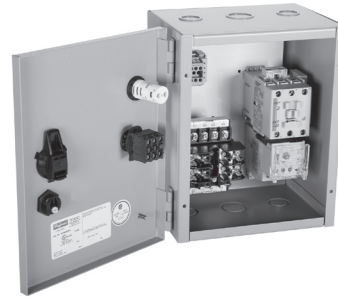


Type 1 General Purpose Enclosures ②③

Enclosure (Box) Kit Includes:

- Hinged cover
- Backpan pre-drilled for listed arrangements (not tapped)
- (2) Ground Lugs and Symbol label
- (2) 22mm knockouts for pilot devices ④
- CEP7-1ERA Overload Reset Adapter ⑤
- MR7 Reset Kit for Cover
- (2) 22mm knockouts for Reset ⑥
- Dual Conduit knockouts - Top and Bottom
- "A" Box - (2) 1/2 to 3/4" and (1) 3/4 to 1"
- "B" Box - (2) 1/2 to 3/4", (1) 1 to 1-1/4", (1) 3/4 to 1"
- (4) 8-32 x 1/2" screws for mounting controllers
- "B" Box also includes (2) 10-32 x 3/4" screws
- Does not include wire



"A" Box Kit







"B" Box Kit

				"A" Box Kit			"B" Box Kit				
Catalog Number				M1-1086-A			M1-12106-B				
Optional: 35mm DIN Rail Kit with (2) 10-32 x 1/4" screws ②				SF-2 (2 inches long)			SF-3 (3 inches long)				
Dimensions ③				10" x 8" x 6" Type 1 Enclosure			12" x 10" x 6" Type 1 Enclosure				
		For use with overload		"A" Box Kit accommodates			"B" Box Kit accommodates				
For use with Controller	CEP7-ED1*	CEP7-EE*	CT7N	Use with No CPT	Use with 50VA CPT ⑤	Space for 2" DIN Rail ②	Use with No CPT	Use with 50VA CPT	Use with 100VA CPT ⑤	Space for 3" DIN Rail ②	
	Non-reversing Contactors										
CA7-9...55	~	~	~	✓	✓	✓	✓	✓	✓	✓	
CA7-60...97 ⑦	~	~	~	No	No	No	✓	N/A	✓	✓	
Reversing Contactors											
CAU7-9...37	~	~	~	✓	No	✓	✓	✓	✓	✓	
CAU7-43...55	~	~	~	No	No	No	✓	✓	✓	✓	
CAU7-60...97 ⑦	~	~	~	No	No	No	No	N/A	No	No	
Non-Reversing Starters											
CAT7-9...23	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	
CAT7-30...55	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	
CAT7-60...97 ⑦	N/A	✓	①	No	No	No	✓	N/A	✓	✓	
Reversing Starters											
CAU7-9...23	✓	✓	①	✓	No	✓	✓	✓	✓	✓	
CAU7-30...37	✓	✓	①	✓	No	✓	✓	✓	✓	✓	
CAU7-43...55	✓	✓	①	No	No	No	✓	✓	✓	✓	
CAU7-60...97 ⑦	N/A	No	No	No	No	No	No	No	No	No	
NEMA Sized Non-reversing Starters											
CATN7-12...16	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	
CATN7-37	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	
CATN7-43	✓	✓	①	✓	✓	✓	✓	✓	✓	✓	
CATN7-85	N/A	✓	①	No	No	No	✓	N/A	✓	✓	

- ① Alternatively CT7N overload relay can be used which will require CT7N-RA3 Reset Adapter. Not included in the kit. Order separately.
- ② 2" DIN rail can accommodate up to (3) V7-W4 TB's or equivalent DIN rail mount timers, relays, etc. Order kit SF-2 separately.
3" DIN rail can accommodate up to (6) V7-W4 TB's or equivalent DIN rail mount timers, relays, etc. Order kit SF-3 separately.
- ③ Enclosure designed for use with CPT with top mount secondary fuse, plus back pan mounted Ambus Fuseholder with (2) primary fuses. A CPT and the addition of extra terminal blocks or other control relay using the 2" DIN rail space may require a design change.

- ④ This enclosure is designed for use with a D7 multi-function Start/Stop as standard plus a D7D monolithic pilot light to fit the (2) 22mm knockouts provided. Additional pilot device holes will require field drilling and may interfere with the controller or the addition of a CPT or TB's.
- ⑤ (2) 22mm knockout locations are provided for one reset Kit to be located contingent on the type of controller used. See box Instruction sheet for mounting details of controller and reset kit.
- ⑥ For enclosure dimensions see page C122
- ⑦ CA7-97 and CAT7-97 will not fit in "B" Box because of wire bending space requirements. See Selection tables for box sizes starting on page C122 for dimensions.
- ⑧ The CEP7-1ERA reset adapter is a 3rd generation accessory only compatible to 3rd generation CEP7-1 overloads

Pilot Device Kits – All applications (except Kwikstarters and Explosion Proof enclosures) ❶

Kits	Description	Contact Blocks included		For Use With Enclosure...	Catalog Number
		NO	NC		
	Multi-Function Pushbutton kit ❷ START-STOP Non-illuminated, Standard for "A" and "B" Box Kits.	1	1	Type 1, 12, 3R, 4, 4X, 13	SS6-D7P
				Type 1, 12, 3R, 4, 13	SS6-D7M
	Multi-Function Pushbutton kit ❷ FORWARD-STOP-REVERSE Non-illuminated, Standard for "A" and "B" Box Kits.	2	3	Type 1, 12, 3R, 4, 4X, 13	SS5-D7P
				Type 1, 12, 3R, 4, 13	SS5-D7M
	STOP and START Two button pushbutton kit	1	1	Type 1, 12, 3R, 4, 4X, 13	SS1-D7P
				Type 1, 12, 3R, 4, 13	SS1-D7M
	FORWARD, REVERSE and STOP Three button pushbutton kit	2	3	Type 1, 12, 3R, 4, 4X, 13	SS7-D7P
				Type 1, 12, 3R, 4, 13	SS7-D7M
	HAND-OFF-AUTO selector switch kit Name plate included.	2	0	Type 1, 12, 3R, 4, 4X, 13	SS2-D7P
	Type 1, 12, 3R, 4, 13			SS2-D7M	
	FWD-OFF-REV selector switch kit Name plate included.	2	0	Type 1, 12, 3R, 4, 4X, 13	SS9-D7P
				Type 1, 12, 3R, 4, 13	SS9-D7M
	OFF-ON selector switch kit Name plate included.	1	0	Type 1, 12, 3R, 4, 4X, 13	SS4-D7P
				Type 1, 12, 3R, 4, 13	SS4-D7M
	Monolithic Pilot Light kit LED Lamp and lens cap Does not include nameplate	~	Type 1, 12, 3R, 4, 4X, 13	Green LED 24V AC/DC	D7D-P3N3
				Red LED 24V AC/DC	D7D-P4N3
				Green LED 120V AC	D7D-P3N5
				Red LED 120V AC	D7D-P4N5
				Green LED 240V AC	D7D-P3N7
				Red LED 240V AC	D7D-P4N7



Example of pushbutton kits on an "A" Box

❶ Pilot Device Kits do not include control wires. See instruction sheet for installation.
 ❷ Multi-function START/STOP pushbutton are standard for General Purpose Type 1(M1) dimensions A and B enclosures.

A.C. Coil Codes & Voltage Ranges ①⑤

All catalog numbers, list prices and enclosure dimensions in the previous section reflect contactors with AC coils. If necessary, add the appropriate price adder to the list price for each coil required as shown in the online catalog. Remember that reversing applications require two coils.

A.C. Coil Codes (Replace “*” in cat.# with coil code)	CA7-9 thru CA7-97 CAN7-12...85	
	50 Hz	60 Hz
24Z [ⓧ]	24V	24V
120 [ⓧ]	110V	120V
220W [ⓧ] [ⓧ]	200-220V	208-240V
277	240V	277V
415	400-415V	~
480 [ⓧ]	440V	480V
600 [ⓧ]	550V	600V

D.C. Coil Codes & Voltage Ranges ①⑤

For starters with DC coils, select Coil Code from the table below. Remember that reversing applications require two coils (Price Adder x 2). Starter catalog numbers must be modified when using DC coils. For example: For **CAT7-9...55** contactors, add an “E” to catalog number for Electronic DC Coils. i.e.: CAT7-9... becomes CAT7-9E... For **CAT7-60...97** contactors, add a “D” to catalog number. i.e.: CAT7-60... becomes CAT7-60D...

D.C. Coil Codes (Replace “*” in cat.# with coil code)	⑥	⑥	④
	CA7-9E...37E CAN7-12E...37E	CA7-43E ...55E CAN7-43E	CA7-60D...97D CAN7-85D
CA7 Code	Voltage	Voltage	Voltage
12E	12VDCE	12VDCE	~
24E [ⓧ]	24VDCE	24VDCE	~
24DD	~	~	24VDC
36E	36-48VDCE	36-48VDCE	~
48E	48-72VDCE	48-72VDCE	~
110E	110VDCE	110VDCE	~
110DD	~	~	110VDC
~	~	~	~
220E	220VDCE	220VDCE	~
250DD	~	~	250VDC

Starter Modification Codes

CAT9 AC/DC Coil Codes and Voltage Ranges ②③⑤

Electronic Coils	V	24-60V	48-130V	100-250V	250-500V
		(Replace “*” in cat.# with coil code)			
CA9-116...370	AC/DC	24W	48W	120W	480W
CA9-116-EI...370-EI	AC/DC with PLC Input	~	~	120W	480W
CA9-400-EI...750-EI		24W ^⑦	48W	120W	480W
CA9-860-EI...1060-EI		~	~	120W	~
CA9-1260-EI		24W ^⑦	48W	120W	480W
CA9-2050-EI...2650-EI		~	~	120W	~

① Only the most common coils are shown here. Other coil voltages may be available. Refer to Contactor Renewal Parts in Section A of this catalog, or contact your nearest Sprecher + Schuh sales office.

② Wide range coil.

③ “-EI” designates contactor coil with PLC input. Selections CA9-116...370 with “EI” requires use of control logic on terminals 1, 2, 3. CA9-400 contactors and larger include an integral switch to select use of “EI”.

④ “DD” coils are standard for CA7-60D...97D.

⑤ Reversing applications require two coils.

⑥ CA7-9E...55E electronic coils are not interchangeable with non-electronic DC or AC coils.

⑦ This coil range is 24-60V DC only.

CA7 Contactor with CEP7 Overload Relay ①③④

For use with contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay)
3-Phase / Manual Reset / Class 10			
CA7-9...CA7-23	0.1...0.5	D1AB	CEP7-ED1AB
	0.2...1.0	D1BB	CEP7-ED1BB
	1.0...5.0	D1CB	CEP7-ED1CB
	3.2...16	D1DB	CEP7-ED1DB
	5.4...27	D1EB	CEP7-ED1EB
CA7-30...CA7-55	1.0...5.0	D1CD	CEP7-ED1CD
	3.6...16	D1DD	CEP7-ED1DD
	5.4...27	D1ED	CEP7-ED1ED
	9...45	D1FD	CEP7-ED1FD
3-Phase / Auto or Manual / Adjustable Trip Class 10, 15, 20 & 30			
CA7-9...CA7-23	0.1...0.5	EAB	CEP7-EEAB
	0.2...1.0	EBB	CEP7-EEBB
	1.0...5.0	ECB	CEP7-EECB
	3.2...16	EDB	CEP7-EEDB
	5.4...27	EEB	CEP7-EEEB
CA7-30...CA7-55	1.0...5.0	ECD	CEP7-EECD
	3.2...16	EDD	CEP7-EEED
	5.4...27	EED	CEP7-EEED
	9...45	EFD	CEP7-EEFD
CA7-55	11...55	EQD	CEP7-EEQD
CA7-60...CA7-97	5.4...27	EEE	CEP7-EEEF
	9...45	EFE	CEP7-EEFE
	18...90	EGE	CEP7-EEGE
	60...120	EVE	CEP7-EEVE

Large Amp CEP7 Solid State Overload Relays, Automatic or Manual Adjustable Trip Class ①②③④

Directly Mounts to Contactor... ②	Adj. Range (A)	Overload Relay Code (◆)	CT Ratio	Catalog Number (of Overload Relay)
Automatic or Manual Reset for 3-Phase Applications Adjustable Trip Class 10, 15, 20 & 30				
CA9-116...146	30...150	EHJ	150:5	CEP7-EEHJ
CA9-190...205	40...200	EJJ	200:5	CEP7-EEJJ
CA9-265...305		CT3	300:5	⑤
CA9-370...580		CT6	600:5	⑤
CA9-750...1060		~		Refer to Factory

Special Notes:
Wye-Delta Starters - First multiply motor full load current by 58%. Then, using this figure, select appropriate Overload Relay Code from tables above.
Part Winding Starters - First multiply motor full load current by 50%. Then, using this figure, select appropriate Overload Relay Code from tables above.
Variable Frequency Drives - CEP7 solid state overload relays cannot be utilized on VFDs or Softstarters with Braking option.

CEP7 Gen 2 Obsolete. See page C105.1

CB7 Contactor with CEP7 Overload Relay

For use with contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay)
1-Phase / Automatic or Manual Reset / Class 10			
CA7-9...CA7-23	1.0...5.0	EPB	CEP7S-EEPB
	3.2...16	ERB	CEP7S-EERB
	5.4...27	ESB	CEP7S-EESB
CA7-30...CA7-43	9...45	ETD	CEP7S-EETD
CA7-60...CA7-97	18...90	EUE	CEP7S-EEUE

① 3-phase CEP7 units are only designed for 3∅ applications. Single phase CEP7S units are only designed for 1∅ applications.
 ② This reference is not intended to be a guide for selecting contactors. Size overload relays using the full load current of the motor.
 ③ The reset time of a CEP7 set in the automatic mode is approximately 180 seconds.

④ CEP7 Overload relays do not work with Variable Frequency Drives or any Sprecher + Schuh Softstarter with braking options.
 ⑤ Utilizes UL approved Current Transformers and a CEP7-EECB overload relay. Refer to page B13 for current setting guidance. For CE approved Current Transformers refer to factory.

Starter Modification Codes

CA7 Contactor with CEP7 Overload Relay ③④

For use with contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay)
1-Phase & 3-Phase / Manual reset / Class 10&20			
CA7-9...CA7-23	0.1...0.5	1EAB	CEP7-1EEAB
	0.2...1.0	1EBB	CEP7-1EEBB
	1.0...5.0	1ECB	CEP7-1EECB
	3.2...16	1EDB	CEP7-1EEDB
	5.4...27	1EEB	CEP7-1EEEB
CA7-30...CA7-55	1.0...5.0	FCP	CEP7-1EFCP ❶
	3.2...16	FDP	CEP7-1EFDP ❶
	5.4...27	1EED	CEP7-1EEED
	11...55	1EFD	CEP7-1EEFD
CA7-60...97	20...100	1EGE	CEP7-1EEGE
1-Phase & 3-Phase / Auto or Manual / Adj. Trip Class 10...30			
CA7-9...CA7-23	0.1...0.5	FAB	CEP7-1EFAB
	0.2...1.0	FBB	CEP7-1EFBB
	1.0...5.0	FCB	CEP7-1EFGB
	3.2...16	FDB	CEP7-1EFDB
	5.4...27	FEB	CEP7-1EFEB
CA7-30...CA7-55	1.0...5.0	FCP	CEP7-1EFCP ❶
	3.2...16	FDP	CEP7-1EFDP ❶
	5.4...27	FED	CEP7-1EFED
	11...55	FFD	CEP7-1EFFD
CA7-55	11...55	FFD	CEP7-1EFFD
CA7-60...CA7-97	5.4...27	FEP	CEP7-1EFEP ❶
	11...55	FFP	CEP7-1EFFP ❶
	20...100	FGE	CEP7-1EFGE

- ❶ Engineered solution is a pass-thru model overload. No direct contactor mounting for this selection is available within the CEP7-1EE/1EF series.
- ❷ This reference is not intended to be a guide for selecting contactors. Size overload relays using the full load current of the motor.
- ❸ The reset time of a CEP7 set in the automatic mode is approximately 180 seconds.

Large Amp CEP7 Solid State Overload Relays, Automatic or Manual Adjustable Trip Class ②③④

Directly Mounts to Contactor... ❷	Adj. Range (A)	Overload Relay Code (◆)	CT Ratio	Catalog Number (of Overload Relay)
Automatic or Manual Reset for 3-Phase Applications Adjustable Trip Class 10, 15, 20 & 30				
CA9-116...146	30...150	9IP	150:5	CEP7-EEHJ
CA9-190...205	40...200	9IP	200:5	CEP7-EEJJ
CA9-265...305		CT3	300:5	❸
CA9-370...580		CT6	600:5	❸
CA9-750...1060		~		Refer to Factory

Special Notes:

Wye-Delta Starters - First multiply motor full load current by 58%. Then, using this figure, select appropriate Overload Relay Code from tables above.

Part Winding Starters - First multiply motor full load current by 50%. Then, using this figure, select appropriate Overload Relay Code from tables above.

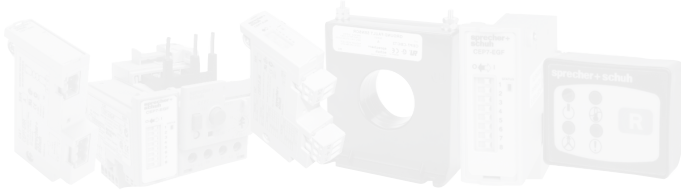
Variable Frequency Drives - CEP7 solid state overload relays cannot be utilized on VFDs or Softstarters with Braking option.

- ❹ CEP7 Overload relays do not work with Variable Frequency Drives or any Sprecher + Schuh Softstarter with braking options.
- ❺ Utilizes UL approved Current Transformers and a CEP7-1EF_Z overload relay. For CE approved Current Transformers – refer to factory.

Intelli-button Reset Kit Factory Modification

The CEP7-ERID Intelli-button plus your choice of side-mounted module can be ordered as a factory modification, installed in any control panel built by Sprecher + Schuh that contains a CEP7-EE_ overload relay. Just add the kit suffix shown below to the end of the starter catalog number. For example, CAT7-9-120-EEB-G0 becomes CAT7-9-120-EEB-G0-IB2

Starter Modification Codes



CEP7-ERID + Side Mount Module...	Add to end of Catalog Number	Kit includes...
Remote Reset Only	-IB1	CEP7-ERID CEP7-ERR
Jam and Remote Reset	-IB2	CEP7-ERID CEP7-EJM (B)
Thermistor Relay and Remote Reset	-IB3	CEP7-ERID CEP7-ERR CEP7-EGF
Ground Fault and Remote Reset	-IB5	CEP7-ERID CEP7-EGF CEP7-CBCT1 (45A)
	-IB6	CEP7-ERID CEP7-EGF CEP7-CBCT3 (180A)
	-IB7	CEP7-ERID CEP7-EGF CEP7-CBCT4 (420A)
	-IB8	CEP7-ERID CEP7-EGJ CEP7-CBCT1 (45A)
Ground Fault and Jam and Remote Reset Module	-IB9	CEP7-ERID CEP7-EGJ CEP7-CBCT2 (90A)
	-IB10	CEP7-ERID CEP7-EGJ CEP7-CBCT3 (180A)
	-IB11	CEP7-ERID CEP7-EGJ CEP7-CBCT4 (420A)

CEP7 Gen 2 Obsolete

CA7 Starters with optional CT7N Bimetallic Overload Relay ❶

Directly Mounts to Contactor...	Amp Range	Overload Relay Code (◆)	Catalog Number (of Overload Relay used)
CA7-9... CA7-23 Frame "A"	0.10...0.16	AA16	CT7N-23-A16
	0.16...0.25	AA25	CT7N-23-A25
	0.25...0.40	AA40	CT7N-23-A40
	0.35...0.50	AA50	CT7N-23-A50
	0.45...0.63	AA63	CT7N-23-A63
	0.55...0.80	AA80	CT7N-23-A80
	0.75...1.0	AB10	CT7N-23-B10
	0.90...1.3	AB13	CT7N-23-B13
	1.1...1.6	AB16	CT7N-23-B16
	1.4...2.0	AB20	CT7N-23-B20
	1.8...2.5	AB25	CT7N-23-B25
	2.3...3.2	AB32	CT7N-23-B32
	2.9...4.0	AB40	CT7N-23-B40
	3.5...4.8	AB48	CT7N-23-B48
	4.5...6.3	AB63	CT7N-23-B63
	5.5...7.5	AB75	CT7N-23-B75
	7.2...10	AC10	CT7N-23-C10
	9.0...12.5	AC12	CT7N-23-C12
	11.3...16	AC16	CT7N-23-C16
	15...20	AC20	CT7N-23-C20
17.5...21.5	AC21	CT7N-23-C21	
21...25	AC25	CT7N-23-C25	
CA7-30... CA7-37 Frame "B"	15...20	BC20	CT7N-37-C20
	17.5...21.5	BC21	CT7N-37-C21
	21...25	BC25	CT7N-37-C25
	24.5...30	BC30	CT7N-37-C30
	29...36	BC36	CT7N-37-C36
CA7-43...55 Frame "C"	33...38	BC38	CT7N-37-C38
	17...25	CC25	CT7N-43-C25
	24.5...36	CC36	CT7N-43-C36
CA7-60... CA7-97 Frame "D"	35...47	CC47	CT7N-43-C47
	45...60	CC60	CT7N-55-C60
CA7-60... CA7-97 Frame "D"	35...47	DC47	CT7N-85-C47
	45...60	DC60	CT7N-85-C60
	58...75	DC75	CT7N-85-C75
	72...90	DC90	CT7N-85-C90
CA7-60... CA7-97 Frame "D"	85...97	DC97	CT7N-97-C97

Special Notes:

Wye-Delta Starters - First multiply motor full load current by 58%. Then, using this figure, select appropriate Overload Relay Code from tables above.

Part Winding Starters - First multiply motor full load current by 50%. Then, using this figure, select appropriate Overload Relay Code from tables above.

❶ Separately mounted overload is available. See Section B.

Modifications or Special Feature ②		Change Last Digit (0) in Catalog Number To:
Pilot Devices In Cover or Flange		
	“Start-Stop” Pushbutton	3
	“On-Off” Pushbutton	4
	“Emergency Stop” Pushbutton - Twist to Release ③	9
	“Hand-Auto” Selector Switch	5
	“Off-On” Selector Switch	6
	“Hand-Off-Auto” Selector Switch	7
	Pilot Light Only ①	1
	Pilot Lights Only (2) ①	2
	Pilot light w/ “Start-Stop” Pushbutton ①	13
	Pilot Light w/ “On-Off” Pushbutton ①	14
	Pilot Light w/ “Hand-Auto” Selector Switch ①	15
	Pilot Light w/ “Off-On” Selector Switch ①	16
	Pilot Light w/ “Hand-Off-Auto” Selector Switch ①	17
Reversing	“For-Stop-Rev”- Pushbutton	3
	“Up-Stop-Down” Pushbutton	4
	“Open-Stop-Close” Pushbutton	5
Multi-Speed	“High-Stop-Low” Pushbutton	3
	“Fast-Stop-Slow” Pushbutton	4
Reversing	“For-Off-Rev” Selector Switch	6
	“Up-Off-Down” Selector Switch	7
	“Open-Off-Close” Selector Switch	8
Multi-Speed	“High-Off-Low” Selector Switch	5
	“Fast-Off-Slow” Selector Switch	6
Reversing	Pilot Lights (2) w/ “For-Stop-Rev” Pushbutton ①	23
	Pilot Lights (2) w/ “Up-Stop-Down” Pushbutton ①	24
	Pilot Lights (2) w/ “Open-Stop-Close Pushbutton ①	25
Multi-Speed	Pilot Lights (2) w/ “High-Stop-Low” Pushbutton ①	23
	Pilot Lights (2) w/ “Fast-Stop-Slow” Pushbutton ①	24
Reversing	Pilot Lights (2) w/ “For-Off-Rev” Selector Switch ①	26
	Pilot Lights (2) w/ “Up-Off-Down” Selector Switch ①	27
	Pilot Lights (2) w/ “Open-Off-Close Selector Switch ①	28
Multi-Speed	Pilot Lights (2) w/ “High-Off-Low” Selector Switch ①	25
	Pilot Lights (2) w/ “Fast-Off-Slow” Selector Switch ①	26

Ordering Instructions

Change base **Catalog Number** according to instructions at top of column 2. Example: To Add a “Start-Stop” Pushbutton: change **CAT7-30-*-*♦-G0** to **CAT7-30-*-*♦-G3**

- ① Pilot Lights may be applied with 24VAC/DC, 120VAC or 240VAC control circuit. Pilot Lights with 380 VAC...575VAC require a control circuit transformer.
- ② Modifications may change dimension of starter enclosure.
- ③ Emergency Stop pushbutton includes inscription ring D7-15YSE112. For other selections from page H68 refer to factory.

Modifications or Special Feature ⑤		ADD Suffix to Catalog Number	Enclosure Type		
Additional Auxiliary Contacts ⑥					
1 N.O. 1 N.C.		L10 L01	All		
1 N.O. & 1 N.C. 2 N.O. 2 N.C.		L11 L20 L02	All		
1 NO + 2 NC Auxiliary 2 NO + 1 NC Auxiliary 3 NO Auxiliaries 3 NC Auxiliaries		L12 L21 L30 L03	All		
2 N.O. & 2 N.C. 1 NO + 3 NC Auxiliary 3 NO + 1 NC Auxiliary 4 NO Auxiliaries 4 NC Auxiliaries		L22 L13 L31 L40 L04	All		
Alternate Auxiliary Contact Arrangements					
1 N.C. in lieu of standard 1 N.O. (on CAT7)		LX1	All		
2 N.C. in lieu of standard 2 N.O. (on CAUT7)		LX2			
Control Circuit Transformer (with fused primary & secondary)					
	Primary Volts	Secondary Volts	Replace (*) in catalog # with following codes ②④		
Standard Capacity ⑤	208	120	XA XB XC XD XE XF	Type 1, 12, 3R, 4,4X Open	
	240	120			
	480	120			
	600	120			
	380	110			XG
	240	24			XE
	480	24	XF	Type 7/9	
	600	24	XJ		
	380	24	XK		
	208	24	XO		
	120	24	XP		
	277	120	XY		
50 Watt Extra Capacity	208	120	XA05 XB05 XC05	Type 1, 12, 3R, 4,4X Open	
	240	120			
	480	120			
	600	120	XD05	Type 7/9	
	240	24	XE05		
	480	24	XF05		
100 Watt Extra Capacity	208	120	XA1 XB1 XC1	Type 1, 12, 3R, 4,4X Open	
	240	120			
	480	120			
	600	120	XD1	Type 7/9	
	240	24	XE1		
	480	24	XF1		
	600	24	XJ1		
Special Voltage Transformer - Add suffix F/A to end of catalog # ①			All, Open		
For applications requiring more than 100 Watt extra capacity					

Ordering Instructions

Change base **Catalog Number** according to instructions in column 2.
 Example: To Add a Control Circuit Transformer (480/120) and additional NO/NC auxiliaries: change **CAT7-30-✳-◆-GO_** to **CAT7-30-XC-◆-GO-L11**.

Note: Separate multiple modification suffixes with a hyphen (-).

- ① Factory assigned.
- ② Coil will be factory selected based on transformer secondary.
- ③ See page C112 for detail specifications for Control Circuit Transformer.
- ④ Refer to factory for pricing on larger oversized control circuit transformer selections.
- ⑤ Modifications may change dimension of starter enclosure.
- ⑥ Auxiliary addition is per contactor. Quantity is double for reversing applications.

Modifications or Special Feature ②	Power Supply					Replace (*) in catalog # with following codes	Enclosure Type
	Rating (W)	Input V AC	Output V DC	Output Amps			
				@ 40°C	@ 60°C		
AC to DC Output Power Supplies							
1-Phase Standard Capacity (CA7-9E...55E)							
Power Supply (with no CPT)	72	115	24	2	1.5	PS1P	Open All
Power Supply (with no CPT)	72	230	24	2	1.5	PS1E	
Power Supply w/CPT @ 208 VAC Primary	72	115	24	2	1.5	PS1XA	
Power Supply w/CPT @ 230 VAC Primary						PS1XB	
Power Supply w/CPT @ 460 VAC Primary						PS1XC	
Power Supply w/CPT @ 575 VAC Primary						PS1XD	
1-Phase Standard Capacity (CA7-60D...97D)							
Power Supply (with no CPT)	336	115	24	14	10	PS4P	Open All
Power Supply (with no CPT)	336	230	24	14	10	PS4E	
Power Supply w/CPT @ 208 VAC Primary	336	115	24	14	10	PS4XA	
Power Supply w/CPT @ 230 VAC Primary						PS4XB	
Power Supply w/CPT @ 460 VAC Primary						PS4XC	
Power Supply w/CPT @ 575 VAC Primary						PS4XD	
1-Phase 90W Extra Capacity (CA7-9E...55E)							
Power Supply (with no CPT)	120	115	24	5	4	PS2P	Open All
Power Supply (with no CPT)	120	230	24	5	4	PS2E	
Power Supply w/CPT @ 208 VAC Primary	120	115	24	5	4	PS2XA	
Power Supply w/CPT @ 230 VAC Primary						PS2XB	
Power Supply w/CPT @ 460 VAC Primary						PS2XC	
Power Supply w/CPT @ 575 VAC Primary						PS2XD	
2-Phase Standard Capacity (CA7-9E...55E)							
Power Supply @ 230 VAC Primary	120	230	24	5	4	PS6B	Open All
Power Supply @ 460 VAC Primary	120	460	24	5	4	PS6C	
2-Phase Standard Capacity (CA7-60D...97D)							
Power Supply @ 230 VAC Primary	336	230	24	7.5	5	PS7B	Open All
Power Supply @ 460 VAC Primary	336	460	24	7.5	5	PS7C	
For applications requiring extra capacity on either device, please refer to factory							
CR17E-* Electronic Interface Module for use with CA7-9...CA7-97: Interface between the DC control signal from a PLC and the AC operating mechanism of the contactor. <ul style="list-style-type: none"> Eliminates the need for a power supply-current draw is 10 to 15 mA across a voltage range of 12-48V DC Requires no additional surge suppression for the coils Must have output voltage 110...240V AC Add Suffix to end of catalog number: for example change CAT7-30-*-◆-GO to CAT7-30-*-◆-GO-JE 						add Suffix to end of Catalog Number -JE	Open All

Ordering Instructions

Replace * in base **Catalog Number** with Power Supply code.
 Example: To Add a Standard Capacity Power Supply with Control Circuit Transformer (480/120):
 change **CAT7-30E-*-◆-GO** to **CAT7-30E-PS1XC-◆-GO**.

- ① Not applicable for Series CA9 Starters. CAT9 Starter applications should strongly consider the use of the "EI" functionality included in the CA9-116...1060-EI Contactors. The optional electronic interface selection allows the CA9 contactor to be switched from a PLC or other low-level signal source (15...33V DC) without the need of an interposing relay. The current burden of the interface is 15 mA maximum.
- ② Modifications may change dimension of starter enclosure.

Modifications or Special Feature ⑦	ADD Suffix to Catalog Number	Enclosure Type
Other modifications		
Fused Control Circuit for separate or common control ⑥ - 1 Fuse - 2 Fuses	F1 F2	All, Open All, Open
Surge Suppressor - RC Link	RC	All, Open
Surge Suppressor - Varistor	RV	All, Open
Surge Suppressor - Diode	RD	All, Open
Unwired Terminal Blocks Specify quantity (▼).	- ▼TB	All
Control Relay Limited to one per controller-8 pole maximum, Specify pole arrangement and voltage ⑤	F/A ①	All, Open
Timing Relay Limited to one per controller-specify "On" or "Off" delay. Voltage will be same as coil voltage	F/A ①	All, Open
Compelling Relay ② ⑤	F/A ①	All, Open
Progressive or Decelerating Relay ② ⑤	F/A ①	All, Open
Omit Automatic Alternator ③	F/A ①	All, Open
Back Spin Timer ④	F/A ①	All, Open
Program Timer (24 hour) ④	F/A ①	All, Open
Fireman Damper Control Option		
HVAC Enclosed Starter Fireman Damper Option - 24 VAC/DC - 120 VAC/DC	FD24 FD120	Type 1
		Non-Combination
		Fusible
		Non-Fusible
		Thermal Magnetic
		Type 3R
		Non-Combination
		Fusible
Non-Fusible		
Thermal Magnetic		

Ordering Instructions

Change base catalog number according to instructions at top of column 2 or 3.
Example: To Add a "Start-Stop" Pushbutton, Control Circuit Transformer (480/120) and RC Link: change **CAT7-30-*-◆-G0** to **CAT7-30-XC-◆-G3-RC**.
Note: Separate multiple modification suffixes with a hyphen (-).

- ① Factory assigned.
- ② For Multi-speed controllers.
- ③ For Duplex Pump controllers.
- ④ For Pump Panel controllers.
- ⑤ If controller has a Control Circuit Transformer, select transformer with additional capacity for relay required.
- ⑥ CPT and power supply modification includes fused control circuit protection.
- ⑦ Modifications may change dimension of starter enclosure.

Modifications or Special Feature ③	ADD Suffix to Catalog Number	Enclosure Type
Meters		
Ammeter - Single Phase	AM1	All, Open
Ammeter - Three Phase (includes switch)	AM3	
Voltmeter - Single Phase	VM1	
Voltmeter - Three Phase (includes switch)	VM3	
Wattmeter	WM	
Elapsed Time Meter	ETM	
Enclosures		
Space Heater (with N.C. interlock)	HTR	Type 1, 12, 3R, 4, 4X
Breather and Drain	BD	Type 7/9
Service Identification Nameplate	F/A ❶	All
Miscellaneous		
Lightning Arrester ②	LA	All, Open
Surge Capacitor ②	SC	
Phase Monitor Relay	F/A ❶	
UL508A Panel Label	UL	Type 1, 12, 3R, 4, 4X
UL1203 Panel Label (includes 508A)	ULX	Type 7/9

Panel Shop Certifications

Sprecher + Schuh is an ISO9001 company. Our panel shops are UL and ATEX Certified.

Please refer to factory for specifications and label options for the following panel certifications.

UL508A or SUSE label: Most starter assemblies can be supplied with a UL508A 'Industrial Control Panel' label. Combination starters can be supplied with Suitable for Service Entrance (SUSE) label. The need for a UL508A or SUSE label must be identified at the time of quotation as well as on the purchase order. The need for a UL508A label may not change the components we would normally use but we must consider all possible requirements at the time we are developing the bill-of-material to be referenced at the time of order entry. Failure to identify the need for a UL508A label or SUSE label at the time of quotation may result in change notice price adders.

ATEX Certification: A requirement for ATEX certification MUST be identified at the time of quotation as well as on the purchase order. ATEX certification of a Type 7/9 explosion proof enclosure definitely requires all conduit and cover openings to be drilled by the enclosure manufacturer. Further, all pilot devices and equipment to be installed must be identified as it controls the heat dissipation which is an ATEX certification requirement. Absolutely no field modification of an ATEX certified starter assembly is allowed. Failure to identify the need for an ATEX certification at the time of quotation and order entry may result in 100% cancelation or re-stocking charge since a new enclosure will be required.

UL1203 Certification: The UL1203 label for explosion proof starters and panels encompasses the UL508A certification. This means all components in a UL1203 labeled panel must first comply with UL508A, and all components in the panel must have a UL label in some form, including the wiring. A special name plate and UL508A label are applied to the panel or starter. A panel is not UL1203 certified unless both label and name plate are present. Contact customquotes@sprecherschuh.com for more information on UL1203 certified panels.

Ordering Instructions

Change base catalog number according to instructions at top of column 2.
Example: To add an Elapsed Time Meter and Breather Drain to an explosion-proof starter, change **CAT7-30-*◆-ED** to **CAT7-30-*◆-E0-ETM-BD**.
Note: Separate multiple modification suffixes with a hyphen (-).

- ❶ Factory assigned.
- ❷ For Pump Panel controllers.
- ❸ Modifications may change dimension of starter enclosure.