

Elevonic® 311/411 Ward-Leonard Controller

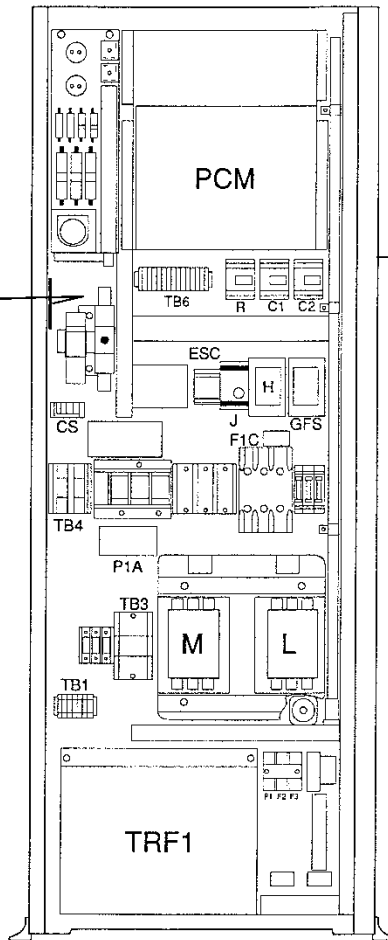
Spare Parts Leaflet 10-AAA21260AAA

March 14, 2012 / Page 1 of 27

10	AAA21260AAA
10	ABA21260AAA
10	ACA21260AAA

10	ACB21260AAA
10	ADA21260AAA
10	ADB21260AAA

CONTROLLER	
SERIAL No.	
SALES No.	
MODEL No.	
VOLTS	AMPS
H. P.	PHASES
WIRES	HERTZ
COMPONENT VINTAGE NO. ABA21260AAA	
COMPONENT CODE 10	
LETTER DESIGNATION	
WIRING DIAGRAM	
WIRING DIAGRAM	
DATE	



UNITED TECHNOLOGIES OTIS®	
CONTROLLER	
SERIAL NO.	
SALES NO.	
MODEL NO.	
VOLTS	
AMPS	
PHASES	
HERTZ	
H.P.	
WIRES	
COMP. VINTAGE NO.	DUPLICATE NO.
COMPONENT CODE: 10	
WIRING DIAGRAM	
DATE	

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Safety First!

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

Leaflet Description

This leaflet provides information on Elevonic® 311/411 Ward-Leonard controller. Within this document parts are specified to meet your installation's individual requirements. To correctly define a part number, refer to the duty number indicated on the unit's nameplate as illustrated on the cover page.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
January 1992	Ali Bozorgzadeh	New SPL
December 1, 2001	John Dwyer	Added history page; changed the naming of the leaflet from 10-A**21260AAA to the correct 10-AAA21260AAA, add duty line numbers; updated part numbers and broke up dense pages.
November 4, 2009	Matt Fournier	Updated part 613BY arrangement on page 24.
March 30, 2011	Matt Fournier	Changed part number AAA00612AAA005 to AAA612AAA005.
March 14, 2012	Anh Pham	Updated parts information throughout

Related Drawings

Drawing No.	Title	Drawing No.	Title
AAA21260AAA	Assembly, High and Medium Speed Ward Leonard Controller	ACB21260AAA	Assembly, High and Medium Speed Ward Leonard Controller
ABA21260AAA	Assembly, High and Medium Speed Ward Leonard Controller	ADA21260AAA	Assembly, High and Medium Speed Ward Leonard Controller
ACA21260AAA	Assembly, High and Medium Speed Ward Leonard Controller	ADB21260AAA	Assembly, High and Medium Speed Ward Leonard Controller

(Continued on next page)

Related Documents

Document ID	Title
SPL 10-AAA21250C	E311M/E411M/E311MV/E411MV Controller
SPL 09-AAA21265AAA	E311/E411 Direct Drive Controller
TIP 31.2-35	"H" and "GFS" Relay Replacement
TIP 8.1-22	Hall Interface Board Replacements; Motor Field Current Transformer

Subject Matter Expert

Name	Department
Anh Pham	OSC Service Engineering

About Spare Parts Leaflets...

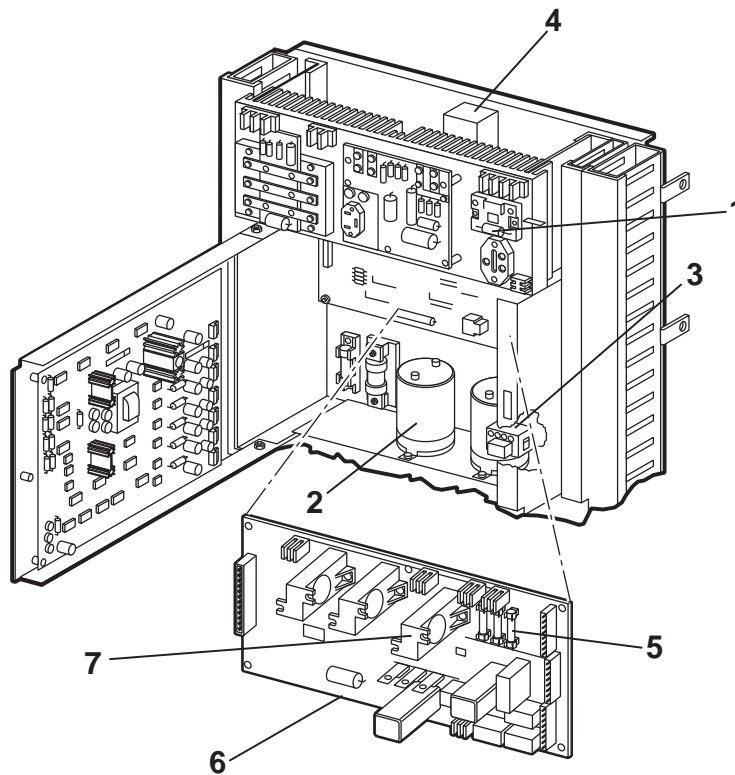
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as "special" or "custom" are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPS, Field Education Articles, Construction Letters, etc. for further information.

If you have any suggestions about this document, please contact the subject matter expert listed on this page.

Power Control Module

Type AAA21260AAC

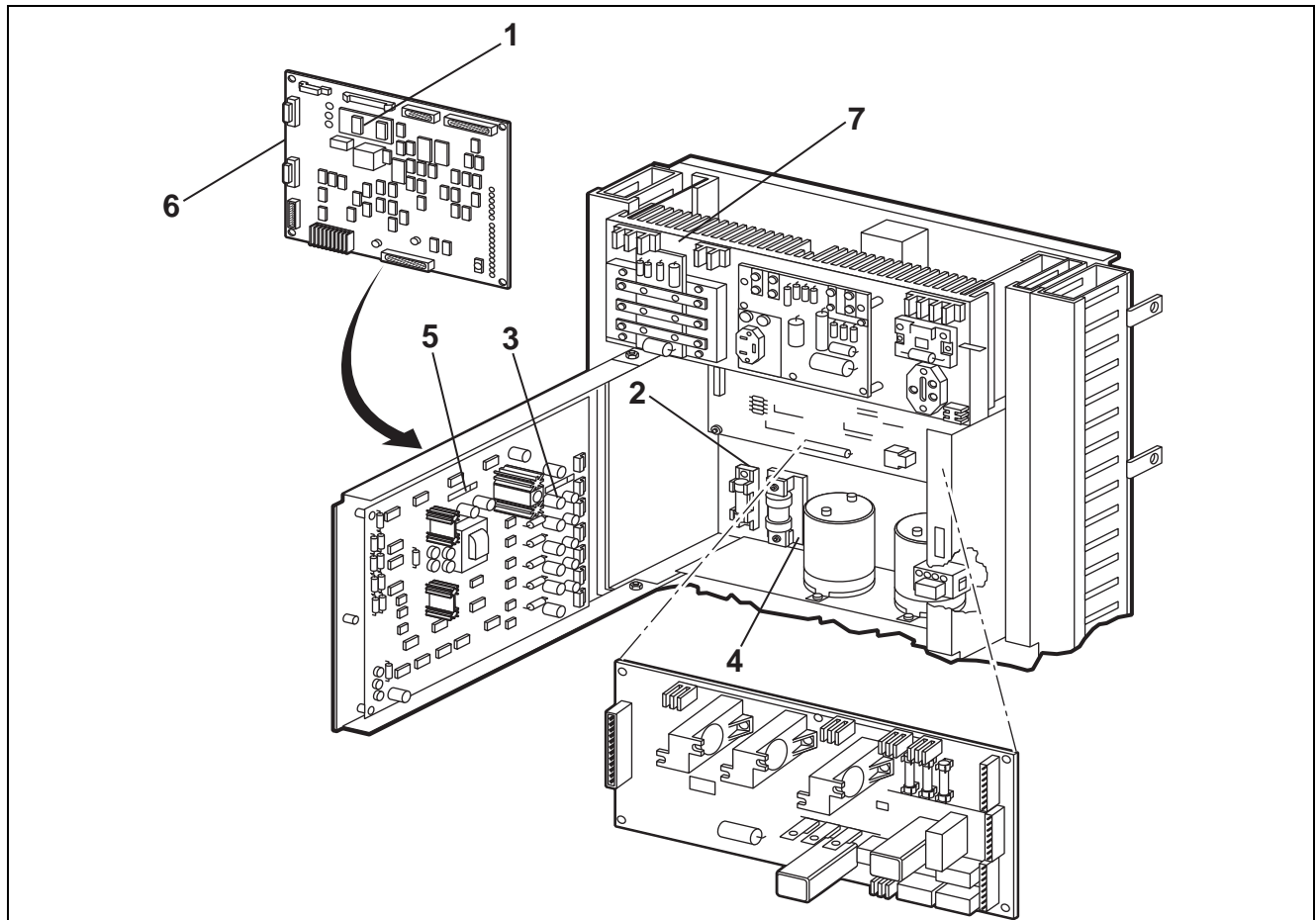


ALL VINTAGES			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	LA5P3-0052	Capacitor, AC Line Snubber	1C
2	LA5P206-0230	Capacitor, Electrolytic	2C, 3C
3	LA5P32-0076 LA5P32-0081	Contactor, AC	1M
4	LA5P16-0027	Fan, 115 VAC	1MTR
5	LA5P17-0253 AAA375BT27	Fuse, 2A, 250 V	1F4, 2F4, 3F4
6	LA46S2868-0020 LA46S2868-0030	PCB, Hall/Relay, w/o Transducer (3CS- must be imported from board being replaced.)	4PC
	AAA234AG4 AAA234AG5	Sensor, Current, > 20 A and < = 40 A (1 wire turn)	3CS
7	AAA234AG2 AAA234AG6	Sensor, Current, > 10 A and < = 20 A (2 wire turn)	3CS
	AAA234AG3 AAA234AG7	Sensor, Current, > 5 A and < = 10 A (4 wire turn)	3CS
	AAA234AG4 AAA234AG8	Sensor, Current, 1 A and < = 5 A (8 wire turn)	3CS

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Power Control Module Type AAA21260AAC

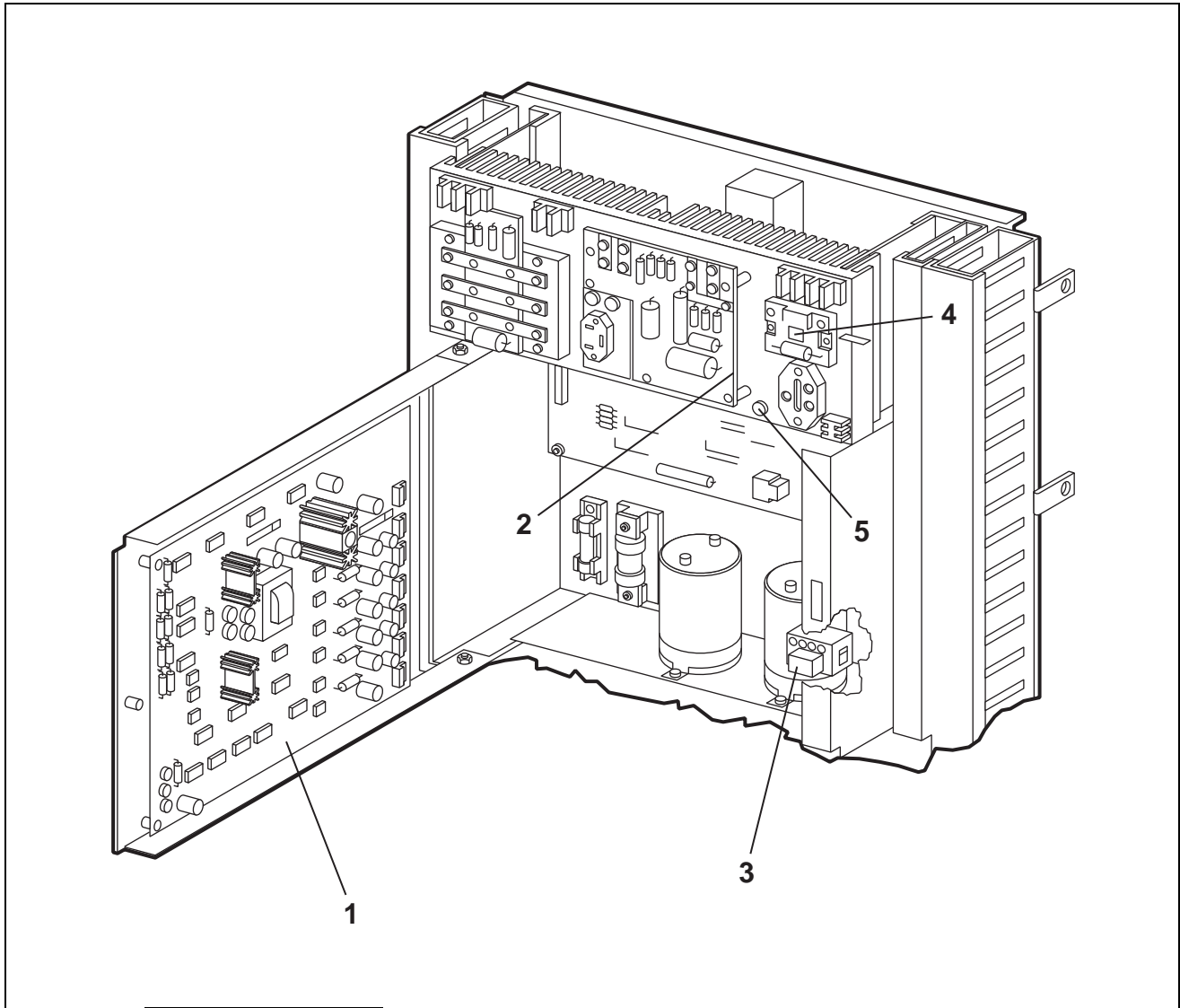
10-AAA21260AAA



REF. No.	ALL VINTAGES PART No.	DESCRIPTION	SYMBOL
1	LA97SA0060-0003 LA97SA0061-0003 AAA30188AAE	EPROM	1MC, 3MC
2	LA5P17-0103 AAA375CK7	Fuse, Brake, 15 A, 250 V	2F
3	LA5P17-0268 AAA375BT18	Fuse, Control Power Supply, 3 A, 250 V	2F-2
4	LA5P17-0176 LA5P17-0384	Fuse, Field, 60 A, 250 V	1F
5	LA5P17-0137 AAA375BT2	Fuse, Tach Power, 0.5 A, 250 V	1F-2
6	LA46S2691-0030 LA46S2691-0041	PCB, DBSS Control	1PC
7	LA46S2869-0010 LA46S2869-0011	PCB, H-Bridge Snubber	3PC

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Power Control Module Type AAA21260AAC



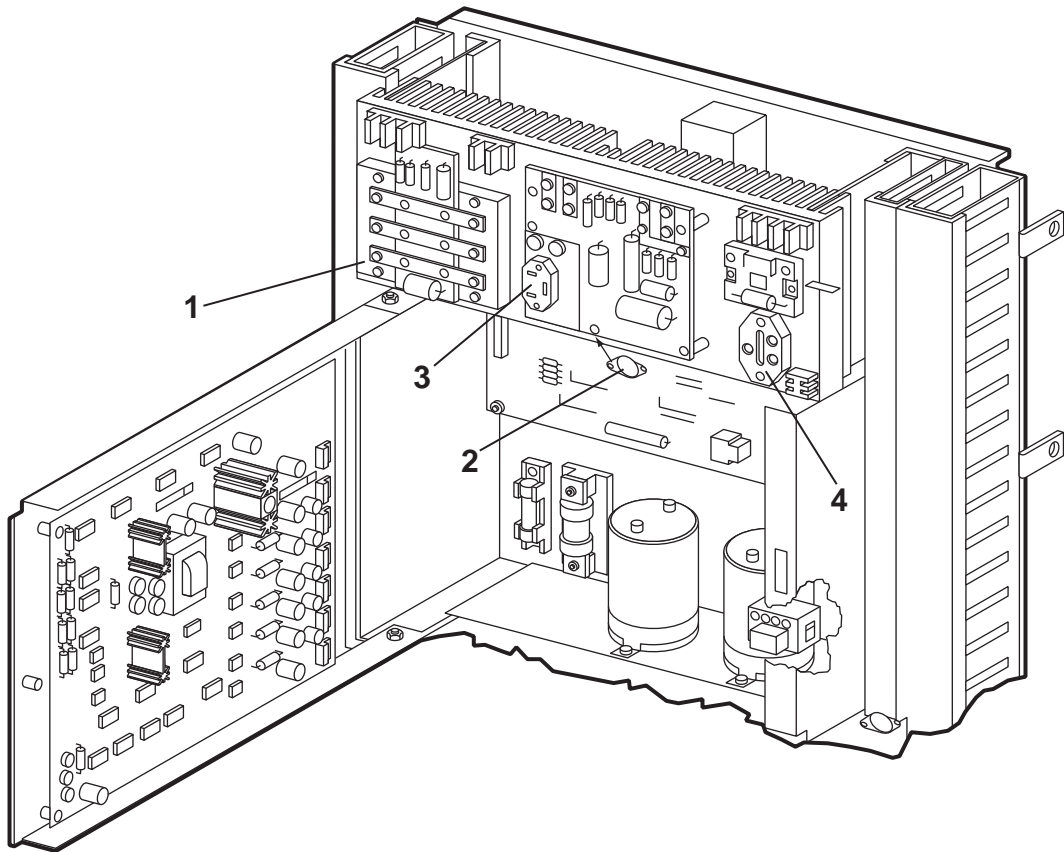
ALL VINTAGES

REF. No.	PART No.	DESCRIPTION	SYMBOL
1	LA46S2871-0020 LA46S2871-0021	PCB, MG Interface	2PC
2	LA46S2870-0010 LA46S2870-0012	PCB, Motor/Brake Snubber	5PC
3	LA5P90-0059	RC Network	RC
4	LA5P50-0299 LA5P50-0437	Rectifier	1RT
5	LA5P50-0322	Rectifier	2RT, 3RT

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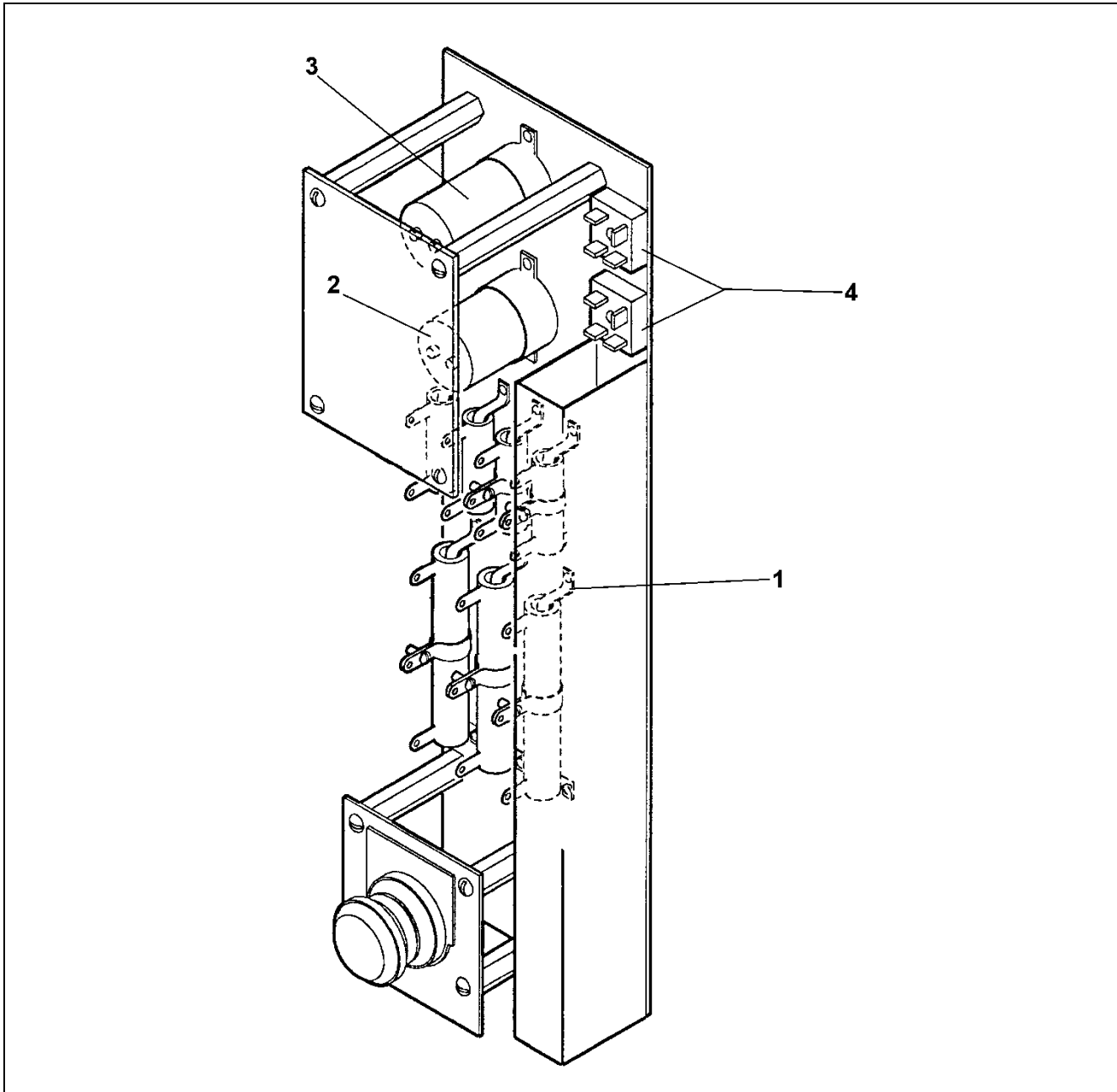
Power Control Module Type AAA21260AAC

10-AAA21260AAA



ALL VINTAGES			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	LA5P30-0062	Module, H-Bridge Transistor	3TS, 4TS
2	LA5P218-0006	Thermostat	1THG
3	LA5P30-0059	Transistor, Darlington, 15 A	2TS
4	LA5P30-0060	Transistor, Darlington, 50 A	1TS

Capacitor & Resistor Assembly

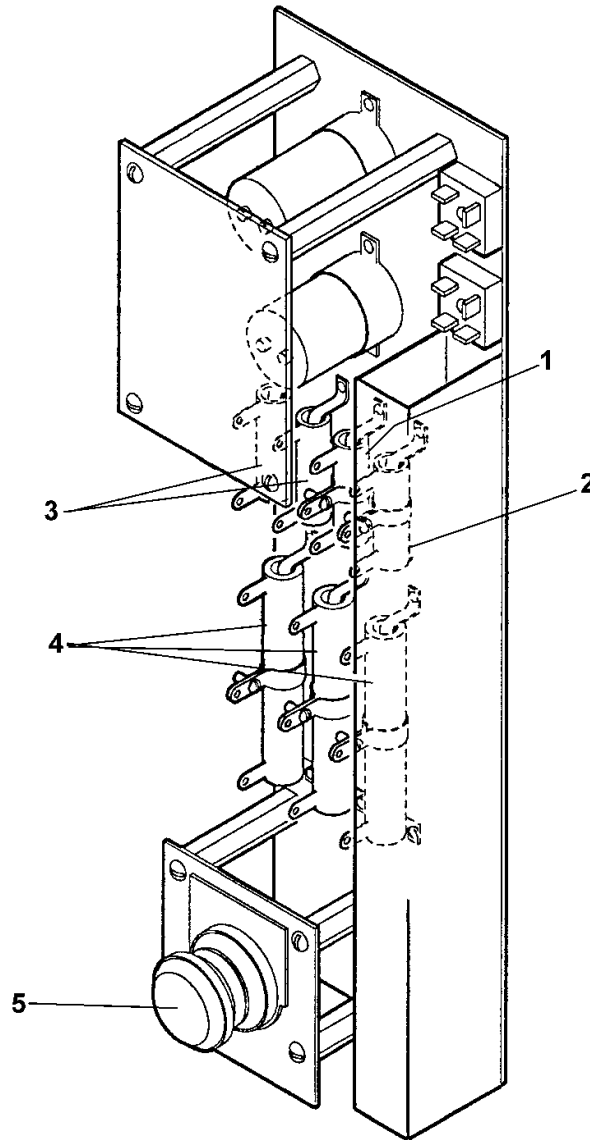


ALL VINTAGES

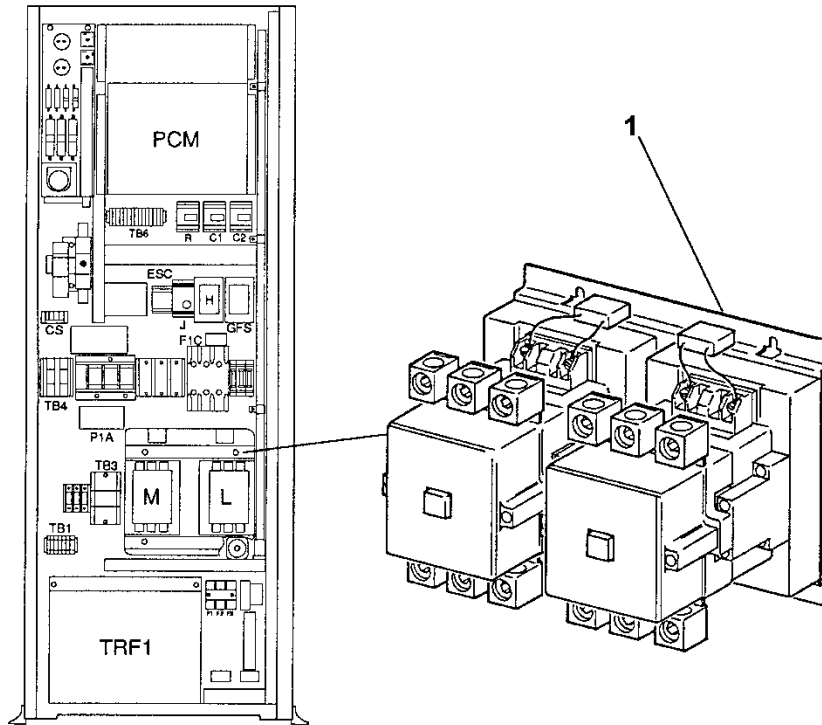
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA617H101	Bracket, Resistor	---
2	226DR8	Capacitor, 450 V	H2
3	226DR7	Capacitor, 200 V	ESC1
4	230BS4	Rectifier	RF6, RF7

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Capacitor & Resistor Assembly



ALL VINTAGES			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	AAA00232AAD002 AAA617M23	Resistor, 25 W, 2 kOhm	ESC2
2	AAA00232AAD004 AAA617M25	Resistor, 25 W, 15 kOhm	H3
3	AAA00232AAD005 AAA232FR1	Resistor, 25 W, 50 kOhm	RF6, RF7
4	AAA00232AAD001 AAA617H5	Resistor, 50 W, 5 Ω	GF3, SUR1, 2
5	177DE4 AAA635L5	Switch, Emergency Stop	STB

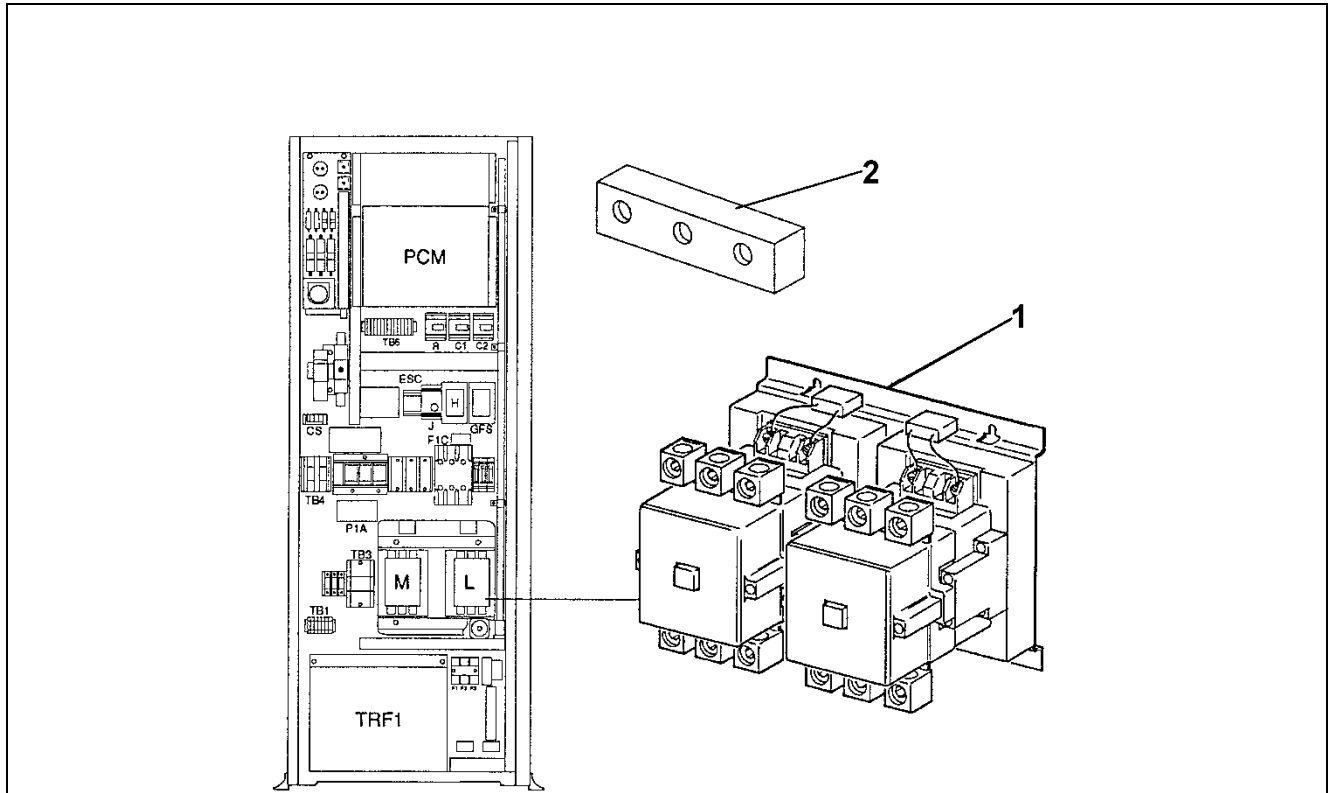


REF. NO.	ALL VINTAGES	DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
	PART or ML			8	8A	15	15A	301
1	AAA638D2 AAA638D107	Contactor, AC Reversing, NEMA-3, NOTE	220-240	302	303	304	305	---
				440-480	22A	26	306A	307A
			550-600	10A	17A	23A	29A	30A
				20	25	26	306A	307A
	AAA638E2 AAA638E106	Contactor, AC Reversing, NEMA-3-1/2, NOTE	200-208	8	8A	15	15A	301
				302	303	304	305	309
			220-240	17A	23A	30A	---	---
				200-240	10A	22A	29A	306
			307		307A	308	308A	310
			310A		311	311A	312	312A
			313		313A	313B	314	314A
			400-480	20	25	26	33	---
	550-600	33	---	---	---	---		
	440-600	12	18A	19	21	24A		

NOTE: For contactor details, SPL10-7151A, AC & DC Contactors Reversing/Y-1 Contactors Starters.

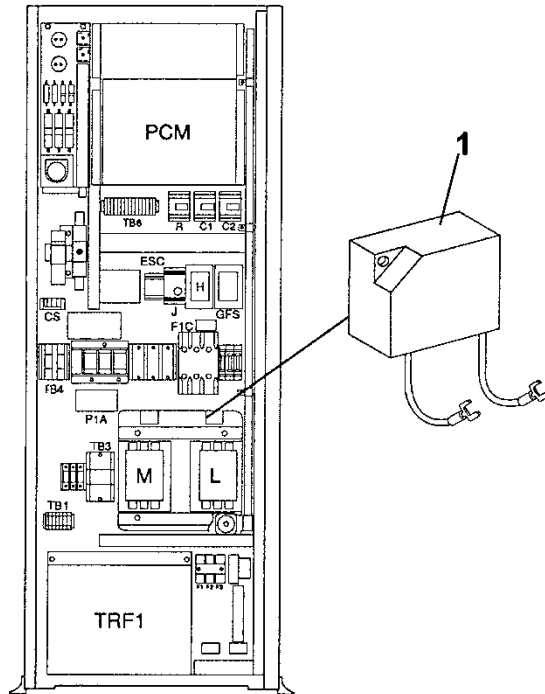
L-M Contactor

10-AAA21260AAA



ALL VINTAGES				DUTY LINE NO.				
REF. NO.	PART or ML	DESCRIPTION	SITE VOLTAGE					
1	AAA638G2 AAA638G107	Contactor, AC Reversing, NEMA 4-1/2, NOTE	200-208	17A	23A	30A	---	---
			200-240	12	18A	19	20	21
				24A	25	26	33	---
	AAA638W2 AAA638W107	Contactor, AC Reversing, NEMA 2, NOTE	220-240	309	---	---	---	---
			440-600	8	8A	15	15A	301
				302	303	304	305	306
				307	308	309	310	310A
311				311A	312	312A	313	
500-600	22A	306A	307A	308A	---			
2	AAA00252AAA001	Bussbar, 2.91 in. L, Contactor = NEMA 2						
	AAA00252AAA002	Bussbar, 2.99 in. L, Contactor = NEMA 3						
	AAA00252AAA003	Bussbar, 3.50 in. L, Contactor = NEMA 3-1/2						
	AAA00252AAA004	Bussbar, 4.76 in. L, Contactor = NEMA 4-1/2						

NOTE: For contactor details, SPL10-7151A, AC & DC Contactors Reversing/Y-A Contactors Starters.

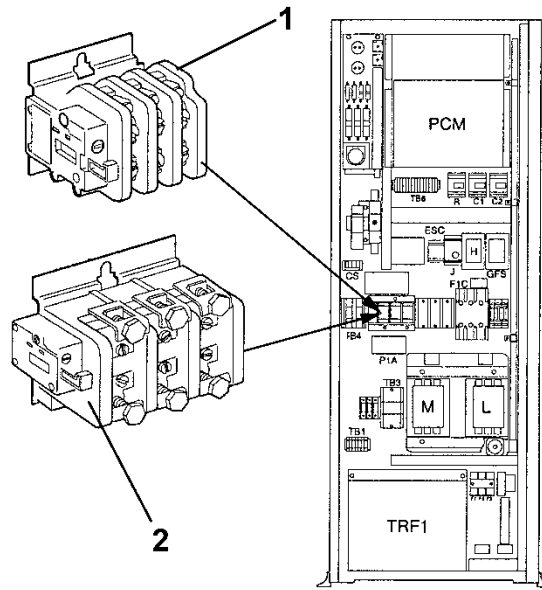


ALL VINTAGES		DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
REF. NO.	PART or ML			17A	30A	---	---	---
1	AAA00605AAA006	Suppressor	200-208	17A	30A	---	---	---
			200-240	12	18A	19	20	21
	24A			25	26	33	---	
	440-600		12	18A	19	20	21	
			24A	25	26	33	---	
	AAA00605AAA004 AAA00605AAA026		200-600	8	8A	10A	15	15A
				22A	23A	29A	301	302
				303	304	305	306	306A
				307	307A	308	308A	309
				310	310A	311	311A	312
312A		313		313A	313B	314		
314A	---	---	---	---				

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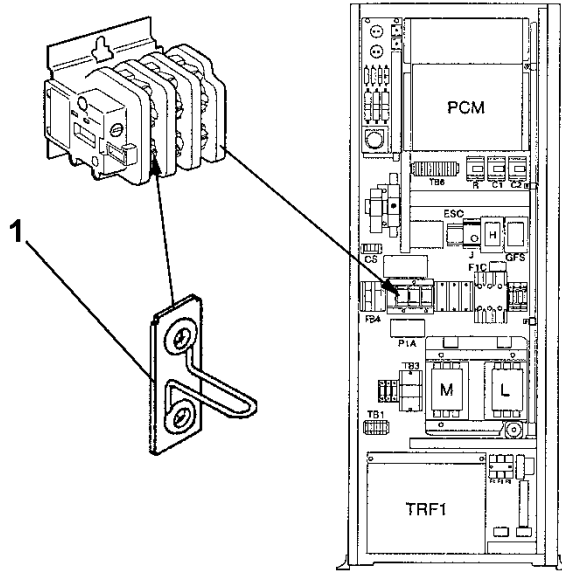
Overload Relay

10-AAA21260AAA



ALL VINTAGES		DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
REF. NO.	PART or ML			8	8A	10A	15	15A
1	6315Y1	Relay, Overload	440-600	17A	18A	22A	23A	29A
				301	302	303	304	305
				306	306 A	307	307A	308
				308A	309	310	310A	311
				311A	312	312A	313	313A
				313B	314	314A	---	---
				550-600	30A	---	---	---
2	6315Y5		200-240	8	8A	10A	15	15A
				17A	22A	23A	29A	301
				302	303	304	305	306
				306A	307	307A	308	308A
				309	310	310A	311	311A
				312	312 A	313	313A	313B
				314	314 A	---	---	---
		200-480	30A	---	---	---	---	
		220-240	18A	---	---	---	---	
		440-600	12	19	20	21	24A	
6315Y10	220-240	25	26	33	---	---		
		12	19	24A	33	---		

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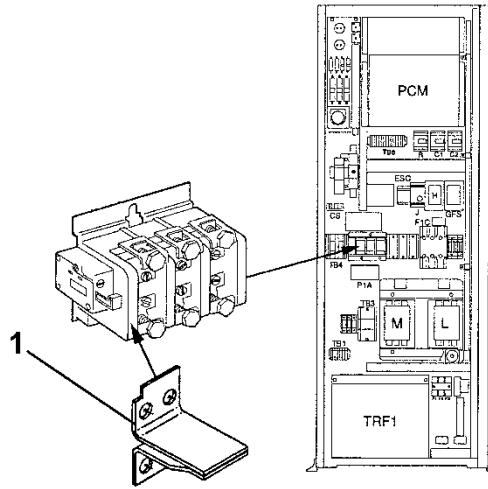


ALL VINTAGES		DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
REF. NO.	PART or ML			8	8A	15	15A	301
1	232AP22	Resistor (Heater Element)	550-600	302	303	304	305	306
				307	308	309	310	311
	312			313	---	---	---	
	22A			306A	307A	308A	310A	
	311A			312A	313A	314A		
	232AP24		440-480	8	8A	15	15A	301
				302	303	304	305	306
				307	308	309	310	311
	232AP25		550-600	10A	29A	---	---	---
				440-480	22A	306A	307A	308A
			311A		312A	313A	314	---
			550-600	313B	314A	---	---	---
232AP26	440-480	10A	29A	313B	314A	---		
		550-600	17A	18A	23A	30A	---	
232AP41	440-480	17A	18A	23A	---	---		

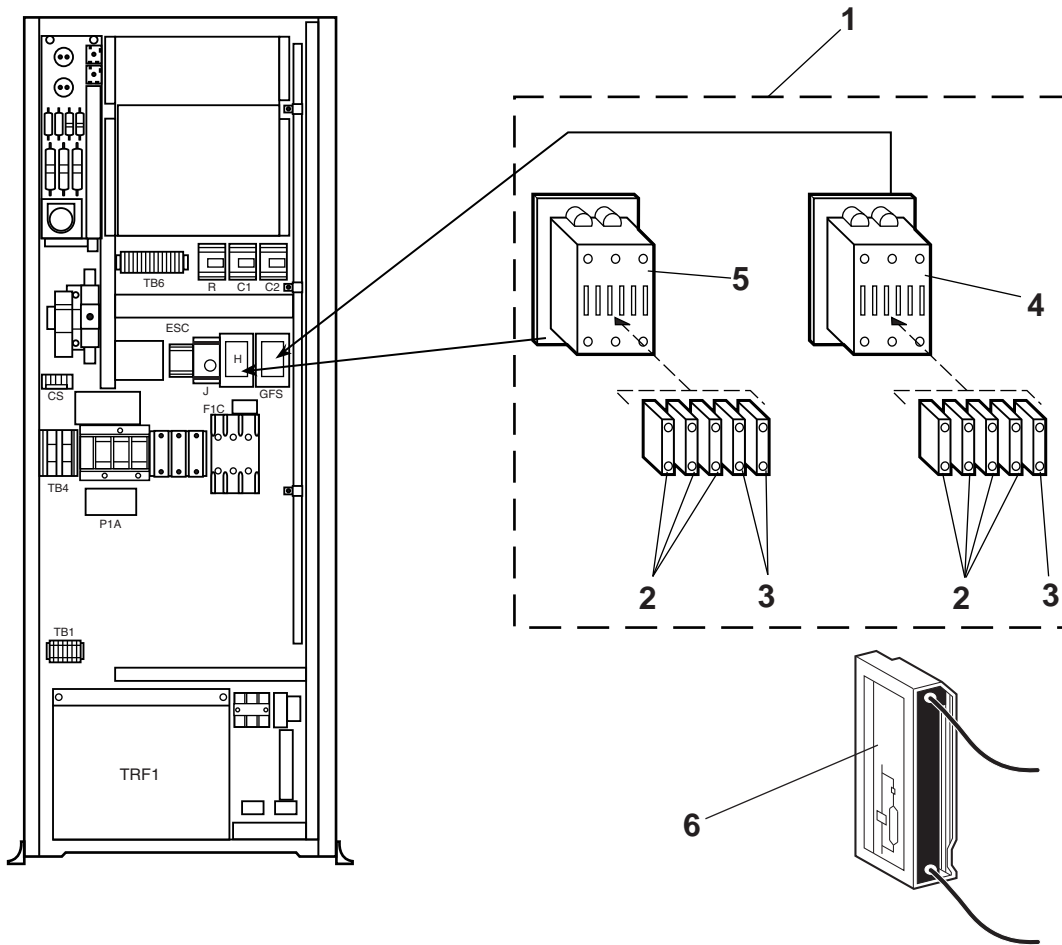
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Overload Relay

10-AAA21260AAA

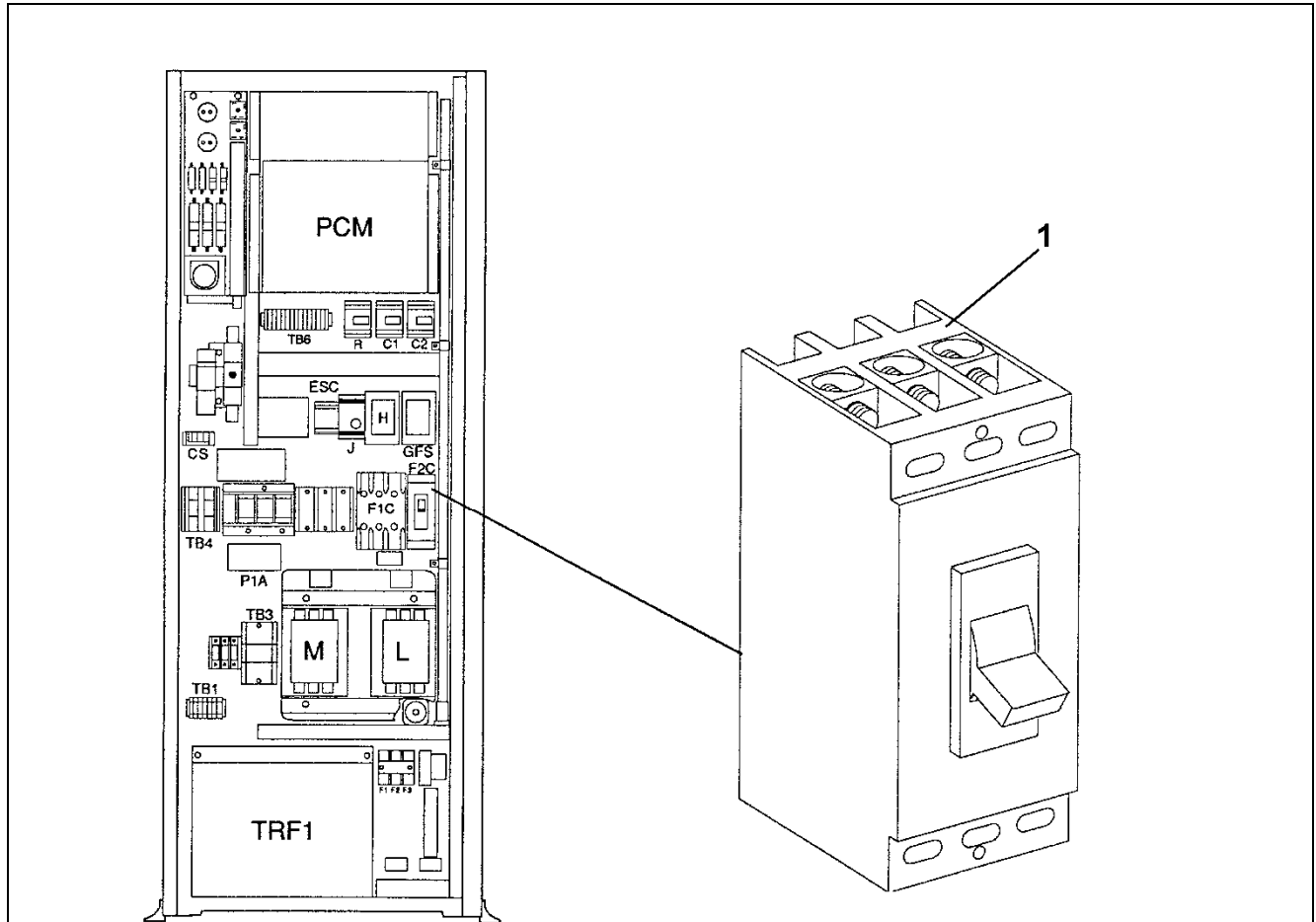


ALL VINTAGES								
REF. NO.	PART or ML	DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
1	232AR8	Resistor (Heater Element)	550-600	12	19	24A	33	---
	232AR11		440-480	30A	---	---	---	---
	232AR22		440-480	12	19	24A	33	---
			550-600	25	---	---	---	---
	232AR24		220-240	8	8A	15	15A	22A
				301	302	303	304	305
				309	---	---	---	---
	232AR25		440-480	25	---	---	---	---
				550-600	20	21	26	---
	232AR25		200-208	8	8A	15	15A	301
				302	303	304	305	306
				307	308	309	310	311
				312	313	---	---	---
	232AR25		220-240	306	306A	307	307A	308
				308A	310	310A	311	311A
				312	312A	313	313A	314
	232AR26		200-208	22A	306A	307A	308A	310A
				311A	312A	313A	314	---
	232AR26		220-240	10A	29A	313B	314A	---
				440-480	20	21	26	---
232AR28	200-208	10A	29A	313B	314A	---		
		220-240	17A	23A	30A	---	---	
232AR29	200-208	17A	23A	30A	---	---		
		220-240	18A	---	---	---	---	
232AR31	220-240	12	19	24A	33	---		



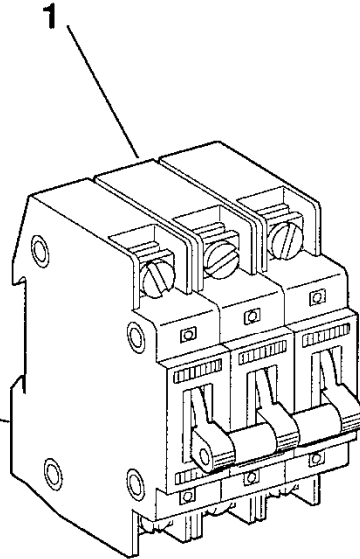
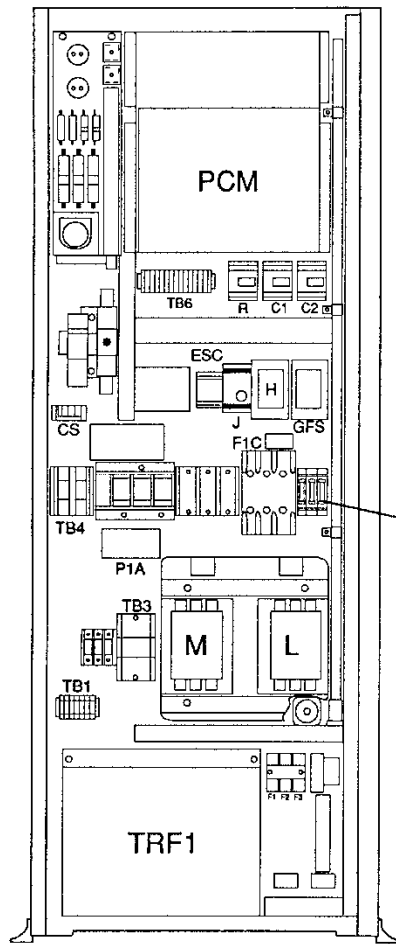
ALL VINTAGES

REF. No.	PART No.	DESCRIPTION
1	AAA21305K1	Assembly, Relay Kit (including TIP 31.2-35, "H" & "GFS" Relay Replacement), Retrofit for 613BX Relays and Auxiliary Blocks
2	AAA638AH100 AAA638AH103	Block, Auxiliary Contact, N.C.
3	AAA638AH101 AAA638AH104	Block, Auxiliary Contact, N.O.
4	613BX18, 20, 22, 24 AAA638AH1 AAA638AH3	Relay, Contactor (GFS)
5	613BX21, 23 AAA638AH2 AAA638AH4	Relay, Contactor (H)
6	605T2 AAA00605AAA014	Suppressor, Transient (SS3)



NOTE: This circuit breaker is not CSA approved.

REF. NO.	PART or ML	DESCRIPTION	DUTY LINE NO.			
			10A	17A	18A	22A
1	AAA00375AAH001	Breaker, Circuit, 20 A, 28-40 A, (F2C)	23	---	---	---
			8	15	24A	29A
	AAA00375AAH002	Breaker, Circuit, 25 A, 22-32 A, (F2C)	30A	301	302	303
			304	305	306	306A
			307	307A	308	308A
			309	310	310A	311
			311A	312	312A	313
			313A	313B	314	314A
	AAA00375AAH003	Breaker, Circuit, 30 A, 36-50 A, (F2C)	12	19	20	21
			25	26	33	---



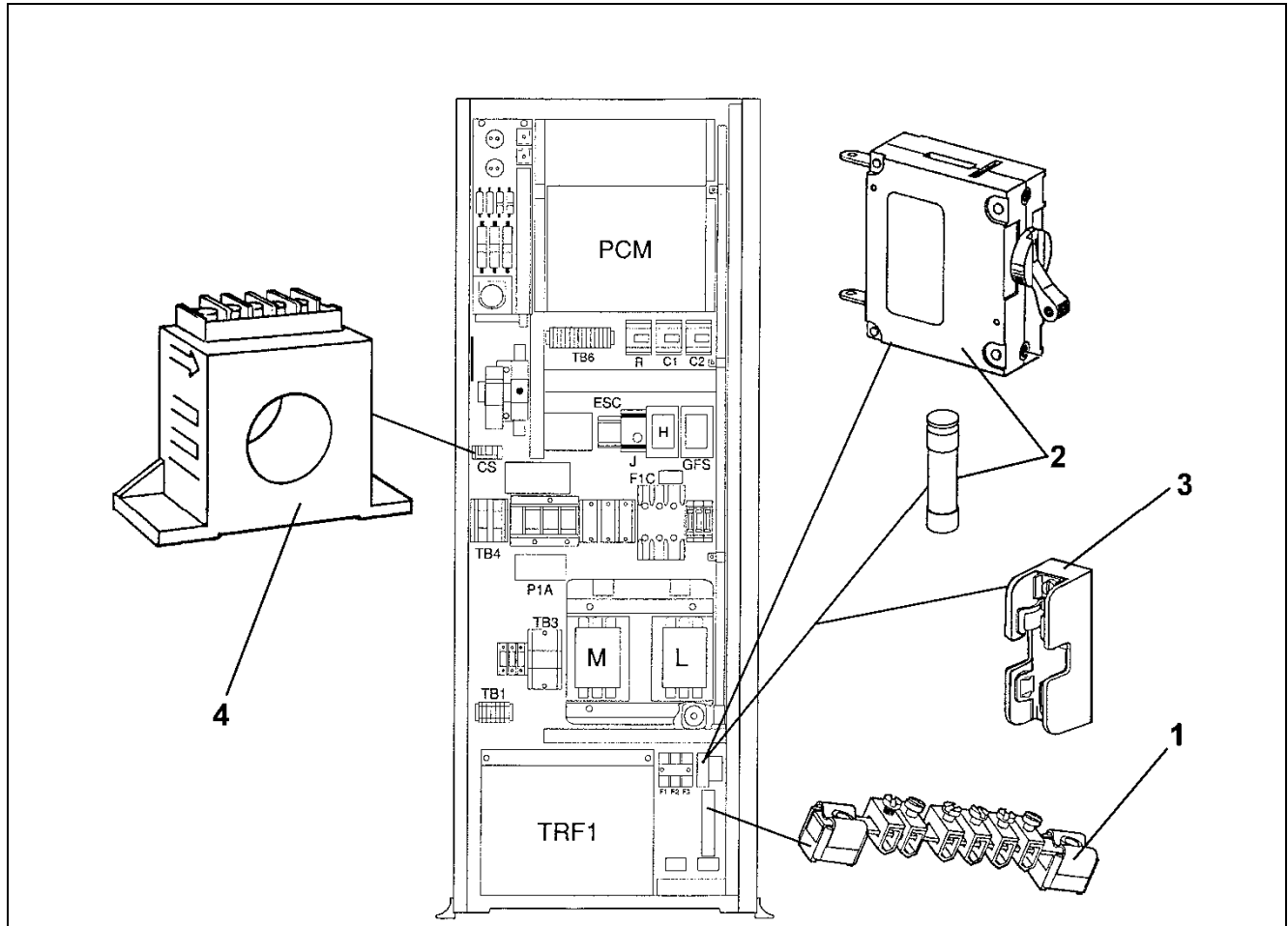
NOTE: This circuit breaker is CSA approved.

ACA21260AAA
 ACB21260AAA
 ADA21260AAA
 ADB21260AAA

REF. NO.	PART or ML	DESCRIPTION	DUTY LINE NO.			
			8A	10A	15A	17A
1	AAA637E1	Breaker, Circuit, 20 A, (F2C)	18A	22A	23	---
			8	15	24A	29A
	AAA637E2	Breaker, Circuit, 25 A, (F2C)	30A	301	302	303
			304	305	306	306A
			307	307A	308	308A
			309	310	310A	311
			311A	312	312A	313
			313A	313B	314	314A
	AAA637E3	Breaker, Circuit, 30 A, (F2C)	12	19	20	21
			25	26	33	---

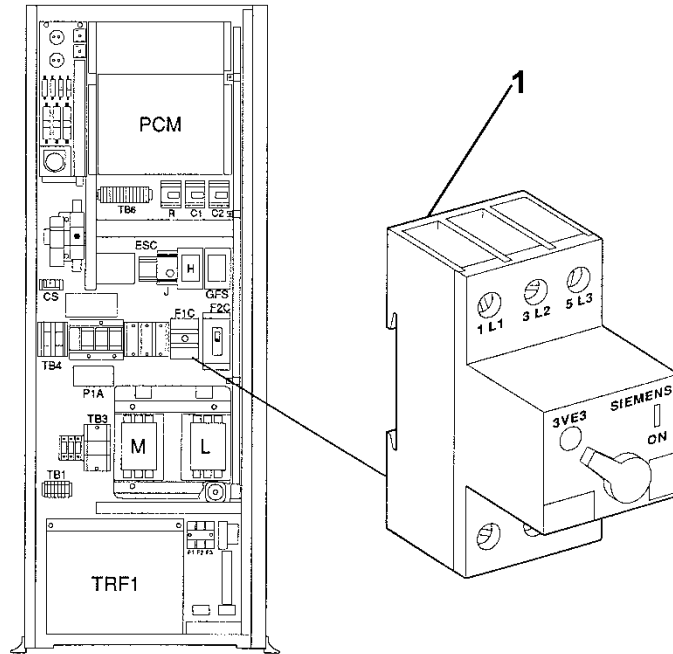
Bussbar and Current Sensor

10-AAA21260AAA



AAA21260AAA	ABA21260AAA ACA21260AAA ACB21260AAA ADA21260AAA ADB21260AAA
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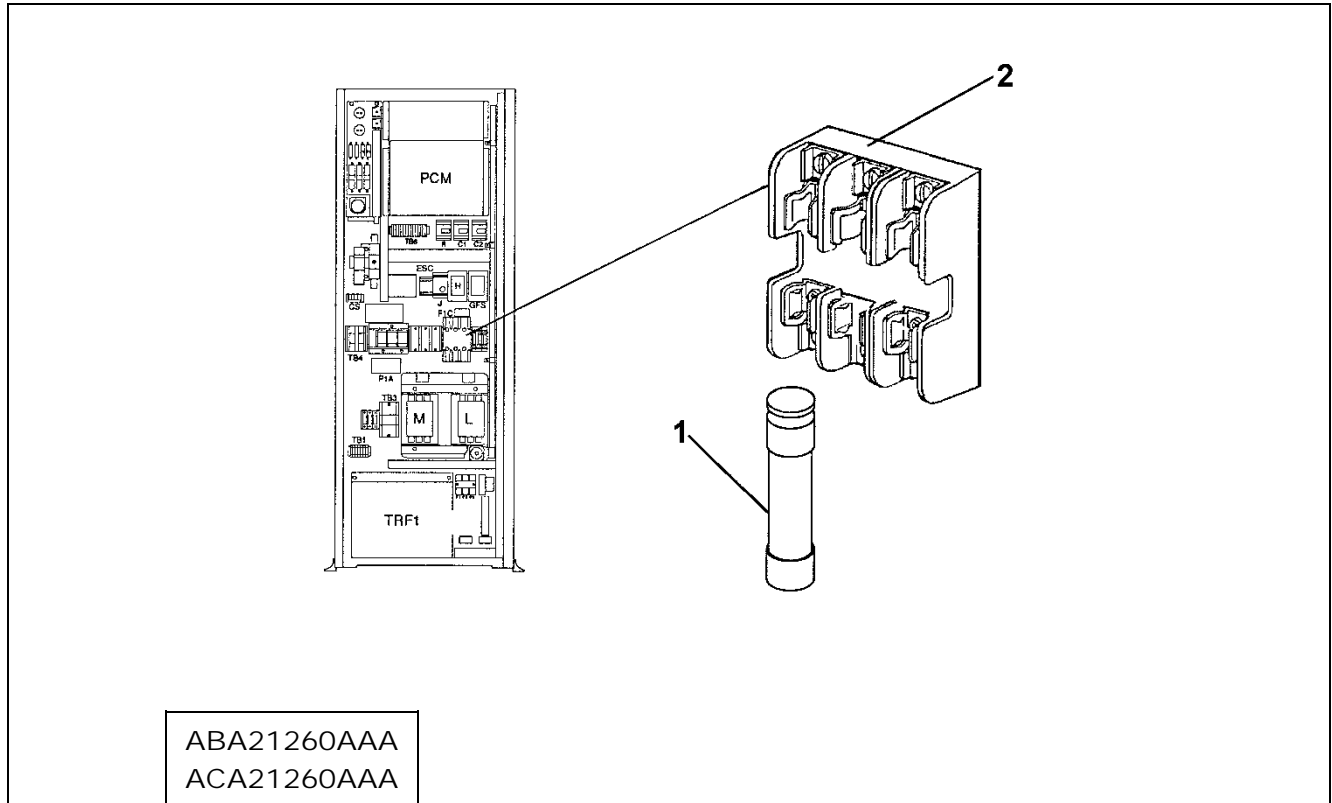
REF. NO.	PART or ML		DESCRIPTION	SYMBOL
1	252W2		Busbar	HL1
2	375BA8 AAA637C8	---	Breaker, Circuit, 5 A	F3C
	---	AAA375BW31	Fuse, 7A, 250 V	
3	---	AAA00180AAE004	Holder, Fuse	
4	P94HA1 AAA622AB2		Sensor, Current	CS



REF. NO.	PART or ML	DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
	AAA21260AAA							
1	AAA00375AAG002	Breaker, Circuit, 16-25A (F1C)	200-240	All				
	AAA00375AAG003	Breaker, Circuit, 6.3-10.0 A (F1C)	440-600	10A	12	17A	18A	19
				20	21	22	23A	25
				26	33	---	---	---
			440-480	8	15	24A	29A	30A
				301	302	303	304	305
				306	306A	307	307A	308
				308A	309	310	310A	311
	311A	312	312A	313	313A			
	313B	314	314A	---	---			
	AAA00375AAG004	Breaker, Circuit, 4.0-6.3 A (F1C)	550-600	8	15	24A	29A	30A
				301	302	303	304	305
				306	306A	307	307A	308
				308A	309	310	310A	311
				311A	312	312A	313	313A
313B	314	314A	---	---				

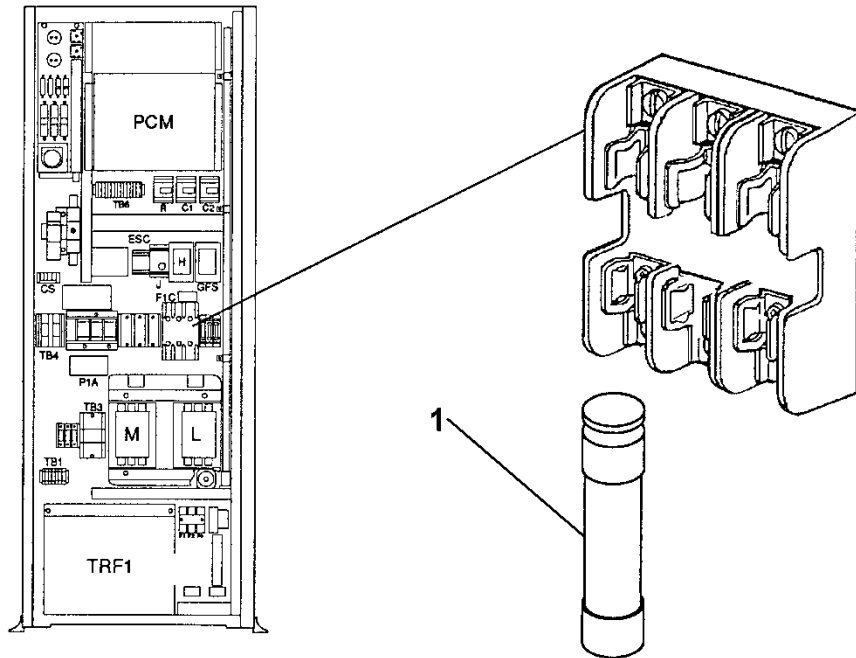
Reject Fuse

10-AAA21260AAA



REF. NO.	PART or ML	DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.			
				8	15	24A	29A
1	AAA375BW31	Fuse, Reject, 7.5 A, (F1C)	550-600	30A	301	302	303
				304	305	306	306A
				307	307A	308	308A
				309	310	310A	311
				311A	312	312A	313
				313A	313B	314	314A
				8	15	24A	29A
	AAA375BW33	Fuse, Reject, 9.0 A, (F1C)	440-480	30A	33	301	302
				304	305	306	306A
				307	307A	308	308A
				309	310	310A	311
				311A	312	312A	313
				313A	313B	314	314A
				8A	10A	12	15A
550-600	17A	18A	19	20			
	21	22A	23A	25			
	26	33	---	---			
2	180CN2	Holder, Fuse, 600 V, 30 A					

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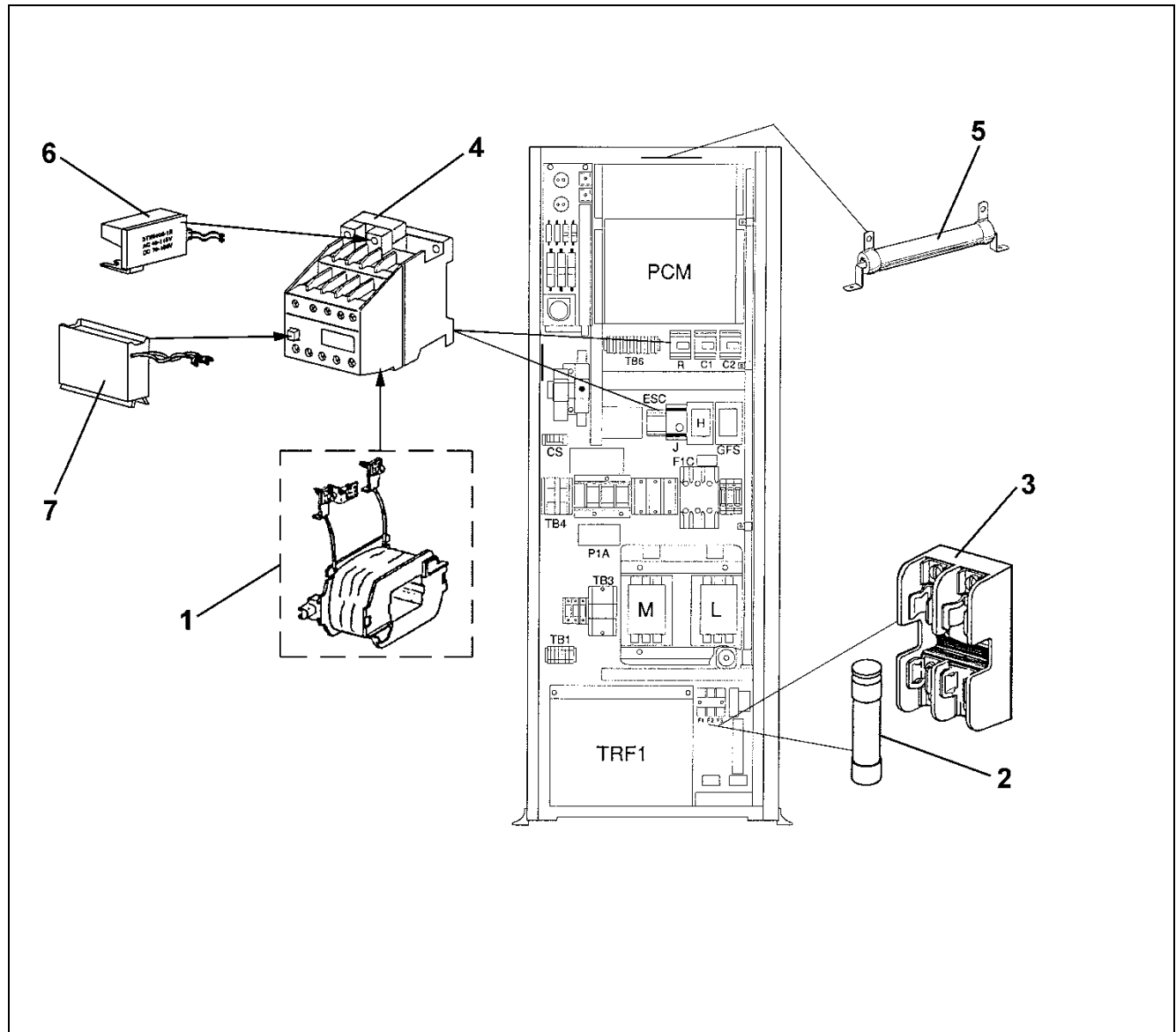
ABA21260AAA
ACA21260AAA

REF. NO.	PART or ML	DESCRIPTION	SITE VOLTAGE	DUTY LINE NO.				
				8A	10A	12	15A	17A
1	AAA375BW35	Fuse, Reject, 12.0 A, (F1C), NOTE	440-480	18A	19	20	21	22A
				23A	25	26	---	---
				8	15	24A	29A	30A
	AAA375BW38	Fuse, Reject, 20.0 A, (F1C), NOTE	200-240	33	301	302	303	304
				305	306	306A	307	307 A
				308	308A	309	310	310 A
				311	311A	312	312A	313
				313A	313B	314	314A	---
				8A	10A	12	15A	17A
	AAA375BW39	Fuse, Reject, 25.0 A, (F1C), NOTE	200-240	18A	19	20	21	22A
				23A	25	26	---	---

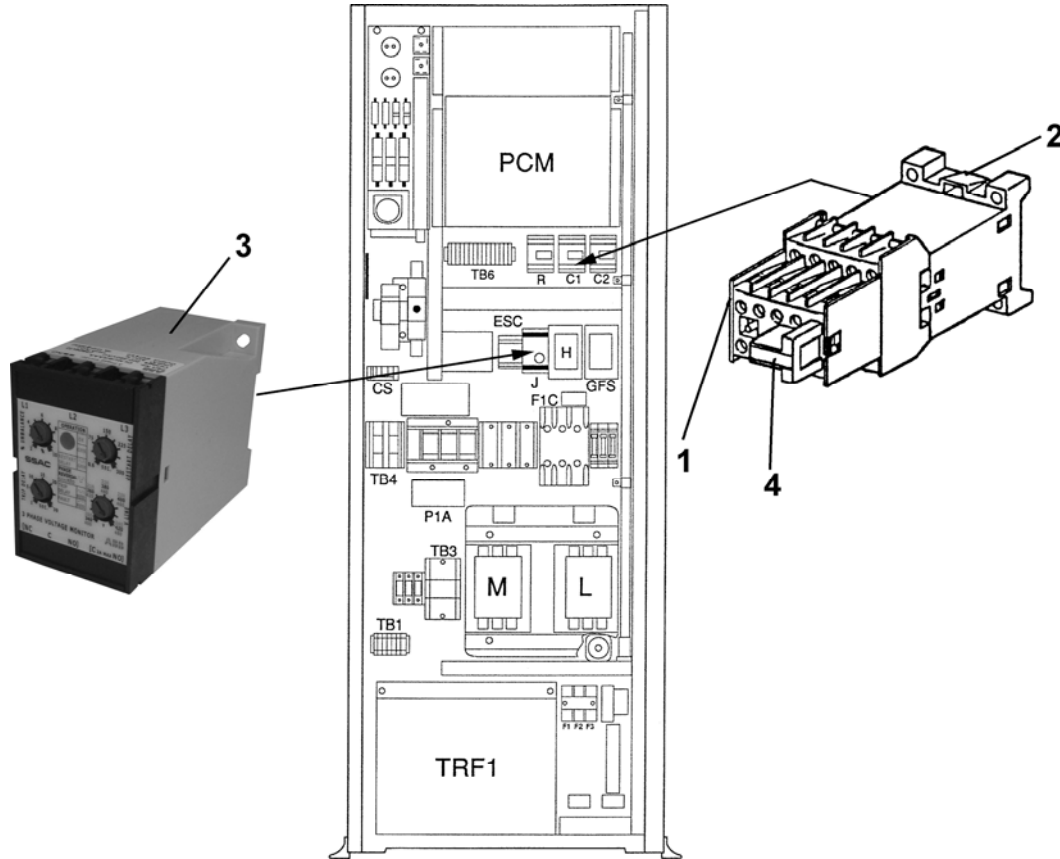
NOTE: Used with fuse holder 180CN2. Refer to page 20.

Coil, Fuse & Control Relay

10-AAA21260AAA



ALL VINTAGES			
REF. NO.	PART or ML	DESCRIPTION	SYMBOL
1	AAA00613AAF038/COIL	Coil, 125 VDC (for AAA00613AAF038)	ESC
2	375Y20 AAA375BW39	Fuse, Reject Type, 20 A	F1, F2, F3
3	AAA00180AAE003	Holder, Fuse, 250 V, 30 A, 3-Pole	F1, F2, F3
4	AAA00613AAF013	Relay, Control, 120 VAC	R
	AAA00613AAF038	Relay, Control, 125 VDC	ESC
5	AAA617K10	Resistor, Variable, 225 Watt	GF1
6	AAA00605AAD001	Suppressor, Surge	SS4 (R)
7	AAA00605AAA008	Suppressor, Transient	ESC4 (ESC)



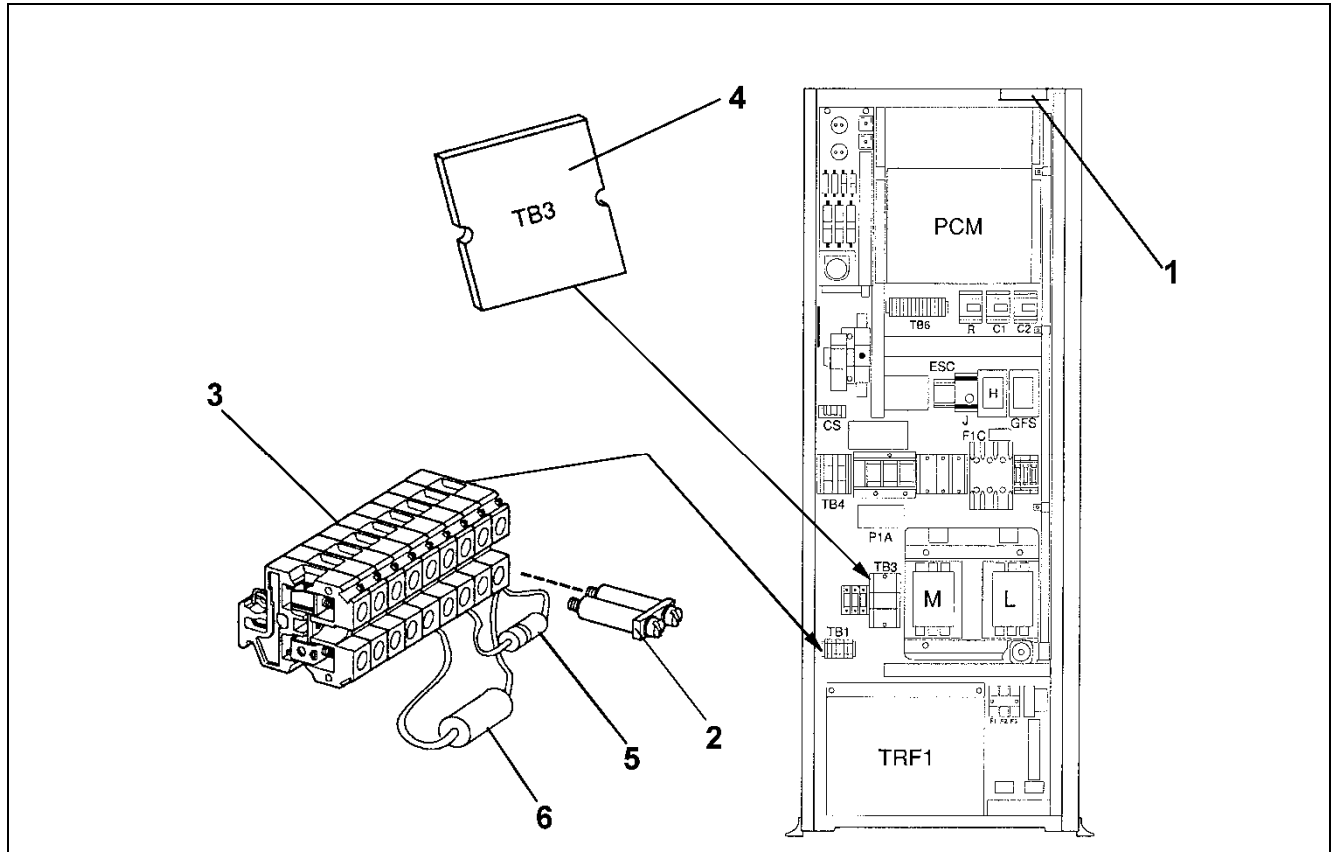
AAA21260AAA
 ABA21260AAA
 ACA21260AAA
 ACB21260AAA
 ADA21260AAA

ADB21260AAA

REF. NO.	PART or ML		DESCRIPTION	SYMBOL
1	AAA613CX208	AAA613DL74	Contact, Accessory	C1, C2
2	AAA613CX104 AAA613CX504	AAA613DL29	Relay, Control, 120 VAC	C1, C2
3	613BY1 613BY23		Relay, Reverse Phase, 200–480 V	J
	613BY3 613BY23		Relay, Reverse Phase, 200–480 V	J
	613BY5 613BY24		Relay, Reverse Phase, 500–600 V	J
4	AAA613CX302	AAA613DL61	Suppressor (for C1 and C2)	SS5, SS6

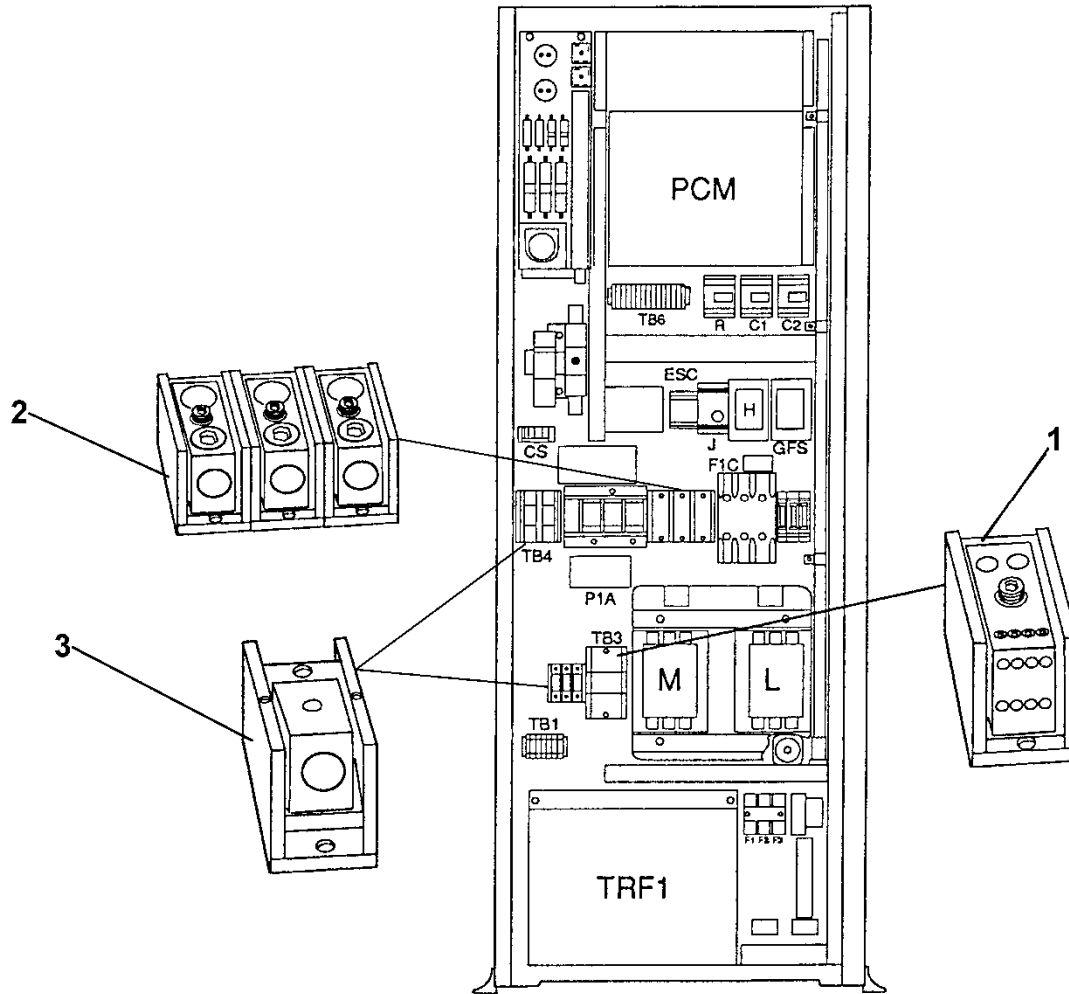
Terminal Block Cover

10-AAA21260AAA



AAA21260AAA	ACB21260AAA
ABA21260AAA	ADA21260AAA
ACA21260AAA	ADB21260AAA

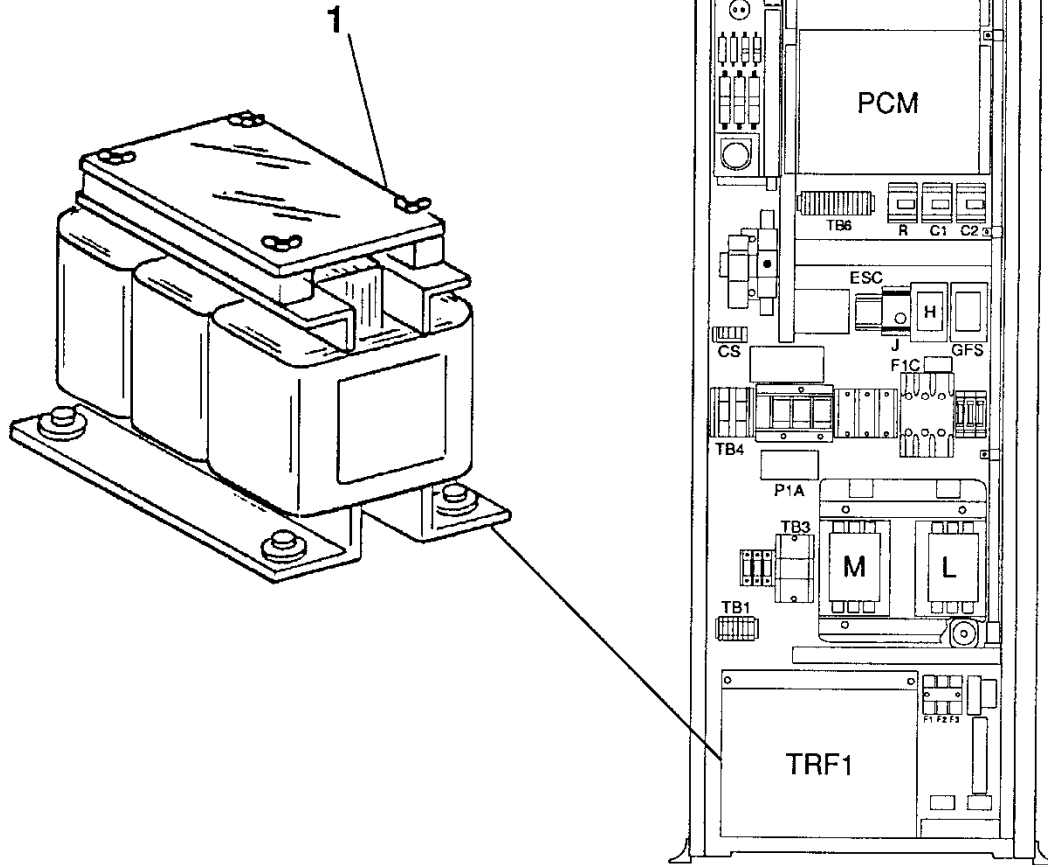
REF. NO.	PART or ML	DESCRIPTION	SYMBOL
1	--- AAA26800QQ1	Board, Resistor	---
2	AAA00303AAL004	Block, Terminal (2-position jumper bar)	---
3	AAA00303AAL001	Block, Terminal (qty. 1)	TB1
4	AAA102PD1	Cover, Terminal Block, 2.688 x 2.750 in.	TB2
	AAA102PD2	Cover, Terminal Block, 3.313 x 2.813 in.	TB4
	AAA102PD3	Cover, Terminal Block, 2.969 x 5.315 in.	TB3
	AAA102PD4	Cover, Terminal Block, 4.844 x 3.813 in.	TB5
5	AAA612AAA005	Diode	B1
6	AAA00232AAE001	Resistor	B2



ALL VINTAGES			
REF. NO.	PART or ML	DESCRIPTION	SYMBOL
1	303DH7	Block, Terminal, 1-Pole, 760 A	TB3
2	303DH3 AAA303FT5	Block, Terminal, 3-Pole, 175 A	TB2
	303DH5	Block, Terminal, 2-Pole, 255 A	TB4
3	AAA303DS1	Block, Special Terminal, 3-Pole, 350 A	TB5

Transformer

10-AAA21260AAA



ALL VINTAGES					
REF. NO.	PART or ML	DESCRIPTION	SITE VOLTAGE	MACHINE TYPE	SYMBOL
1	AAA0235AAN001 AAA00235AAN001	Transformer, Power Supply (219HT = DUTY NO. 33)	200-208	131HT, 155HT, 219HT or 17CT	TRF1
	AAA0235AAN004 AAA00235AAN004	Transformer, Power Supply (219HT = DUTY NO. 33)	220-600	131HT, 155HT, 219HT or 17CT	
	AAA0235AAN002 AAA00235AAN002	Transformer, Power Supply (219HT ≠ DUTY NO. 33)	200-208	139HT or 219HT	
	AAA0235AAN005 AAA00235AAN005	Transformer, Power Supply (219HT ≠ DUTY NO. 33)	220-600	139HT or 219HT	