Multi Speed Heavy Duty Starters

Features and Benefits

Features

- Rugged Industrial Design
- Dual Voltage, Dual Frequency Coils
- Compact Design
- Front Removable Auxiliary Contacts
- Electrical and Mechanical Interlocks
- Half Sizes — Space and Cost Savings
- Industrial Type Disconnect Operating Handle
- Visible Blade Disconnect Thru Size 4
- Adjustable Motor Circuit Protector
- 100,000 Amp Fault Protection with MCP or Optional Class R Fuses
- Pilot Device Locations Punched and Plugged on All Enclosures
- UL Listed File #E14900
- CSA Certified File #LR6535

Applications

Multi speed magnetic starters automatically reconnect multi speed motor windings for the desired speed in response to a signal received from push button stations or other pilot devices.

These starters are available for two, three and four speed motors.

Consequent Pole multi speed motors having two speeds on a single winding (consequent pole) require a starter which reconnects the motor leads to half the number of effective motor poles at the high speed point. In this type of motor, **the low speed is one half the high speed.**

Separate Windings motors having separate windings for each speed provide more varied speed combinations in that the low speed need not be one half the high speed. **Starters for separate winding motors consist of starter unit for each speed.**

Multi speed motor starters are available for constant torque, variable torque and constant horsepower motors.

Constant Torque motors maintain constant torque at all speeds. Horsepower varies directly with speed. This type of motor is applicable to conveyors, mills and similar applications.

Variable Torque motors produce a torque characteristic which varies as the square of the speed. This type of motor is applicable to fans, blowers and centrifugal pumps.

Constant Horsepower motors maintain constant horsepower at all speeds and therefore torque varies inversely with speed. This type of motor is applicable where the same horsepower is required at all speeds. **The higher current required at low speed requires derating on starters for constant horsepower applications.** This type of motor is applicable to metal working machines such as drills, lathes, mills, bending machines, punch presses, and power wrenches.

Operation

Magnetic starters for multi speed applications select the desired speed in accordance with the pilot control.

The shock to machinery upon the reduction of speed is greater than when the speed is increased. Therefore the pilot control should be wired so that the stop button must be depressed before dropping to a lower speed or time delays should be used for applications requiring full automatic operations. The multi speed controls are available with the necessary interlocks or relays to provide this type of operation.

These controls may be modified for compelling or acceleration pilot control.

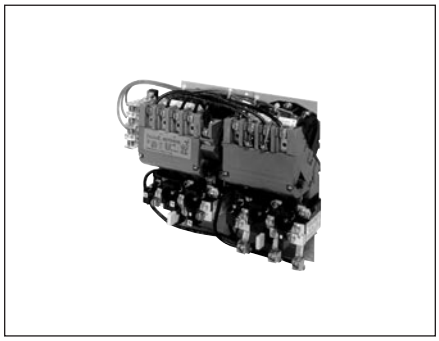
Selective Control permits the operator to start the motor at any speed and to change to a higher speed by merely pushing a button. To change to lower speed it is necessary to first depress the stop button and to then press the proper speed button. Selective control is a function of the pilot control selected and requires no starter modifications.

Compelling Control requires that the motor always be started at the lower speed and that the push buttons be operated in speed sequence to go to the next higher speed. To change to a lower speed, the stop button must be depressed and then the push buttons operated in speed sequence until the desired speed is reached. Compelling control can be added from the factory modification section page 466.

Acceleration Control provides that the motor be accelerated automatically with timers by progressively energizing the controls from the push button station from the lowest to highest speed. To change to a lower speed the stop button is depressed and then it is necessary to proceed as if starting from rest. Acceleration control can be added from the factory modification section page 466.

Deceleration Control provides that the motor be decelerated automatically with a timer when going from high speed to low speed. The timer allows the motor to decelerate from high speed to a lower speed before automatically restarting the motor in low speed. Deceleration control can be added from the factory modification section page 466.

NEMA 1 Multi Speed Starter



Open Style Multi Speed Starter

Multi Speed Heavy Duty Starters

Two Speed Constant or Variable Torque with Solid State Overload, Class 30

Ordering Instructions

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct low speed FLA in the FLA table⑦.
- For self-reset overload option on Sizes 0–5, change 4th character from "S" or "T" to "R". No price addition.
- Technical Data see pages 467–470.
- Field Modification Kits see pages 457–461.
- Factory Modifications see pages 462–466.
- Dimensions see page 482.
- Wiring Diagrams see pages 491–492.
- Replacement parts see page 547.

Coil Table

60Hz Voltage	Letter
24 Separate Control①	J
120 Separate Control②	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480③	C
440–480③	H
575–600③	E

For other voltages and frequencies see Factory Modifications page 465.

Low Speed FLA Table

Size	FLA	†
0,1	0.25–1	A
0,1	0.75–3	B
0,1	2.5–10	D
0–1¾	9–18	E
1–4	13–27	F
1¾	20–40	G
2–4	22–45	H
2½–4	30–60	J
3–4	45–90	K
3½–4	57–115	L
4	67–135	M

One Winding Consequent Pole, 3 Phase

Max Hp							Enclosure							
							Open Type		NEMA 1 General Purpose		NEMA 4/4X④⑥ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R⑤ Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Overload Amp Range	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
½	¾	1½	1½	0	—	0.75–3	30CSB†32A2V*	954.	30CSB†32B2V*	978.	30CSB†32W2V*	1554.	30CSB†3202V*	1164.
2	2	5	5	0	—	2.5–10	30CSD†32A2V*	954.	30CSD†32B2V*	978.	30CSD†32W2V*	1554.	30CSD†3202V*	1164.
3	3	—	—	0	—	9–18	30CSE†32A2V*	954.	30CSE†32B2V*	978.	30CSE†32W2V*	1554.	30CSE†3202V*	1164.
½	¾	1½	1½	1	—	0.75–3	30DSB†32A2V*	1014.	30DSB†32B2V*	1050.	30DSB†32W2V*	1614.	30DSB†3202V*	1236.
2	2	5	5	1	—	2.5–10	30DSD†32A2V*	1014.	30DSD†32B2V*	1050.	30DSD†32W2V*	1614.	30DSD†3202V*	1236.
3	3	10	10	1	—	9–18	30DSE†32A2V*	1014.	30DSE†32B2V*	1050.	30DSE†32W2V*	1614.	30DSE†3202V*	1236.
7½	7½	—	—	1	—	13–27	30DSF†32A2V*	1014.	30DSF†32B2V*	1050.	30DSF†32W2V*	1614.	30DSF†3202V*	1236.
—	—	15	15	—	1¾	13–27	30ESF†32A2V*	1284.	30ESF†32B2V*	1320.	30ESF†32W2V*	1884.	30ESF†3202V*	1506.
10	10	—	—	—	1¾	20–40	30ESG†32A2V*	1284.	30ESG†32B2V*	1320.	30ESG†32W2V*	1884.	30ESG†3202V*	1506.
—	—	15	15	2	—	13–27	30FSF†32A2V*	1758.	30FSF†32B2V*	1866.	30FSF†32W2V*	2562.	30FSF†3202V*	2130.
10	15	25	25	2	—	22–45	30FSH†32A2V*	1758.	30FSH†32B2V*	1866.	30FSH†32W2V*	2562.	30FSH†3202V*	2130.
—	—	30	30	—	2½	22–45	30GSH†32A2V*	2190.	30GSH†32B2V*	2328.	30GSH†32W2V*	3204.	30GSH†3202V*	2760.
15	20	—	—	—	2½	30–60	30GSJ†32A2V*	2190.	30GSJ†32B2V*	2328.	30GSJ†32W2V*	3204.	30GSJ†3202V*	2760.
—	—	40	40	3	—	30–60	30HSJ†32A2V*	2622.	30HSJ†32B2V*	2790.	30HSJ†32W2V*	3822.	30HSJ†3202V*	3390.
25	30	50	50	3	—	45–90	30HSK†32A2V*	2622.	30HSK†32B2V*	2790.	30HSK†32W2V*	3822.	30HSK†3202V*	3390.
30	40	75	75	—	3½	57–115	30ISL†32A2V*	5982.	30ISL†32B2V*	6642.	30ISL†32W2V*	8754.	30ISL†3202V*	7830.
40	50	100	100	4	—	67–135	30JTM†32A2V*	6702.	30JTM†32B2V*	7362.	30JTM†32W2V*	9474.	30JTM†3202V*	8550.
50	75	150	150	—	4½	100–210	30KTSS32A2V*	12354.	30KTSS32B2V*	13656.	30KTSS32W2V*	18594.	30KTSS3202V*	18594.
75	100	200	200	5	—	100–270	30LTUU32A2V*	13194.	30LTUU32B2V*	14496.	30LTUU32W2V*	19434.	30LTUU3202V*	19434.
150	200	400	400	6	—	200–540	30MTXX32A2V*	29826.	30MTXX32B2V*	32558.	30MTXX32E2V*	39308.	30MTXX3202V*	35282.
—	300	600	600	7	—	420–820	—	—	30NTYY32B2V*	42264.	30NTYY32E2V*	45264.	30NTYY3202V*	43884.

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.

①24 volt coils are not available on size 4½–7 starters.
②When the coil voltage is 120 volts or less, the starter is wired for separate control except on size 6–7 starters.
③Not available with self-reset option.
④Size 6 and larger supplied in a painted sheet steel enclosure.
⑤NEMA 12 enclosures are UL listed for NEMA 3R applications on sizes 0 through 5 only. Water tight hubs or equivalent provisions for water tight connection at the conduit entrance should be used. For NEMA size 6–7 starters in NEMA 3R enclosure change the 9th digit in the catalog number from an "0" to a "D".
⑥For Nema 4X non-metallic enclosure. See factory modifications page 464
⑦If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

Multi Speed Heavy Duty Starters

Two Speed Constant or Variable Torque with Solid State Overload, Class 30

Ordering Instructions

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct low speed FLA in the FLA table⑦.
- For self-reset overload option on Sizes 0–5, change 4th character from "S" or "T" to "R". No price addition.
- Technical Data see pages 467–470
- Field Modification Kits see pages 457–461.
- Factory Modifications see pages 462-466.
- Dimensions see page 482.
- Wiring Diagrams see page 492.
- Replacement parts see page 547.

Coil Table

60Hz Voltage	Letter
24 Separate Control①	J
120 Separate Control②	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480③	C
440–480③	H
575–600③	E

For other voltages and frequencies see Factory Modifications page 465.

Low Speed FLA Table

Size	FLA	†
0,1	0.25–1	A
0,1	0.75–3	B
0,1	2.5–10	D
0–1¾	9–18	E
1–4	13–27	F
1¾	20–40	G
2–4	22–45	H
2½–4	30–60	J
3–4	45–90	K
3½–4	57–115	L
4	67–135	M

Two Separate Windings, 3 Phase

Max Hp							Enclosure							
							Open Type		NEMA 1 General Purpose		NEMA 4/4X④⑥ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R⑤ Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Overload Amp Range	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
½	¾	1½	1½	0	—	0.75–3	30CSB†32A1V*	690.	30CSB†32B1V*	714.	30CSB†32W1V*	1290.	30CSB†3201V*	900.
2	2	5	5	0	—	2.5–10	30CSD†32A1V*	690.	30CSD†32B1V*	714.	30CSD†32W1V*	1290.	30CSD†3201V*	900.
3	3	—	—	0	—	9–18	30CSE†32A1V*	690.	30CSE†32B1V*	714.	30CSE†32W1V*	1290.	30CSE†3201V*	900.
½	¾	1½	1½	1	—	0.75–3	30DSB†32A1V*	762.	30DSB†32B1V*	798.	30DSB†32W1V*	1362.	30DSB†3201V*	984.
2	2	5	5	1	—	2.5–10	30DSD†32A1V*	762.	30DSD†32B1V*	798.	30DSD†32W1V*	1362.	30DSD†3201V*	984.
3	3	10	10	1	—	9–18	30DSE†32A1V*	762.	30DSE†32B1V*	798.	30DSE†32W1V*	1362.	30DSE†3201V*	984.
7½	7½	—	—	1	—	13–27	30DSF†32A1V*	762.	30DSF†32B1V*	798.	30DSF†32W1V*	1362.	30DSF†3201V*	984.
—	—	15	15	—	1¾	13–27	30ESF†32A1V*	942.	30ESF†32B1V*	978.	30ESF†32W1V*	1542.	30ESF†3201V*	1164.
10	10	—	—	—	1¾	20–40	30ESG†32A1V*	942.	30ESG†32B1V*	978.	30ESG†32W1V*	1542.	30ESG†3201V*	1164.
—	—	15	15	2	—	13–27	30FSF†32A1V*	1290.	30FSF†32B1V*	1386.	30FSF†32W1V*	2094.	30FSF†3201V*	1650.
10	15	25	25	2	—	22–45	30FSH†32A1V*	1290.	30FSH†32B1V*	1386.	30FSH†32W1V*	2094.	30FSH†3201V*	1650.
—	—	30	30	—	2½	22–45	30GSH†32A1V*	1632.	30GSH†32B1V*	1764.	30GSH†32W1V*	2634.	30GSH†3201V*	2196.
15	20	30	30	—	2½	30–60	30GSJ†32A1V*	1632.	30GSJ†32B1V*	1764.	30GSJ†32W1V*	2634.	30GSJ†3201V*	2196.
—	—	40	40	3	—	30–60	30HSJ†32A1V*	1974.	30HSJ†32B1V*	2142.	30HSJ†32W1V*	3174.	30HSJ†3201V*	2724.
25	30	50	50	3	—	45–90	30HSK†32A1V*	1974.	30HSK†32B1V*	2142.	30HSK†32W1V*	3174.	30HSK†3201V*	2724.
30	40	75	75	—	3½	57–115	30ISL†32A1V*	4386.	30ISL†32B1V*	4698.	30ISL†32W1V*	6810.	30ISL†3201V*	5886.
40	50	100	100	4	—	67–135	30JTM†32A1V*	4866.	30JTM†32B1V*	5178.	30JTM†32W1V*	7290.	30JTM†3201V*	6366.
50	75	150	150	—	4½	100–210	30KTSS32A1V*	10584.	30KTSS32B1V*	11310.	30KTSS32W1V*	16248.	30KTSS3201V*	16248.
75	100	200	200	5	—	100–270	30LTUU32A1V*	11424.	30LTUU32B1V*	12150.	30LTUU32W1V*	17088.	30LTUU3201V*	17088.
150	200	400	400	6	—	200–540	30MTXX32A1V*	21842.	30MTXX32B1V*	24752.	30MTXX32E1V*	27842.	30MTXX3201V*	27464.
—	300	600	600	7	—	420–820	30NTYY32A1V*	29150.	30NTYY32B1V*	32030.	30NTYY32E1V*	33650.	30NTYY3201V*	34892.

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.

①24 volt coils are not available on size 4½–7 starters.
②When the coil voltage is 120 volts or less, the starter is wired for separate control except on size 6–7 starters.
③Not available with self-reset option.
④Size 6 and larger supplied in a painted sheet steel enclosure.
⑤NEMA 12 enclosures are UL listed for NEMA 3R applications on sizes 0 through 5 only. Water tight hubs or equivalent provisions for water tight connection at the conduit entrance should be used. For NEMA size 6–7 starters in NEMA 3R enclosure change the 9th digit in the catalog number from an "0" to a "D".
⑥For Nema 4X non-metallic enclosure. See factory modifications page 464.
⑦If motor FLA are unknown, select overload on the basis that low speed FLA will be no greater than 50% of high speed FLA.

Multi Speed Heavy Duty Starters

Two Speed Constant or Variable Torque with Ambient Comp. Bimetal Overload, Class 30

Ordering Instructions

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Heater elements see page 544. (6-Required)
- Field Modification Kits pages 457–461.
- Factory Modifications pages 462–466.
- Technical Data see pages 467–470.
- Dimensions see page 482.
- Wiring Diagrams see pages 491–492.
- Replacement Parts see page 547.

Coil Table

60Hz Voltage	Letter
24 Separate Control①	J
120 Separate Control①	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies see Factory Modifications page 465.

One Winding Consequent Pole, 3 Phase

Max Hp						Enclosure							
						Open Type		NEMA 1 General Purpose		NEMA 4/4X③ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R② Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
3	3	5	5	0	—	30CP32A2V*81	900.	30CP32B2V*81	924.	30CP32W2V*81	1500.	30CP3202V*81	1110.
7½	7½	10	10	1	—	30DP32A2V*81	960.	30DP32B2V*81	996.	30DP32W2V*81	1560.	30DP3202V*81	1182.
10	10	15	15	—	1¾	30EP32A2V*81	1230.	30EP32B2V*81	1266.	30EP32W2V*81	1830.	30EP3202V*81	1452.
10	15	25	25	2	—	30FP32A2V*81	1704.	30FP32B2V*81	1812.	30FP32W2V*81	2508.	30FP3202V*81	2076.
15	20	30	30	—	2½	30GP32A2V*81	2136.	30GP32B2V*81	2274.	30GP32W2V*81	3150.	30GP3202V*81	2706.
25	30	50	50	3	—	ESP100 Solid State Overload Standard, see page 431 for selection.							
30	40	75	75	—	3½								
40	50	100	100	4	—								
50	75	150	150	—	4½								
75	100	200	200	5	—								
150	200	400	400	6	—								

Two Separate Windings, 3 Phase

Max Hp						Enclosure							
						Open Type		NEMA 1 General Purpose		NEMA 4/4X③ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R② Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
3	3	5	5	0	—	30CP32A1V*81	636.	30CP32B1V*81	660.	30CP32W1V*81	1236.	30CP3201V*81	846.
7½	7½	10	10	1	—	30DP32A1V*81	708.	30DP32B1V*81	744.	30DP32W1V*81	1308.	30DP3201V*81	930.
10	10	15	15	—	1¾	30EP32A1V*81	888.	30EP32B1V*81	924.	30EP32W1V*81	1488.	30EP3201V*81	1110.
10	15	25	25	2	—	30FP32A1V*81	1236.	30FP32B1V*81	1332.	30FP32W1V*81	2040.	30FP3201V*81	1596.
15	20	30	30	—	2½	30GP32A1V*81	1578.	30GP32B1V*81	1710.	30GP32W1V*81	2580.	30GP3201V*81	2142.
25	30	50	50	3	—	ESP100 Solid State Overload Standard, see page 432 for selection.							
30	40	75	75	—	3½								
40	50	100	100	4	—								
50	75	150	150	—	4½								
75	100	200	200	5	—								
150	200	400	400	6	—								

①When the coil voltage is 120 volts or less, the starter is wired for separate control.

②NEMA 12 may be field modified for NEMA 3/3R. See page 461.

③For Nema 4X non-metallic enclosure. See factory modifications page 464.

Multi Speed Heavy Duty Starters

Two Speed Constant Horsepower with Solid State Overload, Class 30

Ordering Instructions

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Replace the (†) with the letter that corresponds to the correct FLA (First † for high speed, second † for low speed.) See FLA table.
- For self-reset overload option on Sizes 0–5, change 4th character from "S" or "T" to "R". No price addition.
- Technical Data see pages 467–470.
- Field Modification Kits see pages 457–461. Factory Modifications see pages 462–466.
- Dimensions see page 482.
- Wiring Diagrams see pages 491–492.
- Replacement Parts see page 547.

Coil Table

60Hz Voltage	Letter
24 Separate Control①	J
120 Separate Control②	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480③④	C
440–480③④	H
575–600③④	E

For other voltages and frequencies see Factory Modifications page 465.

FLA Table

Size	FLA	†
0,1	0.25–1	A
0,1	0.75–3	B
0,1	2.5–10	D
0–1¾	9–18	E
1–4	13–27	F
1¾	20–40	G
2–4	22–45	H
2½–4	30–60	J
3–4	45–90	K
3½–4	57–115	L
4	67–135	M

One Winding Consequent Pole, 3 Phase

Max Hp							Enclosure							
							Open Type		NEMA 1 General Purpose		NEMA 4/4X⑤⑦ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R⑥ Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Overload Amp Range	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
2	2	3	3	0	—	—	30CS††32A2H*	954.	30CS††32B2H*	978.	30CS††32W2H*	1554.	30CS††3202H*	1164.
5	5	7½	7½	1	—	—	30DS††32A2H*	1014.	30DS††32B2H*	1050.	30DS††32W2H*	1614.	30DS††3202H*	1236.
7½	7½	10	10	—	1¾	—	30ES††32A2H*	1284.	30ES††32B2H*	1320.	30ES††32W2H*	1884.	30ES††3202H*	1506.
7½	10	20	20	2	—	—	30FS††32A2H*	1758.	30FS††32B2H*	1866.	30FS††32W2H*	2562.	30FS††3202H*	2130.
10	15	25	25	—	2½	—	30GS††32A2H*	2190.	30GS††32B2H*	2328.	30GS††32W2H*	3204.	30GS††3202H*	2760.
20	25	40	40	3	—	—	30HS††32A2H*	2622.	30HS††32B2H*	2790.	30HS††32W2H*	3822.	30HS††3202H*	3390.
25	30	50	50	—	3½	—	30IS††32A2H*	5982.	30IS††32B2H*	6642.	30IS††32W2H*	8754.	30IS††3202H*	7830.
30	40	75	75	4	—	—	30JT††32A2H*	6702.	30JT††32B2H*	7362.	30JT††32W2H*	9474.	30JT††3202H*	8550.
40	60	100	100	—	4½	100–210	30KTSS32A2H*	12354.	30KTSS32B2H*	13656.	30KTSS32W2H*	18594.	30KTSS3202H*	18594.
60	75	150	150	5	—	100–270	30LTUU32A2H*	13194.	30LTUU32B2H*	14496.	30LTUU32W2H*	19434.	30LTUU3202H*	19434.
100	150	300	300	6	—	200–540	30MTXX32A2H*	29826.	30MTXX32B2H*	32558.	30MTXX32W2H*	39308.	30MTXX3202H*	35282.
—	225	450	450	7	—	420–820	30NTYY32A2H*	—	30NTYY32B2H*	42264.	30NTYY32W2H*	45264.	30NTYY3202H*	43884.

Two Separate Windings, 3 Phase

Max Hp							Enclosure							
							Open Type		NEMA 1 General Purpose		NEMA 4/4X⑤⑦ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R⑥ Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Overload Amp Range	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
2	2	3	3	0	—	—	30CS††32A1H*	690.	30CS††32B1H*	714.	30CS††32W1H*	1290.	30CS††3201H*	900.
5	5	7½	7½	1	—	—	30DS††32A1H*	762.	30DS††32B1H*	798.	30DS††32W1H*	1362.	30DS††3201H*	984.
7½	7½	10	10	—	1¾	—	30ES††32A1H*	942.	30ES††32B1H*	978.	30ES††32W1H*	1542.	30ES††3201H*	1164.
7½	10	20	20	2	—	—	30FS††32A1H*	1290.	30FS††32B1H*	1386.	30FS††32W1H*	2094.	30FS††3201H*	1650.
10	15	25	25	—	2½	—	30GS††32A1H*	1632.	30GS††32B1H*	1764.	30GS††32W1H*	2634.	30GS††3201H*	2196.
20	25	40	40	3	—	—	30HS††32A1H*	1974.	30HS††32B1H*	2142.	30HS††32W1H*	3174.	30HS††3201H*	2742.
25	30	50	50	—	3½	—	30IS††32A1H*	4386.	30IS††32B1H*	4698.	30IS††32W1H*	6810.	30IS††3201H*	5886.
30	40	75	75	4	—	—	30JT††32A1H*	4866.	30JT††32B1H*	5178.	30JT††32W1H*	7290.	30JT††3201H*	6366.
40	60	100	100	—	4½	100–210	30KTSS32A1H*	10584.	30KTSS32B1H*	11310.	30KTSS32W1H*	16248.	30KTSS3201H*	16248.
60	75	150	150	5	—	100–270	30LTUU32A1H*	11424.	30LTUU32B1H*	12150.	30LTUU32W1H*	17088.	30LTUU3201H*	17088.
100	150	300	300	6	—	200–540	30MTXX32A1H*	21842.	30MTXX32B1H*	24752.	30MTXX32E1H*	27842.	30MTXX3201H*	27464.
—	225	450	450	7	—	420–820	30NTYY32A1H*	29150.	30NTYY32B1H*	32030.	30NTYY32E1H*	33650.	30NTYY3201H*	34892.

①24 volt coils are not available on size 4½–7 starters.
②When the coil voltage is 120 volts or less, the starter is wired for separate control except on size 6–7 starters.
③Dual voltage coils NA in stocked or modified starters.
④Not available with self-reset option.
⑤Size 6 and larger supplied in a painted sheet steel enclosure.
⑥NEMA 12 enclosures are UL listed for NEMA 3R applications on sizes 0 through 5 only. Water tight hubs or equivalent provisions for water tight connection at the conduit entrance should be used. For NEMA size 6–7 starters in NEMA 3R enclosure change the 9th digit in the catalog number from an "0" to a "D".
⑦For Nema 4X non-metallic enclosure. See factory modifications page 464.

Multi Speed Heavy Duty Starters

Two Speed Constant Horsepower with Ambient Comp. Bimetal Overload, Class 30

Ordering Instructions

- Replace the (*) with a letter from the coil table. Dual voltage coils are wired on high voltage unless specified on order.
- Heater elements see page 544. (6-Required)
- Technical Data see pages 467–470.
- Field Modification Kits see pages 457–461.
- Factory Modifications see pages 462–466.
- Dimensions see page 482.
- Wiring Diagrams see pages 491–492.
- Replacement Parts see page 547.

Coil Table

60Hz Voltage	Letter
24 Separate Control①	J
120 Separate Control①	F
110–120/220–240	A
200–208	D
220–240	G
277	L
220–240/440–480	C
440–480	H
575–600	E

For other voltages and frequencies see Factory Modifications page 465.

One Winding Consequent Pole, 3 Phase

Max Hp						Enclosure							
						Open Type		NEMA 1 General Purpose		NEMA 4/4X③ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R② Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
2	2	3	3	0	—	30CP32A2H*81	900.	30CP32B2H*81	924.	30CP32W2H*81	1500.	30CP3202H*81	1110.
5	5	7½	7½	1	—	30DP32A2H*81	960.	30DP32B2H*81	996.	30DP32W2H*81	1560.	30DP3202H*81	1182.
7½	7½	10	10	—	1¾	30EP32A2H*81	1230.	30EP32B2H*81	1266.	30EP32W2H*81	1830.	30EP3202H*81	1452.
7½	10	20	20	2	—	30FP32A2H*81	1704.	30FP32B2H*81	1812.	30FP32W2H*81	2508.	30FP3202H*81	2076.
10	15	25	25	—	2½	30GP32A2H*81	2136.	30GP32B2H*81	2274.	30GP32W2H*81	3150.	30GP3202H*81	2706.
20	25	40	40	3	—	ESP100 Solid State Overload Standard, see page 434 for selection.							
25	30	50	50	—	3½								
30	40	75	75	4	—								
40	60	100	100	—	4½								
60	75	150	150	5	—								
100	150	300	300	6	—								

Two Separate Windings, 3 Phase

Max Hp						Enclosure							
						Open Type		NEMA 1 General Purpose		NEMA 4/4X③ Watertight, Dusttight Corrosion Resistant 304 Stainless Steel		NEMA 12 NEMA 3/3R② Industrial Use Weatherproof	
200 Volts	230 Volts	460 Volts	575 Volts	NEMA Size	Half Size	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $	Catalog No	Price $
2	2	3	3	0	—	30CP32A1H*81	636.	30CP32B1H*81	660.	30CP32W1H*81	1236.	30CP3201H*81	846.
5	5	7½	7½	1	—	30DP32A1H*81	708.	30DP32B1H*81	744.	30DP32W1H*81	1308.	30DP3201H*81	930.
7½	7½	10	10	—	1¾	30EP32A1H*81	888.	30EP32B1H*81	924.	30EP32W1H*81	1488.	30EP3201H*81	1110.
7½	10	20	20	2	—	30FP32A1H*81	1236.	30FP32B1H*81	1332.	30FP32W1H*81	2040.	30FP3201H*81	1596.
10	15	25	25	—	2½	30GP32A1H*81	1578.	30GP32B1H*81	1710.	30GP32W1H*81	2580.	30GP3201H*81	2142.
20	25	40	40	3	—	ESP100 Solid State Overload Standard, see page 434 for selection.							
25	30	50	50	—	3½								
30	40	75	75	4	—								
40	60	100	100	—	4½								
60	75	150	150	5	—								
100	150	300	300	6	—								

①When the coil voltage is 120 volts or less, the starter is wired for separate control.

②NEMA 12 may be field modified for NEMA 3/3R. See page 461.

③For Nema 4X non-metallic enclosure. See factory modifications page 464.