

Technical Information

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This document covers the difference between F7 and A1000 for a successful retrofit. Be sure to also check any manuals for peripheral devices used.

1 Applicable Models

Previous Model	Varispeed F7 Models: CIMR-F7C□□□□ Specifications: E, F
New Model	A1000 Models: CIMR-AC□A□□□□ Replaces models using a Heavy Duty rating.
Capacities	200 V class: 0.4 kW to 110 kW 400 V class: 0.4 kW to 300 kW

Note: Especially information, regarding parameters and control circuit wiring will differ, when using other F7 models than F7C+ (Specification E + F). In case of questions, please refer to the Technical Manual of your model or contact your YASKAWA representative.

2 Drive Model Upgrade Checklist

Classifica- tion	Item	Checklist	Check
Hardware	Drive	<u>Verifying Installation Area of the Inverter Drive</u> Dimensions and installation holes differ between F7 and A1000.	
		<u>Verifying the Installation Location of the Digital Operator</u> <ul style="list-style-type: none"> When replacing your inverter, consider whether the new inverter will need to have the digital operator mounted to the same location or not. If the same location is important, please consider changing where the digital operator is positioned on the new unit. 	
		<u>Verifying Specialized Specifications</u> <ul style="list-style-type: none"> Check to see if the inverter you have been using has your company's nameplate on it, or if there are any other custom specifications. This information can be found on the original invoice and product description. 	
	Main Cir- cuit	<u>Verifying Main Circuit Lines (including ground)</u> <ul style="list-style-type: none"> When replacing your inverter, be aware that the position of the main circuit terminal block wiring order will differ with the newer model. Consider how to rewire the terminal block or getting extension cables. 	
		<u>Verifying Main Circuit Terminal Block and Specifications</u> <ul style="list-style-type: none"> When replacing the drive, be aware that the position of the terminals may not be the same shape or size in the newer model. Refer to the terminal layout section in 3-1 to ensure a proper match. 	
	Control Circuit	<u>Verifying Control Circuit Lines</u> <ul style="list-style-type: none"> When replacing your inverter, be aware that the position of the control circuit terminal block and wiring order will differ with the newer model. Consider how to rewire the terminal block or getting extension cables. 	
		<u>Verifying Control Circuit Terminal Block and Specifications</u> <ul style="list-style-type: none"> When replacing your inverter, be aware that the position of the terminals may not be the same shape or size in the newer model. Refer to the terminal layout section in 3-2 to ensure a proper match. 	

Classification	Item	Checklist	Check
Software	Software	<u>Verifying Custom Software</u> Check the inverter software you are currently using to see if it is a standard version of Yaskawa software. You will find the software number on the F7 inverter on the nameplate and in monitor U1-14. If you're not sure whether the software is standard or not, confirm the software number by contacting Yaskawa directly.	
	Parameter	<u>Verifying Parameter Settings</u> <ul style="list-style-type: none"> Check the parameter settings in the inverter you are currently using. Use the replacement guide to set the new parameters to match your current application. For specialized software or parameters not covered in the replacement guide, contact Yaskawa directly. DriveWizard Plus offers a Drive Replacement function for converting parameter settings to a successor.	
Options / Other	Option Card	<u>Verifying Option Cards</u> Any option cards will need to be replaced with new option cards, as A1000 is not compatible with option cards used in earlier models (such as F7).	
	Peripherals	<u>Braking Resistor</u> Check to see if the F7 currently used has a braking resistor installed. For F7 drives 3.7 kW and smaller using an ERF-type braking resistor, check the following: <input type="checkbox"/> Although the braking resistor could be installed in the back of F7, A1000 requires a special attachment that will increase overall dimensions (D dimensions). See section 4.3 for specifications. Attachment for a braking resistor may void certain vibration and shock protection requirements. As the operation environment can affect performance, use only the braking resistor recommended by Yaskawa. <input type="checkbox"/> If planning to use the same ERF-type braking resistor installed to F7 in the new A1000 drive and the cable is too short, replace the cable with a longer one only if the wire specifications are the same.	
		<u>Braking units</u> If braking unit is used, it can simply be transferred over to A1000 as-is. For braking units 30 kW and below, braking transistor protection should be disabled in A1000 (L8-55 = 0).	
		<u>AC or DC Reactor</u> See if the F7 has an AC or DC reactor.	
		<u>Noise Filter</u> If a noise filter is used, it can simply be used with A1000 as-is.	



- ☐ We request that you thoroughly review the instruction manual that come included with the new drive.
- ☐ To receive catalogues or user manuals, please refer to the internet: <http://www.yaskawa.eu.com/index.php?id=84>
- ☐ For technical questions, support, pricing, shipping dates or other such related information, please contact your YASKAWA representative.

3 Terminal Compatibility Table

Some terminal sizes differ between Varispeed F7 and A1000. See the table in section 3-4 for details.

3.1 Main Circuit Terminals

Main circuit terminal functions are the same for F7 and A1000.

Main Circuit Terminal		Comments
F7	A1000	
R/L1	R/L1	Main circuit power supply input
S/L2	S/L2	
T/L3	T/L3	
R1/L11		Main circuit power supply input
S1/L21		
T1/L31		
U/T1	U/T1	Drive output
V/T2	V/T2	
W/T3	W/T3	
B1	B1	Terminal connections for braking resistor or braking resistor units
B2	B2	
+1	+1	DC reactor, DC power supply input (positive)
+2	+2	DC reactor
+3	+3	Braking unit connection (positive)
—	—	Negative terminals (for DC power supply and braking units)
r/l_1		Cooling fan power supply
A/l_2		
$A200/l_{2200}$		Control power supply
$A400/l_{2400}$		
 (2 terminals)	 (2 terminals)	Grounding 200 V class: Ground to 100 Ω or less) 400 V class: Ground to 10 Ω or less)

3.2 Control Circuit Terminal, Signal Level

- Terminal function defaults differences between F7 and A1000 are listed in the table below.
- The table indicates terminals in F7 that do not exist in A1000.
- Voltage signal levels for terminals in A1000 differ from F7 terminals. A1000 requires that the voltage be set by the user.
- Terminals H1 and H2 in A1000 are used for the Safe Disable feature. Do not remove the jumper between terminals HC-H1 and HC-H2 as long as it is not used.

Control Circuit Terminal		Name	Signal Level	
F7	A1000		F7	A1000
S1		Input Selection ^{*1} (1) ^{*2} (Closed: Forward run Open: Stop)	Photocoupler insulation: 24 Vdc, 8 mA ^{*1} : Terminal is multi-functional input in A1000 ^{*2} : Number in parenthesis indicates the input selection number in A1000.	
S2		Input Selection ^{*1} (2) ^{*2} (Closed: Reverse run Open: Stop)		
S3		Multi-Function Input Selection 1 (3) ^{*2} (External fault, N.O.)		
S4		Multi-Function Input Selection 2 (4) ^{*2} (Fault reset)		
S5		Multi-Function Input Selection 3 (5) ^{*2} (Multi-Step Speed Reference 1)		
S6		Multi-Function Input Selection 4 (6) ^{*2} (Multi-Step Speed Reference 2)		
S7		Multi-Function Input Selection 5 (7) ^{*2} (Jog)		
S8	MT	S8: Multi-Function Input Selection 6 (8) ^{*2} (External baseblock command) MT: Multifunctional / Motor PTC Input		
SC		Sequence Control Input Common In A1000 this terminal is the multi-function input selection common	Common control signal	Sequence common
RP		Multi-function pulse input (main speed reference pulse train input in A1000)	Response frequency 0 to 32 kHz (3 kΩ)	Response frequency 0.5 to 32 kHz (3 kΩ)
+V		For frequency reference input [*] A1000 has a lower voltage level for this terminal. The setting range for the frequency reference needs to be adjusted.	+10 V (20 mA max)	+10.5 V [*] (20 mA max)
−V			−10 V (20 mA max)	−10.5 V [*] (20 mA max)
A1		Main speed reference (multi-function analog input terminal in A1000)	−10 to +10 Vdc (20 kΩ) 0±10 V	0 to +10 Vdc (20 kΩ) 0±10 V
A2		Multi-function analog input / PTC Input	0±10 Vdc (20 kΩ) 4 to 20 mA (250Ω)	0 to +10 Vdc (20 kΩ) 0±10 V 4 to 20 mA (250Ω) 0 to 20 mA (250Ω)
A3		Multi-function analog input	0±10 Vdc (20 kΩ)	0±10 Vdc (20 kΩ) / PTC Input
AC		Analog common (common for the frequency reference in A1000)	0	

Control Circuit Terminal		Name	Signal Level	
F7	A1000		F7	A1000
	HC ⁺	Safe Disable input common		24 Vdc, 8 mA max
	H1 ⁺	Safe Disable input		Open: Motor coasts Closed: Normally operation *Make sure a short-circuit link is between terminal HC-H1 and HC-H2 if Safe Disable Input function is not used.
	H2 ⁺			
	DM+			
	DM-	Safe Disable monitor output		Signal Level +48 Vdc, 50 mA max
MA		Fault output (N.O.)	Contact output 30 Vdc 10 mA to 1 A 250 Vac 10 mA to 1 A	
MB		Fault output (N.C.)		
MC		Contact output common		
M1		Multi-function relay output (During run)		
M2				
M3		Multi-function relay output (Zero speed)		
M4				
M5		Multi-function relay output (Speed agree 1)		
M6				
MP		Multi-function pulse monitor (Output frequency)	32 kHz max. (2.2 kΩ)	
FM		Multi-function analog monitor 1 (Output frequency)	-10 to +10 Vdc, 2 mA max. Resolution: 10 bit	-10 to +10 Vdc, 2 mA max. Resolution: 1/1000
AM		Multi-function analog monitor 2 (Output current)		
AC		Analog common	0 V	
E (G)		Ground terminal for shielded line Ground terminal for option cards	—	












3.3 Comm. Circuit Terminal

Comm. Circuit Terminal		Name	Signal Level	
F7	A1000		F7	A1000
R+	R+	MEMOBUS Comm. Input	Differential input, photocoupler	Differential input, photocoupler
R—	R—			
S+	S+	MEMOBUS Comm. Output	Differential output, photocoupler	Differential output, photocoupler
S—	S—			
IG	IG	Comm. ground for shielded line	—	—









3.4 Terminal Sizes and Wire Gauges

The table below lists the wiring sizes based on European standards. Gauges are recommended, and users may select different gauges at their own discretion.









Main Circuit Terminal Size and Gauges

Power Supply	Model	Model	Terminal Signal	Ter- minal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 200V Class	F7	20P4 20P7	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, —, +1, +2, B1, B2, 	M4	1.2 to 1.5	1.5 to 4	2
	A1000	2A0004 2A0006	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3 	M4	1.2 to 1.5	2.5 to 6	2.5
			—, +1, +2, B1, B2	M4	1.2 to 1.5	2.5 to 6	*1
	F7	21P5	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, —, +1, +2, B1, B2	M4	1.2 to 1.5	1.5 to 4	2
	A1000	2A0010	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3 	M4	1.2 to 1.5	2.5 to 6	2.5
			—, +1, +2, B1, B2,	M4	1.2 to 1.5	2.5 to 6	*1
	F7	22P2	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, —, +1, +2, B1, B2, 	M4	1.2 to 1.5	1.5 to 4	2
	A1000	2A0012	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3,	M4	1.2 to 1.5	2.5 to 6	2.5
			—, +1, +2, B1, B2	M4	1.2 to 1.5	2.5 to 6	*1
				M4	1.2 to 1.5	2.5 to 6	2.5
	F7	23P7	R/L1,S/L2,T/L3, U/T1,V/T2,W/T3, —,+1, +2, B1, B2, 	M4	1.2 to 1.5	4	4
	A1000	2A0021	R/L1,S/L2,T/L3,	M4	1.2 to 1.5	2.5 to 6	4
			—,+1, +2	M4	1.2 to 1.5	4 to 6	*1
			U/T1,V/T2,W/T3,	M4	1.2 to 1.5	2.5 to 6	2.5
			B1, B2	M4	1.2 to 1.5	2.5 to 6	*1
				M4	1.2 to 1.5	4 to 6	4
	F7	25P5	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, —, +1, +2, B1, B2, 	M4	1.2 to 1.5	6	6
	A1000	2A0030	R/L1, S/L2, T/L3,	M4	1.2 to 1.5	4 to 16	6
			—, +1, +2	M4	1.2 to 1.5	6 to 16	*1
			U/T1, V/T2, W/T3	M4	1.2 to 1.5	4 to 16	6
			B1, B2	M4	1.2 to 1.5	4 to 6	*1
				M5	2 to 2.5	6 to 10	6
	F7	27P5	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, —, +1, +2, B1, B2, 	M5	2.5	10	10
	A1000	2A0040	R/L1, S/L2, T/L3,	M4	1.2 to 1.5	6 to 16	10
			—, +1, +2	M4	1.2 to 1.5	16	*1
			U/T1, V/T2, W/T3	M4	1.2 to 1.5	6 to 16	10
			B1, B2	M4	1.2 to 1.5	4 to 6	*1
				M5	2 to 2.5	6 to 10	10

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 200V Class	F7	2011	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2, B1, B2, 	M5	2.5	16	16
	A1000	2A0056	R/L1, S/L2, T/L3,	M6	4 to 6	16 to 25	16
			-, +1, +2	M6	4 to 6	16 to 25	*1
			U/T1, V/T2, W/T3	M6	4 to 6	16 to 25	16
			B1, B2	M5	2 to 2.5	6 to 10	*1
				M6	4 to 6	10 to 16	16
	F7	2015	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2	M6	4 to 5	25	2530
			B1, B2	M5	2.5	10	*1
				M6	4 to 5	25	25
	A1000	2A0069	R/L1, S/L2, T/L3,	M8	9 to 11	16 to 25	25
			-, +1, +2	M8	9 to 11	25	*1
			U/T1, V/T2, W/T3,	M8	9 to 11	16 to 25	16
			B1, B2	M5	2 to 2.5	10 to 16	*1
				M6	4 to 6	16 to 25	16
	F7	2018	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2	M8	9 to 10	25 to 35	25
			B1, B2	M5	2.5	10	*1
				M6	4 to 5	25	25
	A1000	2A0081	R/L1, S/L2, T/L3,	M8	9 to 11	25 to 35	35
			-, +1, +2	M8	9 to 11	25 to 35	*1
			U/T1, V/T2, W/T3	M8	9 to 11	25 to 35	25
			B1, B2	M5	2 to 2.5	16	*1
				M6	4 to 6	16 to 25	16
	F7	2022	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, R1/L11, S1/L21, T1/L31	M8	9 to 10	25 to 35	25
			+3	M6	4 to 5	10 to 16	*1
				M8	9 to 10	25 to 35	25
	A1000	2A0110	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3	M8	9 to 11	25 to 50	35
			-, +1	M8	9 to 11	35 to 50	*1
			B1, B2	M8	9 to 11	16 to 50	*1
				M8	9 to 11	16 to 25	16

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 200V Class	F7	2030	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, R1/L11, S1/L21, T1/L31	M8	9 to 10	50	50
			+3	M6	4 to 5	10 to 16	*1
				M8	9 to 10	25 to 35	25
	A1000	2A0138	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3	M10	18 to 23	35 to 70	50
			-, +1	M10	18 to 23	50 to 70	*1
			B1, B2	M10	18 to 23	25 to 70	*1
				M8	9 to 11	25	25
	F7	2037	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, R1/L11, S1/L21, T1/L31	M10	17.6 to 22.5	70 to 95	70
			+3	M8	8.8 to 10.8	6 to 16	*1
				M10	17.6 to 22.5	35 to 70	35
			r/l1,  l2	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	2A0169	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3	M10	18 to 23	50 to 95	70
			-, +1	M10	18 to 23	35 to 95	*1
			+3	M10	18 to 23	50 to 95	*1
				M8	9 to 11	25 to 35	35
	F7	2045	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, R1/L11, S1/L21, T1/L31	M10	17.6 to 22.5	95	95
			+3	M8	8.8 to 10.8	6 to 16	*1
				M10	17.6 to 22.5	50 to 70	50
			r/l1,  l2	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	2A0211	R/L1, S/L2, T/L3	M10	18 to 23	70 to 95	95
			U/T1, V/T2, W/T3	M10	18 to 23	70 to 95	95
			-, +1	M10	18 to 23	35 to 95	*1
			+3	M10	18 to 23	50 to 95	*1
				M8	9 to 11	25 to 50	50

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 200V Class	F7	2055	R/L1, S/L2, T/L3, -, +1	M12	31.4 to 39.2	50 to 95	50x2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M10	17.6 to 22.5	90	90
			+3	M8	8.8 to 10.8	6 to 70	*1
			⊥	M10	17.6 to 22.5	35 to 90	50
			r/l1, l 2	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	2A0250	R/L1, S/L2, T/L3	M12	32 to 40	95 to 150	95x2P
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 150	95x2P
			-, +1	M12	32 to 40	70 to 150	*1
			+3	M10	18.0 to 23.0	35 to 150	*1
			⊥	M12	32 to 40	95 to 150	95
	F7	2075	R/L1, S/L2, T/L3, -, +1	M12	31.4 to 39.2	95 to 122	95x2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M10	17.6 to 22.5	95	95x2P
			+3	M8	8.8 to 10.8	6 to 70	*1
			⊥	M10	17.6 to 22.5	95 to 185	95
			r/l1, l 2	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	2A0312	R/L1, S/L2, T/L3	M12	32 to 40	95 to 150	95x2P
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 150	95x2P
			-, +1	M12	32 to 40	70 to 150	*1
			+3	M10	18.0 to 23.0	70 to 150	*1
			⊥	M12	32 to 40	95 to 150	95
	F7	2090	R/L1, S/L2, T/L3, -, +1	M12	31.4 to 39.2	150 to 185	150x2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M12	31.4 to 39.2	95 to 150	95x2P
			+3	M8	8.8 to 10.8	6 to 70	*1
			⊥	M12	31.4 to 39.2	70 to 150	70x2P
			r/l1, l 2	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	2A0360	R/L1, S/L2, T/L3	M12	32 to 40	95 to 300	240
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 300	240
			-, +1	M12	32 to 40	125 to 300	*1
			+3	M10	18.0 to 23.0	70 to 300	*1
			⊥	M12	32 to 40	120 to 140	120

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 200V Class	F7	2110	R/L1, S/L2, T/L3, -, +1	M12	31.4 to 39.2	240 to 300	240×2P, or 50×4P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M12	31.4 to 39.2	150 to 300	150×2P, or 50×4P
			+3	M8	8.8 to 10.8	6 to 70	*1
			⊥	M12	31.4 to 39.2	150	150×2P
			r/l1, n/l2	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	2A0415	R/L1, S/L2, T/L3	M12	32 to 40	95 to 300	120×2P
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 300	300
			-, +1	M12	32 to 40	150 to 300	*1
			+3	M10	18.0 to 23.0	70 to 300	*1
			⊥	M12	32 to 40	120 to 240	120
3 Phase 400V Class	F7	40P4 40P7	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2, B1, B2, ⊥	M4	1.2 to 1.5	1.5 to 4	2.5
	A1000	4A0002 4A0004	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3,	M4	1.2 to 1.5	2.5 to 6	2.5
			-, +1, +2, B1, B2,	M4	1.2 to 1.5	2.5 to 6	*1
			⊥	M4	1.2 to 1.5	2.5 to 4	2.5
	F7	41P5 42P2	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2, B1, B2, ⊥	M4	1.2 to 1.5	1.5 to 4	2.5
	A1000	4A0005 4A0007 4A0009	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, ⊥	M4	1.2 to 1.5	2.5 to 6	2.5
			-, +1, +2, B1, B2	M4	1.2 to 1.5	2.5 to 6	*1
	F7	43P7	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2, B1, B2	M4	1.2 to 1.5	2.5 to 4	4
			⊥	M4	1.2 to 1.5	2 to 4	2.5
	A1000	4A0011	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, ⊥	M4	1.2 to 1.5	2.5 to 6	2.5
			-, +1, +2, B1, B2	M4	1.2 to 1.5	2.5 to 6	*1

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 400V Class	F7	45P5	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, –, +1, +2, B1, B2	M4	1.2 to 1.5	4	4
			⊥	M4	1.2 to 1.5	2.5 to 4	2.5
	A1000	4A0018	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3,	M4	1.2 to 1.5	2.5 to 16	2.5
			–, +1, +2	M4	1.2 to 1.5	4 to 16	*1
			B1, B2	M4	1.2 to 1.5	4 to 6	*1
			⊥	M5	2 to 2.5	2.5 to 6	2.5
	F7	47P5	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, –, +1, +2, B1, B2	M4	1.2 to 1.5	6	6
			⊥	M4	1.2 to 1.5	4	4
	A1000	4A0023	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3,	M4	1.2 to 1.5	2.5 to 16	4
			–, +1, +2	M4	1.2 to 1.5	4 to 16	*1
			B1, B2	M4	1.2 to 1.5	4 to 6	*1
			⊥	M5	2 to 2.5	4 to 6	4
	F7	4011	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, –, +1, +2, B1, B2	M5	2.5	6 to 10	10
			⊥	M5	2.5	6 to 10	6
	A1000	4A0031	R/L1, S/L2, T/L3,	M5	2 to 2.5	6 to 16	6
			–, +1, +2	M5	2 to 2.5	6 to 16	*1
			U/T1, V/T2, W/T3	M5	2 to 2.5	6 to 16	6
			B1, B2	M5	2 to 2.5	6 to 10	*1
			⊥	M6	4 to 6	6 to 10	6
	F7	4015	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, –, +1, +2, B1, B2	M5	2.5	10	8
			⊥	M5	2.5	6 to 10	6
	A1000	4A0038	R/L1, S/L2, T/L3,	M5	2 to 2.5	10 to 16	10
			–, +1, +2	M5	2 to 2.5	6 to 16	*1
			U/T1, V/T2, W/T3	M5	2 to 2.5	6 to 16	6
			B1, B2	M5	2 to 2.5	6 to 10	*1
			⊥	M6	4 to 6	6 to 16	10

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 400V Class	F7	4018	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +2	M6	4 to 5	10 to 35	10
			B1, B2	M5	2.5	10	10
			⊥	M6	4 to 5	10 to 16	10
	A1000	4A0044	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3,	M6	4 to 6	16 to 25	16
			-, +1, +2	M6	4 to 6	16 to 25	*1
			B1, B2	M5	2 to 2.5	6 to 10	*1
			⊥	M6	4 to 6	10 to 16	16
	F7	4022	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +3, R1/L11, S1/L21, T1/L31	M6	4 to 5	16	16
			⊥	M8	9 to 10	16 to 25	16
	A1000	4A0058	R/L1, S/L2, T/L3,	M8	9 to 11	10 to 50	16
			U/T1, V/T2, W/T3	M8	9 to 11	10 to 50	16
			-, +1	M8	9 to 11	16 to 50	*1
			B1, B2	M8	9 to 11	10 to 50	*1
			⊥	M8	9 to 11	10 to 16	16
	F7	4030	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, +3, R1/L11, S1/L21, T1/L31	M6	4 to 5	25	25
			⊥	M8	9 to 10	25 to 35	25
	A1000	4A0072	R/L1, S/L2, T/L3,	M8	9 to 11	16 to 50	16
			U/T1, V/T2, W/T3	M8	9 to 11	16 to 50	25
			-, +1	M8	9 to 11	25 to 50	*1
			B1, B2,	M8	9 to 11	16 to 50	*1
			⊥	M8	9 to 11	16 to 25	16
	F7	4037	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, -, +1, R1/L11, S1/L21, T1/L31	M8	9 to 10	25 to 50	35
			+3	M6	4 to 5	10 to 16	*1
			⊥	M8	9 to 10	25 to 35	25
	A1000	4A0088	R/L1, S/L2, T/L3,	M8	9 to 11	16 to 70	25
			U/T1, V/T2, W/T3	M8	9 to 11	25 to 70	25
			-, +1	M8	9 to 11	25 to 70	*1
			+3	M8	9 to 11	16 to 70	*1
			⊥	M8	9 to 11	16 to 25	16

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 400V Class	F7	4045	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, –, +1, R1/L11, S1/L21, T1/L31	M8	9 to 10	35 to 50	35
			+3	M6	4 to 5	10 to 16	*1
			⏏	M8	9 to 10	25 to 35	25
	A1000	4A0103	R/L1, S/L2, T/L3,	M8	9 to 11	25 to 70	35
			U/T1, V/T2, W/T3	M8	9 to 11	25 to 70	35
			–, +1	M8	9 to 11	25 to 70	*1
			+3	M8	9 to 11	25 to 70	*1
			⏏	M8	9 to 11	16 to 25	16
	F7	4055	R/L1, S/L2, T/L3, U/T1, V/T2, W/T3, –, +1, R1/L11, S1/L21, T1/L31	M8	9 to 10	50	50
			+3	M6	4 to 5	10 to 16	*1
			⏏	M8	9 to 10	25 to 35	25
	A1000	4A0139	R/L1, S/L2, T/L3	M10	18 to 23	35 to 95	50
			U/T1, V/T2, W/T3	M10	18 to 23	35 to 95	50
			–, +1	M10	18 to 23	50 to 95	*1
			+3	M10	18 to 23	25 to 95	*1
			⏏	M10	18 to 23	25	25
	F7	4075	R/L1, S/L2, T/L3, –, +1	M10	31.4 to 39.2	70 to 95	70
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M10	17.6 to 22.5	50 to 100	50
			+3	M8	8.8 to 10.8	6 to 16	*1
			⏏	M10	31.4 to 39.2	35 to 70	35
			r/l1, 2200/l2200, 4400/l2400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0165	R/L1, S/L2, T/L3	M10	18 to 23	50 to 95	70
			U/T1, V/T2, W/T3	M10	18 to 23	70 to 95	70
			–, +1	M10	18 to 23	35 to 95	*1
			+3	M10	18 to 23	50 to 95	*1
			⏏	M10	18 to 23	25 to 35	35

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 400V Class	F7	4090	R/L1, S/L2, T/L3, -, +1	M10	31.4 to 39.2	70 to 95	70
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M10	17.6 to 22.5	50 to 100	50
			+3	M8	8.8 to 10.8	6 to 16	*1
			⊕	M10	31.4 to 39.2	50 to 95	50
			r/l1, 200 /l2200, 400 /l2400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0208	R/L1, S/L2, T/L3	M10	18 to 23	35 to 95	95
			U/T1, V/T2, W/T3	M10	18 to 23	35 to 95	95
			-, +1	M10	18 to 23	35 to 150	*1
			+3	M10	18 to 23	25 to 70	*1
			⊕	M10	18 to 23	50 to 150	50
	F7	4110	R/L1, S/L2, T/L3, -, +1	M10	31.4 to 39.2	50 to 95	50×2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M10	31.4 to 39.2	50 to 95	50×2P
			+3	M8	8.8 to 10.8	10 to 70	*1
			⊕	M12	31.4 to 39.2	70 to 150	70
			r/l1, 200 /l2200, 400 /l2400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0250	R/L1, S/L2, T/L3	M10	18 to 23	95 to 300	120
			U/T1, V/T2, W/T3	M10	18 to 23	95 to 300	120
			-, +1	M10	18 to 23	70 to 300	*1
			+3	M10	18 to 23	35 to 300	*1
			⊕	M10	18 to 23	70 to 240	70
	F7	4132	R/L1, S/L2, T/L3, -, +1	M10	31.4 to 39.2	95	95×2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M10	31.4 to 39.2	70 to 95	70×2P
			+3	M8	8.8 to 10.8	10 to 70	*1
			⊕	M12	31.4 to 39.2	95 to 150	95
			r/l1, 200 /l2200, 400 /l2400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0296	R/L1, S/L2, T/L3	M12	32 to 40	95 to 300	185
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 300	185
			-, +1	M12	32 to 40	70 to 300	*1
			+3	M10	18 to 23	35 to 300	*1
			⊕	M12	32 to 40	95 to 240	95

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 400V Class	F7	4160	R/L1, S/L2, T/L3, -, +1	M12	31.4 to 39.2	95 to 185	95×2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M12	31.4 to 39.2	95 to 185	95×2P
			+3	M8	8.8 to 10.8	10 to 70	*1
			⊥	M12	31.4 to 39.2	50 to 150	50×2P
			r/l ₁ , 200 /l ₂ 200, 400 /l ₂ 400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0362	R/L1, S/L2, T/L3	M12	32 to 40	95 to 300	240
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 300	240
			-, +1	M12	32 to 40	95 to 300	*1
			+3	M10	18 to 23	70 to 300	*1
			⊥	M12	32 to 40	120 to 240	120
	F7	4185	R/L1, S/L2, T/L3	M16	78.4 to 98	95 to 300	150×2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M16	78.4 to 98	95 to 300	120×2P
			-, +1	M16	78.4 to 98	95 to 300	300×2P
			+3	M16	78.4 to 98	95 to 300	*1
			⊥	M16	78.4 to 98	95 to 300	95×2P
			r/l ₁ , 200 /l ₂ 200, 400 /l ₂ 400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0414	R/L1, S/L2, T/L3	M12	32 to 40	95 to 150	95×2P
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 150	95×2P
			-, +1	M12	32 to 40	70 to 150	*1
			+3	M12	32 to 40	70 to 150	*1
			⊥	M12	32 to 40	35 to 95	95
	F7	4220	R/L1, S/L2, T/L3	M16	78.4 to 98	95 to 300	240×2P
			U/T1, V/T2, W/T3, R1/L11, S1/L21, T1/L31	M16	78.4 to 98	95 to 300	240×2P
			-, +1	M16	78.4 to 98	95 to 300	120×4P
			+3	M16	78.4 to 98	95 to 300	*1
			⊥	M16	78.4 to 98	95 to 300	120×2P
			r/l ₁ , 200 /l ₂ 200, 400 /l ₂ 400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0515	R/L1, S/L2, T/L3	M12	32 to 40	95 to 150	120×2P
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 150	150×2P
			-, +1	M12	32 to 40	70 to 150	*1
			+3	M12	32 to 40	70 to 150	*1
			⊥	M12	32 to 40	50 to 150	150

*1: Value depends on usage of the specified terminals, please contact your YASKAWA representative for further information

Power Supply	Model	Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recomm. Gauges (mm ²)
3 Phase 400V Class	F7	4300	R/L1, S/L2, T/L3	M16	78.4 to 98	95 to 300	120×4P
			R1/L11, S1/L21, T1/L31	M16	78.4 to 98	95 to 300	120×2P
			U/T1, V/T2, W/T3	M16	78.4 to 98	95 to 300	120×4P
			—, +1	M16	78.4 to 98	95 to 300	240×4P
			+3	M16	78.4 to 98	95 to 300	*1
			⊥	M16	78.4 to 98	95 to 300	120×2P
			r/l1, 200 /l2200, 400 /l2400	M4	1.3 to 1.4	0.5 to 4	1.5
	A1000	4A0675	R/L1, S/L2, T/L3,	M12	32 to 40	95 to 150	95x4P
			U/T1, V/T2, W/T3	M12	32 to 40	95 to 150	95x4P
			—, +1	M12	32 to 40	70 to 150	*1
			+3	M12	32 to 40	70 to 150	*1
			⊥	M12	32 to 40	60 to 150	95x2P

Control Circuit Terminal Size and Gauges

Model	Terminal Signal	Bare Wire Terminal		Ferrule-Type Terminal	
		Possible Gauges (mm ²)	Recommended Gauges (mm ²)	Possible Gauges (mm ²)	Recommended Gauges (mm ²)
A1000 200 V class 400 V class	S1-S8, SC, SP, SN, RP, +V, -V, A1, A2, A3, AC, M1-M6, MA, MB, MC, MP, AM, FM, AC, S+, S- R+, R-, IG, HC, H1, H2, DM+, DM-	Stranded wire: 0.2 to 1.0 Solid wire: 0.2 to 1.5	0.75	0.25 to 0.5	0.5

Model	Terminal Signal	Terminal Screw	Tightening Torque (Nm)	Possible Gauges (mm ²)	Recommended Gauges (mm ²)
F7 200V class 400V class	FM, AC, AM, SC, SP, SN, A1, A2, A3, +V, -V, S1-S7, MT, MA, MB, MC, M1, M2, M3, M4, M5, M6, MP, RP, R+, R-, S+, S-, IG	Phoenix type	0.5 to 0.6	Single wire* ¹ : 0.5 to 2.5 Stranded wire: 0.5 to 1.5	0.75
	E (G)	M3.5	0.8 to 1.0	0.5 to 2.5* ¹	1

*1: We recommend using straight solderless terminal on signal lines to simplify wiring and improve reliability. Use shielded twisted-pair cables to input an external frequency reference.

4 Dimensions and Installation Adapters

An attachment is needed for certain drive sizes for adapting screw hole measures of A1000 to F7

4.1 IP00

Voltage Class	Capacity HD mode (kW)	Dimensions (mm)						Installation Adapter and Attachment ² Order Code	
		F7			A1000			Standard Installation	External Heatsink
		W	H	D	W	H	D		
3-Phase 200 V Class	0.4	Not available with IP00 enclosure Note: Removing the upper and lower covers converts F7 to IP00. Removing Top Cover converts A1000 from NEMA1/IP20 to IP20.							
	0.75								
	1.5								
	2.2								
	4.0								
	5.5								
	7.5								
	11								
	15								
	18								
	22	250	400	258	250	400	258	N/A	Not Available
	30	275	450		275	450			
	37	375	600	298	325	550	283	EZZ020801F (100-048-118)	
	45			328		550			
	55	450	725	348	450	705	330	Under Development	
	75								
	90	500	850	358	500	800	350		
	110	575	885	378					

*2: Attachments may void certain vibration and shock protection requirements. As vibration can affect performance, install the braking resistor directly to the drive in areas with large amounts of vibration.

Voltage Class	Capacity (kW)	Dimensions (mm)						Installation Adapter and Attachment ^{*2} Order Code				
		F7			A1000			Standard Installation	External Heatsink			
		W	H	D	W	H	D					
3-Phase 400 V Class	0.4	Not available with IP00 enclosure Note: Removing the upper and lower covers converts F7 to IP00. Removing Top Cover converts A1000 from NEMA1/IP20 to IP20.										
	0.75											
	1.5											
	2.2											
	3.7											
	5.5											
	7.5											
	11											
	15											
	18.5											
	22	275	450	258	250	400	258	100-048-119	Not Available			
	30				275	450		Not Available				
	37				325	510		100-048-121				
	45	325	550	283		Not Available						
	55					100-048-122						
	75											
	90	450	725	348	450	705	330	Under Development				
	110	500	850	358	500	800	350					
	132											
	160											
	185	710	1305	413	500	950	370					
	220				670	1140						
	300 ^{*1}											
		916	1475									

*1: 315 kW for A1000.

*2: Attachments may void certain vibration and shock protection requirements. As vibration can affect performance, install the braking resistor directly to the drive in areas with large amounts of vibration.

4.2 IP20 / NEMA Type 1

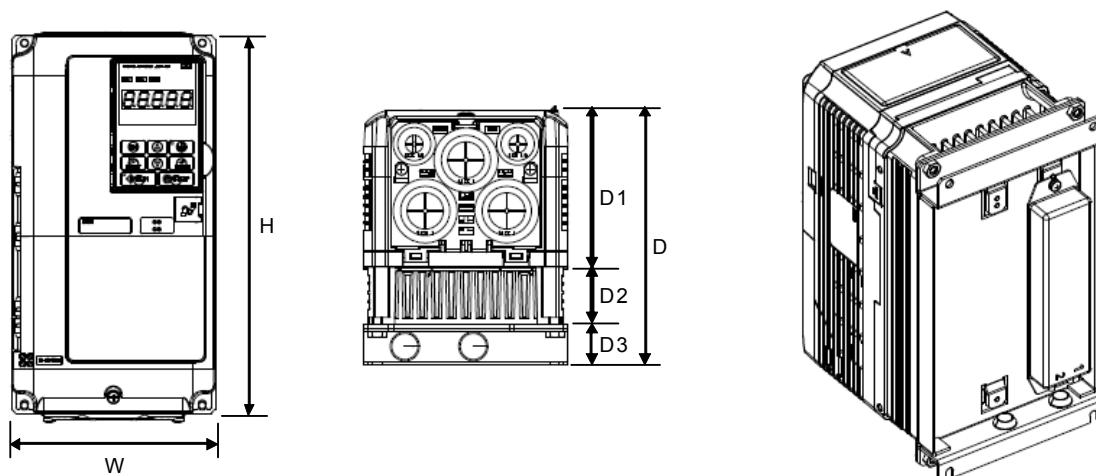
Voltage Class	Capacity (kW)	Dimensions (mm)						Installation Adapter and Attachment * Order Code
		F7			A1000			
		W	H	D	W	H	D	For normal installations
3-Phase 200 V Class	0.4	140	280	157	140	260	147	100-047-230
	0.75							
	1.5							
	2.2							
	3.7							
	5.5							
	7.5	200	300	197	180	300	187	100-047-231
	11		310					100-047-232
	15	240	350	207	220	350	197	100-047-234
	18.5		380			365		
	22	254	535	258	254	534	258	Not Available
	30	279	615		279	614		
	37	380	809	298	329	730	283	100-048-118
	45			328				
	55	453	1027	348	456	960	330	Under Development
	75							
	90	504	1243	358	504	1168	350	
3-Phase 400 V Class	0.4	140	280	157	140	260	147	100-047-230
	0.75							
	1.5							
	2.2							
	3.7							
	5.5							
	7.5	200	300	197	180	300	167	100-047-231
	11							187
	15	240	350	207	220	350	197	100-047-233
	18.5							197
	22	279	535	258	254	465	258	100-048-119
	30				279	515		Not Available
	37	329	635	283	329	630		100-048-120
	45		715					100-048-121
	55		453			1027	348	329
	75	100-048-122						
	90	504		1243	358			
	110							
	132							
	160		579			1324	378	

* Attachments may void certain vibration and shock protection requirements. As vibration can affect performance, install the braking resistor directly to the drive in areas with large amounts of vibration

4.3 Braking Resistor Installation Attachment

While F7 allowed a braking resistor to be installed directly to the unit on the underside, A1000 requires a special attachment for installation. The table below lists the attachment sizes according to the drive. The attachment will increase the overall size of the drive.

The figure below illustrates the installation of a braking resistor in A1000 (Example: 400 V class 0.4 kW).



Dimension after installing the attachment required to transfer a braking resistor from F7 to A1000:

Voltage Class	Capa- city (kW)	Dimensions (mm)											Attachment for Braking Resistor Model Code
		F7					A1000						
		W	H	D1	D2	D	W	H	D1	D2	D3	D	
3-Phase 200 V Class	0.4	140	280	118	39	157	140	260	109	38	28	175	100-048-123
	0.75												
	1.5												
	2.2												
	3.7				59	177				55		192	
3-Phase 400 V Class	0.4	140	280	118	39	157	140	260	109	38	28	175	
	0.75												
	1.5												
	2.2												
	3.7				59	177				55		192	

* Use of the braking resistor attachment may void certain vibration and shock requirements, particularly when installed in combination with other attachments for retrofitting A1000 to the F7 installation. For areas where vibration is a major concern, install the braking resistor directly to the panel, where the inverter is installed instead of using the attachment.

5 Parameter Compatibility Table

5.1 Procedure for Replacing Drives

This document lists the information needed to upgrade from F7C+ to a new A1000 drive.

- ① First, ensure that the A1000 drive is set to Heavy Duty (C6-01 = 0, default setting).
- ② Check all F7 parameters that have been changed from their default settings by using the Verify Menu. The column marked "Setting" has been included to write your setting value in.
- ③ Set the same control mode used for F7 to A1000.
- ④ Set parameters as described in section 5-2.

5.2 Parameter Numbers and Setting Differences

The table below shows all parameters in Advanced Access Level in F7C+. Default values listed for A1000 assume a 400 V class 0.4 kW drive using Open Loop Vector Control. Check especially the hatched parameters. When using the Drive Replacement function of "Drive Wizard Plus" confirm the automatic adaptations made by the software.

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																					
		Parameter	Default	Setting	Parameter	Default																						
Environment Settings	Language Selection	A1-00	0		A1-00	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>A1-00</td><td>A1-00</td></tr><tr><td>0: English</td><td>0: English</td></tr><tr><td>1: Japanese</td><td>1: Japanese</td></tr><tr><td>2: German</td><td>2: German</td></tr><tr><td>3: French</td><td>3: French</td></tr><tr><td>4: Italian</td><td>4: Italian</td></tr><tr><td>5: Spanish</td><td>5: Spanish</td></tr><tr><td>6: Portuguese</td><td>6: Portuguese</td></tr><tr><td>—</td><td>7: Chinese</td></tr></table>		F7	A1000	A1-00	A1-00	0: English	0: English	1: Japanese	1: Japanese	2: German	2: German	3: French	3: French	4: Italian	4: Italian	5: Spanish	5: Spanish	6: Portuguese	6: Portuguese	—	7: Chinese
							F7	A1000																				
							A1-00	A1-00																				
							0: English	0: English																				
							1: Japanese	1: Japanese																				
							2: German	2: German																				
							3: French	3: French																				
							4: Italian	4: Italian																				
							5: Spanish	5: Spanish																				
	6: Portuguese	6: Portuguese																										
—	7: Chinese																											
Access Level Selection	A1-01	2		A1-01	2	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>A1-01</td><td>A1-01</td></tr><tr><td>0: Operation only (monitors only)</td><td>0: Operation only (monitors only)</td></tr><tr><td>1: User Parameters *</td><td>1: User Parameters *</td></tr><tr><td>2: All parameters</td><td>2: All parameters</td></tr></table>		F7	A1000	A1-01	A1-01	0: Operation only (monitors only)	0: Operation only (monitors only)	1: User Parameters *	1: User Parameters *	2: All parameters	2: All parameters											
						F7	A1000																					
						A1-01	A1-01																					
						0: Operation only (monitors only)	0: Operation only (monitors only)																					
						1: User Parameters *	1: User Parameters *																					
						2: All parameters	2: All parameters																					
						*Set parameters A2-01 through A2-32.																						

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Environment Settings	Control Method Selection	A1-02	0		A1-02	0	F7	A1000
							A1-02	A1-02
							0: V/f Control	0: V/f Control
							1: V/f w/PG Control	1: V/f w/PG Control
							2: Open Loop Vector	2: Open Loop Vector
							3: Flux Loop Vector	3: Closed Loop Vector
							—	5: Open Loop Vector for PM
							—	6: Advanced Open Loop Vector for PM
							—	7: Closed Loop Vector for PM
	Initialize Parameters	A1-03	0		A1-03	0	F7	A1000
							A1-03	A1-03
							0: No initialization	0: No initialization
							1110: User initialize	1110: User initialize
							2220: 2-wire sequence	2220: 2-wire sequence
							3330: 3-wire sequence	3330: 3-wire sequence
							—	5550: Reset OPE04
	Password	A1-04	0		A1-04	0		
	Password Setting	A1-05	0		A1-05	0		
	User Parameters	A2-01 to A2-32	—		A2-01 to A2-32	—	*If setting A1-01 to 1, refer to the manual and set parameters A2-01 to A2-32.	
Operation Mode Selection	Frequency Reference Selection	b1-01	1		b1-01	1	F7	A1000
							b1-01	b1-01 / b1-15
							0: Operator	0: Operator
							1: Control circuit terminal (analog input)	1: Control circuit terminal (analog input)
							2: MEMOBUS comm.	2: MEMOBUS comm.
							3: Option card	3: Option card
							4: Pulse train input	4: Pulse train input
	Operation Method Selection	b1-02	1		b1-02	1	F7	A1000
							b1-02	b1-02 / b1-16
							0: Operator	0: Operator
							1: Control circuit terminal	1: Control circuit terminal
							2: MEMOBUS comm.	2: MEMOBUS comm.
							3: Option card	3: Option card

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.												
		Parameter	Default	Setting	Parameter	Default													
Operation Mode Selection	Stopping Method Selection	b1-03	0		b1-03	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b1-03</td><td>b1-03</td></tr><tr><td>0: Ramp to stop</td><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td><td>1: Coast to stop</td></tr><tr><td>2: DC Injection Braking</td><td>2: DC Injection Braking</td></tr><tr><td>3: Coast to stop with timer</td><td>3: Coast to stop with timer</td></tr></table>	F7	A1000	b1-03	b1-03	0: Ramp to stop	0: Ramp to stop	1: Coast to stop	1: Coast to stop	2: DC Injection Braking	2: DC Injection Braking	3: Coast to stop with timer	3: Coast to stop with timer
	F7	A1000																	
	b1-03	b1-03																	
	0: Ramp to stop	0: Ramp to stop																	
	1: Coast to stop	1: Coast to stop																	
	2: DC Injection Braking	2: DC Injection Braking																	
	3: Coast to stop with timer	3: Coast to stop with timer																	
	Reverse Operation Selection	b1-04	0		b1-04	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b1-04</td><td>b1-04</td></tr><tr><td>0: Reverse possible</td><td>0: Reverse possible</td></tr><tr><td>1: Reverse prohibited</td><td>1: Reverse prohibited</td></tr></table>	F7	A1000	b1-04	b1-04	0: Reverse possible	0: Reverse possible	1: Reverse prohibited	1: Reverse prohibited				
	F7	A1000																	
	b1-04	b1-04																	
0: Reverse possible	0: Reverse possible																		
1: Reverse prohibited	1: Reverse prohibited																		
Operation Selection for Setting E1-09 or Less	b1-05	0		b1-05	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b1-05</td><td>b1-05</td></tr><tr><td>0: Run at frequency reference</td><td>0: Run at frequency reference</td></tr><tr><td>1: Shut off drive output</td><td>1: Shut off drive output</td></tr><tr><td>2: Operate by E1-09</td><td>2: Operate by E1-09</td></tr><tr><td>3: Zero speed</td><td>3: Zero speed</td></tr></table>	F7	A1000	b1-05	b1-05	0: Run at frequency reference	0: Run at frequency reference	1: Shut off drive output	1: Shut off drive output	2: Operate by E1-09	2: Operate by E1-09	3: Zero speed	3: Zero speed	
F7	A1000																		
b1-05	b1-05																		
0: Run at frequency reference	0: Run at frequency reference																		
1: Shut off drive output	1: Shut off drive output																		
2: Operate by E1-09	2: Operate by E1-09																		
3: Zero speed	3: Zero speed																		
Read Sequence Input Twice	b1-06	1		b1-06	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b1-06</td><td>b1-06</td></tr><tr><td>0: 2 ms - 2 scans</td><td>0: 1 ms - 1 scan</td></tr><tr><td>1: 5 ms - 2 scans</td><td>1: 1 ms - 2 scans</td></tr></table>	F7	A1000	b1-06	b1-06	0: 2 ms - 2 scans	0: 1 ms - 1 scan	1: 5 ms - 2 scans	1: 1 ms - 2 scans					
F7	A1000																		
b1-06	b1-06																		
0: 2 ms - 2 scans	0: 1 ms - 1 scan																		
1: 5 ms - 2 scans	1: 1 ms - 2 scans																		
Operation Selection After Switching to Remote Mode	b1-07	0		b1-07	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b1-07</td><td>b1-07</td></tr><tr><td>0: Cycle Run command</td><td>0: Cycle Run command</td></tr><tr><td>1: Accept external Run cmd</td><td>1: Accept external Run cmd</td></tr></table>	F7	A1000	b1-07	b1-07	0: Cycle Run command	0: Cycle Run command	1: Accept external Run cmd	1: Accept external Run cmd					
F7	A1000																		
b1-07	b1-07																		
0: Cycle Run command	0: Cycle Run command																		
1: Accept external Run cmd	1: Accept external Run cmd																		
Run Command Selection while in Programming Mode	b1-08	0		b1-08	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b1-08</td><td>b1-08</td></tr><tr><td>0: Disabled.</td><td>0: Disabled.</td></tr><tr><td>1: Run cmd always accepted</td><td>1: Run cmd always accepted</td></tr><tr><td>2: Cannot enter Program Mode</td><td>2: Cannot enter Program Mode</td></tr></table>	F7	A1000	b1-08	b1-08	0: Disabled.	0: Disabled.	1: Run cmd always accepted	1: Run cmd always accepted	2: Cannot enter Program Mode	2: Cannot enter Program Mode			
F7	A1000																		
b1-08	b1-08																		
0: Disabled.	0: Disabled.																		
1: Run cmd always accepted	1: Run cmd always accepted																		
2: Cannot enter Program Mode	2: Cannot enter Program Mode																		
Frequency Reference Selection 2	—	—		b1-15	0	Replaces "Alternative Reference Selection" (H1-xx = 2) Please refer to the Technical Manual for further information or contact YASKAWA. Same setting range as b1-01.													
Run Command Selection 2	—	—		b1-16	0	Same setting range as b1-02													
Run Command at Power Up	—	—		b1-17	0	0: Prohibited 1: Allowed b1-17 = 1: A RUN command at the digital input during Power Up is valid immediately.													

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.			
		Parameter	Default	Setting	Parameter	Default				
DC Injection Braking	Zero-speed Level	b2-01	0.5 Hz		b2-01	0.5 Hz				
	DC injection braking current	b2-02	50%		b2-02	50%				
	DC Injection Braking Time at Start	b2-03	0.00 s		b2-03	0.00 s				
	DC Injection Braking Time at Stop	b2-04	0.50 s		b2-04	0.50 s [*]	*Determined by the control mode selected.			
	Magnetic Flux Compensation Value	—	—		b2-08	0%	Sets the magnetic flux compensation as a percentage of the no-load current value (E2-03).			
Speed Search	Speed Search Selection	b3-01	2		b3-01	0	F7		A1000	
							b3-01		b3-01	b3-24
					0: Disabled (Speed Estimation)		0: Disabled	1: Speed Estimation		
					1: Enabled (Speed Estimation)		1: Enabled	1: Speed Estimation		
					2: Disabled (Current Detection)		0: Disabled	0: Current Detection		
					3: Enabled (Current Detection)		1: Enabled	0: Current Detection		
	Speed Search Operating Current	b3-02	120%*		b3-02	120%*	*Default value changes according to the control mode.			
	Speed Search Deceleration Time	b3-03	2.0 s		b3-03	2.0 s				
	Speed Search Delay Time	b3-05	0.2 s		b3-05	0.2 s				
	Speed Search Detection Compensation Gain	—	—		b3-10	1.05	Sets the gain which is applied to the speed detected by Speed Estimation Speed Search before the motor is reaccelerated.			
	Rotation Direction Search Selection	b3-14	1		b3-14	1 [*]	*Determined by the control mode selected.			
	Speed Search Restart Current Level	b3-17	150%		b3-17	150%				
	Speed Search Restart Detection Time	b3-18	0.10 s		b3-18	0.10 s				
Number of Speed Search Restarts	b3-19	0		b3-19	3					
High speed detection selection	b3-20	0		—	—	Setting not needed in 1000 series inverter.				
Timers	Timer Function On-Delay Time	b4-01	0.0 s		b4-01	0.0 s				
	Timer Function Off-Delay Time	b4-02	0.0 s		b4-02	0.0 s				

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.														
		Parameter	Default	Setting	Parameter	Default															
PID Control	PID Control Method Selection	b5-01	0		b5-01	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b5-01</td><td>b5-01</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: D control for bias</td><td>1: D control for bias</td></tr><tr><td>2: D control of feedback</td><td>2: D control of feedback</td></tr><tr><td>3: D control of Freq Ref +PID output, bias</td><td>3: D control of Freq Ref +PID output, bias</td></tr><tr><td>4: D control of Freq Ref +PID output</td><td>4: D control of Freq Ref +PID output</td></tr></table>	F7	A1000	b5-01	b5-01	0: Disabled	0: Disabled	1: D control for bias	1: D control for bias	2: D control of feedback	2: D control of feedback	3: D control of Freq Ref +PID output, bias	3: D control of Freq Ref +PID output, bias	4: D control of Freq Ref +PID output	4: D control of Freq Ref +PID output
	F7	A1000																			
	b5-01	b5-01																			
	0: Disabled	0: Disabled																			
	1: D control for bias	1: D control for bias																			
	2: D control of feedback	2: D control of feedback																			
	3: D control of Freq Ref +PID output, bias	3: D control of Freq Ref +PID output, bias																			
	4: D control of Freq Ref +PID output	4: D control of Freq Ref +PID output																			
	Proportional Gain Setting (P)	b5-02	1.00		b5-02	1.00															
	Integral Time Setting (I)	b5-03	1.0 s		b5-03	1.0 s															
	Integral Limit Setting	b5-04	100.0%		b5-04	100.0%															
	Derivative Time (D)	b5-05	0.00 s		b5-05	0.00 s															
PID Output Limit	b5-06	100.0%		b5-06	100.0%																
PID Offset Tuning	b5-07	0.0%		b5-07	0.0%																
PID Primary Delay Time	b5-08	0.00 s		b5-08	0.00 s																
PID Output Characteristics Selection	b5-09	0		b5-09	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b5-09</td><td>b5-09</td></tr><tr><td>0: FWD</td><td>0: FWD</td></tr><tr><td>1: REV</td><td>1: REV</td></tr></table>	F7	A1000	b5-09	b5-09	0: FWD	0: FWD	1: REV	1: REV							
F7	A1000																				
b5-09	b5-09																				
0: FWD	0: FWD																				
1: REV	1: REV																				
PID Output Gain Setting	b5-10	1.0		b5-10	1.00	Minimum setting units vary.															
PID Output Reverse Selection	b5-11	0		b5-11	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b5-11</td><td>b5-11</td></tr><tr><td>0: Negative PID output triggers zero limit</td><td>0: Negative PID output triggers zero limit</td></tr><tr><td>1: Rotation direction reverses with negative PID output.</td><td>1: Rotation direction reverses with negative PID output.</td></tr></table>	F7	A1000	b5-11	b5-11	0: Negative PID output triggers zero limit	0: Negative PID output triggers zero limit	1: Rotation direction reverses with negative PID output.	1: Rotation direction reverses with negative PID output.							
F7	A1000																				
b5-11	b5-11																				
0: Negative PID output triggers zero limit	0: Negative PID output triggers zero limit																				
1: Rotation direction reverses with negative PID output.	1: Rotation direction reverses with negative PID output.																				

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																
		Parameter	Default	Setting	Parameter	Default																	
PID Control	Selection of PID Feedback Command Loss Detection	b5-12	0		b5-12	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>b5-12</td><td>b5-12</td></tr><tr><td>0: No Detection</td><td>0: No Detection</td></tr><tr><td>1: Feedback Low detection, Operation continuous</td><td>1: Continue operation</td></tr><tr><td>2: Feedback Low detection, Coast to Stop and Fault Output</td><td>2: Fault, Operation continuous</td></tr><tr><td>3: Feedback High detection, Operation continuous</td><td>3: Multi-function output only, detected during PID control cancel input only.</td></tr><tr><td>4: Feedback High detection, Coast to Stop and Fault Output</td><td>4: An alarm is triggered and the drive continues running. Detected only when PID control is canceled.</td></tr><tr><td>—</td><td>5: Fault is triggered and output is shut off. No detection, when PID control is disabled.</td></tr></table>	F7	A1000	b5-12	b5-12	0: No Detection	0: No Detection	1: Feedback Low detection, Operation continuous	1: Continue operation	2: Feedback Low detection, Coast to Stop and Fault Output	2: Fault, Operation continuous	3: Feedback High detection, Operation continuous	3: Multi-function output only, detected during PID control cancel input only.	4: Feedback High detection, Coast to Stop and Fault Output	4: An alarm is triggered and the drive continues running. Detected only when PID control is canceled.	—	5: Fault is triggered and output is shut off. No detection, when PID control is disabled.
	F7	A1000																					
	b5-12	b5-12																					
	0: No Detection	0: No Detection																					
	1: Feedback Low detection, Operation continuous	1: Continue operation																					
	2: Feedback Low detection, Coast to Stop and Fault Output	2: Fault, Operation continuous																					
	3: Feedback High detection, Operation continuous	3: Multi-function output only, detected during PID control cancel input only.																					
	4: Feedback High detection, Coast to Stop and Fault Output	4: An alarm is triggered and the drive continues running. Detected only when PID control is canceled.																					
	—	5: Fault is triggered and output is shut off. No detection, when PID control is disabled.																					
	PID Feedback Loss Detection Level	b5-13	0%		b5-13	0%																	
	PID Feedback Loss Detection Time	b5-14	1.0 s		b5-14	1.0 s																	
	PID Sleep Function Start Level	b5-15	0.0 Hz		b5-15	0.0 Hz																	
	PID Sleep Delay Time	b5-16	0.0 s		b5-16	0.0 s																	
	PID Accel/Decel Time	b5-17	0.0 s		b5-17	0.0 s																	
	PID Setpoint Selection	b5-18	0		b5-18	0																	
PID Setpoint	b5-19	0.0%		b5-19	0.0%																		
PID Square Root Feedback Selection	b5-28	0		—	—																		
Square root Feedback Gain	b5-29	1.00		—	—																		
PID monitor feedback selection	b5-31	0		—	—																		
PID monitor feedback gain	b5-32	100.0%		—	—																		
PID monitor feedback bias	b5-33	0.0%		—	—																		

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.									
		Parameter	Default	Setting	Parameter	Default										
Dwell Function	Dwell Reference at Start	b6-01	0.0 Hz		b6-01	0.0 Hz										
	Dwell Time at Start	b6-02	0.0 s		b6-02	0.0 s										
	Dwell Frequency at Stop	b6-03	0.0 Hz		b6-03	0.0 Hz										
	Dwell Time at Stop	b6-04	0.0 s		b6-04	0.0 s										
Droop Control	Droop Control Gain	b7-01	0.0%		b7-01	0.0%										
	Droop Control Delay Time	b7-02	0.05 s		b7-02	0.05 s										
Energy Saving Control	Energy Saving Control Selection	b8-01	0		b8-01*	0	<table><tr><td>F7</td><td>A1000</td></tr><tr><td>b8-01</td><td>b8-01</td></tr><tr><td>0: Energy Saving disabled</td><td>0: Energy Saving disabled</td></tr><tr><td>1: Energy Saving enabled</td><td>1: Energy Saving enabled</td></tr></table> *Default value changes according to the control mode.		F7	A1000	b8-01	b8-01	0: Energy Saving disabled	0: Energy Saving disabled	1: Energy Saving enabled	1: Energy Saving enabled
	F7	A1000														
	b8-01	b8-01														
	0: Energy Saving disabled	0: Energy Saving disabled														
	1: Energy Saving enabled	1: Energy Saving enabled														
	Energy Saving Gain	b8-02	0.7*		b8-02	0.7*	*Default value changes according to the control mode.									
	Energy Saving Control Filter Time Constant	b8-03	0.50 s		b8-03	*	Determined by drive capacity and the control mode									
	Energy Saving Coefficient Value	b8-04	*		b8-04	*	Determined by drive capacity									
Power Detection Filter Time	b8-05	20 ms		b8-05	20 ms											
Search Operation Voltage Limit	b8-06	0%		b8-06	0%											
Zero Servo	Zero Servo Gain	b9-01	5		b9-01	5										
	Zero Servo Completion Width	b9-02	10		b9-02	10										
Accel/Decel Time	Acceleration Time 1	C1-01	10.0 s		C1-01	10.0 s										
	Deceleration Time 1	C1-02	10.0 s		C1-02	10.0 s										
	Acceleration Time 2	C1-03	10.0 s		C1-03	10.0 s										
	Deceleration Time 2	C1-04	10.0 s		C1-04	10.0 s										
	Acceleration Time 3	C1-05	10.0 s		C1-05	10.0 s										
	Deceleration Time 3	C1-06	10.0 s		C1-06	10.0 s										
	Acceleration Time 4	C1-07	10.0 s		C1-07	10.0 s										
	Deceleration Time 4	C1-08	10.0 s		C1-08	10.0 s										

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.										
		Parameter	Default	Setting	Parameter	Default											
Accel/Decel. Time	Fast Stop Time	C1-09	10.0 s		C1-09	10.0 s											
	Accel/Decel Time Setting Units	C1-10	1		C1-10	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>C1-10</td><td>C1-10</td></tr><tr><td>0: 0.01 s units</td><td>0: 0.01 s units</td></tr><tr><td>1: 0.1 s units</td><td>1: 0.1 s units</td></tr></table>	F7	A1000	C1-10	C1-10	0: 0.01 s units	0: 0.01 s units	1: 0.1 s units	1: 0.1 s units		
	F7	A1000															
	C1-10	C1-10															
0: 0.01 s units	0: 0.01 s units																
1: 0.1 s units	1: 0.1 s units																
Accel/Decel Time Switching Frequency	C1-11	0.0 Hz		C1-11	0.0 Hz												
S-Curve Characteristics	S-Curve Characteristic at Accel Start	C2-01	0.20 s		C2-01	0.20 s											
	S-Curve Characteristic at Accel End	C2-02	0.20 s		C2-02	0.20 s											
	S-Curve Characteristic at Decel Start	C2-03	0.20 s		C2-03	0.20 s											
	S-Curve Characteristic at Decel End	C2-04	0.00 s		C2-04	0.00 s											
Slip Compensation	Slip Compensation Gain	C3-01	0.0		C3-01	0.0*	*Determined by the control mode selected. *Value for V/f control given										
	Slip Compensation Primary Delay Time	C3-02	2000 ms		C3-02	2000 ms*	*Determined by the control mode selected. *Value for V/f control given										
	Slip Compensation Limit	C3-03	200%		C3-03	200%											
	Slip Compensation Selection during Regeneration	C3-04	0		C3-04	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>C3-04</td><td>C3-04</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled above 6Hz</td></tr><tr><td></td><td>2: Enabled whenever slip compensation is possible</td></tr></table>	F7	A1000	C3-04	C3-04	0: Disabled	0: Disabled	1: Enabled	1: Enabled above 6Hz		2: Enabled whenever slip compensation is possible
	F7	A1000															
C3-04	C3-04																
0: Disabled	0: Disabled																
1: Enabled	1: Enabled above 6Hz																
	2: Enabled whenever slip compensation is possible																
Output Voltage Limit Operation Selection	C3-05	0		C3-05	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>C3-05</td><td>C3-05</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled</td></tr></table>	F7	A1000	C3-05	C3-05	0: Disabled	0: Disabled	1: Enabled	1: Enabled			
F7	A1000																
C3-05	C3-05																
0: Disabled	0: Disabled																
1: Enabled	1: Enabled																
Torque Compensation	Torque Compensation Gain	C4-01	1.00		C4-01	1.00*	*Determined by the control mode selected. *Default value for V/f control is given										

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																						
		Parameter	Default	Setting	Parameter	Default																							
Torque Compensation	Torque Compensation Primary Delay Time	C4-02	200 ms*		C4-02	200 ms*	*Determined by the control mode selected. *Default value for V/f control is given																						
	Torque Compensation at Forward Start	C4-03	0.0%		C4-03	0.0%																							
	Torque Compensation at Reverse Start	C4-04	0.0%		C4-04	0.0%																							
	Torque Compensation Time Constant	C4-05	10 ms		C4-05	10 ms																							
Speed Control (ASR)	ASR Proportional Gain 1	C5-01	20.00*		C5-01	20.00*	*Determined by the control mode selected. Default show here is for when using Closed Loop Vector Control																						
	ASR Integral Time 1	C5-02	0.500 s*		C5-02	0.500 s*																							
	ASR Proportional Gain 2	C5-03	20.00*		C5-03	20.00*																							
	ASR Integral Time 2	C5-04	0.500 s*		C5-04	0.500 s*																							
	ASR Limit	C5-05	5.0%		C5-05	5.0%																							
	ASR Primary Delay Time Constant	C5-06	0.004 s*		C5-06	0.004 s*	*Determined by the control mode selected. Default shown here is for Closed Loop Vector.																						
	ASR Gain Switching Frequency	C5-07	0.0 Hz		C5-07	0.0 Hz																							
	ASR Integral Limit	C5-08	400%		C5-08	400%																							
Carrier Frequency	HD/ND1 Selection	C6-01	0		—	—	Parameter contents differ between F7 and A1000. The default setting in A1000 is for Heavy Duty performance.																						
	Normal/Heavy Duty Selection	—	—		C6-01	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>C6-01</td><td>C6-01</td></tr><tr><td>HD/ND1 Selection</td><td>Duty Mode Selection</td></tr><tr><td>0: Low carrier, constant torque (HD)</td><td>0: Heavy Duty</td></tr><tr><td>1: High carrier, variable torque (ND1)</td><td>1: Normal Duty</td></tr></table>		F7	A1000	C6-01	C6-01	HD/ND1 Selection	Duty Mode Selection	0: Low carrier, constant torque (HD)	0: Heavy Duty	1: High carrier, variable torque (ND1)	1: Normal Duty											
	F7	A1000																											
C6-01	C6-01																												
HD/ND1 Selection	Duty Mode Selection																												
0: Low carrier, constant torque (HD)	0: Heavy Duty																												
1: High carrier, variable torque (ND1)	1: Normal Duty																												
Carrier Frequency Selection	C6-02	1		C6-02	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>C6-02</td><td>C6-02</td></tr><tr><td>0: Low Noise PWM</td><td>—</td></tr><tr><td>1: 2.0 kHz</td><td>1: 2.0 kHz</td></tr><tr><td>2: 5.0 kHz</td><td>2: 5.0 kHz</td></tr><tr><td>3: 8.0 kHz</td><td>3: 8.0 kHz</td></tr><tr><td>4: 10.0 kHz</td><td>4: 10.0 kHz</td></tr><tr><td>5: 12.5 kHz</td><td>5: 12.5 kHz</td></tr><tr><td>6: 15.0 kHz</td><td>6: 15.0 kHz</td></tr><tr><td>—</td><td>7 to A: Swing PWM</td></tr><tr><td>F: User-set</td><td>F: User-set</td></tr></table>		F7	A1000	C6-02	C6-02	0: Low Noise PWM	—	1: 2.0 kHz	1: 2.0 kHz	2: 5.0 kHz	2: 5.0 kHz	3: 8.0 kHz	3: 8.0 kHz	4: 10.0 kHz	4: 10.0 kHz	5: 12.5 kHz	5: 12.5 kHz	6: 15.0 kHz	6: 15.0 kHz	—	7 to A: Swing PWM	F: User-set	F: User-set
F7	A1000																												
C6-02	C6-02																												
0: Low Noise PWM	—																												
1: 2.0 kHz	1: 2.0 kHz																												
2: 5.0 kHz	2: 5.0 kHz																												
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—	7 to A: Swing PWM																												
F: User-set	F: User-set																												

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.
		Parameter	Default	Setting	Parameter	Default	
Carrier Frequency	Carrier Frequency Upper Limit	C6-03	2.0 kHz* ¹		C6-03	2.0 kHz* ²	*1: Depends on Inverter Capacity *2: Depends on C6-02 setting
	Carrier Frequency Lower Limit	C6-04	2.0 kHz* ¹		C6-04	2.0 kHz* ²	*1: Depends on Inverter Capacity *2: Depends on C6-02 setting
	Carrier Frequency Prop. Gain	C6-05	0		C6-05	0*	*Depends on C6-02 setting
Frequency Reference	Frequency Reference 1	d1-01	0.00 Hz		d1-01	0.00 Hz	
	Frequency Reference 2	d1-02	0.00 Hz		d1-02	0.00 Hz	
	Frequency Reference 3	d1-03	0.00 Hz		d1-03	0.00 Hz	
	Frequency Reference 4	d1-04	0.00 Hz		d1-04	0.00 Hz	
	Frequency Reference 5	d1-05	0.00 Hz		d1-05	0.00 Hz	
	Frequency Reference 6	d1-06	0.00 Hz		d1-06	0.00 Hz	
	Frequency Reference 7	d1-07	0.00 Hz		d1-07	0.00 Hz	
	Frequency Reference 8	d1-08	0.00 Hz		d1-08	0.00 Hz	
	Frequency Reference 9	d1-09	0.00 Hz		d1-09	0.00 Hz	
	Frequency Reference 10	d1-10	0.00 Hz		d1-10	0.00 Hz	
	Frequency Reference 11	d1-11	0.00 Hz		d1-11	0.00 Hz	
	Frequency Reference 12	d1-12	0.00 Hz		d1-12	0.00 Hz	
	Frequency Reference 13	d1-13	0.00 Hz		d1-13	0.00 Hz	
	Frequency Reference 14	d1-14	0.00 Hz		d1-14	0.00 Hz	
	Frequency Reference 15	d1-15	0.00 Hz		d1-15	0.00 Hz	
	Frequency Reference 16	d1-16	0.00 Hz		d1-16	0.00 Hz	
	Jog Frequency Reference	d1-17	6.00 Hz		d1-17	6.00 Hz	
	Frequency Reference Upper Limit Value	d2-01	100.0%		d2-01	100.0%	
	Frequency Reference Lower Limit Value	d2-02	0.0%		d2-02	0.0%	
	Main Speed Reference Lower Limit Value	d2-03	0.0%		d2-03	0.0%	

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																						
		Parameter	Default	Setting	Parameter	Default																							
Frequency Reference	Alternative reference Upper limit	d2-04	100.0%		—	—	"Alternative Reference" function is replaced by "Frequency Reference Selection 2" (Parameter b1-15) Contact YASKAWA in case of questions regarding parameter conversion.																						
	Alternative reference lower limit	d2-05	0.0%		—	—	"Alternative Reference" function is replaced by "Frequency Reference Selection 2" (Parameter b1-15) Contact YASKAWA in case of questions regarding parameter conversion.																						
Jump Frequency	Jump Frequency 1	d3-01	0.0 Hz		d3-01	0.0 Hz																							
	Jump Frequency 2	d3-02	0.0 Hz		d3-02	0.0 Hz																							
	Jump Frequency 3	d3-03	0.0 Hz		d3-03	0.0 Hz																							
	Jump Frequency Width	d3-04	1.0 Hz		d3-04	1.0 Hz																							
Frequency Reference Hold	Frequency Reference Hold Function Selection	d4-01	0		d4-01	0	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td>d4-01</td><td></td><td>d4-01</td><td></td></tr><tr><td>0: Disabled</td><td></td><td>0: Disabled</td><td></td></tr><tr><td>1: Enabled</td><td></td><td>1: Enabled</td><td></td></tr></table>			F7		A1000		d4-01		d4-01		0: Disabled		0: Disabled		1: Enabled		1: Enabled					
	F7		A1000																										
	d4-01		d4-01																										
	0: Disabled		0: Disabled																										
1: Enabled		1: Enabled																											
	+/- Speed Limit	d4-02	10%		d7-01	0.0%	<table><tr><td colspan="2">F7</td><td colspan="3">A1000</td></tr><tr><td>H1-01 to H1-06</td><td>d4-02</td><td>H1-01 to H1-08</td><td>d7-01</td><td>d7-02</td></tr><tr><td>1C: +Speed Ref</td><td>Setting value</td><td>44</td><td>Setting value</td><td>No need to set</td></tr><tr><td>1D: - Speed Ref</td><td>Setting value</td><td>45</td><td>No need to set</td><td>- (Setting Value)</td></tr></table>			F7		A1000			H1-01 to H1-06	d4-02	H1-01 to H1-08	d7-01	d7-02	1C: +Speed Ref	Setting value	44	Setting value	No need to set	1D: - Speed Ref	Setting value	45	No need to set	- (Setting Value)
					F7		A1000																						
H1-01 to H1-06	d4-02	H1-01 to H1-08	d7-01	d7-02																									
1C: +Speed Ref	Setting value	44	Setting value	No need to set																									
1D: - Speed Ref	Setting value	45	No need to set	- (Setting Value)																									
					d7-02	0.0%																							
Torque Control	Torque Control Selection	d5-01	0		d5-01	0	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td>d5-01</td><td></td><td>d5-01</td><td></td></tr><tr><td>0: Speed Control</td><td></td><td>0: Speed Control</td><td></td></tr><tr><td>1: Torque Control</td><td></td><td>1: Torque Control</td><td></td></tr></table>			F7		A1000		d5-01		d5-01		0: Speed Control		0: Speed Control		1: Torque Control		1: Torque Control					
	F7		A1000																										
	d5-01		d5-01																										
	0: Speed Control		0: Speed Control																										
	1: Torque Control		1: Torque Control																										
	Torque Reference Delay Time	d5-02	0 ms		d5-02	0 ms																							
Speed Limit Selection	d5-03	1		d5-03	1	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td>d5-03</td><td></td><td>d5-03</td><td></td></tr><tr><td>1: Limited by b1-01</td><td></td><td>1: Limited by b1-01</td><td></td></tr><tr><td>2: Limited by d5-04</td><td></td><td>2: Limited by d5-04</td><td></td></tr></table>			F7		A1000		d5-03		d5-03		1: Limited by b1-01		1: Limited by b1-01		2: Limited by d5-04		2: Limited by d5-04						
F7		A1000																											
d5-03		d5-03																											
1: Limited by b1-01		1: Limited by b1-01																											
2: Limited by d5-04		2: Limited by d5-04																											
Speed Limit	d5-04	0%		d5-04	0%																								
Speed Limit Bias	d5-05	10%		d5-05	10%																								
	Speed/Torque Control Switchover Timer	d5-06	0 ms		d5-06	0 ms																							

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.								
		Parameter	Default	Setting	Parameter	Default									
Magnetic Field Control	Field Weakening Level	d6-01	80%		d6-01	80%									
	Field Frequency	d6-02	0.0 Hz		d6-02	0.0 Hz									
	Field Forcing Function Selection	d6-03	0		d6-03	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>d6-03</td><td>d6-03</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled</td></tr></table>	F7	A1000	d6-03	d6-03	0: Disabled	0: Disabled	1: Enabled	1: Enabled
	F7	A1000													
	d6-03	d6-03													
0: Disabled	0: Disabled														
1: Enabled	1: Enabled														
Field Forcing Limit	d6-06	400%		d6-06	400%										
V/f Characteristics	Input Voltage Setting	E1-01	200 V*		E1-01	200 V*	*Double values for 400 V class drives.								

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
V/f Characteristics	V/f Pattern Selection	E1-03	F		E1-03	F	F7	A1000
							E1-03	E1-03
							0: 50 Hz spec. (constant torque characteristics 1)	0: 50 Hz spec. (constant torque characteristics 1)
							1: 60 Hz spec. (constant torque characteristics 2)	1: 60 Hz spec. (constant torque characteristics 2)
							2: 60 Hz spec. (constant torque characteristics 3),, voltage saturation at 50 Hz	2: 60 Hz spec. (constant torque characteristics 3),, voltage saturation at 50 Hz
							3: 72 Hz spec. (constant torque characteristics 4),, voltage saturation at 60 Hz	3: 72 Hz spec. (constant torque characteristics 4),, voltage saturation at 60 Hz
							4: 50 Hz spec. (derated torque 1)	4: 50 Hz spec. (derated torque 1)
							5: 50 Hz spec. (derated torque 2)	5: 50 Hz spec. (derated torque 2)
							6: 60 Hz spec. (derated torque 3)	6: 60 Hz spec. (derated torque 3)
							7: 60 Hz spec. (derated torque 4)	7: 60 Hz spec. (derated torque 4)
							8: 50 Hz spec. (high starting torque 1)	8: 50 Hz spec. (high starting torque 1)
							9: 50 Hz spec. (high starting torque 2)	9: 50 Hz spec. (high starting torque 2)
							A: 60 Hz spec. (high starting torque 3)	A: 60 Hz spec. (high starting torque 3)
							B: 60 Hz spec. (high starting torque 4)	B: 60 Hz spec. (high starting torque 4)
							C: 90 Hz spec. , Voltage Saturation at 60 Hz	C: 90 Hz spec. , Voltage Saturation at 60 Hz
							D: 120 Hz spec. , voltage saturation at 60 Hz	D: 120 Hz spec. , voltage saturation at 60 Hz
							E: 180 Hz spec. , voltage saturation at 60 Hz	E: 180 Hz spec. , voltage saturation at 60 Hz
							F: User-Set V/f pattern	F: User-Set V/f pattern
	Max Output Frequency	E1-04	50.0 Hz		E1-04	50.0 Hz	*Depends on the control mode and the V/f pattern selected.	
	Max Voltage	E1-05	200.0 V		E1-05	200.0 V	*Depends on the control mode and the V/f pattern selected. Double values for 400 V class drives.	
	Base Frequency	E1-06	50.0 Hz		E1-06	50.0 Hz	*Depends on the control mode and the V/f pattern selected.	
	Mid. Output Frequency	E1-07	2.5 Hz		E1-07	2.5 Hz	*Depends on the control mode and the V/f pattern selected.	
	Mid. Output Frequency Voltage	E1-08	15.0 V		E1-08	15.0 V	*Depends on the control mode and the V/f pattern selected. Double values for 400 V class drives.	

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.												
		Parameter	Default	Setting	Parameter	Default													
V/f Characteristics	Minimum Output Frequency	E1-09	1.2 Hz *		E1-09	1.3 Hz *	*Depends on the control mode and the V/f pattern selected.												
	Minimum Output Frequency Voltage	E1-10	9.0 V *		E1-10	9.0 V *	*Depends on the control mode and the V/f pattern selected. Double values for 400 V class drives.												
	Mid. Output Frequency 2	E1-11	0.0 Hz		E1-11	0.0 Hz													
	Mid. Output Frequency Voltage 2	E1-12	0.0 V		E1-12	0.0 V													
	Base Voltage	E1-13	0.0 V		E1-13	0.0 V													
Motor Parameters	Motor Rated Current	E2-01	*		E2-01	*	*Determined by drive capacity.												
	Motor Rated Slip	E2-02	*		E2-02	*	*Determined by drive capacity.												
	Motor De-Coupled Load Current	E2-03	*		E2-03	*	*Determined by drive capacity.												
	Motor Poles Count	E2-04	4 poles		E2-04	4 poles													
	Motor Line-to-Line Resistance	E2-05	*		E2-05	*	*Determined by drive capacity.												
	Motor Leakage Inductance	E2-06	*		E2-06	*	*Determined by drive capacity.												
	Motor Iron Core Saturation Co-Efficient 1	E2-07	0.50		E2-07	0.50													
	Motor Iron Core Saturation Co-Efficient 2	E2-08	0.75		E2-08	0.75													
	Motor Mechanical Loss	E2-09	0.0%		E2-09	0.0%													
	Motor Iron Loss for Torque Compensation	E2-10	*		E2-10	*	*Determined by drive capacity.												
	Motor Rated Output	E2-11	*		E2-11	*	*Determined by drive capacity.												
Motor 2 V/f characteristics	Motor 2 Control Method Selection	E3-01	0		E3-01	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>E3-01</td><td>E3-01</td></tr><tr><td>0: V/f</td><td>0: V/f</td></tr><tr><td>1: V/f w/PG</td><td>1: V/f w/PG</td></tr><tr><td>2: Open Loop Vector</td><td>2: Open Loop Vector</td></tr><tr><td>3: Closed Loop Vector</td><td>3: Closed Loop Vector</td></tr></table>	F7	A1000	E3-01	E3-01	0: V/f	0: V/f	1: V/f w/PG	1: V/f w/PG	2: Open Loop Vector	2: Open Loop Vector	3: Closed Loop Vector	3: Closed Loop Vector
	F7	A1000																	
	E3-01	E3-01																	
	0: V/f	0: V/f																	
1: V/f w/PG	1: V/f w/PG																		
2: Open Loop Vector	2: Open Loop Vector																		
3: Closed Loop Vector	3: Closed Loop Vector																		
Motor 2 Max Output Frequency	E3-02	50.0 Hz *		E3-04	50.0 Hz *	*Determined by the control mode selected.													
Motor 2 Max Voltage	E3-03	200.0 V *		E3-05	200.0 V *	*Determined by the control mode selected. Double values for 400 V class drives.													
Motor 2 Base Frequency	E3-04	50.0 Hz *		E3-06	50.0 Hz *	*Determined by the control mode selected.													

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.													
		Parameter	Default	Setting	Parameter	Default														
Motor 2 Parameter	Motor 2 Mid. Output Frequency	E3-05	2.5 Hz *		E3-07	2.5 Hz *	*Determined by the control mode selected.													
	Motor 2 Mid. Output Frequency Voltage	E3-06	15.0 V*		E3-08	15.0 V*	*Determined by the control mode selected. Double values for 400 V class drives.													
	Motor 2 Minimum Output Frequency	E3-07	1.2 Hz *		E3-09	1.3 Hz *	*Determined by the control mode selected.													
	Motor 2 Minimum Output Frequency Voltage	E3-08	9.0 V*		E3-10	9.0 V*	*Determined by the control mode selected. Double values for 400 V class drives.													
	Motor 2 Rated Current	E4-01	*		E4-01	*	*Determined by drive capacity.													
	Motor 2 Rated Slip	E4-02	*		E4-02	*	*Determined by drive capacity.													
	Motor 2 De-Coupled Load Current	E4-03	*		E4-03	*	*Determined by drive capacity.													
	Motor 2 Motor Poles	E4-04	4Poles		E4-04	4Poles														
	Motor 2 Line-to-Line Resistance	E4-05	*		E4-05	*	*Determined by drive capacity.													
	Motor 2 Leakage Inductance	E4-06	*		E4-06	*	*Determined by drive capacity.													
	Motor 2 rated capacity	E4-07	*		E4-11	*	*Determined by drive capacity.													
PG speed Control Card	PG Constant	F1-01	1024		F1-01	1024														
	Operation Selection at PG Open Circuit (PGo)	F1-02	1		F1-02	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>F1-02</td><td>F1-02</td></tr><tr><td>0: Ramp to stop</td><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td><td>1: Coast to stop</td></tr><tr><td>2: Fast Stop</td><td>2: Fast Stop</td></tr><tr><td>3: Continue operation</td><td>3: Continue operation</td></tr></table>		F7	A1000	F1-02	F1-02	0: Ramp to stop	0: Ramp to stop	1: Coast to stop	1: Coast to stop	2: Fast Stop	2: Fast Stop	3: Continue operation	3: Continue operation
							F7	A1000												
							F1-02	F1-02												
							0: Ramp to stop	0: Ramp to stop												
							1: Coast to stop	1: Coast to stop												
	2: Fast Stop	2: Fast Stop																		
	3: Continue operation	3: Continue operation																		
	Operation Selection at Overspeed (oS)	F1-03	1		F1-03	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>F1-03</td><td>F1-03</td></tr><tr><td>0: Ramp to stop</td><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td><td>1: Coast to stop</td></tr><tr><td>2: Fast Stop</td><td>2: Fast Stop</td></tr><tr><td>3: Continue operation</td><td>3: Continue operation</td></tr></table>		F7	A1000	F1-03	F1-03	0: Ramp to stop	0: Ramp to stop	1: Coast to stop	1: Coast to stop	2: Fast Stop	2: Fast Stop	3: Continue operation	3: Continue operation
							F7	A1000												
F1-03							F1-03													
0: Ramp to stop							0: Ramp to stop													
1: Coast to stop							1: Coast to stop													
2: Fast Stop	2: Fast Stop																			
3: Continue operation	3: Continue operation																			
Operation Selection at Deviation	F1-04	3		F1-04	3	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>F1-04</td><td>F1-04</td></tr><tr><td>0: Ramp to stop</td><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td><td>1: Coast to stop</td></tr><tr><td>2: Fast Stop</td><td>2: Fast Stop</td></tr><tr><td>3: Continue operation</td><td>3: Continue operation</td></tr></table>		F7	A1000	F1-04	F1-04	0: Ramp to stop	0: Ramp to stop	1: Coast to stop	1: Coast to stop	2: Fast Stop	2: Fast Stop	3: Continue operation	3: Continue operation	
						F7	A1000													
						F1-04	F1-04													
						0: Ramp to stop	0: Ramp to stop													
						1: Coast to stop	1: Coast to stop													
2: Fast Stop	2: Fast Stop																			
3: Continue operation	3: Continue operation																			

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
PG speed Control Card	PG Rotation Selection	F1-05	0		F1-05	0	F7	A1000
							F1-05	F1-05
							0: FWD = A pulse leads	0: FWD = A pulse leads
							1: FWD = B pulse leads	1: FWD = B pulse leads
	PG Division Rate (PG Pulse Monitor)	F1-06	1		F1-06	1	Enabled when using the PG-B2 option card.	
	Integral Value During Accel/Decel Enable/Disable	F1-07	0		C5-12	0	F7	A1000
							F1-07	C5-12
							0: Disabled	0: Disabled
							1: Enabled	1: Enabled
	Overspeed Detection Level	F1-08	115%		F1-08	115%		
	Overspeed Detection Delay Time	F1-09	0.0 s		F1-09	1.0 s*	*Default values depends on control mode *Default value for Closed Loop Vector is given	
Excessive Speed Deviation Detection Level	F1-10	10%		F1-10	10%			
Excessive Speed Deviation Detection Delay Time	F1-11	0.5 s		F1-11	0.5 s			
Number of PG Gear Teeth 1	F1-12	0		F1-12	0			
Number of PG Gear Teeth 2	F1-13	0		F1-13	0			
PG Open-Circuit Detection Time	F1-14	2.0 s		F1-14	2.0 s			
Analog Command Card	Bi-polar or Uni-polar Input Selection	F2-01	0		F2-01	0	F7	A1000
							F2-01	F2-01
							0: Separate input functions	0: Separate input functions
							1: Sum of inputs for freq ref	1: Sum of inputs for freq ref

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																														
		Parameter	Default	Setting	Parameter	Default																															
Digital Command Card	Digital Input Option Card Input Selection	F3-01	0		F3-01	0	*The digital option card determines the setting. DI-08: 0 (8 bit) DI-16H: Set switch S1 to determine input signal: S1 switch 1 : 2 (16 bit) S1 switch S1: 1 (12 bit)																														
	Bit Selection for Digital Option Card Input Data	—	—		F3-03	2*	<table><tr><th>F7</th><th colspan="2">A1000</th></tr><tr><th>F3-01</th><th>F3-01</th><th>F3-03</th></tr><tr><td>0: BCD 1% units</td><td>0: BCD 1% units</td><td>0: 8 bit</td></tr><tr><td>1: BCD 0.1% units</td><td>1: BCD 0.1% units</td><td>1: 12 bit</td></tr><tr><td>2: BCD 0.01% units</td><td>2: BCD 0.01% units</td><td>2: 16 bit</td></tr><tr><td>3: BCD 1 Hz units</td><td>3: BCD 1 Hz units</td><td></td></tr><tr><td>4: BCD 0.1 Hz units</td><td>4: BCD 0.1 Hz units</td><td></td></tr><tr><td>5: BCD 0.01 Hz units</td><td>5: BCD 0.01 Hz units</td><td></td></tr><tr><td>6: BCD, custom</td><td>6: BCD, custom</td><td></td></tr><tr><td>7: Binary input</td><td>7: Binary input</td><td></td></tr></table>	F7	A1000		F3-01	F3-01	F3-03	0: BCD 1% units	0: BCD 1% units	0: 8 bit	1: BCD 0.1% units	1: BCD 0.1% units	1: 12 bit	2: BCD 0.01% units	2: BCD 0.01% units	2: 16 bit	3: BCD 1 Hz units	3: BCD 1 Hz units		4: BCD 0.1 Hz units	4: BCD 0.1 Hz units		5: BCD 0.01 Hz units	5: BCD 0.01 Hz units		6: BCD, custom	6: BCD, custom		7: Binary input	7: Binary input	
							F7	A1000																													
							F3-01	F3-01	F3-03																												
							0: BCD 1% units	0: BCD 1% units	0: 8 bit																												
							1: BCD 0.1% units	1: BCD 0.1% units	1: 12 bit																												
							2: BCD 0.01% units	2: BCD 0.01% units	2: 16 bit																												
							3: BCD 1 Hz units	3: BCD 1 Hz units																													
							4: BCD 0.1 Hz units	4: BCD 0.1 Hz units																													
							5: BCD 0.01 Hz units	5: BCD 0.01 Hz units																													
6: BCD, custom	6: BCD, custom																																				
7: Binary input	7: Binary input																																				

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.							
		Parameter	Default	Setting	Parameter	Default								
Analog Monitor Card	Channel 1 Monitor Selection	F4-01	2		F4-01	102	F7	A1000						
							F4-01, F4-03, H4-01, H4-04, o1-01	F4-01, F4-03, H4-01, H4-04, o1-01						
							01: Frequency reference	101: Frequency reference						
							02: Output frequency	102: Output frequency						
							03: Output current	103: Output current						
							05: Motor speed	105: Motor speed						
							06: Output voltage reference	106: Output voltage reference						
							07: Main circuit DC voltage	107: Main circuit DC voltage						
							08: Output power	108: Output power						
							09: Torque ref (Internal)	109: Torque ref (Internal)						
							15: Freq ref, A1 voltage	113: Freq ref, A1 voltage						
							16: Freq ref, A2 voltage	114: Freq ref, A2 voltage						
							17: Freq ref, A3 voltage	115: Freq ref, A3 voltage						
							18: Secondary current (Iq)	601: Secondary current (Iq)						
							19: Motor excitation current (Id)	602: Motor excitation current (Id)						
							20: Output after soft start	116: Output after soft start						
							21: ASR input	603: ASR input						
							22: ASR output	604: ASR output						
							24: PID feedback amount	501: PID feedback amount						
							26: Output voltage ref (Vq)	605: Output voltage ref (Vq)						
							27: Output voltage ref (Vd)	606: Output voltage ref (Vd))						
							32: ACR output (q-axis)	607: ACR output (q-axis)						
							33: ACR output (d-axis)	608: ACR output (d-axis)						
							36: PID input amount	502: PID input amount						
							37: PID output amount	503: PID output amount						
							38: PID setpoint	504: PID setpoint						
								625: ASR output , no filter						
								626: Feed Forward output						
							Channel 1 Gain	F4-02	1.00		F4-02	100.0%	Setting units differ between F7 and A1000. Set A1000 by multiplying F4-02 in F7 by 100.	
							Channel 2 Monitor Selection	F4-03	3 [°]		F4-03	103 [°]	*Set the comments column for F4-01.	
							Channel 2 Gain	F4-04	0.50		F4-04	50.0%	Setting units differ between F7 and A1000. Set A1000 by multiplying F4-04 in F7 by 100.	
							Channel 1 Output Monitor Bias	F4-05	0.0%		F4-05	0.0%		

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																																	
		Parameter	Default	Setting	Parameter	Default																																		
Analog Monitor Card	Channel 2 Output Monitor Bias	F4-06	0.0%		F4-06	0.0%																																		
	Analog Output Signal Level for Channel 1	F4-07	0		F4-07	0	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td colspan="2">F4-07</td><td colspan="2">F4-07</td></tr><tr><td colspan="2">0: 0 to 10 V</td><td colspan="2">0: 0 to 10 V</td></tr><tr><td colspan="2">1: -10 to +10 V</td><td colspan="2">1: -10 to +10 V</td></tr></table>	F7		A1000		F4-07		F4-07		0: 0 to 10 V		0: 0 to 10 V		1: -10 to +10 V		1: -10 to +10 V																		
	F7		A1000																																					
F4-07		F4-07																																						
0: 0 to 10 V		0: 0 to 10 V																																						
1: -10 to +10 V		1: -10 to +10 V																																						
Analog Output Signal Level for Channel 2	F4-08	0		F4-08	0	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td colspan="2">F4-08</td><td colspan="2">F4-08</td></tr><tr><td colspan="2">0: 0 to 10 V</td><td colspan="2">0: 0 to 10 V</td></tr><tr><td colspan="2">1: -10 to +10 V</td><td colspan="2">1: -10 to +10 V</td></tr></table>	F7		A1000		F4-08		F4-08		0: 0 to 10 V		0: 0 to 10 V		1: -10 to +10 V		1: -10 to +10 V																			
F7		A1000																																						
F4-08		F4-08																																						
0: 0 to 10 V		0: 0 to 10 V																																						
1: -10 to +10 V		1: -10 to +10 V																																						
Digital Output Card	Channel 1 Output Selection	F5-01	0 *		F5-01	0 *	*See the Comments column for H2-01 through H2-03 on pages 43 and 44																																	
	Channel 2 Output Selection	F5-02	1 *		F5-02	1 *																																		
	Channel 3 Output Selection	F5-03	2 *		F5-03	2 *																																		
	Channel 4 Output Selection	F5-04	4 *		F5-04	4 *																																		
	Channel 5 Output Selection	F5-05	6 *		F5-05	6 *																																		
	Channel 6 Output Selection	F5-06	37 *		F5-06	37 *																																		
	Channel 7 Output Selection	F5-07	0F *		F5-07	F *																																		
	Channel 8 Output Selection	F5-08	0F *		F5-08	F *																																		
	DO-08 Output Mode Selection	F5-09	0		F5-09	0	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td colspan="2">F5-09</td><td colspan="2">F5-09</td></tr><tr><td rowspan="8">0</td><td>F5-01=0</td><td rowspan="8">0</td><td>F5-01=0</td></tr><tr><td>F5-02=1</td><td>F5-02=1</td></tr><tr><td>F5-03=2</td><td>F5-03=2</td></tr><tr><td>F5-04=4</td><td>F5-04=4</td></tr><tr><td>F5-05=6</td><td>F5-05=6</td></tr><tr><td>F5-06=37</td><td>F5-06=37</td></tr><tr><td>F5-07=F</td><td>F5-07=F</td></tr><tr><td>F5-08=F</td><td>F5-08=F</td></tr><tr><td colspan="2">1: Signed output</td><td colspan="2">1: Signed output</td></tr><tr><td colspan="2">2: Output according to F5-01 to 08</td><td colspan="2">2: Output according to F5-01 to 08</td></tr></table>	F7		A1000		F5-09		F5-09		0	F5-01=0	0	F5-01=0	F5-02=1	F5-02=1	F5-03=2	F5-03=2	F5-04=4	F5-04=4	F5-05=6	F5-05=6	F5-06=37	F5-06=37	F5-07=F	F5-07=F	F5-08=F	F5-08=F	1: Signed output		1: Signed output		2: Output according to F5-01 to 08		2: Output according to F5-01 to 08
F7		A1000																																						
F5-09		F5-09																																						
0	F5-01=0	0	F5-01=0																																					
	F5-02=1		F5-02=1																																					
	F5-03=2		F5-03=2																																					
	F5-04=4		F5-04=4																																					
	F5-05=6		F5-05=6																																					
	F5-06=37		F5-06=37																																					
	F5-07=F		F5-07=F																																					
	F5-08=F		F5-08=F																																					
1: Signed output		1: Signed output																																						
2: Output according to F5-01 to 08		2: Output according to F5-01 to 08																																						
Communication Option Card	Operation Selection After Communications Error	F6-01	1		F6-01	1	<table><tr><td colspan="2">F7</td><td colspan="2">A1000</td></tr><tr><td colspan="2">F6-01</td><td colspan="2">F6-01</td></tr><tr><td colspan="2">0: Ramp to stop</td><td colspan="2">0: Ramp to stop</td></tr><tr><td colspan="2">1: Coast to stop</td><td colspan="2">1: Coast to stop</td></tr><tr><td colspan="2">2: Fast Stop</td><td colspan="2">2: Fast Stop</td></tr><tr><td colspan="2">3: Continue operation</td><td colspan="2">3: Continue operation</td></tr></table>	F7		A1000		F6-01		F6-01		0: Ramp to stop		0: Ramp to stop		1: Coast to stop		1: Coast to stop		2: Fast Stop		2: Fast Stop		3: Continue operation		3: Continue operation										
F7		A1000																																						
F6-01		F6-01																																						
0: Ramp to stop		0: Ramp to stop																																						
1: Coast to stop		1: Coast to stop																																						
2: Fast Stop		2: Fast Stop																																						
3: Continue operation		3: Continue operation																																						

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.												
		Parameter	Default	Setting	Parameter	Default													
Communication Option Card	Input Level of External Fault from Communications Option Board	F6-02	0		F6-02	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>F6-02</td><td>F6-02</td></tr><tr><td>0: Always detected</td><td>0: Always detected</td></tr><tr><td>1: Detected during run</td><td>1: Detected during run</td></tr></table>	F7	A1000	F6-02	F6-02	0: Always detected	0: Always detected	1: Detected during run	1: Detected during run				
	F7	A1000																	
	F6-02	F6-02																	
	0: Always detected	0: Always detected																	
	1: Detected during run	1: Detected during run																	
	Stopping Method for External Fault from Communication Option Board	F6-03	1		F6-03	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>F6-03</td><td>F6-03</td></tr><tr><td>0: Ramp to stop</td><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td><td>1: Coast to stop</td></tr><tr><td>2: Fast Stop</td><td>2: Fast Stop</td></tr><tr><td>3: Continue operation</td><td>3: Continue operation</td></tr></table>	F7	A1000	F6-03	F6-03	0: Ramp to stop	0: Ramp to stop	1: Coast to stop	1: Coast to stop	2: Fast Stop	2: Fast Stop	3: Continue operation	3: Continue operation
	F7	A1000																	
	F6-03	F6-03																	
	0: Ramp to stop	0: Ramp to stop																	
1: Coast to stop	1: Coast to stop																		
2: Fast Stop	2: Fast Stop																		
3: Continue operation	3: Continue operation																		
Trace Sampling from Comm. Option Board	F6-04	0		—	—	No need to set this parameter as it is not in A1000.													
Current monitor unit selection	F6-05	1		—	—	Settting fixed (Unit: 100%/8192)													
Torque Reference/Torque Limit Selection from Communications Option	F6-06	0		F6-06	0	<div>0: Switching via comm. network is disabled</div> <table><tr><th>F7</th><th>A1000</th></tr><tr><td>F6-06</td><td>F6-06</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled</td></tr></table>	F7	A1000	F6-06	F6-06	0: Disabled	0: Disabled	1: Enabled	1: Enabled					
F7	A1000																		
F6-06	F6-06																		
0: Disabled	0: Disabled																		
1: Enabled	1: Enabled																		
NetRef/ComRef Selection	—	—		F6-07	0	Disable multi-step speed by setting F6-07 to 0.													
Operation Selection After SI-T WDT Error	—	—		F6-25	1	<table><tr><th>A1000</th></tr><tr><td>F6-25</td></tr><tr><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td></tr><tr><td>2: Fast Stop</td></tr><tr><td>3: Continue operation</td></tr></table>	A1000	F6-25	0: Ramp to stop	1: Coast to stop	2: Fast Stop	3: Continue operation							
A1000																			
F6-25																			
0: Ramp to stop																			
1: Coast to stop																			
2: Fast Stop																			
3: Continue operation																			
Number of SI-T BUS Error Detection	—	—		F6-26	2														

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																																																							
		Parameter	Default	Setting	Parameter	Default																																																								
Multi-Function Digital Input	Multi-Function Digital Input Terminal S1 Function Selection	—	—		H1-01*	40 Use this setting..	*Input functions for terminals S1 and S2 are fixed in F7, but multi-functional in A1000. <table><tr><th colspan="2">F7</th><th colspan="2">A1000</th></tr><tr><td colspan="2">H1-01 to H1-06</td><td colspan="2">H1-01 to H1-08</td></tr><tr><td colspan="2">0: 3-wire sequence</td><td colspan="2">0: 3-wire sequence</td></tr><tr><td colspan="2">1: LOCAL/REMOTE selection</td><td colspan="2">1: LOCAL/REMOTE selection</td></tr><tr><td colspan="2">2: Option / Drive selection</td><td colspan="2">2: Run command source</td></tr><tr><td colspan="2"></td><td>b1-15</td><td>b1-16</td></tr><tr><td colspan="2"></td><td>3:</td><td>3: Option card</td></tr><tr><td colspan="2"></td><td>3: Option card</td><td>Option card</td></tr></table>	F7		A1000		H1-01 to H1-06		H1-01 to H1-08		0: 3-wire sequence		0: 3-wire sequence		1: LOCAL/REMOTE selection		1: LOCAL/REMOTE selection		2: Option / Drive selection		2: Run command source				b1-15	b1-16			3:	3: Option card			3: Option card	Option card																							
	F7		A1000																																																											
	H1-01 to H1-06		H1-01 to H1-08																																																											
0: 3-wire sequence		0: 3-wire sequence																																																												
1: LOCAL/REMOTE selection		1: LOCAL/REMOTE selection																																																												
2: Option / Drive selection		2: Run command source																																																												
		b1-15	b1-16																																																											
		3:	3: Option card																																																											
		3: Option card	Option card																																																											
Multi-Function Digital Input Terminal S2 Function Selection	—	—		H1-02*	41 Use this setting.	<table><tr><td>3: Multi-Step Speed Reference 1</td><td>3: Multi-Step Speed Reference 1</td></tr><tr><td>4: Multi-Step Speed Reference 2</td><td>4: Multi-Step Speed Reference 2</td></tr><tr><td>5: Multi-Step Speed Reference 3</td><td>5: Multi-Step Speed Reference 3</td></tr><tr><td>6: Jog freq ref selection</td><td>6: Jog freq ref selection</td></tr><tr><td>7: Accel/Decel Time Selection 1</td><td>7: Accel/decel time selection 1</td></tr><tr><td>8: Baseblock command (N.O.)</td><td>8: Baseblock command (N.O.)</td></tr><tr><td>9: Baseblock command (N.C.)</td><td>9: Baseblock command (N.C.)</td></tr><tr><td>A: Hold accel/decel stop</td><td>A: Hold accel/decel stop</td></tr><tr><td>B: Drive overheat alarm</td><td>B: Drive overheat alarm</td></tr><tr><td>C: Multi-func analog input selection</td><td>C: Multi-func analog input selection</td></tr><tr><td>D: Speed control disabled (V/f w/PG)</td><td>D: Speed control disabled (V/f w/PG)</td></tr><tr><td>E: Speed control integral reset</td><td>E: Speed control integral reset</td></tr><tr><td>F: Not used</td><td>F: Through-mode</td></tr><tr><td>10: Up command</td><td>10: Up command</td></tr><tr><td>11: Down command</td><td>11: Down command</td></tr><tr><td>12: FWD jog</td><td>12: FWD jog</td></tr><tr><td>13: REV jog</td><td>13: REV jog</td></tr><tr><td>14: Fault Reset</td><td>14: Fault Reset</td></tr><tr><td>15: Fast Stop (N.O.)</td><td>15: Fast Stop (N.O.)</td></tr><tr><td>16: Motor switch command</td><td>16: Motor switch command</td></tr><tr><td>17: Fast Stop (N.C.)</td><td>17: Fast Stop (N.C.)</td></tr><tr><td>18: Timer function input</td><td>18: Timer function input</td></tr><tr><td>19: PID control cancel</td><td>19: PID control cancel</td></tr><tr><td>1A: Accel/decel time selection 2</td><td>1A: Accel/decel time selection 2</td></tr><tr><td>1B: Write allowed</td><td>1B: Write allowed</td></tr><tr><td>1C: +Speed Command</td><td>44: Off-set frequency 1 (added)</td></tr><tr><td>1D: —Speed Command</td><td>45: Off-set frequency 2 (added)</td></tr><tr><td>1E: Analog freq ref sample / hold</td><td>1E: Analog freq ref sample / hold</td></tr></table>	3: Multi-Step Speed Reference 1	3: Multi-Step Speed Reference 1	4: Multi-Step Speed Reference 2	4: Multi-Step Speed Reference 2	5: Multi-Step Speed Reference 3	5: Multi-Step Speed Reference 3	6: Jog freq ref selection	6: Jog freq ref selection	7: Accel/Decel Time Selection 1	7: Accel/decel time selection 1	8: Baseblock command (N.O.)	8: Baseblock command (N.O.)	9: Baseblock command (N.C.)	9: Baseblock command (N.C.)	A: Hold accel/decel stop	A: Hold accel/decel stop	B: Drive overheat alarm	B: Drive overheat alarm	C: Multi-func analog input selection	C: Multi-func analog input selection	D: Speed control disabled (V/f w/PG)	D: Speed control disabled (V/f w/PG)	E: Speed control integral reset	E: Speed control integral reset	F: Not used	F: Through-mode	10: Up command	10: Up command	11: Down command	11: Down command	12: FWD jog	12: FWD jog	13: REV jog	13: REV jog	14: Fault Reset	14: Fault Reset	15: Fast Stop (N.O.)	15: Fast Stop (N.O.)	16: Motor switch command	16: Motor switch command	17: Fast Stop (N.C.)	17: Fast Stop (N.C.)	18: Timer function input	18: Timer function input	19: PID control cancel	19: PID control cancel	1A: Accel/decel time selection 2	1A: Accel/decel time selection 2	1B: Write allowed	1B: Write allowed	1C: +Speed Command	44: Off-set frequency 1 (added)	1D: —Speed Command	45: Off-set frequency 2 (added)	1E: Analog freq ref sample / hold	1E: Analog freq ref sample / hold
3: Multi-Step Speed Reference 1	3: Multi-Step Speed Reference 1																																																													
4: Multi-Step Speed Reference 2	4: Multi-Step Speed Reference 2																																																													
5: Multi-Step Speed Reference 3	5: Multi-Step Speed Reference 3																																																													
6: Jog freq ref selection	6: Jog freq ref selection																																																													
7: Accel/Decel Time Selection 1	7: Accel/decel time selection 1																																																													
8: Baseblock command (N.O.)	8: Baseblock command (N.O.)																																																													
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B: Drive overheat alarm	B: Drive overheat alarm																																																													
C: Multi-func analog input selection	C: Multi-func analog input selection																																																													
D: Speed control disabled (V/f w/PG)	D: Speed control disabled (V/f w/PG)																																																													
E: Speed control integral reset	E: Speed control integral reset																																																													
F: Not used	F: Through-mode																																																													
10: Up command	10: Up command																																																													
11: Down command	11: Down command																																																													
12: FWD jog	12: FWD jog																																																													
13: REV jog	13: REV jog																																																													
14: Fault Reset	14: Fault Reset																																																													
15: Fast Stop (N.O.)	15: Fast Stop (N.O.)																																																													
16: Motor switch command	16: Motor switch command																																																													
17: Fast Stop (N.C.)	17: Fast Stop (N.C.)																																																													
18: Timer function input	18: Timer function input																																																													
19: PID control cancel	19: PID control cancel																																																													
1A: Accel/decel time selection 2	1A: Accel/decel time selection 2																																																													
1B: Write allowed	1B: Write allowed																																																													
1C: +Speed Command	44: Off-set frequency 1 (added)																																																													
1D: —Speed Command	45: Off-set frequency 2 (added)																																																													
1E: Analog freq ref sample / hold	1E: Analog freq ref sample / hold																																																													
Multi-Function Digital Input	Terminal S3 Function Selection	H1-01	24		H1-03	24																																																								

(Continued on the following page)

(Continued on the following page)

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.
		Parameter	Default	Setting	Parameter	Default	
Multi-Function Digital Input	Terminal S4 Function Selection	H1-02	14		H1-04	14	* Vaules in brackets are valid for 3-wire initialization (A1-03 = 3330) (continued from the previous page)
							F7
							A1000
							H1-01 to H1-06
							H1-01 to H1-08
							20: External fault (N.O., Always detected, Ramp to stop)
							20: External fault (N.O., Always detected, Ramp to stop)
							21: External fault (N.C., Always detected, Ramp to stop)
							21: External fault (N.C., Always detected, Ramp to stop)
							22: External fault (N.O., Detected during run, Ramp to stop)
							22: External fault (N.O., Detected during run, Ramp to stop)
							23: External fault (N.C., Detected during run, Ramp to stop)
							23: External fault (N.C., Detected during run, Ramp to stop)
							24: External fault (N.O., Always detected, Coast to stop)
							24: External fault (N.O., Always detected, Coast to stop)
							25: External fault (N.C., Always detected, Coast to stop)
							25: External fault (N.C., Always detected, Coast to stop)
							26: External fault (N.O., Detected during run, Coast to stop)
							26: External fault (N.O., Detected during run, Coast to stop)
							27: External fault (N.C., Detected during run, Coast to stop)
							27: External fault (N.C., Detected during run, Coast to stop)
							28: External Fault (N.O., always detected, Fast Stop)
							28: External Fault (N.O., always detected, Fast Stop)
							29: External fault (N.C., always detected, Fast Stop)
							29: External fault (N.C., always detected, Fast Stop)
							2A: External Fault (N.O., detected during run, Fast Stop)
							2A: External Fault (N.O., detected during run, Fast Stop)
							2B: External fault (N.C., detected during run, Fast Stop)
							2B: External fault (N.C., detected during run, Fast Stop)
							2C: External fault (N.O., always detected, alarm only)
							2C: External fault (N.O., always detected, alarm only)
							2D: External fault (N.C., always detected, alarm only)
							2D: External fault (N.C., always detected, alarm only)
							2E: External Fault (N.O., detected during run, alarm only)
							2E: External Fault (N.O., detected during run, alarm only)
							2F: External Fault (N.C., detected during run, alarm only)
							2F: External Fault (N.C., detected during run, alarm only)
							30: PID control integral reset
							30: PID control integral reset
							31: PID control integral hold
							31: PID control integral hold
							32: Multi-step speed reference 4
							32: Multi-step speed reference 4
							34: PID Soft Starter switch
							34: PID Soft Starter switch

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Multi Functional Digital Input	Terminal S5 Function Selection	H1-03	3 (0)*		H1-05	3 (0)*		
							35: PID input characteristics switch	35: PID input characteristics switch
							—	40: Forward run command
							—	41: Reverse run command
							—	42: Run command
							—	43: Forward / Reverse command 2
							—	46: Off-set frequency bias
							60: DC Braking command	60: DC Braking command
	Terminal S6 Function Selection	H1-04	4 (3)*		H1-06	4 (3)*	61: External search command 1	61: External search command 1
							62: External search command 2	62: External search command 2
							63: Magnetic field weakening	63: Magnetic field weakening
							64: External search command 3	64: External search command 3
							65: KEB command (N.C.)	65: KEB command (N.C.)
							66: KEB command (N.O.)	66: KEB command (N.O.)
							67: Comm. test mode	67: Comm. test mode
							68: High Slip Braking	68: High Slip Braking
	Terminal S7 Function Selection	H1-05	6 (4)*		H1-07	6 (4)*	—	6A: Drive enabled
							71: Speed/Torque Control switch	71: Speed/Torque Control switch
							72: Zero Servo	72: Zero Servo
							—	75: UP 2
							—	76: DOWN 2
							77: ASR proportional gain switch	77: ASR proportional gain switch
							78: External torque ref, switch polarity	78: External torque ref, switch polarity
							—	7A: KEB command 2 (N.C.)
	Terminal S8 Function Selection	H1-06	8 (6)*		H1-08	8	—	7B: KEB command 2 (N.O.)
							—	7C: Short Braking command (N.O.)
							—	7D: Short Braking command (N.C.)
							—	7E: Detection rotational direction
							—	90 to 97: DriveWorksEZ 1 to 8
—							9F: DriveWorksEZ, disabled	
* Values in brackets are valid for 3-wire initialization (A1-03 = 3330)								

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Multi-Function Relay Output	Terminal M1 and M2 Function Selection	H2-01	0		H2-01	0	F7	A1000
							H2-01 to H2-03	H2-01 to H2-03
							0: During Run	0: During run
							1: Zero Speed	1: Zero speed
							2: Frequency Agree 1	2: Frequency agree 1
							3: User-set frequency agree 1	3: User-set frequency agree 1
							4: Frequency detection 1	4: Frequency detection 1
							5: Frequency detection 2 (used when L4-07=1)	5: Frequency detection 2 (used when L4-07=1)
							6: Drive ready	6: Drive ready
							7: DC bus undervoltage	7: DC bus undervoltage
							8: During baseblock	8: During baseblock (N.O.)
							9: Freq ref selection situation	9: Freq ref selection situation
							A: Run cmd situation	A: Run cmd situation
							B: Torque detection 1 (N.O.)	B: Torque detection 1 (N.O.)
							C: Frequency reference loss	C: Frequency reference loss
							D: Braking resistor overheat	D: Braking resistor overheat
							E: Fault	E: Fault
							F: Not used	F: Through-mode
							10: Alarm	10: Alarm
							11: Fault reset	11: Fault reset
							12: Timer function output	12: Timer function output
							13: Frequency agree 2	13: Frequency agree 2
							14: User-Set frequency agree 2	14: User-Set frequency agree 2
							15: Frequency detection 3	15: Frequency detection 3
							16: Frequency detection 4	16: Frequency detection 4
							17: Torque detection 1 (N.C.)	17: Torque detection 1 (N.C.)
							18: Torque detection 2 (N.O.)	18: Torque detection 2 (N.O.)
							19: Torque detection 2 (N.C.)	19: Torque detection 2 (N.C.)
							1A: Reverse run	1A: Reverse run
							1B: During baseblock 2 (N.C.)	1B: During baseblock 2 (N.C.)
							1C: Motor selection	1C: Motor selection
							1D: Regen during run	1D: Regen during run
							1E: Fault restart	1E: Fault restart

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Multi-Function Relay Output	Terminal M3 and M4 Function Selection	H2-02	1		H2-02	1		
							1F: Motor overload alarm	1F: Motor overload alarm
							20: Drive overhear alarm	20: Drive overhear alarm
							—	22: Mechanical weakening (N.O.)
							—	2F: Maintenance timer
							30: During torque limit	30: During torque limit
							31: During speed limit	31: During speed limit
							32: Speed limit active	32: Speed limit active
							33: Zero servo complete	33: Zero servo complete
							36: Frequency detection 5	5: Frequency detection 2 (used when L4-07=0)
							37: During run 2	37: During frequency output
							—	38: Drive enabled
							—	39: Kilowatt hour output
							—	3C: Operation mode
							—	3D: Speed Search
							—	3E: PID feedback fault (during loss)
							—	3F: PID feedback too high (fault)
	—	4A: During KEB						
	—	4B: During Short Braking						
	Terminal M5 and M6 Function Selection	H2-03	2		H2-03	2		
							—	4C: During Fast Stop
							—	4D: Oh pre-alarm time limit
							—	4E: During Rr
							—	4F: During Rh
							3D: Cooling fan malfunction	3D: Cooling fan malfunction
							—	61: Rotor detection complete
—							90 to 92: DriveWorksEZ, outputs 1-3	
—							100 to 192:Reverse output of 0 to 92	
Analog Input	Terminal A1 Signal Level Selection	H3-01	0		H3-01	0	Terminal A1 in A1000 is multi-functional.	
							F7	A1000
							H3-01	H3-01
							0: 0 to +10 V	0: 0 to +10 V (uses lower limit)
							1: -10 to 10 V	1: -10 to 10 V
	Terminal A1 Function Selection	—	—		H3-02	0	For A1000, set H3-02 to 0 (Frequency Reference Bias).	
	Terminal A1 Gain Setting	H3-02	100.0%		H3-03	100.0%		
Terminal A1 Gain Setting	F2-02				100.0%	Set this parameter when using an analog option card to determine the gain added to the analog reference.		
Terminal A1 Bias Setting	H3-03	0.0%		H3-04	0.0%			
				F2-03	0.0%	Set this parameter when using an analog option card to determine the bias for the analog reference.		

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																																																							
		Parameter	Default	Setting	Parameter	Default																																																								
Analog Input	Terminal A3 Signal Level Selection	H3-04	0		H3-05	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H3-04</td><td>H3-05</td></tr><tr><td>0: 0 to +10 V</td><td>0: 0 to +10 V (uses lower limit)</td></tr><tr><td>1: -10 to 10 V</td><td>1: 0 to ±10 V (no lower limit)</td></tr></table>		F7	A1000	H3-04	H3-05	0: 0 to +10 V	0: 0 to +10 V (uses lower limit)	1: -10 to 10 V	1: 0 to ±10 V (no lower limit)																																														
	F7	A1000																																																												
	H3-04	H3-05																																																												
	0: 0 to +10 V	0: 0 to +10 V (uses lower limit)																																																												
	1: -10 to 10 V	1: 0 to ±10 V (no lower limit)																																																												
	Terminal A3 Function Selection	H3-05	1F		H3-06	2	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H3-05, H3-09</td><td>H3-06, H3-10</td></tr><tr><td>0: Terminal A1 bias</td><td>0: Main frequency reference</td></tr><tr><td>1: Frequency gain</td><td>1: Frequency gain</td></tr><tr><td>2: Auxiliary freq ref 1</td><td>2: Auxiliary freq ref 1</td></tr><tr><td>3: Auxiliary freq ref 2</td><td>3: Analog frequency reference</td></tr><tr><td>4: Output voltage bias</td><td>4: Output voltage bias</td></tr><tr><td>5: Accel/decel time gain</td><td>5: Accel/decel time gain</td></tr><tr><td>6: DC Injection Braking current</td><td>6: DC Injection Braking current</td></tr><tr><td>7: Torque detection level</td><td>7: Torque detection level</td></tr><tr><td>8: Stall Prevention level during run</td><td>8: Stall Prevention level during run</td></tr><tr><td>9: Output freq lower limit level</td><td>9: Output freq lower limit level</td></tr><tr><td>A: Jump frequency</td><td>No setting necessary</td></tr><tr><td>B: PID feedback</td><td>B: PID feedback</td></tr><tr><td>C: PID setpoint</td><td>C: PID setpoint</td></tr><tr><td>D: Frequency bias 2</td><td>D: Frequency bias 2</td></tr><tr><td>E: Motor temperature input</td><td>E: Motor temperature input</td></tr><tr><td>F: Through- mode</td><td>F: Through- mode</td></tr><tr><td>10: FWD torque limit</td><td>10: FWD torque limit</td></tr><tr><td>11: REV torque limit</td><td>11: REV torque limit</td></tr><tr><td>12: Torque limit during regen</td><td>12: Torque limit during regen</td></tr><tr><td>13: Torque ref / speed limit during Torque Control</td><td>13: Torque ref / speed limit during Torque Control</td></tr><tr><td>14: Torque compensation</td><td>14: Torque compensation</td></tr><tr><td>15: P/N both side torque limit</td><td>15: P/N both side torque limit</td></tr><tr><td>—</td><td>16: PID feedback difference</td></tr><tr><td>1F: Not used for analog input</td><td>1F: Through-mode</td></tr><tr><td>—</td><td>30 to 32: DriveWorksEZ, Analog input 1 to 3</td></tr></table>		F7	A1000	H3-05, H3-09	H3-06, H3-10	0: Terminal A1 bias	0: Main frequency reference	1: Frequency gain	1: Frequency gain	2: Auxiliary freq ref 1	2: Auxiliary freq ref 1	3: Auxiliary freq ref 2	3: Analog frequency reference	4: Output voltage bias	4: Output voltage bias	5: Accel/decel time gain	5: Accel/decel time gain	6: DC Injection Braking current	6: DC Injection Braking current	7: Torque detection level	7: Torque detection level	8: Stall Prevention level during run	8: Stall Prevention level during run	9: Output freq lower limit level	9: Output freq lower limit level	A: Jump frequency	No setting necessary	B: PID feedback	B: PID feedback	C: PID setpoint	C: PID setpoint	D: Frequency bias 2	D: Frequency bias 2	E: Motor temperature input	E: Motor temperature input	F: Through- mode	F: Through- mode	10: FWD torque limit	10: FWD torque limit	11: REV torque limit	11: REV torque limit	12: Torque limit during regen	12: Torque limit during regen	13: Torque ref / speed limit during Torque Control	13: Torque ref / speed limit during Torque Control	14: Torque compensation	14: Torque compensation	15: P/N both side torque limit	15: P/N both side torque limit	—	16: PID feedback difference	1F: Not used for analog input	1F: Through-mode	—	30 to 32: DriveWorksEZ, Analog input 1 to 3
	F7	A1000																																																												
	H3-05, H3-09	H3-06, H3-10																																																												
	0: Terminal A1 bias	0: Main frequency reference																																																												
	1: Frequency gain	1: Frequency gain																																																												
	2: Auxiliary freq ref 1	2: Auxiliary freq ref 1																																																												
	3: Auxiliary freq ref 2	3: Analog frequency reference																																																												
	4: Output voltage bias	4: Output voltage bias																																																												
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	C: PID setpoint	C: PID setpoint																																																												
	D: Frequency bias 2	D: Frequency bias 2																																																												
	E: Motor temperature input	E: Motor temperature input																																																												
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1F: Not used for analog input	1F: Through-mode																																																													
—	30 to 32: DriveWorksEZ, Analog input 1 to 3																																																													
Terminal A3 Gain Setting	H3-06	100.0%		H3-07	100.0%																																																									
Terminal A3 Bias Setting	H3-07	0.0%		H3-08	0.0%																																																									
Terminal A2 Signal Level Selection	H3-08	2		H3-09	2	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H3-08</td><td>H3-09</td></tr><tr><td>0: 0 to 10 V</td><td>0: 0 to +10 V (with lower limit)</td></tr><tr><td>1: -10 to 10 V</td><td>1: 0 to +10 V (no lower limit)</td></tr><tr><td>2: 4 to 20 mA</td><td>2: 4 to 20 mA</td></tr><tr><td>—</td><td>3: 0 to 20 mA</td></tr></table>		F7	A1000	H3-08	H3-09	0: 0 to 10 V	0: 0 to +10 V (with lower limit)	1: -10 to 10 V	1: 0 to +10 V (no lower limit)	2: 4 to 20 mA	2: 4 to 20 mA	—	3: 0 to 20 mA																																											
F7	A1000																																																													
H3-08	H3-09																																																													
0: 0 to 10 V	0: 0 to +10 V (with lower limit)																																																													
1: -10 to 10 V	1: 0 to +10 V (no lower limit)																																																													
2: 4 to 20 mA	2: 4 to 20 mA																																																													
—	3: 0 to 20 mA																																																													
Terminal A2 Function Selection	H3-09	0*		H3-10	0*	*For A1000, see the description for H3-06.																																																								
Terminal A2 Gain Setting	H3-10	100.0%		H3-11	100.0%																																																									

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																					
		Parameter	Default	Setting	Parameter	Default																						
Analog Input	Terminal A2 Input Bias	H3-11	0.0%		H3-12	0.0%																						
	Analog Input Filter Time Constant	H3-12	0.0 s		H3-13	0.03 s																						
	Terminal A1/A2 Switching	—	—	H3-02	0	<table><tr><th colspan="3">A1000</th></tr><tr><th>H3-02</th><th>H3-10</th><th>H3-06</th></tr><tr><td>0</td><td>2</td><td>F7: Setting for H3-05</td></tr><tr><td>2</td><td>0</td><td></td></tr></table>	A1000			H3-02	H3-10	H3-06	0	2	F7: Setting for H3-05	2	0											
				A1000																								
H3-02				H3-10	H3-06																							
0	2	F7: Setting for H3-05																										
2	0																											
H3-10	0																											
	H3-06	2																										
Analog Output	Analog Output 1 Terminal FM	H4-01	2°		H4-01	102°	*See the description for F4-01																					
	Terminal FM Gain	H4-02	100%		H4-02	100%																						
	Terminal FM Bias	H4-03	0%		H4-03	0%																						
	Analog Output 2 Terminal AM	H4-04	3°		H4-04	103°	*See the description for F4-01.																					
	Terminal AM Gain	H4-05	50%		H4-05	50%																						
	Terminal AM Bias	H4-06	0%		H4-06	0%																						
	Analog Output 1 Signal Level Selection	H4-07	0		H4-07	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H4-07</td><td>H4-07</td></tr><tr><td>0: 0 to +10 V output</td><td>0: 0 to +10 Vdc output</td></tr><tr><td>1: 0 to ±10 Vdc output</td><td>1: 0 to ±10 Vdc output</td></tr><tr><td>2: 4 to 20 mA output</td><td>2: 0 to 20 mA output</td></tr></table>	F7	A1000	H4-07	H4-07	0: 0 to +10 V output	0: 0 to +10 Vdc output	1: 0 to ±10 Vdc output	1: 0 to ±10 Vdc output	2: 4 to 20 mA output	2: 0 to 20 mA output											
							F7	A1000																				
	H4-07	H4-07																										
0: 0 to +10 V output	0: 0 to +10 Vdc output																											
1: 0 to ±10 Vdc output	1: 0 to ±10 Vdc output																											
2: 4 to 20 mA output	2: 0 to 20 mA output																											
Analog Output 2 Signal Level Selection	H4-08	0		H4-08	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H4-08</td><td>H4-08</td></tr><tr><td>0: 0 to +10 V output</td><td>0: 0 to +10 Vdc output</td></tr><tr><td>1: 0 to ±10 Vdc output</td><td>1: 0 to ±10 Vdc output</td></tr><tr><td>2: 0 to 20 mA output</td><td>2: 0 to 20 mA output</td></tr></table>	F7	A1000	H4-08	H4-08	0: 0 to +10 V output	0: 0 to +10 Vdc output	1: 0 to ±10 Vdc output	1: 0 to ±10 Vdc output	2: 0 to 20 mA output	2: 0 to 20 mA output												
						F7	A1000																					
H4-08	H4-08																											
0: 0 to +10 V output	0: 0 to +10 Vdc output																											
1: 0 to ±10 Vdc output	1: 0 to ±10 Vdc output																											
2: 0 to 20 mA output	2: 0 to 20 mA output																											
MEMOBUS Comm.	Slave Address	H5-01	1F		H5-01	1F																						
	Communication Speed Selection	H5-02	3		H5-02	3	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H5-02</td><td>H5-02</td></tr><tr><td>0: 1200 bps</td><td>0: 1200 bps</td></tr><tr><td>1: 2400 bps</td><td>1: 2400 bps</td></tr><tr><td>2: 4800 bps</td><td>2: 4800 bps</td></tr><tr><td>3: 9600 bps</td><td>3: 9600 bps</td></tr><tr><td>4: 19200 bps</td><td>4: 19200 bps</td></tr><tr><td>—</td><td>5: 38400 bps</td></tr><tr><td>—</td><td>6: 57600 bps</td></tr><tr><td>—</td><td>7: 76800 bps</td></tr><tr><td>—</td><td>8: 115200 bps</td></tr></table>	F7	A1000	H5-02	H5-02	0: 1200 bps	0: 1200 bps	1: 2400 bps	1: 2400 bps	2: 4800 bps	2: 4800 bps	3: 9600 bps	3: 9600 bps	4: 19200 bps	4: 19200 bps	—	5: 38400 bps	—	6: 57600 bps	—	7: 76800 bps	—
F7	A1000																											
H5-02	H5-02																											
0: 1200 bps	0: 1200 bps																											
1: 2400 bps	1: 2400 bps																											
2: 4800 bps	2: 4800 bps																											
3: 9600 bps	3: 9600 bps																											
4: 19200 bps	4: 19200 bps																											
—	5: 38400 bps																											
—	6: 57600 bps																											
—	7: 76800 bps																											
—	8: 115200 bps																											

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.												
		Parameter	Default	Setting	Parameter	Default													
MEMOBUS Comm.	Communication Parity Selection	H5-03	0		H5-03	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H5-03</td><td>H5-03</td></tr><tr><td>0: No parity</td><td>0: No parity</td></tr><tr><td>1: Even parity</td><td>1: Even parity</td></tr><tr><td>2: Odd parity</td><td>2: Odd parity</td></tr></table>	F7	A1000	H5-03	H5-03	0: No parity	0: No parity	1: Even parity	1: Even parity	2: Odd parity	2: Odd parity		
	F7	A1000																	
	H5-03	H5-03																	
	0: No parity	0: No parity																	
	1: Even parity	1: Even parity																	
	2: Odd parity	2: Odd parity																	
		H5-04	3		H5-04	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H5-04</td><td>H5-04</td></tr><tr><td>0: Ramp to stop</td><td>0: Ramp to stop</td></tr><tr><td>1: Coast to stop</td><td>1: Coast to stop</td></tr><tr><td>2: Fast Stop</td><td>2: Fast Stop</td></tr><tr><td>3: Continue operation</td><td>3: Continue operation</td></tr></table>	F7	A1000	H5-04	H5-04	0: Ramp to stop	0: Ramp to stop	1: Coast to stop	1: Coast to stop	2: Fast Stop	2: Fast Stop	3: Continue operation	3: Continue operation
F7	A1000																		
H5-04	H5-04																		
0: Ramp to stop	0: Ramp to stop																		
1: Coast to stop	1: Coast to stop																		
2: Fast Stop	2: Fast Stop																		
3: Continue operation	3: Continue operation																		
Communication Error Detection Selection	H5-05	1		H5-05	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H5-05</td><td>H5-05</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled</td></tr></table>	F7	A1000	H5-05	H5-05	0: Disabled	0: Disabled	1: Enabled	1: Enabled					
F7	A1000																		
H5-05	H5-05																		
0: Disabled	0: Disabled																		
1: Enabled	1: Enabled																		
Send Wait Time	H5-06	5ms		H5-06	5ms														
RTS Control Selection	H5-07	1		H5-07	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H5-07</td><td>H5-07</td></tr><tr><td>0: Disabled (RTS always on)</td><td>0: Disabled (RTS always on)</td></tr><tr><td>1: Enabled (RTS enabled during send only)</td><td>1: Enabled (RTS enabled during send only)</td></tr></table>	F7	A1000	H5-07	H5-07	0: Disabled (RTS always on)	0: Disabled (RTS always on)	1: Enabled (RTS enabled during send only)	1: Enabled (RTS enabled during send only)					
F7	A1000																		
H5-07	H5-07																		
0: Disabled (RTS always on)	0: Disabled (RTS always on)																		
1: Enabled (RTS enabled during send only)	1: Enabled (RTS enabled during send only)																		
Unit Selection for MEMOBUS Register 0025H	—	—		H5-10	0	<table><tr><th>A1000</th></tr><tr><td>H5-10</td></tr><tr><td>0: 0.1 V units</td></tr><tr><td>1: 1 V units</td></tr></table>	A1000	H5-10	0: 0.1 V units	1: 1 V units									
A1000																			
H5-10																			
0: 0.1 V units																			
1: 1 V units																			
Pulse Train I/O	Pulse Train Input Function Selection	H6-01	0		H6-01	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>H6-01</td><td>H6-01</td></tr><tr><td>0: Frequency reference</td><td>0: Frequency reference</td></tr><tr><td>1: PID feedback value</td><td>1: PID feedback value</td></tr><tr><td>2: PID setpoint</td><td>2: PID setpoint</td></tr><tr><td>—</td><td>3: Speed Detection Value</td></tr></table>	F7	A1000	H6-01	H6-01	0: Frequency reference	0: Frequency reference	1: PID feedback value	1: PID feedback value	2: PID setpoint	2: PID setpoint	—	3: Speed Detection Value
	F7	A1000																	
	H6-01	H6-01																	
	0: Frequency reference	0: Frequency reference																	
	1: PID feedback value	1: PID feedback value																	
2: PID setpoint	2: PID setpoint																		
—	3: Speed Detection Value																		
Pulse Train Input Scaling	H6-02	1440 Hz		H6-02	1440 Hz														
Pulse Train Input Gain	H6-03	100.0%		H6-03	100.0%														
Pulse Train Input Bias	H6-04	0.0%		H6-04	0.0%														
Pulse Train Input Filter Time	H6-05	0.10 s		H6-05	0.10 s														

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Pulse Train I/O	Pulse Train Monitor Selection	H6-06	2		H6-06	102	F7	A1000
							H6-06	H6-06
							01: Frequency reference	101: Frequency reference
							02: Output frequency	102: Output frequency
							05: Motor speed	105: Motor speed
							20: Output frequency after soft start	116: Output frequency after soft start
							24: PID feedback	501: PID feedback
							36: PID input amount	502: PID input amount
	Pulse Train Monitor Scaling	H6-07	1440 Hz		H6-07	1440 Hz		
Motor Protection Function	Motor Overload Protection Selection	L1-01	1		L1-01	1*	F7	A1000
							L1-01	L1-01
							0: Disabled	0: Disabled
							1: General-purpose motor protection	1: General-purpose motor protection
							2: Drive-dedicated motor protection	2: Drive-dedicated motor protection
							3: Vector motor protection	3: Vector motor protection
							—	4: PM motor protection (derated torque)
	—	5: PM motor protection (constant torque)						
	Motor Overload Protection Time	L1-02	1.0min		L1-02	1.0 min.		
	Motor Overheat Alarm Operation Selection	L1-03	3		L1-03	3	F7	A1000
L1-03							L1-03	
0: Ramp to stop							0: Ramp to stop	
1: Coast to stop							1: Coast to stop	
2: Fast Stop							2: Fast Stop	
3: Continue operation	3: Continue operation							
Motor Protection Function	Motor Overheat Fault Operation Selection	L1-04	1		L1-04	1	F7	A1000
							L1-04	L1-04
							0: Ramp to stop	0: Ramp to stop
							1: Coast to stop	1: Coast to stop
	2: Fast Stop	2: Fast Stop						
Motor Temperature Input Filter Time	L1-05	0.20 s		L1-05	0.20 s			

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																
		Parameter	Default	Setting	Parameter	Default																	
Momentary Power Loss Process	Momentary Power Loss Operation Selection	L2-01	0		L2-01	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>L2-01</td><td>L2-01</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled</td></tr><tr><td>2: CPU enabled run</td><td>2: CPU enabled run</td></tr><tr><td>—</td><td>3: KEB operation</td></tr><tr><td>—</td><td>4: KEB deceleration as long as CPU has power.</td></tr><tr><td>—</td><td>5: KEB deceleration to stop.</td></tr></table>	F7	A1000	L2-01	L2-01	0: Disabled	0: Disabled	1: Enabled	1: Enabled	2: CPU enabled run	2: CPU enabled run	—	3: KEB operation	—	4: KEB deceleration as long as CPU has power.	—	5: KEB deceleration to stop.
	F7	A1000																					
	L2-01	L2-01																					
	0: Disabled	0: Disabled																					
	1: Enabled	1: Enabled																					
2: CPU enabled run	2: CPU enabled run																						
—	3: KEB operation																						
—	4: KEB deceleration as long as CPU has power.																						
—	5: KEB deceleration to stop.																						
	Momentary Power Loss Ride-Thru Time	L2-02	*		L2-02	*	Determined by drive capacity. A1000: Depends additionally on C6-01 setting																
	Momentary Power Loss Minimum Baseblock Time	L2-03	*		L2-03	*	Determined by drive capacity. A1000: Depends additionally on C6-01 setting																
	Momentary Power Loss Voltage Recovery Ramp Time	L2-04	*		L2-04	*	Determined by drive capacity. A1000: Depends additionally on C6-01 setting																
Momentary Power Loss Process	Undervoltage Detection Level	L2-05	190 V		L2-05	190 V	380 V for a 400 class drive. If E1-01 is set lower than 400, then set 350 V for A1000.																
	KEB Deceleration Time	L2-06	0.0 s		L2-06	0.0 s	Sets the deceleration time during KEB.																
	Acceleration Time After Power Recovery	L2-07	0.0 s		L2-07	0.0 s																	
	KEB Ride-Thru Start Output Frequency Reduction	L2-08	100%		L2-08	100%																	
	KEB Detection Time	L2-10	50 ms		L2-10	50 ms	Sets the time for which the KEB function is at least active																
	DC Bus Level During KEB	S9-28	1.35		L2-11	1.22 * E1-01	Setting range: 300 to 800 Vdc (for 400V class) Devide by 2 for 200 V class drive																
	S9-01 to S9-22 and S9-30				—	—	S9-Parameters are not longer available because KEB function has been changed. Refer to the Technical Manual or contact your YASKAWA representative in case of questions.																
Stall Prevention Function	Stall Prevention Selection during Acceleration	L3-01	1		L3-01	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>L3-01</td><td>L3-01</td></tr><tr><td>0: Disabled</td><td>0: Disabled</td></tr><tr><td>1: Enabled</td><td>1: Enabled</td></tr><tr><td>2: Optimum Tuning</td><td>2: Optimum Tuning</td></tr></table>	F7	A1000	L3-01	L3-01	0: Disabled	0: Disabled	1: Enabled	1: Enabled	2: Optimum Tuning	2: Optimum Tuning						
	F7	A1000																					
	L3-01	L3-01																					
0: Disabled	0: Disabled																						
1: Enabled	1: Enabled																						
2: Optimum Tuning	2: Optimum Tuning																						
	Stall Prevention Level during Acceleration	L3-02	120%		L3-02	150% [*]	*Upper limit is determined by L8-38.																
	Stall Prevention Limit during Acceleration	L3-03	50%		L3-03	50%																	

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Stall Prevention Function	Stall Prevention Selection during Deceleration	L3-04	1		L3-04	1	F7	A1000
							L3-04	L3-04
							0: Disabled	0: Disabled
							1: Enabled	1: Enabled
							2: Optimal deceleration	2: Optimal deceleration
							3: Enabled (with braking resistor)	3: Enabled (with braking resistor)
							—	4: Overexcitation Braking
	—	5: Overexcitation Deceleration 2						
	Stall Prevention Selection during Run	L3-05	1		L3-05	1	F7	A1000
L3-05							L3-05	
0: Disabled							0: Disabled	
1: Enabled (Decel Time 1)							1: Enabled (Decel Time 1)	
2: Enabled (Decel Time 2)							2: Enabled (Decel Time 2)	
Stall Prevention Level during Run	L3-06	150%		L3-06	150% [*]	*Upper limit is determined by L8-38.		
Frequency Detection	Speed Agreement Detection Level	L4-01	0.0 Hz		L4-01	0.0 Hz		
	Speed Agreement Detection Width	L4-02	2.0 Hz		L4-02	2.0 Hz		
	Speed Agreement Detection Level (+/-)	L4-03	0.0 Hz		L4-03	0.0 Hz		
	Speed Agreement Detection Width (+/-)	L4-04	2.0 Hz		L4-04	2.0 Hz		
Frequency Detection	Operation when Frequency Reference is Missing	L4-05	0		L4-05	0	F7	A1000
							L4-05	L4-05
							0: Stop	0: Stop
1: Continue operating at 80% speed							1: Continue operating at the level set to L4-06	
	Frequency reference value at frequency reference loss	L4-06	80%		L4-06	80%		
	Frequency reference detection width	L4-12	10%		—	—	Frequency Reference Loss is detected, when the analogue reference falls below either 10% of the reference value before or 5% of the maximum output frequency within 400 ms (values fixed)	

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Fault Restart	Number of Auto Restart Attempts	L5-01	0 times		L5-01	0 times		
	Auto Restart Operation Selection	L5-02	0		L5-02	0	F7	A1000
							L5-02	L5-02
							0: No output	0: No output
							1: Outputs during restart	1: Outputs during restart
Overtorque Detection	Torque Detection Selection 1	L6-01	0		L6-01	0	F7	A1000
							L6-01, L6-04	L6-01, L6-04
							0: Disabled	0: Disabled
							1: oL3 detection only active during speed agree, operation continues after detection	1: oL3 detection only active during speed agree, operation continues after detection
							2: oL3 detection always active during run, operation continues after detection	2: oL3 detection always active during run, operation continues after detection
							3: oL3 detection only active during speed agree, output shuts down on an oL3 fault	3: oL3 detection only active during speed agree, output shuts down on an oL3 fault
							4: oL3 detection always active during run, output shuts down on an oL3 fault	4: oL3 detection always active during run, output shuts down on an oL3 fault
							5: UL3 detection only active during speed agree, operation continues after detection	5: UL3 detection only active during speed agree, operation continues after detection
							6: UL3 detection always active during run, operation continues after detection	6: UL3 detection always active during run, operation continues after detection
							7: UL3 detection only active during speed agree, output shuts down on an oL3 fault	7: UL3 detection only active during speed agree, output shuts down on an oL3 fault
							8: UL3 detection always active during run, output shuts down on an oL3 fault	8: UL3 detection always active during run, output shuts down on an oL3 fault
	Torque Detection Level 1	L6-02	150%		L6-02	150%		
	Torque Detection Time 1	L6-03	0.1 s		L6-03	0.1 s		
	Torque Detection Selection 2	L6-04	0*		L6-04	0*	*See the description for L6-01	
	Torque Detection Level 2	L6-05	150%		L6-05	150%		
	Torque Detection Time 2	L6-06	0.1 s		L6-06	0.1 s		
Torque Limit	Forward Torque Limit	L7-01	200%		L7-01	200%		
	Reverse Torque Limit	L7-02	200%		L7-02	200%		

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Torque Limit	Forward Regenerative Torque Limit	L7-03	200%		L7-03	200%		
	Reverse Regenerative Torque Limit	L7-04	200%		L7-04	200%		
	Torque Limit Integral Time Constant	L7-06	200 ms		L7-06	200 ms		
	Control Method for Torque Limit During Accel/Decel	L7-07	0		L7-07	0	F7	A1000
							L7-07	L7-07
							0: Proportional control	0: Proportional control
							1: Integral control	1: Integral control
Hardware Protection	Internal Dynamic Braking Resistor Protection Selection (ERF)	L8-01	0		L8-01	0*	F7	A1000
							L8-01	L8-01
							0: Disabled	0: Disabled
							1: Enabled	1: Enabled
							Determined by drive capacity.	
	Overheat Pre-Alarm Level	L8-02	*		L8-02	*	Determined by drive capacity.	
	Overheat Pre-Alarm Operation Selection	L8-03	3		L8-03	3	F7	A1000
							L8-03	L8-03
							0: Ramp to stop	0: Ramp to stop
							1: Coast to stop	1: Coast to stop
							2: Fast Stop	2: Fast Stop
							3: Continue operation	3: Continue operation
							—	4: Reduce the frequency and continue operation
	Input Phase Loss Protection Selection	L8-05	1		L8-05	1	F7	A1000
							L8-05	L8-05
							0: Disabled	0: Disabled
							1: Enabled (Continue operation)	1: Enabled
Hardware Protection	Output Open-Phase Protection Selection	L8-07	0		L8-07	0	F7	A1000
							L8-07	L8-07
							0: Disabled	0: Disabled
							1: Enabled (triggered by a single phase loss)	1: Enabled (triggered by a single phase loss)
							2: Enabled (triggered when two phases are lost)	2: Enabled (triggered when two phases are lost)

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Hardware Protection	Ground Protection Selection	L8-09	1		L8-09	1*	F7	A1000
							L8-09	L8-09
							0: Disabled	0: Disabled
							1: Enabled	1: Enabled
							*Default setting depends on drive capacity	
	Cooling Fan Control Selection	L8-10	0		L8-10	0	F7	A1000
							L8-10	L8-10
							0: During run only	0: During run only
							1: Fan always on	1: Fan always on
	Cooling Fan Control Delay Time	L8-11	60 s		L8-11	60 s		
	Ambient Temperature Setting	L8-12	45°C		L8-12	40°C	Set the ambient temperature where the drive is being used.	
	oL2 Characteristics Selection at Low Speeds	L8-15	1		L8-15	1	F7	A1000
							L8-15	L8-15
							0: Disabled	0: Disabled
							1: Enabled	1: Enabled
	Soft CLA Selection	L8-18	1		L8-18	0	F7	A1000
							L8-18	L8-18
							0: Disabled	0: Software CLA disabled
							1: Enabled	1: Software CLA enabled
Hunting Prevention Function	Hunting Prevention Function Selection	n1-01	1		n1-01	1	F7	A1000
							n1-01	n1-01
							0: Disabled	0: Disabled
							1: Enabled	1: Enabled
	Hunting Prevention Gain Setting	n1-02	1.00		n1-02	1.00		
Speed Feedb. Det. Control Function	Speed Feedback Detection Control (AFR) Gain	n2-01	1.00		n2-01	1.00		
	Speed Feedback Detection Control (AFR) Time Constant	n2-02	50 ms		n2-02	50 ms		
	Speed Feedback Detection Control (AFR) Time Constant 2	n2-03	750 ms		n2-03	750 ms		

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.																							
		Parameter	Default	Setting	Parameter	Default																								
High Slip Braking	High-Slip Braking Deceleration Frequency Width	n3-01	5%		n3-01	5%																								
	High-Slip Braking Current Limit	n3-02	150%		n3-02	150%*	*Default value is determined by L8-38 and C6-01																							
	High-Slip Braking Dwell Time at Stop	n3-03	1.0 s		n3-03	1.0 s																								
	High-Slip Braking Overload Time	n3-04	40 s		n3-04	40 s																								
Display Setting / Selection	Drive Mode Unit Monitor Selection	o1-01	6*		o1-01	106*	*See the comments given for parameter F4-01.																							
	User Monitor Selection After Power Up	o1-02	1		o1-02	1	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>o1-02</td><td>o1-02</td></tr><tr><td>1: Frequency reference</td><td>1: Frequency reference</td></tr><tr><td>2: Output frequency</td><td>3: Output frequency</td></tr><tr><td>3: Output current</td><td>4: Output current</td></tr><tr><td>4: Determined by o1-01</td><td>5: Determined by o1-01</td></tr><tr><td>—</td><td>2: FWD/ REV</td></tr></table>		F7	A1000	o1-02	o1-02	1: Frequency reference	1: Frequency reference	2: Output frequency	3: Output frequency	3: Output current	4: Output current	4: Determined by o1-01	5: Determined by o1-01	—	2: FWD/ REV								
F7	A1000																													
o1-02	o1-02																													
1: Frequency reference	1: Frequency reference																													
2: Output frequency	3: Output frequency																													
3: Output current	4: Output current																													
4: Determined by o1-01	5: Determined by o1-01																													
—	2: FWD/ REV																													
Display Setting / Selection	Frequency Units of Reference Setting and Monitor	o1-03	0		o1-03	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>o1-03</td><td>o1-03</td></tr><tr><td>0: 0.01 Hz units</td><td>0: 0.01 Hz units</td></tr><tr><td>1: 0.01% units</td><td>1: 0.01% units</td></tr><tr><td>2 to 39: r/min units</td><td>2: r/min units</td></tr><tr><td>40 to 39999: User-set units</td><td>3: User-set units</td></tr><tr><td></td><td><table><tr><td>o1-10</td><td>o1-11</td></tr><tr><td>1 to 60000</td><td>0 to 3</td></tr></table></td></tr></table> <p>o1-10: Determines how the units for the frequency reference. o1-11: Sets the decimal point for the frequency reference display.</p> <p>Example. : For a max output frequency of 200.0, set the following:</p> <table><tr><th>F7</th><th>A1000</th></tr><tr><td>Setting value : o1-03=12000</td><td>Setting value: o1-03=3 : o1- 10=2000 : o1-11=1</td></tr></table> <p><u>12000</u> └─ Max value, excluding decimal point → o1-10= "2000" └─ digits displayed to the right of the decimal → o1-11= 1</p>		F7	A1000	o1-03	o1-03	0: 0.01 Hz units	0: 0.01 Hz units	1: 0.01% units	1: 0.01% units	2 to 39: r/min units	2: r/min units	40 to 39999: User-set units	3: User-set units		<table><tr><td>o1-10</td><td>o1-11</td></tr><tr><td>1 to 60000</td><td>0 to 3</td></tr></table>	o1-10	o1-11	1 to 60000	0 to 3	F7	A1000	Setting value : o1-03=12000	Setting value: o1-03=3 : o1- 10=2000 : o1-11=1
							F7	A1000																						
							o1-03	o1-03																						
							0: 0.01 Hz units	0: 0.01 Hz units																						
1: 0.01% units	1: 0.01% units																													
2 to 39: r/min units	2: r/min units																													
40 to 39999: User-set units	3: User-set units																													
	<table><tr><td>o1-10</td><td>o1-11</td></tr><tr><td>1 to 60000</td><td>0 to 3</td></tr></table>	o1-10	o1-11	1 to 60000	0 to 3																									
o1-10	o1-11																													
1 to 60000	0 to 3																													
F7	A1000																													
Setting value : o1-03=12000	Setting value: o1-03=3 : o1- 10=2000 : o1-11=1																													
Setting Unit for Frequency Constants Related to V/f Characteristics	o1-04	0			o1-04	0	<table><tr><th>F7</th><th>A1000</th></tr><tr><td>o1-04</td><td>o1-04</td></tr><tr><td>0: Hz units</td><td>0: Hz units</td></tr><tr><td>1: r/min units</td><td>1: r/min units</td></tr></table>		F7	A1000	o1-04	o1-04	0: Hz units	0: Hz units	1: r/min units	1: r/min units														
F7	A1000																													
o1-04	o1-04																													
0: Hz units	0: Hz units																													
1: r/min units	1: r/min units																													
LCD Brightness	o1-05	3			—	—	This parameter is not available in A1000.																							

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Multi-Function Selection	LOCAL/REMOTE Key Function Selection	o2-01	1		o2-01	1	F7 o2-01 0: Disabled 1: Enabled	A1000 o2-01 0: Disabled 1: Enabled
	STOP Key Function Selection	o2-02	1		o2-02	1	F7 o2-02 0: Disabled 1: Enabled	A1000 o2-02 0: Disabled 1: Enabled
	User Parameter Default Value	o2-03	0		o2-03	0	F7 o2-03 0: No change 1: Save values 2: Clear memory	A1000 o2-03 0: No change 1: Save values 2: Clear memory
	Drive Model Selection	o2-04	*		o2-04	*	Do not change this setting. Determined by drive capacity.	
	Frequency Reference Setting Method Selection	o2-05	0		o2-05	0	F7 o2-05 0: ENTER required 1: ENTER key not required	A1000 o2-05 0: ENTER required 1: ENTER key not required
	Operation Selection when Digital Operator is Disconnected	o2-06	0		o2-06	0	F7 o2-06 0: Disabled 1: Enabled	A1000 o2-06 0: Disabled 1: Enabled
	Cumulative Operation Time Setting	o2-07	0H		o4-01	0H		
	Cumulative Operation Time Selection	o2-08	0		o4-02	0	F7 o2-08 0: Whenever the power is on 1: During run only	A1000 o4-02 0: Whenever the power is on 1: During run only
	Factory Tuning	o2-09	2		o2-09	*	*Do not change this setting. Parameter defines the inverter capacity after changing the control board.	
	Fan Operation Time (A1000: Cooling Fan Operation Time Setting)	o2-10	0H		o4-03	0H	F7 Setting Range : 0 to 65535H A1000 Setting Range: 0 to 9999H	

Parameter Name <i>Check parameters with gray shading.</i>		F7			A1000		Comments Gray shading indicates default setting.	
		Parameter	Default	Setting	Parameter	Default		
Multi-Function Selection	Fault Trace, Fault History Reset	o2-12	0		o4-11	0	F7	A1000
							o2-12	o4-11
							0: No change	0: No change
							1: Reset U2, U3 parameters	1: Reset U2, U3 parameters
	kWh Monitor Initialize Selection	o2-14	0		o4-12	0	F7	A1000
							o2-14	o4-12
							0: No change	0: No change
							1: Reset the kWh monitor	1: Reset the kWh monitor
Copy Function	Copy Function Selection	o3-01	0		o3-01	0	F7	A1000
							o3-01	o3-01
							0: Waiting	0: Waiting
							1: READ	1: Read LCD operation
							2: COPY	2: Write to the drive
							3: VERIFY	3: Verify
	Read Permitted Selection	o3-02	0		o3-02	0	F7	A1000
							o3-02	o3-02
							0: Read prohibited	0: Read prohibited
							1: Read allowed	1: Read allowed

5.3 Parameter Setting Range Differences

- Initialize (F7, A1000 both use A1-03)
 - F7 : 0, 1110, 2220, 3330
 - A1000 : 0, 1110, 2220, 3330, 5550 (oPE04 reset)
- Speed Search Delay (F7, A1000 both use b3-05)
 - F7 : 0.0 to 20.0 s
 - A1000 : 0.0 to 100.0 s
- S-Curve Characteristics Time (F7, A1000 both use C2-01 to C2-04)
 - F7 : 0.0 to 2.50 s
 - A1000 : 0.0 to 10.00 s
- Torque Compensation Primary Delay Time Constant (F7, A1000 both use C4-02)
 - F7 : 0 to 10000 ms
 - A1000 : 0 to 60000 ms
- Carrier Frequency Upper Limit (F7, A1000 both use C6-03)
 - F7 : 2.0 to 15 kHz (upper limit depends on drive capacity)
 - A1000 : 1.0 to 15.0 kHz

•Carrier Frequency Lower Limit	(F7, A1000 both use C6-04)
F7 : 0.4 to 15 kHz	
A1000 : 1.0 to 15.0 kHz	
•Analog Output 1 (2) Monitor Selection	(F7, A1000 both use F4-01 (F4-03))
F7 : 1 to 38 (enter the last two digits of the monitor to output: U1-□□)	
A1000 : 000 to 999 (enter the last three digits of the monitor to output: U□-□□)	
•Analog Output 1 (2) Monitor Gain	(F7, A1000 both use F4-02 (F4-04))
F7 : 0.00 % to 1000.0 %	
A1000 : -999.9 % to 999.9 %	
•Analog Output 1 (2) Monitor Bias	(F7, A1000 both use F4-05 (F4-06))
F7 : -110.0 % to 110.0 %	
A1000 : -999.9 % to 999.9 %	
•Digital Output Option : Output 1 to 8 Selection	(F7, A1000 both use F5-01 to F5-08)
F7 : 0 to 3A (HEX)	
A1000 : 0 to 192 (HEX)	
•Multi-Function Input Terminal S3 to MT (S1 to S8 in A1000)	(F7: H1-01 to H1-06, A1000: H1-01 to H1-08)
F7 : 0 to 78	
A1000 : 0 to 9F (HEX)	
•Multi-Function Relay Output	(F7, A1000 both use H2-01 to H2-03)
F7 : 0 to 3A (HEX)	
A1000 : 0 to 192	
•Analog Input Terminal A1 gain	(F7: H3-02, A1000: H3-03)
A3 gain	(F7: H3-06, A1000: H3-07)
A2 gain	(F7: H3-10, A1000: H3-11)
F7 : 0.0% to 1000.0%	
A1000 : -999.9% to 999.9%	
•Analog Input Terminal A1 bias	(F7: H3-03, A1000: H3-04)
A3 bias	(F7: H3-07, A1000: H3-08)
A2 bias	(F7: H3-11, A1000: H3-12)
F7 : -100.0% to +100.0%	
A1000 : -999.9% to 999.9%	
•Analog Input Terminal A1 Function Selection	(F7: —, A1000: H3-02)
A3 Function SeSlection	(F7: H3-05, A1000: H3-06)
A2 Function Selection	(F7: H3-09, A1000: H3-10)
F7 : 0 to 1F (HEX)	
A1000 : 0 to 31	
•Analog Output FM (AM) Monitor Selection	(F7, A1000 both use H4-01 (H4-04))
F7 : 1 to 38 (enter the last two digits of the monitor to output: U1-□□)	
A1000 : 000 to 999 (enter the last three digits of the monitor to output: U□-□□)	
•Analog Output Terminal FM (AM) Gain	(F7, A1000 both use H4-02 (H4-05))
F7 : 0.0 % to 1000.0 %	
A1000 : -999.9% to 999.9%	
•Analog Output Terminal FM (AM) Bias	(F7, A1000 both use H4-03 (H4-06))
F7 : -110.0 % to +110.0 %	
A1000 : -999.9 % to 999.9 %	

- Pulse Train Monitor Selection (F7, A1000 both use H6-06)
 - F7 : 1, 2, 5, 20, 24, 36
 - A1000 : 000, 031, 101, 102, 105, 116, 501, 502

- KEB decel Time (F7, A1000 both use L2-06)
 - F7 : 0.0 to 200.0 s
 - A1000 : 0.00 to 6000.0 s

- Power Loss Ride Through Acceleration Time (F7, A1000 both use L2-07)
 - F7 : 0.0 to 25.5 s
 - A1000 : 0.00 to 6000.0 s

- Stall Prevention Level during Acceleration (F7, A1000 both use L3-02)
 - F7 : 0 to 200 %
 - A1000 : 0 to 150 %

- Stall Prevention Level During Run (F7, A1000 both use L3-06)
 - F7 : 30 to 200 %
 - A1000 : 30 to 150 %

- Ambient Temperature (F7, A1000 both use L8-12)
 - F7 : 45 to 60°C
 - A1000 : -10 to 50°C

- Drive Mode Display Item Selection (F7, A1000 both use o1-01)
 - F7 : 4 to 40 (enabled when o1-02 = 4)
 - A1000 : 104 to 809 (enabled when o1-02 = 5)

- Monitor Display at Power Up (F7, A1000 both use o1-02)
 - F7 : 1 to 4
 - A1000 : 1 to 5

- Frequency Reference Setting / Display Units (F7, A1000 both use o1-03)

F7 : 0 to 39999		A1000 : 0 to 3	
0	: 0.01 Hz units (default)	0	: 0.01 Hz units (default)
1	: 0.01% units	1	: 0.01% units
2 to 39	: r/min units (set the number of motor poles)	2	: r/min units (calculated by the max output frequency and the no. of motor poles)
40 to 39999	: User-set display (value, which will be displayed when using the max output frequency)	3	: User-set units (set using parameters o1-10 and o1-11)

- Cumulative Operation Time Setting (F7: o2-07, A1000: o4-01)
 - F7 : 0 to 65535H (set in hour units)
 - A1000 : 0 to 9999H (set in 10 hour units)

- Fan Operation Time Setting (F7: o2-10, A1000: o4-03)
 - F7 : 0 to 65535H (set in hour units)
 - A1000 : 0 to 9999H (set in 10 hour units)

6 Differences in Inverter Capacity

Power Supply	F7				A1000			
	Model CIMR-F7C□	Rated Output Capacity (kVA)	Rated Output Current (A)	Carrier Frequency (kHz)* ¹	Model CIMR-AC□	Rated Output Capacity (kVA)	Rated Output Current (A)	Carrier Frequency (kHz)* ²
200 V 3-Phase	20P4	1.2	3.2	15	2A0004	1.2	3.2	2
	20P7	1.6	4.1	15	2A0006	1.9	5.0	
	21P5	2.7	7.0	15	2A0010	3.0	8.0	
	22P2	3.7	9.6	15	2A0012	4.2	11	
	23P7	5.7	15	15	2A0021	6.7	17.5	
	25P5	8.8	23	15	2A0030	9.5	25	
	27P5	12	31	15	2A0040	12.6	33	
	2011	17	45	15	2A0056	17.9	47	
	2015	22	58	15	2A0069	23	60	
	2018	27	71	15	2A0081	29	75	
	2022	32	85	15	2A0110	32	85	
	2030	44	115	10	2A0138	44	115	
	2037	55	145	8	2A0169	55	145	
	2045	69	180	8	2A0211	69	180	
	2055	82	215	8	2A0250	82	215	
	2075	110	283	5	2A0312	108	283	
	2090	130	346	5	2A0360	132	346	
	2110	160	415	2	2A0415	158	415	
400 V 3-Phase	40P4	1.4	1.8	15	4A0002	1.4	1.8	2
	40P7	1.6	2.1	15	4A0004	2.6	3.4	
	41P5	2.8	3.7	15	4A0005	3.7	4.8	
	42P2	4.0	5.3	15	4A0007	4.2	5.5	
	43P7	5.8	7.6	15	4A0011	7.0	9.2	
	45P5	9.5	12.5	15	4A0018	11.3	14.8	
	47P5	13	17	15	4A0023	13.7	18	
	4011	18	24	15	4A0031	18.3	24	
	4015	24	31	15	4A0038	24	31	
	4018	30	39	15	4A0044	30	39	
	4022	34	45	15	4A0058	34	45	
	4030	46	60	10	4A0072	46	60	
	4037	57	75	10	4A0088	57	75	
	4045	69	91	10	4A0103	69	91	
	4055	85	112	10	4A0139	85	112	
	4075	110	150	8	4A0165	114	150	
	4090	140	180	8	4A0208	137	180	
	4110	160	216	8	4A0250	165	216	
	4132	200	260	5	4A0296	198	260	
	4160	230	304	5	4A0362	232	304	
	4185	280	370	5	4A0414	282	370	
	4220	390	506	2	4A0515	343	450	
	4300	510	675	2	4A0675	461	605	

*1: Default value depends on drive duty selection. Values for "Normal Duty 1 (ND1)" (C6-01 = 1) are given

*2: Default value depends on drive duty selection. Values for "Heavy Duty" (C6-01 = 0) are given