



Combination Starter Features

Combination starters include the following features:

- **Manufactured with NEW cold forming “tox” process.**
- Solid State Overloads Standard on Sizes 5–8
- Easy to install
- Wide range of enclosure types available.
- Heavy Duty Quarter Turns
- 100kA Short Circuit Current Rating when Protected with Class R Fuses to 600V or MCP to 480V
- Visible Blade Disconnect
- Industrial Type Disconnect Handle

Application

A combination starter meets National Electrical Code requirements for:

1. A means of providing short circuit motor protection with fused or breaker disconnection of line voltage.
2. A means of safeguarding personnel from contact with live parts and from accidental starting of machinery by disconnecting the motor and the controller.
3. A motor controller with overload protection.

Prewired combination starters eliminate the cost of wiring between separate disconnect and starter. Factory testing assures field performance. Combination starters also provide a more compact and attractive installation than separate units.

Enclosure Types

Combination starters are available in NEMA 1, 12/3/3R/4 (painted), 4/4X (stainless), 4X fiberglass and 7 & 9 enclosures. Enclosures protect personnel from contact with live parts and depending upon the construction, protect the control in varying degrees from physical damage and harmful atmospheres. All enclosures are supplied with corrosion resistant finishes.

Type MCS Disconnect Switches

Type MCS Disconnect Switches from Siemens go the distance in durability, performance and reliability. A quick make, quick break mechanism insures proper switch operation regardless of handle speed. Rugged construction—with a high fault withstand rating of 100kA at 600 volts AC when fused with class R rated fuses—meets the most stringent industry standards set forth by the automotive, petro-chemical, and pulp and paper industries.

With visible blade contacts for ease of inspection, removable line shields and front removable fuse clips and lugs, type MCS disconnect switches make day-to-day operation and maintenance quick and easy. UL recognized and CSA certified, MCS disconnect switches are available with class R fuse kits and field installable auxiliary switches.

Siemens Type ETI Circuit Breaker

The ETI circuit breaker is a device designed specifically for application in motor circuits. The ETI is a magnetic only protective device designed to provide protection against short circuit current.

The instantaneous-only type ETI circuit breaker employs adjustable magnetic trip settings to allow broader application ranges and a higher degree of motor short circuit protection.



Heavy Duty Starters

These combination starters use the same starters described in the heavy duty starter section of this catalog. ESP 100 solid state overload starters and ambient compensated bimetal overload starters are available.

Combination Heavy Duty Starters

Fusible with Solid State Overload, Class 17

Selection



Ordering Information

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Technical Data see www.sea.siemens.com/controls.
- Field Modification Kits see page 6/71.
- Factory Modifications see page 6/83.
- Dimensions see page 6/106.
- Wiring Diagrams see page 6/118.
- Replacement Parts see page 6/135.

Coil Table

60Hz Voltage	Letter
24 Separate Control	J
120 Separate Control	F
110–120/220–240 ^①	A
200–208	D
220–240	G
277	L
220–240/440–480 ^①	C
440–480	H
575–600	E
For other voltages and frequencies, see Factory Modifications page 6/83.	

Standard Width Enclosure, 3 Phase, 3 Pole^⑤

Max Hp				NEMA Size	Half Size	Overload Amp Range	Disc Amp Rating	Fuse Clip Size Amps/Volts	Enclosure							
200 Volts	230 Volts	460 Volts	575 Volts						NEMA 1 General Purpose		NEMA 4/4X Stainless ^② Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 4X Fiberglass Watertight, Dusttight Corrosion Resistant		NEMA 12, NEMA 3/3R, ^② NEMA 4 Painted (thru Sz 4) Industrial Use Weatherproof Watertight, Dusttight	
									Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$
1/8	1/8	—	—	0	—	0.25–1	30	30A/250V	17CSA92B*10		17CSA92W*10		17CSA92F*10		17CSA92N*10	
—	—	1/8	1/8	0	—	0.25–1	30	30A/600V	17CSA92B*11		17CSA92W*11		17CSA92F*11		17CSA92N*11	
1/2	3/4	—	—	0	—	0.75–3	30	30A/250V	17CSB92B*10		17CSB92W*10		17CSB92F*10		17CSB92N*10	
—	—	1 1/2	2	0	—	0.75–3	30	30A/600V	17CSB92B*11		17CSB92W*11		17CSB92F*11		17CSB92N*11	
2	2	—	—	0	—	2.5–10	30	30A/250V	17CSD92B*10		17CSD92W*10		17CSD92F*10		17CSD92N*10	
—	—	5	5	0	—	2.5–10	30	30A/600V	17CSD92B*11		17CSD92W*11		17CSD92F*11		17CSD92N*11	
3	3	—	—	0	—	9–18	30	30A/250V	17CSE92B*10		17CSE92W*10		17CSE92F*10		17CSE92N*10	
1/8	1/8	—	—	1	—	0.25–1	30	30A/250V	17DSA92B*10		17DSA92W*10		17DSA92F*10		17DSA92N*10	
—	—	1/8	1/8	1	—	0.25–1	30	30A/600V	17DSA92B*11		17DSA92W*11		17DSA92F*11		17DSA92N*11	
1/2	3/4	—	—	1	—	0.75–3	30	30A/250V	17DSB92B*10		17DSB92W*10		17DSB92F*10		17DSB92N*10	
—	—	1 1/2	2	1	—	0.75–3	30	30A/600V	17DSB92B*11		17DSB92W*11		17DSB92F*11		17DSB92N*11	
2	2	—	—	1	—	2.5–10	30	30A/250V	17DSD92B*10		17DSD92W*10		17DSD92F*10		17DSD92N*10	
—	—	5	5	1	—	2.5–10	30	30A/600V	17DSD92B*11		17DSD92W*11		17DSD92F*11		17DSD92N*11	
3	3	—	—	1	—	9–18	30	30A/250V	17DSE92B*10		17DSE92W*10		17DSE92F*10		17DSE92N*10	
—	—	10	10	1	—	9–18	30	30A/600V	17DSE92B*11		17DSE92W*11		17DSE92F*11		17DSE92N*11	
5	5	—	—	1	—	13–27	30	30A/250V	17DSF92B*10		17DSF92W*10		17DSF92F*10		17DSF92N*10	
7 1/2	7 1/2	—	—	1	—	13–27	60	60A/250V	17DSF92B*12		17DSF92W*12		17DSF92F*12		17DSF92N*12	
—	—	15	15	—	1 1/4	13–27	60	60A/600V	17ESF92B*13		17ESF92W*13		17ESF92F*13		17ESF92N*13	
10	10	—	—	—	1 1/4	20–40	60	60A/250V	17ESG92B*12		17ESG92W*12		17ESG92F*12		17ESG92N*12	
—	—	15	20	2	—	13–27	60	60A/600V	17FSF92B*13		17FSF92W*13		17FSF92F*13		17FSF92N*13	
10	15	—	—	2	—	22–45	60	60A/250V	17FSH92B*12		17FSH92W*12		17FSH92F*12		17FSH92N*12	
—	—	25	25	2	—	22–45	60	60A/600V	17FSH92B*13		17FSH92W*13		17FSH92F*13		17FSH92N*13	
—	—	30	—	—	2 1/2	22–45	60	60A/600V	17GSH92B*13		17GSH92W*13		17GSH92F*13		17GSH92N*13	
15	20	—	—	—	2 1/2	22–45	100	100A/600V	17GSH92B*15		17GSH92W*15		17GSH92F*15		17GSH92N*15	
—	—	—	—	—	2 1/2	30–60	100	100A/250V	17GSJ92B*14		17GSJ92W*14		17GSJ92F*14		17GSJ92N*14	
—	—	30	40	3	—	30–60	100	100A/600V	17HSJ92B*15		17HSJ92W*15		17HSJ92F*15		17HSJ92N*15	
20	25	—	—	3	—	45–90	100	100A/250V	17HSK92B*14		17HSK92W*14		17HSK92F*14		17HSK92N*14	
—	—	50	50	3	—	45–90	100	100A/600V	17HSK92B*15		17HSK92W*15		17HSK92F*15		17HSK92N*15	
25	30	—	—	3	—	45–90	200	200A/250V	17HSK92B*16		17HSK92W*16		17HSK92F*16		17HSK92N*16	
30	40	—	—	—	3 1/2	57–115	200	200A/250V	17ISL92B*16		17ISL92W*16		17ISL92F*16		17ISL92N*16	
—	—	75	75	—	3 1/2	57–115	200	200A/600V	17ISL92B*17		17ISL92W*17		17ISL92F*17		17ISL92N*17	
40	50	—	—	4	—	67–135	200	200A/250V	17JTM92B*16		17JTM92W*16		17JTM92F*16		17JTM92N*16	
—	—	100	100	4	—	67–135	200	200A/600V	17JTM92B*17		17JTM92W*17		17JTM92F*17		17JTM92N*17	
75	100	—	—	5	—	55–250	400	400A/250V	17LPU92B*18		17LPU92E*18 ^④		—		17LPU92N*18	
—	100	—	—	5	—	55–250	600	600A/250V ^③	17LPU92B*20		17LPU92E*20 ^④		—		17LPU92N*20	
—	—	125	5	—	55–250	400	400	200A/600V	17LPU92B*17		17LPU92E*17 ^④		—		17LPU92N*17	
—	—	200	200	5	—	55–250	400	400A/600V	17LPU92B*19		17LPU92E*19 ^④		—		17LPU92N*19	
—	—	200	5	—	55–250	600	600	600A/600V ^③	17LPU92B*21		17LPU92E*21 ^④		—		17LPU92N*21	
150	200	—	—	6	—	200–540	600	600A/250V	17MPX92B*20		17MPX92E*20 ^④		—		17MPX92N*20	
—	—	400	400	6	—	200–540	600	600A/600V	17MPX92B*21		17MPX92E*21 ^④		—		17MPX92N*21	
—	—	400	400	6	—	200–540	800	800A/600V	17MPX92B*23		17MPX92E*23 ^④		—		17MPX92N*23	
—	—	600	600	7	—	420–820	1200	1200A/600V	Contact Sales Office	—	—	—	—	—	Contact Sales Office	
—	—	900	900	8	—	420–1220	1600	1600A/600V	Contact Sales Office	—	—	—	—	—	Contact Sales Office	

Note: Hp's shown above are based on the overload amp range for the FLA's (per the National Electric Code) of typical industrial motors. All starter sizes carry one maximum Hp rating.

① Dual voltage coils not available in modified starters or in starter sizes 5–8.

② For conduit hubs and conversion instructions, see page 6/77.

③ Use Class J fuses only.

④ Enclosure is NEMA Type 4 (painted steel).

⑤ Single phase wiring page 6/117.

Class	Size	Model	ESP 100® Current Range ^⑤	Breaker HP Code® Horsepower Rating 200, 230, 460, 575
17 — Combination Starter (Non Fusible, Fusible)	C — 0	P — Thermal size 00-4, Solid state sizes 5 & 6	Three Phase A — .25-1 B — .75-3 D — 2.5-10 E — 9-18 F — 13-27 G — 20-40 H — 22-45 J — 30-60 K — 45-90 L — 57-115 M — 67-135 U — 55-250 X — 200-540 Y — 420-820 Z — 420-1220	A — 1/2, 1/2, 1, 1 B — 1, 1, 3, 3 C — 3, 3, 5, 5 D — 3, 3, 7 1/2, 7 1/2 E — 7 1/2, 7 1/2, 10, 10 F — —, —, 15, 15 G — 10, 10, —, — H — 7 1/2, 10, 20, 20 J — 10, 15, 25, 25 K — —, —, 30, 30 L — 15, 20, —, — M — —, —, 30, 30 N — 25, 30, 50, 50 P — 30, 40, 75, 75 R — 40, 50, 100, 100
18 — Combination Starter (Circuit Breaker)	D — 1	S — ESP100 size 0-3 1/2 T — ESP100 size 4		
25 — Reversing Combination Starter (Non Fusible, Fusible)	E — 1 3/4			
26 — Reversing Combination Starter (Circuit Breaker)	F — 2			
	G — 2 1/2			
	H — 3			
	I — 3 1/2			
	J — 4			
	L — 5			
	M — 6			
Enclosure Type				
B — NEMA 1				
F — NEMA 4X Fiberglass				
H — NEMA 7/9/3/4, bolted (Class 18 & 26 only)				
N — NEMA 12 Field convertible to 3/3R/4				
W — NEMA 4/4X Stainless Steel				

Class	Size	Model	ESP 100® Current Range ^⑤	Pilot Control Circuit	Power Poles/Enclosure Size	Coil	Enclosure Type
14 — Across the Line NEMA Motor Starter	B — 00	P — Thermal size 00-3 1/2, Solid state sizes 5 & 6	Three Phase A — .25-1 B — .75-3 D — 2.5-10 E — 9-18 F — 13-27 G — 20-40 H — 22-45 J — 30-60 K — 45-90 L — 57-115 M — 67-135 U — 55-250 X — 200-540 Y — 420-820 Z — 420-1220	2 — suitable for 3 wire control (NO aux. contact incl.)	1 — 2 power poles, 1 phase 3 — 3 power poles, 3 phase 82 — 3 power poles, 3 phase, extra wide enclosure	A ^③ — 110-120V/220-240V@60Hz 110V/190-220V@50Hz C ^③ — 220-240V/440-480V@60Hz 190-220V/380-440V@50Hz D — 200-208V@60Hz E — 550-600V@60Hz 550V@50Hz F — 120V@60Hz 110V@50Hz G — 220-240V@60Hz 190-220V@50Hz H — 440-480V@60Hz 380-440V@50Hz J ^④ — 24V@60Hz 24V@50Hz L — 277V@60Hz 240V@50Hz	A — Open B — NEMA 1 F — NEMA 4X Fiberglass H — NEMA 7/9/3/4 bolted O — NEMA 12 Field convertible to 3/3R/4 W — NEMA 4/4X Stainless Steel
22 — Reversing NEMA Motor Starter	C — 0	G — Thermal size 4 S — ESP100 size 00-3 1/2 T — ESP100 size 4	Single Phase ^① A — .25-1 B — .75-3 D — 2.5-10 E — 5-16				
40 — Across the Line NEMA Magnetic Contactor	D — 1						
43 — Reversing NEMA Magnetic Contactor	E — 1 3/4 & 1P						
	F — 2						
	G — 2 1/2						
	H — 3						
	I — 3 1/2						
	J — 4						
	L — 5						
	M — 6						

Class	Size	Model	ESP 100® Current Range ^⑤	Type	Line Volts	Enclosure Type	Coil	Disconnect Type ^④
36 — Non Combination Reduced Voltage Starter	C — 0 D — 1 E — 1 3/4 F — 2 G — 2 1/2	S — ESP100 size 0-4 T — ESP100 size 5-6		T — Auto XFMR P — Part Wind. O — Wye Delta Open Trans. C — Wye Delta Closed Trans.	2 — 230 3 — 380 4 — 460 5 — 575 6 — 200/208	A — Open B — NEMA 1 W — NEMA 4/4X Stainless Steel O — NEMA 12	D — 24V@60Hz E — 24V@50Hz F — 277V@60Hz G — 240V@50Hz H —	D — Non Fused Disc. F — Fusible Disc. P — MCP
37 — Combination Reduced Voltage Starter	H — 3 I — 3 1/2 J — 4 L — 5 M — 6 N — 7 P — 8							

①Single phase ESP100 available on Class 14 Starters only.

②Not used on Class 17, 25 or with ESP100 versions.
③Not available on sizes 5-8.

④For Class 37 only.
⑤Position used for ESP100 only.
⑥Not available on sizes 7 and 8.