

# Factory Modifications

Selection

NEMA CONTROL PRODUCTS

## Ordering Information

- ▶ All modifications will consist of Siemens standard components as available. Standard equipment dimensions and enclosure construction may not apply when certain modifications and special features are added.
- ▶ Catalog Number Suffixes indicate numbers or letters added to the end of a catalog number. Example: 14DUE32BA becomes 14DUE32BAA1.

## Pilot Devices

Description	Modification	Class	Enclosure Type	Suffix	List Price \$
Push Buttons	Start, Stop	14, 17, 18, 36, 37, 40, 83, 84, CLM, CM, LE	All	A1	212.⑤
	Forward, Reverse, Stop	22, 25, 26, 43	All①	A2	382.
	High, Low, Stop	30, 32	All		
	E-Stop	14①, 17, 18, 22①, 25, 26, 30①, 32, 36, 37, 40①, 43①	All①	ES	287.
	Test Push Buttons	83, 84	All	K1	212.
Selector Switches	Hand-Off-Auto	14, 17, 18, 36, 37, 40, 83, 84, LE	All	A3	212.⑤
		CM, CLM	All	A3	827.
	For 24 volt HOA control, 20 Amp contactor only	CM, CLM	1	EM	736.
	Off-On	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 40, 43, 83, 84, CLM, CM, LE	All	A4	212.⑤
	Auto-Off	14, 17, 18, 40, 83, 84, CM, CLM, LE	All①	A6	212.⑤
	Forward-Off-Reverse	22, 25, 26, 43	All	A5	200.
	High-Off-Low	30, 32	All		
	Hand-Off-Auto (Keyed)	14, 17, 18, 36, 37, 40, 83, 84, LE, CLM, CM	All①	A9	637.⑤
Auto-Off-Low-High	30, 32	All①	A0	241.	

## Pilot Lights

Class	Enclosure Type	Lens Color →	Red	Green	Red	Green	Red	Green	Amber	White	Red Push-To-Test	Green Push To-Test	Green Push To-Test
		Legend →	On For/Rev Low/High	On For/Rev Low/High	Run	Run	Off	Off	OL Tripped	Control Power On	On For/Rev Low/High	On For/Rev Low/High	Off
		Suffix →	FA	FB	FC	FD	FJ	FK	FL④	FW①	FS①	FT①	FU①
14, 40, 17, 18, 36, 37, 87, 88, LE, CLM, CM	All		228.	228.	228.	228.	334.	334.	334.	228.	289.	289.	398.
22, 25, 26, 30, 32, 43, 83, 84	All		455.	455.	434.⑥	434.⑥	334.	334.	334.	228.	581.	581.	398.

## Coil Options

Class 14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83①, 84②, 87, 88					
Volts 60 HZ	Volts 50 HZ	Coil Letter Change	Controller Size — List Price \$		
			00-2½	3, 3½	4
24 Separate Control	24	J	NC	NC	NC
120 Separate Control	110	F			
110-120/220-240	110/190-220	A			
200-208	—	D			
220-240	190-220	G			
277	240	L			
220-240/440-480	190-220/380-440	C			
440-480	380-440	H			
575-600	550	E			
DC Coil③	24V 48V 125V 250V	S⑦ U V W			

AC (50-60 HZ) or DC	Coil Letter Change	Controller Size 4 (Vacuum Only) Size 5 & 6 (ALL)
23-26V 42-48V 110-127V 200-220V 220-240V 240-277V 380-420V 440-480V 575-600V	J U F D G L K H E	NC

## Miscellaneous Options

	Class	Change the 92 to	List Price \$
Omit Alternator (deduct)	83, 84	95	222.
Duplex with Separate Relay Alternation	83, 84	93	NC
Duplex with lead pump transfer switch	83, 84	94	NC

① Not Available on Class 14, 40, 22, 43, 30 (size 00-4) and Class LE, CLM (20-30amp) NEMA 1 clamshell enclosures.

② DC coils include 1 NC, late break aux. contact. This aux. contact takes up one side of the starter (00-4 only).

③ Price x 2 for Classes 22, 25, 26, 30, 32, 43, 83, 84.

④ Bimetal OL - Size 00 - 2 1/2 available. Solid-state OL - Size 00 - 4, 7 & 8 available.

⑤ For Class 83, 84 two devices are provided. Price x 2.

⑥ For Class 83, 84 standard enclosure (92) alternating relay available in 24V or 120V control only.

⑦ S coil is not available for size 4 contactors or starters.

⑧ Class 83 and 84 only.

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Ordering Information	Transformer Table		
<ul style="list-style-type: none"> <li>▶ Replace (*) with letter from Transformer Table.</li> <li>▶ Prices shown are additions to standard equipment prices as listed in the catalog and are not to be used as separate selling prices. All modifications will consist of Siemens standard components as available. Standard equipment dimensions and enclosure construction may not apply when certain modifications and special features are added.</li> <li>▶ Catalog Number Suffixes indicate numbers or letters added to the end of a catalog number. Example: 14DUE32BA becomes 14DUE32BABB.</li> </ul>	Primary Volts	Secondary Volts	Letter
	120	24	B
	208	24	S
	208	120	T
	240	24	J
	240	120	F
	277	24	N
	277	120	P
	380	110	U
	415	100	W
	480	240	R
	480/240	24	D
	480/240	120	A
	600	24	E
600	120	C	

NEMA CONTROL PRODUCTS

## Control Power Transformers<sup>Ⓢ</sup>

Description	Catalog No Suffix	Product Class	Enclosure Type	20-60	100	—	200	300-400	—	—	← Lighting & Heating Ratings (Amps)
				0-2½	3	3½, 4	5	6	7	8	
Standard Capacity <sup>Ⓢ</sup> with 1-Secondary Fuse	B*	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>Ⓢ</sup> , 84 <sup>Ⓢ</sup> , 87	1, 3, 4, 12	262.	—	—	—	—	—	—	—
			7 & 9	301.	—	—	—	—	—	—	—
Standard Capacity with 2-Primary and 1-Secondary Fuse	D*	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>Ⓢ</sup> , 84 <sup>Ⓢ</sup> , 87, LE, CLM, CM	1, 3, 4, 12	474.	755.	755.	871.	871.	959.	959.	—
			7 & 9	513.	798.	798.	920.	920.	1113.	1113.	—
100VA Extra Capacity with 2-Primary and 1-Secondary Fuse	C*	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>Ⓢ</sup> , 84 <sup>Ⓢ</sup> , 87, LE, CLM, CM	1, 3, 4, 12	674.	968.	968.	1064.	1064.	1161.	1161.	—
			7 & 9	716.	1132.	1132.	1307.	1307.	1455.	1455.	—
150VA Extra Capacity with 2-Primary and 1-Secondary Fuse	C*1	14, 17, 18, 22, 25, 26, 30, 32, 40, 43, 83 <sup>Ⓢ</sup> , 84 <sup>Ⓢ</sup> , 87, LE, CLM, CM	1, 3, 4, 12	843.	1153.	1153.	1250.	1250.	1250.	1250.	—
			All	1045.	1365.	1365.	1443.	1443.	—	—	—

## Factory Assembled Fuse Clips—Class 25, 32, 84<sup>Ⓢ</sup>

Fuse Clip Amps	Volts	Rejection Clip Suffix <sup>Ⓢ③</sup>	List Price \$
30	250	10	29.
30	600	11	50.
60	250	12	50.
60	600	13	69.
100	250	14	155.
100	600	15	155.
200	250	16	349.
200	600	17	349.
400	250	18	716.
400	600	19	716.
600	250	20	1027.
600	600	21	1027.
800	600	23	2311.
1600	600	25	5776.

ESP200 Modifications

**Note:** Factory will furnish the same voltage coils as transformer secondary voltage (except with class 36,37).

Ⓢ The standard control transformer supplied for starter sizes 0 through 2½ will be rated 45VA and have the appropriate secondary fuse. Primary fuses will not be

supplied as standard. For primary fuse option select appropriate suffix from table.

③ For ESP100 styles add the rejection clip suffix to the end of the base style catalog number. For thermal styles add the rejection clip suffix immediately before the 81 in the part number.

③ For Class J fuse clips, add suffix "DJ".

④ Class 84 Duplex Controllers require two fusible disconnects thus multiply the price adder by two.

⑤ Price x 2 Class 83 and 84.

⑥ For 24VAC control a minimum of 100VA CPT required.

# Factory Modifications

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NEMA CONTROL PRODUCTS

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## Additional Auxiliary Contacts

Class	NO Contacts	NC Contacts	Catalog Number Suffix	Controller Size — List Price \$			
				00-1 <sup>3</sup> / <sub>4</sub>	2-4	5-6	7-8
14, 17, 18, 40, 83 <sup>Ⓞ</sup> , 84 <sup>Ⓞ</sup>	—	1	G01	108.	108.	—	—
	—	2	G02	213.	213.	213.	—
	1	—	G10	108.	108.	—	—
	1	1	G11	213.	213.	213.	213.
	1	2	G12	321.	321.	—	—
	2	—	G20	213.	213.	213.	—
	2	1	G21	321.	321.	—	—
	2	2	G22	427.	427.	427.	—
	2	3	G23	535.	535.	—	—
	3	1	G31	427.	427.	427.	—
	3	2	G32	535.	535.	—	—
	3	3	G33	640.	—	—	—
	4	—	G40	427.	427.	427.	—
	4	1	G41	535.	535.	—	—
	4	2	G42	640.	—	—	—
	4	4	G44	854.	—	—	—
	5	—	G50	535.	535.	—	—
	5	1	G51	640.	—	—	—
	5	3	G53	854.	—	—	—
6	—	G60	640.	—	—	—	
6	2	G62	854.	—	—	—	
7	1	G71	854.	—	—	—	
8	—	G80	854.	—	—	—	
22, 25, 26, 43 & 30, 32 (2-winding)	—	2	G02 <sup>Ⓞ</sup>	213.	213.	—	—
	2	—	G20 <sup>Ⓞ</sup>	213.	213.	—	—
	2	2	G22 <sup>Ⓞ</sup>	427.	427.	427.	—
	4	0	G40 <sup>Ⓞ</sup>	427.	427.	427.	—
	4	4	G44 <sup>Ⓞ</sup>	854.	854.	—	—
	6	2	G62 <sup>Ⓞ</sup>	854.	854.	—	—
	8	0	G80 <sup>Ⓞ</sup>	854.	854.	—	—
	8	—	G80 <sup>Ⓞ</sup>	—	213.	—	—
30, 32 (1-winding)	2	—	G20 <sup>Ⓞ</sup>	—	213.	—	—
	2	2	G22 <sup>Ⓞ</sup>	427.	427.	—	—
	4	—	G40 <sup>Ⓞ</sup>	427.	427.	—	—
	4	4	G44 <sup>Ⓞ</sup>	—	854.	—	—
	6	2	G62 <sup>Ⓞ</sup>	—	854.	—	—
	8	—	G80 <sup>Ⓞ</sup>	—	854.	—	—
LE, CLM, CM	1	1	G11	213.	—	—	—
CLM, CM	0	2	G02 <sup>Ⓞ</sup>	213.	—	—	—
	2	0	G20 <sup>Ⓞ</sup>	213.	—	—	—
	2	2	G22 <sup>Ⓞ</sup>	213.	—	—	—
	2	2	G22 <sup>Ⓞ</sup>	213.	—	—	—

ESP200 Modifications

## Overload Options

Class 14, 17, 18, 22, 25, 26, 30, 32, 36, 37								
Description	Trip Class	Phase	Contacts	Catalog Number Suffix	Controller Size—List Price \$			
					00-2 <sup>1</sup> / <sub>2</sub>	3-4	5, 6	7, 8
Ambient Compensated Bimetal	Class 10 or 20 (K or E heaters)	3-Phase or Single Phase	NO & NC, SPDT	91	57. <sup>Ⓞ</sup>	—	—	—
			NC	81	—	—	—	—
ESP200	Class 5, 10, 20, 30 selectable	3-Phase or Single Phase	NO & NC	N/A	—	—	—	—
3RB200 (Sz 5-6)	Class 10	3-Phase	NO & NC	51	—	—	—	—
	Class 20	3-Phase	NO & NC	—	—	—	—	—

Ⓞ Auxiliary contacts will be added evenly across contacts. (i.e. Class 22, G02 suffix will add 2 NC contacts (one per contactor).

Ⓞ Double the price addition for Class 30 and 32.

Ⓞ For class 83 and 84 contacts will be added to both starters. Price x 2.

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ESP200 Modifications

Ordering Information
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## Control Options

Description	Class	Enclosure Type	Catalog Number Suffix	List Price \$
Lighting Control Modules	CLM 20 Amp	All	2W, 3W, 3WS	494, 769, 765.
Surge Suppression for 120V AC Coil <sup>Ⓞ</sup>	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 83, 84, 87, 88	All	SS	87.
Disconnect Switch Interlock 2 NO/2 NC	DPDT	1, 3, 4, 4X, 12	GY	142.
Motor Circuit Protector Interlock NO/NC	SPDT	18, 26, 32, 37, 84, CM, LE	GY	280.
Lightning Arrestor	All	All	L	387.
Circuit Breaker Shunt Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	All	L6	798.
Circuit Breaker Undervoltage Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	All	L7	798.
Circuit Breaker Alarm Switch Trip	18, 26, 32, 37, 84, 87, 88, CM, LE	All	L8	798.
NO alarm aux contact for ESP OL <sup>Ⓞ</sup>	14, 17, 18, 22, 25, 26, 30, 32, 36, 37, 83, 84, 87, 88	All	L9	53.
Ground Lug – 1 Conductor	All	All	L10	77.
Control Circuit Fuse and Holder (Transformer Primary Fusing)	All	All	F1 (1 fuse)	212.
			F2 (2 fuses)	212.
Control Circuit Circuit Breaker Internally Operated	All <sup>Ⓞ</sup>	All	F4	843.
Space Heater (120V separate control)	All <sup>Ⓞ</sup>	All	SH	677.
Space Heater with Thermostat (120V separate control)	All <sup>Ⓞ</sup>	All	ST	727.
Surge Capacitor	87, 88	All	SC	465.
Alarm Package (includes horn, light, relay & push-button)	83, 84, 87, 88	All	M7	1453.
Backspin Protection	87, 88	All	T5	755.
Minimum Run Timer 0.2 sec. - 3 mins.	87, 88	All	T6	755.
Blown Fuse Indicator Light	17, 25, 32, 37, 84, 87, 88, CM, LE	All	L11	483.
Single Phase 120VAC Combination Starter	17, 18	All	Z1 <sup>Ⓞ</sup>	NC
Single Phase 240VAC Combination Starter	17, 18	All	Z1 <sup>Ⓞ</sup>	NC

## Reversing Options

Description	Class	Catalog Number Suffix	Controller Size — List Price \$									
			0	1	1¼	2	2½	3	3½	4	5	
Reversing in one speed only 2 speed 1 winding	30, 32	R6	1033.	1161.	1415.	1665.	2056.	2418.	2777.	3266.	—	
Reversing in one speed only 2 speed 2 winding		R7	1000.	1205.	1443.	1698.	2123.	2497.	2864.	3372.	—	
Reversing in both speeds 2 speed 1 winding		R8	1395.	1703.	2287.	2691.	3406.	4007.	5282.	6214.	—	
Reversing in both speeds 2 speed 2 winding		R9	1551.	1878.	2669.	3140.	3835.	3834.	5233.	6158.	—	
Reversing for Reduced Voltage	36, 37	R	1240.	1393.	1393.	3813.	3813.	8731.	8731.	8731.	10435.	

## Enclosure Options Class 36, 37

Class	Enclosure Type	Change the 8th Character of the Catalog Number to:	Controller Size — List Price \$					
			0–1¼	2, 2½	3	3½, 4	5	6
36	NEMA 12/3R <sup>Ⓞ</sup>	N	968.	1211.	1453.	1936.	2614.	3631.
37	NEMA 4 (Painted)	E	1161.	1307.	1888.	2972.	5517.	7261.
37	NEMA 4 (Stainless Steel)	W	1393.	1568.	2265.	3565.	—	—

## Enclosure Options Class 14, 17, 18

Class	Enclosure Type	Change the 7th Character of the Catalog Number to:	Change the 8th Character of the Catalog Number to:	Controller Size – List Price Adder \$				
				00–1 3/4	2–2 1/2	3	3 1/2–4	5–8
14	NEMA 4/4X (316 Stainless Steel)	X	X	53.	175.	175.	175.	—
14 (Extra Wide)	NEMA 4/4X (316 Stainless Steel)	X	X	92.	92.	200.	200.	—
17 & 18	NEMA 4/4X (316 Stainless Steel)	X	X	288.	288.	288.	413.	—

Note: Add price to the standard 304 stainless steel unit price.

Ⓞ Supplied as NEMA 12, field convertible to NEMA 3R.  
<sup>Ⓞ</sup> For bimetal OL, order cat. no. with "91" suffix.  
<sup>Ⓞ</sup> Specify the single phase voltage when ordering.

Ⓞ Surge Suppression for NEMA sizes 5 – 8 are supplied internal with the coil.

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## Control Relays

Description	Class	Enclosure Type	Suffix	List Price \$
Control Relay <sup>①</sup> 4-Poles Max	All	1, 3, 4, 7, 9, 12	R40	1142.
			R22	
			R04	
Under Voltage, Phase Failure, Phase Sequence, Phase Unbalance (460V) Under Voltage, Phase Failure, Phase Sequence, Phase Unbalance (230V) Under Voltage, Phase Failure, Phase Sequence, Phase Unbalance (575V)	All	1, 3, 4, 7 & 9, 12	R1 <sup>②</sup>	1067.
R2 <sup>②</sup>				
R4 <sup>②</sup>				
Ground Fault Relay	All	1, 3, 4, 7, 9, 12	R5	568.
Electronic On Delay Relay (.15s–100h) 24V/120V <sup>③</sup>			T1	1064.
Electronic On Delay Relay (.15s–100h) 24V/240V <sup>③</sup>			T2	
Electronic Off Delay Relay (.15s–100s) 120V <sup>③</sup>			T3	
Electronic Off Delay Relay (.15s–100s) 240V <sup>③</sup>	T4			
24 hour time clock 24 hour time clock with day omission 7 day time clock	LE, CLM, CM	All	T7 T8 T9	1064.
Compelling Relay	30, 32	1, 4, 12	A6	638.
Acceleration Control			A7	1453.
Deceleration Control			A8	

## Meters—Mounted on Enclosure

Description	Class	Enclosure Type	Suffix	List <sup>③</sup> Price \$
Ammeter (includes a C.T. if necessary)	14 <sup>④</sup> , 17, 18, 22 <sup>④</sup> , 25, 26, 36, 37, 40 <sup>④</sup> , 43 <sup>④</sup> , 83, 84	1, 12	M1	1915.
Ammeter and Switch (3-Phase with 3 C.T.'s)			M2	2903.
Voltmeter			M3	1915.
Voltmeter and Switch (3-Phase)			M4	2903.
Elapsed Time Meter <sup>②</sup>			M5	562.
Wattmeter			M6	3928.

## Function Identification Plates

Description	Class	Suffix	List Price \$
Function identification plate, with marking as specified	All	N1	94.

## Terminal Blocks<sup>①</sup>

Description	Class	Suffix	List Price \$
3 Point Terminal	All	TC3 <sup>⑤</sup>	232.
6 Point Terminal		TC6 <sup>⑤</sup>	465.
9 Point Terminal		TC9 <sup>⑤</sup>	697.

## Special Ratings

Description	Class	Suffix	List Price \$
Service Entrance Rating	17, 18, 25, 26, 32, 37, 84, 87	N3	251.

① Supplied mounted and unwired.

② Not available on Class 36, 37.

③ Price x 2 Class 83 and 84.

④ ETM available with 120V coil only.

⑤ For terminal point more than 9 terminals use additional suffixes. Max 3 suffixes can be selected.

⑥ Available 3-Phase only.