

Series CA7 Contactors

CA7 Contactors

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



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

Big performance in a small package

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

Type 1 and Type 2 Coordination

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

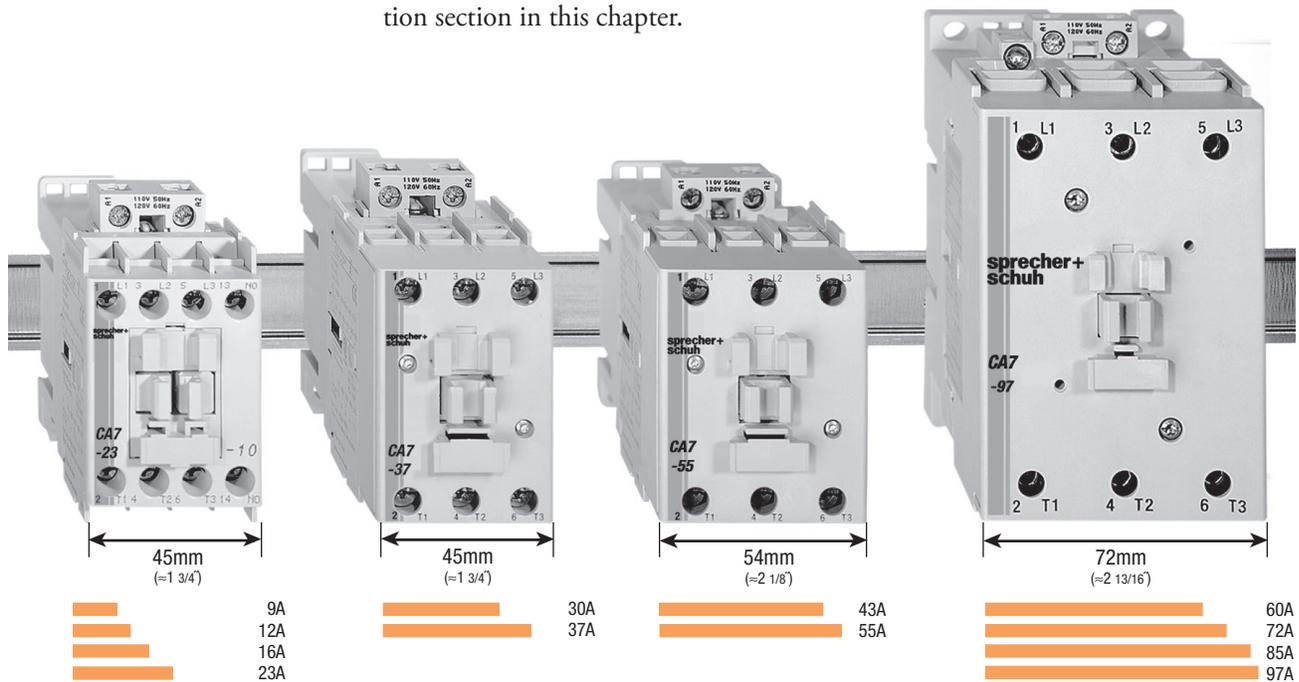
Advanced safety and reliability features

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

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

Advantages of Electronic DC Coil

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



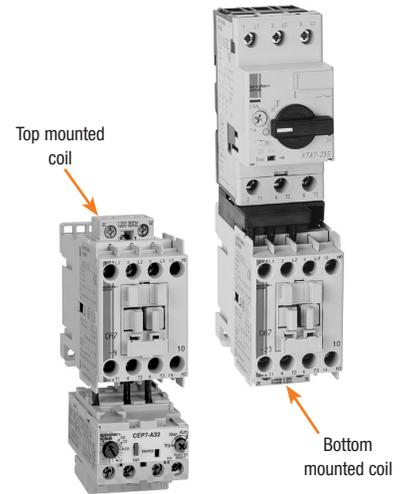
Modular accessories are common to all devices

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



Reversible coil provides total flexibility

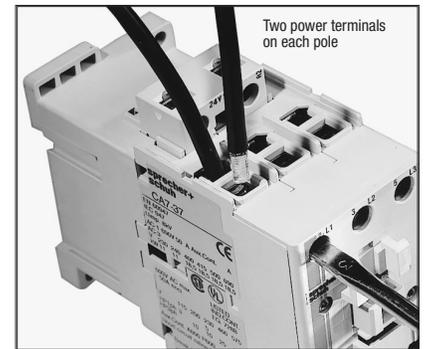
When shipped, both coil connections are normally located at the top of the contactor in preparation for mounting an overload relay at the bottom. For multi-starter panels, however, the coil can be reversed, which provides space to close-couple a KT7 Motor Circuit Controller on the top of the contactor.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



Reversible coils are standard on all CA7 contactors

Dual power terminals speed wiring

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



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

Special use contactors for specialized applications

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

Lighting contactors

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



CAL7 Lighting Contactor



CAN7 NEMA labeled contactor



CNX Special Purpose Contactor

NEMA Labeled Contactors

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

Special purpose contactors

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

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

Non-Reversing, Three Pole Contactors With AC Coil, Series CA7 (Open type only) 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) | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V / 415V | 500V | 690V | 1 Ø | | 3 Ø | | | | | |
| 1 1/2 | 1 1/2 | | | | | | | 2 | 2 | 5 | 7-1/2 | 1 | 0 | | |
| 9 | 32 | 3 | 4 | 4 | 4 | 1/2 | 1 1/2 | 2 | 2 | 5 | 7-1/2 | 1 | 0 | CA7-9-10-* | 120 |
| 12 | 32 | 4 | 5.5 | 5.5 | 5.5 | 1/2 | 2 | 3 | 3 | 7-1/2 | 10 | 1 | 0 | CA7-12-10-* | 155 |
| 16 | 32 | 5.5 | 7.5 | 7.5 | 7.5 | 1 | 3 | 5 | 5 | 10 | 15 | 1 | 0 | CA7-16-10-* | 174 |
| 23 | 32 | 7.5 | 11 | 13 | 10 | 2 | 3 | 5 | 7-1/2 | 15 | 15 | 1 | 0 | CA7-23-10-* | 193 |
| 30 | 65 | 10 | 15 | 15 | 15 | 2 | 5 | 7-1/2 | 10 | 20 | 25 | 1 | 0 | CA7-30-00-* | 222 |
| 30 | 65 | 10 | 15 | 15 | 15 | 2 | 5 | 7-1/2 | 10 | 20 | 25 | 1 | 0 | CA7-30-10-* | 244 |
| 30 | 65 | 10 | 15 | 15 | 15 | 2 | 5 | 7-1/2 | 10 | 20 | 25 | 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 |
| 37 | 65 | 11 | 18.5/ 20 | 20 | 18.5 | 3 | 5 | 10 | 10 | 25 | 30 | 1 | 0 | CA7-37-10-* | 288 |
| 37 | 65 | 11 | 18.5/ 20 | 20 | 18.5 | 3 | 5 | 10 | 10 | 25 | 30 | 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 |
| 43 | 85 | 13 | 22 | 25 | 22 | 3 | 7-1/2 | 10 | 15 | 30 | 30 | 1 | 0 | CA7-43-10-* | 308 |
| 43 | 85 | 13 | 22 | 25 | 22 | 3 | 7-1/2 | 10 | 15 | 30 | 30 | 0 | 1 | CA7-43-01-* | 308 |
| 55 | 85 | 15 | 30 | 30 | 22 | 5 | 10 | 15 | 20 | 40 | 40 | 0 | 0 | CA7-55-00-* | 323 |
| 55 | 85 | 15 | 30 | 30 | 22 | 5 | 10 | 15 | 20 | 40 | 40 | 1 | 0 | CA7-55-10-* | 345 |
| 55 | 85 | 15 | 30 | 30 | 22 | 5 | 10 | 15 | 20 | 40 | 40 | 0 | 1 | CA7-55-01-* | 345 |
| 60 | 100 | 18.5 | 32 | 37 | 32 | 5 | 10 | 15 | 20 | 40 | 50 | 0 | 0 | CA7-60-00-* | 350 |
| 60 | 100 | 18.5 | 32 | 37 | 32 | 5 | 10 | 15 | 20 | 40 | 50 | 1 | 0 | CA7-60-10-* | 372 |
| 60 | 100 | 18.5 | 32 | 37 | 32 | 5 | 10 | 15 | 20 | 40 | 50 | 0 | 1 | CA7-60-01-* | 372 |
| 72 | 100 | 22 | 40 | 45 | 40 | 5 | 15 | 20 | 25 | 50 | 60 | 0 | 0 | CA7-72-00-* | 403 |
| 72 | 100 | 22 | 40 | 45 | 40 | 5 | 15 | 20 | 25 | 50 | 60 | 1 | 0 | CA7-72-10-* | 425 |
| 72 | 100 | 22 | 40 | 45 | 40 | 5 | 15 | 20 | 25 | 50 | 60 | 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 |
| 85 | 100 | 25 | 45 | 55 | 45 | 7-1/2 | 15 | 25 | 30 | 60 | 60 | 1 | 0 | CA7-85-10-* | 482 |
| 85 | 100 | 25 | 45 | 55 | 45 | 7-1/2 | 15 | 25 | 30 | 60 | 60 | 0 | 1 | CA7-85-01-* | 482 |
| 97 | 130 | 30 | 55 | 55 | 55 | 10 | 20 | 30 | 30 | 75 | 75 | 0 | 0 | CA7-97-00-* | 577 |
| 97 | 130 | 30 | 55 | 55 | 55 | 10 | 20 | 30 | 30 | 75 | 75 | 1 | 0 | CA7-97-10-* | 599 |
| 97 | 130 | 30 | 55 | 55 | 55 | 10 | 20 | 30 | 30 | 75 | 75 | 0 | 1 | CA7-97-01-* | 599 |



CA7-9-10 contactor



CA7-55-00 contactor



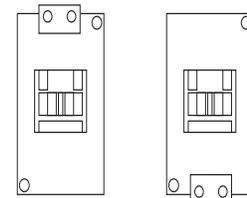
CA7-97-00 contactor

Coil Codes ❷

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

Coil Terminal Position ❸

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



All CA7 contactors come with reversible coils.

Ordering Instructions

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

- 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 A56. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ❸ For coil terminals on the load side (bottom) add a **U** in front of the coil code. For example: CA7-23-10-120 becomes CA7-23-10-U120.

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

| I _e [A] | | Ratings for Switching AC Motors (AC2 / AC3 / AC4) | | | | | | | | | | Contact Configuration, Main Pole | | Open Type | Catalog Number | Price |
|--------------------|------|---|---------|------|------|-------------------|-------|--------------|-------|-------|-------|----------------------------------|---|--------------|----------------|-------|
| | | kW (50 Hz) | | | | UL/CSA HP (60 Hz) | | | | | | | | | | |
| | | AC-3 | AC-1 | 400V | | 500V | 690V | 1 Ø | | 3 Ø | | | | | | |
| 230V | 415V | | | 115V | 230V | | | 200V | 230V | 460V | 575V | | | | | |
| 9 | 32 | 3 | 4 | 4 | 4 | 1/2 | 1 1/2 | 2 | 2 | 5 | 7-1/2 | 4 | 0 | CA7-9-M40-* | 120 | |
| | | | | | | 3 | 1 | CA7-9-M31-* | 132 | | | | | | | |
| | | | | | | 2 | 2 | CA7-9-M22-* | 132 | | | | | | | |
| 12 | 32 | 4 | 5.5 | 5.5 | 5.5 | 1/2 | 2 | 3 | 3 | 7-1/2 | 10 | 4 | 0 | CA7-12-M40-* | 157 | |
| | | | | | | 3 | 1 | CA7-12-M31-* | 167 | | | | | | | |
| | | | | | | 2 | 2 | CA7-12-M22-* | 167 | | | | | | | |
| 16 | 32 | 5.5 | 7.5 | 7.5 | 7.5 | 1 | 3 | 5 | 5 | 10 | 15 | 4 | 0 | CA7-16-M40-* | 176 | |
| | | | | | | 3 | 1 | CA7-16-M31-* | 186 | | | | | | | |
| | | | | | | 2 | 2 | CA7-16-M22-* | 186 | | | | | | | |
| 23 | 32 | 7.5 | 11 | 13 | 10 | 2 | 3 | 5 | 7-1/2 | 15 | 15 | 4 | 0 | CA7-23-M40-* | 194 | |
| | | | | | | 3 | 1 | CA7-23-M31-* | 206 | | | | | | | |
| | | | | | | 2 | 2 | CA7-23-M22-* | 206 | | | | | | | |
| 37 | 75 | 11 | 18.5 | 20 | 18.5 | 3 | 5 | 10 | 10 | 25 | 30 | 4 | 0 | CA7-40-M40-* | 385 | |
| | | | | | | 2 | 2 | CA7-40-M22-* | 385 | | | | | | | |
| 37 | 75 | 11 | 18.5/20 | 18.5 | 7.5 | 3 | 5 | 10 | 10 | 25 | 15 | 2 | 2 | CA7-40-M22-* | 385 | |
| | | | | | | 4 | 0 | CA7-90-M40-* | 657 | | | | | | | |
| 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 | |



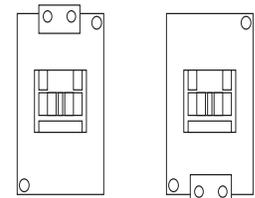
CA7-23-M22-120 contactor

Coil Codes ❶

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

Coil Terminal Position ❷

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



All CA7 contactors come with reversible coils.

Ordering Instructions

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

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

❷ For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23-M40-120 becomes CA7-23-M40-U120.

CA7 Contactors

Non-Reversing, Three Pole Contactors With Electronic DC Coil, Series CA7 (Open type only) ①②③

| I _b [A] ① | | Ratings for Switching AC Motors (AC2 / AC3 / AC4) | | | | | | | | | | Auxiliary Contacts per Contactor | | Open Type | |
|-------------------------|------|---|-------------|------|---------------|-------------------|-------|-------|-------|-------|-------|--|---|--------------|-----|
| | | kW (50 Hz) | | | | UL/CSA HP (60 Hz) | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V/ 415V | 500V | 690V | 1 Ø | | 3 Ø | | | | | |
| 115V | 230V | | | | | | | 200V | 230V | 460V | 575V | | | | |
| 9 | 32 | 3 | 4 | 4 | 4 | 1/2 | 1 1/2 | 2 | 2 | 5 | 7-1/2 | 1 | 0 | CA7-9E-10-* | 197 |
| | | | | | | | | | | | | 0 | 1 | CA7-9E-01-* | |
| 12 | 32 | 4 | 5.5 | 5.5 | 5.5 | 1/2 | 2 | 3 | 3 | 7-1/2 | 10 | 1 | 0 | CA7-12E-10-* | 242 |
| | | | | | | | | | | | | 0 | 1 | CA7-12E-01-* | |
| 16 | 32 | 5.5 | 7.5 | 7.5 | 7.5 | 1 | 3 | 5 | 5 | 10 | 15 | 1 | 0 | CA7-16E-10-* | 267 |
| | | | | | | | | | | | | 0 | 1 | CA7-16E-01-* | |
| 23 | 32 | 7.5 | 11 | 13 | 10 | 2 | 3 | 5 | 7-1/2 | 15 | 15 | 1 | 0 | CA7-23E-10-* | 292 |
| | | | | | | | | | | | | 0 | 1 | CA7-23E-01-* | |
| 30 | 65 | 10 | 15 | 15 | 15 | 2 | 5 | 7-1/2 | 10 | 20 | 25 | 0 | 0 | CA7-30E-00-* | 332 |
| | | | | | | | | | | | | 1 | 0 | CA7-30E-10-* | |
| | | | | | | | | | | | | 0 | 1 | CA7-30E-01-* | |
| 37 | 65 | 11 | 18.5/ 20 | 20 | 18.5 | 3 | 5 | 10 | 10 | 25 | 30 | 0 | 0 | CA7-37E-00-* | 392 |
| | | | | | | | | | | | | 1 | 0 | CA7-37E-10-* | |
| | | | | | | | | | | | | 0 | 1 | CA7-37E-01-* | |
| 43 | 85 | 13 | 22 | 25 | 22 | 3 | 7-1/2 | 10 | 15 | 30 | 30 | 0 | 0 | CA7-43E-00-* | 455 |
| | | | | | | | | | | | | 1 | 0 | CA7-43E-10-* | |
| | | | | | | | | | | | | 0 | 1 | CA7-43E-01-* | |
| 55 | 85 | 15 | 30 | 30 | 22 | 5 | 10 | 15 | 20 | 40 | 40 | 0 | 0 | CA7-55E-00-* | 465 |
| | | | | | | | | | | | | 1 | 0 | CA7-55E-10-* | |
| | | | | | | | | | | | | 0 | 1 | CA7-55E-01-* | |



CA7-16E-10-110E contactor ④



CA7-23E-10-24E contactor



CA7-55E-00-24E contactor

Description

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E...55E has internal surge suppression. See page A68 for more information.

This new design results in:

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

Applications

Direct control from PLC:

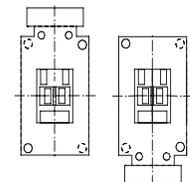
The low power consumption contactor designed to control motors and other loads is especially aligned to the specific requirement of electronic control circuits. The low power consumption of 1.7 allows direct control through PLC's without the need for interposing relays. Power dissipation is greatly reduced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

Coil Codes ②④

| DC Coil Codes | Voltage |
|---------------|----------|
| 12E | 12V |
| 24E | 24V |
| 36E ⑤ | 36-48V |
| 48E ⑤ | 48-72V |
| 110E ⑤ | 110-125V |
| 220E ⑤ | 220-250V |

Coil Terminal Position ⑥

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



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

① AC1 Resistive Ratings and UL/CSA Continuous Current Ratings may be increased by the use of Lug Kits or Paralleling Links. See CA7 Accessories section for applicable information.

② CA7-9E...55E with electronic coils are not interchangeable with non-electronic DC or AC coils.

③ See page A47 for limitations on adding auxiliaries to Electronic DC Coil contacts.

④ Voltages of 36V DC and greater are supplied with backpack module standard. See page A85.

⑤ Not applicable with Electronic Timer accessories (CRZ_7).

⑥ For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23E-10-24E becomes CA7-23E-10-U24E.

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

| 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) | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V | 500V | 690V | 1 Ø | | 3 Ø | | | | | |
| 415V | 115V | | | | 230V | | | 200V | 230V | 460V | 575V | | | | |
| | | | | | | | | | | | | NO | NC | Catalog Number | Price |
| 9 | 32 | 3 | 4 | 4 | 4 | 1 1/2 | 1 1/2 | 2 | 2 | 5 | 7-1/2 | 4 | 0 | CA7-9E-M40-* | 198 |
| | | | | | | 3 | 3 | 5 | 7-1/2 | 3 | 1 | CA7-9E-M31-* | 210 | | |
| | | | | | | 2 | 2 | 2 | 2 | CA7-9E-M22-* | 210 | | | | |
| 12 | 32 | 4 | 5.5 | 5.5 | 5.5 | 1 1/2 | 2 | 3 | 3 | 7-1/2 | 10 | 4 | 0 | CA7-12E-M40-* | 240 |
| | | | | | | 3 | 3 | 7-1/2 | 10 | 3 | 1 | CA7-12E-M31-* | 252 | | |
| | | | | | | 2 | 2 | 2 | 2 | CA7-12E-M22-* | 252 | | | | |
| 16 | 32 | 5.5 | 7.5 | 7.5 | 7.5 | 1 | 3 | 5 | 5 | 10 | 15 | 4 | 0 | CA7-16E-M40-* | 264 |
| | | | | | | 3 | 3 | 5 | 5 | 10 | 15 | 3 | 1 | CA7-16E-M31-* | 277 |
| | | | | | | 2 | 2 | 2 | 2 | CA7-16E-M22-* | 277 | | | | |
| 23 | 32 | 7.5 | 11 | 13 | 10 | 2 | 3 | 5 | 7-1/2 | 15 | 15 | 4 | 0 | CA7-23E-M40-* | 290 |
| | | | | | | 3 | 3 | 5 | 7-1/2 | 15 | 15 | 3 | 1 | CA7-23E-M31-* | 302 |
| | | | | | | 2 | 2 | 2 | 2 | CA7-23E-M22-* | 302 | | | | |
| 37 | 75 | 11 | 18.5 | 20 | 18.5 | 3 | 5 | 10 | 10 | 25 | 30 | 4 | 0 | CA7-40E-M40-* | 520 |
| 37 | 75 | 11 | 18.5/20 | 18.5 | 7.5 | 3 | 5 | 10 | 10 | 25 | 15 | 2 | 2 | CA7-40E-M22-* | 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...55E have internal surge suppression. See page A68 for more information.

This design results in:

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

Applications

Direct control from PLC:

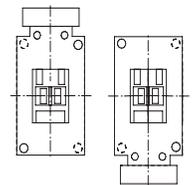
The low power consumption contactor designed to control motors and other loads is especially aligned to the specific requirement of electronic control circuits. The low power consumption of 1.7 allows direct control through PLC's without the need for interposing relays. Power dissipation is greatly reduced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

Coil Codes ①③

| DC Coil Codes | Voltage |
|---------------|----------|
| 12E | 12V |
| 24E | 24V |
| 36E ④ | 36-48V |
| 48E ④ | 48-72V |
| 110E ④ | 110-125V |
| 220E ④ | 220-250V |

Coil Terminal Position ⑤

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



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

① CA7-9E...55E with electronic coils are not interchangeable with non-electronic DC or AC coils
 ② See pages A47 for limitations on adding auxiliaries to Electronic DC Coil contacts.
 ③ Voltages of 36V DC and greater are supplied with backpack module standard. See page A85.

④ Not applicable with Electronic Timer accessories (CRZ_7).
 ⑤ For coil terminals on the load side (bottom) add a U in front of the coil code. For example: CA7-23E-M40-24E becomes CA7-23E-M40-U24E.

Non-Reversing, Three Pole Contactors With Two Winding DC Coil, Series CA7 (Open type only) ①

| I _e [A] | | Ratings for Switching AC Motors (AC2 / AC3 / AC4) | | | | | | | | | | Auxiliary Contacts per Contactor ① | | Open Type | |
|--------------------|------|---|------|------|---------------|-------------------|------|------|------|------|------|---------------------------------------|----|----------------|-------|
| | | kW (50 Hz) | | | | UL/CSA HP (60 Hz) | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V/ 415V | 500V | 690V | 1 Ø | | 3 Ø | | | | | |
| 115V | 230V | | | | | | | 200V | 230V | 460V | 575V | NO | NC | Catalog Number | Price |
| 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 |
| 97 | 130 | 30 | 55 | 55 | 55 | 10 | 20 | 30 | 30 | 75 | 75 | 0 | 0 | CA7-97D-00-* | 757 |
| | | | | | | | | | | | | 1 | 0 | CA7-97D-10-* | 779 |
| | | | | | | | | | | | | 0 | 1 | CA7-97D-01-* | 779 |



CA7-60D Contactor

Description:

Contactors with two winding DC coils have very low hold-in values and share the same dimensions with AC contactors. See page A57 for more information. See page A84 for dimensional information.

Non-Reversing, Four Pole Contactors With Two Winding DC Coil, Series CA7 (Open type only) ①

| I _e [A] | | Ratings for Switching AC Motors (AC2 / AC3 / AC4) | | | | | | | | | | Contact Configuration Main Pole | | Auxiliary Contacts per Contactor | | Open Type | |
|--------------------|------|---|------|------|--------------|-------------------|------|------|------|------|------|---------------------------------|----|----------------------------------|----|----------------|-------|
| | | kW (50 Hz) | | | | UL/CSA HP (60 Hz) | | | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 415V 400V | 500V | 690V | 1 Ø | | 3 Ø | | | | | | | |
| 115V | 230V | | | | | | | 200V | 230V | 460V | 575V | NO | NC | NO | NC | Catalog Number | Price |
| 85 | 130 | 25 | 45 | 55 | 45 | 7-1/2 | 15 | 25 | 30 | 60 | 50 | 4 | 0 | 0 | 0 | CA7-90D-M40-* | 781 |
| 85 | 130 | 25 | 45 | 55 | 18.5 | 7-1/2 | 15 | 25 | 30 | 50 | 20 | 2 | 2 | 0 | 0 | CA7-90D-M22-* | 781 |

Coil Codes ②③④

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

Ordering Instructions

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

- ① CA7-60D...CA7-97D have an internal auxiliary contact to transition from the start winding to the run winding.
- ② Coils include an integrated diode surge suppressor.
- ③ Other coil voltages are available, see page A57. 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.*
- ④ 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.

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 | Catalog Number | Price |
|--------------------|------|---|---------|------|--------------|-------------------|-------|-------|-------|-------|-------|----------------------------------|---|--------------|----------------|-------|
| | | kW (50 Hz) | | | | UL/CSA HP (60 Hz) | | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V 415V | 500V | 690V | 1 Ø | | 3 Ø | | | | | | |
| 115V | 230V | | | | | | | 200V | 230V | 460V | 575V | | | | | |
| 9 | 32 | 3 | 4 | 4 | 4 | 1/2 | 1 1/2 | 2 | 2 | 5 | 7-1/2 | 1 | 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 ④ | 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 ④ | 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 ④ | 1 | CAU7-43-22-* | 754 | |
| 55 | 85 | 15 | 30 | 30 | 22 | 5 | 10 | 15 | 20 | 40 | 40 | 0 | 1 | CAU7-55-02-* | 797 | |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-55-22-* | 841 | |
| 60 | 100 | 18.5 | 32 | 37 | 32 | 5 | 10 | 15 | 20 | 40 | 50 | 0 | 1 | CAU7-60-02-* | 895 | |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-60-22-* | 939 | |
| 72 | 100 | 22 | 40 | 45 | 40 | 5 | 15 | 20 | 25 | 50 | 60 | 0 | 1 | CAU7-72-02-* | 1010 | |
| | | | | | | | | | | | | 1 ④ | 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 ④ | 1 | CAU7-85-22-* | 1169 | |
| 97 | 130 | 30 | 55 | 55 | 55 | 10 | 20 | 30 | 30 | 75 | 75 | 0 | 1 | CAU7-97-02-* | 1410 | |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-97-22-* | 1454 | |



CAU7-9-22-120 reversing contactor



CAU7-43-22-120 reversing contactor

Includes:

- Line side coil terminations
- Mechanical and electrical Interlock ③
- Reversing power wiring ① (using Power Wiring Kit Cat.# CAUT7-PW...)
- Control wiring available; see footnote ②

Coil Codes ⑤

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

Ordering Instructions

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

- ① 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...55 deduct \$22
 CAU7-60...97 without power wiring not available
 Ex: CAU7-9-22-* becomes CAU7-9-22-***-LW**.
- ② For control wiring, add suffix **-CW** to catalog number and add \$20.
 Example: CAU7-9-22-* becomes CAU7-9-22-***-CW**.
- ③ The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.
- ④ The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.
- ⑤ Other voltages available, see page A56. *Nonstandard coil voltages not listed here must be ordered and installed separately as renewal parts.*

Reversing, Three Pole Contactors With Electronic DC Coil, Series CAU7 (Open type only) ⑤⑥

| 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) | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V | 500V | 690V | 1 Ø | | 3 Ø | | | | | |
| 415V | 115V | | | | 230V | | | 200V | 230V | 460V | 575V | | | | |
| 9 | 32 | 3 | 4 | 4 | 4 | 1/2 | 1 1/2 | 2 | 2 | 5 | 7-1/2 | 1 | 1 | CAU7-9E-22-* | 484 |
| 12 | 32 | 4 | 5.5 | 5.5 | 5.5 | 1/2 | 2 | 3 | 3 | 7-1/2 | 10 | 1 | 1 | CAU7-12E-22-* | 597 |
| 16 | 32 | 5.5 | 7.5 | 7.5 | 7.5 | 1 | 3 | 5 | 5 | 10 | 15 | 1 | 1 | CAU7-16E-22-* | 629 |
| 23 | 32 | 7.5 | 11 | 13 | 10 | 2 | 3 | 5 | 7-1/2 | 15 | 15 | 1 | 1 | CAU7-23E-22-* | 679 |
| 30 | 65 | 10 | 15 | 15 | 15 | 2 | 5 | 7-1/2 | 10 | 20 | 25 | 0 | 1 | CAU7-30E-02-* | 780 |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-30E-22-* | 820 |
| 37 | 65 | 11 | 18.5/20 | 20 | 8.5 | 3 | 5 | 10 | 10 | 25 | 30 | 0 | 1 | CAU7-37E-02-* | 971 |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-37E-22-* | 1018 |
| 43 | 85 | 13 | 22 | 25 | 22 | 3 | 7-1/2 | 10 | 15 | 30 | 30 | 0 | 1 | CAU7-43E-02-* | 1050 |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-43E-22-* | 1090 |
| 55 | 85 | 15 | 30 | 30 | 22 | 5 | 10 | 15 | 20 | 40 | 40 | 0 | 1 | CAU7-55E-02-* | 1070 |
| | | | | | | | | | | | | 1 ④ | 1 | CAU7-55E-22-* | 1110 |



CAU7-9E-22-24E Reversing contactor



CAU7-37E-22-24E Reversing contactor

Description

Low Consumption Electronic DC coils have extremely low inrush which allows the use of smaller power supplies. CA7-9E...55E have internal surge suppression. See page A68 for more information.

This new design results in:

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

Applications

Direct control from PLC:

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

Includes:

- Line side coil terminations
- Mechanical and electrical Interlock ③
- Reversing power wiring ① (using Power Wiring Kit Cat.# CAU7-PW...)
- Control wiring available; see footnote ②
- CAU7-9E...55E has internal surge suppression.

Coil Codes ⑥⑦

| DC Coil Codes | Voltage |
|---------------|----------|
| 12E | 12V |
| 24E | 24V |
| 36E ③ | 36-48V |
| 48E ③ | 48-72V |
| 110E ③ | 110-125V |
| 220E ③ | 220-250V |

① 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
CAU7-43E...55E deduct \$22

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

② For control wiring, add suffix "-CW" to catalog number and add \$20.

Example: CAU7-9E-22-24E becomes CAU7-9E-22-24E-CW.

③ The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.

④ The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.

⑤ CA7-9E...55E with electronic coils are not interchangeable with non-electronic DC or AC coils.

⑥ See pages A47 for limitations, on adding auxiliaries to Electronic DC Coil contacts.

⑦ Voltages of 36V DC and greater are supplied with backpack module standard. See page A85.

⑧ Not applicable with Electronic Timer accessories (CRZ_7).

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) | | | | | | | | | |
| | | AC-3 | AC-1 | 230V | 400V | 500V | 690V | 1 Ø | | 3 Ø | | | | | |
| 115V | 230V | | | | | | | 200V | 230V | 460V | 575V | | | | |
| 60 | 100 | 18.5 | 32 | 37 | 32 | 5 | 10 | 15 | 20 | 40 | 50 | 0 | 1 | CAU7-60D-02-* | 1115 |
| | | | | | | | | | | | | 1 | 1 | CAU7-60D-22-* | 1159 |
| 72 | 100 | 22 | 40 | 45 | 40 | 5 | 15 | 20 | 25 | 50 | 60 | 0 | 1 | CAU7-72D-02-* | 1240 |
| | | | | | | | | | | | | 1 | 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 | 1 | CAU7-85D-22-* | 1410 |
| 97 | 130 | 30 | 55 | 55 | 55 | 10 | 20 | 30 | 30 | 75 | 75 | 0 | 1 | CAU7-97D-02-* | 1745 |
| | | | | | | | | | | | | 1 | 1 | CAU7-97D-22-* | 1789 |



CAU7-85D Reversing (Typical)

NOTE: DC and AC coils are not interchangeable. CA7-60D...97D contactors have a two winding, 3-lead coil with built-in late break auxiliary contact and coil suppression. Refer to dimensions starting on page A86.

Includes:

- DC operating mechanism
- Line side coil terminations
- Mechanical and electrical Interlock ②
- Reversing power wiring
- Control wiring available; see footnote ①

Coil Codes ④⑤

| DC Coil Code | Voltage |
|--------------|---------|
| 12DD | 12V |
| 24DD | 24V |
| 48DD | 48V |
| 110DD | 110V |
| 220DD | 220V |

Ordering Instructions

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

- ① For control wiring, add suffix **-CW** to catalog number and add \$20. Example: CAU7-60D-22-* becomes CAU7-60D-22-***-CW**.
- ② The NC auxiliary contacts are supplied as part of the mechanical interlock (Cat.# CM7-02) and are used to electrically interlock the contactors.
- ③ The NO auxiliary contacts supplied are side mounted. Top mount NO auxiliary contacts must be special ordered. Contact your Sprecher+Schuh representative.
- ④ Other voltages available, see page A57. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ⑤ Coils for CAU7-60D...97D reversing contactors include an integrated diode surge suppressor.