

Factory Modifications

Table 33-248. A200 Factory Modifications

Modifications	Description	Catalog Number Suffix	NEMA Size								
			00 – 1	2	3	4	5	6	7	8	9
			Adder U.S. \$								
Control Circuit	1 Extra Auxiliary Contact (1NO-1NC) Non-reversing, Reversing, 2-Speed Unwired	J1									
	2 Extra Auxiliary Contact Non-reversing, Reversing, 2-Speed Unwired	J2									
	3 Extra Auxiliary Contact Non-reversing, Unwired	J3									
	4 Extra Auxiliary Contact Non-reversing, Unwired	J4									
	Wired for Separate Control (NC)	C									
	Omit Control Wiring (NC)	X									
Overload Relays (Substitutions)	Ambient Compensated with Auto Reset (NC)	D									
	Fast Trip — Ambient Compensated (Specify Motor FLA)	D7									
	Overload Relay Alarm Contact (NO) per overload	E									

Accessories and Field Modification Kits



Type J Auxiliary Contact

Type J Auxiliary Contact

- Capable of being field mounted in a contactor or starter (Classes A200, A900 Sizes 00 – 6, V200, V201 vacuum and definite purpose controllers).

- Provides two separate electrical contact sets which wire vertically and are color coded; black designates NC and silver designates NO. Please note that the vertical wiring is contrary to the horizontal wiring of the L-56 auxiliary contacts.
- Designed to fit within dimensions of starter; no additional panel space is required.
- Provides circuit isolation (no polarity restrictions) and single break bifurcated contacts.

Table 33-249. Auxiliary Contact Ratings

Voltage	Make	Break
NEMA A600		
120 – 600V AC	7200 VA	720 VA
72 – 120V AC	60A	720 VA
28 – 72V AC	60 VA	10A
NEMA R300		
28 – 300V DC	28 VA	28 VA

Table 33-250. Auxiliary Contact Types

Contact Type	Max.	Catalog Number	Price U.S. \$
1NO and 1NC	4	J11	
2NC	4	J02	
2NO	4	J20	
1 Coil Clearing NC and 1NO	4	J1C	

Discount Symbol 1CD1C



SS-56 Surge Suppressor

SS-56 Surge Suppressor

- Designed to be used with magnetic motor controllers through Size 4 in 120V, 60 Hz control circuit applications where electronic equipment is used.
- Steady State Coil Volts: 120, 60 Hz, RMS
- Peak Input Volts: 169.6, 60 Hz, Max. Amplitude
- Max. Ambient Temperature: 65°C
- Nominal Limiting Volts: 270 Peak
- Nominal Rate of Volt Rise: .5 per mS

Table 33-251. Surge Suppressor ^①

Type Mounting	Kit Catalog Number	Price U.S. \$ ^②
Starter	SS-56	

^① Can be used on Sizes 5 and 6 with 120V coil. Mounting bracket required — order separately. Mounting Bracket 177C043G04.

^② Discount Symbol **1CD1**.

Mechanical Interlock

- Prevents closing of one member of a reversing or multi-speed contactor until the opposite member is completely open.
- Lever type mechanism assures positive action.
- Can be factory assembled or field mounted on A200 and A900 starters and contactors.

Table 33-254. Mechanical Interlock

Contactors Arrangement (Number of Poles, Horizontal or Vertical)	Continuous Size	Interlock Catalog Number	Price U.S. \$
3 x 3 Horizontal	0, 1	M-33-1B	
4 x 4 Horizontal	0, 1	M-33-1B	
5 x 3 Horizontal	0, 1	M-33-1B	
All Pole Combination, Vertical	0, 1	M-34-1A	
3 x 3 Horizontal Reversing	2	M-33-2B	
3 x 3 Vertical Reversing	2	M-34-2A	
5 x 3 Horizontal	2	M-35-2A	
4 x 4 Horizontal	2	M-36-2A	
All Pole Combination Horizontal	3, 4	M-33-3B	
All Pole Combination Vertical	3, 4	M-34-3	

F-56 Fuse Block

- Facilitates installation of fuses (15A, 600V max.) in control circuits.
- Utilizes Bussman type KTK fuses, or equivalent.
- Mounts in same cavity as Type J auxiliary contact.
- No tools or mounting hardware needed.
- Fuse not included.

Table 33-252. Fuse Block

Mounting	Kit Catalog Number	Price U.S. \$
Starter Panel	F56 F56-P	

R-56 Interposing Relay

The R-56AA interposing relay is a low energy solid-state device with a single NO solid-state contact. It can be used as a 120V AC control relay, and will operate on as little as 40V AC input. Is useful in applications requiring long control wiring runs where excessive voltage drop would prevent the contactor or relay from energizing. Will operate a Size 4 contactor from 10,000 feet using 18 AWG wire.

Table 33-253. Interposing Relay

Type Mounting	Kit Catalog Number	Price U.S. \$ ^③
Starter or Panel	R56-AA	

^③ Discount Symbol **1CD1**.

B3NO Bell Alarm Contact

- Isolated Normally Open Bell Alarm Contact.
- Mounts in Type B block-type overload relay.

Table 33-255. Bell Alarm Contact

Kit Catalog Number	Price U.S. \$
B3NO-2 B3NO-4 ^④	

^④ For Size 3 and 4.

Table 33-256. Control Contact Ratings (B600)

AC Volts	Maximum Amperes	
	Make	Break
24 – 120	30	3.00
121 – 600	3600 VA	360 VA
Continuous Current Rating: 5A		

Overload Relay Reset Extension

- Used to adjust overload reset rod depth of Class A200 Model J starters and current design overload relays to same dimensions as obsolete B200 starters and overloads identified by suffix **B**, i.e., BA13B.

When replacing obsolete B200 device with Class A200 starter and Type B overload, order Style 6710C11H03. No charge.

When replacing obsolete B200 device with Class A200 starter and Type A overload, order Style 1490C15H10. No charge.

Power Pole Kit

- Adds 1NO or 1NC power pole to Size 00 – 1 A201 Class contactors.
- Factory installed or field mountable in load side auxiliary cavities.
- 600V AC.
- Continuous current rating of 18A for Size 0, 27A for Size 1.

Table 33-257. Power Pole Kit ^⑤

Continuous Current Rating	Kit Size	Kit Catalog Number	Price U.S. \$
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Normally Open

18 27	0 1	PN0-0 PN0-1	
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Normally Closed

18 27	0 1	PNC-0 PNC-1	
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^⑤ Do not use with DC operated contactors.

Discount Symbol **1CD1C**

Accessories

Replacement Auxiliary Contacts

Table 33-258. Replacement Auxiliary Contacts

Contactor Size	Contact Arrangement	Aux. Elect. Contact		Price U.S. \$
		Catalog Number	Style Number	
5, 6	1NO + 1NC	J11	9084A17G01	
	2NO	J20	9084A17G02	
	2NC	J02	9084A17G03	
7, 8	1NO	—	578D461G01	
	1NC	—	578D461G03	
9	1NO + 1NC	—	843D943G04	
	2NO	—	843D943G05	
	2NC	—	843D943G06	

Extra Auxiliary Contact Kits

All starters include an auxiliary contact with 1NO and 1NC contact. These kits include an auxiliary contact with contacts as shown, plus operating arm and mounting bracket when required.

Table 33-259. Extra Auxiliary Contact Kits

Contactor Size	Contact Arrangement	Style Number	Price U.S. \$
5, 6	1NO + 1NC	3463D94G18	
	2NO	3463D94G04	
	2NC	3463D94G19	
7, 8 ①	2NO	818D498G06	
	1NO	818D498G04	

① Size 7 and larger use DC coils as standard.

DC Coil Conversion Kits

Kits listed below include all necessary parts to convert from AC to DC control including the DC coil with built-in diode, rectifier, auxiliary interlock and all mounting hardware.

Table 33-260. DC Coil Conversion Kits

Size	Voltage	Kit Style Number	Price U.S. \$
5	110-120	7864A28G01	
	220-240	7864A28G02	
	440-480	7864A28G03	
6	110-120	7864A29G01	
	220-240	7864A29G02	
	440-480	7864A29G03	

Mechanical Interlocks

Table 33-261. Mechanical Interlocks

Contactor Sizes	Style Numbers		Price U.S. \$
	Horizontal	Vertical	
3, 4 and 5	2050A11G75	2050A11G65	
5 and 5	2050A11G25	2050A11G15	
5 and 6	2050A11G27	2050A11G17	
6 and 6	2050A11G26	2050A11G16	
6 and 7, 8	—	2050A11G55	
7, 8 and 7, 8	No (Rear Conn.)	567D624G01	
7, 8 and 9	No (Rear Conn.)	9944D56G06	
9 and 9	No (Rear Conn.)	9944D56G01	

Overload Protection

Overload Protection Size 5 Starters

Type B overload relay is a three-pole, block type, thermal ambient compensated device with manual reset mounted integrally. Current transformers are enclosed in a protective case and integrally mounted to save panel space. Standard ratio is 300:5.

Overload Protection Size 6 Starters

Overload protection assembly consists of three current transformers, Type B three-pole block overload relay and an optional interposing relay. These parts are mounted on a panel which connects directly to the load terminal of the contactor. Current transformers are 600:5 ratio as standard.

If automatic reset is required, the Type A, three-pole block, ambient compensated relay is available upon request.

Overload Relay Kits

Each kit includes three current transformers (standard ratio) and one Type B, three-pole block overload relay, ambient compensated with manual reset.

Table 33-262. Overload Relay Kits

Kit Size	Kit Part Number	Price U.S. \$
5	2057A34G01	
6	6379D80G10	

Table 33-263. Replacement Terminal Lugs ②

Contactor Size	Cable Size	Terminals		Kit Style Number	Price U.S. \$
		Qty. in Kit	Qty. Req'd. per Pole		
5	1-500 MCM	6	2	2119A76G01	
6	2-500 MCM	6	2	7858A96G01	
7	4-500 MCM	12	4	7858A96G02	
8	4-500 MCM	12	4	7858A96G03	

② All mounting hardware is included in kit.