

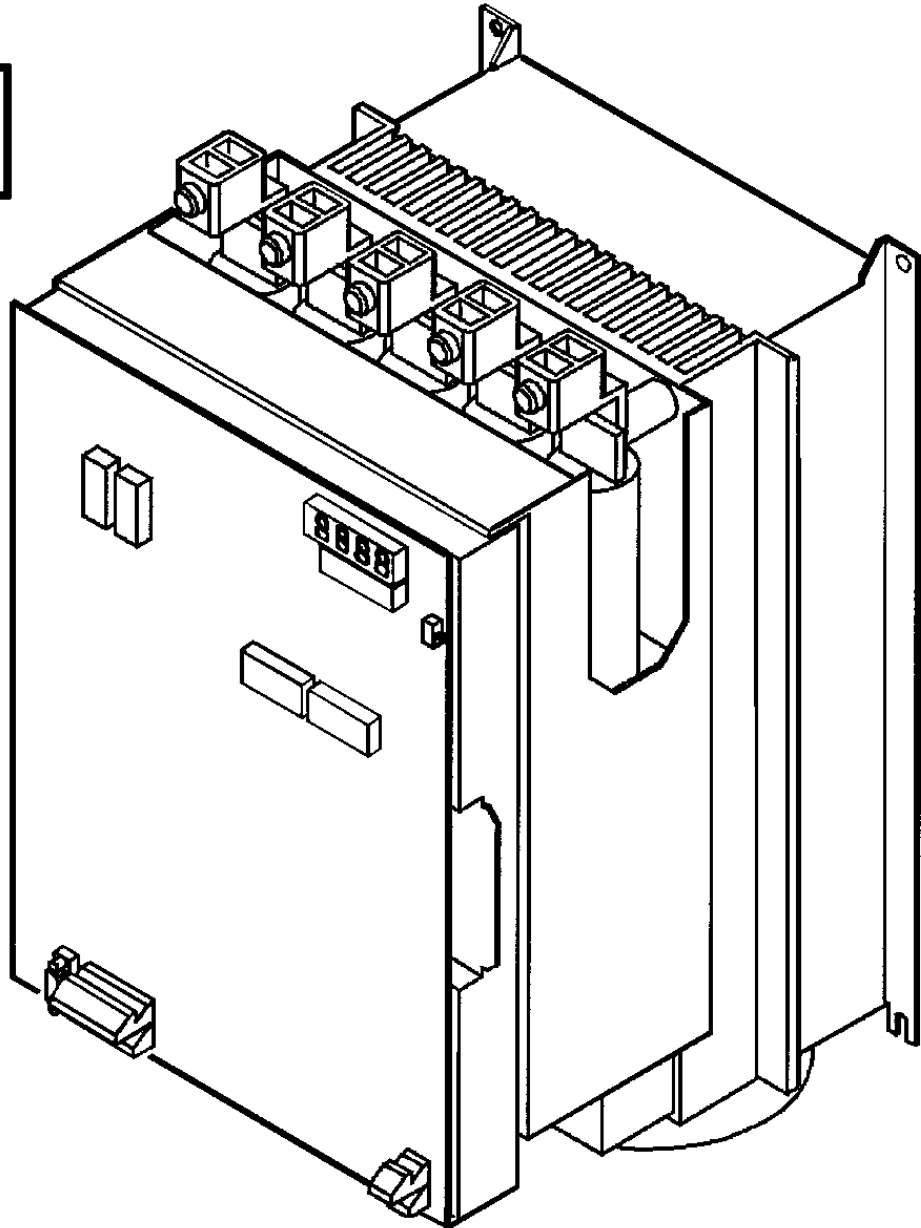
**Power Control Module
Direct Drive**

Spare Parts Leaflet

10-AAA21255J

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**W/O
VINTAGE**



OTIS

This document contains technical data
subject to EAR. ECCN: EAR99

SERVICE ENGINEERING
Otis Elevator Company
Bloomfield, Connecticut USA

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Leaflet Description

This leaflet details the lowest replaceable parts for the power control module direct drive. Currently these drives are applicable to the Elevonic® 411M-MMS (DSD412).

A special version with an analog interface has been developed for use on the E101/401 controllers (DSD401).

Leaflet Revisions

Date Revised	Subject Matter Expert	Reason for Revision
December 1998	Steve Quinlan	New leaflet
October 25, 2001	Anh Pham	Update part numbers, correct mistakes & break up dense pages.
March 27, 2002	Nick Marchitto	Add drive model DSD401 and associated LRUs in support of Elevonic® 101/401 Ward-Leonard changeover to direct drive.
October 5, 2006	Anh Pham	Deleted p/n AAA21255J150 on p. 7
November 20, 2006	Anh Pham	Added p. 8 with Ribbon Cables information
April 4, 2007	Anh Pham	Deleted p/n AAA21255J131 on p. 7
October 30, 2008	Anh Pham	Added parts on pages 5 and 10.
August 15, 2012	Chris Koenig	Added 1 part number in ref. 1 on p. 8
October 17, 2012	Anh Pham	Corrected ref. 2 on p. 7 and ref. 2 on p. 9
July 17, 2013	Chris Koenig	Added p/n AAA21255J23 on pp. 4–5
November 16, 2016	Chris Koenig	Updated part numbers on pp. 6–7
September 21, 2022	Juan Murillo	Updated to include OBSOLESCENCE note on cover
January 18, 2023	Juan Murillo	Updated to remove OBSOLESCENCE note on cover

Related Drawings

Drawing No.	Title	Drawing No.	Title
AAA21255J	Direct Drive Assembly		

(Continued on next page)

History (Continued)

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Related Documents

Document ID	Title
SPL 10-AAA21255V	E411M-MS Controller
51695	Procurement Specification
TIP 8.3-9	Direct Drive Replacement for E101/401 Direct Drive
TIP 8.3-10	Installation and Converting E401 MG to a Direct Drive
TIP 1.1.26.0-1	Tuning the DSD-412

Subject Matter Expert

Name	Department
Chris Koenig	OSC Service Engineering

About Spare Parts Leaflets...

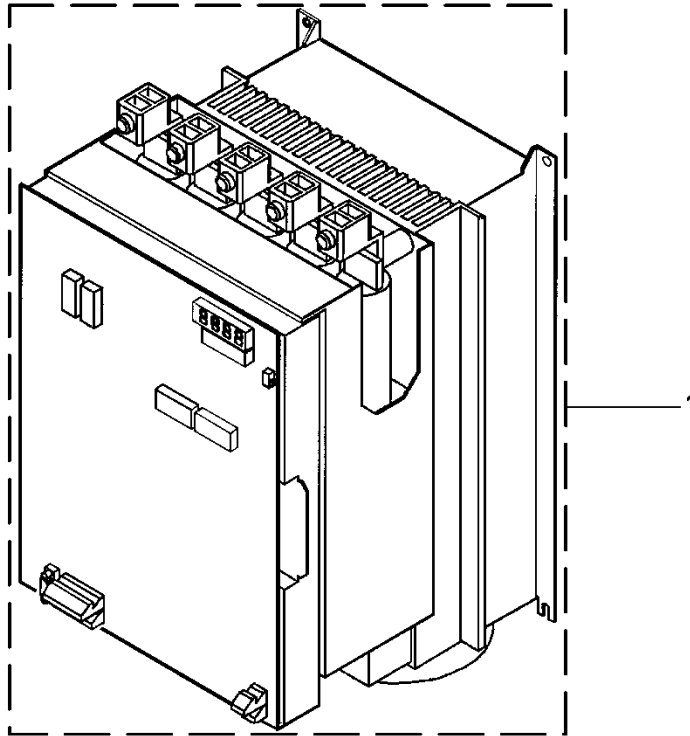
This document lists the lowest replaceable units (LRUs) for the standard version of the product. The LRUs are chosen by a team of Otis associates representing engineering and manufacturing.

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.

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Direct Drive Assemblies



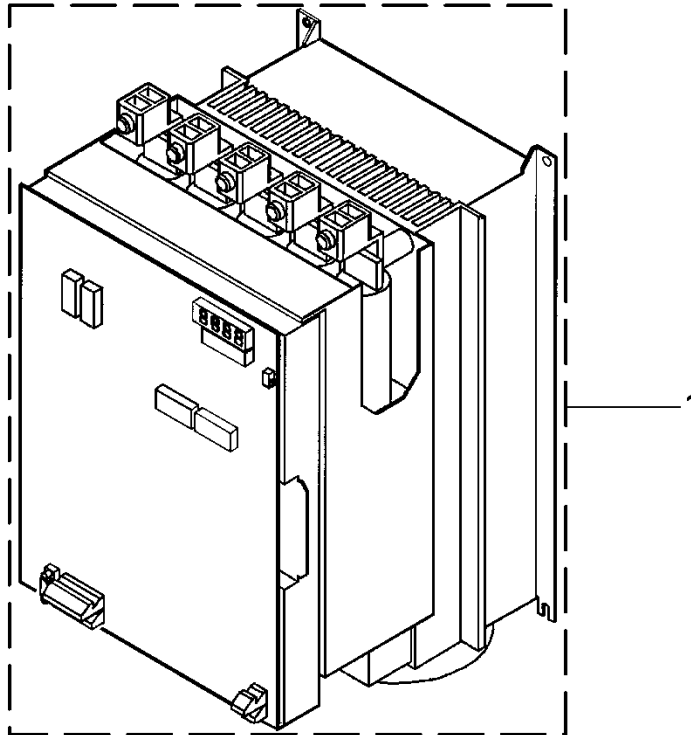
W/O VINTAGE

REF. No.	OTIS PART No.	MFR. PART No.	DRIVE MOTOR CURRENT (AMPS)	MOTOR FIELD RANGE (AMPS)	USED ON	
1	AAA21255J4	53ST0600-1_10	100	0.2–1.9	DSD412	
	AAA21255J5	53ST0600-1_40	100	2.0–9.6		
	AAA21255J6	53ST0600-1_50	100	9.7–16.0		
	AAA21255J14	53ST0600-1A00	100	0.2–40.0		
	AAA21255J1	53ST1250-1_40	190	2.0–9.6		
	AAA21255J2	53ST1250-1_50	190	9.7–16.0		
	AAA21255J3	53ST1250-1_10	190	0.2–1.9		
	AAA21255J12	53ST1250-1_70	190	16.1–30.0		
	AAA21255J7	53ST1250-1_80	190	30.1–48.0		
	AAA21255J15	53ST1250-1A00	190	0.2–40.0		
	AAA21255J8	53ST2000-1_10	300	0.2–1.9		
	AAA21255J9	53ST2000-1_40	300	2.0–9.6		
	AAA21255J10	53ST2000-1_50	300	9.7–16.0		
	AAA21255J13	53ST2000-1_70	300	16.1–30.0		
	AAA21255J11	53ST2000-1_80	300	30.1–48.0		
	AAA21255J16	53ST2000-1A00	300	0.2–40.0		
	AAA21255J23	53SX2000-1A00	300	0.2–40.0		600V / DSD412

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Direct Drive Assemblies

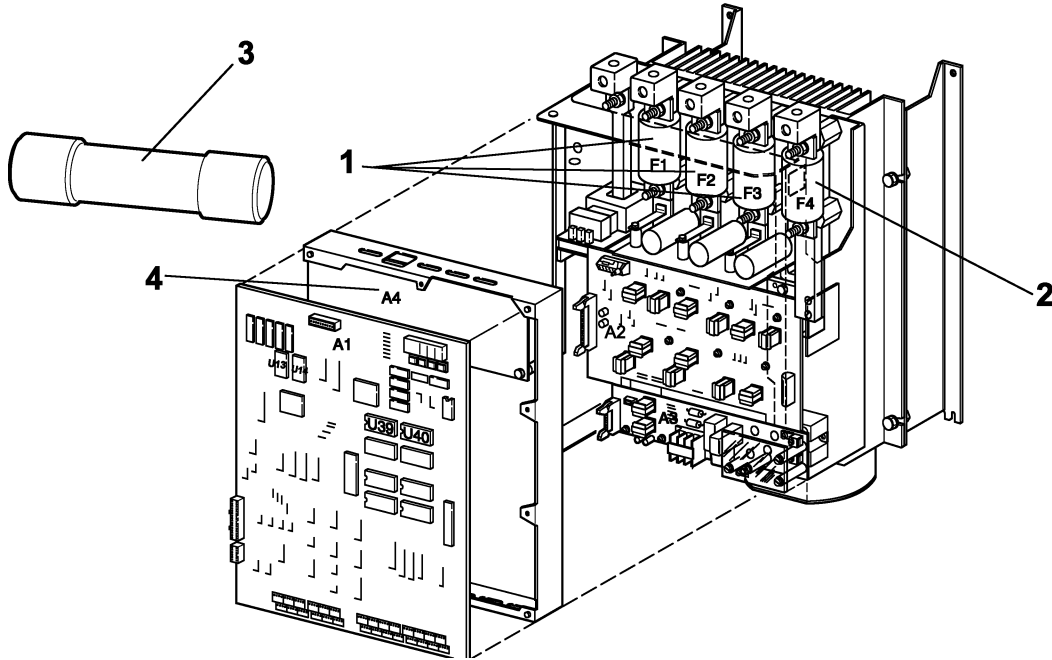
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W/O VINTAGE					
REF. No.	OTIS PART No.	MFR. PART No.	DRIVE MOTOR CURRENT (AMPS)	MOTOR FIELD RANGE (AMPS)	USED ON
1	AAA21255J20	53ST1258-3ANO	190	---	DSD401
	AAA21255J21	53ST2008-3ANO	300	---	
	AAA21255J17	53ST060A-1F00	100	0.2–40.0 A	E411MC
	AAA21255J18	53ST125A-1F00	190		
	AAA21255J19	53ST200A-1G00	300		
	AAA21255J23	53SX200A-1G00	300	0.2–40.0 A	600 V / E411MC

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Fuses

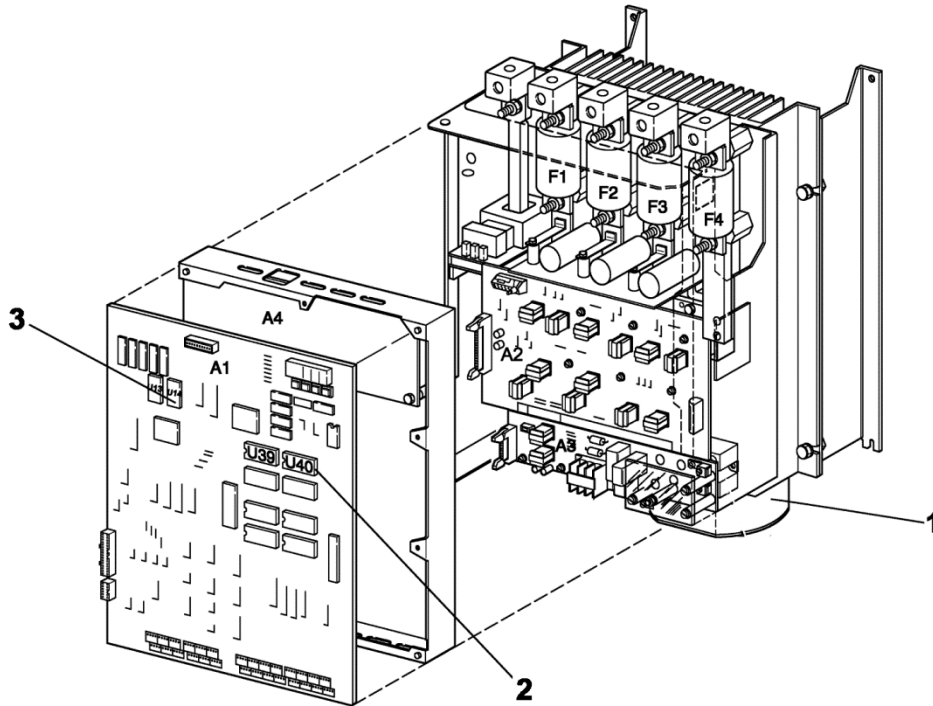


W/O VINTAGE					
REF. No.	OTIS PART No.	MFR. PART No.	DESCRIPTION	SYMBOL	USED ON
1	AAA21255J102	05P00017-0220	Fuse, 250 A, 700 V, W → 190 A Drive	F1 - F3	DSD401 & DSD412
	AAA21255J116 P375AV2 AAA375CD24	05P00017-0166	Fuse, 150 A, 700 V, W → 100 A Drive	F1 - F3	DSD412
	AAA21255J122	05P00017-0234	Fuse, 400 A, 700 V, W → 300 A Drive	F1 - F3	DSD401 & DSD412
2	AAA21255J103	05P00017-0366	Fuse, 300 A, 700 V, W → 190 A Drive	F4	DSD412
	AAA21255J117 P375AV4 AAA375CD23	05P00017-0179	Fuse, 200 A, 700 V, W → 100 A Drive	F4	DSD412
	AAA21255J123	05P00017-0235	Fuse, 500 A, 700 V, W → 300 A Drive	F4	DSD401 & DSD412
3	AAA375BY8	GDC - 2A	Fuse, 2 A, 250 V, Slow Blow (to A4), NOTE	F1	DSD401 & DSD412
4	AAA21255J106	05P00090-0293	Supply, Power, w/115 V Logic	A4	

NOTE: Fuse AAA375BY8, is located on power supply, p/n AAA21255J106.

Fan and Software

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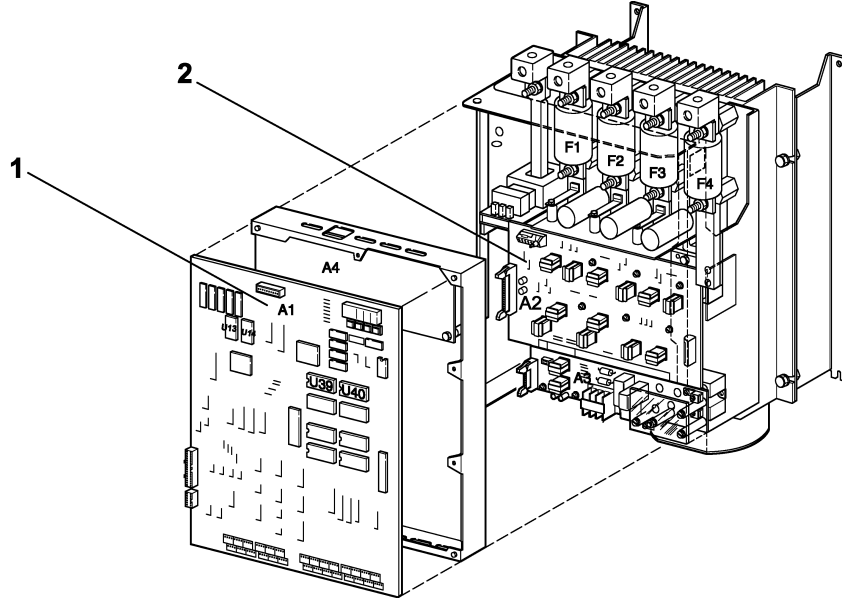
W/O VINTAGE					
REF. No.	OTIS PART No.	MFR. PART No.	DESCRIPTION	SYMBOL	USED ON
1	AAA21255J101	05P00016-0012	Fan, 250 cfm, 115 V, 190 A Drive	B1	DSD412 & DSD401
	AAA21255J115	05P00016-0043	Fan, 105 cfm, 115 V, 100 A Drive	B1	DSD412
	AAA21255J137	05P00016-0048			
	AAA21255J130	05P00016-0008	Fan, 550 cfm, 115 V, 300 A Drive	B1	DSD412 & DSD401
*	AAA21255J114	46S03017-0010	PCB, Snubber Capacitor (w/190 A). Not shown	A5	DSD412 & DSD401
	AAA21255J121	46S03020-0030	PCB, Snubber Capacitor (w/100 A). Not shown	A5	DSD412
	AAA21255J129	46S03089-0010	PCB, Snubber Capacitor (w/300 A). Not shown	A5	DSD412 & DSD401
2	AAA30190AAD AAA30190AAE	---	Software (burned on AAA616LX3 chip), Drive Control PCB, Latest Version, See NOTE	U39, U40	DSD412
3	AAA30191AAE AAA30191AAF	---	Software (burned on AAA616KH1 chip), Drive Control PCB, Latest Version, See NOTE	U13, U14	

* Parts not shown.

NOTE: Contact OSC Customer Service for the latest software version.

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PC Boards



W/O VINTAGE					
REF. No.	OTIS PART No.	MFR. PART No.	DESCRIPTION	SYMBOL	USED ON
1	AAA21255J109	46S02975-0102	PCB, Drive Control	A1	DSD412
		46S02975-0103			
	AAA21255J151	46S02975-0303	PCB, Drive Control	A1	DSD401
2	AAA21255J110	46S02976-0030	PCB, Armature Interface W 190 A Drive, NOTE 1	A2	DSD401 & DSD412
	AAA21255J120	46S02976-0020	PCB, Armature Interface W 100 A Drive, NOTE 1	A2	
	AAA21255J132	46S02976-0032	PCB, Armature Interface, NOTE 1	A2	
	AAA21255J148	46502976-0032-125OT	Upgrade Kit, Armature Interface PCB, 100 A and 190 A, NOTE 1	A2	DSD401 & DSD412
	AAA21255J124	46S03088-0010	PCB, Armature Interface, W 300 A Drive, NOTE 2	A2	
	AAA21255J133	46S03088-0012	PCB, Armature Interface, NOTE 2	A2	
	AAA21255J149	46503088-0012-200OT	Upgrade Kit, Armature Interface PCB, 300 A, NOTE 2	A2	

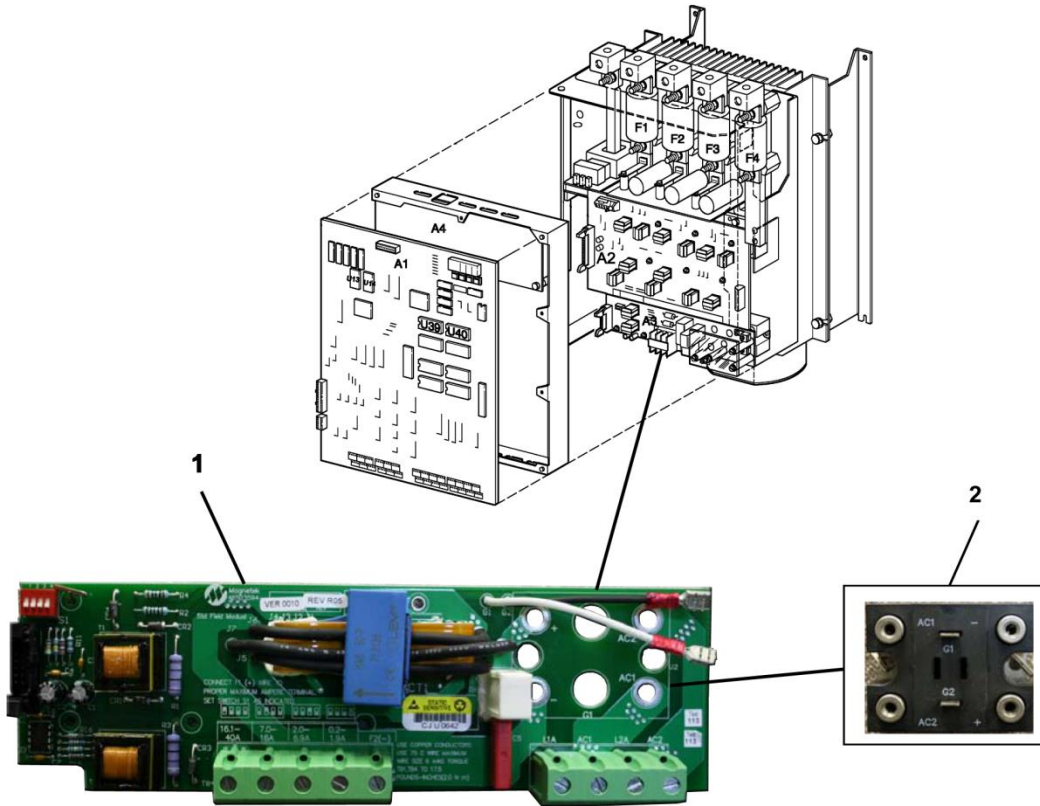
NOTE 1: Armature interface boards are replaced by universal PCB, Otis p/n AAA21255J132.
If you are replacing an old version board, order the upgrade kit, Otis p/n AAA21255J148.

NOTE 2: Armature interface boards are replaced by universal PCB, Otis p/n AAA21255J133.
If you are replacing an old version board, order the upgrade kit, Otis p/n AAA21255J149

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PC Boards

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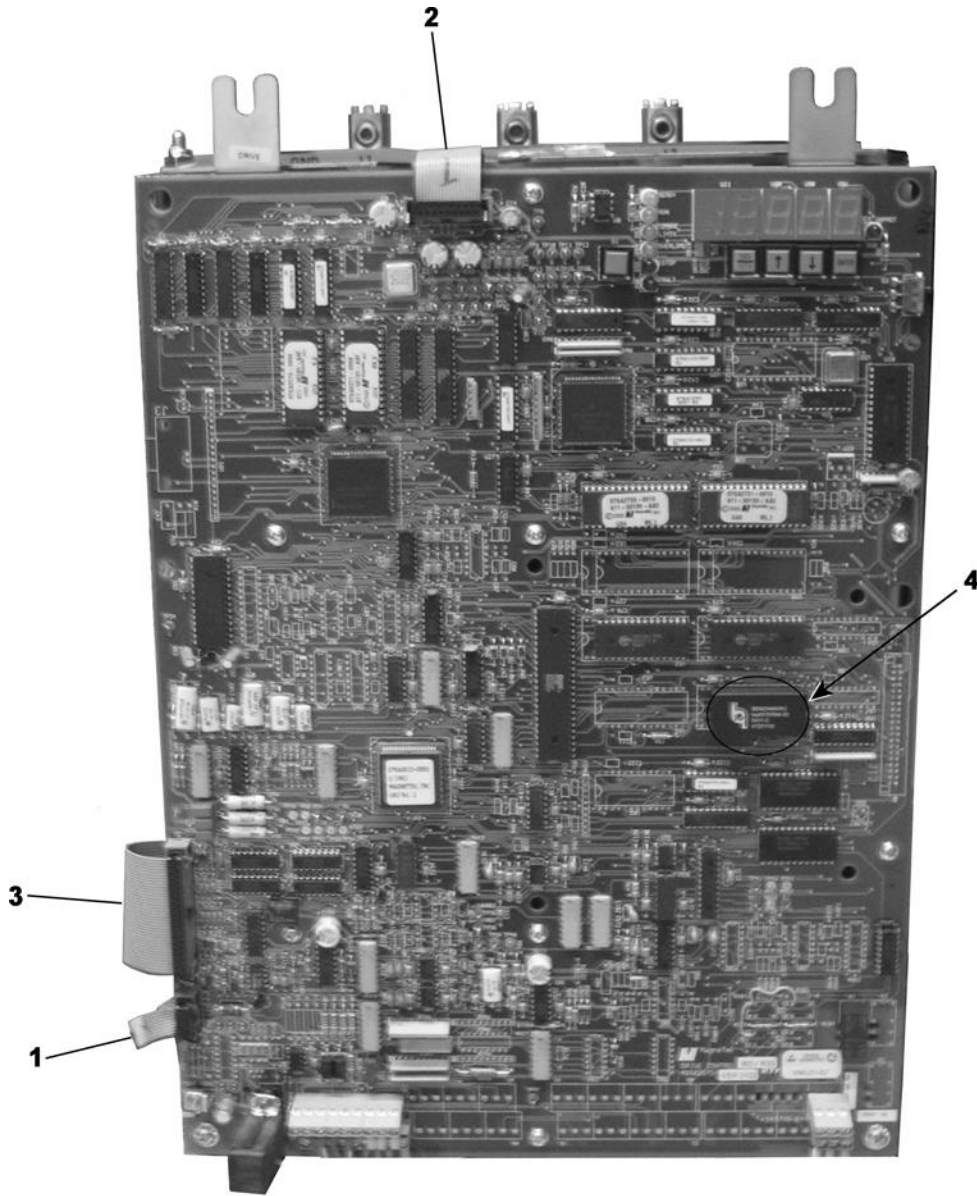
REF. No.	W/O VINTAGE OTIS PART No.	MFR. PART No.	DESCRIPTION	SYMBOL	USED ON
1	AAA21255J111	46S03046-0010	PCB, Motor Field Interface, 0.2 - 1.9 A, NOTE 1 & 2	A3	DSD412
	AAA21255J112	46S03046-0040	PCB, Motor Field Interface, 2.0 - 6.9 A, NOTE 1 & 2	A3	
	AAA21255J113	46S03046-0050	PCB, Motor Field Interface, 7.0 - 16.0 A, NOTE1 & 2	A3	
	AAA21255J125	46S03046-0070	PCB, Motor Field Interface, 16.1 - 30 A, NOTE 1 & 2	A3	
	AAA21255J126	46S03046-0080	PCB, Motor Field Interface, 30.1 - 48.0 A, NOTE1 & 2	A3	
	AAA21255J150	46S03594-0010	PCB, Motor Field Interface, 0.2 - 40.0 A, NOTE 3	A3	
*	AAA21255J152	46S3650-0010	PCB, Signal Interface Board.	A3	DSD401
2	AAA21255J147	05P00050-0523	Module, SCR Field Control	Q7	DSD412

* Part not shown.

- NOTE:**
1. Motor field interface boards are replaced by universal PCB, Otis p/n AAA21255J150.
 2. A separate SCR, Otis p/n AAA21255J147 must be ordered with AAA21255J150 when it is being used as replacement for the old version board.
 3. A separate SCR, Otis p/n AAA21255J147 may be ordered when AAA21255J150 order.

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Ribbon Cables



W/O VINTAGE				
REF. No.	OTIS PART No.	MFR. PART No.	DESCRIPTION	USED ON
1	AAA21255J140	05P00034-0762	Cable, Ribbon, 10-Position, for 100 A Drive	DSD412
	AAA21255J141	05P00034-0750	Cable, Ribbon, 10-Position, for 190 A Drive	
	AAA21255J142	46S03396-0080	Cable, Ribbon, 10-Position, for 300 A Drive	
2	AAA21255J143	05P00034-0751	Cable, Ribbon, 20-Position	
3	AAA21255J144	05P00034-0752	Cable, Ribbon, 40-Position	
4	---	LA5P226-0392	Chip, Batram	---