

Pump Control Panels

Class 87, 88

General

Features

- Fully Gasketed NEMA 3R Rainproof Enclosures
- 100,000 Amp Interrupting Capacity with Class R Fuses
- Heavy Duty NEMA Starters
- Solid State or Ambient Compensated Bimetal Overload Relays
- Heavy Duty Disconnect Handle
- Available in Reduced Voltage Versions
- Bold Pilot Legend on Front
- Generous Accessory Space
- Copper Grounding Lug For Three #6 Wires
- UL Listed for Outdoor Use and Service Equipment File #E14900



Application

Heavy duty pump control panels are designed to withstand the most demanding environments. Typical applications include irrigation, agriculture, petrochemical, wastewater treatment and wherever motor control is challenged by harsh elements.

Rugged pump control panels utilized cold forming "tox" process. They are more rainproof, sleet and ice resistant than in the past.

Installation is easy. Panels are factory wired to provide flexible control and protect against short circuits and overloads. Ample space is provided for field modifications and installation of accessories.

The pump control panels feature a full sized removable auxiliary panel for the mounting of accessories. The fusible version features fuse clips for full sized RK5 or compact class J fuses and accessory mounting space for the most commonly used accessories.

Class 87 pump panels become jockey pump panels with the addition of a pressure switch (see field modifications). The jockey pump's primary function is to maintain water pressure at a preset level and thus compensate for possible shortage of water in the pumping system. When the water pressure drops below the preset level, the pressure switch energizes the starter which in turn activates the jockey pump. The water pressure is then brought back up to the desired level. This insures the maintenance of proper water pressure at all times.

Features

Specified by Fortune 500 companies, ESP100 or thermal starters offer prolonged service under severe duty conditions. NEMA rated, these starters utilize large silver cadmium oxide contacts and wide copper heat sinks to ensure rapid heat dissipation and maximum electrical life.

ESP100 solid state overload relays provide phase loss protection for the motor by tripping within three seconds upon complete loss of one phase in a three phase circuit. Each overload has a 2:1 (4:1 in lower ranges) FLA adjustment range with an adjustment dial reading out in FLA. This feature allows for extreme fine tuning. Their heaterless construction minimizes energy costs and costs of cabinet ventilation or cooling. The class 87 pump panel comes with class 10 trip standard.

The ambient compensated bimetal overload relays are designed to parallel thermal characteristics of typical pump motors. They prevent nuisance trips that may result from operation of the control in a higher ambient temperature than that at the pump. These relays are trip-free, tamperproof and can be set to reset automatically or manually.

HOA and Start Pushbutton

Every pump panel comes with an HOA and a start pushbutton.

Half Size Starters

Siemens motor matched starters feature all the rugged performance characteristics of our NEMA rated starter sizes, but are fractionally sized to more closely match your exact motor rating. As a result, significant economic savings are made possible without sacrificing the reliability you expect from a heavy duty starter.

These additional starter sizes have the reserve capacity to handle occasional plugging and jogging without de-rating the device.

Siemens motor matched can save hundreds, even thousands of dollars per project.

Siemens motor matched starters comply with NEMA, UL and CSA standards.

Panels are predrilled for easy repositioning of the fuse trailer block to accommodate 250 and 600 volt fuses and full sized RK or compact J fuses. Circuit breakers are also available.

New Heavy Duty Fusible Disconnect Switch

The disconnect switch has been made even better to give you greater advantages:

- Visible blades for the highest level of safety.
- Double Break Switching Action to reduce arcing, increase lifetime and eliminate the "electric hinge".
- Oversized lugs are standard.
- Line side shield to help guard personnel from contact with live parts.

Motor Circuit Protector

The motor circuit protector provides fast, accurate fault clearing that will minimize damage to the motor and control apparatus and protect branch circuit conductors. Continuous current ratings and adjustable trip ranges meet NEC requirements for full load and locked rotor currents. The adjustable instantaneous trip point can be set precisely to assure fault protection and eliminate nuisance tripping.

Removable Door

Enclosure door may be lifted off to make wiring easier.

Mounting Flanges

Convenient flanges at top and bottom of the enclosure provide easy mounting. They fit pole or flat surfaces using keyhole slots.

Quarter Turn Latches

Quarter turns are utilized to secure the door.

Wind Catches

A wind catch is provided to prevent the door from slamming shut (or open) due to high wind conditions.

Safety Disconnect Handle

Up to three padlocks can be used to lock the disconnect in the OFF position. Maintenance work can be performed without hazard to personnel.

External Reset

The overload relay may be quickly reset by means of a button on the front of the enclosure.

Bold Pilot Legend

Provides positive indication of the selector switch position for use to stop the pump motor.

Ground Lugs

Insures proper connecting of ground wires and lightning arresters.

UL Listed

Assures proper construction throughout control panel.

Reduced Voltage

Available in part winding, wye delta and auto transformer types, these controls may be necessary where the power company limits the amount of current drawn from its lines, or where starting torque must be reduced.

Fully gasketed NEMA 3/12 weather-proof enclosures are supplied with Class 88 reduced voltage starters.

Part Winding Starters apply starting current in timed steps to minimize voltage fluctuations.

Auto Transformer Starters maintain a closed circuit during transition and eliminate voltage or current surges. They draw less current than part winding starters and are well suited for starting motors over 20 Hp.

Wye Delta starters and motors are used in areas where the power supply is inadequate to supply full starting current without objectionable voltage drop or for applications where low starting torque is required. Centrifugal pumps and similar apparatus requiring a low starting torque are typical applications. Both ends of all three windings of the wye delta motor are brought out so that they may be accessible for reconnecting from wye to delta.

Auxiliary Equipment

Pilot Lights are easily installed on the enclosure. Oil Tight and Heavy Duty, they meet NEMA A600 requirements.

Lightning Arresters protect the control panel from lightning induced surges.

Undervoltage and Phase Sensing Relays protect the pump against low voltage, voltage imbalance, loss of phase and phase reversal.

Anti-Backspin Timers prevent the motor from starting during motor/shaft backspin.

The TOX Box

Siemens uses the TOX process to manufacture the enclosures for the pump panels.

Advantages of the TOX process:

- Joints are 50-70% stronger.
- Since the TOX process compresses the metal at the joint, it does not leave the high stresses in the metal.
- Increased corrosion resistance. The protective layer on the metal is not damaged in the process, but instead flows with the material.

Reduced Voltage Pump Panels

Auto Transformer & Part winding [2 step] with Solid State Overload

Selection

Ordering Information	Coil and Control Voltage
<ul style="list-style-type: none"> ▶ Technical Data see www.sea.siemens.com/controls. ▶ Field Modification Kits see page 8/79. ▶ Factory Modifications see page 8/93. ▶ Dimensions see page 8/110. ▶ Wiring Diagrams see page 8/137. ▶ Replacement Parts see pages 8/152. 	<p>The coil voltage on the contactors will be the motor voltage. A CPT will be supplied to provide the control voltage. The control voltage will be 120V.</p> <p>To change the control voltage to customer supplied (no CPT included), change the 9th character to the following:</p> <p>for 24V , use "J"</p> <p>for 120V, use "F"</p>

Auto Transformer Type

Motor Voltage	Max Hp	OL amp range	NEMA Size	Half Size	Fusible Disconnect			Circuit Breaker		
					Fuse Clip Size	Catalog Number	List Price \$	Circuit Breaker Amps	Catalog Number	List Price \$
230	15	22-45	2	—	60A/250V	88FSHT2FG	6402.	50	88FSHT2MG	6487.
	20	30-60	—	2 1/2	100A/250V	88GSJT2FG	8659.	100	88GSJT2MG	8836.
	30	45-90	3	—	100A/250V	88HSKT2FG	9241.	100	88HSKT2MG	10123.
	40	57-115	—	3 1/2	200A/250V	88ISLT2FG	13128.	125	88ISLT2MG	14499.
	50	67-135	4	—	200A/250V	88JSMT2FG	13867.	150	88JSMT2MG	15239.
	75	100-210	5	—	—	—	—	250	88KSST2MG	23913.
	100	100-270	5	—	400A/250V	88KSUT2FG	24013.	400	88KSUT2MG	25670.
	200	200-540	6	—	—	—	—	600	88MSXT2MH	42954.
460	25	22-45	2	—	60A/600V	88FSHT4FH	6826.	50	88FSHT4MH	6937.
	30	22-45	—	2 1/2	60A/600V	88GSHT4FH	8983.	50	88GSHT4MH	9071.
	50	45-90	3	—	100A/600V	88HSKT4FH	9568.	100	88HSKT4MH	10042.
	75	57-115	—	3 1/2	200A/600V	88ISLT4FH	13574.	125	88ISLT4MH	14676.
	100	67-135	4	—	200A/600V	88JSMT4FH	15146.	150	88JSMT4MH	15601.
	150	100-210	5	—	—	—	—	250	88KSST4MH	24560.
	200	100-270	5	—	400A/600V	88KSUT4FH	26463.	400	88KSUT4MH	27750.
	400	200-540	6	—	600A/600V	88MSXT4FH	38713.	600	88MSXT4MH	42950.

Part Winding 2 Step

Motor Voltage	Max Hp	OL amp range	NEMA Size	Half Size	Fusible Disconnect			Circuit Breaker		
					Fuse Clip Size	Catalog Number	List Price \$	Circuit Breaker Amps	Catalog Number	List Price \$
230	20	20-40	—	1 3/4	100A/250V	88ESGP2FG	3829.	100	88ESGP2MG	3590.
	25	22-45	2	—	100A/250V	88FSHP2FG	4145.	100	88FSHP2MG	4014.
	40	30-60	—	2 1/2	200A/250V	88GSJP2FG	5855.	100	88GSJP2MG	5701.
	50	45-90	3	—	200A/250V	88HSKP2FG	6348.	150	88HSKP2MG	6194.
	60	57-115	—	3 1/2	200A/250V	88ISLP2FG	11248.	250	88ISLP2MG	12111.
	75	67-135	4	—	400A/250V	88JSMP2FG	11872.	250	88JSMP2MG	12727.
	125	100-210	5	—	—	—	—	400	88KSSP2MG	22426.
	150	100-270	5	—	600A/250V	88KSUP2FG	22958.	600	88KSUP2MG	23505.
460	30	13-27	—	1 3/4	100A/600V	88ESFP4FH	3829.	50	88ESFP4MH	3590.
	40	22-45	2	—	100A/600V	88FSHP4FH	4145.	100	88FSHP4MH	4014.
	60	30-60	—	2 1/2	200A/600V	88GSJP4FH	5855.	100	88GSJP4MH	5701.
	75	30-60	3	—	200A/600V	88HSJP4FH	6348.	125	88HSJP4MH	6194.
	100	57-115	—	3 1/2	200A/600V	88ISLP4FH	11248.	150	88ISLP4MH	12111.
	150	67-135	4	—	400A/600V	88JSMP4FH	11872.	250	88JSMP4MH	12727.
	250	100-210	5	—	—	—	—	400	88KSSP4MH	23505.
	350	100-270	5	—	600A/600V	88KSUP4FH	22958.	600	88KSUP4MH	42287.

Reduced Voltage Pump Panels

Wye Delta with Solid State Overload

Selection

Ordering Information	Coil and Control Voltage
<ul style="list-style-type: none"> ▶ Technical Data see www.sea.siemens.com/controls. ▶ Field Modification Kits see page 8/79. ▶ Factory Modifications see page 8/93. ▶ Dimensions see page 8/110. ▶ Wiring Diagrams see page 8/137. ▶ Replacement Parts see pages 8/152. 	<p>The coil voltage on the contactors will be the motor voltage. A CPT will be supplied to provide the control voltage. The control voltage will be 120V.</p> <p>To change the control voltage to customer supplied (no CPT included), change the 9th character to the following: for 24V, use "J" for 120V, use "F"</p>

Wye Delta

Motor Voltage	Max Hp	NEMA Size	Half Size	Fuse Clip Amps	MCP Amps	Open Transition				Closed Transition			
						Fusible Disconnect		Circuit Breaker		Fusible Disconnect		Circuit Breaker	
						Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
200V	10	1	—	60	50	88DSF06FD	4815.	88DSF06MD	5115.	88DSFC6FD	6209.	88DSFC6MD	6510.
	15	—	1 3/4	100	100	88ESG06FD	5408.	88ESG06MD	5385.	88ESGC6FD	6564.	88ESGC6MD	6818.
	20	2	—	100	100	88FSH06FD	6163.	88FSH06MD	5909.	88FSHC6FD	7303.	88FSHC6MD	7350.
	30	—	2 1/2	200	125	88GSJ06FD	7727.	88GSJ06MD	7820.	88GSJC6FD	9091.	88GSJC6MD	9491.
	40	3	—	200	150	88HSK06FD	8320.	88HSK06MD	8721.	88HSC6FD	10077.	88HSC6MD	10477.
	50	—	3 1/2	200	250	88ISL06FD	14622.	88ISL06MD	15616.	88ISLC6FD	16802.	88ISLC6MD	18181.
	60	4	—	400	250	88ISL06FD	15161.	88JSM06MD	16540.	88ISLC6FD	18097.	88JSMC6MD	19476.
	75	5	—	400	400	88KSS06FD	22808.	88KSS06MD	26667.	88KSSC6FD	30458.	88KSSC6MD	30381.
	150	5	—	600	600	88KSU06FD	27573.	88KSU06MD	27080.	88KSUC6FD	31425.	88KSUC6MD	30932.
	300	6	—	—	800	—	—	88MSX06MD	50276.	—	—	88MSXC6MD	59706.
230V	10	1	—	60	50	88DSF02FG	4815.	88DSF02MG	5115.	88DSFC2FG	6209.	88DSFC2MG	6510.
	15	—	1 3/4	60	50	88ESG02FG	5323.	88ESG02MG	5385.	88ESGC2FG	6479.	88ESGC2MG	6818.
	25	2	—	100	100	88FSH02FG	6163.	88FSH02MG	5909.	88FSHC2FG	7303.	88FSHC2MG	7350.
	30	—	2 1/2	200	100	88GSJ02FG	7727.	88GSJ02MG	7820.	88GSJC2FG	9091.	88GSJC2MG	9491.
	50	3	—	200	150	88HSK02FG	8320.	88HSK02MG	8721.	88HSC2FG	10077.	88HSC2MG	10477.
	60	—	3 1/2	200	250	88ISL02FG	14622.	88ISL02MG	15616.	88ISLC2FG	16802.	88ISLC2MG	18181.
	75	4	—	400	250	88JSM02FG	15161.	88JSM02MG	16540.	88JSMC2FG	18097.	88JSMC2MG	19476.
	100	5	—	400	400	88KSS02FG	22808.	88KSS02MG	26667.	88KSSC2FG	30458.	88KSSC2MG	30381.
	150	5	—	600	600	88KSU02FG	27573.	88KSU02MG	27080.	88KSUC2FG	31425.	88KSUC2MG	30932.
	350	6	—	—	1200	—	—	88MSX02MG	50276.	—	—	88MSXC2MG	59706.
460V	15	1	—	60	30	88DSE04FH	4815.	88DSE04MH	5115.	88DSEC4FH	6209.	88DSEC4MH	6510.
	30	—	1 3/4	60	50	88ESF04FH	5339.	88ESF04MH	5385.	88ESFC4FH	6494.	88ESFC4MH	6818.
	40	2	—	100	100	88FSH04FH	5855.	88FSH04MH	5909.	88FSHC4FH	7465.	88FSHC4MH	7519.
	60	—	2 1/2	200	100	88GSJ04FH	7419.	88GSJ04MH	7820.	88GSJC4FH	9260.	88GSJC4MH	9661.
	75	3	—	200	125	88GSJ04FH	8320.	88HSK04MH	8721.	88GSJC4FH	10901.	88HSC4MH	11302.
	100	—	3 1/2	200	150	88ISL04FH	12727.	88ISL04MH	15616.	88ISLC4FH	17373.	88ISLC4MH	19044.
	150	4	—	400	250	88JSM04FH	15161.	88JSM04MH	16540.	88JSMC4FH	18775.	88JSMC4MH	20154.
	200	5	—	400	400	88KSS04FH	22808.	88KSS04MH	26667.	88KSSC4FH	31151.	88KSSC4MH	31074.
	300	5	—	600	600	88KSU04FH	27573.	88KSU04MH	27080.	88KSUC4FH	33096.	88KSUC4MH	32603.
	700	6	—	—	1200	—	—	88MSX04MH	50276.	—	—	88MSXC4MH	59706.
575V	15	1	—	60	30	88DSE05FE	4815.	88DSE05ME	5115.	88DSEC5FE	6209.	88DSEC5ME	6510.
	30	—	1 3/4	60	50	88ESF05FE	5339.	88ESF05ME	5385.	88ESFC5FE	6494.	88ESFC5ME	6818.
	40	2	—	60	50	88FSF05FE	5855.	88FSF05ME	5909.	88FSFC5FE	7465.	88FSFC5ME	7519.
	60	—	2 1/2	100	100	88GSH05FE	7419.	88GSH05ME	7820.	88GSHC5FE	9260.	88GSHC5ME	9661.
	75	3	—	200	125	88HSJ05FE	8320.	88HSJ05ME	8721.	88HSJC5FE	10901.	88HSJC5ME	11302.
	100	—	3 1/2	200	150	88ISK05FE	12727.	88ISK05ME	15616.	88ISKC5FE	17373.	88ISKC5ME	19044.
	150	4	—	400	250	88ISK05FE	15161.	88JSM05ME	16540.	88ISKC5FE	18775.	88JSMC5ME	20154.
	200	5	—	400	400	88KSS05FE	22808.	88KSS05ME	26667.	88KSSC5FE	31151.	88KSSC5ME	31074.
	300	5	—	600	400	88KSU05FE	27573.	88KSU05ME	27080.	88KSUC5FE	33096.	88KSUC5ME	32603.
	700	6	—	—	1200	—	—	88MSX05ME	50276.	—	—	88MSXC5ME	59706.

Pump Control Panels

Standard Pump Panel with Solid State Overload

Selection

Ordering Information	Coil Table																				
<ul style="list-style-type: none"> ▶ Technical Data see www.sea.siemens.com/controls. ▶ Field Modification Kits see page 8/79. ▶ Factory Modifications see page 8/93. ▶ Dimensions see page 8/110. ▶ Wiring Diagrams see page 8/137. ▶ Replacement Parts see pages 8/152. ▶ Sizes 1-4 will be supplied standard with a 240/480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table. ▶ Sizes 5&6 will be supplied standard with a 480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table. 	<table border="1"> <thead> <tr> <th>60Hz Voltage</th> <th>Letter</th> </tr> </thead> <tbody> <tr><td>24 Separate Control</td><td>J</td></tr> <tr><td>120 Separate Control</td><td>F</td></tr> <tr><td>110-120/220-240</td><td>A[ⓐ]</td></tr> <tr><td>200-208</td><td>D</td></tr> <tr><td>220-240</td><td>G</td></tr> <tr><td>220-240/440-480</td><td>C[ⓐ]</td></tr> <tr><td>277</td><td>L</td></tr> <tr><td>440-480</td><td>H</td></tr> <tr><td>550-600</td><td>E</td></tr> </tbody> </table>	60Hz Voltage	Letter	24 Separate Control	J	120 Separate Control	F	110-120/220-240	A [ⓐ]	200-208	D	220-240	G	220-240/440-480	C [ⓐ]	277	L	440-480	H	550-600	E
60Hz Voltage	Letter																				
24 Separate Control	J																				
120 Separate Control	F																				
110-120/220-240	A [ⓐ]																				
200-208	D																				
220-240	G																				
220-240/440-480	C [ⓐ]																				
277	L																				
440-480	H																				
550-600	E																				

Fusible Disconnect

200V	230V	460V	575V	NEMA Size	Half Size	Overload Amp Range	Fuse Clip Amps	Catalog Number	List Price \$
—	—	1	1	1	—	0.75-3 [ⓐ]	30	87DSB6FC	1017.
—	—	5	5	1	—	2.5-10	30	87DSD6FC	1017.
—	—	7 1/2	10	1	—	9-18	30	87DSE6FC	1017.
—	—	7 1/2	10	1	—	9-18	60	87DSE60C	1032.
—	—	15	15	—	1 3/4	13-27	30	87ESF6FC	1194.
—	—	15	15	—	1 3/4	13-27	60	87ESF60C	1210.
—	—	15	20	2	—	13-27	60	87FSF6FC	1371.
—	—	25	25	2	—	22-45	60	87FSH6FC	1371.
—	—	25	25	2	—	22-45	100	87FSH60C	1456.
—	—	30	30	—	2 1/2	22-45	60	87GSH6FC	1957.
—	—	30	30	—	2 1/2	22-45	100	87GSH60C	2042.
—	—	50	50	3	—	45-90	100	87HSK6FC	2211.
—	—	50	50	3	—	45-90	200	87HSK60C	2373.
—	—	75	75	—	3 1/2	57-115	200	87ISL6FC	3760.
—	—	100	100	4	—	67-135	200	87JSM6FC	4068.
—	—	200	200	5	—	100-270	400	87KSU6FH	8844.
—	—	250	—	6	—	200-540	600	87MSW6FH	22330.
2	2	—	—	1	—	2.5-10	30	87DSD6LC	1002.
3	3	—	—	1	—	9-18	30	87DSE6LC	1002.
7 1/2	7 1/2	—	—	1	—	13-27	30	87DSF6LC	1002.
7 1/2	7 1/2	—	—	1	—	13-27	60	87DSF6PC	1017.
10	10	—	—	—	1 3/4	20-40	60	87ESG6LC	1194.
10	15	—	—	2	—	22-45	60	87FSH6LC	1348.
10	15	—	—	2	—	22-45	100	87FSH6PC	1441.
15	20	—	—	—	2 1/2	30-60	60	87GSJ6LC	1903.
15	20	—	—	—	2 1/2	30-60	100	87GSJ6PC	1995.
25	30	—	—	3	—	45-90	100	87HSK6LC	2165.
25	30	—	—	3	—	45-90	200	87HSK6PC	2342.
30	40	—	—	—	3 1/2	57-115	200	87ISL6LC	3729.
40	50	—	—	4	—	67-135	200	87JSM6LC	4037.
75	100	—	—	5	—	100-270	400	87KSU6LH	8659.

Circuit Breaker

200V	230V	460V	575V	NEMA Size	Half Size	Overload Amp Range	Motor Circuit Interrupter ETI Amps	Catalog Number	List Price \$
1/2	1/2	1	1	1	—	0.75-3 [ⓐ]	3	87DSB6MC	1279.
1	1	3	3	1	—	2.5-10	10	87DSC6MC	1279.
2	2	5	5	1	—	2.5-10	10	87DSD6MC	1279.
3	3	7 1/2	10	1	—	9-18	25	87DSE6MC	1279.
7 1/2	7 1/2	10	—	1	—	13-27	30	87DSF6MC	1279.
—	—	15	15	—	1 3/4	13-27	30	87ESF6MC	1433.
10	10	—	—	—	1 3/4	20-40	50	87ESG6MC	1433.
—	—	15	20	2	—	13-27	30	87FSF6MC	1587.
10	15	25	25	2	—	22-45	50	87FSH6MC	1587.
—	—	30	30	—	2 1/2	22-45	50	87GSH6MC	2072.
15	20	—	—	—	2 1/2	30-60	100	87GSJ6MC	2072.
25	30	50	50	3	—	45-90	100	87HSK6MC	2242.
30	40	75	75	—	3 1/2	57-115	125	87ISL6MC	4438.
40	50	100	100	4	—	67-135	150	87JSM6MC	4746.
50	75	150	200	5	—	100-270	250	87KST6MH	10793.
75	100	200	200	5	—	100-270	400	87KSU6MH	10793.
100	125	250	300	6	—	200-540	400	87MSW6MH	23401.
150	200	400	400	6	—	200-540	600	87MSX6MH	26902.

[ⓐ] Not available on Size 5 and larger.

[ⓐ] For an overload amp range of 0.25-1A, change the 5th character from a 'B' to an 'A'.

Pump Control Panels

Pump Panel with Ambient Compensated Bimetal Overload

Selection

Ordering Information	Coil Table	
<ul style="list-style-type: none"> ▶ Order 3 heater elements by code number at 11.60 each see page 8/145. ▶ Technical Data see www.sea.siemens.com/controls ▶ Field Modification Kits see page 8/79. ▶ Factory Modifications see page 8/93. ▶ Dimensions see page 8/110. ▶ Wiring Diagrams see page 8/137. ▶ Replacement Parts see pages 8/152. ▶ Sizes 1-4 will be supplied standard with a 230/480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table. ▶ Sizes 5&6 will be supplied standard with a 480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table. 	60Hz Voltage	Letter
	24 Separate Control 120 Separate Control 110-120/220-240 200-208 220-240 220-240/440-480 277 440-480 550-600	J F A [Ⓞ] D G C [Ⓞ] L H E

Fusible Disconnect

200V	230V	460V	575V	NEMA Size	Half Size	Fuse Clip Amps	Catalog Number	List Price \$
—	—	10	10	1	—	30	87DAE6FC	982.
—	—	10	10	1	—	60	87DAE60C	998.
—	—	15	15	—	1 3/4	30	87EAF6FC	1159.
—	—	15	15	—	1 3/4	60	87EAF60C	1175.
—	—	25	25	2	—	60	87FAJ6FC	1337.
—	—	25	25	2	—	100	87FAJ60C	1421.
—	—	30	30	—	2 1/2	60	87GAK6FC	1922.
—	—	30	30	—	2 1/2	100	87GAK60C	2007.
—	—	50	50	3	—	100	87HAN6FC	2176.
—	—	50	50	3	—	200	87HAN60C	2338.
—	—	75	75	—	3 1/2	200	87IAP6FC	3725.
—	—	100	100	4	—	200	87JAR6FC	4033.
7 1/2	7 1/2	—	—	1	—	30	87DAE6LC	967.
7 1/2	7 1/2	—	—	1	—	60	87DAE6PC	982.
10	10	—	—	—	1 3/4	60	87EAG6LC	1159.
10	15	—	—	2	—	60	87FAJ6LC	1314.
10	15	—	—	2	—	100	87FAJ6PC	1406.
15	20	—	—	—	2 1/2	100	87GAL6LC	1961.
25	30	—	—	3	—	100	87HAN6LC	2130.
25	30	—	—	3	—	200	87HAN6PC	2307.
30	40	—	—	—	3 1/2	200	87IAP6LC	3694.
40	50	—	—	4	—	200	87JAR6LC	4002.

Circuit Breaker

200V	230V	460V	575V	NEMA Size	Half Size	Motor Circuit Interrupter ETI	Catalog Number	List Price \$
1/2	1/2	1	1	1	—	3	87DAA6MC	1244.
1	1	3	3	1	—	10	87DAB6MC	1244.
3	3	7 1/2	7 1/2	1	—	25	87DAD6MC	1244.
7 1/2	7 1/2	10	10	1	—	30	87DAE6MC	1244.
7 1/2	7 1/2	15	15	—	1 3/4	30	87EAF6MC	1398.
10	10	—	—	—	1 3/4	50	87EAG6MC	1538.
—	—	15	20	2	—	40	87FAH6MC	1552.
10	15	25	25	2	—	50	87FAJ6MC	1552.
—	—	30	30	—	2 1/2	50	87GAK6MC	2038.
15	20	—	—	—	2 1/2	100	87GAL6MC	2038.
25	30	50	50	3	—	100	87HAN6MC	2207.
30	40	75	75	—	3 1/2	125	87IAP6MC	4403.
40	50	100	100	4	—	150	87JAR6MC	4711.

Ⓞ Not available on Size 5 or larger.

Vacuum Starter Pump Panels With Solid-State Overload Relay

Selection

Ordering Information	Coil Table	
<ul style="list-style-type: none"> ▶ Technical Data see www.sea.siemens.com/controls. ▶ Field Modification Kits see page 8/79. ▶ Factory Modifications see page 8/93. ▶ Dimensions see page 8/110. ▶ Wiring Diagrams see page 8/137. ▶ Replacement Parts see pages 8/152. ▶ Sizes 1-4 will be supplied standard with a 240/480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table. ▶ Sizes 5&6 will be supplied standard with a 480 volt coil. To change the coil voltage, change the 8th character in the catalog number to the letter shown in the coil table. 	60Hz Voltage	***
	024 Separate Control	024
	120	120
	208	208
	277	277
480	480	
600	600	

Fusible Disconnect

Max Hp		NEMA Size	Overload Range	Fuse Clip Amps	Catalog Number	List Price \$
460 Volts	575 Volts					
100	100	4	55-250A	200A/600V	87JCM4F	7059.
200	200	5	55-250A	400A/600V	87KCU4F*	11363.

Circuit Breaker

Max Hp		NEMA Size	Overload Range	Circuit Breaker Rating	Catalog Number	List Price \$
460 Volts	575 Volts					
100	100	4	55-250A	250A	87JCM4M*	7810.
200	200	5	55-250A	250A	87KCT4M*	13416.
250	300	6	200-540A	400A	87MCW4M*	29928.
400	400	6	200-540A	600A	87MCX4M*	29928.