils are not interchangeable. CAQ7-16C…37C contactors have increased dimensions to accommodate DC coils.

Coil Codes ❶

D.C. Coil Code	Voltage
12D	12V
24D ❷	24V
48D	48V
110D	110V
220D	220V

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

❶ Other voltages available, see page A38. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

❷ Surge suppressor coil with integrated available. Order coil code **24DD** and add $42 to list price.

Theory of Operation

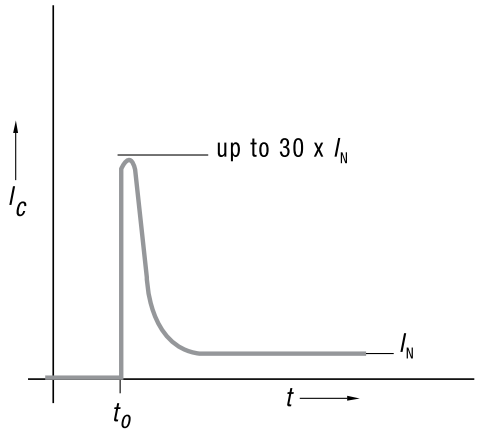
Single capacitor switching is often used in power factor correction on individual loads. Inrush current at the point of becoming energized can peak to 30 times normal current (see Figure 1) depending on impedance of cables and transformers.

Capacitor bank switching is often used in power factor correction on multiple loads. Inrush current at the point of becoming energized can peak to 200 times normal current (see Figure 2) because each capacitor in the bank acts as an additional power source and therefore feeds additional current to the circuit.

Complications of capacitor switching with standard contactors can include nuisance tripping of the short circuit protective device, welding of main contacts, and stress on components resulting in reduced life of capacitors.

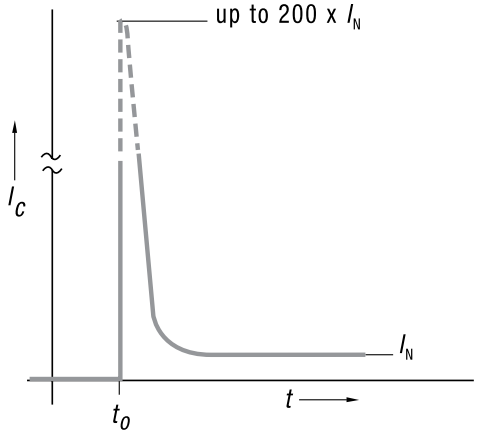
Managing the peak inrush common with capacitor switching can involve complicated dimensioning in the form of over sizing standard contactors combined with adding coils of wire. CAQ7 contactors offer a simple alternative solution by combining a built-in set of resistors and early-make contacts, wired in parallel with the power contacts, to pre-charge the capacitors. The increased impedance of the CAQ7 resistors is only present in the circuit during inrush. This circuitry is housed in a front mount add-on deck similar to a four pole auxiliary block, which results in a compact design and ease of selection based on applied KVAR.

CAQ7 is available with AC or DC coils and with 1 NO & 1 NC (see Figure 3) or 2 NO auxiliary contacts (see Figure 4). CAQ7 contactors only show UL/CSA Approved capacitor ratings on the nameplate and should not be used for switching motors.



Single Capacitor Inrush

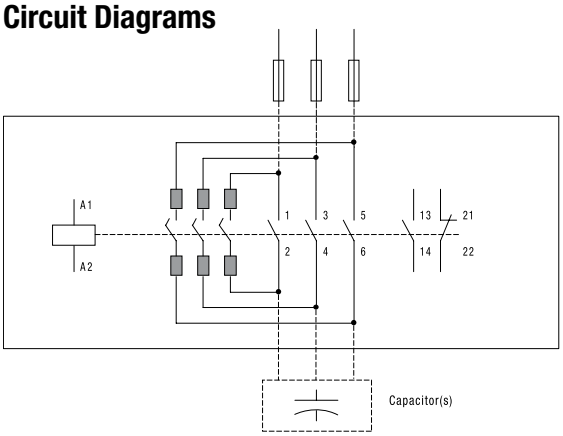
Figure 1



Capacitor Bank Inrush

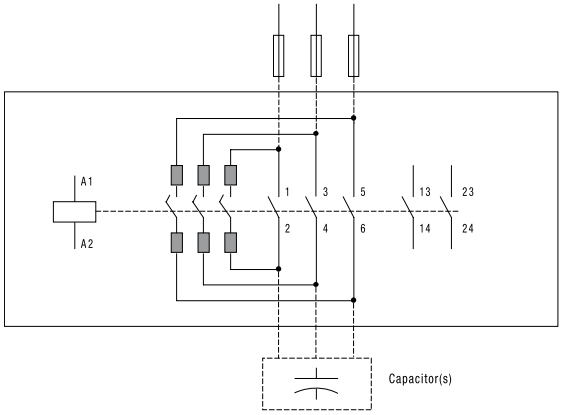
Figure 2

Circuit Diagrams



CAQ7-16-✱-11 and CAQ7-37-✱-11
(1 NO and 1 NC auxiliary contact)

Figure 3



CAQ7-16-✱-20 and CAQ7-37-✱-20
(2 NO auxiliary contacts)

Figure 4

SSCDN850OE

Non-Reversing, Three Pole Special Purpose Contactors With AC Coil (Open type only) ❶❷

Full Load Amps	Locked Rotor Amps - 3Ø			Resistive Amps ❹	Maximum Horsepower						Auxiliary Contacts per Contactor		Catalog Number	Price
					1 Ø		3 Ø							
	200V 230V	460V	575V		115V	230V	200V/ 208V	230V	460V	575V	NO	NC		
15	91	91	66	25	1-1/2	3	4	5	10	10	1	0	CNX-205-✱	174
											0	1	CNX-206-✱	174
30	180	150	120	40	2	5	7-1/2	10	20	20	1	0	CNX-207-✱	240
											0	1	CNX-208-✱	240
40	240	200	160	50	3	5	10	10	25	25	0	0	CNX-209-00-✱	261
											1	1	CNX-209-10-✱	281
											0	1	CNX-209-01-✱	281
50	300	250	200	65	3	7-1/2	10	15	30	30	0	0	CNX-212-00-✱	281
											1	0	CNX-212-10-✱	302
											0	1	CNX-212-01-✱	302
90	540	450	360	120	~	~	25	30	60	60	0	0	CNX-218-00-✱	452
											1	0	CNX-218-10-✱	472
											0	1	CNX-218-01-✱	472

CNX-208-120
Special Purpose contactor

Description

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

Coil Codes ❸

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

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

❶ Special order contactors. Contact your Sprecher + Schuh representative for availability.
❷ All CNX contactors listed here are ARI (Air Conditioning and Refrigeration Institute) approved.
❸ Other voltages available, see page A37. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
❹ Reference page A56 for Operation Life Data.

Non-Reversing, Three Pole Special Purpose Contactors With DC Coil (Open type only) ❶❷

Full Load Amps	Locked Rotor Amps - 3Ø			Resistive Amps ❹	Maximum Horsepower						Auxiliary Contacts per Contactor		Catalog Number	Price
					1 Ø		3 Ø							
	200V 230V	460V	575V		115V	230V	200V/ 208V	230V	460V	575V	NO	NC		
15	91	91	66	25	1-1/2	3	4	5	10	10	1	0	CNX-205C-✱	209
											0	1	CNX-206C-✱	209
30	180	150	120	40	2	5	7-1/2	10	20	20	1	0	CNX-207C-✱	288
											0	1	CNX-208C-✱	288
40	240	200	160	50	3	5	10	10	25	25	0	0	CNX-209C-00-✱	323
											1	1	CNX-209C-10-✱	343
											0	1	CNX-209C-01-✱	343
50	300	250	200	65	3	7-1/2	10	15	30	30	0	0	CNX-212C-00-✱	397
											1	0	CNX-212C-10-✱	417
											0	1	CNX-212C-01-✱	417
90	540	450	360	120	~	~	25	30	60	60	0	0	CNX-218D-00-✱	575
											1	0	CNX-218D-10-✱	595
											0	1	CNX-218D-01-✱	595

CNX-208C-24D
Special Purpose contactor

Description

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

Coil Codes ❸

CNX-205C...212C	CNX-218D	
D.C. Coil Code	D.C. Coil Code	Voltage
24D ❺	24DD ❻	24V
110D ❺	110DD ❻	110V

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	See Coil Code table on this page for codes.

❶ Special order contactors. Contact your Sprecher + Schuh representative for availability.
❷ All CNX contactors listed here are ARI (Air Conditioning and Refrigeration Institute) approved.
❸ Other voltages available, see page A38. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
❹ Reference page A56 for Operation Life Data.
❺ DC coils for CNX-205C...212C are True DC Coils.
❻ DC coils for CNX-218D contactors are two winding DC Coil Series and include integrated diode surge suppressor.

SSCDN850OE

Non-Reversing, Three Pole NEMA Labeled Contactors with AC Coil ❶❸

NEMA Size	Maximum Horsepower						Standard Auxiliary Contacts		Catalog Number	Price
	1Ø		3Ø							
	115V	230V	200V	230V	460V	575V	NO	NC		
00	1/3	1	1-1/2	1-1/2	2	2	1	0	CAN7-12-10-✱	155
0	1	2	3	3	5	5	1	0	CAN7-30-10-✱	265
1	2	3	7-1/2	7-1/2	10	10	1	0	CAN7-37-10-✱	288
2	3	7-1/2	10	15	25	25	1	0	CAN7-72-10-✱	425
3	7-1/2	15	25	30	50	50	1	1	CAN6-110-11-✱	750
									CAN6-110-EI-11-✱	880
4	~	~	40	50	100	100	1	1	CAN6-180-11-✱	1608
									CAN6-180-EI-11-✱	1850
5	~	~	75	100	200	200	1	1	CAN6-300-EI-11-✱	2375

CAN7 NEMA labeled contactor (AC)

Application Notes

- NEMA contactors are UL Listed and rated in accordance with the requirements of NEMA standards publication ICS-2. These contactors are labeled for applications that require compliance with NEMA standards.
- Sizes are based on standard NEMA classifications.
- Easy coil change and contact replacement. See page A37 for CAN7 coils and pages A81-82 for CA(N)6 coils and contacts.
- Snap-on auxiliary contact blocks available in many configurations. See pages A29-30 (CA[N]7) and page A79 (CA[N]6).
- Available as open units or in NEMA 1, 3R, 4, 4X and 12 enclosures. Contact your Sprecher + Schuh representative for enclosed pricing. NEMA sized starters with AC Coils are listed on page C33.

Note: CA6 open-type contactors include terminal bolts. If lugs are required, see page A76 for ordering information.

CAN7 AC Coil Codes ❷

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

CAN6 AC Coil Codes Conventional Coils ❷

CAN6-110...180		
AC Coil Code	Voltage Range	
	50 Hz	60 Hz
24	~	24V
120B	110V	120V
208	~	208V
240B	220-230V	260V
277	240V	277V
380	380V-400V	440V
480	415V	480V
575	500V	575V

CAN6 AC Coil Codes "EI" Electronic Coils ❷❸

CAN6-110-EI...300-EI	
AC Coil Code	Voltage Range
	50 Hz / 60 Hz
24 ❹	24V
120	110-130V
220W	208-277V
460W	380-500V

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

❶ Refer to page A64 for CAN7 dimensional information and page A102 for CA(N)6 dimensions.

❷ Other voltages available, see page A37 for CAN7 and pages A81-82 for CA(N)6. *Nonstandard coil voltages not listed here must be ordered and installed separately as renewal parts.*

❸ "-EI" designates contactor with Electronic Interface coil.

❹ 24 V AC coil not available for CAN6-300-EI.

Non-Reversing, Three Pole NEMA Labeled Contactors with DC Coil ❶❸

NEMA Size	Maximum Horsepower						Standard Auxiliary Contacts		Catalog Number	Price
	1Ø		3Ø							
	115V	230V	200V	230V	460V	575V	NO	NC		
00	1/3	1	1-1/2	1-1/2	2	2	1	0	CAN7-12C-10-✱	200
0	1	2	3	3	5	5	1	0	CAN7-30C-10-✱	312
1	2	3	7-1/2	7-1/2	10	10	1	0	CAN7-37C-10-✱	372
2	3	7-1/2	10	15	25	25	1	0	CAN7-72D-10-✱	552
3	7-1/2	15	25	30	50	50	2	1	CAN6-110-L22-✱	880
									CAN6-110-EI-11-✱ ❺	1005
4	~	~	40	50	100	100	1	1	CAN6-180-EI-11-✱	2290
5	~	~	75	100	200	200	1	1	CAN6-300-EI-11-✱	2950

CAN7 NEMA labeled contactor (AC)

Application Notes

- NEMA contactors are UL Listed and rated in accordance with the requirements of NEMA standards publication ICS-2. These contactors are labeled for applications that require compliance with NEMA standards.
- Sizes are based on standard NEMA classifications.
- Easy coil change and contact replacement. See page A38 for CA(N)7 coils and pages A81-82 for CA(N)6 coils and contacts.
- Snap-on auxiliary contact blocks available in many configurations. See pages A29-30 (CAN7) and page A79 (CA[N]6).
- Available as open units or in NEMA 1, 3R, 4, 4X and 12 enclosures. Contact your Sprecher + Schuh representative for enclosed pricing.

Note: CA6 open-type contactors include terminal bolts. If lugs are required, see page A76 for ordering information.

CAN7 D.C. Coil Codes ❷❹

CAN7-12C...37C	CAN7-72D	Voltage
DC Coil Code	DC Coil Code	
24D	24DD	24V
110D	110DD	110V

CAN6 D.C. Coil Codes Conventional Coils ❷

CAN6-110 + 180	
DC Coil Code	Voltage
24D	24V
110D	110V

CAN6 D.C. Coil Codes "EI" Electronic Coils ❷❻

CAN6-110-EI...300-EI	
DC Coil Code	Voltage Range
24D	24V
120D	110 - 130V

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

❶ Refer to page A64 for CAN7 dimensional information and page A102 for CA(N)6 dimensions.
❷ Other voltages available, see page A38 for CAN7 and pages A81-A82 for CA(N)6. *Nonstandard coil voltages not listed here must be ordered and installed separately as renewal parts.*
❸ "-EI" designates contactor with Electronic Interface coil.
❹ Coils for CAN7-72D contactor includes a built-in diode surge suppressor.
❺ CAN6-110 includes two winding coil and an L11 block including one NC late break auxiliary contact mounted to the right side. See page A94 for functional schematic. See page C73 for a starter wiring diagram.
❻ Refer to page A93-A95 for CA6-EI Application Notes for 24 volt DC Electronic Coils.

SSCDN8500E

Series CAL7 Lighting Contactors

Compact contactors for North American lighting applications

Sprecher + Schuh CA7 and CA6 contactors 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.

Lamps can basically be divided into three categories:

Tungsten Filament Lamps
- General purpose incandescent
- Special purpose incandescent
- Infrared
- Sodium Iodine

Discharge Lamps (with Ballast)
- Fluorescent lamps
- Mercury vapor
- High/low pressure sodium
- Quartz
- Halogen metal-vapor

Mixed Light Lamps

In application…

The tungsten filaments of incandescent lamps have a very low ohmic resistance when cold. As a result, the closing current is very high but also very short.

The closing current of discharge lamps (lighting with ballast) is highly inductive (due to series-connected transformers or chokes), and its duration depends on the lamp type.

In general, North Americans refer to Lighting Contactor ratings in amperes without distinction between incandescent or ballast type of load. The lighting contactor selection table provided on the following page is for North American use, so ratings are selected for mixed lamp loads which account for the higher incandescent inrush.

Europeans usually separate the values for incandescent from discharge (ballast) lighting. Both values are provided in the technical section of our general catalog and may be more appropriate for those applying by CE standards.

Electrically held contactors

Electrically held contactors are available for use where the control signal is activated by a timer or other maintained electrical signal. The coil is energized as long as the contactor is closed. This design is well suited for applications where lights are operated frequently or where the control panel is in a remote location.

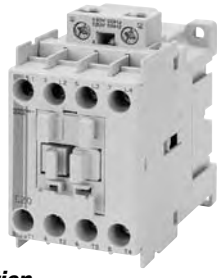
Mechanically held contactors

Mechanically held contactors are available for applications where quiet operation or critical lighting is required, i.e., institutions, hospitals and residential/commercial areas. After the contactor closes, the voltage is disconnected from the operating coil and the contactor is held closed by the mechanical latch. Built-in clearing interlocks allow control from either a momentary or maintained pilot device for the separate “pull-in” and “release” functions.

Lighting Contactors with AC Coil

Continuous Ampere Rating ❹	Number of Poles	Standard Auxiliary Contacts		Electrically Held		Mechanically Held ❶	
		NO	NC	Open Type Catalog Number	Price	Open Type Catalog Number	Price
20	4	0	0	**CAL7-20-M40-✱**	**195**	**CAVL7-20-M40-✱-L10**	**379**
30	4	0	0	**CAL7-30-M40-✱**	**288**	**CAVL7-30-M40-✱-L10**	**427**
60	4	0	0	**CAL7-60-M40-✱**	**489**	**CAVL7-60-M40-✱-L10**	
100	3	1	1	**CA6-95-11-✱**	**600**	~	~
150	3	1	1	**CA6-180-11-✱**	**1608**	~	~
200	3	1	1	**CA6-210-E1-11-✱**	**1917**	~	~

Larger sizes available. Contact your Sprecher + Schuh representative.



Description

The CAL7 electrically held contactors and CAVL7 mechanical held contactors are cUL rated and labeled for tungsten and ballast lighting duty applications at 20, 30, and 60 amperes respectively.

The CA6 contactors shown are selections based on available technical data. These CA6 units do not bear a cUL rating for use as a lighting contactor.

CA(L)7 Coil Codes ❷

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

CA6 Coil Codes ❷

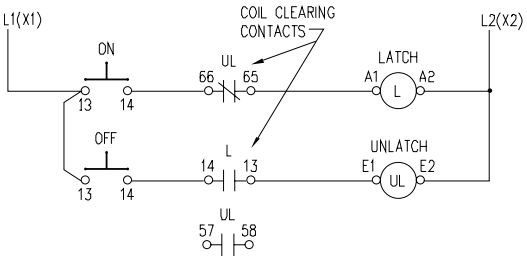
CA6-95 / 180		
AC Coil Code	Voltage Range	
	50 Hz	60 Hz
24	~	24V
120B	110V	120V
208	~	208V
240B	220-230V	260V
277	240V	277V
380	380-400V	440V
480	415V	480V
575	500V	575V

CA6 EI-Coil Codes ❸❷

CA6-210-EI		
AC Coil Code	Voltage Range	
	50 Hz	60 Hz
120	110-130V	110-130V
220W	208-277V	208-277V
380	380-400V	380-400V

Operation of Mechanically Held Contactor with "ON-OFF" Pushbutton

Catalog number "CAVL7" consists of a CAL7 contactor with CV7-11 mechanical latch. Depressing the "ON" button energizes the "L" coil and the contactor closes. The mechanical latch locks the contactor in the closed position. The "L" coil is then de-energized by the coil, clearing contact "UL" (Terminals 65-66) to remove voltage. Depressing the "OFF" button energizes the "UL" coil, and the mechanical latch releases the contactor. The "UL" coil is immediately de-energized by the coil clearing contact "L" (Terminals 13-14) to remove voltage. The contactor is now open.



❶ The N.O. auxiliary is used to mechanical latch the control circuit and is not available for use by customer for other uses.

❷ Other voltages available, see page A37. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*

❸ "-EI" designates contactor with Electronic Interface coil.

❹ Engineering practice permits 2.5 x I_e to be applied to a contactor when 3 poles are connected in parallel for single phase discharge lamp (ballast lighting) applications. Example: A CAL7-20-M40-✱ Lighting Contactor plus a CA7-P-B23 Paralleling Link can be used on a 50A ballast load. Applying parallel conductors to incandescent lamp loads does NOT result in a greater permissible load. Paralleling Links can be found in the Accessories section.

Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	**See Coil Code table on this page for codes.**

SSCDN8500E

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

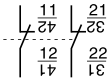
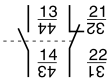
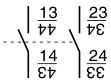
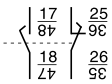
Bifurcated auxiliary contacts provides a higher degree of reliability than the standard cross-stamped auxiliary contacts because it H-bridge divides each movable contact into two sections at the tip of the spanner. Typical application is low-voltage low-current applications (i.e.: PLC). Cross-stamped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

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...85-✱-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...85-✱-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...85-✱-00	**CA7-PV-20**	27	**CA7-PVB-20**	42
1EM	1LB	17 25 / 18 26	CA7-30...85-✱-00	**CA7-PV-L11**	37	***NOT AVAILABLE***	~
1	3	53 61 71 81 / 54 62 72 82	CA7-30...85-✱-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...85-✱-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 33 43 53 / 22 34 44 54	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 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 Detailed ratings can be found on page A53.

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**

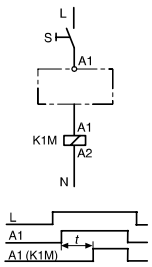
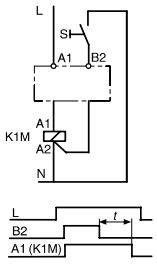
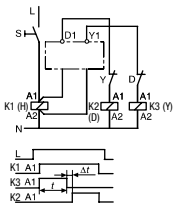
❶ Max. number of auxiliary contacts that may be mounted:
- AC Coil contactors-max. 4 N.O. contacts on the front of the contactor, 2-N.O. contacts on the side, 4-N.C. front or side: 6 total.
- DC Coil contactors-max. 4 N.O. contacts on the front of the contactor, or max. 2-N.O. contacts on side, 4-N.C. 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 A53.

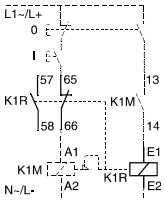
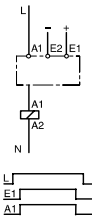
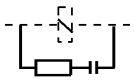
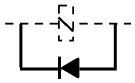
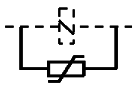
SSCDN850OE

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 CA7-40 and CA7-90 (4-pole) contactors must be bolted down when used with interlocks.

Control Modules *(continued)*

Module	Description	For use with…	Connection Diagrams	Function	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 all (except true DC coils)			**CV7-11-✱** *Replace ✱ with coil code below (See Application Note below)*	**94**
	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 ❹	CA7 all (with AC control)		Input: **24V DC ❶** 12V DC 48V DC Output: 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**	**34**
				**Varistor Module -** AC/DC Control 12…55VAC/ 12…77VDC 56…136VAC/ 78…180VDC 137…277VAC/ 181…350VDC 278…575VAC	**CRV7-55** **CRV7-136** **CRV7-277** **CRV7-575**	**21**

CV7 Mechanical Latch Coil Codes ❷❸❻

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
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 ❺	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 in a DC application, both the Contactor and Latch must still be AC, using the Coil Code Table shown. For example, if needing a latched contactor for 24 V DC, choose coil code 48Z for a CA7 contactor and Latch for 48V AC. This combination will work at 24V DC momentary due to coil clearing contacts.

❶ Control voltage 18…30V DC (10…15mA)
❷ Other voltages available. Contact your Sprecher + Schuh representative.
❸ CV7 must be wired for momentary operation only.
❹ 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.

❺ Use 600V AC when 575 V is required.
❻ Command duration 0.03…10 seconds.

SSCDN8500E

AC Voltage Sag Immunity Modules

Module	Description	Full-Wave Bridge Rectifier		Catalog Number	Price
		Module Input	Module Output		
		Control circuit voltage range	For use with CA7 contactors with DC coil CS7 control relays with DC coil		
	SEMI-F47-Module	24-250 VAC	24-250 VDC ❶	**CA7-SF47**	**109**
	Semi-F47-Module with 1...30s on-delay timer	110-250 VAC	110-250 VDC ❶	**CA7-SF47A30**	**175**

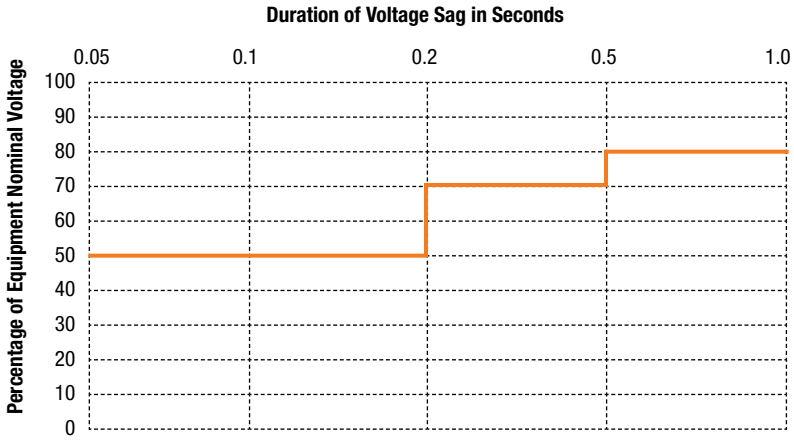
Sprecher + Schuh's CA7-SF47 module meets the Semi-F47 AC voltage sag immunity requirements to 50% voltage sag for 200 ms. Voltage sags can affect the readiness and operation of contactors and starters, resulting in shut downs, lost production, and diminished revenue. It is essential for process equipment to be compatible with its electrical environment. The CA7-SF47 voltage sag immunity module is an essential component to achieve equipment reliability during voltage sag events.

Product Features

- Meets Semi-F47 standard requirements
- For use with CA7 contactors and CS7 control relays with DC coils. A full-wave bridge rectifier internal to the CA7-SF47 module provides AC to DC coil voltage rectification.
- Suitable for contactor range (with screw terminals)
  - CA7-9 ... 85, 3-Pole contactors
  - CA7-9 ... 90, 4-Pole contactors
- Suitable for control relays (with screw terminals)
  - CS7
- Optional 1 to 30 seconds On-Delay timer function.

Benefits

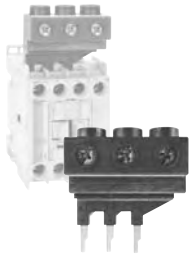
- Direct mounting to the coil terminals of the CA7 contactors and CS7 control relays. Only 24 mm is added to the component height.
- Direct electrical connection to the contactor or control relay. Customer coil power connections are made at the terminals of the CA7-SF47 module
- The CA7-SF47A30 module includes a 1 to 30 seconds adjustable On-Delay timer in addition to the voltage sag immunity functionality. Two independent functions in a single module.



VOLTAGE SAG DURATION				VOLTAGE SAG
Seconds	*Milliseconds*	*Cycles at 60 hz*	*Cycles at 50 hz*	*Percent (%) of Equipment Nominal Voltage*
< 0.05 s	< 50 ms	< 3 cycles	< 2.5 cycles	Not specified
0.05 to 0.2 s	50 to 200 ms	3 to 12 cycles	2.5 to 10 cycles	50%
0.2 to 0.5 s	200 to 500 ms	12 to 30 cycles	10 to 25 cycles	70%
0.5 to 1.0 s	500 to 1000 ms	30 to 60 cycles	25 to 50 cycles	80%
> 1.0 s	> 1000 ms	> 60 cycles	> 50 cycles	Not specified

❶ Input AC control circuit voltage must be matched when selecting the contactor/relay DC coil voltage.

Terminal Lug Kits ❶

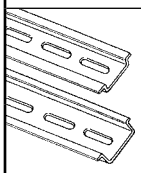
Component	Description	For use with . . .	Maximum Resistive Current Ratings (A) ❷ IEC (40°C)	IEC (60°C)	UL/CSA (40°C)	Pkg. Qty.	Catalog Number ❶	Price Each
	**3 Pole Lug Kit –** Allows larger wires to be used with the contactor. Ideal for wye-delta, reversing and multispeed contactors and starters. Can increase IEC AC-1 current rating, as well as the UL/CSA continuous current (resistive) rating of the contactor. Three pole kit used for smaller contactors.	CA7-9. . .23 -line side -load side	45	45	40	1	**CA7-P-KN23 CA7-P-KL23**	**41**
		CA7-30. . .37	60	55	55	1	**CA7-P-K37**	**56**
	1 Pole Lug Kit – Allows larger wires to be used with the contactor. Ideal for wye-delta, reversing and multispeed contactors and starters. Can increase AC-1 current rating of the contactor. One pole kit used for larger contactors.	CA7-43	90	75	75	3 ❸	**CA7-P-K43**	**28 ❸ Each**
		CA7-60 . . .85	130	130	130	3 ❸	**CA7-P-K85**	**33 ❸ Each**

Paralleling Links ❶❷

Component	Description	For use with . . .	Maximum Resistive Current Ratings (A) ❷ IEC (40°C)	IEC (60°C)	UL/CSA (40°C)	Pkg. Qty.	Catalog Number ❶	Price Each
	3 Pole Paralleling Link – Allows smaller CA7 contactors to be used on single-phase resistive applications. By paralleling the three power poles, the contacts see only a portion of the actual load. ❹	CA7-9. . .23	100	100	100	2 ❸	**CA7-P-B23**	**10 ❸ Each**
		CA7-30. . .37	150	135	150	2 ❸	**CA7-P-B37**	**15 ❸ Each**

❶ cULus Approved (File E33916).
❷ Lighting applications are not considered purely resistive loads. Therefore, the IEC and UL/CSA resistive ratings listed here do not apply to lighting loads. Lighting contactor ratings are provided in the Technical Information section.
❸ Priced per piece. Total cost is package quantity x price. Minimum order, 3 pieces.
❹ Engineering practice permits 2.5 x I_e to be applied to a contactor when 3 poles are connected in parallel for single phase discharge lamp (ballast lighting) applications.

Assembly Components

Component	Description	For Use With…	Pkg. Qty.	Catalog Number	Price Each
	Dovetail Connectors – Connects multiple contactor and starter assemblies together.	CA7 all	10	**CA7-S9**	**1.75**
	Reversing Power Wiring Kit - ❶ Provides a solid "wireless" connection for reversing applications. May be used with both solid state and thermal O/L relays.	CA7-9…12 CA7-16…23	1	**CAUT7-PW23**	**17**
		CA7-30…37 CA7-43 CA7-60…85	1 1 1	**CAUT7-PW37** **CAUT7-PW43** **CAUT7-PW85**	**20** **37** **94**
	Connecting Module - ❶ Provides a solid "wireless" connection between a CA7 contactor and a Motor Circuit Controller.	KT4 or KTA3-25 with CA7-9…23	1	**KT3-NW23**	**20**
	Stab Connectors - Dual stab (0.250 inch)	CA7-9…85 coil term. CA7-9…23 power term. CA7 accessories	20 100 100	**CA7-SC2** **CA7-SC10** **CA4-SC11**	**1.75**
	Protective Covers - Protects against unintended manual operation of contactors, front mounted auxiliary contacts, pneumatic timers and latches.	CA7-9…85	10	**CA7-SCC**	**3.35**
		CS7-PV, CA7-PV, CZE7, CZA7, CV7	1	**CA7-SCF**	**1.75**
	**DIN-rail** - 2 meter lengths (6' 6"); price per rail Top Hat, low profile Top Hat, high profile	CA7 all	20 10	**3F** **3AF**	**29** **44**

Marking Systems

Component	Description	Pkg. Qty.	Catalog Number	Price Each
	Label Sheet – 1 sheet with 105 self-adhesive paper labels each, 6 x 17mm	1	**CA7-FMS**	**1.75**
	Marking Tag Sheet - 1 sheet with 160 perforated paper labels each, 6 x 17mm. To be used with transparent cover.	1	**CA7-FMP**	**1.75**
	Transparent Cover - To be used with Marking Tag Sheets.	100 ❷	**CA7-FMC**	**.17**
	Tag Carrier - For marking with Clip-on Tags. See Terminals Section N for complete listing of Clip-on Tags.	100 ❷	**CA7-FMA2**	**.17**

❶ cULus Approved (File E33916).
❷ Minimum order quantity is one package of 100. Price each x 100 = total price.

SSCDN8500E

Wye-Delta Starter Kits ❶

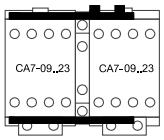
Wye-Delta power wiring kits were designed to aid in the field assembly of open-transition wye-delta starters that use CA7 contactors. These kits include line, load and start-point (shorting) connections. Assembling a wye-delta starter requires the use of the following components:

- Contactors and overload relay
- Mechanical / Electrical Interlock (Cat.No: CM7-02)
- Electronic Wye-delta Timer (Cat. No: CRZY7-30-110/240)
- Dovetail Connector to couple 1M and 2M contactor (Cat. No: CA7-S9); optional

3-Phase Rating												
kW (50Hz)				HP (60Hz)				Use with catalog number . . .				
								Delta		Wye		
230V	380V 415V	500V	690V	200V	230V	460V	575V	1M	2M	1S	Catalog Number	Price
5.5	8	8	8	5	5	10	10	CA7-9	CA7-9	CA7-9	CAYT7-PW23	22
7.5	11	11	11	5	7.5	15	15	CA7-12	CA7-12	CA7-9		
10	14	15	14	7.5	10	20	20	CA7-16	CA7-16	CA7-12		
14	21	21	19	7.5	10	25	25	CA7-23	CA7-23	CA7-12		
18	28	28	28	10	15	30	30	CA7-30	CA7-30	CA7-16	CAYT7-PW37	27
19	35	35	32	15	20	40	40	CA7-37	CA7-37	CA7-23		
23	40	40	41	20	25	50	50	CA7-43	CA7-43	CA7-30	CAYT7-PW43	44
33	58	60	56	30	40	75	75	CA7-60	CA7-60	CA7-37	CAYT7-PW72	79
39	69	67	70	40	50	100	100	CA7-72	CA7-72	CA7-43		
47	82	82	81	50	60	125	125	CA7-85	CA7-85	CA7-60	CAYT7-PW85	106

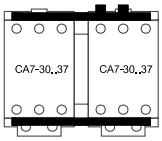
Reversing Starter Connection Kits ❷

Kit=CAUT7-PW23
CA7-PWNM23



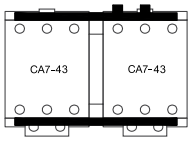
CA7-PWLM23

Kit =CAUT7-PW37
CA7-PWNM37



CA7-PWLM37

Kit =CAUT7-PW43
CA7-PWNM43

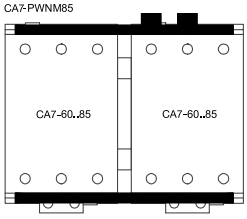


CA7-PWLM43

Reversing- and WYE-Delta Starter Kits

Only the kits are catalog items. Single components are available by special order in bulk packages of 20 pcs

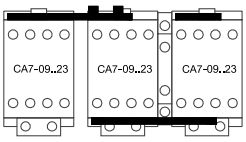
Kit =CAUT7 -PW85
CA7-PWNM85



CA7-PWLM85

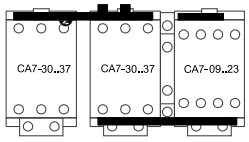
WYE-Delta Starter Connection Kits

Kit =CAYT7-PW23
CA7-PWNM23 CA7-PWD23



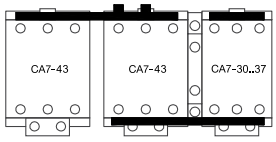
CA7-PWLM23

Kit =CAYT7-PW37
CA7-PWNM37 CA7-PWD23



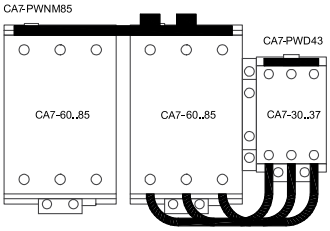
CA7-PWY37

Kit =CAYT7-PW43
CA7-PWNM43 CA7-PWD43



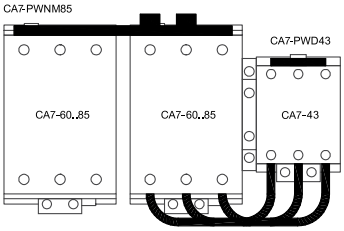
CA7-PWY43

Kit =CAYT7-PW72
CA7-PWNM85 CA7-PWD43



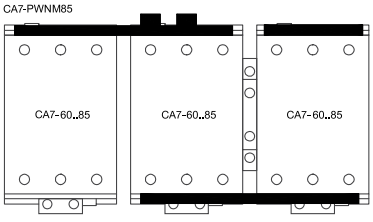
CA7-PWY72 (3 Wires AWG8, L=100 mm)

Kit =CAYT7 -PW72
CA7-PWNM85 CA7-PWD43



CA7-PWY72 (3 Wires AWG8, L=100 mm)

Kit =CAYT7-PW85
CA7-PWNM85 CA7-PWD85



CA7-PWLM85

❶ cULus Approved (File E33916).

❷ Individual parts of kits are available for unique applications by special order. Contact your Sprecher + Schuh Representative.

M1 General Purpose Enclosures ❶

Enclosure	Description	For use With. . .	Catalog Number	Price
	Sheet metal enclosure ("A" box) - ❶ - Includes installed Reset Kit CEP7-ERA adapter is required for all CEP7-ED, EE overloads in "A" boxes. CEP7-ERA must be ordered separately from page B7.1.	CA7-9…43 contactor CAT7-9...23 starter (using CEP7 second generation) CA(T)7-9…37 (using CEP7 first generation)	**M1-100645/3 ❶**	**50**
	Sheet metal enclosure ("B" box) - ❶ - Includes Reset Kit - Includes special offset attachment for resetting CEP7 solid state overload relays (only necessary with CAT7-60…85 starters) ❷ CEP7-ERA adapter is required for all CEP7-ED, EE overloads in "B" boxes. CEP7-ERA must be ordered separately from page B7.1.	***Backpan not required*** CA(T)7-60…85 ***Backpan required*** CAT7-30...43 (using second generation CEP7) CAU(T)7-9…43 CA(T)7-9…43 w/ CPT CA(T)7-43 (with first generation CEP7)	**M1-130706-7 ❶❷**	**104**
	"B box" enclosure backpan *Required when mounting all contactor/ starter configurations noted here.*	***Backpan required*** CAT7-30...43 (using second generation CEP7) CAU(T)7-9…43 CA(T)7-9…43 w/ CPT CA(T)7-43 (with first generation CEP7)	**TI-2.11.1**	**17**

M1 General Purpose Enclosure Pilot Device Kits

Enclosure	Description	For use With M1 Enclosure . . .	Catalog Number	Price
	START-STOP pushbutton assembly - includes mounting bracket and	M1-100645/3 M1-130706-7	**SS3-NA ❸** **SS3-NB ❹**	**67**
	HAND-OFF-AUTO selector switch assembly-includes mounting bracket and wiring	M1-100645/3 M1-130706-7	**SS2-NA ❸** **SS2-NB ❹**	**67**
	ON-OFF selector switch assembly - with mounting bracket and wiring	M1-100645/3 M1-130706-7	**SS4-NA ❸** **SS4-NB ❹**	**67**
	Pilot light (neon type) assembly - includes mounting bracket, wiring and resistors for all standard voltages between 115V and 575V	M1-100645/3 M1-130706-7	**PL-NA ❸** **PL-NB ❹**	**126**

❶ Not designed for use with CT7 or CT7K thermal overload relays or CA7-9C…CA7-43C contactors (with DC coils).
❷ Special offset attachment (Cat.# TI-12-18) may be purchased separately. List price $4.
❸ Pilot device kit also for use with all enclosed contactors or starters listed in this catalog with enclosure dimension "A".
❹ Pilot device kit also for use with all enclosed contactors or starters listed in this catalog with enclosure dimension "B".

Renewal Coils - A.C. ❶❷❸

AC Control Voltages			AC Coil Codes ❷	For use with contactor . . .				
				CA7-9...16	CA7-23...37	CA7-43	CA7-60...85	~
				CA7-9-M...16-M...	CA7-23-M...37-M...	~	~	CA7-90-M...
				CAQ7-16	CAQ7-37	~	~	~
				CNX-205...206	CNX-207...209	CNX-212	CNX-218	~
				CAN7-12	CAN7-30...37	CA7-40-M...	CAN7-72	~
				~	CAL(V)7-20-M40	CAL(V)7-30-M40	~	CAL(V)7-60-M40
50 Hz	60 Hz	50/60 Hz		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
	12V		12B	**TA006**	**TC006**	**TD006**	**TE006**	**TF006**
12V			12A	**TA404**	**TC404**	**TD404**	**TE404**	**TF404**
	24V		24B	**TA013**	**TC013**	**TD013**	**TE013**	**TF013**
24V			24A	**TA407**	**TC407**	**TD407**	**TE407**	**TF407**
		24V	**24Z**	**TA855**	**TC855**	**TD855**	**TE855**	**TF855**
32V	36V		36	**TA481**	**TC481**	**TD481**	**TE481**	**TF481**
36V			36A	**TA410**	**TC410**	**TD410**	**TE410**	**TF410**
42V	48V		48	**TA482**	**TC482**	**TD482**	**TE482**	**TF482**
48V			48A	**TA414**	**TC414**	**TD414**	**TE414**	**TF414**
		48V	48Z	**TA860**	**TC860**	**TD860**	**TE860**	**TF860**
100V	100...110V		110	**TA861**	**TC861**	**TD861**	**TE861**	**TF861**
110V	120V		**120**	**TA473**	**TC473**	**TD473**	**TE473**	**TF473**
		110V	110Z	**TA856**	**TC856**	**TD856**	**TE856**	**TF856**
120V			120A	**TA425**	**TC425**	**TD425**	**TE425**	**TF425**
127V			127	**TA428**	**TC428**	**TD428**	**TE428**	**TF428**
200V	200.. 220V	200V	220	**TA862**	**TC862**	**TD862**	**TE862**	**TF862**
	208V		**208**	**TA049**	**TC049**	**TD049**	**TE049**	**TF049**
	208.. 240V		**220W**	**TA296**	**TC296**	**TD296**	**TE296**	**TF296**
220V	240V		**240**	**TA474**	**TC474**	**TD474**	**TE474**	**TF474**
200V...230V			230A	**TA441**	**TC441**	**TD441**	**TE441**	**TF441**
		230V	230Z	**TA851**	**TC851**	**TD851**	**TE851**	**TF851**
230V...240V			240A	**TA440**	**TC440**	**TD440**	**TE440**	**TF440**
240V	277V		**277**	**TA480**	**TC480**	**TD480**	**TE480**	**TF480**
		240V	240Z	**TA858**	**TC858**	**TD858**	**TE858**	**TF858**
	347V		347	**TA065**	**TC065**	**TD065**	**TE065**	**TF065**
	380V		380B	**TA067**	**TC067**	**TD067**	**TE067**	**TF067**
380V...400V	440V		**380**	**TA071**	**TC071**	**TD071**	**TE071**	**TF071**
		400V	400Z	**TA863**	**TC863**	**TD863**	**TE863**	**TF863**
400V...415V			415	**TA457**	**TC457**	**TD457**	**TE457**	**TF457**
440V	480V		**480**	**TA475**	**TC475**	**TD475**	**TE475**	**TF475**
		440V	440Z	**TA859**	**TC859**	**TD859**	**TE859**	**TF859**
500V			500	**TA479**	**TC479**	**TD479**	**TE479**	**TF479**
550V	600V		**600**	**TA476**	**TC476**	**TD476**	**TE476**	**TF476**
Price				**59**	**84**	**101**	**118**	**118**

CA7 A.C. coil (typical)

❶ Other coil voltages available. Contact your Sprecher + Schuh representative for information.
❷ A.C. Codes in large, bold letters indicate coils that are standard stocked items.
❸ AC and DC coils on CNX-xxx contactors are not interchangeable.

Renewal Coils - D.C. ❶❷❼

AC Control Voltages	DC Coil Codes ❷	True DC Replacement Coils ❼ For use with contactor...			Two Winding DC Replacement Coils ❻ For use with contactor...				
		CA7-9C(D)... 16C(D)	CA7-23C(D)... 37C(D)	CA7-43C	CA-9Y...16Y	CAY-23Y...37Y	CA7-43Y	CA7-60D...85D ❺	~
		CA7-9C(D)-M... 16C (D)-M...	CA7-23C(D)-M...	CA7-43C(D)	~	~	~	~	CA7-90D-M...
		CAQ7-16C	CAQ7-37C	CA7-40C-M...	~	~	~	~	~
		CNX-205...206	CNX7-207...209	CNX7-212	~	~	~	CNX7-218	~
		CAN7-12C	CAN7-37C	~	~	~	~	CAN7-72D	~
		Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.	Cat. No.
9V ❸	9D	**TA766**	**TC766**	**TD766**	~	~	~	~	~
9V Diode ❸	9DD	~	~	~	**TA766Y**	**TC766Y**	**TD766Y**	**TE766M**	**TF766M**
12V	**12D**	**TA708**	**TC708**	**TD708**	~	~	~	~	~
12V Diode ❽	**12DD**	~	~	~	**TA708Y**	**TC708Y**	**TD708Y**	**TE708M**	**TF708M**
24V ❹	**24D**	**TA714**	**TC714**	**TD714**	~	~	~	~	~
24V Diode ❹❽	**24DD**	**TA714M**	**TC714M**	**TD714M**	**TA714Y**	**TC714Y**	**TD714Y**	**TE714M**	**TF714M**
36V	36D	**TA719**	**TC719**	**TD719**	~	~	~	~	~
36V Diode	36DD	~	~	~	**TA719Y**	**TC719Y**	**TD719Y**	**TE719M**	**TF719M**
48V	**48D**	**TA724**	**TC724**	**TD724**	~	~	~	~	~
48V Diode	**48DD**	~	~	~	**TA724Y**	**TC724Y**	**TD724Y**	**TE724M**	**TF724M**
60V	60D	**TA774**	**TC774**	**TD774**	~	~	~	~	~
60V Diode	60DD	~	~	~	**TA774Y**	**TC774Y**	**TD774Y**	**TE774M**	**TF774M**
64V	64D	**TA727**	**TC727**	**TD727**	~	~	~	~	~
64V Diode	64DD	~	~	~	**TA727Y**	**TC727Y**	**TD727Y**	**TE727M**	**TF727M**
72V	72D	**TA728**	**TC728**	**TD728**	~	~	~	~	~
72V Diode	72DD	~	~	~	**TA728Y**	**TC728Y**	**TD728Y**	**TE728M**	**TF728M**
80V	80D	**TA729**	**TC729**	**TD729**	~	~	~	~	~
80V Diode	80DD	~	~	~	**TA729Y**	**TC729Y**	**TD729Y**	**TE729M**	**TF729M**
110V	**110D**	**TA733**	**TC733**	**TD733**	~	~	~	~	~
110V Diode	**110DD**	~	~	~	**TA733Y**	**TC733Y**	**TD733Y**	**TE733M**	**TF733M**
115V	115D	**TA734**	**TC734**	**TD734**	~	~	~	~	~
115V Diode	115DD	~	~	~	**TA734Y**	**TC734Y**	**TD734Y**	**TE734M**	**TF734M**
125V	125D	**TA737**	**TC737**	**TD737**	~	~	~	~	~
125V Diode	125DD	~	~	~	**TA737Y**	**TC737Y**	**TD737Y**	**TE737M**	**TF737M**
220V	**220D**	**TA747**	**TC747**	**TD747**	~	~	~	~	~
220V Diode	**220DD**	~	~	~	**TA747Y**	**TC747Y**	**TD747Y**	**TE747M**	**TF747M**
230V	230D	**TA749**	**TC749**	**TD749**	~	~	~	~	~
230V Suppres.	230DS	~	~	~	**TA749Y**	**TC749Y**	**TD749Y**	**TE749M**	**TF749M**
250V	250D	**TA751**	**TC751**	**TD751**	~	~	~	~	~
250V Suppres.	250DS	~	~	~	**TA751Y**	**TC751Y**	**TD751Y**	**TE751M**	**TF751M**
Price (coil without diode)		**92**	**126**	**160**	~	~	~	~	~
Price (coil with diode)		**134**	**168**	**202**	**134**	**168**	**202**	**235**	**235**

Note: The "DD" coils listed above include an integrated bi-directional diode. Drop out time of this design is significantly improved when compared to an external diode. See ratings on page A48.

True DC coil (typical)

Two Winding DC coil (typical) ❻

❶ Other coil voltages available. Contact your Sprecher + Schuh representative for information.
❷ DC Codes in large, bold letters indicate coils that are standard stocked items.
❸ Voltage operating range: 0.65…1.3 x U_s.
❹ Voltage operating range: 0.7…1.25 x U_s.
❺ CA7-60D…85D contactors have a two winding coil with built-in late break auxiliary contact and coil suppression.
❻ CA7-9Y…43Y two winding coils are sold for renewal parts only and are not interchangeable with standard CA7-9…43 AC coil contactors or CA7-9C…43C true DC coil contactors. CA7-9Y…43Y contactors should be tested following a coil swap to insure functionality of the timed auxiliary contact.
❼ AC and DC coils on CNX-xxx contactors are not interchangeable.
❽ "DD" coils with integrated surge suppression diode fit CA7-xxD contactors.

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