

Gamma D[®] Controller

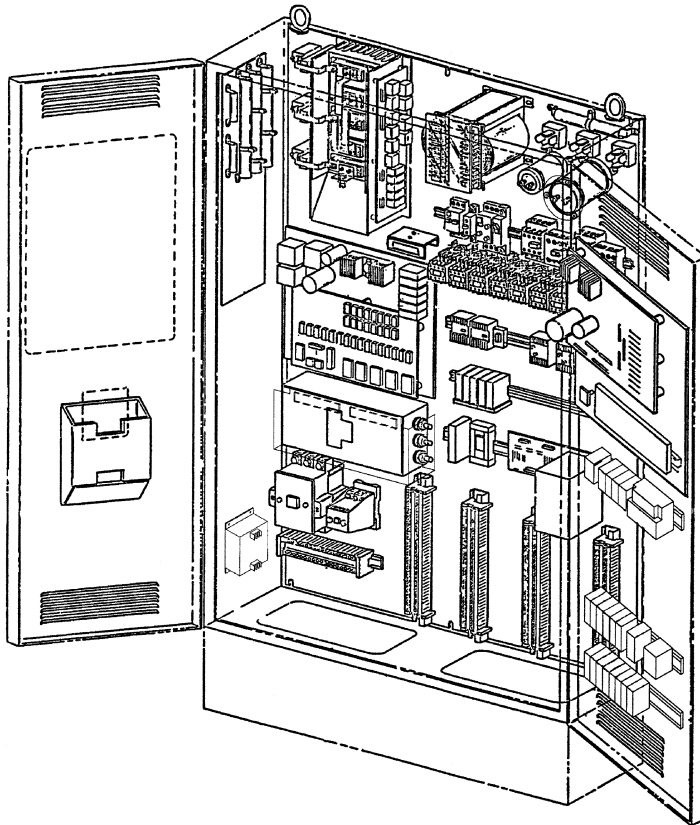
Spare Parts Leaflet

10-AAA21270AAA

September 21, 2022 / Page 1 of 22

OBSOLESCENCE NOTICE

The product covered in this SPL has been designated as obsolete and is no longer supported. See TIP 32.2-1, *Obsolete Components*, for potential upgrade. Replacement lower-level parts listed within and unique to this design will be reviewed for obsolescence.



10	C-AAA21270AAA
10	C-ABA21270AAA
10	C-ACA21270AAA
10	C-ADA21270AAA

CONTROLLER
SERIAL No.
SERVICE ORDER No.
CONTRACT No.
MODEL No.
VOLTS AMP
H.P. PHASES
WIRES HERTZ
COMPONENT VNTAGE NO.
COMPONENT CODE 10
LEADER DESIGNATION
C-A ^{21270AAA}
WIRING DIAGRAM
DATE



This document does not contain any technical data subject to EAR or ITAR

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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Leaflet Description

This leaflet details Gamma D® controller. The information provided here covers the standard product line only. Symbols used in the leaflet are closely related to the component parts layout on pages 3 and 4. Order parts by descriptions.

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
January 1990	---	---
March 1999	John Doane	Editorial correction
January 1, 2001	John Doane	Add door lock bypass, and general purpose control relay
March 18, 2002	Mike Boles	Added EMI filter on page 5, and updated parts on pp.19-21
April 19, 2002	John Dwyer	Correct parts on pp.6 &10, and update relay p/n on p.13
December 13, 2002	Mike Boles	Revised part number for remote station extender, ref. 5 on p. 10
August 30, 2003	Mike Boles	Updated contactor and relay parts on pages 13, 14, 16, and 17
January 11, 2012	Ali Bozorgzadeh	Removed strikethroughs in ref. 1 on p. 10
June 5, 2019	Ali Bozorgzadeh	Switched references 2 and 4 on p. 7
September 21, 2022	Juan Murillo	Updated to include OBSOLESCENCE note on cover

Related Drawings

Drawing No.	Title	Drawing No.	Title
AAA21270AAA	Gamma D Assembly	ACA21270AAA	Gamma D Assembly
ABA21270AAA		ADA21270AAA	

Related Documents

Document ID	Title
SPL 10-9708BJ	Motion Gamma D Power Pack
SPL 10-7151A	AC & DC Contactors
TIP 1.2.0-37	Replacing Obsolete Commercial Relays

Subject Matter Expert

Name	Department
Ali Bozorgzadeh	OSC Service Engineering

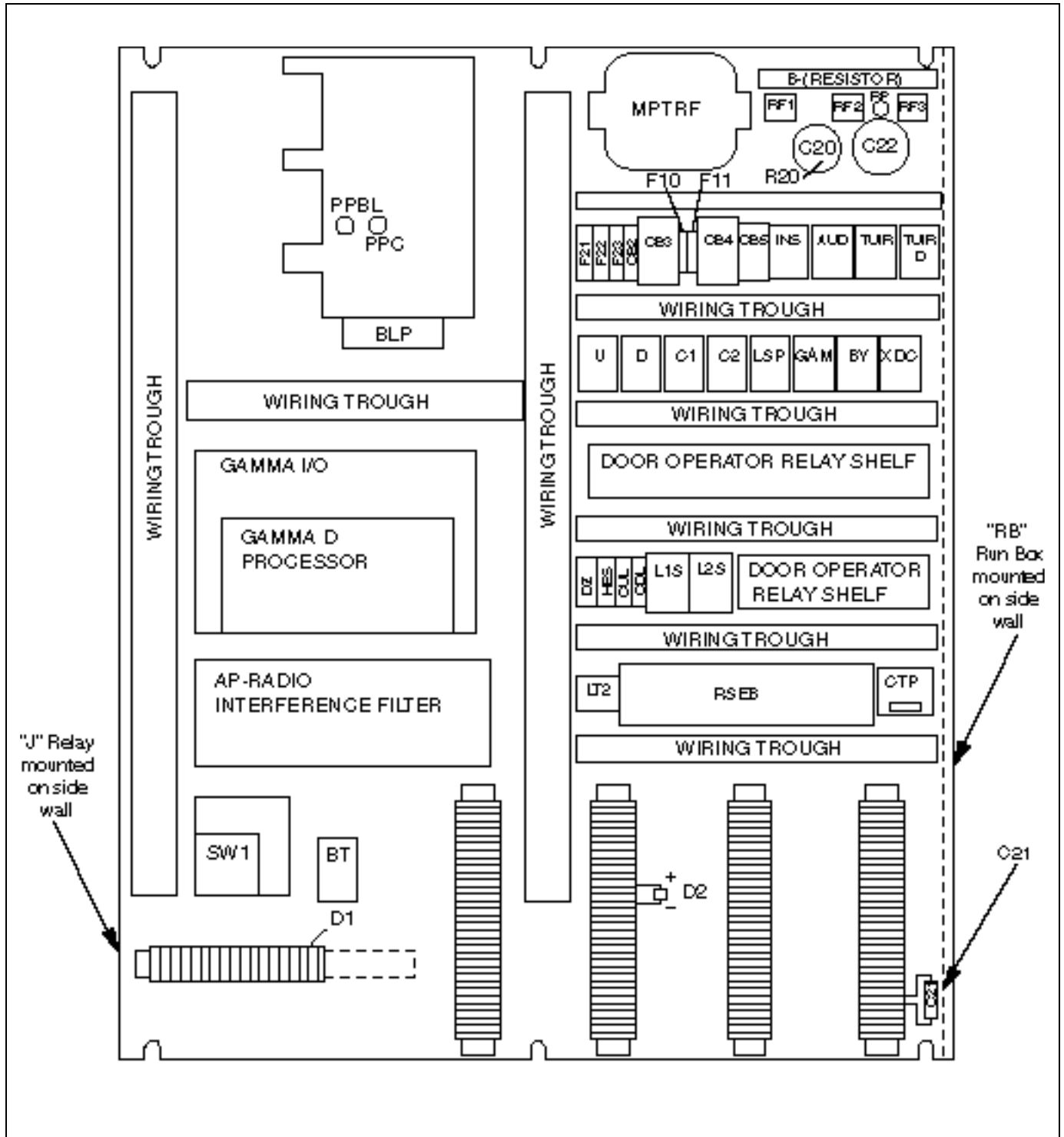
About Spare Parts Leaflets...

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.

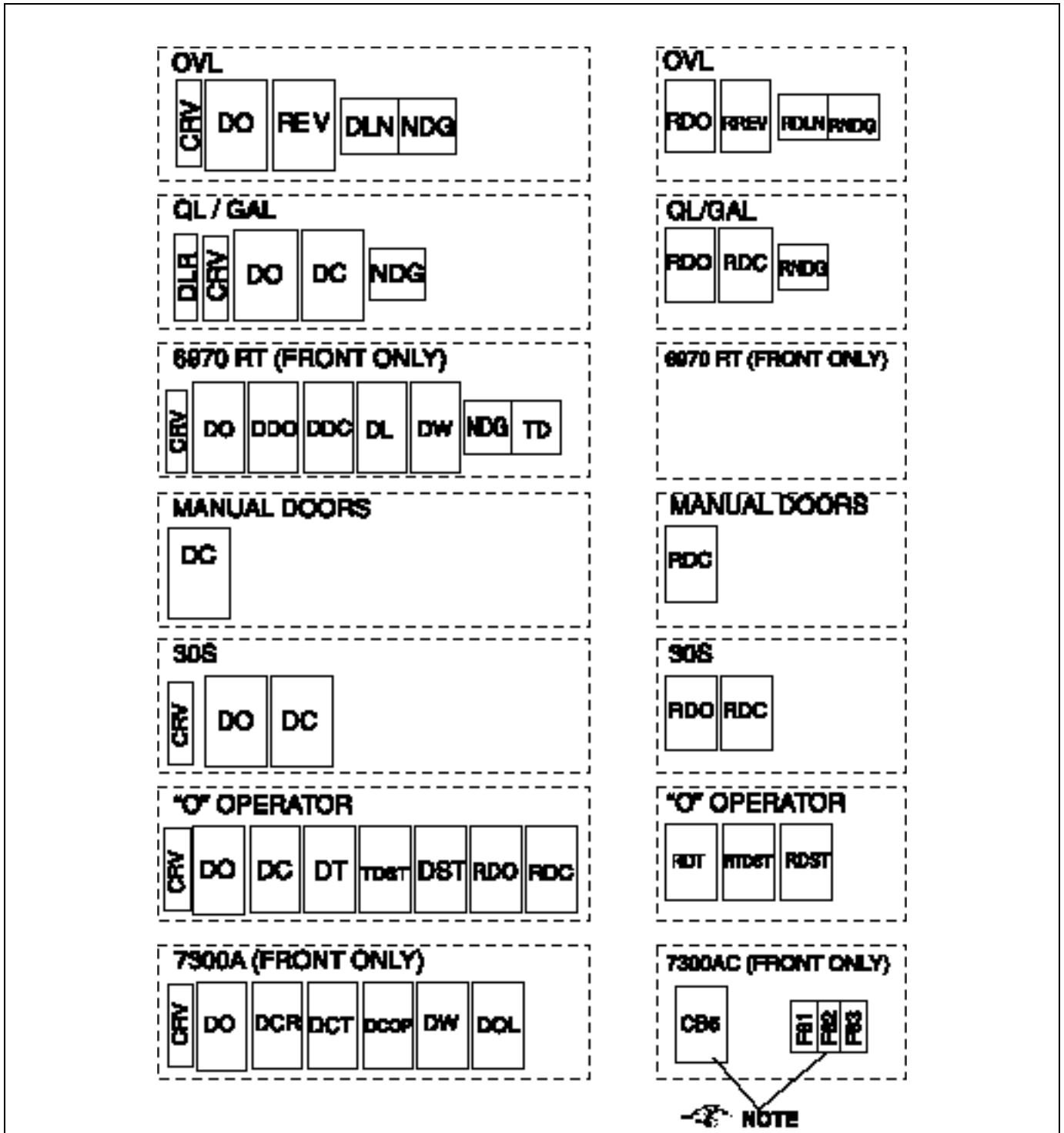
While goal of this document is to make parts identification as easy as possible, the document cannot be all-inclusive. Elevator and escalator contracts classified as "special" or "custom" are not addressed here. For such contracts, please refer to specified information, the contract folder, TIPs, Field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

Component Layout Illustration



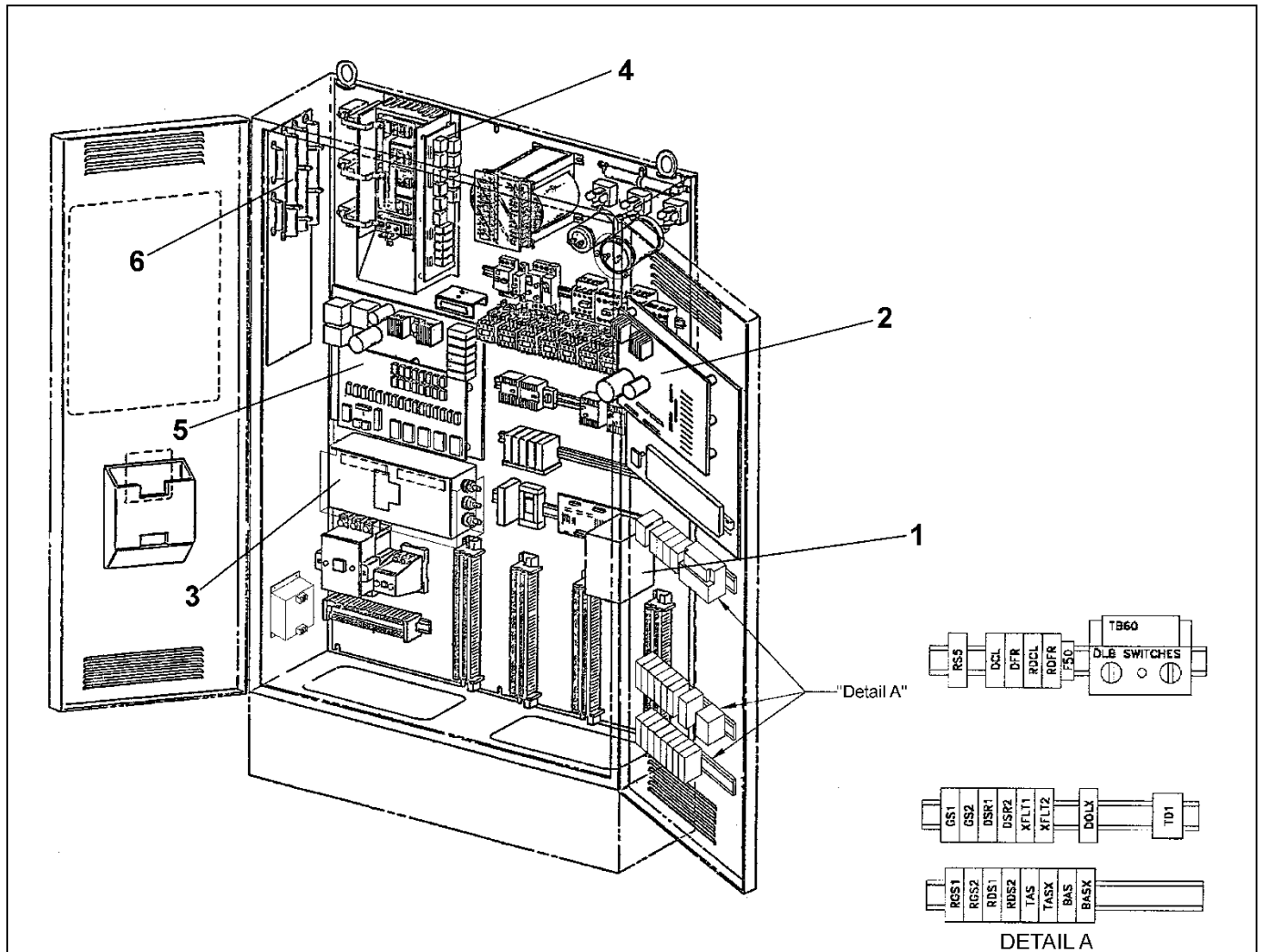
Component Layout Illustration for Operator Relay Shelves



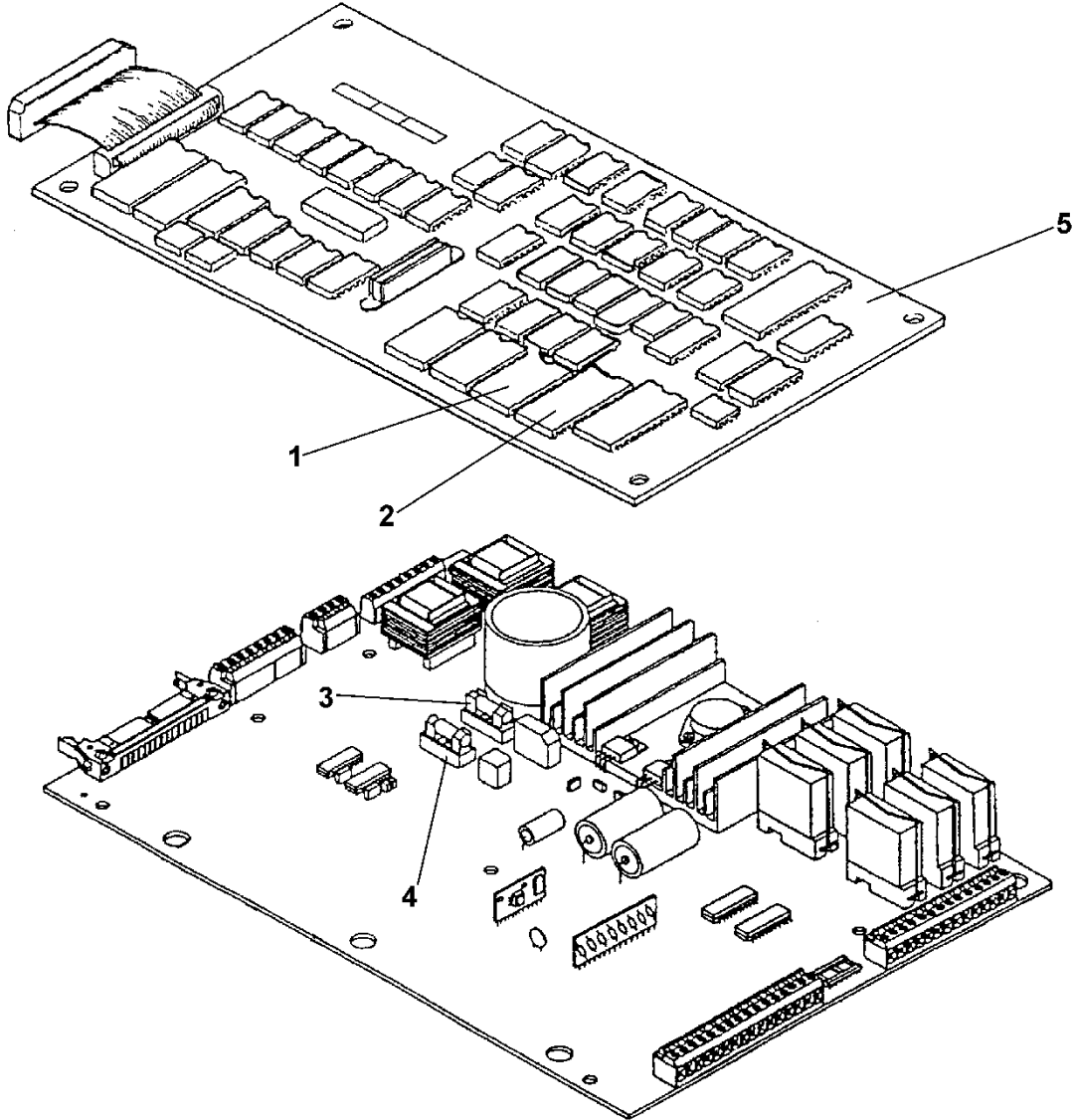
NOTE: CB6 is used with 440-460 building powers supply; F61, F62 and F63 are used with 550-600 building power supply.

Gamma D® Controller

10-AAA21270AAA



ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	7003BF1	Box, Run
2	---	Connector, & Limited Car Board, Pages 8-10
3	GAA737E1	Filter, AP Radio Interface, CSA Contracts (Canada)
	GAA737G1	Filter, AP Radio Interface, Non-CSA Contracts (USA)
4	A9708BJ3	Panel, Thyristor, SPL 10-9708BJ
	A9708BJ4	
5	---	PC Boards, Gamma D Processor & I/O, Pages 6-7
6	---	Resistors, & Door Operators, Pages 19-21

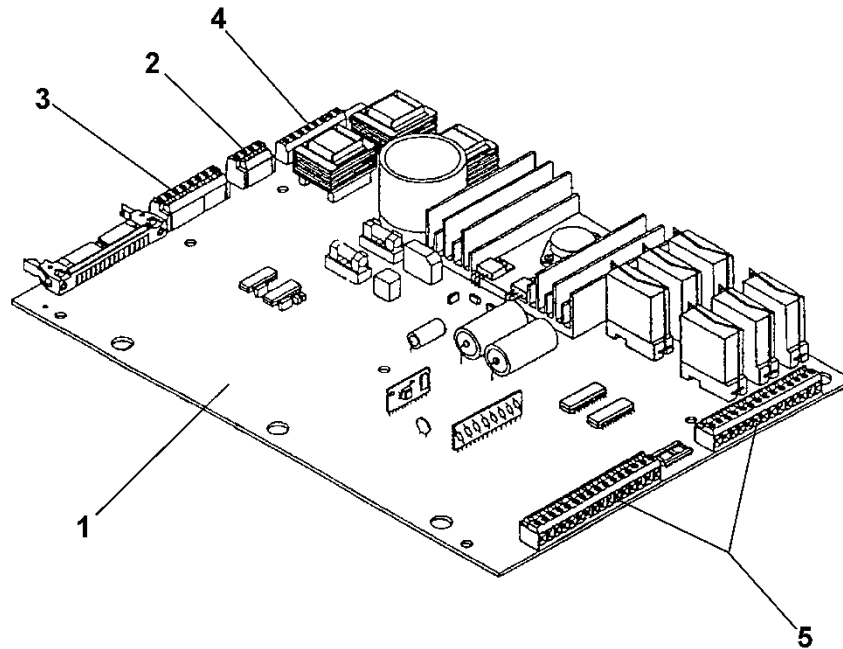


ALL VINTAGE		
REF. No.	PART No.	DESCRIPTION
1	GOA616G60	EEPROM, Processor Board, Z9 (blank)
2	AAA30352AAA	EPROM, Processor Board, Z10 (baseline)
3	GO375AF23	Fuse, 2.5 A, F2
4	GO375AF26	Fuse, 5.0 A, F1
5	B9708BM2 C9708BM2	PC Board, Processor

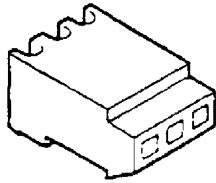
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I/O Board

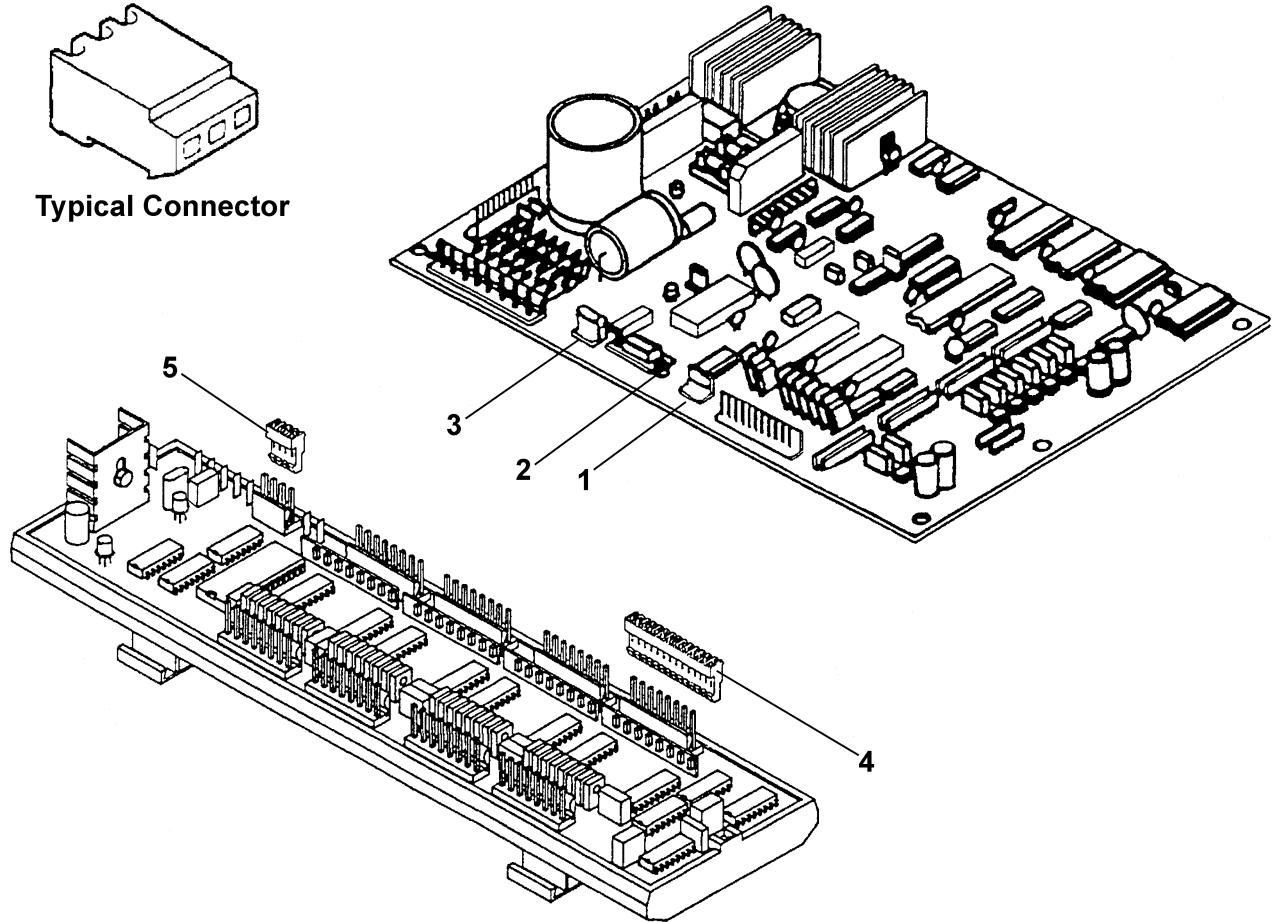
10-AAA21270AAA



ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	B9708BN1	I/O Board, Gamma DTM, 200–380 V
	B9708BN2	I/O Board, Gamma DTM, 400–600 V
2	GOA614AX4	Terminal, Plugable, w/Screw Connection, 4-Pin (P2)
3	GOA614AX14	Terminal, Plugable, w/Screw Connection, 14-Pin (P5, P7)
4	GOA614AX10	Terminal, Plugable, w/Screw Connection, 10-Pin (P1)
5	GOA614AX8	Terminal, Plugable, w/Screw Connection, 8-Pin (P3)



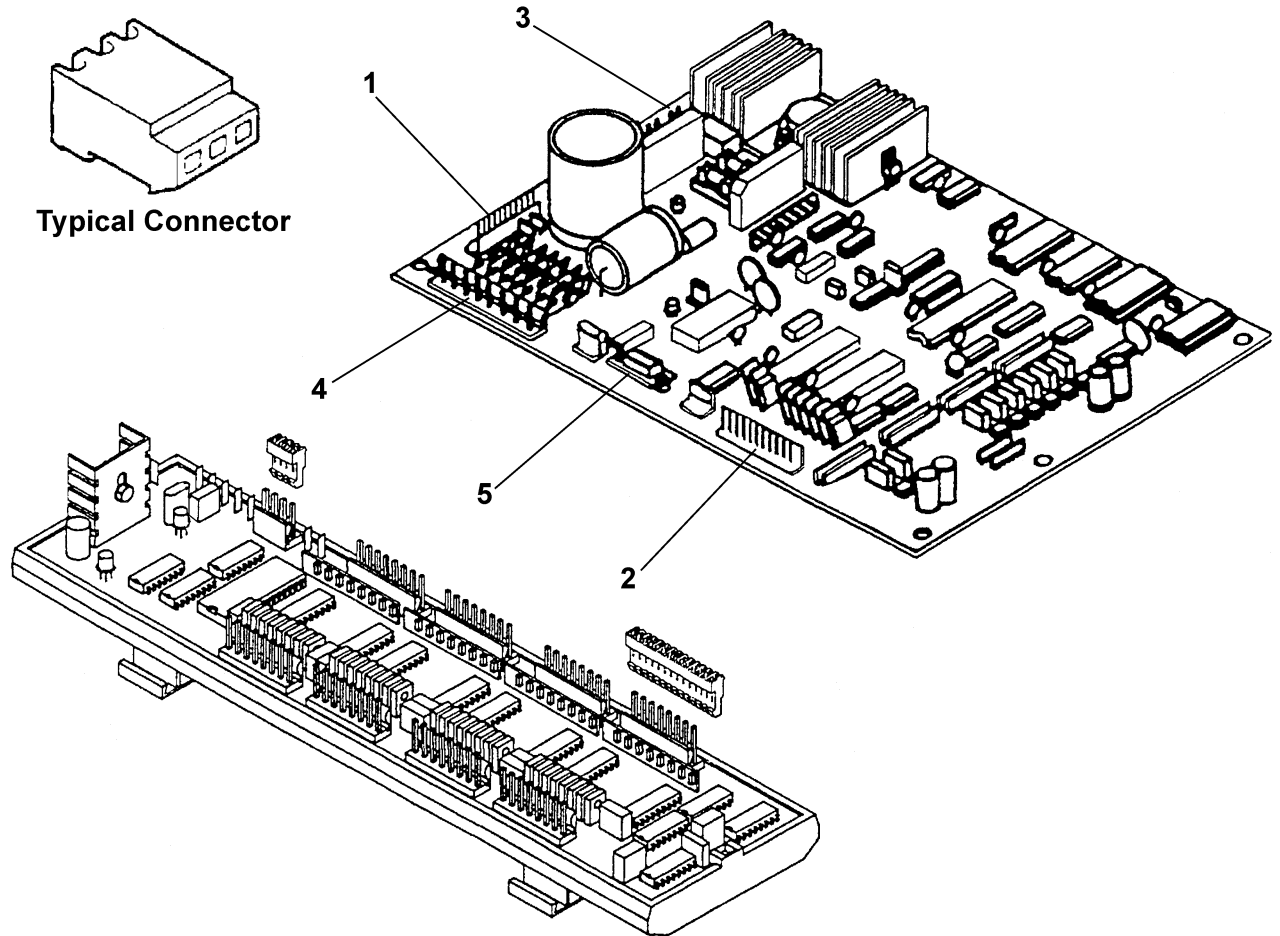
Typical Connector



ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	GO614BC202 AAA447AC28	Connector, Female End, 2-Pole (P9)
2	GO614BC204 AAA447AC24	Connector, Female End, 4-Pole (P6)
3	GO614BC206 AAA447AC52	Connector, Female End, 6-Pole (P4)
4	GO614BC208 AAA447AC62	Connector, Female End, 8-Pole
5	GO614BC404	Connector, Female, Feed-Through, 4-Pole

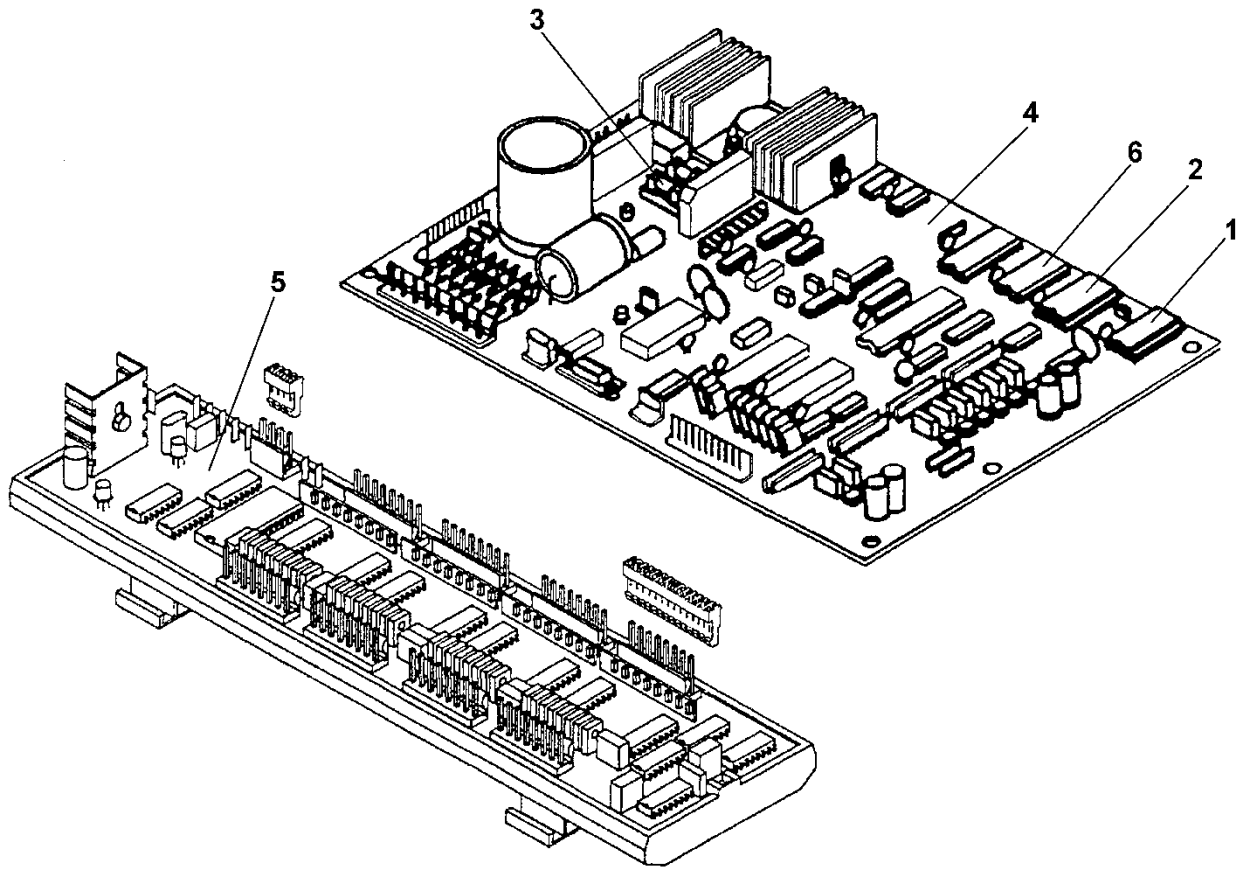
NOTE: The callouts represent general locations only.

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ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	GO614BC210	Connector, Female End, 10-Pole (P2)
2	GO614BC212	Connector, Female End, 12-Pole (P7)
3	GO614BC214	Connector, Female End, 14-Pole (P1)
4	GO614BC216	Connector, Female End, 16-Pole (P3)
5	GAA447CL4	Connector, Female End, 9-Pole (P5)

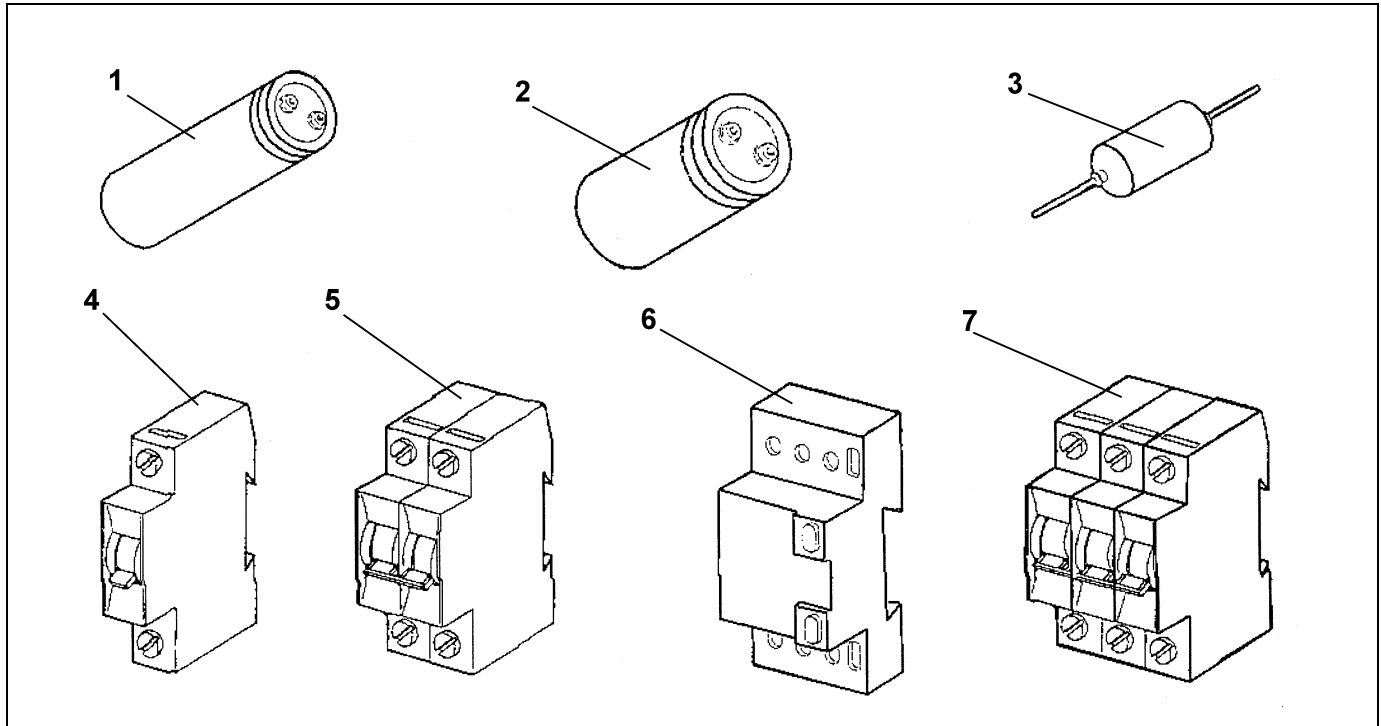
NOTE: The callouts represent general locations only.



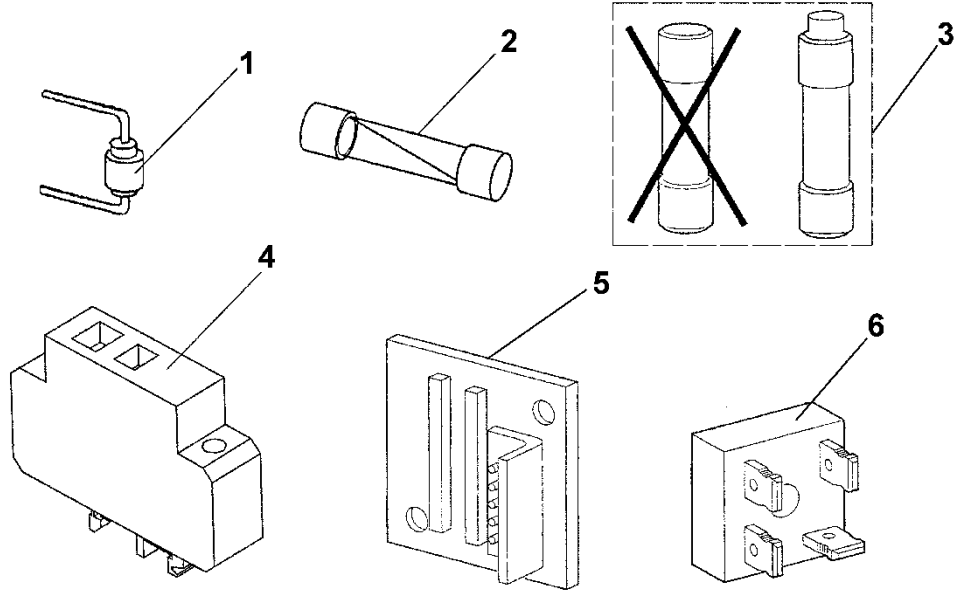
ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	AAA616HT1	EEPROM, Limited Car Board, 2-6 Stops, (Z30)
	AAA616HT2	EEPROM, Limited Car Board, 7-14 Stops, (Z30)
	AAA616KS1	EEPROM, Limited Car Board, Blank, (Z30)
2	AAA30038AL0 AAA30038BAA	EPROM, Limited Car Board, (Z29)
3	GO375AF18	Fuse, 1 A, 250 VAC, (F1)
	GO375AF25 AAA375BY12	Fuse, 4 A, 250 VAC, (F2, F3)
4	C9693A3	PC Board, Limited Car, (LCB)
5	B9693AE1	PC Board, Remote Station Extender, (RSEB)
6	AAA00616AAA001	RAM, Non-Volatile, (Z28)

Capacitor & Circuit Breaker

10-AAA21270AAA



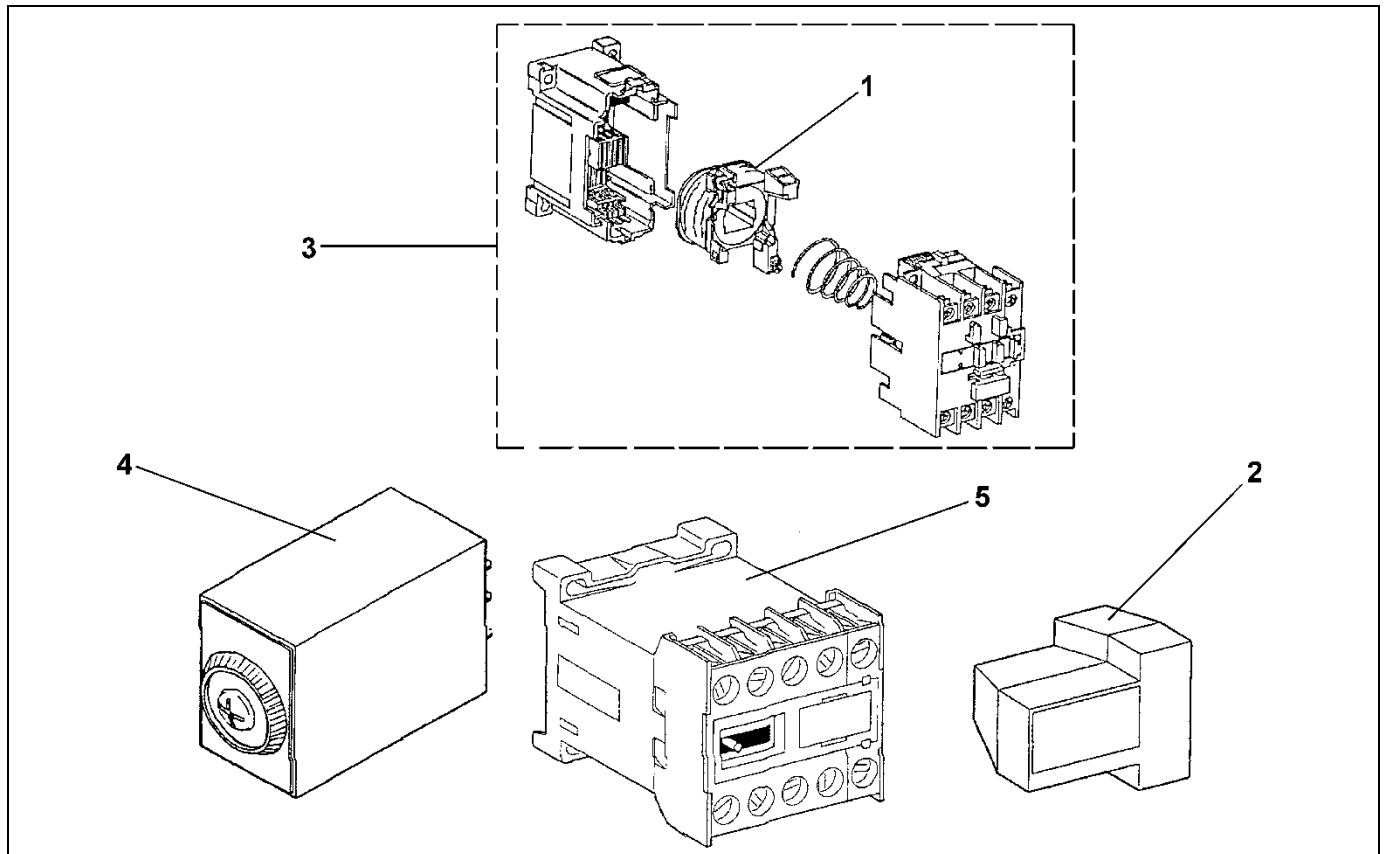
ALL VINTAGES				
REF. No.	PART No.	DESCRIPTION	OPERATOR TYPE	SYMBOL
1	226DR1	Capacitor, 1400 μ F, 450 VDC	---	C22
2	226EJ1	Capacitor, 19,000 μ F, 60 VDC	---	C20
3	226BB3	Capacitor, 1.0 μ F, 600 VDC (brake switch)	---	C21
4	AAA00375AAF008	Circuit Breaker, 1-Pole, 8.0 A (constant part)	---	CB2
5	AAA00375AAD005	Circuit Breaker, 2-Pole, 3.0 A	OVL	CB4
	AAA00375AAD007	Circuit Breaker, 2-Pole, 6.0 A	GAL-MOD, GAL-MOM/MOH, or QL	
	AAA00375AAD009	Circuit Breaker, 2-Pole, 10.0 A	6970	
	AAA00375AAD005	Circuit Breaker, 2-Pole, 3.0 A	'O', Front	CB5
	AAA00375AAD007	Circuit Breaker, 2-Pole, 6.0 A	'O', Rear	
6	AAA00375AAC009	Circuit Breaker, 3-Pole, 4.0–6.3 A	---	CB4
	AAA00375AAC010	Circuit Breaker, 3-Pole, 6.3–10.0 A	---	
	AAA00375AAC006	Circuit Breaker, 3-Pole, 1.0–1.6 A	'O', 30S or 7300	
7	AAA00375AAJ007	Circuit Breaker, 3-Pole, 6.0 A (constant part)	---	CB3
	AAA00375AAJ004	Circuit Breaker, 3-Pole, 2.0 A	7300AC	CB6



ALL VINTAGES					
REF. No.	PART No.	DESCRIPTION			SYMBOL
1	AAA00230AAB001	Diode, 6 A			D1, D2
2	AAA375CB24	Fuse, 5.0 A, 250 V			F10, F11
3	AAA375BG20	Fuse, Fast Blow, 10 A (230 V Supply)			F21, F22, F23
	AAA375BK36	Fuse, Time Delay, 7.5 A (230 V Supply)			F21, F22, F23
	AAA375BG15	Fuse, Fast Blow, 5.0 A (440 V Supply)			F21, F22, F23
	AAA375BK36	Fuse, Time Delay, 7.5 A (440 V Supply)			F21, F22, F23
	AAA375BG14	Fuse, Fast Blow, 4.0 A (575 V Supply)			F21, F22, F23
	AAA375BK31	Fuse, Time Delay, 5.0 A (575 V Supply)			F21, F22, F23
	AAA375BK21	Fuse, Time Delay, 2.0 A	550-600 V Supply	7300AC Door Operator	F61, F62, F63
4	AAA180DT1	Holder, Fuse, 600 V			F61, F62, F63
5	9693J1	PC Board, Line Terminator			LT1, LT2
6	230BS3	Rectifier, Bridge, 600 V, 25 A			RF1, RF2, RF3

Coil and Relays

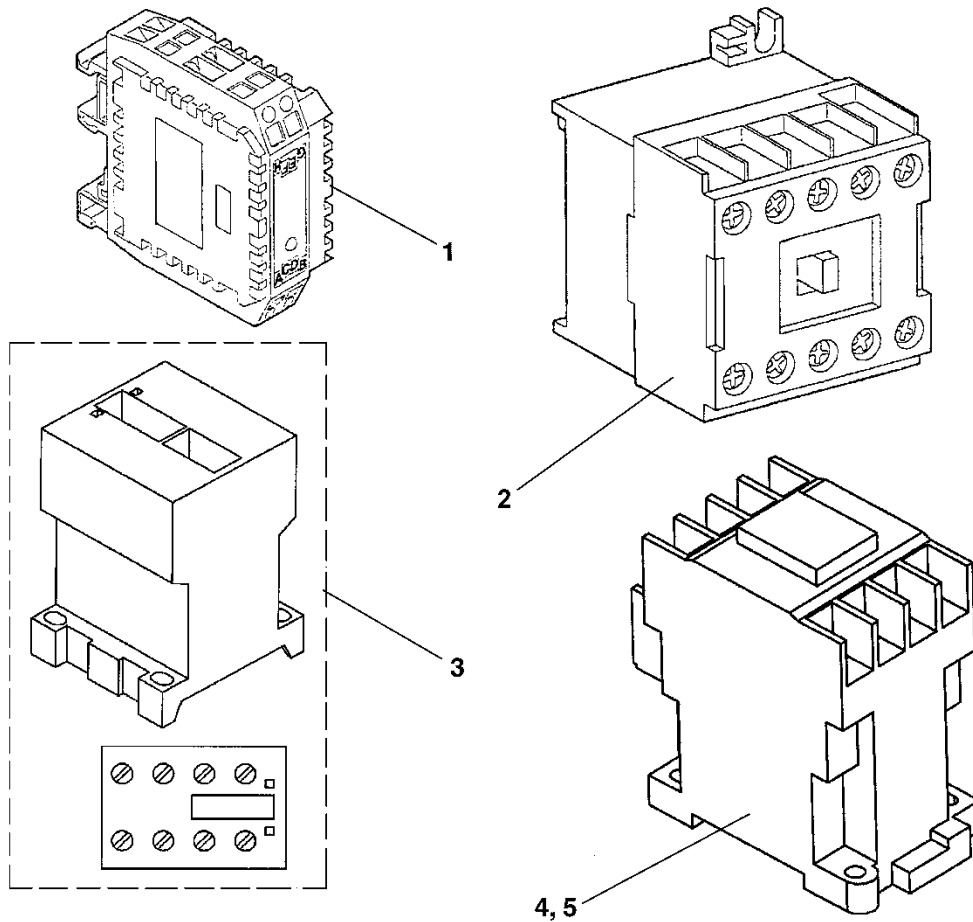
10-AAA21270AAA



REF. No.	PART No.		DESCRIPTION	SYMBOL *
	ABA21270AAA	ACA21270AAA ADA21270AAA		
1	613BX/22.122.304-33 (👁 NOTE)		Coil, 120 VAC	---
2	---	AAA613CX602	Contact, Auxiliary	DZ
3	613BX4 (👁 NOTE) AAA613DL17		Relay, 120 VAC, 2 NO, 2 NC Contacts	(R)REV, (R)DDO, (R)DL, (R)DDC, (R)DW
	613BX12 (👁 NOTE) AAA613DL22		Relay, 120 VAC, 4 NO, 4NC Contacts	(R)DCR, (R)DW, (R)DCT, (R)DT, GAM, BY, C1, C2, LSP, U, D, INS, AUD, XDC
4	AAA613CL3		Relay, Time Delay	TDST, RTDST
5	AAA613CX506		Relay, 120 VAC, 2 NO, 2 NC Contacts	L1S, L2S, TDIR, TUIR, (R)DOL
	---	AAA613CX109	Relay, 240 VAC, 2 NO, 2 NC Contacts	DZ

* (R) in the symbol column refers to rear door application.

NOTE: The 631BX/22.122.304-33 coil and 613BX4 and 613BX12 relays are obsolete and subject to availability. Replacement relays have differences in mounting configuration, coil terminal locations and contact terminal markings. 👁 TIP 1.2.0-37 for details.

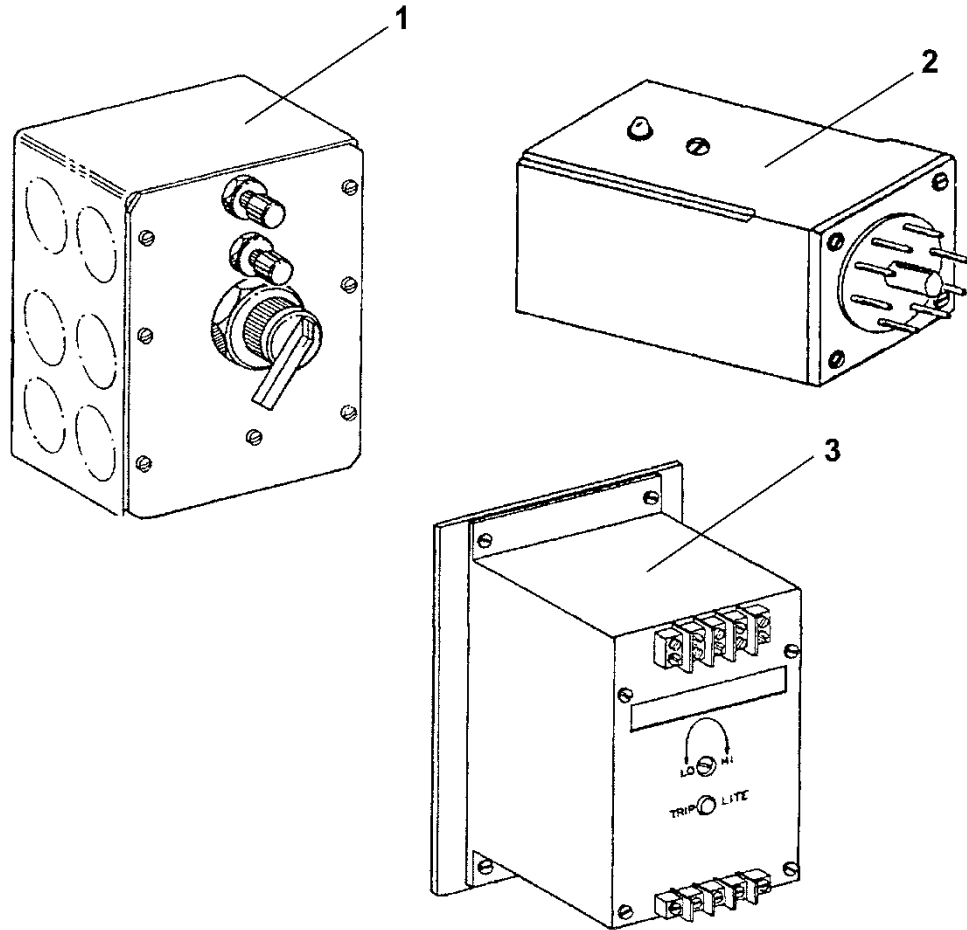


	ABA21270AAA	ACA21270AAA ADA21270AAA		
REF. No.	PART No.		DESCRIPTION	SYMBOL
1	AAA00613AAB001	---	Relay, 24 VDC, 2 SPDT	DZ
	AAA00613AAB001		Relay, 24 VDC, 2 SPDT	CDL, CRV, CUL, DLR, HES
2		AAA00613AAC007	Relay, 24 VAC, 2 NO, 2 NC Contacts	(R)NDG, (R)DLN
3	AAA638B109	---	Relay, 24 VAC, 3 NO, 1 NC	(R)DO, (R)DC, (R)DCOP
	AAA613CY106	---	Auxiliary Contact, 2 NO, 2 NC	
4	---	AAA613DL20	Relay, 120 VAC, 6 NO, 2 NC Contacts	(R)DO, (R)DC, (R)DCOP
5	AAA613DL31		Relay, 110 VAC Coil, 2 NO, 2 NC	GS1, GS2, DSR1, DSR2, XFLT1, XFLT2, CK, TAS, TASX, BAS, BASX, RGS1, RGS2, RDS1, RDS2

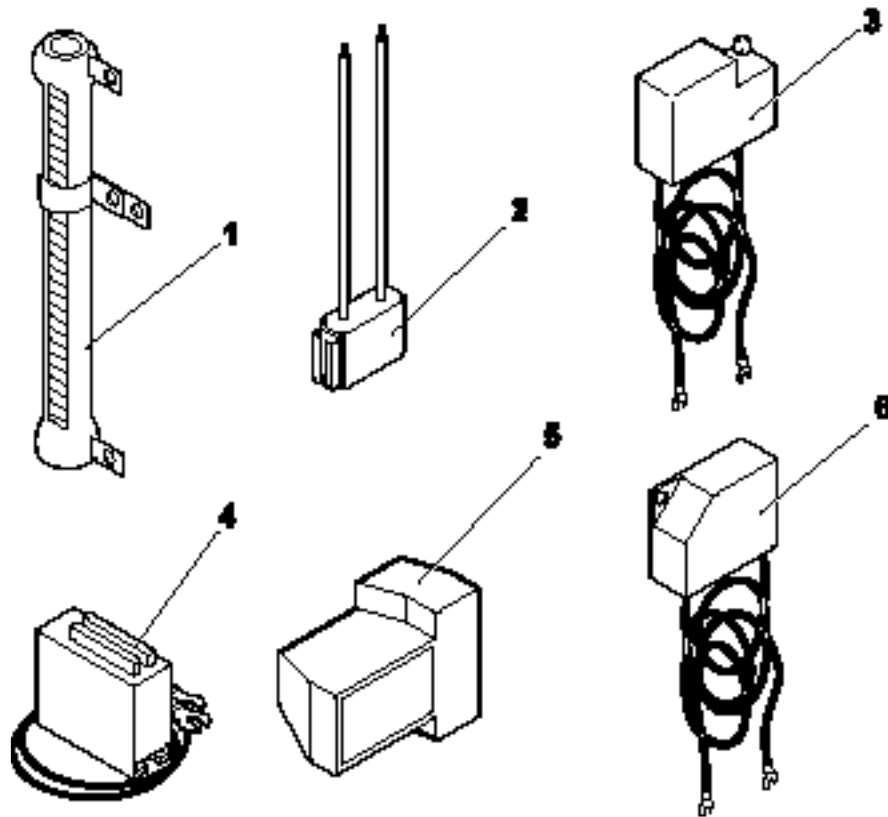
NOTE: (R) in the symbol column refers to rear door application.

Relay and Run Box

10-AAA21270AAA



ALL VINTAGES			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	7003BF1	Box, Run	RB
2	P613BV1	Relay, 200-240 V Site Supply	J1
	P613BV2	Relay, 400-480 V Site Supply	
3	P613BV3	Relay, 550-600 V Site Supply	

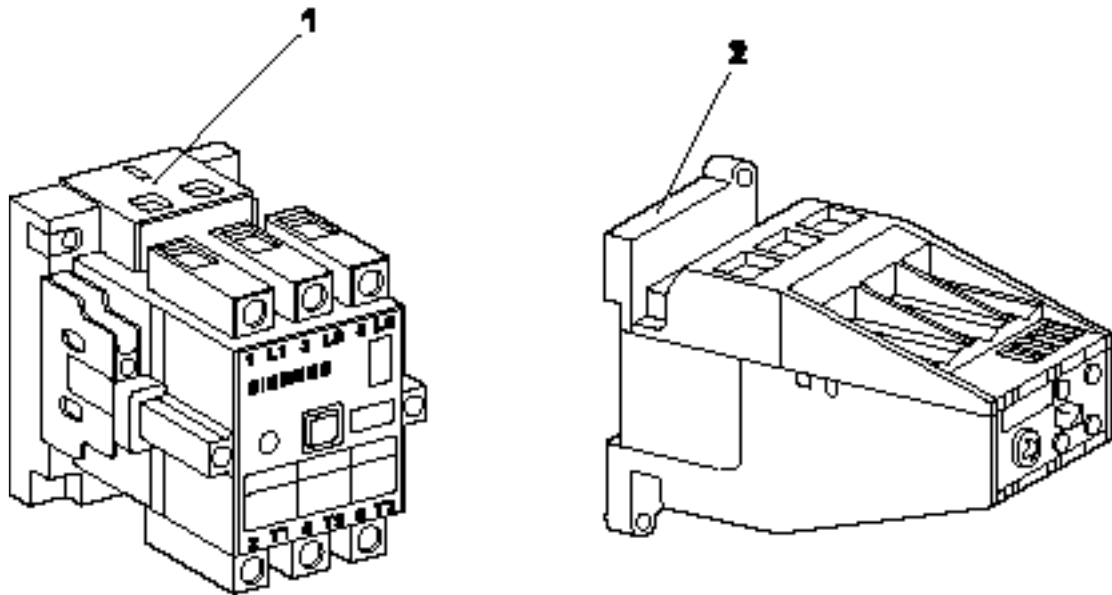






ALL VINTAGES			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	232EG38 AAA617L11	Resister, Power, 150 Ω, 100 W, w/Conductor, 7.38 in. L	B
2	605T3 AAA00605AAA019	Suppressor, Diode, 250 VDC	(R)NDG, (R)DLN
3	605T2 AAA00605AAA018	Suppressor, R-C Network, 110-280 VAC, 0.15 μFD, 613BX Relay	---
4	AAA00605AAA002	Suppressor, RC, 48-127 VAC	(R)DO, (R)DC, (R)DCOP
5	AAA605W2 AAA613CX302 AAA613CX702	Suppressor, R-C Network, 48-127 VAC	L1S, L2S, TDIR, TUIR, (R)DOL, DZ
6	AAA00605AAA004	Suppressor, RC, 48-127 VAC	SW1

NOTE: (R) in the symbol column refers to rear door application.

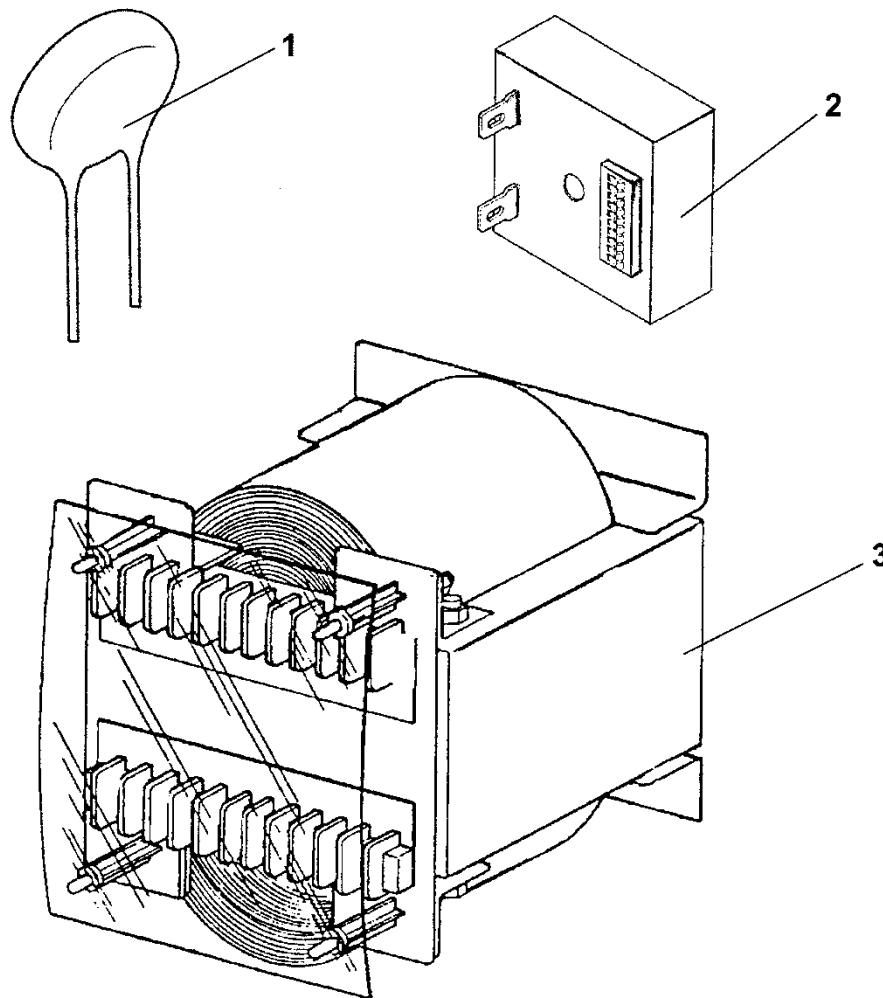
Main Switch & Thermal Overload

10-AAA21270AAA



ALL VINTAGES					
REF. No.	PART No.	DESCRIPTION	SITE SUPPLY (V)	MOTOR H.P.	SYMBOL
1	AAA00613AAE002 AAA638R2 AAA638R107	Switch, Main, NEMA 2,  SPL 10-7151A	200–208	4–12	SW1,  NOTE
			220–240	4.25–12	
			400–480	4–20	
			550–600	4–22	
	AAA638A2 AAA638A110	Switch, Main, NEMA 3,  SPL 10-7151A	200–208	12 & 15	
			220–240	13, 15 & 20	
			400–480	22 & 27	
			550–600	27	
2	AAA637A14	Thermal Overload, 5.0–8.0 A			BT,  NOTE
	AAA637A15	Thermal Overload, 6.3–10 A			
	AAA637A17	Thermal Overload, 10–16 A			
	AAA637A19	Thermal Overload, 16–25 A			
	AAA637A20	Thermal Overload, 20–32 A			
	AAA637A21	Thermal Overload, 25–40 A			
	AAA637A22	Thermal Overload, 32–45 A			
	AAA637A23	Thermal Overload, 40–57 A			
AAA637A24	Thermal Overload, 50–63 A				

NOTE:  page 3 for mounting position.

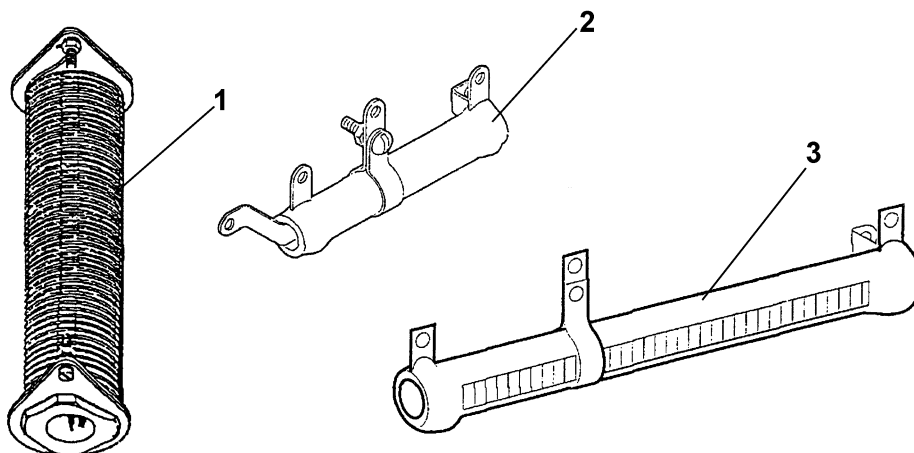


ALL VINTAGES			
REF. No.	PART No.	DESCRIPTION	SYMBOL
1	604F4 AAA605AA30	Suppressor, MOV, 130 VDC (RMS), 20.0 mm Disc ⌀, 120 V Brake	BV
	604F10	Varistor, 230 VDC, 24.0 mm Disc ⌀, 230 V Brake	
2	AAA623AA1	Timer, Delay, 1.5 Sec.	(R) TD
3	AAA00235AAD001	Transformer, Main, 200-240 V Site Supply	MPTRF
	AAA00235AAD002	Transformer, Main, 400-480 V Site Supply	
	AAA00235AAD003	Transformer, Main, 550-600 V Site Supply	

NOTE: (R) in the symbol column refers to rear door application.

Resistors

10-AAA21270AAA




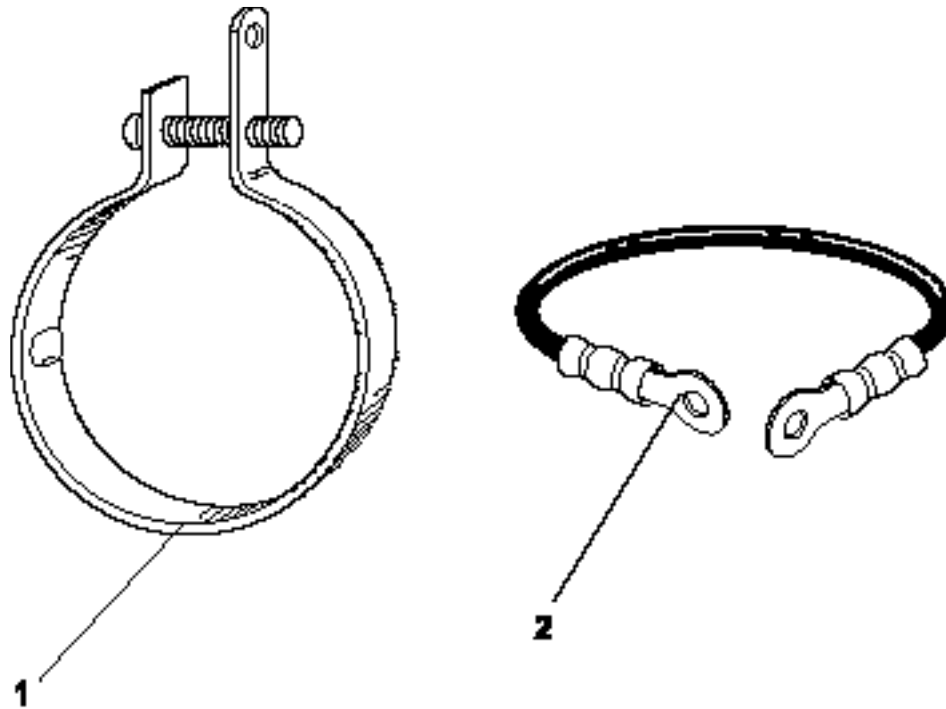
👁 page 20 for resistor accessories and symbols

ALL VINTAGES				
REF. No.	OLD PART No.	NEW PART No.	DESCRIPTION	LENGTH (in.)
1	232AA18	232AA48	Resistor, 14.1 Ω, 400 W	10
2	232B47		Resistor, 75 Ω, 30 W	3
	232B67		Resistor, 75 Ω, 30 W	3
3	AAA232FD8	AAA617H8	Resistor, 25 Ω, 50 W	---
	232EH3	AAA617K8	Resistor, 50 Ω, 225 W	11.25
	232EH6	AAA617K10	Resistor, 250 Ω, 225 W	11.25
	232EH8	AAA617K12	Resistor, 1000 Ω, 225 W	11.25
	232EG4	AAA617L9	Resistor, 50 Ω, 100 W	7.25
	232EG7	AAA617L12	Resistor, 200 Ω, 100 W	7.25
	232EG8	AAA617L13	Resistor, 250 Ω, 100 W	7.25
	AAA232EG14	AAA617L14	Resistor, 300 Ω, 100 W	7.25
	232EG13	AAA617L18	Resistor, 1000 Ω, 100 W	7.25
	AAA232FG10	AAA617L10	Resistor, 100 Ω, 100 W	7.25
	232EG11	AAA617L16	Resistor, 500 Ω, 100 W	7.25
	AAA232FG11	AAA617L11	Resistor, 150 Ω, 100 W	7.25

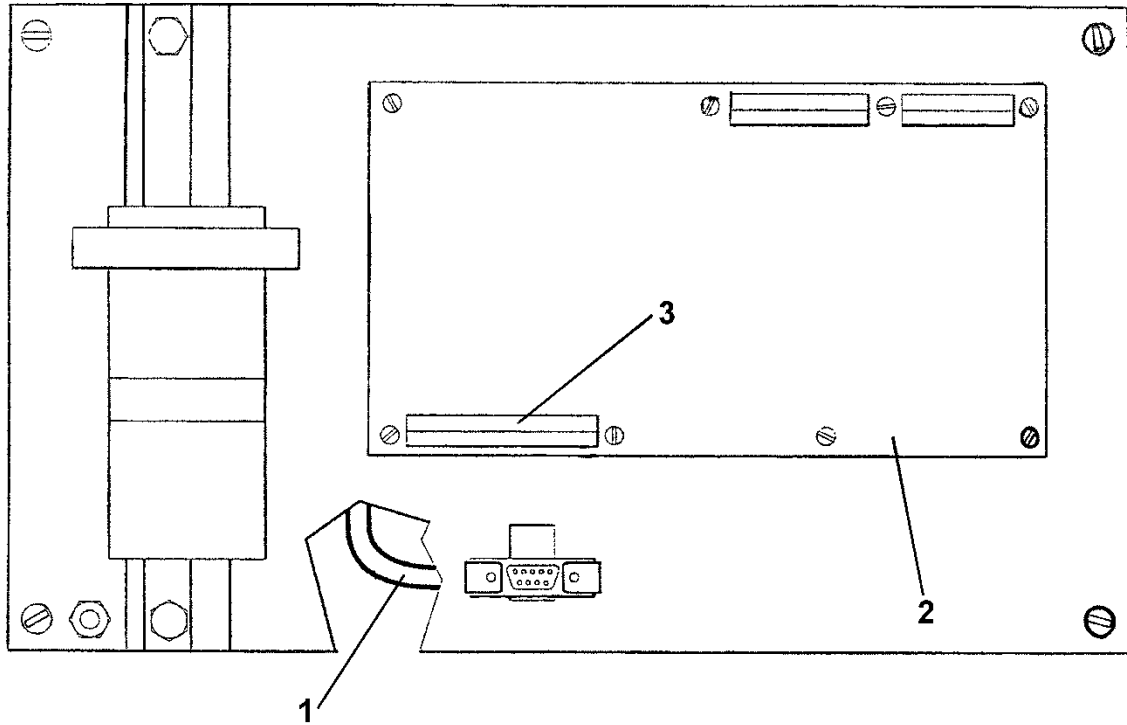
Resistor Accessories & Symbols

OPERATOR TYPE	ALL VINTAGES		SYMBOL	OHMS (Ω)	WATT (W)
	PART No.				
30S	232EG53	AAA617L10	(R)GM1,(R)GM2	100	100
6970RT	232AA18	232AA48	D5, D13	14.1	400
	232EH6	AAA617K10	D1, D3, D4, D4A, D6, D9, D11, D12, D12A, D14	250	225
	232EG39	AAA617L12	D7A, D15A	200	100
	232EG45	AAA617L18	(R)DMF	1000	100
	232EG52	AAA617L9	D2, D10	50	100
	232EH23	AAA617K8	D7, D8, D15, D16	50	225
	---	AAA617H8	RP	25	50
7300	232EG39	AAA617L12	(R)DM6, (R)DM7, (R)DM8	200	100
	232EG59	AAA617L16	(R)DM4, (R)DM5	500	100
	232EG70	AAA617L11	(R)DM1, (R)DM2, (R)DM3	150	100
GAL-MOD	232EH26	AAA617K10	R4, R8	250	225
	232EH36	AAA617K10	R3, R7	250	225
	232EH6	AAA617K10	R2, R6	250	225
	232EH8	AAA617K12	R1, R5	1000	225
	---	AAA617H8	RP	25	50
GAL-MOM/MOH	---	AAA617H8	RP	25	50
O	232EG39	AAA617L12	(R)DM1, (R)	200	100
	232EG53	AAA617L10	(R)DM3, (R)DM4	100	100
	---	AAA617H8	RP	25	50
OVL	232EG40	AAA617L13	(R)DMFR1, (R)DMR3	250	100
	232EG41	AAA617L14	(R)DMR2, (R)DMR4	300	100
	232EG53	AAA617L10	(R)DMRF2	100	100
	---	AAA617H8	RP	25	50
QL	232B47	---	R1A, R5A	75	30
	232B67	---	R1, R5	75	30
	---	AAA617H8	RP	25	50
	232EH23	AAA617K8	R4, R8	50	225
	232EH3	AAA617K8	R2, R6	50	225
	232EH33	AAA617K8	R3, R7	50	225

NOTE: (R) in the symbol column refers to *rear door application*. Resistors are mounted on left side wall of cabinet (facing unit);  p. 4 for layout detail.



ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	AAA232FG103 AAA617L101	Clamp, (lug), Resistor, AAA617L
	AAA617H102	Clamp, (lug), Resistor, AAA617K, AAA617H
	336CV1	Clamp, (lug), Resistor, 232AA
2	175J60	Conductor, AAA617K, AAA617L
	175J2	Conductor, 232B
	175BN9	Conductor, 232AA



ALL VINTAGES		
REF. No.	PART No.	DESCRIPTION
1	AAA174MG1	Assembly, Cable
2	A9689C1	Assembly, Slave Board
3	AAA176FY1	Connector