

VS mini J7 to J1000 Replacement Instructions

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1 Applicable Drives

This document describes the substitution of the following drives:

Original drive: CIMR-J7AZxxxx

Spec: xxxx0 (IP20)

Software Version: Standard 001x, 002x

High Carrier Frequency 14.5 kHz 506X

Replacement: CIMR-JZAxxxxxx

The replacement drive must be selected using the Heavy Duty rating.

The description is not valid for drives with other specs or other firmware installed!

2 Drive Replacement Checklist

	Item	Checkpoints	Checked?
Hardware	Basic	<p>< Digital operator panel ></p> <ul style="list-style-type: none"> * Does the digital operator panel need to be at the same position as before? <ul style="list-style-type: none"> o If necessary try to readjust the position in order to have the operator panel at the same location as before. * Was a remote operator panel connected to the old unit? <ul style="list-style-type: none"> o If so, never connect the old remote operator panel to the J1000. Replace existing remote operators by the new type. See part 5 of this manual for options replacement. 	
		<p>< Special specifications ></p> <ul style="list-style-type: none"> * Check the installed drives specification to make sure, that it is compliant to the standard specification (no special firmware, ...) 	
	Main and control terminals	<p>< Wire Length ></p> <ul style="list-style-type: none"> * In the J7 drive main terminals are located at the top of the drive. The J1000 drive has all main terminals at the bottom. Check if all cables are long enough to be connected without tension to the new unit. 	
<p>< Main circuit wires and terminal specifications ></p> <ul style="list-style-type: none"> * Compare the occupied terminals of the old unit with the new drives terminals (shape, size, etc.) and check if the wires fit in the new unit's terminals using part 3 of this document. 			
Software	Software version	<p>< Check for special software ></p> <ul style="list-style-type: none"> * Check the software number in the old to be sure that it can be replaced by the J1000 drive. Also refer to 6.3. <ul style="list-style-type: none"> o If necessary, ask your dealer for identifying the software installed on drive that has to be replaced and for further replacement instructions. 	

Software	Parameter	<p>< Check the parameter settings ></p> <ul style="list-style-type: none"> * If possible read out the parameter settings of the old unit and perform a parameter transformation to the new parameters following part 6 of this book. * If there is special software installed or parameters that are not mentioned in this book appear, contact your dealer. 	
Options, Others	Communi- cation Option	<p>< Is an option card is installed? ></p> <ul style="list-style-type: none"> * Check if any communication option is installed. <ul style="list-style-type: none"> o If a communication option is installed, get the equivalent part for the J1000. o Never try to apply J7 options to J1000 unit. o Communication cable connectors from J7 options can be used on J1000 options without rewiring. 	
		<p>< Is an AC or DC reactor installed? ></p> <ul style="list-style-type: none"> * AC or DC chokes installed with a J7 can be used with a J1000 and have not to be changed (only for same capacity like the installed J7). Before connecting it, make sure that it works properly. 	
		<p>< Is an EMC Filter installed? ></p> <ul style="list-style-type: none"> * EMC filters installed with a J7 can partially used with a J1000. For details on filter replacement contact your sales agent. Before using the old J7 filter in combination with the J1000, make sure the filter is free from any damage. <p>< Extension Cables ></p> <ul style="list-style-type: none"> * The extension cables for remote operation can continued to be used, but the remote operator and the remote operator interface have to be replaced! 	

- Refer to the instruction manual for questions about installation, parameter settings or detailed parameter / function descriptions
- In case of technical questions regarding the replacement please contact your dealer.

3 Terminals

3.1 Main circuit terminals

- As the VS mini J7 and J1000 may have different terminals sizes (depending on capacity), this point has to be carefully checked before the replacement (see 3.4).

J7 Main terminals	J1000 Main terminals	Note
R/L1	R/L1	Power supply connection. Note: In the J7 the power supply terminals are located at the top of the drive. In the J1000 they are located at the bottom. Make sure the cables fit without tension. Replace or extend them if needed.
S/L2	S/L2	
T/L3	T/L3	
U/T1	U/T1	Drive output
V/T2	V/T2	
W/T3	W/T3	
-	B1	Braking resistor or external braking chopper connection
-	B2	Braking resistor connection
+1	+1	DC Reactor connection, DC power supply input
+2	+2	DC Reactor connection
-	-	DC power supply input, external braking chopper connection
⊕	⊕	Ground connector (ground with <100Ohm for 200 V class and < 10 Ohm for 400 V class)

3.2 Control Terminals, Signal Levels

Terminal		Function	Signal Level	
J7	J1000		J7	J1000
S1		Multi function input 1 (1: Run forward 0: Stop)	Photo coupler isolation 24 Vdc, 8 mA	Photo coupler 24 Vdc, 8 mA
S2		Multi function input 2 (1: Run reverse 0: Stop)		
S3		Multi function input 3 (J7: Fault Reset / J1000: Ext. Fault)		
S4		Multi function input 4 (J7: Ext. Fault / J1000: Fault Reset)		
S5		Multi function input 5 (Multi speed 1)		
SC		Multi function input common	-	-
FS	+V	Analog input power supply	+12 Vdc, max. 20 mA	+10.5 Vdc, max. 20 mA
FR	A1	Analog input 1 (frequency reference)	0-10 Vdc (20 kΩ), 0 or 4-20 mA (250 Ω),	0-10 Vdc (20 kΩ), 0 or 4-20 mA (250 Ω)
FC	AC	Analog input common	0V	
MA		Change over contact output (NO) (Fault)	Max. load 250 Vac 1 A max. 30 Vdc 1 A max.	Max. load 250 Vac 10 mA~1A 30 Vdc 10 mA~1A
MB		Change over contact output (NC) (Fault)		
MC		Change over contact output common		
AM		Analog output	0-10 Vdc, max. 2 mA	0-10 Vdc, max. 2 mA
AC		Analog output GND	Resolution 8 Bit	Resolution 8 Bit

3.3 DIP Switches

When replacing a J7, make sure to set the DIP switches S1 and S3 on the J1000 properly.

Function	J7		J1000	
	Switch	Default	Switch	Default
NPN/PNP selection	SW7	NPN	S3	NPN
Analog input 1 level sel.	SW8	Voltage	S1	Voltage

3.4 Main Terminal Size/ Electric Wire Differences

The J7 has main terminals at the top and at the bottom whereas the J1000 has all main terminals at the bottom. When replacing a J7 by a J1000 make sure that all wires are long enough and can be connected to the J1000 with out tension.

⊕ = Ground terminal

Voltage class	Drive	Model	Terminal Symbol	Screw Size	Tightening Torque (Nm)	Wire Size (mm ²)	Recommended Wire Size (mm ²)
Single-Phase 200V	J7	B0P1 B0P2 B0P4	R/L1,S/L2, -,+1,+2, ⊕	M3.5	0.8~1.0	0.75~2.0	2
			U/T1,V/T2,W/T3,		1.24		
	J1000	B0P1 B0P2 B0P4	R/L1,S/L2, U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)		0.8~1.0		
			J7	B0P7	R/L1,S/L2, U/T1,V/T2,W/T3, -,+1,+2, ⊕	M3.5	0.8~1.0
	2.0~5.5	2					
	J1000	B0P7	R/L1,S/L2, U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)	M4	1.2~1.5	2	
			J7	B1P5	R/L1,S/L2, U/T1,V/T2,W/T3, -,+1,+2, ⊕	M3.5	0.8~1.0
	2.0~5.5	2					
J1000	B1P5	R/L1,S/L2, U/T1,V/T2,W/T3, ⊕(2 terminals) -,+1,+2,B1,B2	M4	1.2~1.5	3.5		
		5.5					
Three-Phase 200V	J7	20P1 20P2 20P4 20P7	R/L1,S/L2,T/L3, -,+1,+2,⊕	M3.5	0.8~1.0	0.75~2.0	2
			U/T1,V/T2,W/T3,		1.24		
	J1000	20P1 20P2 20P4 20P7	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)		0.8~1.0		
			J7	21P5	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2, ⊕	M3.5	0.8~1.0
J1000	21P5	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)			M4		
		3.5					

Voltage class	Drive	Model	Terminal Symbol	Screw Size	Tightening Torque (Nm)	Wire Size (mm ²)	Recommended Wire Size (mm ²)
	J7	22P2	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2, ⊕	M3.5	0.8~1.0	2.0~5.5	3.5
	J1000	22P2	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)	M4	1.2~1.5		
	J7	24P0	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2, ⊕	M4	1.2~1.5	2.0~5.5	5.5
	J1000	24P0	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)				
Three-Phase 400V	J7	40P2 40P4 40P7 41P5	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2, ⊕	M3.5	0.8~1.0	2.0~5.5	2
	J1000	40P2 40P4 40P7 41P5	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕ (2 terminals)	M4	1.2~1.5		
	J7	42P2	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2, ⊕	M4	1.2~1.5	2.0~5.5	2
	J1000	42P2	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)				
	J7	43P0 44P0	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2 ⊕	M4	1.2~1.5	2.0~5.5	2 3.5
	J1000	43P0 44P0	R/L1,S/L2,T/L3 U/T1,V/T2,W/T3, -,+1,+2,B1,B2, ⊕(2 terminals)	M4	1.2~1.5	2.0~5.5	2 3.5

3.5 Control terminal sizes and wire sizes

Voltage class	Drive	Terminal Symbol	Screw Size	Tightening Torque (Nm)	Wire Size (mm ²)	Recommended Wire Size (mm ²)
All	J7	S1-S5, SC, FS, FR, FC, AM,AC	M2	0.22~0.25	flexible: 0.5 ~0.75 solid: 0.5 ~1.25	0.75
	J1000	S1-S5, SC, V+, A1, AC, AM,AC			flexible: 0.25 ~1.0 solid: 0.25 ~1.5	
	J7	MA,MB,MC	M3	0.5~0.6	flexible: 0.5 ~1.25 solid: 0.5 ~1.25	0.75
	J1000				flexible: 0.25 ~1.5 solid: 0.25 ~1.5	

4 Dimensions

The table below shows differences in the dimensions of J7 and J1000 and required parts for drive replacement. (J7 dimensions are without potentiometer knob).

Voltage class	J7 CIMR- J7AZ□	J1000 JZA□	J7 (unit: mm)			J1000 (unit: mm)			Mechanical Mounting Adapter
			W	H	D	W	H	D	
Single Phase 200V	B0P10	B0P10	68	128	70	68	128	76	Not required
	B0P20	B0P20			112			118	
	B0P40	B0P40			129			137.5	
	B0P70	B0P70	108		108	154			
	B1P50	B1P50							
Three Phase 200V	20P10	20P10	68	128	70	68	128	76	Not required
	20P20	20P20			102			108	
	20P40	20P40			122			128	
	21P50	21P50	108		108	129		137.5	
	22P20	22P20							
	23P70	24P00	140		140	143			
	Three Phase 400V	40P20	40P20		108	128		81	
40P40		40P40	99	99					
40P70		40P70	129	137.5					
41P50		41P50	154	154					
42P20		42P20							
43P00		43P00	140	140	143		100-036-355		
43P70		44P00					Not required		

5 Options Replacement

Refer to the table below for an overview about the replacement of options, which might be installed at the drive that has to be replaced. Replace an option only by the appropriate new type and never try to apply any not mentioned option or J7 option to the J1000.

Type	Description	J7	J1000
Serial communications	Interface for Remote operator	SI-232/J7	SI-232/J
	Interface for RS-232 PC communication (Memobus)	SI-232/J7C	SI-232/JC
	Interface for RS-422/485 communication (Memobus)	SI-485/J7	SI-485/J
Operator panel	Remote operator without potentiometer	JVOP-146	JVOP-182
	Remote operator with potentiometer	JVOP-144	not available
	Extension cable 1 m	WV001	WV001
	Extension cable 3m	WV003	WV003
Potentiometer Option	To use a potentiometer on the drive for setting up the frequency reference.	Built in	AI-V3/J
DIN rail mounting	Used to mount the drive on a DIN rail.	EZZ08122x	Use the same. When replacing a J7xA43P0 by a JA4A0009 a different DIN rail mounting kit is required!
AC reactors		UZBA-B	same as J7
DC reactors		UZDA-B	same as J7

6 Parameter Settings

6.1 J7 to J1000 Parameter Correspondence for Drive Replacement

- Before setting up other parameters, make sure that C6-01 is set to "0" (Heavy Duty). Refer to the Technical manual for details on the Normal and Heavy Duty selection.
- The given voltage values are valid for 200 V units. For 400 V units the values have to be doubled.

Drive Function/ Parameter	J7		J1000		Comments														
	Parameter No.	Initial Value	Parameter No.	Initial Value															
Parameter access level	n01	1	A1-01	2	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n01→0</td> <td>A1-01→0</td> </tr> <tr> <td>n01→1</td> <td>A1-01→2</td> </tr> <tr> <td>n01→5</td> <td>A1-01→2 b1-08→1</td> </tr> <tr> <td>n01→6</td> <td>o4-11→1</td> </tr> <tr> <td>n01→8</td> <td>A1-03→2220</td> </tr> </tbody> </table>	J7	J1000	n01→0	A1-01→0	n01→1	A1-01→2	n01→5	A1-01→2 b1-08→1	n01→6	o4-11→1	n01→8	A1-03→2220		
J7			J1000																
n01→0			A1-01→0																
n01→1			A1-01→2																
n01→5	A1-01→2 b1-08→1																		
n01→6	o4-11→1																		
n01→8	A1-03→2220																		
Initialization	A1-03	0																	
Run Command in Programming Mode	b1-08	0																	
Fault history U2 initialization	o4-11	0																	
RUN command source selection	n02	0	b1-02	1	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n02→0</td> <td>b1-02→0</td> </tr> <tr> <td>n02→1</td> <td>b1-02→1</td> </tr> <tr> <td>n02→2</td> <td>b1-02→2</td> </tr> </tbody> </table>	J7	J1000	n02→0	b1-02→0	n02→1	b1-02→1	n02→2	b1-02→2						
J7	J1000																		
n02→0	b1-02→0																		
n02→1	b1-02→1																		
n02→2	b1-02→2																		
Frequency reference source selection	n03	0	b1-01	1	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n03→0</td> <td>b1-01→3 (AI-V3/J option required)</td> </tr> <tr> <td>n03→1</td> <td>b1-01→0</td> </tr> <tr> <td>n03→2</td> <td>b1-01→1 and H3-01→0</td> </tr> <tr> <td>n03→3</td> <td>b1-01→1 and H3-01→2</td> </tr> <tr> <td>n03→4</td> <td>b1-01→1 and H3-01→3</td> </tr> <tr> <td>n03→6</td> <td>b1-01→2 (SI-485/J option required)</td> </tr> </tbody> </table> <p>When using A1 as frequency reference input, make sure to set DIP switch S1 properly (voltage or current input).</p>	J7	J1000	n03→0	b1-01→3 (AI-V3/J option required)	n03→1	b1-01→0	n03→2	b1-01→1 and H3-01→0	n03→3	b1-01→1 and H3-01→2	n03→4	b1-01→1 and H3-01→3	n03→6	b1-01→2 (SI-485/J option required)
J7	J1000																		
n03→0	b1-01→3 (AI-V3/J option required)																		
n03→1	b1-01→0																		
n03→2	b1-01→1 and H3-01→0																		
n03→3	b1-01→1 and H3-01→2																		
n03→4	b1-01→1 and H3-01→3																		
n03→6	b1-01→2 (SI-485/J option required)																		
Stop method selection	n04	0	b1-03	0	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n04→0</td> <td>b1-03→0</td> </tr> <tr> <td>n04→1</td> <td>b1-03→1</td> </tr> </tbody> </table>	J7	J1000	n04→0	b1-03→0	n04→1	b1-03→1								
J7	J1000																		
n04→0	b1-03→0																		
n04→1	b1-03→1																		
Reverse run prohibit selection	n05	0	b1-04	0	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n05→0</td> <td>b1-04→0</td> </tr> <tr> <td>n05→1</td> <td>b1-04→1</td> </tr> </tbody> </table>	J7	J1000	n05→0	b1-04→0	n05→1	b1-04→1								
J7	J1000																		
n05→0	b1-04→0																		
n05→1	b1-04→1																		
Digital Operator STOP key function	n06	0	o2-02	1	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n06→0</td> <td>o2-02→1</td> </tr> <tr> <td>n06→1</td> <td>o2-02→0</td> </tr> </tbody> </table>	J7	J1000	n06→0	o2-02→1	n06→1	o2-02→0								
J7	J1000																		
n06→0	o2-02→1																		
n06→1	o2-02→0																		
Frequency reference in local mode	n07	0	-	-	- (no operator panel potentiometer)														
Frequency reference from operator ENTER key selection	n08	0	o2-05	0	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n08→0</td> <td>o2-05→0</td> </tr> <tr> <td>n08→1</td> <td>o2-05→1</td> </tr> </tbody> </table>	J7	J1000	n08→0	o2-05→0	n08→1	o2-05→1								
J7	J1000																		
n08→0	o2-05→0																		
n08→1	o2-05→1																		
Max. output frequency	n09	60.0 Hz	E1-04	60.0 Hz															

Function/ Parameter	J7		J1000		Comments								
	Parameter No.	Initial Value	Parameter No.	Initial Value									
Max. output voltage	n10	200.0 V *	E1-05	200 V *	* Values for a 400 V class drive are double.								
Base frequency	n11	60.0Hz	E1-06	60.0 Hz									
Mid. output frequency	n12	1.5Hz	E1-07	3.0 Hz									
Mid. output voltage	n13	12.0V *	E1-08	16.0 V *	* Values for a 400 V class drive are double.								
Min. output frequency	n14	1.5Hz	E1-09	1.5 Hz									
Min. output voltage	n15	12.0V *	E1-10	12.0 V *	* Values for a 400 V class drive are double.								
Acceleration time 1	n16	10.0 s	C1-01	10.0 s									
Deceleration time 1	n17	10.0 s	C1-02	10.0 s									
Acceleration time 2	n18	10.0 s	C1-03	10.0 s									
Deceleration time 2	n19	10.0 s	C1-04	10.0 s									
S-curve at accel. Start	n20	0 (0 s)	C2-01	0.2 s	J7: Selection parameter (setting 0, 1, 2, and 3). Same setting for all conditions. J1000: Numerical parameter (time must be set in seconds). S-curve set separately for each ride profile section.								
S-curve at accel. End		0 (0 s)	C2-02	0.2 s									
S-curve at decel. start		0 (0 s)	C2-03	0.2 s									
S-curve at decel. end		0 (0 s)	C2-04	0.0 s									
Multi speed ref. 1	n21	6.00Hz	d1-01	0.00 Hz									
Multi speed ref. 2	n22	0.00Hz	d1-02	0.00 Hz									
Multi speed ref. 3	n23	0.00Hz	d1-03	0.00 Hz									
Multi speed ref. 4	n24	0.00Hz	d1-04	0.00 Hz									
Multi speed ref. 5	n25	0.00Hz	d1-05	0.00 Hz									
Multi speed ref. 6	n26	0.00Hz	d1-06	0.00 Hz									
Multi speed ref. 7	n27	0.00Hz	d1-07	0.00 Hz									
Multi speed ref. 8	n28	0.00Hz	d1-08	0.00 Hz									
Jog frequency	n29	6.00Hz	d1-17	6.00Hz									
Frequency reference upper limit	n30	100%	d2-01	100.0%									
Frequency reference lower limit	n31	0%	d2-02	0.0%									
Motor rated current	n32	-	E2-01	-.	Depends on the drive capacity								
Motor overheat protection	n33	0	L1-01	1	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n33→0</td> <td>L1-01→1</td> </tr> <tr> <td>n33→1</td> <td>L1-01→2</td> </tr> <tr> <td>n33→2</td> <td>L1-01→0</td> </tr> </tbody> </table>	J7	J1000	n33→0	L1-01→1	n33→1	L1-01→2	n33→2	L1-01→0
J7	J1000												
n33→0	L1-01→1												
n33→1	L1-01→2												
n33→2	L1-01→0												
Motor protection time constant	n34	8min	L1-02	1min	Set L1-02 = n34 / 8.								

Function/ Parameter	J7		J1000		Comments																																														
	Parameter No.	Initial Value	Parameter No.	Initial Value																																															
Drive cooling fan operation selection	n35	0	L8-10	0	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n35→0</td> <td>L8-10→0</td> </tr> <tr> <td>n35→1</td> <td>L8-10→1</td> </tr> </tbody> </table>	J7	J1000	n35→0	L8-10→0	n35→1	L8-10→1																																								
J7	J1000																																																		
n35→0	L8-10→0																																																		
n35→1	L8-10→1																																																		
Terminal S1 function selection	-	-	H1-01	40	The function of S1 is fixed to Fwd Run in the J7. The equivalent setting in the J1000 is H1-01=40 (default).																																														
Terminal S2 function selection	n36	2	H1-02	41	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n36~39→2</td> <td>H1-02~H1-05→41</td> </tr> <tr> <td>n36~39→3</td> <td>H1-02~H1-05→24</td> </tr> <tr> <td>n36~39→4</td> <td>H1-02~H1-05→25</td> </tr> </tbody> </table>	J7	J1000	n36~39→2	H1-02~H1-05→41	n36~39→3	H1-02~H1-05→24	n36~39→4	H1-02~H1-05→25																																						
J7	J1000																																																		
n36~39→2	H1-02~H1-05→41																																																		
n36~39→3	H1-02~H1-05→24																																																		
n36~39→4	H1-02~H1-05→25																																																		
Terminal S3 function selection	n37	5	H1-03	24	<table border="1"> <tbody> <tr> <td>n36~39→5</td> <td>H1-02~H1-05→14</td> </tr> <tr> <td>n36~39→6</td> <td>H1-02~H1-05→3</td> </tr> <tr> <td>n36~39→7</td> <td>H1-02~H1-05→4</td> </tr> <tr> <td>n36~39→8</td> <td>H1-02~H1-05→5</td> </tr> </tbody> </table>	n36~39→5	H1-02~H1-05→14	n36~39→6	H1-02~H1-05→3	n36~39→7	H1-02~H1-05→4	n36~39→8	H1-02~H1-05→5																																						
n36~39→5	H1-02~H1-05→14																																																		
n36~39→6	H1-02~H1-05→3																																																		
n36~39→7	H1-02~H1-05→4																																																		
n36~39→8	H1-02~H1-05→5																																																		
Terminal S4 function selection	n38	3	H1-04	14	<table border="1"> <tbody> <tr> <td>n36~39→10</td> <td>H1-02~H1-05→6</td> </tr> <tr> <td>n36~39→11</td> <td>H1-02~H1-05→7</td> </tr> <tr> <td>n36~39→12</td> <td>H1-02~H1-05→8</td> </tr> <tr> <td>n36~39→13</td> <td>H1-02~H1-05→9</td> </tr> <tr> <td>n36~39→14</td> <td>H1-02~H1-05→61</td> </tr> <tr> <td>n36~39→15</td> <td>H1-02~H1-05→62</td> </tr> <tr> <td>n36~39→16</td> <td>H1-02~H1-05→A</td> </tr> <tr> <td>n36~39→17</td> <td>H1-02~H1-05→1</td> </tr> <tr> <td>n36~39→18</td> <td>H1-02~H1-05→2</td> </tr> </tbody> </table>	n36~39→10	H1-02~H1-05→6	n36~39→11	H1-02~H1-05→7	n36~39→12	H1-02~H1-05→8	n36~39→13	H1-02~H1-05→9	n36~39→14	H1-02~H1-05→61	n36~39→15	H1-02~H1-05→62	n36~39→16	H1-02~H1-05→A	n36~39→17	H1-02~H1-05→1	n36~39→18	H1-02~H1-05→2																												
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n36~39→15	H1-02~H1-05→62																																																		
n36~39→16	H1-02~H1-05→A																																																		
n36~39→17	H1-02~H1-05→1																																																		
n36~39→18	H1-02~H1-05→2																																																		
Terminal S5 function selection	n39	6	H1-05	3	<table border="1"> <tbody> <tr> <td>n36~39→19</td> <td>H1-02~H1-05→28</td> </tr> <tr> <td>n04→0</td> <td>set the stop time C1-09</td> </tr> <tr> <td>n36~39→19</td> <td>H1-02~H1-05→24</td> </tr> <tr> <td>n04→1</td> <td></td> </tr> <tr> <td>n36~39→20</td> <td>H1-02~H1-05→15</td> </tr> <tr> <td>n04→0</td> <td>set the stop time C1-09</td> </tr> <tr> <td></td> <td>no alarm message</td> </tr> <tr> <td>n36~39→20</td> <td>can not be set</td> </tr> <tr> <td>n04→1</td> <td></td> </tr> <tr> <td>n36~39→21</td> <td>H1-02~H1-05→29</td> </tr> <tr> <td>n04→0</td> <td>set the stop time C1-09</td> </tr> <tr> <td>n36~39→21</td> <td>H1-02~H1-05→25</td> </tr> <tr> <td>n04→1</td> <td></td> </tr> <tr> <td>n36~39→22</td> <td>H1-02~H1-05→17</td> </tr> <tr> <td>n04→0</td> <td>set the stop time C1-09</td> </tr> <tr> <td></td> <td>no alarm message</td> </tr> <tr> <td>n36~39→22</td> <td>can not be set</td> </tr> <tr> <td>n04→1</td> <td></td> </tr> <tr> <td>n37→0</td> <td>H1-03→0</td> </tr> <tr> <td></td> <td>H1-04→10</td> </tr> <tr> <td></td> <td>H1-05→11</td> </tr> <tr> <td>n39→34</td> <td>(b1-01 must be set to 0 or 1 and b1-02 must be set to 1)</td> </tr> <tr> <td>n39→35</td> <td>H1-05→67</td> </tr> </tbody> </table>	n36~39→19	H1-02~H1-05→28	n04→0	set the stop time C1-09	n36~39→19	H1-02~H1-05→24	n04→1		n36~39→20	H1-02~H1-05→15	n04→0	set the stop time C1-09		no alarm message	n36~39→20	can not be set	n04→1		n36~39→21	H1-02~H1-05→29	n04→0	set the stop time C1-09	n36~39→21	H1-02~H1-05→25	n04→1		n36~39→22	H1-02~H1-05→17	n04→0	set the stop time C1-09		no alarm message	n36~39→22	can not be set	n04→1		n37→0	H1-03→0		H1-04→10		H1-05→11	n39→34	(b1-01 must be set to 0 or 1 and b1-02 must be set to 1)	n39→35	H1-05→67
n36~39→19	H1-02~H1-05→28																																																		
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n39→35	H1-05→67																																																		
Terminal MA,MB,MC function selection	n40	1	H2-01	E																																															

Function/ Parameter	J7		J1000		Comments	
	Parameter No.	Initial Value	Parameter No.	Initial Value		
Analog input FR (A1) gain	n41	100%	H3-03	100%	J7	J1000
					n40→0	H2-01→E
					n40→1	H2-01→0
					n40→2	H2-01→2
					n40→3	H2-01→1
					n40→4	H2-01→5
					n40→5	H2-01→4
					n40→6	H2-01→B
					n40→7	H2-01→17
					n40→10	H2-01→10
					n40→11	H2-01→8
					n40→12	H2-01→3C
					n40→13	H2-01→6
					n40→14	H2-01→1E
					n40→15	H2-01→7
n40→16	H2-01→1A					
n40→17	H2-01→3D					
n40→18	F (trough mode)					
Analog input FR (A2) bias	n42	0%	H3-04	0%		
Analog input filter time constant	n43	0.10 s	H3-13	0.03 s		
Analog output AM function selection	n44	0	H4-01	102		
Analog output AM gain	n45	1.00	H4-02	100.0%	J7	J1000
					n44→0	H4-01→102
					n44→1	H4-01→103
Carrier frequency selection	n46	4 (depending on drive size)	C6-02	02-04 dep.	Set H4-02 = n45 * 100	
Carrier frequency upper limit	n47	0	C6-03	C6-02 dep.	J7	J1000
Carrier frequency lower limit			C6-04	C6-02 dep.	n46→1	C6-02→1 (2kHz)
Carrier frequency proportional gain			C6-05	0	n46→2	C6-02→2 (5kHz)
			Momentary power loss detection selection	L2-01	0	n46→3
n46→4				C6-02→4 (10kHz)		
n46→7	C6-03 = 2.5 C6-04 = 1.0 C6-05 = 12					
n46→8	C6-03 = 2.5 C6-04 = 1.0 C6-05 = 24					
n46→9	C6-03 = 2.5 C6-04 = 1.0 C6-05 = 36					

Function/ Parameter	J7		J1000		Comments												
	Parameter No.	Initial Value	Parameter No.	Initial Value													
Automatic fault reset attempts	n48	0	L5-01	0	<table border="1"> <tr> <th>J7</th> <th>J1000</th> </tr> <tr> <td>n47→0</td> <td>L2-01→0</td> </tr> <tr> <td>n47→1</td> <td>L2-01→1</td> </tr> <tr> <td>n47→2</td> <td>L2-01→2</td> </tr> </table>	J7	J1000	n47→0	L2-01→0	n47→1	L2-01→1	n47→2	L2-01→2				
J7	J1000																
n47→0	L2-01→0																
n47→1	L2-01→1																
n47→2	L2-01→2																
Jump frequency 1	n49	0.0Hz	d3-01	0.0Hz													
Jump frequency 2	n50	0.0Hz	d3-02	0.0Hz													
Jump frequency bandwidth	n51	0.0 Hz	d3-04	1.0 Hz													
DC injection braking current	n52	50%	b2-02	50%													
DC injection time at stop	n53	0.5 s	b2-04	0.50 s													
DC injection time at start	n54	0.0 s	b2-03	0.00 s													
Stall prevention during deceleration	n55	0	L3-04	1													
Stall prevention level during acceleration	n56	170%	L3-02	-	<table border="1"> <tr> <th>J7</th> <th>J1000</th> </tr> <tr> <td>n55→0</td> <td>L3-04→1</td> </tr> <tr> <td>n55→1</td> <td>L3-04→0</td> </tr> </table>	J7	J1000	n55→0	L3-04→1	n55→1	L3-04→0						
J7	J1000																
n55→0	L3-04→1																
n55→1	L3-04→0																
Stall prevention level during run	n57	160%	L3-06	-	Initial value of J1000 depends on Duty mode selection (C6-01).												
Output frequency detection level (DO)	n58	0.00Hz	L4-01	0.0Hz	Initial value of J1000 depends on Duty mode selection (C6-01)												
Over torque detection	n59	0	L6-01	0													
Over torque detection level	n60	160%	L6-02	150%	<table border="1"> <tr> <th>J7</th> <th>J1000</th> </tr> <tr> <td>n59→0</td> <td>L6-01→0</td> </tr> <tr> <td>n59→1</td> <td>L6-01→1</td> </tr> <tr> <td>n59→2</td> <td>L6-01→3</td> </tr> <tr> <td>n59→3</td> <td>L6-01→2</td> </tr> <tr> <td>n59→4</td> <td>L6-01→4</td> </tr> </table>	J7	J1000	n59→0	L6-01→0	n59→1	L6-01→1	n59→2	L6-01→3	n59→3	L6-01→2	n59→4	L6-01→4
J7	J1000																
n59→0	L6-01→0																
n59→1	L6-01→1																
n59→2	L6-01→3																
n59→3	L6-01→2																
n59→4	L6-01→4																
Over torque detection time	n61	0.1 s	L6-03	0.1 s													
Frequency reference hold selection (up/down function)	n62	0	d4-01	0													
Torque compensation gain	n63	1.0	C4-01	1.00	<table border="1"> <tr> <th>J7</th> <th>J1000</th> </tr> <tr> <td>n62→0</td> <td>d4-01→0</td> </tr> <tr> <td>n62→1</td> <td>d4-01→1</td> </tr> </table>	J7	J1000	n62→0	d4-01→0	n62→1	d4-01→1						
J7	J1000																
n62→0	d4-01→0																
n62→1	d4-01→1																
Motor rated slip	n64		E2-02	-													
Motor no-load current	n65		E2-03	-	Default value depends on the drive capacity.												
Slip compensation gain	n66	0.0	C3-01	0.0	Default value depends on the drive capacity. Set E2-03 = n32 * n65 / 100%												

Function/ Parameter	J7		J1000		Comments																		
	Parameter No.	Initial Value	Parameter No.	Initial Value																			
Slip compensation time constant	n67	2.0 s	C3-02	2000 ms																			
Memobus communication error behavior selection	n68	0	H5-04	3	J7: Setting unit is 1.0 s J1000: Setting unit is 1 ms																		
Memobus communication error detection	n69	0	H5-05	1	<table border="1"> <thead> <tr> <th>J7</th> <th colspan="2">J1000</th> </tr> <tr> <td></td> <th>H5-04</th> <th>H5-05</th> </tr> </thead> <tbody> <tr> <td>n68→0</td> <td>1</td> <td rowspan="4">1</td> </tr> <tr> <td>n68→1</td> <td>0 (C1-02)</td> </tr> <tr> <td>n68→2</td> <td>2 (C1-09)</td> </tr> <tr> <td>n68→3</td> <td>3</td> </tr> <tr> <td>n68→4</td> <td>No effect</td> <td>0</td> </tr> </tbody> </table>	J7	J1000			H5-04	H5-05	n68→0	1	1	n68→1	0 (C1-02)	n68→2	2 (C1-09)	n68→3	3	n68→4	No effect	0
J7			J1000																				
			H5-04	H5-05																			
n68→0			1	1																			
n68→1			0 (C1-02)																				
n68→2	2 (C1-09)																						
n68→3	3																						
n68→4	No effect	0																					
Memobus frequency reference and monitor units	H5-13	0																					
Memobus slave address	n70	0	H5-01	1F	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n69→0</td> <td>H5-13→0</td> </tr> <tr> <td>n69→1</td> <td>H5-13→1 and o1-03→0</td> </tr> <tr> <td>n69→2</td> <td>H5-13→2</td> </tr> <tr> <td>n69→3</td> <td>H5-13→3</td> </tr> </tbody> </table>	J7	J1000	n69→0	H5-13→0	n69→1	H5-13→1 and o1-03→0	n69→2	H5-13→2	n69→3	H5-13→3								
J7	J1000																						
n69→0	H5-13→0																						
n69→1	H5-13→1 and o1-03→0																						
n69→2	H5-13→2																						
n69→3	H5-13→3																						
Memobus communication Speed selection	n71	2	H5-02	3	J7: set as decimal value J1000: set as hexadecimal value																		
Memobus parity selection	n72	0	H5-03	0	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n71→0</td> <td>H5-02→1</td> </tr> <tr> <td>n71→1</td> <td>H5-02→2</td> </tr> <tr> <td>n71→2</td> <td>H5-02→3</td> </tr> <tr> <td>n71→3</td> <td>H5-02→4</td> </tr> </tbody> </table>	J7	J1000	n71→0	H5-02→1	n71→1	H5-02→2	n71→2	H5-02→3	n71→3	H5-02→4								
J7	J1000																						
n71→0	H5-02→1																						
n71→1	H5-02→2																						
n71→2	H5-02→3																						
n71→3	H5-02→4																						
Transmission wait time	n73	10ms	H5-06	10 ms	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n72→0</td> <td>H5-03→1</td> </tr> <tr> <td>n72→1</td> <td>H5-03→2</td> </tr> <tr> <td>n72→2</td> <td>H5-03→0</td> </tr> </tbody> </table>	J7	J1000	n72→0	H5-03→1	n72→1	H5-03→2	n72→2	H5-03→0										
J7	J1000																						
n72→0	H5-03→1																						
n72→1	H5-03→2																						
n72→2	H5-03→0																						
RTS flow control on/off	n74	0	H5-07	1																			
Low speed carrier frequency reduction	n75	0	L8-38	depends on drive capacity	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n74→0</td> <td>H5-07→1</td> </tr> <tr> <td>n74→1</td> <td>H5-07→0</td> </tr> </tbody> </table>	J7	J1000	n74→0	H5-07→1	n74→1	H5-07→0												
J7	J1000																						
n74→0	H5-07→1																						
n74→1	H5-07→0																						
COPY function selection	n76	rdy	o3-01	0	<table border="1"> <thead> <tr> <th>J7</th> <th>J1000</th> </tr> </thead> <tbody> <tr> <td>n75→0</td> <td>L8-38→0</td> </tr> <tr> <td>n75→1</td> <td>L8-38→1</td> </tr> </tbody> </table>	J7	J1000	n75→0	L8-38→0	n75→1	L8-38→1												
J7	J1000																						
n75→0	L8-38→0																						
n75→1	L8-38→1																						
READ prohibit selection	n77	0	o3-02	0	Possible with copy unit or remote operator.																		
Fault History	n78	-	U2-01/02	-																			
Software Version	n79	-	U1-25/26	-	In the J1000 the last current fault and the last fault can be seen in parameter U2-01 and U2-02																		

6.2 J7 and J1000 Differences in Parameter Settings

- Maximum carrier frequency
 - J7: n46, max. 10 kHz
 - J1000: C6-02, max. 15 kHz
- S-Curve setting
 - J7: fixed settings
 - J1000: set in seconds
- Stall Prevention Level

The stall prevention level during acceleration and constant speed run depends on the duty mode setting.

 - J7: The maximum setting of n56/57 is 200%
 - J1000: Heavy Duty, The maximum setting of L3-02 and L3-06 is 150%
Normal Duty, The maximum setting of L3-02 and L3-06 is 120%

6.3 Replacement of J7 Drives with Special Software

The table below gives a reference how to replace J7 drives with special software installed.

The software ID number of the J7 drive that has to be replaced is printed on the type plate.

J7		J1000
Software Number	Description	
001x, 002x	J7 Standard drive software	Covered by standard software functionality
506x	High Carrier Frequency	Covered by standard software functionality
others	-	Contact your sales office.

Rated Power, Current and Carrier Frequency

Voltage class	Max. Motor power (kW)	J7 type J7AZ□	J1000 type JZA□	J7			J1000		
				Output power (kVA)	Output current (A)	Carrier frequency (kHz)	Output power (kVA)	Output current (A)	Carrier frequency (kHz)
Single phase 200V	0.1	B0P1	B0P1	0.3	0.8	10	0.3	0.8	10
	0.2	B0P2	B0P2	0.6	1.6		0.6	1.6	
	0.4	B0P4	B0P4	1.1	3.0		1.1	3.0	
	0.75	B0P7	B0P7	1.9	5.0		1.9	5.0	
	1.5	B1P5	B1P5	3.0	8.0	7.5	3.0	8.0	8
3 phase 200V	0.1	20P1	20P1	0.3	0.8	10	0.3	0.8	10
	0.2	20P2	20P2	0.6	1.6		0.6	1.6	
	0.4	20P4	20P4	1.1	3.0		1.1	3.0	
	0.75	20P7	20P7	1.9	5.0		1.9	5.0	
	1.5	21P5	21P5	3.0	8.0	7.5	3.0	8.0	8
	2.2	22P2	22P2	4.2	11.0		4.2	11.0	
4.0	24P0	24P0	6.7	17.5	6.7	17.5			
3 phase 400V	0.2	40P2	40P2	0.9	1.2	7.5	0.9	1.2	8
	0.4	40P4	40P4	1.4	1.8		1.4	1.8	
	0.75	40P7	40P7	2.6	3.4		2.6	3.4	
	1.5	41P5	41P5	3.7	4.8		3.7	4.8	
	2.2	42P2	42P2	4.2	5.5		4.2	5.5	
	3.0	43P0	43P0	5.5	7.2		5.5	7.2	
	4.0	44P0	44P0	6.6	8.6		7.0	9.2	