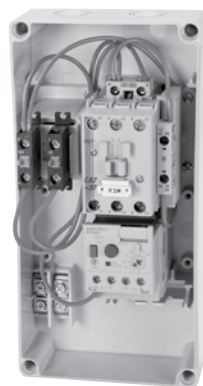


# KWIKstarters II

Preassembled or  
build from stock –  
Easy, fast, economical  
enclosed starters for  
applications up to 30HP

Sprecher + Schuh offers a broad selection of pre-assembled or “build-from-stock” starters housed in a high impact, non-metallic, cUL Approved, Type 1, 12, 4, 4X enclosure. Built for convenience, space savings and economy, KWIKstarters II are efficiently designed to use stock CA7 contactors and CEP7 or CT7N overloads usually stocked by distributors. Contactor and overload are either pre-wired and pre-mounted onto the enclosure’s built-in DIN-rail or may be ordered as separate components. Ample knockouts and open terminals guarantee quick, no fuss wiring.



KWIKstarters are also available with our advanced CEP7 Solid State Overload Relay (select appropriate overload relay code for this option)



## Sized for most industrial applications

KWIKstarters II control motors up to 30HP @ 460V in two sizes of enclosures, measuring only 208 x 98mm (7.4” x 3.9”) or 250 x 125mm (9.85” x 4.93”) for our larger sizes. This covers over 85% of industrial motor control applications in a very compact package that can be mounted adjacent to or directly on equipment.

## Thermal overload protection

KWIKstarters, sized 9 to 23 amps, are equipped with Sprecher + Schuh’s CT7N bimetallic thermal overload relay as standard. The consistent high quality of our thermal overload relays is ensured by a complex current calibration procedure performed after each unit is at full operating temperature.

## Solid state overload options

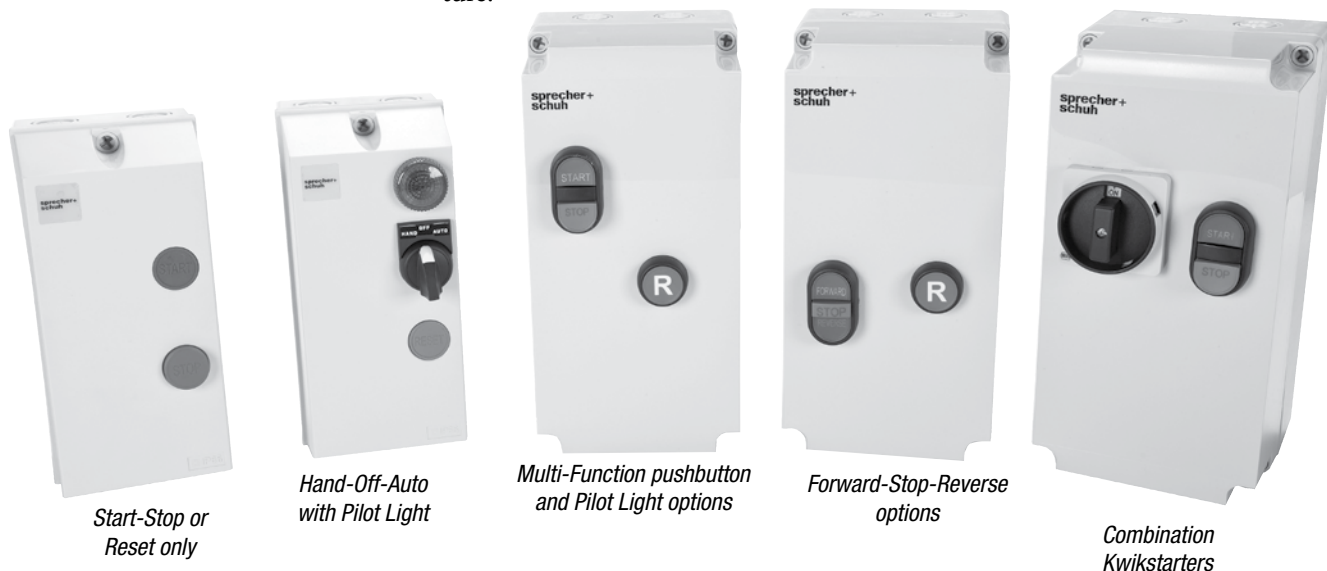
KWIKstarters II, sizes 9 to 23 amps, can also be supplied with Sprecher + Schuh’s CEP7 Second Generation solid state overload relay. The CEP7 Overload is standard on larger (sizes 30 to 43 amps) and all reversing KWIKstarters. The CEP7 solid state overload relays measure motor current directly through integrated current transformers and on board electronics. The electronics provide increased accuracy and numerous other advantages over electromechanical relays. Learn more about Sprecher + Schuh overload relays in Section B of this catalog.

## Build it yourself...



KWIKstarters may be assembled from stock components. Just grab a CA7 contactor and overload of your choice and snap them into the enclosure. Minimal wiring is required and assembly can be completed in minutes.



Most KWIKstarters are equipped with Thermal Overload protection as standard



#### KWIKstarters II with CT7N or CEP7 Overload Relays; ①⑥

Cover Control/ Enclosure	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ③
	Single Ø		Three Ø									
	115V	230V	200V	230V	460V	575V	NO	NC				
KWIKstarter with Start & Raised Stop ④⑤												
	1/2	1 1/2	~	~	~	~	1 ②	0	CBK7-9-*♦-P2	✖	302	Q1
	~	~	2	2	5	7 1/2	1 ②	0	CAK7-9-*♦-P2	✖		
	1/2	2	~	~	~	~	1 ②	0	CBK7-12-*♦-P2	✖	338	Q1
	~	~	3	3	7 1/2	10	1 ②	0	CAK7-12-*♦-P2	✖		
	1	3	~	~	~	~	1 ②	0	CBK7-16-*♦-P2	✖	363	Q1
	~	~	5	5	10	15	1 ②	0	CAK7-16-*♦-P2	✖		
	2	3	~	~	~	~	1 ②	0	CBK7-23-*♦-P2	✖	390	Q1
	~	~	5	7 1/2	15	15	1 ②	0	CAK7-23-*♦-P2	✖		
KWIKstarter with Reset												
	1/2	1 1/2	~	~	~	~	1	0	CBK7-9-*♦-P0	✖	276	Q1
	~	~	2	2	5	7 1/2	1	0	CAK7-9-*♦-P0	✖		
	1/2	2	~	~	~	~	1	0	CBK7-12-*♦-P0	✖	313	Q1
	~	~	3	3	7 1/2	10	1	0	CAK7-12-*♦-P0	✖		
	1	3	~	~	~	~	1	0	CBK7-16-*♦-P0	✖	338	Q1
	~	~	5	5	10	15	1	0	CAK7-16-*♦-P0	✖		
	2	3	~	~	~	~	1	0	CBK7-23-*♦-P0	✖	365	Q1
	~	~	5	7 1/2	15	15	1	0	CAK7-23-*♦-P0	✖		

#### Coil Codes ⑤

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
✕ 24Z	24V	24V	Separate	Separate
✕ 120	110V	120V	Common	Separate
✕ 208	~	208V	~	Common
✕ 220W	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
380	380V-400V	440V	~	Common
✕ 480	440V	480V	~	Common
600	550V	600V	~	Common

#### Control Circuit Note

**Common:** Coils are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils are assumed to be from a separate source and will not be connected to the line source per the table.





#### Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code	See this page See page C17
Replace (◆) with O/L Relay	
<b>Important Note:</b> KWIKstarters II are only designed to accommodate CT7N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select O/L Relay Code from page C17.	

- ① KWIKstarters II are designed for three-wire control circuits. Two-wire (maintain) control can be accomplished by adding pushbutton latch KS7-PLA.
- ② A special design NO auxiliary contact (Cat.# KS7-PCK) is used as the holding circuit interlock, as well as, the START button interface. It is not available for other use.
- ③ Refer to page C28 for dimensional information.
- ④ STOP button also functions as RESET button. Plastic Bezel is standard.
- ⑤ Other voltages available, see Section A. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ⑥ Use CT7N or CEP7-ED/CEP7-EE Second Generation overload.

#### KWIKstarters II with CT7N or CEP7 Overload Relays; ①④⑤⑥

Cover Control/ Enclosure	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ③	
	Single Ø		Three Ø										
	115V	230V	200V	230V	460V	575V	NO	NC					
KWIKstarter with Start & Raised Stop ④⑤													
	1/2	1 1/2	~	~	~	~	1 ②	0	CBK7-9E-✱-◆-P2	ⓧ	379	Q1	
	~	~	2	2	5	7 1/2			CAK7-9E-✱-◆-P2	ⓧ			
	1/2	2	~	~	~	~	1 ②	0	CBK7-12E-✱-◆-P2	ⓧ	425	Q1	
	~	~	3	3	7 1/2	10			CAK7-12E-✱-◆-P2	ⓧ			
	1	3	~	~	~	~	1 ②	0	CBK7-16E-✱-◆-P2	ⓧ	456	Q1	
	~	~	5	5	10	15			CAK7-16E-✱-◆-P2	ⓧ			
	2	3	~	~	~	~	1 ②	0	CBK7-23E-✱-◆-P2	ⓧ	489	Q1	
	~	~	5	7 1/2	15	15			CAK7-23E-✱-◆-P2	ⓧ			
	KWIKstarter with Reset												
		1/2	1 1/2	~	~	~	~	1	0	CBK7-9E-✱-◆-P0	ⓧ	353	Q1
~		~	2	2	5	7 1/2			CAK7-9E-✱-◆-P0	ⓧ			
1/2		2	~	~	~	~	1	0	CBK7-12E-✱-◆-P0	ⓧ	400	Q1	
~		~	3	3	7 1/2	10			CAK7-12E-✱-◆-P0	ⓧ			
1		3	~	~	~	~	1	0	CBK7-16E-✱-◆-P0	ⓧ	431	Q1	
~		~	5	5	10	15			CAK7-16E-✱-◆-P0	ⓧ			
2		3	~	~	~	~	1	0	CBK7-23E-✱-◆-P0	ⓧ	464	Q1	
~		~	5	7 1/2	15	15			CAK7-23E-✱-◆-P0	ⓧ			

#### Coil Codes ⑤


















DC Coil Codes	Voltage
12E	12V
24E	24V

#### Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code Replace (◆) with O/L Relay	<b>See this page</b> <b>See page C17</b>
<b>Important Note:</b> KWIKstarters II are only designed to accommodate C77N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select O/L Relay Code from page C17.	

- ① KWIKstarters II are designed for three-wire control circuits. Two-wire (maintain) control can be accomplished by adding pushbutton latch KS7-PLA.
- ② A special design NO auxiliary contact (Cat.# KS7-PCK) is used as the holding circuit interlock, as well as, the START button interface. It is not available for other use.
- ③ Refer to page C28 for dimensional information.
- ④ STOP button also functions as RESET button. Plastic Bezel is standard.
- ⑤ CA7-9E...23E with electronic coils are not interchangeable with non-electronic DC or AC coils
- ⑥ Use CT7N or CEP7-ED/CEP7-EE Second Generation overload.

**KWIKstarters II with CT7N or CEP7 Overload Relays with H-O-A and Light ①②③④⑤⑥**

Cover Control/ Enclosure	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ④
	Single Ø		Three Ø									
	115V	230V	200V	230V	460V	575V	NO	NC				
	KWIKstarter with Reset and H-O-A Selector Switch and Light with AC Coil											
	1/2	1 1/2	~	~	~	~	1	0	CBK7-9-*-*♦-P0+1R7 	380	Q1	
	~	~	2	2	5	7 1/2			CAK7-9-*-*♦-P0+1R7 			
	1/2	2	~	~	~	~	1	0	CBK7-12-*-*♦-P0+1R7 	417	Q1	
	~	~	3	3	7 1/2	10			CAK7-12-*-*♦-P0+1R7 			
	1	3	~	~	~	~	1	0	CBK7-16-*-*♦-P0+1R7 	442	Q1	
	~	~	5	5	10	15			CAK7-16-*-*♦-P0+1R7 			
	2	3	~	~	~	~	1	0	CBK7-23-*-*♦-P0+1R7 	469	Q1	
	~	~	5	7 1/2	15	15			CAK7-23-*-*♦-P0+1R7 			
	KWIKstarter with Reset and H-O-A Selector Switch and Light with Electronic DC Coil ⑦											
	1/2	1 1/2	~	~	~	~	1	0	CBK7-9E-*-*♦-P0+1R7 	457	Q1	
	~	~	2	2	5	7 1/2			CAK7-9E-*-*♦-P0+1R7 			
	1/2	2	~	~	~	~	1	0	CBK7-12E-*-*♦-P0+1R7 	504	Q1	
	~	~	3	3	7 1/2	10			CAK7-12E-*-*♦-P0+1R7 			
	1	3	~	~	~	~	1	0	CBK7-16E-*-*♦-P0+1R7 	535	Q1	
	~	~	5	5	10	15			CAK7-16E-*-*♦-P0+1R7 			
	2	3	~	~	~	~	1	0	CBK7-23E-*-*♦-P0+1R7 	568	Q1	
	~	~	5	7 1/2	15	15			CAK7-23E-*-*♦-P0+1R7 			

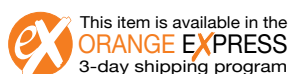
**Coil Codes ⑦**

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
✖ 24Z	24V	24V	Separate	Separate
✖ 120	110V	120V	Common	Separate
✖ 208	~	208V	~	Common
✖ 220W	200V-220V	208V-240V	Common	Common
✖ 240	220V	240V	Common	Common
D.C. Coil Code	Voltage Range			
	VDC			
	12E	12V		
	24E	24V		

**Control Circuit Note**

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Line Voltage not listed: (i.e.: 480 and 575 VAC) require a separate control source (i.e.: 120 VAC). D7D pilot devices are rated 300 VAC maximum.





**Ordering Instructions**

Specify Catalog Number	
Replace (✱) with Coil Code Replace (◆) with O/L Relay	<b>See this page</b> <b>See page C17</b>
<b>Important Note:</b> KWIKstarters II are only designed to accommodate CT7N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select O/L Relay Code from page C17.	

- ① This is a factory assembly. The KS7-C0S1 does not include knock-outs for field assembly of this starter.
- ② Uses D7D-P4N\_ Red Monolithic "Run" pilot light with LED bulb. Pilot light voltage to match coil voltage for 24, 120, 240 VAC control. Red "Run" Light can be changed for Green. Change +1R7 to +1G7. For example, CAK7-9-✱-◆-P0+1R7 becomes CAK7-9-✱-◆-P0+1G7.
- ③ Uses D7D-SM32x20 Monolithic 3-position selector switch for maintain control, HAND-OFF-AUTO function with legend plate.
- ④ Refer to page C26 for wiring diagram and C28 for dimensional information. This is a clam-shell enclosure design with wires to cover controls.
- ⑤ Uses CT7N or CEP7-ED/CEP7-EE Second Generation overload.
- ⑥ One NO auxilliary for customer use. There is no room for additional auxilliaries.
- ⑦ CA7-9E...23E with electronic coils are not interchangeable with non-electronic DC or AC coils. Uses D7D-P4N3 Red Monolithic "Run" pilot light.

#### NEMA KWIKstarters II with CT7N or CEP7 Overload Relays ①⑥

Cover Control/ Enclosure	NEMA Size	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ③
		Single Ø		Three Ø									
		115V	230V	200V	230V	460V	575V	NO	NC				
	KWIKstarter with Start & Raised Stop with AC Coil ④⑤												
	00	1/3	1	~	~	~	~	1 ②	0	CBKN7-12-*♦-P2	✗	338	Q1
		~	~	1-1/2	1-1/2	2	2			CAKN7-12-*♦-P2	✗		
	0	1	2	~	~	~	~	1 ②	0	CBKN7-16-*♦-P2	✗	363	Q1
		~	~	3	3	5	5			CAKN7-16-*♦-P2	✗		
	KWIKstarter with Start & Raised Stop with Electronic DC Coil ⑦												
	00	1/3	1	~	~	~	~	1 ②	0	CBKN7-12E-*♦-P2	✗	425	Q1
		~	~	1-1/2	1-1/2	2	2			CAKN7-12E-*♦-P2	✗		
	0	1	2	~	~	~	~	1 ②	0	CBKN7-16E-*♦-P2	✗	456	Q1
		~	~	3	3	5	5			CAKN7-16E-*♦-P2	✗		
	KWIKstarter with Reset with AC Coil												
	00	1/3	1	~	~	~	~	1 ②	0	CBKN7-12-*♦-P0	✗	313	Q1
		~	~	1-1/2	1-1/2	2	2			CAKN7-12-*♦-P0	✗		
	0	1	2	~	~	~	~	1 ②	0	CBKN7-16-*♦-P0	✗	338	Q1
		~	~	3	3	5	5			CAKN7-16-*♦-P0	✗		
	KWIKstarter with Reset with Electronic DC Coil ⑦												
	00	1/3	1	~	~	~	~	1 ②	0	CBKN7-12E-*♦-P0	✗	400	Q1
		~	~	1-1/2	1-1/2	2	2			CAKN7-12E-*♦-P0	✗		
	0	1	2	~	~	~	~	1 ②	0	CBKN7-16E-*♦-P0	✗	431	Q1
		~	~	3	3	5	5			CAKN7-16E-*♦-P0	✗		

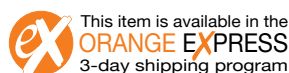
#### Coil Codes ⑤⑦

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
24Z	24V	24V	Separate	Separate
120	110V	120V	Common	Separate
208	~	208V	~	Common
220W	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
380	380V-400V	440V	~	Common
480	440V	480V	~	Common
600	550V	600V	~	Common
D.C. Coil Code	Voltage Range			
	VDC			
12E	12V			
24E	24V			

#### Control Circuit Note

**Common:** Coils are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils are assumed to be from a separate source and will not be connected to the line source per the table.




#### Ordering Instructions

Specify Catalog Number	
Replace (✱) with Coil Code Replace (◆) with O/L Relay	<b>See this page</b> <b>See page C17</b>
<b>Important Note:</b> KWIKstarters II are only designed to accommodate CT7N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select O/L Relay Code from page C17.	

- ① KWIKstarters II are designed for three-wire control circuits. Two-wire (maintain) control can be accomplished by adding pushbutton latch KS7-PLA.
- ② A special design NO auxiliary contact (Cat.# KS7-PCK) is used as the holding circuit interlock, as well as, the START button interface. It is not available for other use.
- ③ Refer to page C28 for dimensional information.
- ④ STOP button also functions as RESET button. Plastic Bezel is standard.
- ⑤ Other voltages available, see Section A. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ⑥ Use CT7N or CEP7-ED/CEP7-EE Second Generation overload.
- ⑦ CA7-9E...23E with electronic coils are not interchangeable with non-electronic DC or AC coils.

**NEMA KWIKstarters II with CT7N or CEP7 Overload Relays with H-O-A and Light ①②③⑤⑥**

Cover Control/ Enclosure	NEMA Size	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ④
		Single Ø		Three Ø									
		115V	230V	200V	230V	460V	575V	NO	NC				
	NEMA KWIKstarter with Reset and H-O-A Selector Switch and Light with AC Coil												
	00	1/3	1	~	~	~	~	1 ⑥	0	CBKN7-12-✱-◆-P0+1R7 ⑤	417	Q1	
		~	~	1-1/2	1-1/2	2	2			CAKN7-12-✱-◆-P0+1R7 ⑤			
	0	1	2	~	~	~	~	1 ⑥	0	CBKN7-16-✱-◆-P0+1R7 ⑤	442	Q1	
		~	~	3	3	5	5			CAKN7-16-✱-◆-P0+1R7 ⑤			
	NEMA KWIKstarter with Reset and H-O-A Selector Switch and Light with Electronic DC Coil ⑦												
	00	1/3	1	~	~	~	~	1 ⑥	0	CBKN7-12E-✱-◆-P0+1R7 ⑤	504	Q1	
		~	~	1-1/2	1-1/2	2	2			CAKN7-12E-✱-◆-P0+1R7 ⑤			
	0	1	2	~	~	~	~	1 ⑥	0	CBKN7-16E-✱-◆-P0+1R7 ⑤	535	Q1	
		~	~	3	3	5	5			CAKN7-16E-✱-◆-P0+1R7 ⑤			

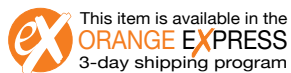
**Coil Codes ⑦**

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
⑤ 24Z	24V	24V	Separate	Separate
⑤ 120	110V	120V	Common	Separate
⑤ 208	~	208V	~	Common
⑤ 220W	200V-220V	208V-240V	Common	Common
⑤ 240	220V	240V	Common	Common
D.C. Coil Code	Voltage Range			
	VDC			
	12V			
	24V			

**Control Circuit Note**

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Line Voltage not listed: (i.e.: 480 and 575 VAC) require a separate control source (i.e.: 120 VAC). D7D pilot devices are rated 300 VAC maximum.












**Ordering Instructions**

Specify Catalog Number	
Replace (✱) with Coil Code Replace (◆) with O/L Relay	<b>See this page</b> <b>See page C17</b>
<b>Important Note:</b> KWIKstarters II are only designed to accommodate CT7N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select O/L Relay Code from page C17.	

- ① This is a factory assembly. The KS7-C0S1 does not include knock-outs for field assembly of this starter.
- ② Uses D7D-P4N\_ Red Monolithic "Run" pilot light with LED bulb. Pilot light voltage to match coil voltage for 24, 120, 240 VAC control. Red "Run" Light can be changed for Green. Change +1R7 to +1G7. For example, CAKN7-9-✱-◆-P0+1R7 becomes CAKN7-9-✱-◆-P0+1G7.
- ③ Uses D7D-SM32x20 Monolithic 3-position selector switch for maintain control, HAND-OFF-AUTO function with legend plate.
- ④ Refer to page C26 for wiring diagram and C28 for dimensional information. This is a clam-shell enclosure design with wires to cover controls.
- ⑤ Uses CT7N or CEP7-ED/CEP7-EE Second Generation overload.
- ⑥ One NO auxilliary for customer use. There is no room for additional auxilliaries.
- ⑦ CA7-9E...23E with electronic coils are not interchangeable with non-electronic DC or AC coils. Uses D7D-P4N3 Red Monolithic "Run" pilot light.

**KWIKstarters II with CT7N or CEP7 Overload Relays with I-O Multifunction and E-Stop ①②③④⑤⑥**

Cover Control/ Enclosure	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code
	Single Ø		Three Ø									
	115V	230V	200V	230V	460V	575V	NO	NC				
	KWIKstarter with Reset and H-O-A Selector Switch and Light with AC Coil											
	1/2	1 1/2	~	~	~	~	1	0	CBK7-9-*-*◆-P0+4U-ESTOP 	415	Q1	
	~	~	2	2	5	7 1/2			CAK7-9-*-*◆-P0+4U-ESTOP 			
	1/2	2	~	~	~	~	1	0	CBK7-12-*-*◆-P0+4U-ESTOP 	452	Q1	
	~	~	3	3	7 1/2	10			CAK7-12-*-*◆-P0+4U-ESTOP 			
	1	3	~	~	~	~	1	0	CBK7-16-*-*◆-P0+4U-ESTOP 	477	Q1	
	~	~	5	5	10	15			CAK7-16-*-*◆-P0+4U-ESTOP 			
	2	3	~	~	~	~	1	0	CBK7-23-*-*◆-P0+4U-ESTOP 	504	Q1	
	~	~	5	7 1/2	15	15			CAK7-23-*-*◆-P0+4U-ESTOP 			

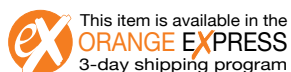
**Coil Codes**

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
ⓧ 24Z	24V	24V	Separate	Separate
ⓧ 120	110V	120V	Common	Separate
ⓧ 208	~	208V	~	Common
ⓧ 220W	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
ⓧ 380	380V-400V	440V	~	Common
ⓧ 480	440V	480V	~	Common
600	550V	600V	~	Common

**Control Circuit Note**

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Line Voltage not listed: (i.e.: 480 and 575 VAC) require a separate control source (i.e.: 120 VAC).





**Ordering Instructions**





Specify Catalog Number	
Replace (✱) with Coil Code Replace (◆) with O/L Relay	<b>See this page</b> <b>See page C17</b>
<b>Important Note:</b> KWIKstarters II are only designed to accommodate CT7N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select O/L Relay Code from page C17.	

- ① This is a factory assembly. The KS7-C0S1 does not include knock-outs for field assembly of this starter.
- ② Uses D7P-U2EFFEPX11 Two-Position Multifunction push button with legend I/O.
- ③ Uses D7P-MT44PX01 Emergency Stop Push Button.
- ④ Refer to page C28 for dimensional information. This is a clam-shell enclosure design with wires to cover controls.
- ⑤ Uses CT7N or CEP7-ED/CEP7-EE Second Generation overload.
- ⑥ There is no room for additional auxiliaries.

**KWIKstarter II Enclosures with CT7N or CEP7 Overload Relays ❶❷**

Component	Description	For Use With		Environmental Approvals	Catalog Number	Price
		Contactors	Overload			
	<b>Flush Green START / Extended Red STOP-</b> Mechanical interface auxiliary contact (KS7-PCK) included in enclosure.	CA7-9...23	CT7N CEP7-ED1 CEP7-EE	cUL Type 1/12/4/4x IEC IP66	<b>KS7-COS4</b>	<b>70</b>
	<b>Blue RESET Only</b>	CA7-9...23	CT7N CEP7-ED1 CEP7-EE	cUL Type 1/12/4/4x IEC IP66	<b>KS7-COS1</b>	<b>45</b>

**KWIKstarter II Components with CT7N or CEP7 Overload Relays**

Component	Description	For Use With...	Catalog Number	Price
	<b>Start - Contact kit</b> Specially designed NO auxiliary; mechanically interfaces with the START button. Mounts on right side. A KS7-PCK is included in every KS7-COS4 enclosure.	KS7-COS4 (Replacement Part)	<b>KS7-PCK</b>	<b>17</b>
	<b>Pushbutton Latch -</b> For maintain contact control (2-wire control)	KS7-COS4	<b>KS7-PLA</b>	<b>8.50</b>
	<b>Neutral Terminal</b>	KS7-COS1 KS7-COS4	<b>KS7-PNT</b>	<b>12</b>
	<b>Grounding Kit</b> (for use with metal conduit)	All KWIKstarter enclosures	<b>KS7-GR1</b>	<b>13.50</b>

- ❶ KWIKstarters II are only designed to accommodate CA7-9...23 contactors with CT7N Thermal Overload Relays or CEP7 Second Generation Solid State Overload Relays. Select contactor from Section A and overload relay from Section B in this catalog.
- ❷ KS7-COS4 and KS7-COS1 may be used with either CEP7 Second Generation or CT7N (field interchangeable).

**KWIKstarters II with CEP7 Solid State Overload Relay  
3-Phase Application ②③**

For use with KWIKstarter...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay used)	Price Adder
<b>3-Phase / Manual Reset / Class 10</b>				
CAK7-9...CAK7-23	0.1...0.5	D1AB	CEP7-ED1AB	+9
	0.2...1.0	D1BB	CEP7-ED1BB	+9
	1.0...5.0	D1CB	CEP7-ED1CB	+9
	3.2...16	D1DB	CEP7-ED1DB	+9
	5.4...27	D1EB	CEP7-ED1EB	+9
<b>3-Phase / Selectable Function and Class</b>				
CAK7-9...CAK7-23	0.1...0.5	EAB	CEP7-EEAB	+17
	0.2...1.0	EBB	CEP7-EEBB	+17
	1.0...5.0	ECB	CEP7-EECB	+17
	3.2...16	EDB	CEP7-EEDB	+17
	5.4...27	EEB	CEP7-EEEB	+17

**KWIKstarters II with CEP7 Solid State Overload Relay  
1-Phase Application ②③**

For use with KWIKstarter...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay used)	Price Adder
<b>1-Phase / Selectable Function and Class</b>				
CBK7-9...CBK7-23	1.0-5.0	EPB	CEP7S-EEPB	+15
	3.2-16	ERB	CEP7S-EERB	+15
	5.2-27	ESB	CEP7S-EESB	+15


**KWIKstarters II with CT7N Bimetallic Overload Relays ①**

For use with Kwikstarter...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay used)	Price Adder
CAK7-9...CAK7-23 and CBK7-9...CBK7-23  Frame "A"	0.10...0.16	AA16	CT7N-23-A16	Standard
	0.16...0.25	AA25	CT7N-23-A25	Standard
	0.25...0.40	AA40	CT7N-23-A40	Standard
	0.35...0.50	AA50	CT7N-23-A50	Standard
	0.45...0.63	AA63	CT7N-23-A63	Standard
	0.55...0.80	AA80	CT7N-23-A80	Standard
	0.75...1.0	AB10	CT7N-23-B10	Standard
	0.90...1.3	AB13	CT7N-23-B13	Standard
	1.1...1.6	AB16	CT7N-23-B16	Standard
	1.4...2.0	AB20	CT7N-23-B20	Standard
	1.8...2.5	AB25	CT7N-23-B25	Standard
	2.3...3.2	AB32	CT7N-23-B32	Standard
	2.9...4.0	AB40	CT7N-23-B40	Standard
	3.5...4.8	AB48	CT7N-23-B48	Standard
	4.5...6.3	AB63	CT7N-23-B63	Standard
	5.5...7.5	AB75	CT7N-23-B75	Standard
	7.2...10	AC10	CT7N-23-C10	Standard
	9.0...12.5	AC12	CT7N-23-C12	Standard
	11.3...16	AC16	CT7N-23-C16	Standard
	15...20	AC20	CT7N-23-C20	Standard
	17.5...21.5	AC21	CT7N-23-C21	Standard
	21...25	AC25	CT7N-23-C25	Standard



- ① If using CT7N in single phase application with CBK7-9...16, wire per drawing on page C26.
- ② CEP7 Overloads are available for use in KWIKStarters if the premium features are required (see Section B).
- ③ 3-phase CEP7-ED or CEP7-EE units are only designed for 3Ø applications. Single phase CEP7S units are only designed for 1Ø applications. If using CEP7S, wire per drawing on page C26.

#### KWIKstarters II with CEP7 Overload Relays ❶

Enclosure (KS7-C2S4)	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ③
	Single Ø		Three Ø									
	115V	230V	200V	230V	460V	575V	NO	NC				
	KWIKstarters II with AC Coil											
	2	5	~	~	~	~	1	0	CBK7-30-*-ETD-P▼	462	Q2	
	~	~	7-1/2	10	20	25			CAK7-30-*-◆-P▼			
	3	5	~	~	~	~	1	0	CBK7-37-*-ETD-P▼	507	Q2	
	~	~	10	10	25	30			CAK7-37-*-◆-P▼			
	3	7-1/2	~	~	~	~	1	0	CBK7-43-*-ETD-P▼	600	Q2	
	~	~	10	15	30	30			CAK7-43-*-◆-P▼			



#### Control Circuit Note

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Pilot lights are 240 VAC maximum.

#### Replace ◆ with one of the following Overload Relays

For use with KWIKstarter...	Amp Range	Overload Relay Code (◆)	Catalog No. (of Overload Relay used)	Price Adder
3-Phase / Manual Reset / Class 10				
CAK7-30...43	1.0...5.0	D1CD	CEP7-ED1CD	+0
	3.2...16	D1DD	CEP7-ED1DD	+0
	5.4...27	D1ED	CEP7-ED1ED	+0
	9...45	D1FD	CEP7-ED1FD	+0
3-Phase / Auto or Manual Reset / Class 10, 15, 20, 30				
CAK7-30...43	1.0...5.0	ECD	CEP7-EECD	+21
	3.2...16	EDD	CEP7-EEDD	+21
	5.4...27	EED	CEP7-EEED	+21
	9...45	EFD	CEP7-EEFD	+21

#### Coil Codes (\*) ④⑥

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
24Z	24V	24V	Separate	Separate
120	110V	120V	Common	Separate
208	~	208V	~	Common
220W	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
380	380V-400V	440V	~	Common
480	440V	480V	~	Common
600	550V	600V	~	Common

#### Optional CA7 Modifications (Factory Assembled)

Description	Add to end of catalog number	Price Adder
Electronic Interface	-JE	+94
Surge Suppressor RD	-C	+54
Surge Suppressor Varistor	-V	+54
Additional NC Contact	-L01	+45
Additional NO Contact	-L10	+45

#### Ordering Instructions

Specify Catalog Number	
Replace (*) with Coil Code	See this page only
Replace (◆) with O/L Relay	
Replace (▼) with Pilot Device Option	








#### Pilot Device Options (includes reset) ②⑤

Pushbutton Description	Replace ▼ in catalog number with	Price Adder
START-STOP Multi-function	3U	Standard
I-O Multi-function	4U	Standard
OFF-ON 2-Position Selector switch	6	Standard
HAND-OFF-AUTO 3-Position Selector switch	7	Standard
Run Pilot Light Green (LED)	1G	Standard
Run Pilot Light Red (LED)	1R	Standard
Overload Alarm Pilot Light (LED)	1Y	Standard
D7-N8 22mm Hole Plug	0	Standard
Pilot Light Red (LED) with START-STOP Multi-function	1R3U	+50
Pilot Light Red (LED) with I-O Multi-function	1R4U	+50
Illuminated Red (LED) HAND-OFF-AUTO 3-Position Selector Switch	1R7U	+50

- ❶ Use CEP7-ED/CEP7-EE Second Generation overloads only. Single-phase applications utilize CEP7S-EED only.
- ❷ Plastic Bezel is standard. Pilot Device options include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.
- ❸ Refer to page C27 for wiring diagram and C28 for dimensional information.

- ④ Other voltages available, see Section A. Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.
- ⑤ One and only one Pilot Device option must be selected. If Pilot Light option is selected then coil voltage must be 24V, 120V or 240V AC only.
- ⑥ CPT not possible with KS7-C2S4 enclosure.

#### KWIKstarters II with CEP7 Overload Relays ①

Enclosure (KS7-C2S4)	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Price	Dimension Code
	Single Ø		Three Ø								
	115V	230V	200V	230V	460V	575V	NO	NC			
	KWIKstarters II with Electronic DC Coil ④										
	2	5	~	~	~	~	1	0	CBK7-30E-*-ETD-P▼ 	572	Q2
	~	~	7-1/2	10	20	25			CAK7-30E-*-◆-P▼ 		
	3	5	~	~	~	~	1	0	CBK7-37E-*-ETD-P▼ 	633	Q2
	~	~	10	10	25	30			CAK7-37E-*-◆-P▼ 		
	3	7-1/2	~	~	~	~	1	0	CBK7-43E-*-ETD-P▼ 	767	Q2
	~	~	10	15	30	30			CAK7-43E-*-◆-P▼ 		



#### Coil Codes ④⑥

D.C.	Voltage Range
Coil Code	VDC
12E	12V
24E ⚡	24V
48E	48-72V
110E	110-125V
220E	220-250V

#### Pilot Device Options (includes reset) ②⑤

Pushbutton Description	Replace ▼ in catalog number with	Price Adder
START-STOP Multi-function	3U	Standard
I-O Multi-function	4U	Standard
OFF-ON 2-Position Selector switch	6	Standard
HAND-OFF-AUTO 3-Position Selector switch	7	Standard
Run Pilot Light Green (LED)	1G	Standard
Run Pilot Light Red (LED)	1R	Standard
Overload Alarm Pilot Light (LED)	1Y	Standard
D7-N8 22mm Hole Plug	0	Standard
Pilot Light Red (LED) with START-STOP Multi-function	1R3U	+50
Pilot Light Red (LED) with I-O Multi-function	1R4U	+50
Illuminated Red (LED) HAND-OFF-AUTO 3-Position Selector Switch	1R7U	+50

#### Optional CA7 Modifications (Factory Assembled)

Description	Add to end of catalog number	Price Adder
Electronic Interface	-JE	+94
Surge Suppressor RD	-C	+54
Surge Suppressor Varistor	-V	+54
Additional NC Contact	-L01	+45
Additional NO Contact	-L10	+45

#### Ordering Instructions


Specify Catalog Number	
Replace (*) with Coil Code	See this page only
Replace (◆) with O/L Relay	
Replace (▼) with Pilot Device Option	

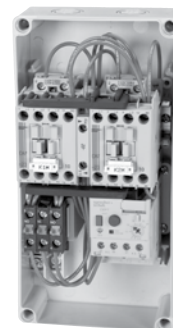
#### Replace ◆ with one of the following Overload Relays

For use with KWIKstarter...	Amp Range	Overload Relay Code (◆)	Catalog No. (of Overload Relay used)	Price Adder
<b>3-Phase / Manual Reset / Class 10</b>				
CAK7-30...43	1.0...5.0	D1CD	CEP7-ED1CD	+0
	3.2...16	D1DD	CEP7-ED1DD	+0
	5.4...27	D1ED	CEP7-ED1ED	+0
	9...45	D1FD	CEP7-ED1FD	+0
<b>3-Phase / Auto or Manual Reset / Class 10, 15, 20, 30</b>				
CAK7-30...43	1.0...5.0	ECD	CEP7-EECD	+21
	3.2...16	EDD	CEP7-EEDD	+21
	5.4...27	EED	CEP7-EEED	+21
	9...45	EFD	CEP7-EEFD	+21

- ① Use CEP7-ED/CEP7-EE Second Generation overloads only. Single-phase applications utilize CEP7S-EETD only.
- ② Plastic Bezel is standard. Pilot Device options include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.
- ③ Refer to page C27 for wiring diagram and C28 for dimensional information.
- ④ CA7-9E...43E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- ⑤ One and only one Pilot Device option must be selected.
- ⑥ CPT not possible with KS7-C2S4 enclosure.

### Three Phase Reversing KWIKstarters II with CEP7 Overload Relays ①

Enclosure (KS7-COS4R)	Maximum Horsepower				Auxiliary Contacts per Contactor ⑦		cUL Approved- Type 1/12/4/4X IP66		Dimension Code
	Three Ø								
	200V	230V	460V	575V	NO	NC			
	FVR 3-Phase with AC Coil								
	2	2	5	7 1/2	1	1	CAUK7-9-*--♦-P▼ ⓧ	675	Q3
	3	3	7 1/2	10	1	1	CAUK7-12-*--♦-P▼ ⓧ	745	Q3
	5	5	10	15	1	1	CAUK7-16-*--♦-P▼ ⓧ	790	Q3
	5	7 1/2	15	15	1	1	CAUK7-23-*--♦-P▼ ⓧ	835	Q3



### Coil Codes (\*) ④⑥

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
24Z ⓧ	24V	24V	Separate	Separate
120 ⓧ	110V	120V	Common	Separate
208	~	208V	~	Common
220W ⓧ	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
380	380V-400V	440V	~	Common
480 ⓧ	440V	480V	~	Common
600	550V	600V	~	Common

### Control Circuit Note

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Pilot lights are 240 VAC maximum.

### Pilot Device Options (includes reset) ②⑥

Pushbutton Description	Replace ▼ in catalog number with	Price Adder
FOR-STOP-REV Multi-function	3U	Standard
UP-STOP-DOWN Multi-function	4U	Standard
OPEN-STOP-CLOSE Multi-function	5U	Standard
FOR-STOP-REV 3-Position Selector switch	6	Standard
UP-OFF-DOWN 3-Position Selector switch	7	Standard
OPEN-OFF-CLOSE 3-Position Selector switch	8	Standard
Overload Alarm Pilot Light	1Y	Standard
D7-N8 22mm Hole Plug	0	Standard

### Optional CA7 Modifications (Factory Assembled)

Description (supplied on each contactor)	Add to end of catalog number	Price Adder
Electronic Interface	-2JE	+188
Surge Suppressor RD	-2C	+108
Surge Suppressor Varistor	-2V	+108
Additional NC Contact	-2L01	+90
Additional NO Contact	-2L10	+90

### Ordering Instructions






Specify Catalog Number	
Replace (*) with Coil Code	See this page ONLY
Replace (♦) with O/L Relay	
Replace (▼) with Pilot Device Option	

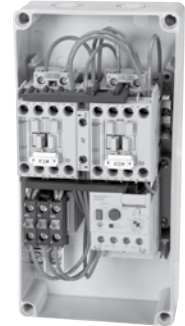
### Replace ♦ with one of the following Overload Relays

For use with KWIKstarter...	Amp Range	Overload Relay Code (♦)	Catalog Number (of Overload Relay used)	Price Adder
<b>3-Phase / Manual Reset / Class 10</b>				
CAUK7-9...23 CAUK7-9E...23E	0.1...0.5	D1AB	CEP7-ED1AB	Standard
	0.2...1.0	D1BB	CEP7-ED1BB	Standard
	1.0...5.0	D1CB	CEP7-ED1CB	Standard
	3.2...16	D1DB	CEP7-ED1DB	Standard
	5.4...27	D1EB	CEP7-ED1EB	Standard
<b>3-Phase / Auto or Manual Reset / Class 10, 15, 20, 30</b>				
CAUK7-9...23 CAUK7-9E...23E	0.1...0.5	EAB	CEP7-EEAB	+17
	0.2...1.0	EBB	CEP7-EEBB	+17
	1.0...5.0	ECB	CEP7-EECB	+17
	3.2...16	EDB	CEP7-EEDB	+17
	5.4...27	EEB	CEP7-EEEB	+17

- ① Use CEP7-ED/CEP7-EE Second Generation overloads only.
- ② Plastic Bezel is standard. Pilot Device options include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.
- ③ Refer to page C27 for wiring diagram and C29 for dimensional information.
- ④ Other voltages available, see Section A. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ⑤ One Pilot Device option must be selected. Blanks are not available. If Pilot Light option is selected then coil voltage must be 24V, 120V or 240V AC only.
- ⑥ CPT not possible with KS7-COS4R enclosure.
- ⑦ One N.C. auxiliary contact is used for electrical interlocking. On CAUK7 reversing starters, the N.C. contact comes from the Mechanical/Electrical Interlock unit (Cat# CM7-02).

### Three Phase Reversing KWIKstarters II with CEP7 Overload Relays ❶

Enclosure (KS7-C0S4R)	Maximum Horsepower				Auxiliary Contacts per Contactor ❷		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ❸
	Three Ø									
	200V	230V	460V	575V	NO	NC				
	FVR 3-Phase with Electronic DC Coil									
	2	2	5	7 1/2	1	1	CAUK7-9E-❖-❖-P▼ 	829	Q3	
	3	3	7 1/2	10	1	1	CAUK7-12E-❖-❖-P▼ 	919	Q3	
	5	5	10	15	1	1	CAUK7-16E-❖-❖-P▼ 	976	Q3	
	5	7 1/2	15	15	1	1	CAUK7-23E-❖-❖-P▼ 	1033	Q3	



### Coil Codes ❹❺

D.C. Coil Code	Voltage Range VDC
12E	12V
24E	24V
48E	48-72V
110E	110-125V
220E	220-250V

### Pilot Device Options (includes reset) ❷❻

Pushbutton Description	Replace ▼ in catalog number with	Price Adder
FOR-STOP-REV Multi-function	3U	Standard
UP-STOP-DOWN Multi-function	4U	Standard
OPEN-STOP-CLOSE Multi-function	5U	Standard
FOR-STOP-REV 3-Position Selector switch	6	Standard
UP-OFF-DOWN 3-Position Selector switch	7	Standard
OPEN-OFF-CLOSE 3-Position Selector switch	8	Standard
Overload Alarm Pilot Light	1Y	Standard
D7-N8 22mm Hole Plug	0	Standard

### Optional CA7 Modifications (Factory Assembled)

Description (supplied on each contactor)	Add to end of catalog number	Price Adder
Electronic Interface	-2JE	+188
Surge Suppressor RD	-2C	+108
Surge Suppressor Varistor	-2V	+108
Additional NC Contact	-2L01	+90
Additional NO Contact	-2L10	+90

### Ordering Instructions


Specify Catalog Number	
Replace (*) with Coil Code	
Replace (♦) with O/L Relay	
Replace (▼) with Pilot Device Option	See this page ONLY

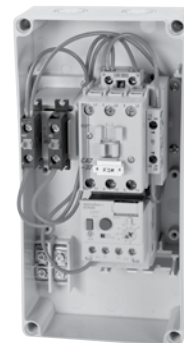
### Replace ♦ with one of the following Overload Relays

For use with KWIKstarter...	Amp Range	Overload Relay Code (♦)	Catalog Number (of Overload Relay used)	Price Adder
3-Phase / Manual Reset / Class 10				
CAUK7-9...23 CAUK7-9E...23E	0.1...0.5	D1AB	CEP7-ED1AB	Standard
	0.2...1.0	D1BB	CEP7-ED1BB	Standard
	1.0...5.0	D1CB	CEP7-ED1CB	Standard
	3.2...16	D1DB	CEP7-ED1DB	Standard
	5.4...27	D1EB	CEP7-ED1EB	Standard
3-Phase / Auto or Manual Reset / Class 10, 15, 20, 30				
CAUK7-9...23 CAUK7-9E...23E	0.1...0.5	EAB	CEP7-EEAB	+17
	0.2...1.0	EBB	CEP7-EEBB	+17
	1.0...5.0	ECB	CEP7-EECB	+17
	3.2...16	EDB	CEP7-EEDB	+17
	5.4...27	EEB	CEP7-EEEB	+17

- ❶ Use CEP7-ED/CEP7-EE Second Generation overloads only.
- ❷ Plastic Bezel is standard. Pilot Device options include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.
- ❸ Refer to page C27 for wiring diagram and C29 for dimensional information.
- ❹ CA7-9E...43E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- ❺ One Pilot Device option must be selected. Blanks are not available. If Pilot Light option is selected then coil voltage must be 24V DC only.
- ❻ CPT not possible with KS7-COS4R enclosure.
- ❼ One N.C. auxiliary contact is used for electrical interlocking. On CAUK7 reversing starters, the N.C. contact comes from the Mechanical/Electrical Interlock unit (Cat# CM7-02).

#### NEMA KWIKstarters II with CEP7 Overload Relays ❶

Enclosure (KS7-C2S4)	NEMA Size	Maximum Horsepower						Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code ③
		Single Ø		Three Ø									
		115V	230V	200V	230V	460V	575V	NO	NC				
	NEMA KWIKstarters II with AC Coil												
	1	2	3	~	~	~	~	1	0	CBKN7-37-*-ETD-P▼ ⓧ	507	Q2	
		~	~	7-1/2	7-1/2	10	10			CAKN7-37-*-◆-P▼ ⓧ			
	2	3	7-1/2	~	~	~	~	1	0	CBKN7-43-*-ETD-P▼ ⓧ	600	Q2	
		~	~	10	15	25	25			CAKN7-43-*-◆-P▼ ⓧ			
	NEMA KWIKstarters II with Electronic DC Coil ④												
	1	3	5	~	~	~	~	1	0	CBKN7-37E-*-ETD-P▼ ⓧ	633	Q2	
		~	~	10	10	25	30			CAKN7-37E-*-◆-P▼ ⓧ			
	2	3	7-1/2	~	~	~	~	1	0	CBKN7-43E-*-ETD-P▼ ⓧ	767	Q2	
		~	~	10	15	30	30			CAKN7-43E-*-◆-P▼ ⓧ			



#### AC Control Circuit Note

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Pilot lights are 240 VAC maximum.

#### Coil Codes (\*) ④⑤⑦

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
24Z	24V	24V	Separate	Separate
120	110V	120V	Common	Separate
208	~	208V	~	Common
220W	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
380	380V-400V	440V	~	Common
480	440V	480V	~	Common
600	550V	600V	~	Common

D.C. Coil Code	Voltage Range
	VDC
12E	12V
24E	24V
48E	48-72V
110E	110-125V
220E	220-250V

#### Pilot Device Options (includes reset) ②⑥

Pushbutton Description	Replace ▼ in catalog number with	Price Adder
START-STOP Multi-function	3U	Standard
I-O Multi-function	4U	Standard
OFF-ON 2-Position Selector switch	6	Standard
HAND-OFF-AUTO 3-Position Selector switch	7	Standard
Run Pilot Light Green (LED)	1G	Standard
Run Pilot Light Red (LED)	1R	Standard
Overload Alarm Pilot Light (LED)	1Y	Standard
D7-N8 22mm Hole Plug	0	Standard
Pilot Light Red (LED) with START-STOP Multi-function	1R3U	+50
Pilot Light Red (LED) with I-O Multi-function	1R4U	+50
Illuminated Red (LED) HAND-OFF-AUTO 3-Position Selector Switch	1R7U	+50

#### Replace ◆ with one of the following Overload Relays

For use with KWIKstarter...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay used)	Price Adder
3-Phase / Manual Reset / Class 10				
CAK7-30...43	1.0...5.0	D1CD	CEP7-ED1CD	+0
	3.2...16	D1DD	CEP7-ED1DD	+0
	5.4...27	D1ED	CEP7-ED1ED	+0
	9...45	D1FD	CEP7-ED1FD	+0
3-Phase / Auto or Manual Reset / Class 10, 15, 20, 30				
CAK7-30...43	1.0...5.0	ECD	CEP7-EECD	+21
	3.2...16	EDD	CEP7-EEDD	+21
	5.4...27	EED	CEP7-EEED	+21
	9...45	EFD	CEP7-EEFD	+21

#### Optional CA7 Modifications (Factory Assembled)

Description	Add to end of catalog number	Price Adder
Electronic Interface	-JE	+94
Surge Suppressor RD	-C	+54
Surge Suppressor Varistor	-V	+54
Additional NC Contact	-L01	+45
Additional NO Contact	-L10	+45

#### Ordering Instructions


Specify Catalog Number	
Replace (*) with Coil Code	
Replace (◆) with O/L Relay	
Replace (▼) with Pilot Device Option	See this page only

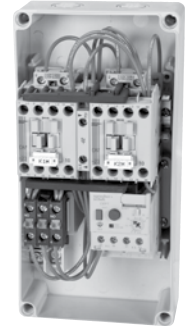
- ❶ Use CEP7-ED/CEP7-EE Second Generation overloads only. Single-phase applications utilize CEP7S-EETD only.
- ❷ Plastic Bezel is standard. Pilot Device options include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.
- ❸ Refer to page C27 for wiring diagram and C28 for dimensional information.
- ❹ CA7-9E...43E with electronic coils are not interchangeable with non-electronic DC

or AC coils.

- ❺ Other voltages available, see Section A. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ❻ One and only one Pilot Device option must be selected. If Pilot Light option is selected then coil voltage must be 24V AC or DC, 120V or 240V AC only.
- ❼ CPT not possible with KS7-C2S4 enclosure.

#### Three Phase Reversing NEMA KWIKstarters II with CEP7 Overload Relays ①

Enclosure (KS7-COS4R)	NEMA Size	Maximum Horsepower				Total Aux. Contacts Installed		cUL Approved- Type 1/12/4/4X IP66	Catalog Number	Price	Dimension Code
		Three Ø									
		200V	230V	460V	575V	NO	NC				
	3-Phase FVR NEMA KWIKstarter with AC Coil										
	00	1-1/2	1-1/2	2	2	1	1	CAUKN7-12-*-*♦-P▼	745	Q3	
	0	3	3	5	5	1	1	CAUKN7-16-*-*♦-P▼	790	Q3	
	3-Phase FVR NEMA KWIKstarter with Electronic 24V DC Coil										
	00	1-1/2	1-1/2	2	2	1	1	CAUKN7-12E-*-*♦-P▼	919	Q3	
	0	3	3	5	5	1	1	CAUKN7-16E-*-*♦-P▼	976	Q3	



#### Coil Codes (\*) ④⑤⑦

A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
24Z	24V	24V	Separate	Separate
120	110V	120V	Common	Separate
208	~	208V	~	Common
220W	200V-220V	208V-240V	Common	Common
240	220V	240V	Common	Common
277	240V	277V	Common	~
380	380V-400V	440V	~	Common
480	440V	480V	~	Common
600	550V	600V	~	Common

D.C. Coil Code	Voltage Range
	VDC
12E	12V
24E	24V
48E	48-72V
110E	110-125V
220E	220-250V

#### AC Control Circuit Note

**Common:** Coils and pilot devices in the control circuit are assumed to be common with the line voltage and will be connected to the line source (L1-L2) per the table.

**Separate:** Coils and pilot devices in the control circuit are assumed to be from a separate source and will not be connected to the line source per the table. Pilot lights are 240 VAC maximum.

#### Pilot Device Options (includes reset) ②⑥

Pushbutton Description	Replace ▼ in catalog number with	Price Adder
FOR-STOP-REV Multi-function	3U	Standard
UP-STOP-DOWN Multi-function	4U	Standard
OPEN-STOP-CLOSE Multi-function	5U	Standard
FOR-STOP-REV 3-Position Selector switch	6	Standard
UP-OFF-DOWN 3-Position Selector switch	7	Standard
OPEN-OFF-CLOSE 3-Position Selector switch	8	Standard
Overload Alarm Pilot Light	1Y	Standard
D7-N8 22mm Hole Plug	0	Standard

#### Optional CA7 Modifications (Factory Assembled)

Description (supplied on each contactor)	Add to end of catalog number	Price Adder
Electronic Interface	-2JE	+188
Surge Suppressor RD	-2C	+108
Surge Suppressor Varistor	-2V	+108
Additional NC Contact	-2L01	+90
Additional NO Contact	-2L10	+90

#### Ordering Instructions



Specify Catalog Number	
Replace (*) with Coil Code	
Replace (♦) with O/L Relay	
Replace (▼) with Pilot Device Option	See this page ONLY

#### Replace ♦ with one of the following Overload Relays






For use with KWIKstarter...	Amp Range	Overload Relay Code (♦)	Catalog Number (of Overload Relay used)	Price Adder
<b>3-Phase / Manual Reset / Class 10</b>				
CAUKN7-12..16E	0.1...0.5	D1AB	CEP7-ED1AB	Standard
	0.2...1.0	D1BB	CEP7-ED1BB	Standard
	1.0...5.0	D1CB	CEP7-ED1CB	Standard
	3.2...16	D1DB	CEP7-ED1DB	Standard
	5.4...27	D1EB	CEP7-ED1EB	Standard
<b>3-Phase / Auto or Manual Reset / Class 10, 15, 20, 30</b>				
CAUKN7-12..16E	0.1...0.5	EAB	CEP7-EEAB	+17
	0.2...1.0	EBB	CEP7-EEBB	+17
	1.0...5.0	ECB	CEP7-EECB	+17
	3.2...16	EDB	CEP7-EEDB	+17
	5.4...27	EEB	CEP7-EEEB	+17

- ① Use CEP7-ED/CEP7-EE Second Generation overloads only.
- ② Plastic Bezel is standard. Pilot Device options include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.
- ③ Refer to page C27 for wiring diagram and C29 for dimensional information.
- ④ CA7-9E...43E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- ⑤ Other voltages available, see Section A. *Non-standard coil voltages not listed here must be ordered and installed separately as renewal parts.*
- ⑥ One Pilot Device option must be selected. Blanks are not available. If Pilot Light option is selected then Pilot Light must match Coil Voltage 24V AC or DC, 120V or 240V AC only.
- ⑦ CPT not possible with KS7-COS4R enclosure.
- ⑧ One N.C. auxiliary contact is used for electrical interlocking. On CAUKN7 reversing starters, the N.C. contact comes from the Mechanical/Electrical Interlock unit (Cat# CM7-02).

#### KWIKstarter II Enclosures for use with CA7 Contactors and Overload Relays ③

Component	Description	For Use With		Environmental Approvals	Catalog Number	Price
		Contactors	Overload			
	<b>Enclosure for KWIKstarter II ①</b> CAK7/CBK7-30...43 CAK7/CBK7-30E...43E	CA7-30...43 CA7-30E...43E	CEP7-ED1CD...ED1FD CEP7-EECD...EEFD CEP7S-EETD	cUL Type 1/12/4/4x IEC IP66	<b>KS7-C2S4</b>	<b>110</b>
	<b>Enclosure for Reversing KWIKstarter II ②</b> CAUK7-9...23 CAUK7-9E...23E	CAU7-9...23 CAU7-9E...23E	CEP7-ED1AB...ED1EB CEP7-EEAB...EEEB	cUL Type 1/12/4/4x IEC IP66	<b>KS7-C0S4R</b>	<b>110</b>

#### KWIKstarter II Pilot Device Kits (for use with KS7-C2S4 or KS7-C0S4R) ③④

Kits	Description	For Use With Enclosure...	Contact Blocks included		Catalog Number	Price
			NO	NC		
	<b>Multi-Function Pushbutton kit</b> Non-illuminated <b>START-STOP</b> I-O	KS7-C2S4 Type 1, 12, 4, 4X	1	1	<b>KS7-P3U</b> <b>KS7-P4U</b>	<b>55</b>
	<b>FOR-STOP-REV</b> <b>UP-STOP-DOWN</b> <b>OPEN-STOP-CLOSE</b>	KS7-C0S4R Type 1, 12, 4, 4X	2	1	<b>KS7-P3U-REV</b> <b>KS7-P4U-REV</b> <b>KS7-P5U-REV</b>	<b>103</b>
	<b>Selector switch kits</b> Non-illuminated, includes legend plate <b>ON-OFF</b> 2-Position <b>HA ND-OFF-AUTO</b> 3-Position	KS7-C2S4 Type 1, 12, 4, 4X	1 2	- -	<b>KS7-P6</b> <b>KS7-P7</b>	<b>41</b> <b>54</b>
	<b>FOR-OFF-REV</b> 3-Position <b>UP-OFF-DOWN</b> 3-Position <b>OPEN-OFF-CLOSE</b> 3-Position	KS7-C0S4R Type 1, 12, 4, 4X	2	-	<b>KS7-P6-REV</b> <b>KS7-P7-REV</b> <b>KS7-P8-REV</b>	<b>54</b>
	<b>Run Pilot Light or Overload Alarm Pilot Light</b> Plastic operator with diffuser lens in Red, Green or Yellow, with integrated LED power module	KS7-C2S4 or KS7-C0S4R - Type 1, 12, 3R, 4, 4X	Replace ⑤ with color choice <b>R</b> = Red <b>G</b> = Green <b>Y</b> = Yellow		<b>KS7-P1②24V ⑥</b> <b>KS7-P1②120V</b> <b>KS7-P1②240V</b>	<b>50</b>
	<b>Reset Pushbutton, Blue</b> Plastic push button, flush operator with Blue Cap and R text	KS7-C2S4 KS7-C0S4	Black Plastic with Blue Cap and White "R"		<b>D7P-F611 ⑤</b>	<b>See page H8</b>
	<b>Hole Plug</b> Used to plug 22.5mm holes.	KS7-C2S4 KS7-C0S4R	Gray Plastic		<b>D7-N8</b>	<b>See page H71</b>

① KWIKstarter enclosure KS7-C2S4 are designed to fit CA7-30(E)...43(E) contactors with CEP7 Overload Relays. CT7N Thermal Overloads can not be substituted.

② KWIKstarter enclosure KS7-C0S4R are designed to fit CAU7-9(E)...23(E) reversing contactors with CEP7 Overload Relays. CT7N Thermal Overloads can not be substituted.

③ KS7-C2S4 and KS7-C0S4R are supplied with two 22mm holes for Pilot Devices. A Reset is required and one additional pilot device kit from this page must be selected. CPT not possible.

④ Plastic bezel is standard. Pilot Device Kits include D7-BX\_ Base Mounted contact blocks. See page H68 for more information.

⑤ D7P-R611 and CEP7-ERA can not be used with KS7-C2S4 or KS7-C0S4R.

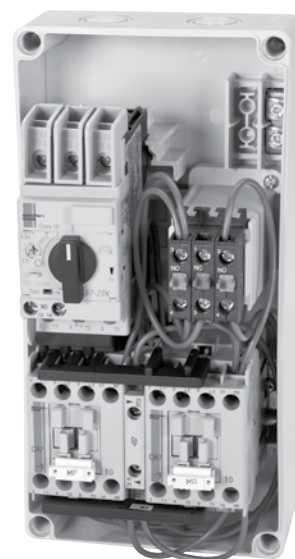
⑥ KS7-P1②24V can be used with 24V AC or 24V DC.

# CX7 KWIKstarters

## Type E/F Combination Motor Controllers

KTA7 can be applied in combination with a CA7 contactor for remote control and an enclosure with matching environmentally approved thru-the-door handle disconnect mechanism to meet all requirements for a Construction Type E or F Combination Starter. This selection of individual Combination starters are smaller and a less expensive than Classic Construction Type A (Fusible), or Type C (Thermal-magnetic Molded Case Circuit Breaker), as offered in the following pages.

Sprecher + Schuh has developed a KwikStarter version of the Combination Motor Controller which can be easily field assembled or can be purchased as a factory assembly. For details and catalog number selection on these economical combination starter alternatives turn to page F95.

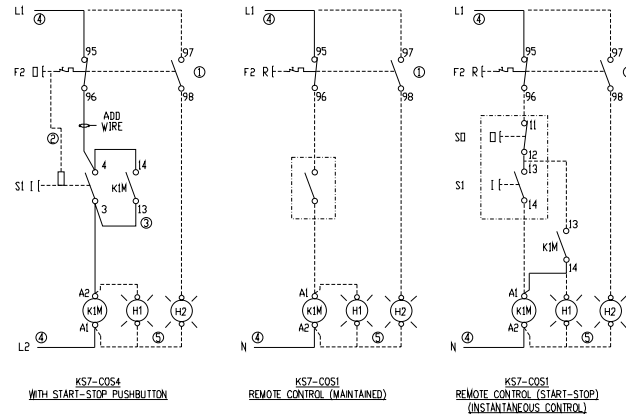
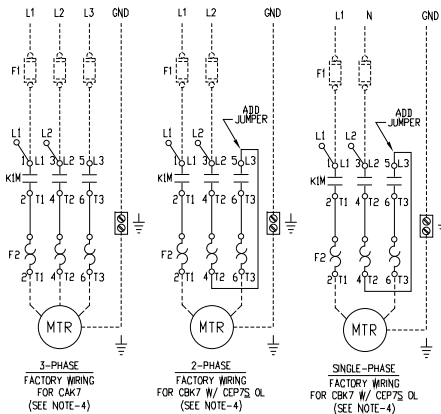


### Why Type E/F?

NEC430-53.C.1 defines that the short-circuit protection of a single motor branch circuit shall be provided by a set of fuses or a thermal-magnetic molded case circuit breaker. Alternatively NEC 430-53.C.6 also permits the use of a Self-protected Combination Motor Controller can be used to not only provide short-circuit protection for a single motor branch circuit but also provide a means of disconnect and overload protection. Self-protected Combination motor controllers like KTA7 can be combined with CA7, providing a coil for cover control or remote operation. This results in a Construction Type E or Type F (based on selection depending on published UL ratings) Combination starter per UL508. For details of UL, NEC and CSA application standards and rules please see page F119.

#### KWIKstarter II (in enclosure KS7-C0S1/C0S4)

CUSTOMER MUST PROVIDE PROPER BRANCH CIRCUIT PROTECTION (F1)  
SEE THE APPLICATION INSTRUCTION SHEET - COMPONENT SELECTION TABLES  
FOR MAX. FUSE SIZE & CLASS AND APPLICABLE SHORT CIRCUIT RATING  
(USE 75°C COPPER WIRE ONLY)

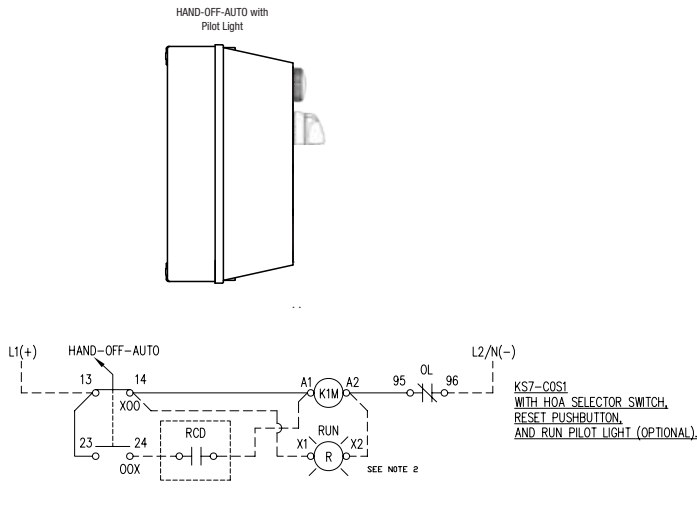


- NOTES:
- 1) MECHANICAL LATCH KS7-PLA FOR MAINTAINED CONTROL (OPTIONAL).
  - 2) START CONTACT KIT KS7-PCK (INCLUDED) MOUNTS ON THE RIGHT SIDE WITH MOLDED PRE-FORMED JUMPERS.
  - 3) DO NOT WIRE CONTROLS CIRCUIT TO LINE SIDE OF CONTACTOR WHEN COIL VOLTAGE IS 120V OR LESS. (FACTORY WIRING STANDARD)
  - 4) OPTIONAL PILOT LIGHTS.

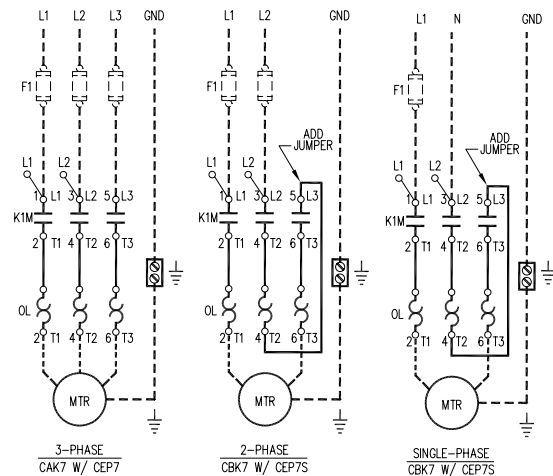
THIS DRAWING IS FOR THE FOLLOWING ENCLOSURES:  
KS7-C0S4 with integrated START-STOP push buttons  
KS7-C0S1 with integrated RESET push button

#### KWIKstarter II (in enclosure KS7-C0S1) with HOA option

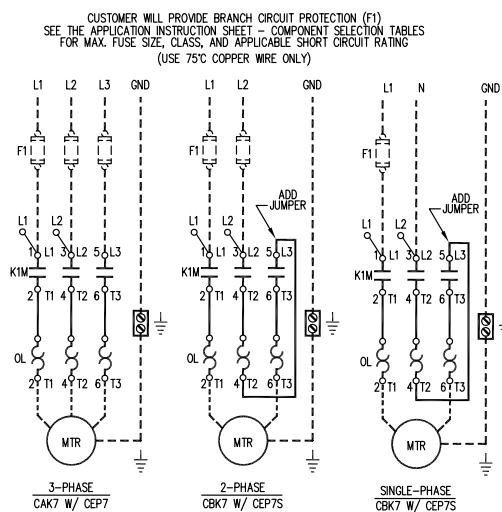
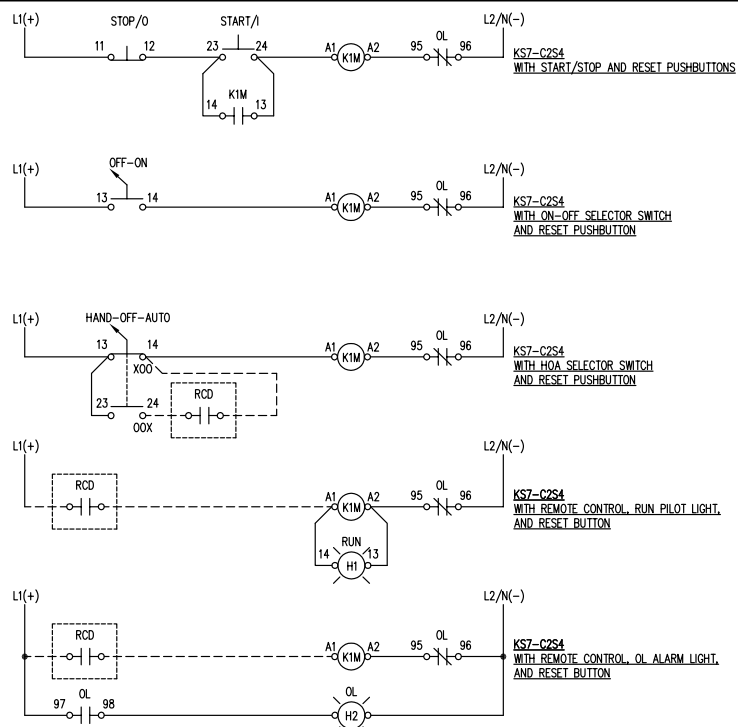
CUSTOMER WILL PROVIDE BRANCH CIRCUIT PROTECTION (F1)  
SEE THE APPLICATION INSTRUCTION SHEET - COMPONENT SELECTION TABLES  
FOR MAX. FUSE SIZE, CLASS, AND APPLICABLE SHORT CIRCUIT RATING  
(USE 75°C COPPER WIRE ONLY)



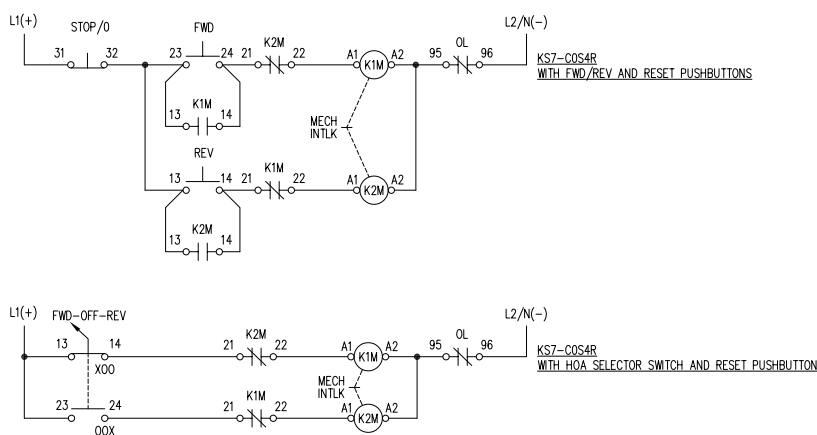
A.C. Coil Code	Voltage Range		Control Source	
	50 Hz	60 Hz	CBK7	CAK7
<b>24Z</b>	24V	24V	Separate	Separate
<b>120</b>	110V	120V	Common	Separate
<b>208</b>	~	208V	~	Common
<b>220W</b>	200V-220V	208V-240V	Common	Common
<b>240</b>	220V	240V	Common	Common



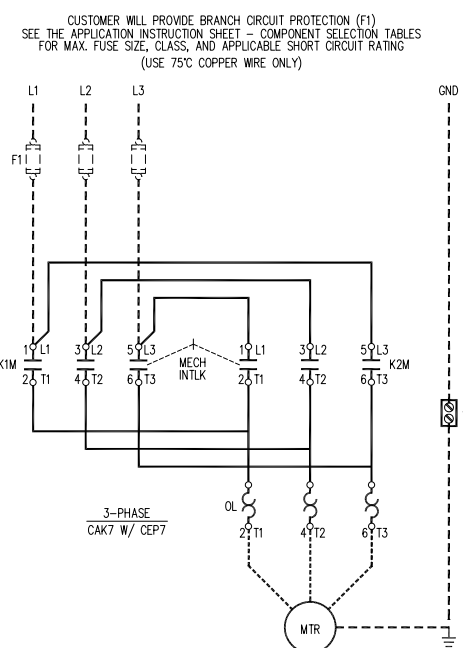
- NOTES:
1. RCD = REMOTE CONTROL DEVICE (BY OTHERS). WIRE RCD TO TERMINAL 24 ON THE H-O-A SEL. SW. AND TERMINAL A1 ON THE CONTACTOR.
  2. DASHED LINES - - - - - INDICATE WIRING PROVIDED IN THE FIELD.
  3. DOOR WIRES TO BE SECURED WITH ADHESIVE MOUNTS AND SPIRAL WRAPPED.

**KWIKstarter II (in enclosure KS7-C2S4)**

- NOTES:
1. DO NOT CONNECT A1-A2 TO L1-L2 UNLESS COIL VOLTAGE MATCHES LINE VOLTAGE
  2. PILOT LIGHTS POSSIBLE FOR REMOTE OR OVERLOAD ALARM IF NO START/STOP CONTROL DEVICES IN COVER
  3. RCD = REMOTE CONTROL DEVICE (BY OTHERS)

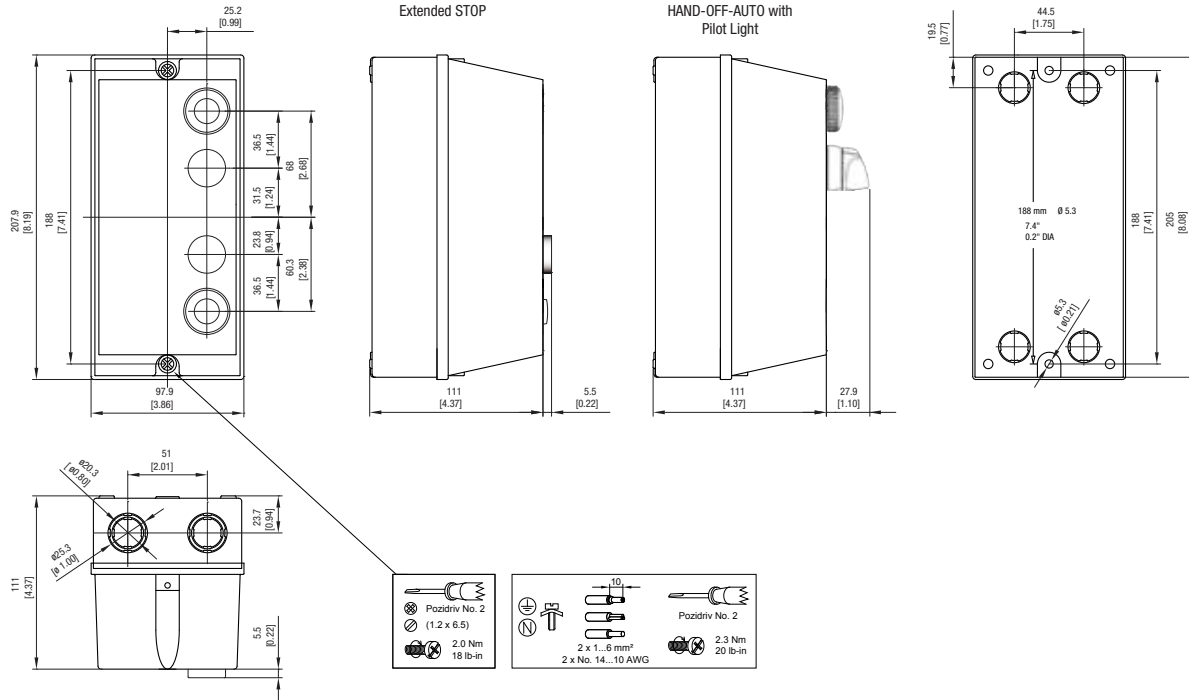
**KWIKstarter II (in enclosure KS7-C0S4R)**

NOTE:  
DO NOT CONNECT A1-A2 TO L1-L2 UNLESS COIL VOLTAGE MATCHES LINE VOLTAGE

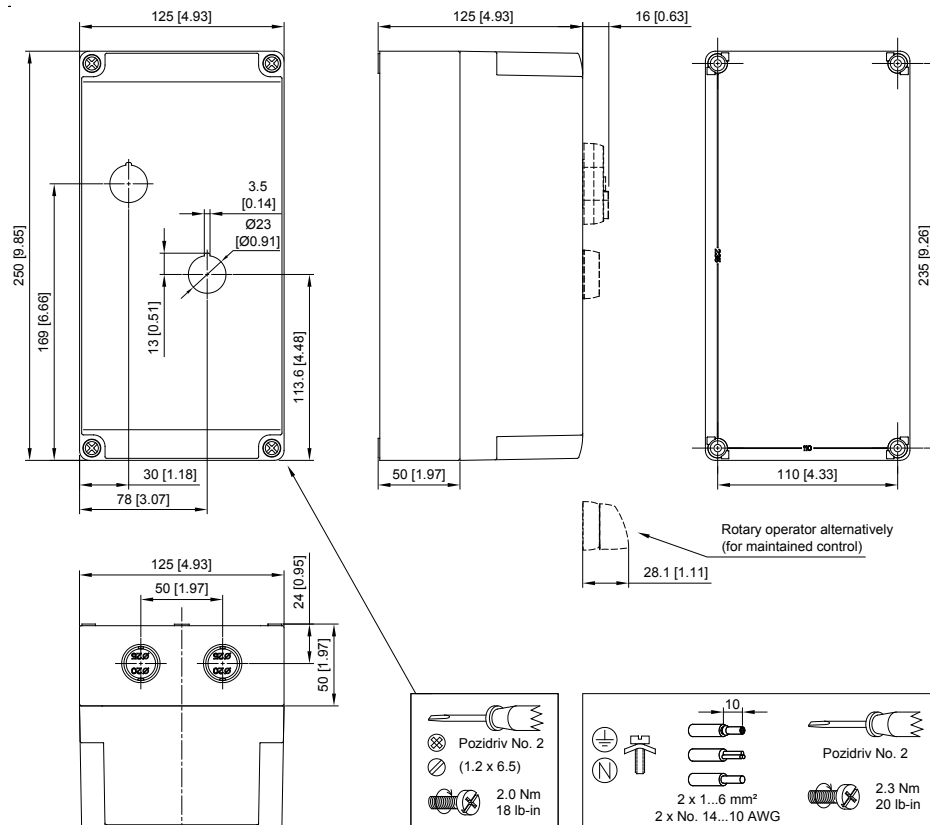


**KWIKstarter II Enclosure KS7-C0S1/C0S4 (Dimension Code Q1)**

Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.



**KWIKstarter II Enclosure KS7-C2S4 (Dimension Code Q2)**



**KWIKstarter II Enclosure KS7-C0S4R (Dimension Code Q3)**

Dimensions are in millimeters (inches). Dimensions not intended for manufacturing purposes.

