

# Series CA6 Motor Protection Contactors



CA6-860-EI contactor

Sprecher + Schuh's CA6 contactor line combines the simple function of our popular CA7 series with the rugged performance demanded in this middle horsepower range. On average these contactors are 50% smaller than traditional contactors in this size class. The entire CA6 line is modularly designed for easy inspection, coil change and contact replacement. Maintenance can be performed from the front so that mounting requires no additional space. Even with the installation of mechanical interlocks and auxiliary contact blocks, the units can be flush mounted side by side, saving panel space.

## Safety first

CA6 arc chambers are completely enclosed (without arc exhaust vents), offering the best protection against hot arcing gases. A large safety distance in front of the contactor is unnecessary. CA6 contactors are also designed so that operation is impossible if the arc chambers are removed. Conversely, once the contactor is energized, the arc chambers cannot be removed. When used with terminal covers or HB Touch-Safe Lugs, CA6 contactors meet international standards for touch-safe design.



## A broad selection for middle horsepower applications

The CA6 range consists of nine contactors in three frame sizes covering motors from 75 to 600HP at 460V and from 100 to 700HP at 575V. This line is ideally suited for demanding applications such as steel mills, rock quarries, mines or for any middle horsepower application where a sturdy, durable contactor is needed.

## Rugged and reliable

CA6 contactors conform to UL508, IEC 60947 and can be operated at rated voltages up to 600V (UL) and 1000V (IEC). High thermal and switching capacities guarantee reliable operation and long life. CA6 contactors are listed in CSA Certified Elevator Equipment for heavy duty use in elevators, refrigerators and heating installations in Canada.

## Arc quenching extends contact life

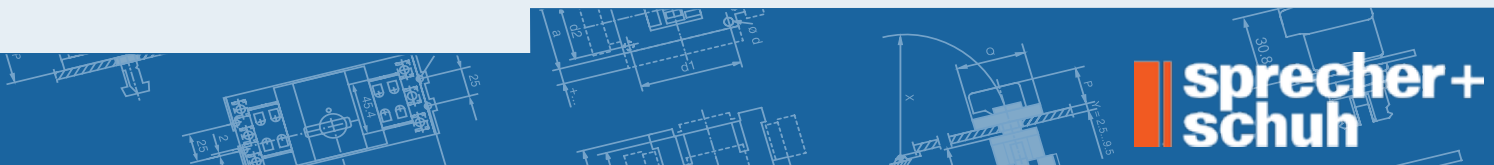
All CA6 contactors are designed with sophisticated arc quenching techniques that extinguish damaging breaking arcs quickly. This is accomplished by guiding the arc away from the contacts and into "arc chambers" which are built-in to every CA6 cover.

## Electronic coils offer many advantages

Behind the attractive outward appearance of the CA6 contactor are advanced engineering solutions that offer convenience and savings. The entire line can be equipped with an electronically controlled coil that reduces pick-up currents by 60% on average. Holding current is also reduced.

Other advantages of the CA6 electronic coil include:

- Direct connection to a PLC
- Overvoltage protection and suppression circuits (eliminating interference from the coil) are standard
- Smooth, even operation over the entire voltage range minimizes the possibility of contact bounce
- No safeguards are necessary to bridge brief supply interruptions
- Precisely defined pick-up and drop-out voltages, eliminate the possibility of chattering
- Electronic coils operate over a much broader voltage range, providing flexibility in applications and lower costs due to reduced inventory



# AC Coil CA6 Contactor



## Conventional Coil or Electronic Coil Models

Conventional Coil models are available up to 150HP @ 460V. Electronic Coil models are optional up to CA6-180-EI and standard for CA6-210-EI...860-EI models.

CA6 contactors with AC and DC electronic coils operate in two user-selectable modes – the “E” mode for normal operation or the “EI” mode for interfacing directly with a Programmable Logic Controller (PLC) or other low level signal source (13...30.2 VDC). The coil is set in the “E” mode from the factory, offering all of the functions and advantages of an electronic coil with the exception of electronic interface. An orange “jumper” located on the bottom of the contactor can be quickly changed to “EI” mode if interface from a PLC is desired.

### NON-REVERSING, Three Pole Contactors With AC Coil, Series CA6 (Open type only) ①

I <sub>e</sub> [A]		Ratings for Switching AC Motors (AC2 / AC3)										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	NO	NC	Catalog Number ①
115	250	37	64/66	80	111	10	25	40	40	75	100	1	1	CA6-115-11-* CA6-115-EI-11-*
140	250	45	78/82	80 ②	111	15	30	40	50	100	125	1	1	CA6-140-11-* CA6-140-EI-11-* ②
180	250	57	101/105	98 ②	135 ②	~	40	50	60	150	150	1	1	CA6-180-11-* CA6-180-EI-11-* ②
210	350	67	118/122	147	205	~	50	60	75	150	200	1	1	CA6-210-EI-11-*
250	350	80	140/145	177	250	~	~	75	100	200	250	1	1	CA6-250-EI-11-*
300	450	97	170/176	213	293	~	~	100	125	250	300	1	1	CA6-300-EI-11-*
420	540	135	238/250	298	424	~	~	150	175	350	400	1	1	CA6-420-EI-11-* ③
630	800	200	355	450	500	~	~	200	250	500	600	1	1	CA6-630-EI-11-*
860	1000	250	500	560	~	~	~	250	300	600	700	1	1	CA6-860-EI-11-*

### REVERSING, Three Pole Contactors With AC Coil, Series CA6 (Open type only) ⑥

I <sub>e</sub> [A]		Ratings for Switching AC Motors (AC2 / AC3)										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	NO	NC	Catalog Number ①
115	250	37	64/66	80	111	10	25	40	40	75	100	1	1	CAU6-115-22-* CAU6-115-EI-22-*
140	250	45	78/82	80 ②	111	15	30	40	50	100	125	1	1	CAU6-140-22-* CAU6-140-EI-22-* ②
180	250	57	101/105	98 ②	135 ②	~	40	50	60	150	150	1	1	CAU6-180-22-* CAU6-180-EI-22-* ②
210	350	67	118/122	147	205	~	50	60	75	150	200	1	1	CAU6-210-EI-22-*
250	350	80	140/145	177	250	~	~	75	100	200	250	1	1	CAU6-250-EI-22-*
300	450	97	170/176	213	293	~	~	100	125	250	300	1	1	CAU6-300-EI-22-*
420	540	135	238/250	298	424	~	~	150	175	350	400	1	1	CAU6-420-EI-22-* ③
630	800	200	355	450	500	~	~	200	250	500	600	1	1	CAU6-630-EI-22-*
860	1000	250	500	560	~	~	~	250	300	600	700	1	1	CAU6-860-EI-22-*

### AC Coil Codes

CA6-115 /140 /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

CA6-115-EI ...CA6-420-EI ①		
AC Coil Code	Voltage Range	
	50 Hz / 60 Hz	
24 ③	24V	
120 ④	110-130V	
220W	208-277V	
460W	380-500V	

CA6-630-EI ...CA6-860-EI ①		
AC Coil Code	Voltage Range	
	50 Hz / 60 Hz	
120	110-130V ④	
208W	200-220V	
240W	230-250V ④	
277	277V	
480	440-480V	

\*Replace “\*” with Coil Code above.

- ① “-EI” designates contactor with Electronic Interface coil.
- ② Ratings are higher for contactors with electronic coil:  
CA6-140-EI-11-\*      CA6-180-EI-11-\*  
500V = 98 kW      500V = 126 kW  
690V = 135 kW      690V = 176 kW
- ③ 24V Coil is not available for CA6-420-EI.
- ④ Coil is rated AC/DC.

# Features & Accessories

CA6 contactors utilize the latest modular design techniques that speed installation, reduce panel space and facilitate maintenance

**Main Terminal Set**

- Accommodation for single or dual connections to each pole
- Accepts flat or round conductors
- Touch safe to IP20 according to IEC 60529
- Eliminates need for Terminal Shields

**Screw type lug set**

- Accommodation for single or dual connections to each pole
- Accepts round conductors only
- Copper construction

**Aux. Contact Blocks**

- Up to four auxiliary contact blocks (8 poles) may be mounted on the side of the CA6 contactor.

**Mechanical Interlock optional with 2-N.C. auxiliary contacts**

**Surge Suppressor**

- Limits voltage spikes when switching off coil.
- Attaches to all CA6 contactors.

**CA6-115-EI 3-pole Non-Reversing Contactor**

- Connects directly to a low level signal source
- Very low pull-in and holding current
- Threshold voltages for pull-in and drop-out are very precisely defined, eliminating "chattering"
- Supply voltage dips are bridged without extra equipment
- "EI" designates contactor with Electronic Interface coil. "EI" coils cover a much wider voltage range with only one coil
- Other voltages available

**CA6-140-EI 3-pole Non-Reversing Contactor**

- Ratings for Switching AC Motors (AC2 / AC3) are higher for contactors with electronic coil:
 

CA6-140-EI-11-*	CA6-180-EI-11-*
500V = 98 kW	500V = 126 kW
690V = 135 kW	690V = 176 kW
- AC or DC coils
- Non-reversing NEMA size available (CAN6)

## Hydraulic Elevator CA6Y2 Wye Delta

### Hydraulic Elevator Wye Delta, with AC Coils (Two Contactor Type)

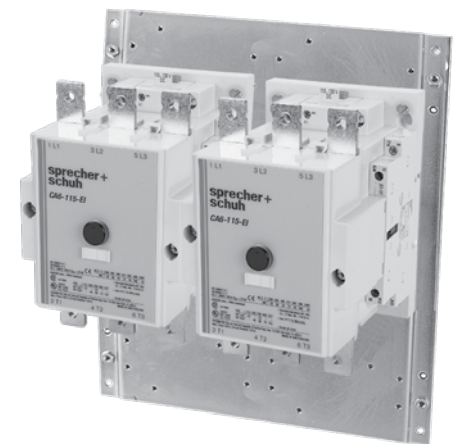
Maximum Horsepower Three Phase Ⓢ				Auxiliary Contacts per Contactor		Open Type
200V	230V	460V	575V	NO	NC	Catalog No.
60 40	60 50	125 100	150 125	1	1	CA6Y2-115-22-*LW CA6Y2-115-EI-22-*LW
60 50	75 60	175 125	200 125	1	1	CA6Y2-140-22-*LW CA6Y2-140-EI-22-*LW
75 60	100 75	200 150	250 150	1	1	CA6Y2-180-22-*LW CA6Y2-180-EI-22-*LW

**HP Selection**

Industrial Application	CSA Elevator Duty
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\*Replace "\*" with Coil Code at left. For Contactors with power wiring add suffix "-PW" to catalog number. Example: CA6Y2-115-22-\*LW becomes CA6Y2-115-22-\*PW. Control wiring is not included.

- Mechanical & Electrical Interlocks included
- Mounting plate included
- Power wiring available but not included



CA6Y2-115 Wye-Delta contactor

Ⓢ Larger sizes are possible.

# DC Coil CA6 Contactor

## NON-REVERSING, Three Pole Contactors With DC Coil, Series CA6 (Open type only) ①

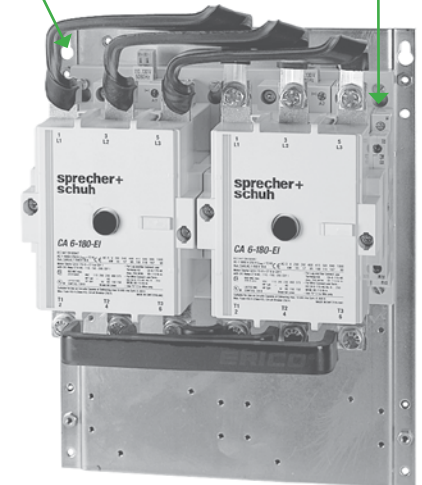
I <sub>e</sub> [A]		Ratings for Switching AC Motors (AC2 / AC3)										Auxiliary Contacts per Contactor		Open Type
		kW (50 Hz)				UL/CSA HP (60 Hz)								
		230V	400V/415V	500V	690V	1 Ø		3 Ø						
AC-3	AC-1	230V	400V/415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number
115	250	37	64/66	80	111	10	25	40	40	75	100	1	1	CA6-115-L22-* CA6-115-EI-11-*
140	250	45	78/82	80	111	15	30	40	50	100	125	1	1	CA6-140-L22-* CA6-140-EI-11-*
180	250	57	101/105	98	135	~	40	50	60	150	150	1	1	CA6-180-L22-* CA6-180-EI-11-*
210	350	67	118/122	147	205	~	50	60	75	150	200	1	1	CA6-210-EI-11-*
250	350	80	140/145	177	250	~	~	75	100	200	250	1	1	CA6-250-EI-11-*
300	450	97	170/176	213	293	~	~	100	125	250	300	1	1	CA6-300-EI-11-*
420	540	135	238/250	298	424	~	~	150	175	350	400	1	1	CA6-420-EI-11-*
630	800	200	355	450	500	~	~	200	250	500	600	1	1	CA6-630-EI-11-*
860	1000	250	500	560	~	~	~	250	300	600	700	1	1	CA6-860-EI-11-*

\*Replace "\*" with Coil Code below.

Mounting plate included

Mechanical & Electrical Interlocks included

Reversing power wiring (using Power Wiring Kit)



CA6-180 Reversing contactor

## REVERSING, Three Pole Contactors With DC Coil, Series CA6 (Open type only)

I <sub>e</sub> [A]		Ratings for Switching AC Motors (AC2 / AC3)										Auxiliary Contacts per Contactor		Open Type
		kW (50 Hz)				UL/CSA HP (60 Hz)								
		230V	400V/415V	500V	690V	1 Ø		3 Ø						
AC-3	AC-1	230V	400V/415V	500V	690V	115V	230V	200V	230V	460V	575V	NO	NC	Catalog Number
115	250	37	64/66	80	111	10	25	40	40	75	100	2	1	CAU6-115-L42-* CAU6-115-EI-22-*
140	250	45	78/82	80	111	15	30	40	50	100	125	2	1	CAU6-140-L42-* CAU6-140-EI-22-*
180	250	57	101/105	98	135	~	40	50	60	150	150	1	1	CAU6-180-L42-* CAU6-180-EI-22-*
210	350	67	118/122	147	205	~	50	60	75	150	200	1	1	CAU6-210-EI-22-*
250	350	80	140/145	177	250	~	~	75	100	200	250	1	1	CAU6-250-EI-22-*
300	450	97	170/176	213	293	~	~	100	125	250	300	1	1	CAU6-300-EI-22-*
420	540	135	238/250	298	424	~	~	150	175	350	400	1	1	CAU6-420-EI-22-*
630	800	200	355	450	500	~	~	200	250	500	600	1	1	CAU6-630-EI-22-*
860	1000	250	500	560	~	~	~	250	300	600	700	1	1	CAU6-860-EI-22-*

\*Replace "\*" with Coil Code at right.

## DC COIL CODES

CA6-115 / 140 / 180	
DC Coil Code	Voltage Range
24D	24V
110D	110V
220D	220V

Note: Unit includes two winding coil and an L11 block including one NC late break auxiliary contact mounted on the right side.

CA6-115-EI...CA6-420-EI	
DC Coil Code	Voltage Range
24D	24V
120D	110-130V
220D	200-255V

CA6-630...CA6-860-EI	
DC Coil Code	Voltage Range
120	110-130V
240W	200-255V

Contact your Sprecher + Schuh representative for complete product information.

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