

Ecombo Starters

Save space,
save money
in individual or
multi-motor
starter applications

F3

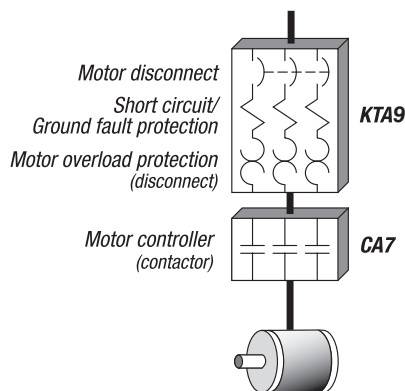
Ecombo Circuit Controllers

See our online white paper

Methods
of Applying

KT9

Motor Circuit Controllers



The Ecombo starter line combines a KTA9 self-protected Type E combination controller with a CA7 contactor to form a cost effective compact Type E/F alternative to traditional combination starters.



Sprecher + Schuh's Ecombo starters are the compact alternative to larger and higher priced combination starters. Both models consist of a KTA9 Motor Circuit Controller (cULus listed as a Type E, self-protected combination starter), assembled with a CA7 or CA8 contactor, which provides remote operation (Type E/F). Whether used as a standalone starter or in multi-motor starter applications, Ecombo starters save significant panel space and dollars over conventional combination starter alternatives.

Control and protection for most industrial applications

The Ecombo starter line covers motors to 40 amperes, while providing current limiting short circuit protection up to 65kA. Class 10 thermal overload protection is also assured with a very accurate current adjustment setting which is factory calibrated to the smallest and largest current the unit can handle. A "differential tripping" mechanism also provides accelerated tripping under single phase conditions (see illustration on page F1:3). Ecombo starters may be selected as Type 2 Coordinated per IEC 60947-4-1, or UL Construction Type E or F.

The Ecombo starter...

Ecombo starters (CLE) come standard with a KTA9 Motor Circuit Controller connected to Sprecher + Schuh's CA7 contactor (or CA8 mini contactor) through a specially designed connection module. The unit is DIN-rail mounted. Contactor coil connections are at the bottom of the starter to provide attractive and cost effective panel wiring. Ecombo starters may also be purchased with just three parts and assembled by the user to further increase economy. The CLE + O/L is a three component starter with a KTB9 controller, CA7 contactor, and a CEP7 solid state overload relay, pre-assembled on a bus bar module and ready to mount to a DIN rail or panel.



CLE Ecombo starter



CLE Three-Component starter

EcomboPlus... the complete solution

The EcomboPlus starter (CLS-7) is factory assembled on a W Type module that provides support and allows the starter to be mounted on one or two DIN-rails or screw mounted. Each starter comes standard with a front mounted auxiliary trip contact and optional terminal block control wiring at the top or bottom of the unit.

Reduce panel size, complexity and cost

Because KT9 Motor Circuit Controllers are UL listed as self-protected combination starters, NEC / CEC group motor rules are simplified substantially. In many cases, only a non-fused switch is required for panel disconnect. See our online white paper "Methods of Applying KT9s in multi-motor starter applications", which explains applying KT9s in multi-motor starter applications.

Series	
CL	Non-reversing S+S
CLU	Reversing S+S

Mounting Style	
E	ECO (no mounting rail)
S	Sliding Din

Contactor Size	
809	9A
812	12A
709	9A
712	12A
716	16A
723	23A
730	30A
737	37A

Contactor Coil	
CA8	
024Z	24V 50Hz / 60Hz
0120	110V 50Hz / 120V 60Hz
0240	240V 50Hz / 60Hz
0600	525V 50Hz / 600V 60Hz CA
024D	24V DC
24DD	24V DC With Diode
CA7	
024Z	24V 50Hz / 60Hz
0120	110V 50Hz / 120V 60Hz
220W	208-220V 50Hz / 208-240V 60Hz
220W	240V 50Hz / 60Hz
0480	440V 50Hz / 480V 60Hz
0600	550V 50Hz / 600V 60Hz
024E	24V DC

Contactor Aux	
01	1 N.C.
10	1 N.O.
02	2 N.C.
11	1 N.O. + 1 N.C.
12	1 N.O. + 2 N.C.
21	2 N.O. + 1 N.C.
22	2 N.O. + 2 N.C.
30	3 N.O.
31	3 N.O. + 1 N.C.
32	3 N.O. + 2 N.C.
33	3 N.O. + 3 N.C.

Breaker Frame	
C	KT9 C Frame MCPB only (32S)
D	KT9 D Frame MPCB or MCP (40H)

Breaker Current	
A16	0.1 - 0.16A
A25	0.16A - 0.25A
A40	0.25 - 0.40A
A63	0.40 - 0.63A
B10	0.63 - 1A
B16	1 - 1.6A
B25	1.6 - 2.5A
B40	2.5 - 4A
B63	4 - 6.3A
C10	6.3 - 10A
C16	10 - 16A
C20	14.5 - 20A
C25	18 - 25A
C29	23 - 29A
C32	26.5 - 32A
C36	30 - 36A
C40	34 - 40A

CL E - 709 0120 10 - C B40 B
 CLU E - 723 024E 22 - C C20 B
 CL E - 712 024Z 10 - C C16 B - FDB

Options	
-KN	Black Lockable Knob
-KY	Red/Yellow Lockable Knob
-TE	Spacing Adapter for Type E
-W	Mounting Module
-JE	Interface Adapter

Breaker Aux Code	
X	w/o Aux. and Trip Contacts
A	1 NC
B	1 NO
C	1 NO + 1 NC
D	2 NO
E	2 NC
R	1 NC + 1 NO (SC+OL)
S	1 NO + 1 NO (SC+OL)
T	1 NO + 1 NC (SC+OL)
N	1 NO (SC+OL) + 1 NC (SC)

Overload Relay	
-	No Separate Overload Relay
FAB	0.1...0.5A Solid State
FBB	0.12...1.0A Solid State
FCB	1.0...5.0A Solid State
FDB	3.2...16A Solid State
FEB	5.4...27A Solid State
FED	5.4...27A Solid State
FFD	11...55A Solid State

This illustration is for reference only.
 Turn to the appropriate page to determine
 specific catalog number.

Non-Reversing Ecombo Starters with AC Coil, Series CA8 Contactor

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ②
		200V	230V	460V	575V	
KTA9-32S – Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLE-809*10-CA16X
0.16...0.25A	3.5	~	~	~	~	CLE-809*10-CA25X
0.25...0.40A	5.6	~	~	~	~	CLE-809*10-CA40X
0.40...0.63A	8.8	~	~	~	~	CLE-809*10-CA63X
0.63...1.0A	14	~	~	1/2	1/2	CLE-809*10-CB10X
1.0...1.6A	22	~	~	3/4	3/4	CLE-809*10-CB16X
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLE-809*10-CB25X
2.5...4.0A	56	3/4	3/4	2	3	CLE-809*10-CB40X
4.0...6.3A	88	1	1-1/2	3	5 ⑥	CLE-809*10-CB63X
6.3...10A	140	2	2	5	5 ⑥	CLE-809*10-CC10X
6.3...10A	140	2	2	5	7-1/2 ⑥	CLE-812*10-CC10X
10...16A	224	3	3	7-1/2	10 ⑥	CLE-812*10-CC16X

Includes:

- KTA9-32S (Standard Interrupting Capacity) Motor Controller
- CA8 Contactor
- Connecting Module (Cat.# KT9-32S-PEK12)
- Terminal Adaptor for Type F Applications (Cat.# KT9-40-TE)
- Can mount on one DIN-rail

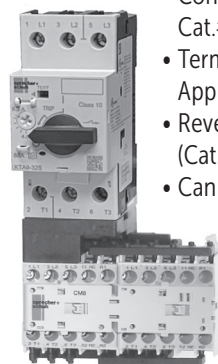


Reversing Ecombo Starters with AC Coil, Series CA8 Contactor

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ②
		200V	230V	460V	575V	
KTA9-32S – Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLUE-809*02-CA16X
0.16...0.25A	3.5	~	~	~	~	CLUE-809*02-CA25X
0.25...0.40A	5.6	~	~	~	~	CLUE-809*02-CA40X
0.40...0.63A	8.8	~	~	~	~	CLUE-809*02-CA63X
0.63...1.0A	14	~	~	1/2	1/2	CLUE-809*02-CB10X
1.0...1.6A	22	~	~	3/4	3/4	CLUE-809*02-CB16X
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUE-809*02-CB25X
2.5...4.0A	56	3/4	3/4	2	3	CLUE-809*02-CB40X
4.0...6.3A	88	1	1-1/2	3	5 ⑥	CLUE-809*02-CB63X
6.3...10A	140	2	2	5	5 ⑥	CLUE-809*02-CC10X
6.3...10A	140	2	2	5	7-1/2 ⑥	CLUE-812*02-CC10X
10...16A	224	3	3	7-1/2	10 ⑥	CLUE-812*02-CC16X

Includes:

- KTA9-32S (Standard Interrupting Capacity) Motor Controller
- One Reversing CAU8 Contactor with Mechanical Interlock (CM8)
- Connecting Module Cat.# KT9-32S-PEK12)
- Terminal Adaptor for Type F Applications (Cat.# KT9-40-TE)
- Reversing Power Wiring Kit (Cat.# CAUT8-PW)
- Can mount on one DIN-rail



AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
0240	240V	240V
0380 ④	Use Coil Code 0400	
0400 ④	400V	400V
0480	440V	480V
0575 ⑤	Use Coil Code 0600	
0600 ⑤	525V	600V

Horsepower ratings shown in the tables are for reference only. The final selection of the controller depends on the actual motor full load current and service factor.

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. – 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

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

- ① KAIC Assembly Rating Index. See pages F3:17-F3:20 for Application Rating Guide.
- ② Does not include auxiliary contacts. See Factory Options on page F3:16 for additional auxiliary contact configurations.
- ③ The coil codes shown are the most commonly stocked items. Contact your Sprecher + Schuh representative if special voltages are required.
- ④ The European Community has agreed that 400V is the nominal voltage in lieu of 380V. Use this code when 380V is required.
- ⑤ Use this code for 575V applications.
- ⑥ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See page F1:5 for ratings.

Non-Reversing Ecombo Starters with DC Coil, Series CA8 Contactor

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ②
		200V	230V	460V	575V	
KTA9-32S – Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLE-809*D10-CA16X
0.16...0.25A	3.5	~	~	~	~	CLE-809*D10-CA25X
0.25...0.40A	5.6	~	~	~	~	CLE-809*D10-CA40X
0.40...0.63A	8.8	~	~	~	~	CLE-809*D10-CA63X
0.63...1.0A	14	~	~	1/2	1/2	CLE-809*D10-CB10X
1.0...1.6A	22	~	~	3/4	3/4	CLE-809*D10-CB16X
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLE-809*D10-CB25X
2.5...4.0A	56	3/4	3/4	2	3	CLE-809*D10-CB40X
4.0...6.3A	88	1	1-1/2	3	5 ⑥	CLE-809*D10-CB63X
6.3...10A	140	2	2	5	5 ⑥	CLE-809*D10-CC10X
6.3...10A	140	2	2	5	7-1/2 ⑥	CLE-812*D10-CC10X
10...16A	224	3	3	7-1/2	10 ⑥	CLE-812*D10-CC16X

Includes:

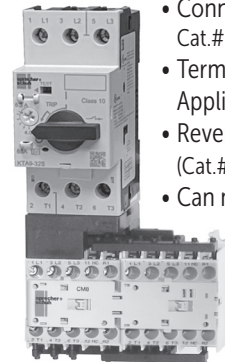
- KTA9-32S (Standard Interrupting Capacity) Motor Controller
- CA8 Contactor
- Connecting Module (Cat.# KT9-32S-PEK12)
- Terminal Adaptor for Type F Applications (Cat.# KT9-40-TE)
- Can mount on one DIN-rail


Reversing Ecombo Starters with DC Coil, Series CA8 Contactor

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ②
		200V	230V	460V	575V	
KTA9-32S – Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLUE-809*D02-CA16X
0.16...0.25A	3.5	~	~	~	~	CLUE-809*D02-CA25X
0.25...0.40A	5.6	~	~	~	~	CLUE-809*D02-CA40X
0.40...0.63A	8.8	~	~	~	~	CLUE-809*D02-CA63X
0.63...1.0A	14	~	~	1/2	1/2	CLUE-809*D02-CB10X
1.0...1.6A	22	~	~	3/4	3/4	CLUE-809*D02-CB16X
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUE-809*D02-CB25X
2.5...4.0A	56	3/4	3/4	2	3	CLUE-809*D02-CB40X
4.0...6.3A	88	1	1-1/2	3	5 ⑥	CLUE-809*D02-CB63X
6.3...10A	140	2	2	5	5 ⑥	CLUE-809*D02-CC10X
6.3...10A	140	2	2	5	7-1/2 ⑥	CLUE-812*D02-CC10X
10...16A	224	3	3	7-1/2	10 ⑥	CLUE-812*D02-CC16X

Includes:

- KTA9-32S (Standard Interrupting Capacity) Motor Controller
- One Reversing CAU8 Contactor with Mechanical Interlock (CM8)
- Connecting Module Cat.# KT9-32S-PEK12)
- Terminal Adaptor for Type F Applications (Cat.# KT9-40-TE)
- Reversing Power Wiring Kit (Cat.# CAUT8-PW)
- Can mount on one DIN-rail



DC Coil Code	Voltage
012	12V
024	24V ④
110	110V
125	125V
220	220V

Horsepower ratings shown in the tables are for reference only. The final selection of the controller depends on the actual motor full load current and service factor.

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. – 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

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

- ① KAIC Assembly Rating Index. See pages F3:17-F3:20 for Application Rating Guide.
- ② Does not include auxiliary contacts. See Factory Options on page F3:16 for additional auxiliary contact configurations.
- ③ The coil codes shown are the most commonly stocked items. Contact your Sprecher + Schuh representative if special voltages are required.
- ④ Integrated surge suppressor for coil is available. See page F3:16 for options.
- ⑤ The European Community has agreed that 400V is the nominal voltage in lieu of 380V. Use this code when 380V is required.
- ⑥ Use this code for 575V applications.
- ⑦ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See page F1:5 for ratings.

F3
Ecombo Circuit Controllers

Non-Reversing Ecombo Starters with AC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLE-709*10-CA16B
0.16...0.25A	3.5	~	~	~	~	CLE-709*10-CA25B
0.25...0.40A	5.6	~	~	~	~	CLE-709*10-CA40B
0.40...0.63A	8.8	~	~	~	~	CLE-709*10-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLE-709*10-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLE-709*10-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLE-709*10-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLE-709*10-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❷	CLE-709*10-CB63B
6.3...10A	140	2	2	5	7-1/2 ❷	CLE-709*10-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❷	CLE-712*10-CC10B
10...16A	224	3	5	10	10 ❷	CLE-716*10-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLE-709*10-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLE-709*10-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLE-709*10-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLE-709*10-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLE-709*10-DB40B
4.0...6.3A	88	1	1-1/2	3	5	CLE-709*10-DB63B
6.3...10A	140	2	2	5	7-1/2	CLE-709*10-DC10B
6.3...10A	140	2	2	5	7-1/2	CLE-712*10-DC10B
10...16A	224	3	5	10	10	CLE-716*10-DC16B
14.5...20A	280	5	5	10	15 ❷	CLE-723*10-DC20B
18...25A	350	5	7-1/2	15	20 ❷	CLE-723*10-DC25B
23...29A	406	7-1/2	10	20	25 ❷	CLE-730*10-DC29B
26.5...32A	448	7-1/2	10	20	30 ❷	CLE-730*10-DC32B
30...36A	432	10	10	25	30 ❷	CLE-737*10-DC36B
34...40A	480	10	10	25	30 ❷	CLE-737*10-DC40B
KTA7-45H – High Interrupting Capacity (13 x In)						
6.3...10A	130	2	3	5	7-1/2	CLE-730*10-FC10B-W ❷
10...16A	208	3	5	10	10	CLE-730*10-FC16B-W ❷
14.5...20A	260	5	5	10	15	CLE-730*10-FC20B-W ❷
18...25A	325	7-1/2	7-1/2	15	20	CLE-730*10-FC25B-W ❷
23...32A	416	7-1/2	10	20	25	CLE-730*10-FC32B-W ❷
32...45A	585	10	10	25	30	CLE-737*10-FC45B-W ❷
32...45A	585	10	15	30	30	CLE-743*11-FC45C-W ❷ ❸

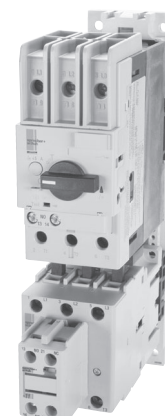
Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- CA7 Contactor (AC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Can mount on one DIN-rail



Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on C26 to C29 and 45H models. See modifications on page F3:16.



For applications above 45 amps please consider open type combination starters in Section C.

Coil Codes (*) ①

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
220W	200-220V	208-240V
230Z	230V	230V
0277	240V	277V
0415	400-415V	~
0480 ③	440V	480V
0600 ③	550V	600V

Horsepower ratings shown in the tables are for reference only. The final selection of the controller depends on the actual motor full load current and service factor.

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

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

① Other voltages available, see Section A in this catalog.

② CLE-730...743 with KTA7-45H include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary. To add Type W Mounting Modules for 32S models add -W to end of catalog number. See page F3:16 for modifications.

③ CLE-743 supplied with (1) NO and (1) NC front mount auxiliary.

④ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.

Non-Reversing Ecombo Starters with DC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLE-709*E10-CA16B
0.16...0.25A	3.5	~	~	~	~	CLE-709*E10-CA25B
0.25...0.40A	5.6	~	~	~	~	CLE-709*E10-CA40B
0.40...0.63A	8.8	~	~	~	~	CLE-709*E10-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLE-709*E10-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLE-709*E10-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLE-709*E10-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLE-709*E10-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❷	CLE-709*E10-CB63B
6.3...10A	140	2	2	5	7-1/2 ❷	CLE-709*E10-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❷	CLE-712*E10-CC10B
10...16A	224	3	5	10	10 ❷	CLE-716*E10-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLE-709*E10-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLE-709*E10-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLE-709*E10-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLE-709*E10-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLE-709*E10-DB40B
4.0...6.3A	88	1	1-1/2	3	5	CLE-709*E10-DB63B
6.3...10A	140	2	2	5	7-1/2	CLE-709*E10-DC10B
6.3...10A	140	2	2	5	7-1/2	CLE-712*E10-DC10B
10...16A	224	3	5	10	10	CLE-716*E10-DC16B
14.5...20A	280	5	5	10	15 ❸	CLE-723*E10-DC20B
18...25A	350	5	7-1/2	15	20 ❸	CLE-723*E10-DC25B
23...29A	406	7-1/2	10	20	25 ❸	CLE-730*E10-DC29B
26.5...32A	448	7-1/2	10	20	30 ❸	CLE-730*E10-DC32B
30...36A	432	10	10	25	30 ❸	CLE-737*E10-DC36B
34...40A	480	10	10	25	30 ❸	CLE-737*E10-DC40B
KTA7-45H – High Interrupting Capacity (13 x In)						
6.3...10A	130	2	3	5	7-1/2	CLE-730*E10-FC10B-W ❹
10...16A	208	3	5	10	10	CLE-730*E10-FC16B-W ❹
14.5...20A	260	5	5	10	15	CLE-730*E10-FC20B-W ❹
18...25A	325	7-1/2	7-1/2	15	20	CLE-730*E10-FC25B-W ❹
23...32A	416	7-1/2	10	20	25	CLE-730*E10-FC32B-W ❹
32...45A	585	10	10	25	30	CLE-737*E10-FC45B-W ❹
32...45A	585	10	15	30	30	CLE-743*E11-FC45C-W ❹ ❺

For applications above 45 amps please consider open type combination starters in Section C.

Coil Codes (*) ①

DC Coil Codes	Voltage
012	12V
024	24V
036	36-48V
048	48-72V
110	110-125V
220	220-250V

Horsepower ratings shown in the tables are for reference only. **The final selection of the controller depends on the actual motor full load current and service factor.**

- For motor with service factor less than 1.15. Use motor name-plate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

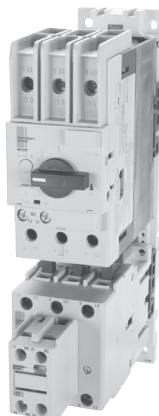
Specify Catalog Number	
Replace (*) with Coil Code	See Coil Code table on this page for codes.

Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- CA7 Contactor (DC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Can mount on one DIN-rail

Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on C26 to C29 and 45H models. See modifications on page F3:16.



F3

Ecombo Circuit Controllers

- Other voltages available, see Section A in this catalog.
- CLE-730...743 with KTA7-45H include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary. To add Type W Mounting Modules for 32S models add -W to end of catalog number. See page F3:16 for modifications.
- CLE-743 supplied with (1) NO and (1) NC front mount auxiliary.
- Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.

Reversing Ecombo Starters with AC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLUE-709*22-CA16B
0.16...0.25A	3.5	~	~	~	~	CLUE-709*22-CA25B
0.25...0.40A	5.6	~	~	~	~	CLUE-709*22-CA40B
0.40...0.63A	8.8	~	~	~	~	CLUE-709*22-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUE-709*22-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUE-709*22-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUE-709*22-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUE-709*22-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❹	CLUE-709*22-CB63B
6.3...10A	140	2	2	5	7-1/2 ❹	CLUE-709*22-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❹	CLUE-712*22-CC10B
10...16A	224	3	5	10	10 ❹	CLUE-716*22-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLUE-709*22-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUE-709*22-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUE-709*22-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUE-709*22-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUE-709*22-DB40B
4.0...6.3A	88	1	1-1/2	3	5	CLUE-709*22-DB63B
6.3...10A	140	2	2	5	7-1/2	CLUE-709*22-DC10B
6.3...10A	140	2	2	5	7-1/2	CLUE-712*22-DC10B
10...16A	224	3	5	10	10	CLUE-716*22-DC16B
14.5...20A	280	5	5	10	15 ❹	CLUE-723*22-DC20B
18...25A	350	5	7-1/2	15	20 ❹	CLUE-723*22-DC25B
23...29A	406	7-1/2	10	20	25 ❹	CLUE-730*22-DC29B ❷
26.5...32A	448	7-1/2	10	20	30 ❹	CLUE-730*22-DC32B ❷
30...36A	432	10	10	25	30 ❹	CLUE-737*22-DC36B ❷
34...40A	480	10	10	25	30 ❹	CLUE-737*22-DC40B ❷
KTA7-45H – High Interrupting Capacity (13 x In)						
6.3...10A	130	2	3	5	7.5	CLUE-730*22-FC10B-W ❷
10...16A	208	3	5	10	10	CLUE-730*22-FC16B-W ❷
14.5...20A	260	5	5	10	15	CLUE-730*22-FC20B-W ❷
18...25A	325	7.5	7.5	15	20	CLUE-730*22-FC25B-W ❷
23...32A	416	7.5	10	20	25	CLUE-730*22-FC32B-W ❷
32...45A	585	10	10	25	30	CLUE-737*22-FC45B-W ❷
32...45A	585	10	15	30	30	CLUE-743*22-FC45C-W ❷❸

For applications above 45 amps please consider open type combination starters in Section C.

Coil Codes (*) ①

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
220W	200-220V	208-240V
230Z	230V	230V
0277	240V	277V
0415	400-415V	~
0480 ③	440V	480V
0600 ③	550V	600V

Ordering Instructions

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

Horsepower ratings shown in the tables are for reference only. **The final selection of the controller depends on the actual motor full load current and service factor.**

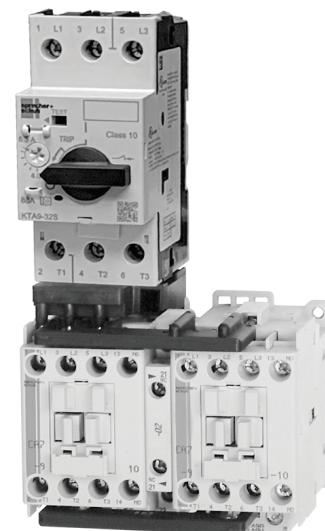
- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

① Other voltages available, see Section A in this catalog.

② CLUE-730...743 with KTA9-40H and KTA7-45H include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary from page F1:17.

③ CLUE-743 supplied with (1) NO and (1) NC front mount auxiliary per contactor.

④ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.



Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- Two CA7 Contactors (AC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Reversing Power Wiring Kit (Cat.# CAUT7-PW23)
- Electrical / Mechanical Interlock
- Can mount on one DIN-rail

Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on C29...C40 and 45H models. See modifications on page F3:16.

Reversing Ecombo Starters with DC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLUE-709*E22-CA16B
0.16...0.25A	3.5	~	~	~	~	CLUE-709*E22-CA25B
0.25...0.40A	5.6	~	~	~	~	CLUE-709*E22-CA40B
0.40...0.63A	8.8	~	~	~	~	CLUE-709*E22-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUE-709*E22-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUE-709*E22-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUE-709*E22-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUE-709*E22-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❹	CLUE-709*E22-CB63B
6.3...10A	140	2	2	5	7-1/2 ❹	CLUE-709*E22-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❹	CLUE-712*E22-CC10B
10...16A	224	3	5	10	10 ❹	CLUE-716*E22-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLUE-709*E22-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUE-709*E22-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUE-709*E22-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUE-709*E22-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUE-709*E22-DB40B
4.0...6.3A	88	1	1-1/2	3	5	CLUE-709*E22-DB63B
6.3...10A	140	2	2	5	7-1/2	CLUE-709*E22-DC10B
6.3...10A	140	2	2	5	7-1/2	CLUE-712*E22-DC10B
10...16A	224	3	5	10	10	CLUE-716*E22-DC16B
14.5...20A	280	5	5	10	15 ❹	CLUE-723*E22-DC20B
18...25A	350	5	7-1/2	15	20 ❹	CLUE-723*E22-DC25B
23...29A	406	7-1/2	10	20	25 ❹	CLUE-730*E22-DC29B ❷
26.5...32A	448	7-1/2	10	20	30 ❹	CLUE-730*E22-DC32B ❷
30...36A	432	10	10	25	30 ❹	CLUE-737*E22-DC36B ❷
34...40A	480	10	10	25	30 ❹	CLUE-737*E22-DC40B ❷
KTA7-45H – High Interrupting Capacity (13 x In)						
6.3...10A	130	2	3	5	7.5	CLUE-730*E22-FC10B-W ❷
10...16A	208	3	5	10	10	CLUE-730*E22-FC16B-W ❷
14.5...20A	260	5	5	10	15	CLUE-730*E22-FC20B-W ❷
18...25A	325	7.5	7.5	15	20	CLUE-730*E22-FC25B-W ❷
23...32A	416	7.5	10	20	25	CLUE-730*E22-FC32B-W ❷
32...45A	585	10	10	25	30	CLUE-737*E22-FC45B-W ❷
32...45A	585	10	15	30	30	CLUE-743*E22-FC45C-W ❷❸

For applications above 45 amps please consider open type combination starters in Section C.

Coil Codes (*) ①

DC Coil Codes	Voltage
012	12V
024	24V
036	36-48V
048	48-72V
110	110-125V
220	220-250V

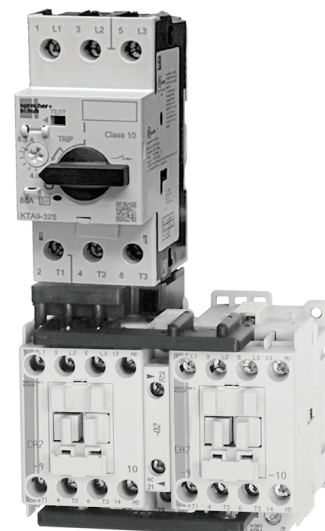
Horsepower ratings shown in the tables are for reference only. **The final selection of the controller depends on the actual motor full load current and service factor.**

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

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

- ① Other voltages available, see Section A in this catalog.
- ② CLUE-730...743 with KTA9-40H and KTA7-45H include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary from page F1:17.
- ③ CLUE-743 supplied with (1) NO and (1) NC front mount auxiliary per contactor.
- ④ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.



Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- Two CA7 Contactors (DC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Reversing Power Wiring Kit (Cat.# CAUT7-PW23)
- Electrical / Mechanical Interlock
- Can mount on one DIN-rail

Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on C29...C40 and 45H models. See modifications on page F3:16.

Non-Reversing EcomboPlus Starters with AC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLS-709*10-CA16B
0.16...0.25A	3.5	~	~	~	~	CLS-709*10-CA25B
0.25...0.40A	5.6	~	~	~	~	CLS-709*10-CA40B
0.40...0.63A	8.8	~	~	~	~	CLS-709*10-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLS-709*10-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLS-709*10-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLS-709*10-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLS-709*10-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLS-709*10-CB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLS-709*10-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❸	CLS-712*10-CC10B
10...16A	224	3	5	10	10 ❸	CLS-716*10-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLS-709*10-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLS-709*10-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLS-709*10-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLS-709*10-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLS-709*10-DB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLS-709*10-DB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLS-709*10-DC10B
6.3...10A	140	2	2	5	7-1/2 ❸	CLS-712*10-DC10B
10...16A	224	3	5	10	10 ❸	CLS-716*10-DC16B
14.5...20A	280	3	5	10	15 ❸	CLS-723*10-DC20B
18...25A	350	3	5	15	20 ❸	CLS-723*10-DC25B
23...29A	406	3	5	10	20 ❸	CLS-730*10-DC29B ❷
26.5...32A	448	3	5	10	20 ❸	CLS-730*10-DC32B ❷
30...36A	432	3	5	10	25 ❸	CLS-737*10-DC36B ❷
34...40A	480	3	5	10	25 ❸	CLS-737*10-DC40B ❷

Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- CA7 Contactor (AC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Can mount on 35mm DIN-rail



Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on DC29...DC40 models. See modifications on page F3:16.



For applications above 40 amps please consider open type combination starters in Section C.

Coil Codes (*) ①

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
220W	200-220V	208-240V
230Z	230V	230V
0277	240V	277V
0415	400-415V	~
0480 ③	440V	480V
0600 ③	550V	600V

Horsepower ratings shown in the tables are for reference only. The final selection of the controller depends on the actual motor full load current and service factor.

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0 - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

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

- ① Other voltages available, see Section A in this catalog.
- ② CLS-730...737 include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary. To add Type W Mounting Modules to other units see page F3:16 for modifications.
- ③ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.

Non-Reversing EcomboPlus Starters with DC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLS-709*E10-CA16B
0.16...0.25A	3.5	~	~	~	~	CLS-709*E10-CA25B
0.25...0.40A	5.6	~	~	~	~	CLS-709*E10-CA40B
0.40...0.63A	8.8	~	~	~	~	CLS-709*E10-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLS-709*E10-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLS-709*E10-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLS-709*E10-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLS-709*E10-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLS-709*E10-CB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLS-709*E10-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❸	CLS-712*E10-CC10B
10...16A	224	3	5	10	10 ❸	CLS-716*E10-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLS-709*E10-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLS-709*E10-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLS-709*E10-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLS-709*E10-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLS-709*E10-DB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLS-709*E10-DB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLS-709*E10-DC10B
6.3...10A	140	2	2	5	7-1/2 ❸	CLS-712*E10-DC10B
10...16A	224	3	5	10	10 ❸	CLS-716*E10-DC16B
14.5...20A	280	3	5	10	15 ❸	CLS-723*E10-DC20B
18...25A	350	3	5	15	20 ❸	CLS-723*E10-DC25B
23...29A	406	3	5	20	25 ❸	CLS-730*E10-DC29B ❷
26.5...32A	448	3	5	20	30 ❸	CLS-730*E10-DC32B ❷
30...36A	432	3	5	25	30 ❸	CLS-737*E10-DC36B ❷
34...40A	480	3	5	25	30 ❸	CLS-737*E10-DC40B ❷

Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- CA7 Contactor (DC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Can mount on 35mm DIN-rail

Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on DC29...D40 models. See modifications on page F3:16.



F3

Ecombo Circuit Controllers

For applications above 40 amps please consider open type combination starters in Section C.

Coil Codes (*) ①

DC Coil Codes	Voltage
012	12V
024	24V
036	36-48V
048	48-72V
110	110-125V
220	220-250V

Horsepower ratings shown in the tables are for reference only. The final selection of the controller depends on the actual motor full load current and service factor.

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

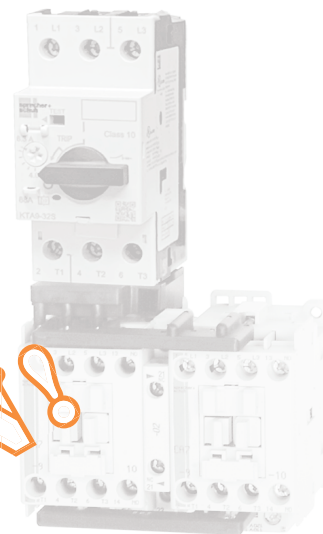
Specify Catalog Number	
Replace (*) with Coil Code	See Coil Code table on this page for codes.

- ① Other voltages available, see Section A in this catalog.
- ② CLS-730...737 include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary. To add Type W Mounting Modules to other units see page F3:16 for modifications.
- ③ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17

Reversing EcomboPlus Starters with AC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLUS-709*22-CA16B
0.16...0.25A	3.5	~	~	~	~	CLUS-709*22-CA25B
0.25...0.40A	5.6	~	~	~	~	CLUS-709*22-CA40B
0.40...0.63A	8.8	~	~	~	~	CLUS-709*22-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUS-709*22-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUS-709*22-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUS-709*22-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUS-709*22-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLUS-709*22-CB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLUS-709*22-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❸	CLUS-712*22-CC10B
10...16A	224	3	5	10	10 ❸	CLUS-716*22-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLUS-709*22-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUS-709*22-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUS-709*22-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUS-709*22-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUS-709*22-DB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLUS-709*22-DB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLUS-709*22-DC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❸	CLUS-712*22-DC10B
10...16A	224	3	5	10	10	CLUS-716*22-DC16B
14.5...20A	280	5	5	10	15 ❸	CLUS-723*22-DC20B
18...25A	350	7-1/2	15	20 ❸	20 ❸	CLUS-723*22-DC25B
23...29A	406	7-1/2	10	20	25 ❸	CLUS-730*22-DC29B ❷
26.5...32A	448	7-1/2	10	20	30 ❸	CLUS-730*22-DC32B ❷
30...36A	432	10	10	25	30 ❸	CLUS-737*22-DC36B ❷
34...40A	480	10	10	25	30 ❸	CLUS-737*22-DC40B ❷

For applications above 40 amps please consider open type combination starters in Section C.



Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- Two CA7 Contactors (DC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Reversing Power Wiring Kit (Cat.# CAUT7-PW23)
- Electrical / Mechanical Interlock
- Can mount on one DIN-rail

Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on DC29...DC40 models. See modifications on page F3:16.

Coil Codes (*) ①

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
220W	200-220V	208-240V
230Z	230V	230V
0277	240V	277V
0415	400-415V	~
0480 ③	440V	480V
0600 ③	550V	600V

Horsepower ratings shown in the tables are for reference only. **The final selection of the controller depends on the actual motor full load current and service factor.**

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

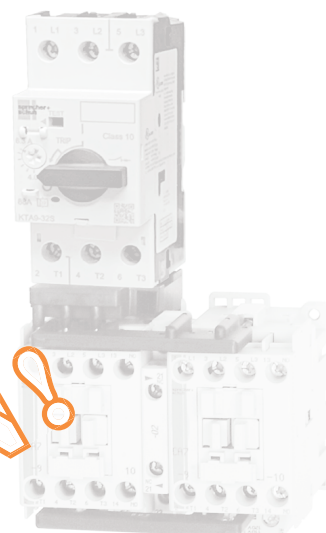
Specify Catalog Number	
Replace (*) with Coil Code	See Coil Code table on this page for codes.

- ① Other voltages available, see Section A in this catalog.
- ② CLUS-730...737 include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary. To add Type W Mounting Modules to other units see page F3:16 for modifications.
- ③ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.

Reversing EcomboPlus Starters with DC Coil, Series CA7 Contactor ②

Thermal Trip [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ❶
		200V	230V	460V	575V	
KTA9-32S - Standard Interrupting Capacity (14 x In)						
0.10...0.16A	2.2	~	~	~	~	CLUS-709*E22-CA16B
0.16...0.25A	3.5	~	~	~	~	CLUS-709*E22-CA25B
0.25...0.40A	5.6	~	~	~	~	CLUS-709*E22-CA40B
0.40...0.63A	8.8	~	~	~	~	CLUS-709*E22-CA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUS-709*E22-CB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUS-709*E22-CB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUS-709*E22-CB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUS-709*E22-CB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLUS-709*E22-CB63B
6.3...10A	140	2	2	5	7-1/2 ❸	CLUS-709*E22-CC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❸	CLUS-712*E22-CC10B
10...16A	224	3	5	10	10 ❸	CLUS-716*E22-CC16B
KTA9-40H – High Interrupting Capacity (14 x In)						
0.40...0.63A	8.8	~	~	~	~	CLUS-709*E22-DA63B
0.63...1.0A	14	~	~	1/2	1/2	CLUS-709*E22-DB10B
1.0...1.6A	22	~	~	3/4	3/4	CLUS-709*E22-DB16B
1.6...2.5A	35	1/2	1/2	1	1-1/2	CLUS-709*E22-DB25B
2.5...4.0A	56	3/4	3/4	2	3	CLUS-709*E22-DB40B
4.0...6.3A	88	1	1-1/2	3	5 ❸	CLUS-709*E22-DB63B
6.3...10A	140	2	2	5	7-1/2	CLUS-709*E22-DC10B
6.3...10A	140	3	3	7-1/2	7-1/2 ❸	CLUS-712*E22-DC10B
10...16A	224	3	5	10	10	CLUS-716*E22-DC16B
14.5...20A	280	5	5	10	15 ❸	CLUS-723*E22-DC20B
18...25A	350	7-1/2	7-1/2	15	20 ❸	CLUS-723*E22-DC25B
23...29A	406	7-1/2	10	20	25 ❸	CLUS-730*E22-DC29B ❷
26.5...32A	448	7-1/2	10	20	30 ❸	CLUS-730*E22-DC32B ❷
30...36A	432	10	10	25	30 ❸	CLUS-737*E22-DC36B ❷
34...40A	480	10	10	25	30 ❸	CLUS-737*E22-DC40B ❷

For applications above 40 amps please consider open type combination starters in Section C.



Includes:

- KT9 Motor Controller with 1 NO Auxiliary Contact
- Two CA7 Contactors (DC)
- Connecting Module (Cat.# KT9-32S or 40H-PEC23)
- Terminal Adaptor for Type E/F Applications
- Reversing Power Wiring Kit (Cat.# CAUT7-PW23)
- Electrical / Mechanical Interlock
- Can mount on one DIN-rail

Optional: ②

- Type W Mounting Module is optional on 32S & 40H. Type W Module is standard on DC29...DC40 models. See modifications on page F3:16.

Coil Codes (*) ①

DC Coil Codes	Voltage
012	12V
024	24V
036	36-48V
048	48-72V
110	110-125V
220	220-250V

Horsepower ratings shown in the tables are for reference only. *The final selection of the controller depends on the actual motor full load current and service factor.*

- For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor F.L.C. = 4.2A; S.F. = 1.0. - 4.2A x 0.9 = 3.78A. Select Catalog Number KTA9-32S-4.0A.

Ordering Instructions

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

- ① Other voltages available, see Section A in this catalog.
- ② CLUS-730...737 include Type W Mounting Modules for 35mm or 70mm DIN rail or Panel Mounting as necessary. To add Type W Mounting Modules to other units see page F3:16 for modifications.
- ③ Catalog numbers with specific voltages (i.e. @ 575V) shaded in gray are suitable for use as a manual motor starter only because they are not Type E rated. See ratings starting on page F3:17.

Non-Reversing 3-Component Ecombo Starters ②③

Rated Oper. Current [A] ④	Overload Adj. Range [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ①
			200V	230V	460V	575V	
KTB9-40H – High Interrupting Capacity (14 x In)							
0.63	0.1...0.5	8.8	~	~	~	~	CLE-709*10-DA63B-FBB
1.0	1.0...5.0	14	~	~	1/2	1/2	CLE-709*10-DB10B-FCB
1.6	1.0...5.0	22	~	~	3/4	3/4	CLE-709*10-DB16B-FCB
2.5	1.0...5.0	35	1/2	1/2	1	1-1/2	CLE-709*10-DB25B-FCB
4.0	1.0...5.0	56	3/4	3/4	2	3	CLE-709*10-DB40B-FCB
6.3	3.2...16	88	1	1-1/2	3	5	CLE-709*10-DB63B-FDB
10	3.2...16	140	2	2	5	7-1/2	CLE-709*10-DC10B-FDB
16	3.2...16	224	3	3	7-1/2	10	CLE-712*10-DC16B-FDB
16	3.2...16	224	3	5	10	10	CLE-716*10-DC16B-FDB
20	5.4...27	280	5	5	10	~	CLE-723*10-DC20B-FEB
25	5.4...27	350	5	7-1/2	15	~	CLE-723*10-DC25B-FEB
29	11...55	406	7-1/2	10	20	~	CLE-730*10-DC29B-FFD
32	11...55	448	7-1/2	10	20	~	CLE-730*10-DC32B-FFD
KTB7-45H – High Interrupting Capacity (13 x In)							
25	5.4...27	325	5	7-1/2	15	20	CLE-730*10-FC25B-FED
32	11...55	416	7-1/2	10	20	25	CLE-730*10-FC32B-FFD
32	11...55	416	7-1/2	10	20	25	CLE-737*10-FC32B-FFD
45	11...55	585	10	10	25	30	CLE-737*10-FC45B-FFD
45	11...55	585	10	15	30	~	CLE-743*11-FC45C-FFD

Coil Codes (*)

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
220W	200-220V	208-240V
230Z	230V	230V
0277	240V	277V
0415	400-415V	~
0480 ⑤	440V	480V
0600 ⑤	550V	600V

Ordering Instructions

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



Includes:

- KTB9 Motor Controller
- CA7 Contactor (AC)
- CEP7 Solid State Overload Relay
- KT9 Connectors
- Terminal Adaptor for Type E Applications
- Mounting Modules for 40H or 45H Frame Units as required from page F1.17
- See page F3.16 for Factory Options

① Other voltages available, see Section A in this catalog.

② All CLE are supplied with Auxiliary Contacts for customer use as follows;

CLE-709...723 (1) NO Internal Mount

CLE-730...737 (1) NO Side Mount

CLE-743 (1) NO & (1) NC Front Mount

All KTB9s are supplied with (1) NO auxiliary contact, which should be used in series with the NC contact on the overload (95-96).

③ Horsepower ratings shown in tables are for reference only. **The final selection of the controller and solid state overload relay depends on the actual motor full load current and service factor.**

④ The KTB9 Motor Circuit Controller is designed and tested to protect a motor circuit in case of a shortcircuit. A separate Sprecher + Schuh CEP7-1EF overload relay with selectable trip class should be used to protect the motor against overload. In Applications with motor starting times exceeding 10 seconds (heavy duty starting) the rated operational current (Ie) of the motor FLA must be multiplied by the following factors for selection of the KTB9 Motor Circuit Controller KTB9-40H and KTB7-45H.

Trip classes according to UL 508 Section 52 and IEC 60947-4-1

CLASS 10 = 1.0, CLASS 15 = 1.22, CLASS 20 = 1.42, CLASS 25 = 1.58, CLASS 30 = 1.7 The maximum number of motor starts in 25 cycles/hour with a minimum OFF-time of 120 seconds between cycles. This additional calculation and selecting a larger frame size is necessary to compensate (dissipate) the increased heat resulting from long acceleration applications effecting the rated operational current of the KTB9.

Reversing 3-Component Ecombo Starters ②③④

Rated Oper. Current [A] ⑥	Overload Adj. Range [A]	Magnetic Trip [A]	Typical Three Phase [HP]				Catalog Number ①③⑥
			200V	230V	460V	575V	
KTB9-40H – High Interrupting Capacity (14 x In)							
0.63	0.1...0.5	8.8	~	~	~	~	CLUE-709*22-DA63B-FBB
1.0	1.0...5.0	14	~	~	1/2	1/2	CLUE-709*22-DB10B-FCB
1.6	1.0...5.0	22	~	~	3/4	3/4	CLUE-709*22-DB16B-FCB
2.5	1.0...5.0	35	1/2	1/2	1	1-1/2	CLUE-709*22-DB25B-FCB
4.0	1.0...5.0	56	3/4	3/4	2	3	CLUE-709*22-DB40B-FCB
6.3	3.2...16	88	1	1-1/2	3	5	CLUE-709*22-DB63B-FDB
10	3.2...16	140	2	2	5	7-1/2	CLUE-709*22-DC10B-FDB
16	3.2...16	208	3	3	7-1/2	10	CLUE-712*22-DC16B-FDB
16	3.2...16	224	3	5	10	10	CLUE-716*22-DC16B-FDB
20	5.4...27	280	5	5	10	~	CLUE-723*22-DC20B-FEB
25	5.4...27	350	5	7-1/2	15	~	CLUE-723*22-DC25B-FED
29	11...55	406	7-1/2	10	20	~	CLUE-730*22-DC29B-FFD
32	11...55	448	7-1/2	10	20	~	CLUE-730*22-DC32B-FFD
KTB7-45H – High Interrupting Capacity (13 x In)							
25	5.4...27	325	5	7-1/2	15	20	CLUE-730*22-FC25B-FED
32	11...55	416	7-1/2	10	20	25	CLUE-730*22-FC32B-FFD
32	11...55	416	7-1/2	10	20	25	CLUE-737*22-FC32B-FFD
45	11...55	585	10	10	25	30	CLUE-737*22-FC45B-FFD
45	11...55	585	10	15	30	~	CLUE-743*22-FC45B-FFD



Includes:

- KTB9 Motor Controller
- CAU7 Reversing Contactor (AC)
- CEP7 Solid State Overload Relay
- KT9 Connectors
- Terminal Adaptor for Type E Applications
- Mounting Modules for 40H or 45H Frame Units as required from page F1.17
- See page F3.16 for Factory Options

Coil Codes (*)

AC Coil Code	Voltage Range	
	50 Hz	60 Hz
024Z	24V	24V
0120	110V	120V
220W	200-220V	208-240V
230Z	230V	230V
027V	240V	277V
0415	400-415V	~
0480 ⑤	440V	480V
0600 ⑤	550V	600V

- ① Other voltages available, see Section A in this catalog.
- ② All CLUE are supplied with Auxiliary Contacts for customer use as follows:
CLUE-709..723 (1) NO Internal Mount
CLUE-730..737 (1) NO Side Mount
CLUE-743 (1) NO & (1) NC Front Mount
CM7-02 interlock (2) NC (Electrical Interlocks)
All KTB9s are supplied with (1) NO auxiliary contact (A10), which should be used in series with the NC contact on the overload (95-96).
- ③ All CAU7 reversing contactors are supplied with CM7-02, including (2) NC contacts for electronic interlocking (not available for customer use).
- ④ Horsepower ratings shown in tables are for reference only. **The final selection of the controller and solid state overload relay depends on the actual motor full load current and service factor.**
- ⑤ The KTB9 Motor Circuit Controller is designed and tested to protect a motor circuit in case of a short circuit. A separate Sprecher + Schuh CEP7-1EF overload relay with selectable trip class should be used to protect the motor against overload. In Applications with motor starting times exceeding 10 seconds (heavy duty starting) the rated operational current (Ie) of the motor FLA must be multiplied by the following factors for selection of the KTB9 Motor Circuit Controller KTB9-40H and KTB7-45H.
Trip classes according to UL 508 Section 52 and IEC 60947-4-1
CLASS 10 = 1.0, CLASS 15 = 1.22, CLASS 20 = 1.42, CLASS 25 = 1.58, CLASS 30 = 1.73
- ⑥ The maximum number of motor starts in 25 cycles/hour with a minimum OFF-time of 120 seconds between cycles. This additional calculation and selecting a larger frame size is necessary to compensate (dissipate) the increased heat resulting from long acceleration applications effecting the rated operational current of the KTB9.

Ordering Instructions

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

Ecombo and EcomboPlus Modifications ③

Modification	Change Last Digit in Catalog Number to: ①
KT9 Auxiliary (Front Mount 250VAC max.) and Trip Contacts	
Auxiliary Contact 1 NO	B
Auxiliary Contact 1 NO + 1 NC	C
Auxiliary Contact 2 NO	D
1 NO SC or OL + 1 NC Auxiliary Contact	R
1 NO SC or OL + 1 NO Auxiliary Contact	S
1 NC SC or OL + 1 NO Auxiliary Contact	T
KT9 Auxiliary (Side Mount 600VAC max.) and Trip Contacts	
Auxiliary Contact 2 NC	E

CL and CLU Additions ③

Add desired suffix AFTER auxiliary contact option code.

Addition	Add Suffix to end of Catalog Number:
Accessories	
Electronic Interfaces (CA7)	-JE ②
Lockable Twist Knob (KT9) - Black	-KN
Lockable Twist Knob (KT9) - Red/Yellow	-KY
Type W Mounting Module 45mm (W-32489) or 54mm (W-32490) short module for CLE/CLUE 9...23 Amp only	-W ④
Control Wiring Top Plug (CLS/CLUS only)	-SP
Control Wiring Bottom Plug (CLS/CLUS only)	-SB

① For CLE-8... or CLUE-8..., change last digit "X" to one of the modifications listed.
Example: – CLE-809*10-CA16X changes to CLE-809*10-CA16B.
For CLE-7... or CLUE-7..., change last digits "B" to one of the modifications listed.
Example: CLE-709*10-CA16B changes to CLE-709*10-CA16C.

② CRI7E-24 will be used. CRI7E-12 by special order only.

③ See page A2:19 for limitations on adding auxiliaries to Electronic DC Coil contactors.

④ Type W Mounting Modules are included as standard on all CLS/CLUS, CLE/CLUE 3-Component Ecombos, and CLE/CLUE 30 amps and greater. See page F1:17 for more information.

UL 60947-4-1 Ratings

Starters with CA8/CAU8 Contactors and KT9 MPCBs¹

Suitable for Group Installation on load side of KT9 Manual Motor Controller; Type 1 Short-Circuit Coordination Only

Cat. No.		MPCB	Motor Current Adjustment Range [A]	Connection Module	Reversing Power Wiring Kit	Min Contactor Size ❶	SCCR [kA]		Max Fuse or Circuit Breaker per NEC [A]
DOL Starters	Reversing Starters						Type 1 Coordination		
							480V AC	600V AC	
C-Frame MPCB with CA8/CAU8 Contactors									
CLE-809*10-CA16X	CLUE-809*22-CA16X	KT9-32S-0.16A	0.10...0.16	KT9-32S-PEK12		CA8-09	65	50	450
CLE-809*10-CA25X	CLUE-809*22-CA25X	KT9-32S-0.25A	0.16...0.25			CA8-09	65	50	450
CLE-809*10-CA40X	CLUE-809*22-CA40X	KT9-32S-0.40A	0.25...0.40			CA8-09	65	50	450
CLE-809*10-CA63X	CLUE-809*22-CA63X	KT9-32S-0.63A	0.40...0.63			CA8-09	65	50	450
CLE-809*10-CB10X	CLUE-809*22-CB10X	KT9-32S-1.0A	0.63...1.0			CA8-09	65	50	450
CLE-809*10-CB16X	CLUE-809*22-CB16X	KT9-32S-1.6A	1.0...1.6			CA8-09	65	50	450
CLE-809*10-CB25X	CLUE-809*22-CB25X	KT9-32S-2.5A	1.6...2.5			CA8-09	65	30	450
CLE-809*10-CB40X	CLUE-809*22-CB40X	KT9-32S-4.0A	2.5...4.0			CA8-09	65	30	450
CLE-809*10-CB63X	CLUE-809*22-CB63X	KT9-32S-6.3A	4.0...6.3			CA8-09	65	30	450
CLE-809*10-CC10X	CLUE-809*22-CC10X	KT9-32S-10A	6.3...10			CA8-09	65	30	450
CLE-812*10-CC10X	CLUE-812*22-CC10X	KT9-32S-10A	6.3...10			CA8-12	65	30	450
CLE-812*10-CC16X	CLUE-812*22-CC16X	KT9-32S-16A	10...16			CA8-12	30	30	450

Suitable for Group Installation/Disconnecting Means on load side of KT9 Manual Motor Controller; Type 1 Short-Circuit Coordination Only

C-Frame MPCB with CA8/CAU8 Contactors									
CLE-809*10-CA16X	CLUE-809*22-CA16X	KT9-32S-0.16A	0.10...0.16	KT9-32S-PEK12	CAUT8-PW	CA8-09	65	50	450
CLE-809*10-CA25X	CLUE-809*22-CA25X	KT9-32S-0.25A	0.16...0.25			CA8-09	65	50	450
CLE-809*10-CA40X	CLUE-809*22-CA40X	KT9-32S-0.40A	0.25...0.40			CA8-09	65	50	450
CLE-809*10-CA63X	CLUE-809*22-CA63X	KT9-32S-0.63A	0.40...0.63			CA8-09	65	50	450
CLE-809*10-CB10X	CLUE-809*22-CB10X	KT9-32S-1.0A	0.63...1.0			CA8-09	65	50	450
CLE-809*10-CB16X	CLUE-809*22-CB16X	KT9-32S-1.6A	1.0...1.6			CA8-09	65	50	450
CLE-809*10-CB25X	CLUE-809*22-CB25X	KT9-32S-2.5A	1.6...2.5			CA8-09	65	30	450
CLE-809*10-CB40X	CLUE-809*22-CB40X	KT9-32S-4.0A	2.5...4.0			CA8-09	65	30	450
CLE-809*10-CB63X	CLUE-809*22-CB63X	KT9-32S-6.3A	4.0...6.3			CA8-09	65	30	450
CLE-809*10-CC10X	CLUE-809*22-CC10X	KT9-32S-10A	6.3...10			CA8-09	65	30	450
CLE-812*10-CC10X	CLUE-812*22-CC10X	KT9-32S-10A	6.3...10			CA8-12	65	30	450
CLE-812*10-CC16X	CLUE-812*22-CC16X	KT9-32S-16A	10...16			CA8-12	30	30	450

① Similar for other contactor configurations (DOL or Reversing)

UL 60947-4-1 Ratings

Starters with CA8/CAU8 Contactors and KT9 MPCBs¹

KT9 Combination Motor Controller as Type F Combination; Type 1 Short-Circuit Coordination Only

Cat. No.		MPCB	Motor Current Adjustment Range [A]	Connection Module	Reversing Power Wiring Kit	Min Contactor Size ❶	SCCR [kA]		Max Fuse or Circuit Breaker per NEC [A]
DOL Starters	Reversing Starters						Type 1 Coordination		
							480V AC	600V AC	
C-Frame MPCB with CA8/CAU8 Contactors									
CLE-809*10-CA16X	CLUE-809*22-CA16X	KTA9-32S-0.16A	0.10...0.16	KT9-32S-PEK12	CAUT8-PW	CA8-09	65	50	450
CLE-809*10-CA25X	CLUE-809*22-CA25X	KTA9-32S-0.25A	0.16...0.25			CA8-09	65	50	450
CLE-809*10-CA40X	CLUE-809*22-CA40X	KTA9-32S-0.40A	0.25...0.40			CA8-09	65	50	450
CLE-809*10-CA63X	CLUE-809*22-CA63X	KTA9-32S-0.63A	0.40...0.63			CA8-09	65	50	450
CLE-809*10-CB10X	CLUE-809*22-CB10X	KTA9-32S-1.0A	0.63...1.0			CA8-09	65	50	450
CLE-809*10-CB16X	CLUE-809*22-CB16X	KTA9-32S-1.6A	1.0...1.6			CA8-09	65	50	450
CLE-809*10-CB25X	CLUE-809*22-CB25X	KTA9-32S-2.5A	1.6...2.5			CA8-09	65	30	450
CLE-809*10-CB40X	CLUE-809*22-CB40X	KTA9-32S-4.0A	2.5...4.0			CA8-09	65	30	450
CLE-809*10-CB63X	CLUE-809*22-CB63X	KTA9-32S-6.3A	4.0...6.3			CA8-09	65	~	450
CLE-809*10-CC10X	CLUE-809*22-CC10X	KTA9-32S-10A	6.3...10			CA8-09	65	~	450
CLE-812*10-CC10X	CLUE-812*22-CC10X	KTA9-32S-10A	6.3...10			CA8-12	65	~	450
CLE-812*10-CC16X	CLUE-812*22-CC16X	KTA9-32S-16A	10...16			CA8-12	30	~	450

UL 60947-4-1 Ratings

Starters with CA7/CAU7 Contactors and KT9 MPCBs¹

Suitable for Group Installation on load side of KT9 Manual Motor Controller; Type 1 Short-Circuit Coordination Only

C-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-CA16X	CLUE-709*22-CA16X	KTA9-32S-0.16A	0.10...0.16	KT9-32S-PEC23 or KT9-32S-PNC23	CAUT7-PW23	CA7-9	65	50	450
CLE-709*10-CA25X	CLUE-709*22-CA25X	KTA9-32S-0.25A	0.16...0.25			CA7-9	65	50	450
CLE-709*10-CA40X	CLUE-709*22-CA40X	KTA9-32S-0.40A	0.25...0.40			CA7-9	65	50	450
CLE-709*10-CA63X	CLUE-709*22-CA63X	KTA9-32S-0.63A	0.40...0.63			CA7-9	65	50	450
CLE-709*10-CB10X	CLUE-709*22-CB10X	KTA9-32S-1.0A	0.63...1.0			CA7-9	65	50	450
CLE-709*10-CB16X	CLUE-709*22-CB16X	KTA9-32S-1.6A	1.0...1.6			CA7-9	65	50	450
CLE-709*10-CB25X	CLUE-709*22-CB25X	KTA9-32S-2.5A	1.6...2.5			CA7-9	65	30	450
CLE-709*10-CB40X	CLUE-709*22-CB40X	KTA9-32S-4.0A	2.5...4.0			CA7-9	65	30	450
CLE-709*10-CB63X	CLUE-709*22-CB63X	KTA9-32S-6.3A	4.0...6.3			CA7-9	65	30	450
CLE-709*10-CC10X	CLUE-709*22-CC10X	KTA9-32S-10A	6.3...10			CA7-9	65	30	450
CLE-712*10-CC10X	CLUE-712*22-CC10X	KTA9-32S-10A	6.3...10			CA7-12	30	30	450
CLE-716*10-CC16X	CLUE-716*22-CC16X	KTA9-32S-16A	10...16			CA7-16	30	30	450
CLE-716*10-CC20X	CLUE-716*22-CC20X	KTA9-32S-20A	14.5...20	CA7-16	30	30	450		
CLE-723*10-CC25X	CLUE-723*22-CC25X	KTA9-32S-25A	18...25	CA7-23	30	18	450		
CLE-730*10-CC25X	CLUE-730*22-CC25X	KTA9-32S-25A	18...25	-	CAUT7-PW37	CA7-30	30	18	450
CLE-730*10-CC29X	CLUE-730*22-CC29X	KTA9-32S-29A	23...29			CA7-30	30	10	450
CLE-737*10-CC32X	CLUE-737*22-CC32X	KTA9-32S-32A	26.5...32			CA7-37	30	10	450
D-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-DA63X	CLUE-709*22-DA63X	KTA9-40H-0.63A	0.40...0.63	KT9-40H-PEC23 or KT9-40H-PNC23	CAUT7-PW23	CA7-9	65	50	450
CLE-709*10-DB10X	CLUE-709*22-DB10X	KTA9-40H-1.0A	0.63...1.0			CA7-9	65	50	450
CLE-709*10-DB16X	CLUE-709*22-DB16X	KTA9-40H-1.6A	1.0...1.6			CA7-9	65	50	450
CLE-709*10-DB25X	CLUE-709*22-DB25X	KTA9-40H-2.5A	1.6...2.5			CA7-9	65	30	450
CLE-709*10-DB40X	CLUE-709*22-DB40X	KTA9-40H-4.0A	2.5...4.0			CA7-9	65	30	450
CLE-709*10-DB63X	CLUE-709*22-DB63X	KTA9-40H-6.3A	4.0...6.3			CA7-9	65	30	450
CLE-709*10-DC10X	CLUE-709*22-DC10X	KTA9-40H-10A	6.3...10			CA7-9	65	30	450
CLE-712*10-DC10X	CLUE-712*22-DC10X	KTA9-40H-10A	6.3...10			CA7-12	65	30	450
CLE-716*10-DC16X	CLUE-716*22-DC16X	KTA9-40H-16A	10...16			CA7-16	65	30	450
CLE-716*10-DC20X	CLUE-716*22-DC20X	KTA9-40H-20A	14.5...20			CA7-16	65	30	450
CLE-723*10-DC20X	CLUE-723*22-DC20X	KTA9-40H-20A	14.5...20			CA7-23	65	30	450
CLE-723*10-DC25X	CLUE-723*22-DC25X	KTA9-40H-25A	18...25			CA7-23	50	30	450
CLE-730*10-DC25X	CLUE-730*22-DC25X	KTA9-40H-25A	18...25	KT9-40H-PEC37 or KT9-40H-PNC37	CAUT7-PW37	CA7-30	50	30	450
CLE-730*10-DC29X	CLUE-730*22-DC29X	KTA9-40H-29A	23...29			CA7-30	50	30	450
CLE-737*10-DC32X	CLUE-737*22-DC32X	KTA9-40H-32A	26.5...32			CA7-37	50	30	450
CLE-737*10-DC36X	CLUE-737*22-DC36X	KTA9-40H-36A	30...36			CA7-37	30	30	450
CLE-737*10-DC40X	CLUE-737*22-DC40X	KTA9-40H-40A	34...40			CA7-37	30	30	450

① Similar for other contactor configurations (DOL or Reversing)

UL 60947-4-1 Ratings

Starters with CA7/CAU7 Contactors and KT9 MPCBs¹

Suitable for Group Installation/Disconnecting Means on load side of KT9 Manual Motor Controller; Type 1 Short-Circuit Coordination Only

Cat. No.		MPCB	Motor Current Adjustment Range [A]	Connection Module	Reversing Power Wiring Kit	Min Contactor Size ❶	SCCR [kA]		Max Fuse or Circuit Breaker per NEC [A]
DOL Starters	Reversing Starters						Type 1 Coordination		
							480V AC	600V AC	
C-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-CA16X	CLUE-709*22-CA16X	KT9-32S-0.16A	0.10...0.16	KT9-32S-PEC23 or KT9-32S-PNC23	CAUT7-PW23	CA7-9	65	50	450
CLE-709*10-CA25X	CLUE-709*22-CA25X	KT9-32S-0.25A	0.16...0.25			CA7-9	65	50	450
CLE-709*10-CA40X	CLUE-709*22-CA40X	KT9-32S-0.40A	0.25...0.40			CA7-9	65	50	450
CLE-709*10-CA63X	CLUE-709*22-CA63X	KT9-32S-0.63A	0.40...0.63			CA7-9	65	50	450
CLE-709*10-CB10X	CLUE-709*22-CB10X	KT9-32S-1.0A	0.63...1.0			CA7-9	65	50	450
CLE-709*10-CB16X	CLUE-709*22-CB16X	KT9-32S-1.6A	1.0...1.6			CA7-9	65	50	450
CLE-709*10-CB25X	CLUE-709*22-CB25X	KT9-32S-2.5A	1.6...2.5			CA7-9	65	30	450
CLE-709*10-CB40X	CLUE-709*22-CB40X	KT9-32S-4.0A	2.5...4.0			CA7-9	65	30	450
CLE-709*10-CB63X	CLUE-709*22-CB63X	KT9-32S-6.3A	4.0...6.3			CA7-9	65	30	450
CLE-709*10-CC10X	CLUE-709*22-CC10X	KT9-32S-10A	6.3...10			CA7-9	65	30	450
CLE-712*10-CC10X	CLUE-712*22-CC10X	KT9-32S-10A	6.3...10			CA7-12	30	30	450
CLE-716*10-CC16X	CLUE-716*22-CC16X	KT9-32S-16A	10...16			CA7-16	30	30	450
CLE-716*10-CC20X	CLUE-716*22-CC20X	KT9-32S-20A	14.5...20			CA7-16	30	10	450
CLE-723*10-CC25X	CLUE-723*22-CC25X	KT9-32S-25A	18...25			CA7-23	10	5	450
CLE-730*10-CC25X	CLUE-730*22-CC25X	KT9-32S-25A	18...25	-	CAUT7-PW37	CA7-30	30	5	450
CLE-730*10-CC29X	CLUE-730*22-CC29X	KT9-32S-29A	23...29			CA7-30	10	~	450
CLE-737*10-CC32X	CLUE-737*22-CC32X	KT9-32S-32A	26.5...32			CA7-37	10	~	450
D-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-DA63X	CLUE-709*22-DA63X	KT9-40H-0.63A	0.40...0.63	KT9-40H-PEC23 or KT9-40H-PNC23	CAUT7-PW23	CA7-9	65	50	450
CLE-709*10-DB10X	CLUE-709*22-DB10X	KT9-40H-1.0A	0.63...1.0			CA7-9	65	50	450
CLE-709*10-DB16X	CLUE-709*22-DB16X	KT9-40H-1.6A	1.0...1.6			CA7-9	65	50	450
CLE-709*10-DB25X	CLUE-709*22-DB25X	KT9-40H-2.5A	1.6...2.5			CA7-9	65	30	450
CLE-709*10-DB40X	CLUE-709*22-DB40X	KT9-40H-4.0A	2.5...4.0			CA7-9	65	30	450
CLE-709*10-DB63X	CLUE-709*22-DB63X	KT9-40H-6.3A	4.0...6.3			CA7-9	65	30	450
CLE-709*10-DC10X	CLUE-709*22-DC10X	KT9-40H-10A	6.3...10			CA7-9	65	30	450
CLE-712*10-DC10X	CLUE-712*22-DC10X	KT9-40H-10A	6.3...10			CA7-12	65	30	450
CLE-716*10-DC16X	CLUE-716*22-DC16X	KT9-40H-16A	10...16			CA7-16	65	30	450
CLE-716*10-DC20X	CLUE-716*22-DC20X	KT9-40H-20A	14.5...20			CA7-16	65	30	450
CLE-723*10-DC20X	CLUE-723*22-DC20X	KT9-40H-20A	14.5...20			CA7-23	65	30	450
CLE-723*10-DC25X	CLUE-723*22-DC25X	KT9-40H-25A	18...25			CA7-23	50	30	450
CLE-730*10-DC25X	CLUE-730*22-DC25X	KT9-40H-25A	18...25	KT9-40H-PEC37 or KT9-40H-PNC37	CAUT7-PW37	CA7-30	50	30	450
CLE-730*10-DC29X	CLUE-730*22-DC29X	KT9-40H-29A	23...29			CA7-30	50	30	450
CLE-737*10-DC32X	CLUE-737*22-DC32X	KT9-40H-32A	26.5...32			CA7-37	30	18	450
CLE-737*10-DC36X	CLUE-737*22-DC36X	KT9-40H-36A	30...36			CA7-37	30	18	450
CLE-737*10-DC40X	CLUE-737*22-DC40X	KT9-40H-40A	34...40			CA7-37	30	18	450

KT9 Combination Motor Controller as Type F Combination; Type 1 Short-Circuit Coordination Only

C-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-CA16X	CLUE-709*22-CA16X	KT9-32S-0.16A	0.10...0.16	KT9-32S-PEC23 or KT9-32S-PNC23	CAUT7-PW23	CA7-9	65	50	450
CLE-709*10-CA25X	CLUE-709*22-CA25X	KT9-32S-0.25A	0.16...0.25			CA7-9	65	50	450
CLE-709*10-CA40X	CLUE-709*22-CA40X	KT9-32S-0.40A	0.25...0.40			CA7-9	65	50	450
CLE-709*10-CA63X	CLUE-709*22-CA63X	KT9-32S-0.63A	0.40...0.63			CA7-9	65	50	450
CLE-709*10-CB10X	CLUE-709*22-CB10X	KT9-32S-1.0A	0.63...1.0			CA7-9	65	50	450
CLE-709*10-CB16X	CLUE-709*22-CB16X	KT9-32S-1.6A	1.0...1.6			CA7-9	65	50	450
CLE-709*10-CB25X	CLUE-709*22-CB25X	KT9-32S-2.5A	1.6...2.5			CA7-9	65	30	450
CLE-709*10-CB40X	CLUE-709*22-CB40X	KT9-32S-4.0A	2.5...4.0			CA7-9	65	30	450
CLE-709*10-CB63X	CLUE-709*22-CB63X	KT9-32S-6.3A	4.0...6.3			CA7-9	65	~	450
CLE-709*10-CC10X	CLUE-709*22-CC10X	KT9-32S-10A	6.3...10			CA7-9	65	~	450
CLE-712*10-CC10X	CLUE-712*22-CC10X	KT9-32S-10A	6.3...10			CA7-12	30	~	450
CLE-716*10-CC16X	CLUE-716*22-CC16X	KT9-32S-16A	10...16			CA7-16	30	~	450
D-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-DA63X	CLUE-709*22-DA63X	KT9-40H-0.63A	0.40...0.63	KT9-40H-PEC23 or KT9-40H-PNC23	CAUT7-PW23	CA7-9	65	50	450
CLE-709*10-DB10X	CLUE-709*22-DB10X	KT9-40H-1.0A	0.63...1.0			CA7-9	65	50	450
CLE-709*10-DB16X	CLUE-709*22-DB16X	KT9-40H-1.6A	1.0...1.6			CA7-9	65	50	450
CLE-709*10-DB25X	CLUE-709*22-DB25X	KT9-40H-2.5A	1.6...2.5			CA7-9	65	30	450
CLE-709*10-DB40X	CLUE-709*22-DB40X	KT9-40H-4.0A	2.5...4.0			CA7-9	65	30	450
CLE-709*10-DB63X	CLUE-709*22-DB63X	KT9-40H-6.3A	4.0...6.3			CA7-9	65	30	450
CLE-709*10-DC10X	CLUE-709*22-DC10X	KT9-40H-10A	6.3...10			CA7-9	65	30	450
CLE-712*10-DC10X	CLUE-712*22-DC10X	KT9-40H-10A	6.3...10			CA7-12	65	30	450
CLE-716*10-DC16X	CLUE-716*22-DC16X	KT9-40H-16A	10...16			CA7-16	65	30	450
CLE-723*10-DC20X	CLUE-723*22-DC20X	KT9-40H-20A	14.5...20			CA7-23	65	~	450
CLE-723*10-DC25X	CLUE-723*22-DC25X	KT9-40H-25A	18...25			CA7-23	50	~	450
CLE-730*10-DC29X	CLUE-730*22-DC29X	KT9-40H-29A	23...29	KT9-40H-PEC37 or KT9-40H-PNC37	CAUT7-PW37	CA7-30	50	~	450
CLE-737*10-DC32X	CLUE-737*22-DC32X	KT9-40H-32A	26.5...32			CA7-37	30	~	450
CLE-737*10-DC36X	CLUE-737*22-DC36X	KT9-40H-36A	30...36			CA7-37	30	~	450
CLE-737*10-DC40X	CLUE-737*22-DC40X	KT9-40H-40A	34...40			CA7-37	30	~	450

① Similar for other contactor configurations (DOL or Reversing)

IEC 60947-4-1 Ratings

Starters with CA8/CAU8 Contactors and KT9 MPCBs'

IEC 60947-4-1; Type 1 Short-Circuit Coordination

Cat. No.		MPCB	Motor Current Adjustment Range [A]	Connection Module	Reversing Power Wiring Kit	Min Contactor Size ①	SCCR [kA]	
DOL Starters	Reversing Starters						Type 1 Coordination	
							415V AC	525V AC
C-Frame MPCB with CA8/CAU8 Contactors								
CLE-809*10-CA16X	CLUE-809*22-CA16X	KA9-32S-0.16A	0.10..0.16	KT9-32S-PEK12	CAUT8-PW	CA8-09	65	50
CLE-809*10-CA25X	CLUE-809*22-CA25X	KA9-32S-0.25A	0.16..0.25			CA8-09	65	50
CLE-809*10-CA40X	CLUE-809*22-CA40X	KA9-32S-0.40A	0.25..0.40			CA8-09	65	50
CLE-809*10-CA63X	CLUE-809*22-CA63X	KA9-32S-0.63A	0.40..0.63			CA8-09	65	50
CLE-809*10-CB10X	CLUE-809*22-CB10X	KA9-32S-1.0A	0.63..1.0			CA8-09	65	50
CLE-809*10-CB16X	CLUE-809*22-CB16X	KA9-32S-1.6A	1.0..1.6			CA8-09	65	50
CLE-809*10-CB25X	CLUE-809*22-CB25X	KA9-32S-2.5A	1.6..2.5			CA8-09	65	30
CLE-809*10-CB40X	CLUE-809*22-CB40X	KA9-32S-4.0A	2.5..4.0			CA8-09	65	30
CLE-809*10-CB63X	CLUE-809*22-CB63X	KA9-32S-6.3A	4.0..6.3			CA8-09	65	30
CLE-809*10-CC10X	CLUE-809*22-CC10X	KA9-32S-10A	6.3..10			CA8-09	65	30
CLE-812*10-CC10X	CLUE-812*22-CC10X	KA9-32S-10A	6.3..10			CA8-12	65	30
CLE-812*10-CC16X	CLUE-812*22-CC16X	KA9-32S-16A	10..16			CA8-12	30	30

Starters with CA7/CAU7 Contactors and KT9 MPCBs'

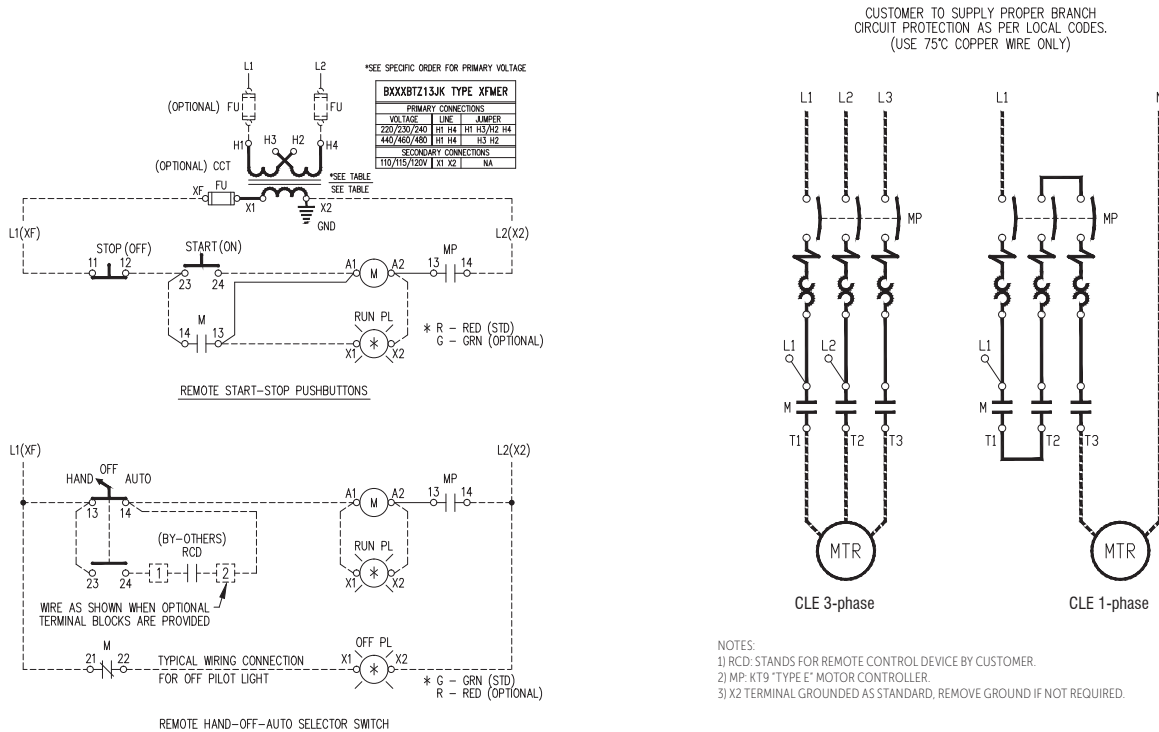
IEC 60947-4-1; Type 2 Short-Circuit Coordination

Cat. No.		MPCB	Motor Current Adjustment Range [A]	Connection Module	Reversing Power Wiring Kit	Min Contactor Size ❶	SCCR [kA]		
DOL Starters	Reversing Starters						Type 2 Coordination		
							415V AC	525V AC	690V AC
C-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-CA16X	CLE-709*10-CA16X	KTA9-32S-0.16A	0.10...0.16	KT9-32S-PEC23 or KT9-32S-PNC23	CAUT7-PW23	CA7-9	100	65	50
CLE-709*10-CA25X	CLE-709*10-CA25X	KTA9-32S-0.25A	0.16...0.25			CA7-9	100	65	50
CLE-709*10-CA40X	CLE-709*10-CA40X	KTA9-32S-0.40A	0.25...0.40			CA7-9	100	65	50
CLE-709*10-CA63X	CLE-709*10-CA63X	KTA9-32S-0.63A	0.40...0.63			CA7-9	100	65	50
CLE-709*10-CB10X	CLE-709*10-CB10X	KTA9-32S-1.0A	0.63...1.0			CA7-9	100	65	50
CLE-709*10-CB16X	CLE-709*10-CB16X	KTA9-32S-1.6A	1.0...1.6			CA7-9	100	50	50
CLE-723*10-CB25X	CLE-723*10-CB25X	KTA9-32S-2.5A	1.6...2.5			CA7-23	65	50	~
CLE-723*10-CB40X	CLE-723*10-CB40X	KTA9-32S-4.0A	2.5...4.0			CA7-23	65	~	~
CLE-723*10-CB63X	CLE-723*10-CB63X	KTA9-32S-6.3A	4.0...6.3			CA7-23	65	~	~
CLE-723*10-CC10X	CLE-723*10-CC10X	KTA9-32S-10A	6.3...10			CA7-23	65	~	~
CLE-730*10-CC16X	CLE-730*10-CC16X	KTA9-32S-16A	10...16	~	CAUT7-PW37	CA7-30	50	~	~
CLE-730*10-CC20X	CLE-730*10-CC20X	KTA9-32S-20A	14.5...20			CA7-30	50	~	~
CLE-730*10-CC25X	CLE-730*10-CC25X	KTA9-32S-25A	18...25			CA7-30	15	~	~
CLE-730*10-CC29X	CLE-730*10-CC29X	KTA9-32S-29A	23...29			CA7-30	15	~	~
CLE-730*10-CC32X	CLE-730*10-CC32X	KTA9-32S-32A	26.5...32			CA7-30	15	~	~
D-Frame MPCB with CA7/CAU7 Contactors									
CLE-709*10-DA63X	CLUE-709*22-DA63X	KTA9-40H-0.63A	0.40...0.63	KT9-40H-PEC23 or KT9-40H-PNC23	CAUT7-PW23	CA7-9	100	65	50
CLE-709*10-DB10X	CLUE-709*22-DB10X	KTA9-40H-1.0A	0.63...1.0			CA7-9	100	65	50
CLE-709*10-DB16X	CLUE-709*22-DB16X	KTA9-40H-1.6A	1.0...1.6			CA7-9	100	50	50
CLE-709*10-DB25X	CLUE-709*22-DB25X	KTA9-40H-2.5A	1.6...2.5			CA7-9	100	50	50
						CA7-12	~	50	~
						CA7-23	~	~	50
CLE-709*10-DB40X	CLUE-709*22-DB40X	KTA9-40H-4.0A	2.5...4.0			CA7-9	65	50	50
						CA7-12	~	50	~
						CA7-23	~	~	50
CLE-709*10-DB63X	CLUE-709*22-DB63X	KTA9-40H-6.3A	4.0...6.3			CA7-9	65	50	50
				CA7-12	~	50	~		
				CA7-23	~	~	50		
CLE-709*10-DC10X	CLUE-709*22-DC10X	KTA9-40H-10A	6.3...10	CA7-9	65	50	50		
				CA7-12	~	50	~		
				CAUT7-PW37	CA7-30	~	~	50	
CLE-723*10-DC16X	CLUE-723*22-DC16X	KTA9-40H-16A	10...16	CAUT7-PW23	CA7-23	65	50	~	
CLE-723*10-DC20X	CLUE-723*22-DC20X	KTA9-40H-20A	14.5...20		CA7-23	65	~	~	
CLE-723*10-DC25X	CLUE-723*22-DC25X	KTA9-40H-25A	18...25		CA7-23	65	~	~	
CLE-730*10-DC29X	CLUE-730*22-DC29X	KTA9-40H-29A	23...29	KT9-40H-PEC37 or KT9-40H-PNC37	CAUT7-PW37	CA7-30	65	~	~
CLE-730*10-DC32X	CLUE-730*22-DC32X	KTA9-40H-32A	26.5...32			CA7-30	65	~	~
CLE-737*10-DC36X	CLUE-737*22-DC36X	KTA9-40H-36A	30...36			CA7-37	65	~	~
CLE-737*10-DC40X	CLUE-737*22-DC40X	KTA9-40H-40A	34...40			CA7-37	65	~	~

① Similar for other contactor configurations (DOL or Reversing)

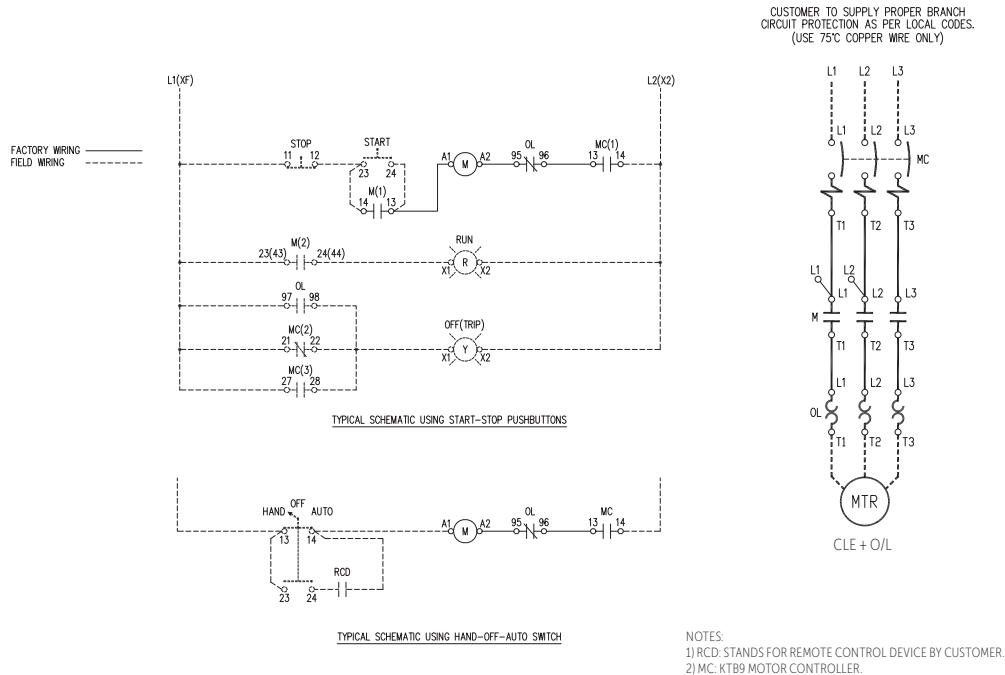
2-Component Ecombo Starters

CLE Non-Reversing Typical Diagram



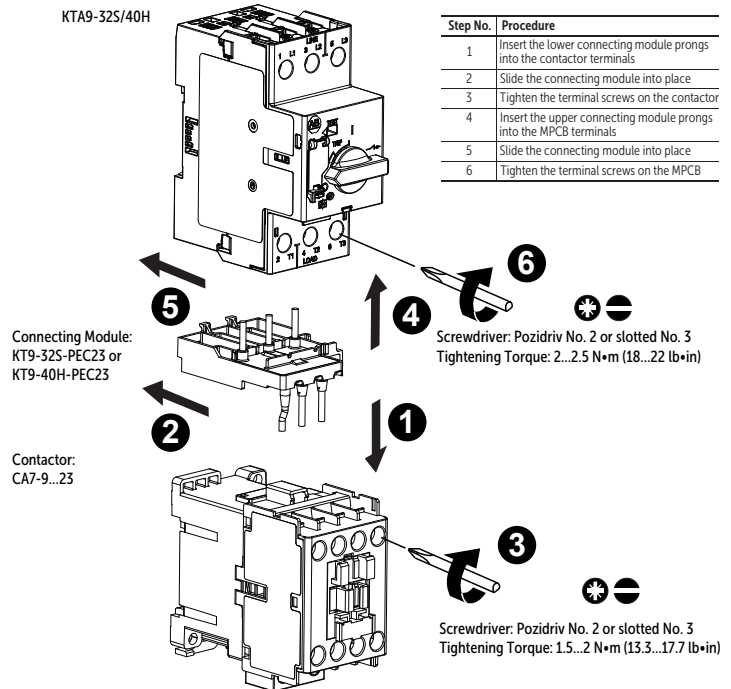
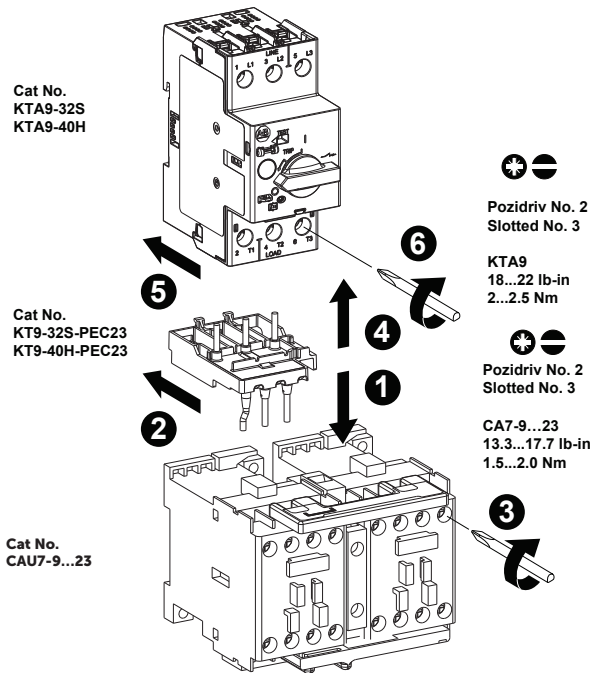
3-Component Ecombo Starters

CLE + O/L Non-Reversing Typical Diagram

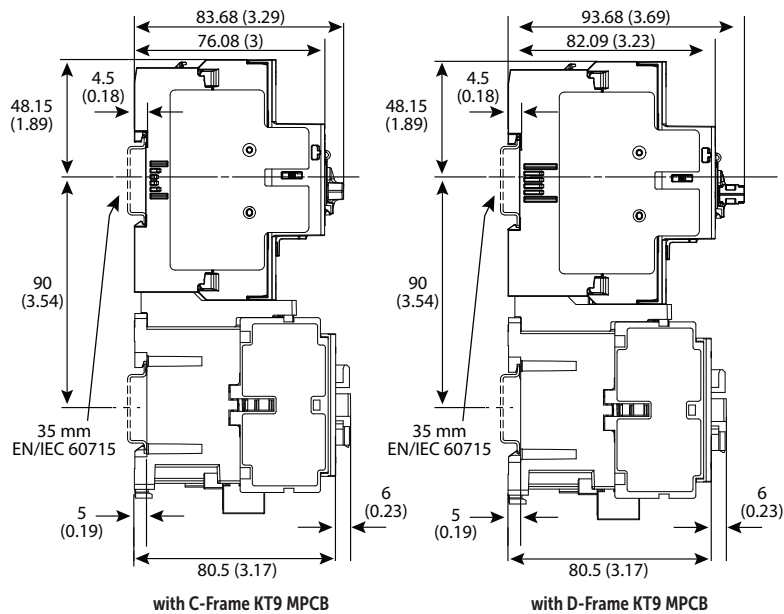
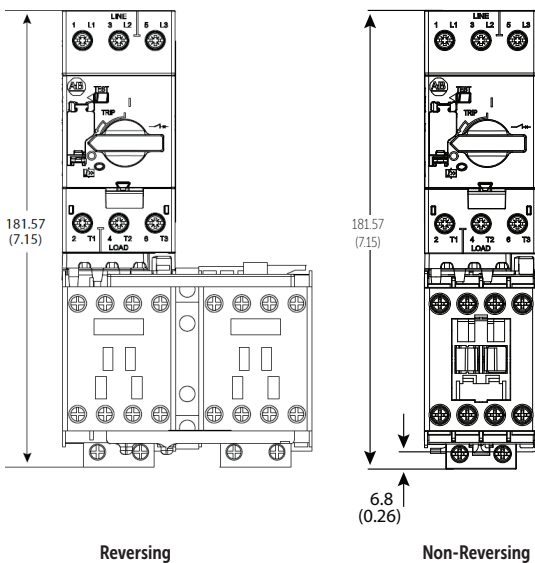


Reversing and Non-Reversing Ecombo Starters CLE / CLUE-709...723

CLE / CLUE-709...723

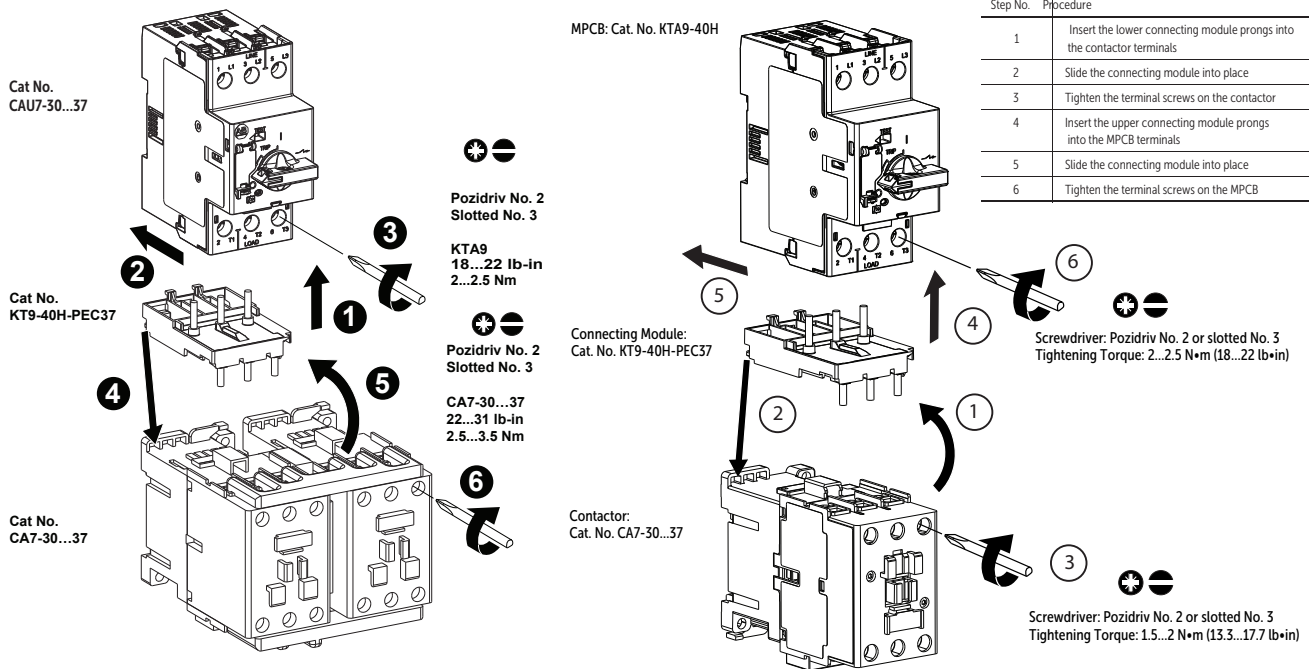


KTA9-32S/40H + KT9-32S/40H-PEC23 + CA7-9...23/CAU7-9...23

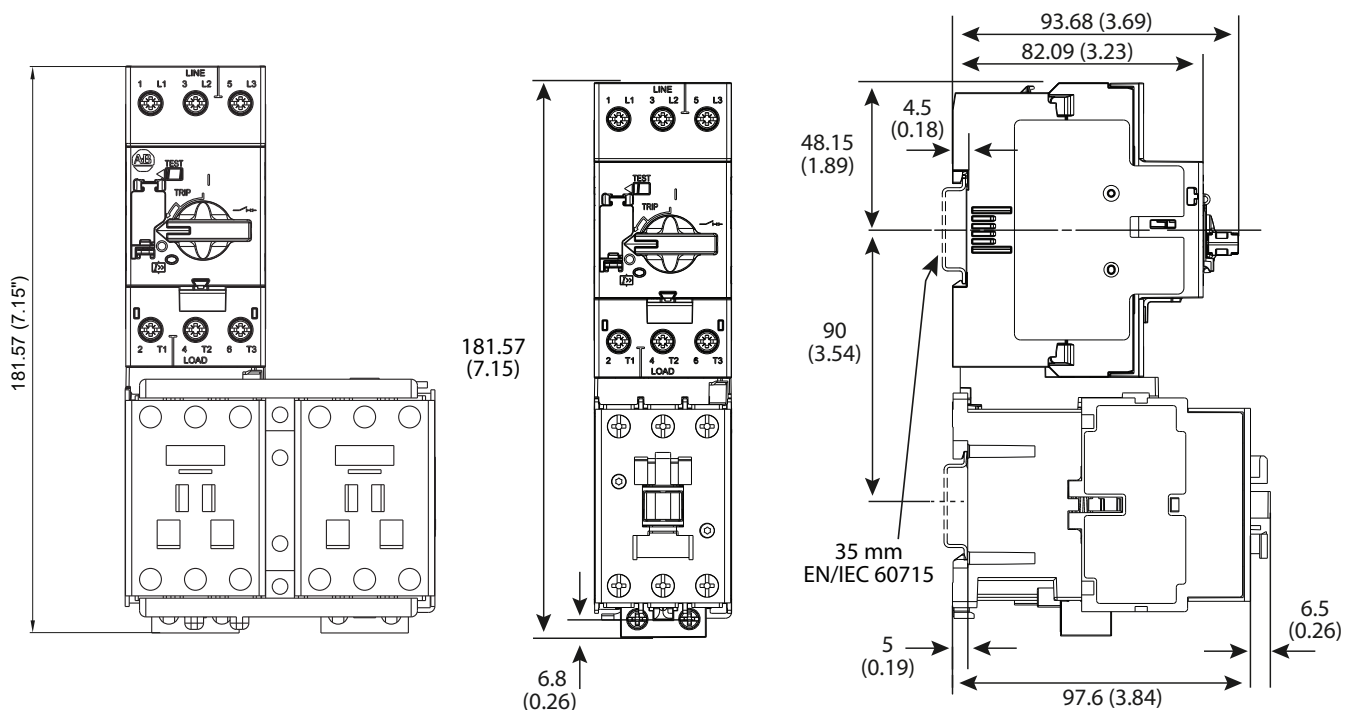


Reversing and Non-Reversing Ecombo Starters CLE / CLUE-730...737

CLE / CLUE-730...737



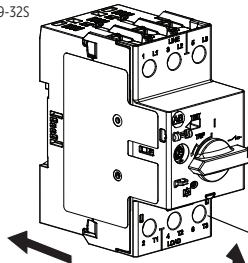
KTA9-40H + KT9-32S / 40H-PEC23 + CA7-30...37 / CAU7-30...37



Reversing and Non-Reversing Ecombo Starters CLE / CLUE-809...812

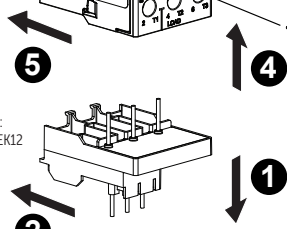
CLE / CLUE-809...812

MPCB: Cat. No. KTA9-32S

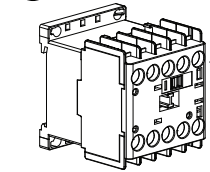


Step No.	Procedure
1	Insert the lower connecting module prongs into the contactor terminals
2	Slide the connecting module into place
3	Tighten the terminal screws on the contactor
4	Insert the upper connecting module prongs into the MPCB terminals
5	Slide the connecting module into place
6	Tighten the terminal screws on the MPCB

Connecting Module:
Cat. No. KTA9-32S-PEK12



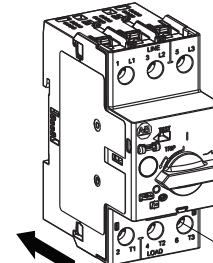
Cat. No.
CAU8-09...12



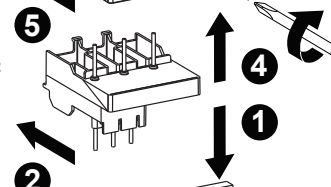
Screwdriver: Pozidriv No. 2 or slotted No. 3
Tightening Torque: 2...2.5 N•m (18...22 lb•in)

Screwdriver: Pozidriv No. 2 or slotted No. 3
Tightening Torque: 1...1.2 N•m (8.9...10.6 lb•in)

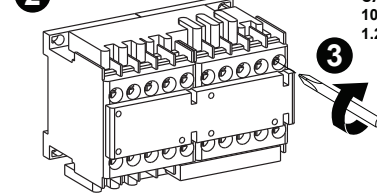
Cat. No.
KTA9-32S



Cat. No.
KT9-32S-PEK12



Cat. No.
CAU8-09...12



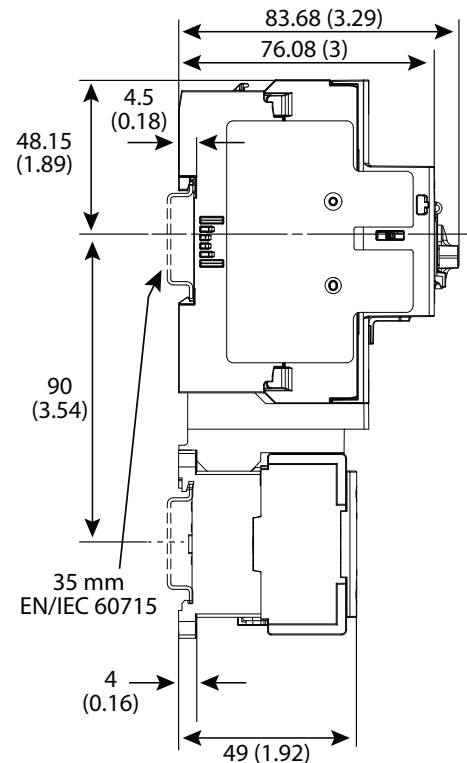
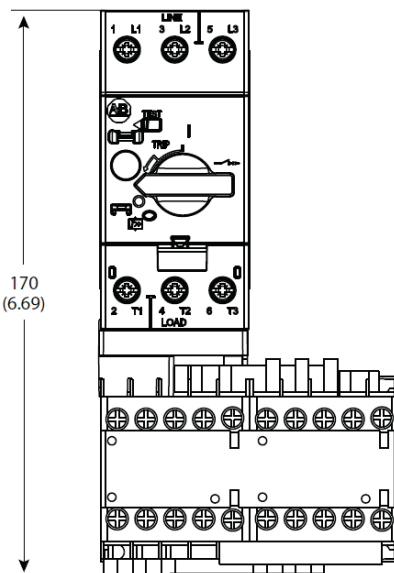
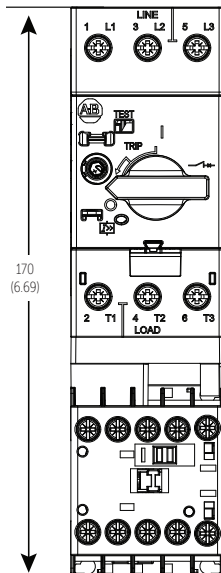
✦ —
Pozidriv No. 2
Slotted No. 3

KTA9
18...22 lb•in
2...2.5 Nm

✦ —
Pozidriv No. 2
Slotted No. 3

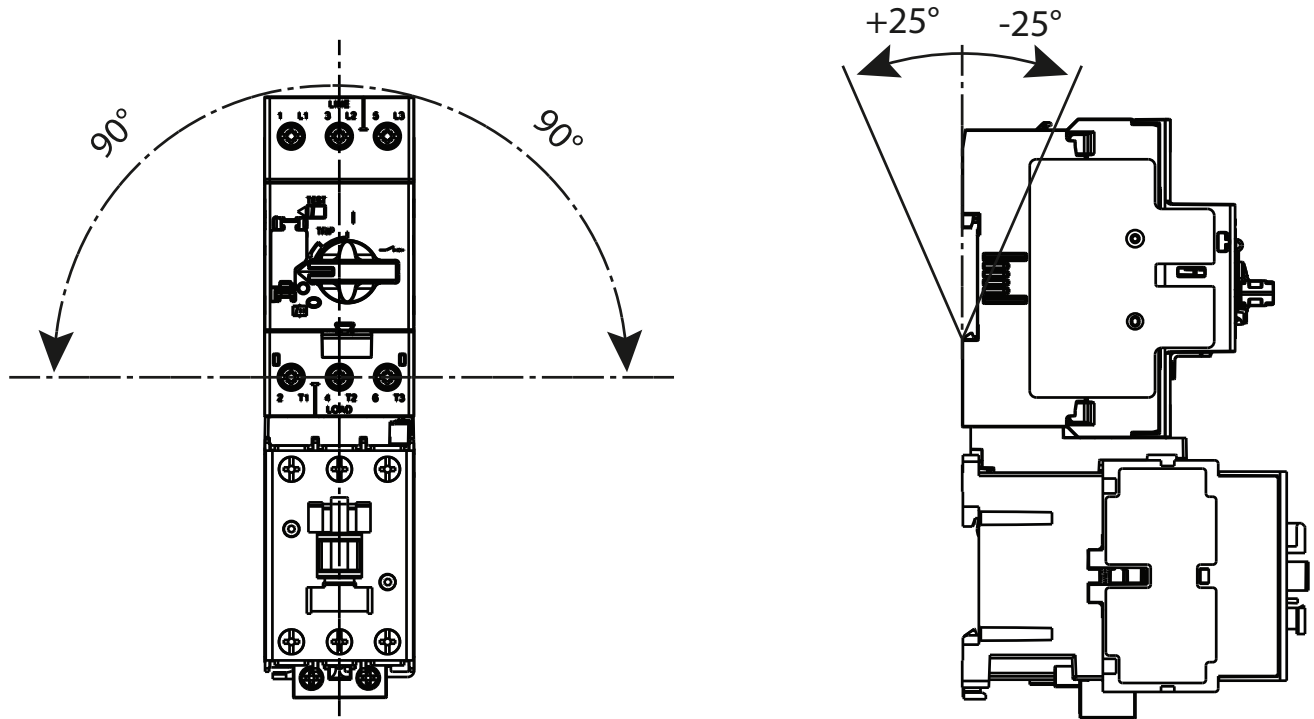
CA8
10.6 lb•in
1.2 Nm

KTA9-32S + KT9-32S-PEK12 + CA8-09...12 / CAU8-09...12



Reversing and Non-Reversing Ecombo Starters

Mounting Position



F3

ECombo Circuit Controllers