

Product Transition Guide

C100 to G100





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„ 1.0 Applicable Drives

This document describes the substitution of the following drives:

Original Drive: LSLVxxxxC100-x
Spec: (IP20) UL Open Type
Software Version: Standard: 1.9

Replacement: LSLVxxxxG100-xEONNS
Spec: (IP20) UL Open Type
Software Version: PRG: x.x

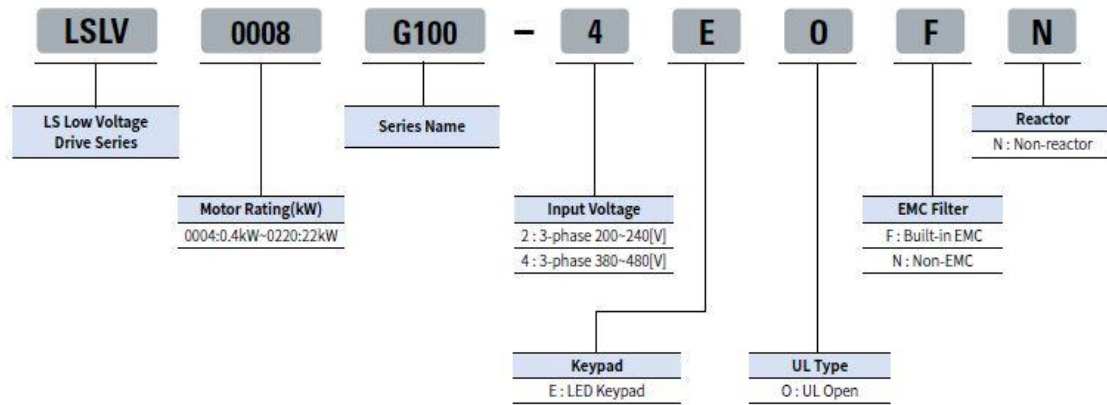
The description is not valid for drives with other specifications or firmware installed.

2.0 Drive Replacement Checklist

	Item	Checkpoints	Checked?
Hardware	Basic	Digital Operator Panel Does the digital operator panel need to be mounted in the same location as before? - If necessary, attempt to mount the operator panel at the same location as before. Was a remote operator connected to the old unit? - If so, do not attempt to connect the old remote operator panel to the G100. Refer to part 6 of this document for option replacements.	
		Special Specifications Check the installed drive's specifications to make sure that it is compliant with the standard specifications (no special firmware, etc.).	
	Main and Control Terminals	Wire Length Check to assure that all cables are long enough to be connected without tension to the new drive.	
		Main Circuit Wires and Terminal Specifications Compare the occupied terminals of the old drive to the new drive's terminals (shape, size, etc.). Check that all wires fit in the new drive's terminals, refer to part 4 of this document.	
Software	Software Version	Check Software Version for Special Software Check the software number in the old drive to be sure that it can be replaced by the G100 drive. Refer to part 7.3 of this document. - Ask your LSIS representative for help in identifying the software installed on the drive that must be replaced and for additional replacement information.	
	Parameter	Check the Parameter Settings Check the parameter settings of the C100 drive and perform a parameter transition to the new parameters following part 7 of this document. Contact your LSIS representative if there is special software installed or if a parameter is not mentioned in this document.	
Options, Others	Communication Option	Communication options were not available for the C100 drive. - The G100 has the following Fieldbus options available. • Profibus-DP • CANopen • Ethernet/IP (Dual Port)	
	Reactors, Chokes	Is an AC Reactor or DC Link Choke Installed? AC Reactors or DC Link Chokes installed on a C100 drive are compatible with the G100 drive.	
	Filters	Is an EMC Filter Installed? Some EMC Filters installed on a C100 drive are compatible with the G100 drive. For details on filter replacements contact your LSIS representative.	
	Cables	Extension Cables The extension cables for remote operation used on a C100 drive are compatible with the G100 drive. However, the remote operator and the remote operator interface are not compatible with the G100 drive and must be replaced.	

- For questions on installation, parameter settings or detailed parameter/ function descriptions see the instruction manual. Other technical questions should be referred to your LSIS representative.

3.0 Ratings Summary



Voltage Class	Maximum Motor Power (kW)	C100				G100			
		Model No. LSLV....C	Output Power (kVa)	HP	Output Current (HD/ND)	Model No. LSLV....G	Output Power (kVa)	HP (HD/ND)	Output Current (HD/ND)
Single Phase 200 V	0.1	0001	0.3	1/8	0.8/-				
	0.2	0002	0.5	1/4	1.4/-				
	0.4	0004	1.0	1/2	2.5/-				
	0.75	0008	1.9	1	5/-				
	1.5	0015	3.0	2	8/-				
	2.2	0022	4.2	3	11/-				
Three-Phase 200 V	0.4	0004	1.0	0.5/1	2.5/3.1	0004	1.0	0.5/1	2.5/3.1
	0.75	0008	1.9	1/1.5	5.0/6.0	0008	1.9	1/2	5.0/6.0
	1.5	0015	3.0	2/3	8/9.6	0015	3.0	2/3	8/9.6
	2.2	0022	4.2	3/4	11/12	0022	4.2	3/5	11/12
	3.7	0037	6.1	5/5.4	17/18	0040	6.5	5/7.5	17/18
	5.5	0055	9.1	7.5/10	24/30	0055	9.1	7.5/10	24/30
	7.5	0075	12.2	10/15	32/40	0075	12.2	10/15	32/40
Three-Phase 400 V	0.4	0004	1.0	0.5/1	1.3/2.0	0004	1.0	0.5/1	1.3/2.0
	0.75	0008	1.9	1/1.5	2.5/3.1	0008	1.9	1/2	2.5/3.1
	1.5	0015	3.0	2/3	4.0/5.1	0015	3.0	2/3	4.0/5.1
	2.2	0022	4.2	3/4	5.5/6.9	0022	4.2	3/5	5.5/6.9
	3.7	0037	6.1	5/5.4	9.0/10	0040	6.5	5/7.5	9.0/10
	5.5	0055	9.1	7.5/10	12/16	0055	9.1	7.5/10	12/16
	7.5	0075	12.2	10/15	16/23	0075	12.2	10/15	16/23

3.1 G100 Single Phase UL Rating

Model	Frame Size	Horse power (*)	Input				Output			
			Vac	Phase	Amps		Vac	Amps		Hz
					HD	ND		HD	ND	
LSLV0004G100-2	A	-	200-240	1	2.2	3.0	0-Vin	1.5	2	0.1~400
LSLV0008G100-2	A	0.5/0.75	200-240	1	4.9	6.3	0-Vin	2.8	3.6	0.1~400
LSLV0015G100-2	B	1/1	200-240	1	8.4	10.8	0-Vin	4.6	5.9	0.1~400
LSLV0022G100-2	B	1.5/1.5	200-240	1	11.8	13.1	0-Vin	6.1	6.7	0.1~400
LSLV0040G100-2	C	2/3	200-240	1	18.5	19.4	0-Vin	9.3	9.8	0.1~400
LSLV0055G100-2	D	3/5	200-240	1	25.8	32.7	0-Vin	12.8	16.3	0.1~400
LSLV0075G100-2	D	5/7.5	200-240	1	34.9	44.2	0-Vin	17.4	22.0	0.1~400
LSLV0004G100-4	A	-/0.5	380-480	1	1.1	2.0	0-Vin	0.7	1.3	0.1~400
LSLV0008G100-4	A	0.5/0.75	380-480	1	2.4	3.3	0-Vin	1.4	1.9	0.1~400
LSLV0015G100-4	B	1/1	380-480	1	4.2	5.5	0-Vin	2.1	2.8	0.1~400
LSLV0022G100-4	B	1/2	380-480	1	5.9	7.5	0-Vin	2.8	3.6	0.1~400
LSLV0040G100-4	C	3/3	380-480	1	9.8	10.8	0-Vin	4.9	5.4	0.1~400
LSLV0055G100-4	D	3/5	380-480	1	12.9	17.5	0-Vin	6.4	8.7	0.1~400
LSLV0075G100-4	D	5/7.5	380-480	1	17.5	25.4	0-Vin	8.7	12.6	0.1~400

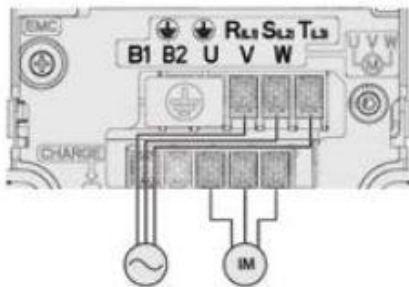
4.0 Terminals

4.1 Main Circuit Terminals

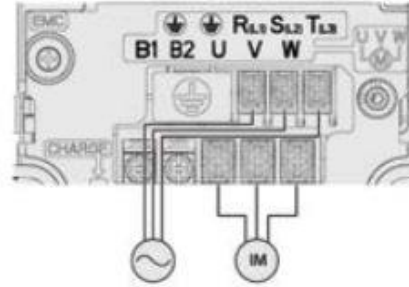
Note: The C100 and G100 drives may have different terminal sizes (depending on capacity); therefore, the terminals must be carefully checked before replacement. The main terminal functionality has not been changed.

C100 Main Terminals	G100 Main Terminals	Note
R / L 1	R / L 1	AC Power Input Terminals
S / L2	S / L2	
T / L 3	T / L 3	
B	-	Dynamic Braking Resistor Terminal
P1(+)	-	DC Reactor Connection
P2(+)	-	Dynamic Braking Resistor Terminal/DC Reactor Connection
N(-)	-	Negative DC Bus Terminal
-	B1	Dynamic Braking Resistor Terminals
-	B2	
U	U	Motor Output Terminals
V	V	
W	W	
		Grounding Terminal: For 200V class: 100 Ω or less For 400V class: 10 Ω or less

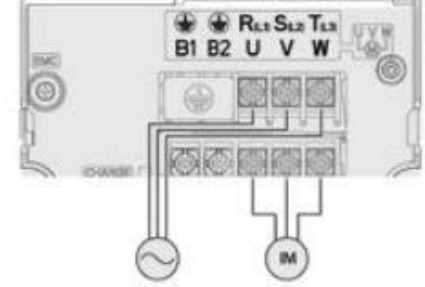
0.4/0.75kW



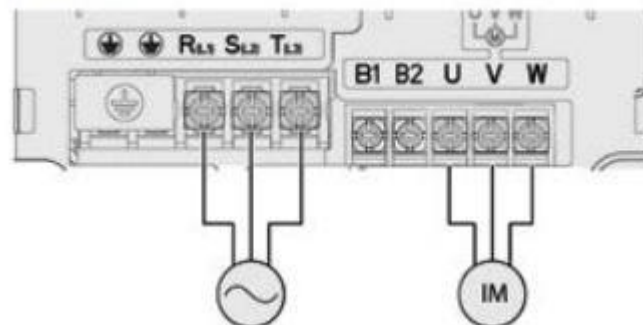
1.5/2.2kW



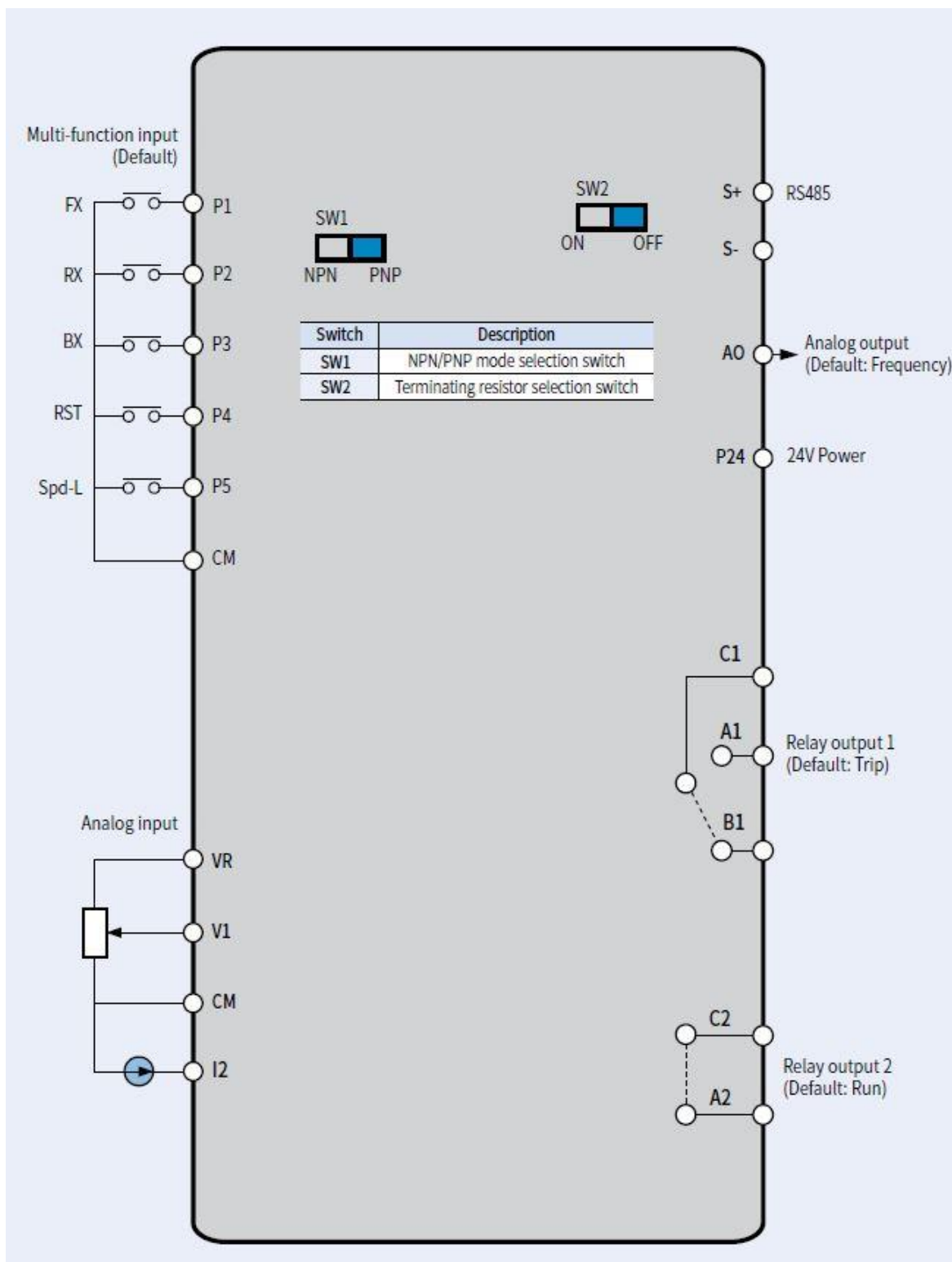
4kW



5.5/7.5kW



4.2 Control Terminals, Signal Levels



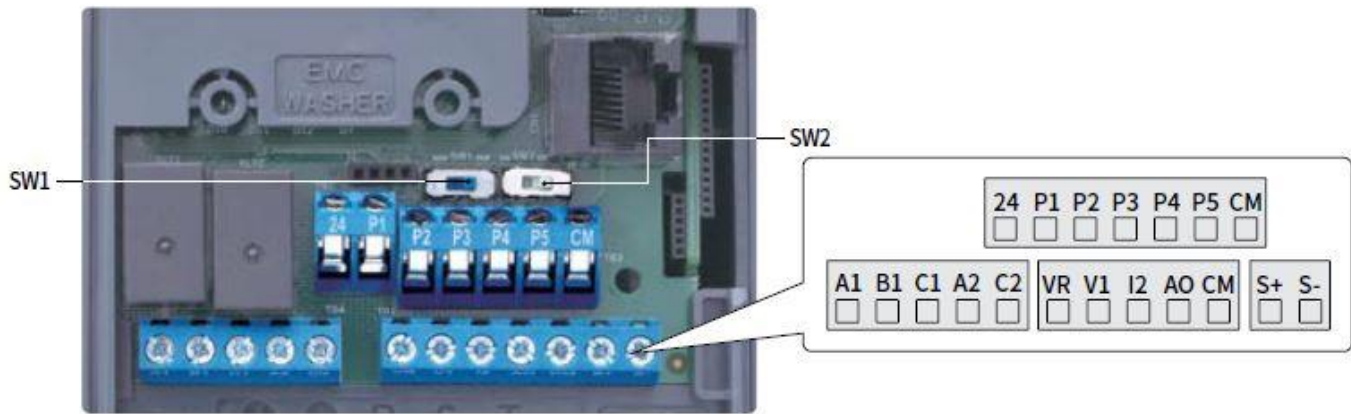
4.2 Control Terminals, Signal Levels

Terminal		Function	Signal Level	
C100	G100		C100	G100
P1		Multi-function input 1 (FX: Forward Run)	+24 Vdc, 8 mA	+24 Vdc, 8 mA
P2		Multi-function input 2 (RX: Reverse Run)		
P3		Multi-function input 3 (C100: Emergency Stop/G100: BX)		
P4		Multi-function input 4 (Trip Reset)		
P5		Multi-function input 5 (C100: Jog Operation/G100: Speed-L)		
CM		Input signal common	-	-
VR		Analog input power supply	+12 Vdc, max 100mA	
AI	V1	Analog input 1 (Frequency Reference)	0~ +10 Vdc (20 kΩ) 0 or 4-20 mA (250 Ω)	0 ~ +10 Vdc (20 kΩ) 0 ~ +/- 10 Vdc (20 kΩ)
-	I2	Analog input 2 (Frequency Reference)	- 0 or 4-20 mA (250 Ω)	
P24		External 24V power source	+24 Vdc, max. 100mA	
AM	AO	Multi-function analog output	0 ~ +10 Vdc	
3A	A1	Change over contact output (NO).	Maximum Load 250 Vac, 10mA ~ 1A 30 Vdc, 10 mA ~ 1A	Maximum Load 250 Vac, 10 mA ~ 1A 30 Vdc, 10 mA ~ 1A
3B	B1	Change over contact output (NC).		
3C	C1	Change over contact output common.		
-	A2	Multi-function output contact 2 (NO).	-	
-	C2	Multi-function output 2 common		
SA	-	Safe stop terminal A	-	-
SB	-	Safe stop terminal B		
SC	-	Safe stop terminal C		
S+		RS485 Communication Terminals		
S-				

4.3 DIP Switches

Note: When replacing a C100 drive with a G100 drive, verify that DIP Switches are set properly.

Function	C100		G100	
	Switch	Default	Switch	Default
NPN / PNP Selection	J3	NPN	SW1	NPN
Analog input 1 level selection	J1	Voltage	-	-
Terminating Resistor	SW1(TR)	OFF	SW2	OFF



4.4 Control Terminal and Wire Sizes

Voltage Class	VFD Series	Terminals	Control Terminal Wiring					
			Stranded Wire		Solid Wire		Crimp Connector	
			mm ²	AWG	mm ²	AWG	mm ²	AWG
All	C100	P1-P5, CM, VR, AI, AM, S+, S-, 24, SA, SB, SC	1.5	15	1.0	17	-	-
	G100	P1-P5, CM, VR, V1, I2, AO, CM, S+, S-, 24	0.8	18	-	-	0.5	20
	C100	3A, 3B, 3C	1.5	15	1.0	17	-	-
	G100	A1, B1, C1, A2, C2	0.8	18	-	-	0.5	20

Terminals	Terminal Screw Size	Screw Torque (Kgf·cm/Nm)
P1~P5/CM/VR/V1/I2/AO/24/S+/S-	M2	2.2~2.5/0.22~0.25
A1/B1/C1, A2/C2	M2.6	4.0/0.4

4.5 Main Terminal Size / Electric Wire Differences

Voltage Class	VFD Series	Capacity	Ground		Power Terminal Wiring				Terminal Size
			mm ²	AWG	mm ²		AWG		
					R/S/T	U/V/W	R/S/T	U/V/W	
3-Phase 200V	C100	0004	3.5	12	2	2	14	14	M3.5
		0008							
		0015							
		0022							
	G100	0004	4	12	1.5	1.5	16	16	M3
		0008							
		0015	4	12	4	2.5	12	14	M4
		0022							
	C100	0037	3.5	12	3.5	3.5	12	12	M4
	G100	0040	6	10	6	6	10	10	M4
	C100	0055	5.5	10	6	6	10	10	M4
		0075							
G100	0055	6	10	16	10	6	8	M4	
	0075								
3-Phase 400V	C100	0004	2	14	2	2	14	14	M3.5
		0008							
		0015							
		0022							
	G100	0004	2.5	14	1.5	1.5	16	16	M3.5
		0008							
		0015							
		0022							
	C100	0037	2	14	3.5	3.5	12	12	M4
	G100	0040	6	10	2.5	2.5	14	14	M4
	C100	0055	3.5	12	3.5	3.5	12	12	M4
		0075							
G100	0055	6	10	10	6	8	10	M4	
	0075								

» 5.0 Dimensions

Note: The tables below show dimension differences between the C100 and the G100 (mm and in). Dimensions are without the potentiometer knob.

Voltage Class	Model No. LSLV....C	C100			Model No. LSLV....G	G100		
		W (mm)	H (mm)	D (mm)		W (mm)	H (mm)	D (mm)
Three-Phase 200 V	0004	68	128	128	0004	85	163	131.5
	0008	68	128	128	0008	85	163	131.5
	0015	100	128	130	0015	100	177	150.5
	0022	100	128	145	0022	100	177	150.5
	0037	140	128	145	0040	135	193	150.5
	0055	160	232	141	0055	180	240	144
	0075	160	232	141	0075	180	240	144
Three-Phase 400 V	0004	68	128	128	0004	85	163	131.5
	0008	68	128	128	0008	85	163	131.5
	0015	100	128	130	0015	100	177	150.5
	0022	100	128	145	0022	100	177	150.5
	0037	140	128	145	0040	135	193	150.5
	0055	160	232	141	0055	180	240	144
	0075	160	232	141	0075	180	240	144

Voltage Class	Model No. LSLV....C	C100			Model No. LSLV....G	G100		
		W (in)	H (in)	D (in)		W (in)	H (in)	D (in)
Three-Phase 200 V	0004	2.68	5.04	5.04	0004	3.35	6.42	5.18
	0008	2.68	5.04	5.04	0008	3.35	6.42	5.18
	0015	3.94	5.04	5.12	0015	3.94	6.97	5.93
	0022	3.94	5.04	5.71	0022	3.94	6.97	5.93
	0037	5.51	5.04	5.71	0040	5.31	7.60	5.93
	0055	6.30	9.13	5.55	0055	7.09	9.45	5.67
	0075	6.30	9.13	5.55	0075	7.09	9.45	5.67
Three-Phase 400 V	0004	2.68	5.04	5.04	0004	3.35	6.42	5.18
	0008	2.68	5.04	5.04	0008	3.35	6.42	5.18
	0015	3.94	5.04	5.12	0015	3.94	6.97	5.93
	0022	3.94	5.04	5.71	0022	3.94	6.97	5.93
	0037	5.51	5.04	5.71	0040	5.31	7.6	5.93
	0055	6.30	9.13	5.55	0055	7.09	9.45	5.67
	0075	6.30	9.13	5.55	0075	7.09	9.45	5.67

6.0 Parameter Settings

6.1 Parameter Cross Reference for Drive Replacement

Function/Parameter	C100		G100		Setting	
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100	G100
Frequency Command	0.00	0.00	0.00	0.00	Setting range 0-maximum frequency (Hz)	
Accel Time	ACC	5.0	ACC	20.00	C100 →0.0-6000.0	G100
Decel Time	dEC	10.0	DEC	30.0	→0.0-6000	
Command Source	drv	1	drv	1	drv	drv
					0: Keypad	0: Keypad
					1: Fx/Rx-1	1: Fx/Rx-1
					2: Fx/Rx-2	2: Fx/Rx-2
					3: RS-485	3: RS-485
Frequency Reference Source	Frq	0	Frq	0	-	4: Fieldbus
					Frq	Frq
					0: Keypad setting 1	0: Keypad-1
					1: Keypad setting 2	1: Keypad-2
					2: Panel potentiometer V2	2: V1
					3: Terminal A1 (J1 to V)	4: Panel potentiometer
					4: Terminal A1 (J1 to I)	5: I2
					5: Panel potentiometer V2 + A1 (J1 to I)	6: RS485
					6: Panel potentiometer V2 + A1 (J1 to V)	8: Fieldbus
Multi-step frequency 1	St1	10.00	St1	10.00	-	-
Multi-step frequency 2	St2	20.00	St2	20.00	-	-
Multi-step frequency 3	St3	30.00	St3	30.00	-	-
Output current	CUR	-	CUR	-	-	-
Motor RPM	rPM	-	rPM	-	-	-
DC link voltage	dCL	-	dCL	-	-	-
Inverter output voltage	vOL	-	vOL	-	vOL: Output voltage	-
					Por: Output power	-
					tOr: Torque	-
Fault display	nOn	-	nOn	-	-	-
Select rotation direction	drC	F	drC	F	-	-
Drive mode 2	drv2	1	bA-04	1	drv2	bA-04
					0: Keypad	0: Keypad
					1: Fx/Rx-1	1: Fx/Rx-1
					2: Fx/Rx-2	2: Fx/Rx-2
					3: Int 485	3: Int 485
Frequency setting method 2	drv2	1	bA-05	0	-	4: Fieldbus
					Frq2	bA-05
					0: Keypad setting 1	0: Keypad-1
					1: Keypad setting 2	1: Keypad-2
					2: Panel potentiometer V2	2: V1
					3: Terminal A1 (J1 to V)	4: Panel potentiometer
					4: Terminal A1 (J1 to I)	5: I2
					5: Panel potentiometer V2 + A1 (J1 to I)	6: Int 485
					6: Panel potentiometer V2 + A1 (J1 to V)	8: Fieldbus
Forward/reverse run disable	F1	0	Ad-09	0	F1	Ad-09
					0: None	0: None
					1: Forward Prev	1: Forward Prev
					2: Reverse Prev	2: Reverse Prev
Accel Pattern	Ad-01	0	Ad-01	0	Ad-01	Ad-01
					0: Linear	0: Linear
					1: S-curve	1: S-curve
Stop mode select	F3	0	Ad-02	0	F3	Ad-02
					0: Linear	0: Linear
					1: S-curve	1: S-curve

Function/Parameter	C100		G100		Setting	
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100	G100
Stop mode select	F4	0	Ad-08	0	F4	Ad-08
					0: Decelerate to stop	0: Decelerate to stop
					1: DC brake to stop	1: DC brake to stop
					2: Free run to stop	2: Free run to stop
					3: Power braking stop	4: Power braking stop
DC brake start frequency	F8	5.00	Ad-17	5.00	Displayed when stop mode select is set to DC brake	
DC brake wait time	F9	0.10	Ad-14	0.10		
DC brake rate	F10	50	Ad-16	50		
DC brake time	F11	1.0	Ad-15	1.0		
DC start brake rate	F12	50	Ad-13	50	Ad-12 DC braking start time only displayed when Ad-07 is set to 1	
DC brake start time	F13	0.0	Ad-12 Ad-07	0.0 0		
Sensorless magnetization time at start	F14	0.5	Cn-09	1.0	-	
Jog frequency	F20	10.00	dr-11	10.00	-	
Maximum frequency	F21	60.00	dr-20	60.00	-	
Base frequency	F22	60.00	dr-18	60.00	-	
Start frequency	F23	0.50	dr-19	0.50	-	
Frequency high/low limit select	F24	0	Ad-24	0	-	
Frequency high limit	F25	60.00	Ad-26	60.00	-	
Frequency low limit	F26	0.50	Ad-25	0.50	-	
Torque boost select	F27	0	dr-15	0	F27	dr-15
					0: Manual torque boost	0: Manual torque boost
					1: Auto torque boost	1: Auto torque boost
Forward torque boost	F28	3.0	dr-16	2.0	F28	dr-16
Reverse torque boost	F29	3.0	dr-17	2.0	0.0~20.0%	0.0~15.0%
					F29	dr-17
V/f pattern	F30	0	bA-07	0	F30	ba-07
					0: Linear	0: Linear
					1: Square	1: Square
					2: User V/f	2: User V/f
					-	3: Square 2
User V/f frequency 1	F31	15.00	bA-41	15.00	-	
User V/f voltage 1	F32	25	bA-42	25	-	
User V/f frequency 2	F33	30.00	bA-43	30.00	-	
User V/f voltage 2	F34	50	bA-44	50	-	
User V/f frequency 3	F35	45.00	bA-45	45.00	-	
User V/f voltage 3	F36	75	bA-46	75	-	
User V/f frequency 4	F37	60.00	bA-47	60.00	-	
User V/f voltage 4	F38	100	bA-48	100	-	
Output voltage adjustment	F39	100	bA-15	0	F39	bA-15
					40.0~110.0%	0, 170-480(V)
Energy savings level	-	-	Ad-50	0	-	Ad-50
						0: None
						1: Manual
						2: Auto
	F40	0	Ad-51	0	-	
Electronic thermal select	F50	0	Pr-40	0	F50	Pr-40
					0: None	0: None
					1: Yes	1: Free-run
					-	2: Decel
Electronic thermal 1 minute rating	F51	150	Pr-42	150	-	
Electronic thermal continuous rating	F52	100	Pr-43	120	-	
Motor cooling method	F53	0	Pr-41	0	F53	Pr-41
					0: Self-cool	0: Self-cool
					1: Forced-cool	1: Forced-cool

Function/Parameter	C100		G100		Setting					
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100		G100			
Overload warning level	-	-	Pr-17	0	-		Pr-17			
							0: No			
							1: Yes			
	F54	150	Pr-18	150			-			
Overload warning time	F55	10.0	Pr-19	10.0			-			
Overload trip select	F56	1	Pr-20	1			-			
Overload trip level	F57	180	Pr-21	180			-			
Overload trip time	F58	60.0	Pr-22	60.0			-			
Stall prevention select	F59	0	Pr-50	0	C100		Flux Braking	During Decel	During Run	During Accel
					F59					
					0		0	0	0	0
					1		0	0	0	1
					2		0	0	1	0
					3		0	0	1	1
					4		0	1	0	0
					5		0	1	0	1
					6		0	1	1	0
				7	1	1	1	1	1	
Stall prevention level	F60	150	Pr-52	180	-					
Save up/down frequency select	F63	0	Ad-65	0	F63		Ad-65			
					0: No		0: No			
					1: Yes		1: Yes			
Save up/down frequency	F64	-	-	-	-					
200V input voltage	F67	220	bA-19	220	-					
400V input voltage	F68	380		380	-					
Draw Mode Select	F70	0	bA-01	0	F70		bA-01			
					0: Inverter does not run in draw mode		0: Auxiliary frequency reference disabled			
					1: Analog input AI V (0-10 V)		1: Analog input V1 (0-10 V)			
					2: Analog input AI I (0-20mA)		3: Panel potentiometer VO			
					3: Panel potentiometer V2		4: Analog input I2 (0-20mA)			
	F71	0.0	bA-02	0	0.0%	F71	bA-02			
						0	M+(G*A)			
						1	M*(G*A)			
						2	M/(G*A)			
						3	M+{M*(G*A)}			
						4	M+G*2*(A-50)			
						5	M*{G*2*(A-50)}			
						6	M/{G*2*(A-50)}			
	7	M+M*G*2*(A-50)								
					*A: Auxiliary frequency reference (Hz or Rpm) or gain (%)					
					*G: bA-03, Auxiliary frequency gain					
ND/HD selection	F72	0	Pr-04	1	F72		Pr-04			
					0: HD (CT) heavy load		0: Normal duty			
					1: ND (VT) light load		1: Heavy duty			
200V DB start voltage	F73	390	Ad-79	390	-					
400V DB start voltage	F74	780		780	-					
Fault history 1	H1	-	Pr-91	-	-					
Fault history 2	H2	-	Pr-92	-	-					
Fault history 3	H3	-	Pr-93	-	-					
Fault history 4	H4	-	Pr-94	-	-					
Fault history 5	H5	-	Pr-95	-	-					
Reset fault history	H6	0	Pr-96	0	H6		Pr-96			
					0: No		0: No			
					1: Yes		1: Yes			
Dwell Frequency	H7	5.00	Ad-20	5.00	-					
			Ad-22	5.00						
Dwell time	H8	0.0	Ad-21	0.0	-					
			Ad-23	0.0						
Skip frequency select	H10	0	Ad-27	0	-					
Skip frequency low limit 1	H11	10.00	Ad-28	10.00	-					
Skip frequency high limit 1	H12	15.00	Ad-29	15.00	-					
Skip frequency low limit 2	H13	20.00	Ad-30	20.00	-					
Skip frequency high limit 2	H14	25.00	Ad-31	25.00	-					
Skip frequency low limit 3	H15	30.00	Ad-32	30.00	-					
Skip frequency high limit 3	H16	35.00	Ad-33	35.00	-					

Function/Parameter	C100		G100		Setting					
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100			G100		
S-Curve accel/decel start side	H17	40	Ad-03	40	-					
			Ad-05	40	-					
S-Curve accel/decel end side	H18	40	Ad-04	40	-					
			Ad-06	40	-					
Input/output phase loss protection select	H19	0	Pr-05	00	H19	Pr-05				
						Input Phase Loss	Output Phase Loss			
					0	0	0			
					1	0	1			
					2	1	0			
					3	1	1			
Power on start select	H20	0	Ad-10	0	-					
Restart after fault reset	H21	0	Pr-08	0	-					
Speed search select	H22	0	Cn-71	0		Cn-71				
						Power-on start	Restart after instant power failure	Operation after fault	Normal acceleration	
					H22					
					0	0	0	0	0	
					1	0	0	0	1	
					2	0	0	1	0	
					3	0	0	1	1	
					4	0	1	0	0	
					5	0	1	0	1	
					6	0	1	1	0	
					7	0	1	1	1	
					8	1	0	0	0	
					9	1	0	0	1	
					10	1	0	1	0	
					11	1	0	1	1	
					12	1	1	0	0	
					13	1	1	0	1	
14	1	1	1	0						
15	1	1	1	1						
Current level during speed search	H23	150	Cn-72	150	-					
P gain during speed search	H24	100	Cn-73	100	-					
I gain during speed search	H25	200	Cn-74	200	-					
Number of auto restart attempts	H26	0	Pr-09	0	-					
Auto restart time	H27	1.0	Pr-10	1.0	-					
Motor capacity	H30	-	dr-14	-	-					
Number of motor poles	H31	4	bA-11	4	-					
Rated slip frequency	H32	-	bA-12	-	bA-12 setting range 0-3000 RPM					
Motor rated current	H33	-	bA-13	-	-					
Motor no load current	H34	-	bA-14	-	-					
Motor efficiency	H36	-	bA-16	-	-					
Load inertia rate	H37	0	bA-17	0	-					
Carrier frequency	H39	3.0	Cn-04	3.0	-					
Control mode select	H40	0	dr-09	0	H40			dr-09		
					0: V/f Control			0: V/f Control		
					1: Slip Compensation			2: Slip Compensation		
					3: Sensorless Vector			4: IM Sensorless Vector		
Auto tuning	H41	0	bA-20	0	H41			bA-20		
					0: No			0: None		
					1: Yes			1: All (Rotation Type)		
					-			2: All (Static Type)		
					-			3: Rs+Lsigma (Rotation Type)		
Stator resistance (Rs)	H42	-	bA-21	-	-			6: Tr (Static Type)		
Leakage inductance	H44	-	bA-22	-	-					
Sensorless torque limit	H47	180	Cn-54	180	Positive direction torque limit					
			Cn-55	180	Positive direction regen torque limit					
			Cn-56	180	Reverse direction torque limit					
			Cn-57	180	Reverse direction regen torque limit					

Function/Parameter	C100		G100		Setting	
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100	G100
PWM mode select	H48	0	Cn-05	0	-	
PID select	H49	0	AP-01	0	H49	AP-01
					0: None	0: None
					1: Yes	1: -
PID F/B select	H50	0	AP-21	3	-	2: Proc PID
					H50	AP-21
					0: Analog input terminal AI (I:0-20mA)	0: V1
					1: Analog input terminal AI (V:0-10 V)	2: V0
					2: RS-485 communication	3: I2
					-	4: Int 485
P gain for PID	H51	300.0	AP-22	50.0	-	6: Fieldbus
Integral time for PID	H52	1.0	AP-23	10.0	-	
Differential time for PID	H53	0.0	AP-24	0.0	-	
PID control mode select	H54	0	AP-28	0	H54	AP-28
					0: Normal PID control	0: Process PID control
					1: Process PID control	1: Normal PID control
PID output frequency high limit	H55	60.00	AP-29	60.00	-	
PID output frequency low limit	H56	0.50	AP-30	-60.00	-	
PID standard value select	H57	0	AP-20	0	H57	AP-20
					0: Loader digital setting 1	0: Keypad
					1: Loader digital setting 2	1: V1
					2: V1 terminal setting: 0-10 V	3: V0
					3: I terminal setting: 0-20mA	4: I2
					4: RS-485 communication	5: Int 485
PID control unit select	H58	0	AP-42	5	-	7: Fieldbus
					H58	AP-42
					0: Frequency (Hz)	0: Percentage (%)
Sleep delay time	H61	60.0	AP-37	60.0	1: Percentage (%)	5: Frequency (Hz)
Sleep frequency	H62	0.00	AP-38	0.00	-	
Wake-up level	H63	35.0	AP-39	35.0	-	
KEB operation select	H64	0	Cn-77	0	H64	Cn-77
					0: No	0: No
					1: Yes	1: KEB-1
Energy buffering start level	H65	125.0	Cn-78	125.0	-	2: KEB-2
Energy buffering stop level	H66	130.0	Cn-79	130.0	-	
Energy buffering P gain	H67	50	Cn-80	1000	-	
Accel/decel reference	H70	0	bA-08	0	-	
Accel/decel time scale	H71	1	bA-09	1	H71	ba-09
					0: 0.01~600.00	0: '0.01
					1: 0.1~6000.0	1: '0.1
					2: 1~60000	2: '1

Function/Parameter	C100		G100		Setting	
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100	G100
Power on display	H72	0	dr-80	0	H72	dr-80
					0: Frequency Command	0: Operation frequency
					1: Acceleration time	1: Acceleration time
					2: Deceleration time	2: Deceleration time
					3: Drive mode	3: Command source
					4: Frequency mode	4: Frequency reference source
					5: Multi-step frequency 1	5: Multi-step speed frequency 1
					6: Multi-step frequency 2	6: Multi-step speed frequency 2
					7: Multi-step frequency 3	7: Multi-step speed frequency 3
					8: Output current	8: Output current
					9: Motor RPM	9: Motor RPM
					10: Inverter DC link voltage	10: Inverter DC voltage
					11: User display select (H73)	11: User select signal (dr-81)
					12: Fault display	12: Fault display
					13: Direction of motor rotation	13: Select run direction
					14: Output current 2	14: Output current 2
					15: Motor RPM 2	15: Motor RPM 2
					16: Inverter DC link voltage 2	16: Inverter DC voltage 2
					17: User display select 2 (H73)	17: User select signal 2 (dr-81)
Monitoring item select	H73	0	dr-81	0	H73	dr-81
					0: Output voltage (V)	0: Output voltage (V)
					1: Output power (kW)	1: Output power (kW)
Gain for motor RPM display	H74	100.0	Ad-61	100.0		-
DB resistor operating rate limit select	H75	0	Pr-66	10		-
DB resistor operating rate	H76	10				-
Cooling fan control	H77	0	Ad-64	1	H77	Ad-64
					0: Always on	0: During run
					1: Temp control	1: Always on
Cooling fan fault selection	H78	0	Pr-79	1	-	2: Temp control
					H78	Pr-79
					0: Continuous operation	0: Trip
S/W version	H79	-	dr-97	-	1: Trip	1: Warning
			dr-98	-		-
2nd motor accel time	H81	5.0	M2-04	20.0		-
2nd motor decel time	H82	10.0	M2-05	30.0		-
2nd motor base frequency	H83	60.00	M2-07	60.00		-
2nd motor V/f pattern	H84	0	M2-25	0		-
2nd motor forward torque boost	H85	5.0	M2-26	2.0		-
2nd motor reverse torque boost	H86	5.0	M2-27	2.0		-
2nd motor stall prevention level	H87	150	M2-28	150		-
2nd motor electronic thermal 1 minute rating	H88	150	M2-29	150		-
2nd motor electronic thermal continuous rating	H89	100	M2-30	100		-
2nd motor rated current	H90	-	M2-12	-		-

Function/Parameter	C100		G100		Setting	
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100	G100
Parameter initialization	H93	0	dr-93	0	H90	dr-93
					0: None	0: None
					1: All parameter groups	1: All groups
					2: Drive group	2: dr group
					3: Function group 1	3: bA group
					4: Function group 2	4: Ad group
					5: I/O group	5: Cn group
						6: In group
						7: OU group
						8: CM group
						9: AP group
						11: AO group
						12: Pr group
						13: M2 group
						14: run group
Password register	H94	0	dr-94	0	-	
Parameter lock	H95	0	dr-95	0	-	
Time constant of V2 input filter	I1	10	In-37	100	-	
V2 input min voltage	I2	0.00	In-38	0.00	-	
V2 output at minimum voltage	I3	0.00	In-39	0.00	I3	In-39
					0.00~400.00Hz	0.00~100.00%
V2 input max voltage	I4	5.00	In-40	5.00	0.00Hz	0.00%
						-
V2 output at maximum voltage	I5	60.00	In-41	100.00	I5	In-41
					0.00~400.00Hz	0.00~100.00%
					60.00Hz	100.00%
V1 filter time constant	I6	10	In-07	100	-	
V1 minimum input voltage	I7	0.00	In-08	0.00	-	
V1 output at minimum voltage	I8	0.00	In-09	0.00	I8	In-09
					0.00~400.00Hz	0.00~100.00%
V1 maximum input voltage	I9	10.00	In-10	10.00	0.00Hz	0.00%
						-
V1 output at maximum voltage	I10	60.00	In-11	100.00	I10	In-11
					0.00~400.00Hz	0.00~100.00%
					60.00Hz	100.00%
I input filter time constant	I11	10	In-52	100	-	
I input minimum current	I12	4.00	In-53	4.00	-	
I output at minimum current	I13	0.00	In-54	0.00	I13	In-54
					0.00~400.00Hz	0.00~100.00%
I input maximum current	I14	20.00	In-55	20.00	0.00Hz	0.00%
						-
I output at maximum current	I15	60.00	In-56	100.00	I15	In-56
					0.00~400.00Hz	0.00~100.00%
					60.00Hz	100.00%
Criteria for analog input signal loss	I16	0	Pr-15	0	I16	Pr-15
					0: Disabled	0: Below half of X1
					1: Below half of X1	1: Below X1
Time to determine speed command loss	I63	1.0	Pr-13	1.0	2: Below X1	-
						-
Motion at speed command loss	I62	0	Pr-12	0	I62	Pr-12
					0: Continuous operation at lost frequency	0: None
					1: Free-run	1: Free-run
					2: Decel to stop	2: Decel
					-	3: Hold input
					-	4: Hold output
P1 terminal function setting	I17	0	In-65	1	-	5: Lost preset (Pr-14)
					I17~I21	In-65~In-69
					0: Forward run command	1: Fx forward run command
					1: Reverse run command	2: Rx reverse run command
					2: Emergency stop trip	5: Bx
					3: Fault reset	3: RST
					4: Jog operation command	6: JOG
					5: Multi-step freq - Low	7: Speed - L
					6: Multi-step freq - Mid	8: Speed - M

Function/Parameter	C100		G100		Setting	
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100	G100
P2 terminal function setting	I18	1	In-66	2	7: Multi-step freq - High	9: Speed - H
					8: Multi Accel/Decel- Low	11: XCEL - L
					9: Multi Accel/Decel - Mid	12: XCEL - M
					10: Multi Accel/Decel - High	49: XCEL - H
					11: DC brake during stop	-
P3 terminal function setting	I19	2	In-67	5	15: Up	17: Up
					16: Down	18: Down
					17: 3-wire operation	14: 3-wire
					18: External trip: A Contact	4: External Trip
					19: External trip: B Contact	-
P4 terminal function setting	I20	3	In-68	3	21: PID to V/f	23: PID Openloop
					22: 2nd Source	15: 2nd Source
					23: Analog Hold	21: Analog Hold
					24: Accel/Decel Disable	25: XCEL Stop
					25: Up/Down frequency initialization	20: U/D Clear
P5 terminal function setting	I21	4	In-69	7	26: JOG-FX	46: FWD JOG
					27: JOG-RX	47: REV JOG
					-	13: RUN Enable
					-	16: Exchange
					-	22: I-Term Clear
Input terminal status display	I25	00000	In-90	00000	-	24: P Gain 2
					-	26: 2nd Motor
					-	27: U/D Enable
					-	33: Baseblock
					-	34: Pre Excite
Filter time constant for multi-function input terminal	I27	4	In-85	10	-	38: Timer In
			In-86	3	-	40: dis Aux Ref
Multi-step frequency 4	I30	30.00	bA-53	40.00	-	51: Fire Mode
Multi-step frequency 5	I31	25.00	bA-54	50.00	-	52: KEB-1 Select
Multi-step frequency 6	I32	20.00	bA-55	60.00	-	-
Multi-step frequency 7	I33	15.00	bA-56	60.00	-	-
Multi-accel time 1	I34	3.0	bA-70	20.00	-	-
Multi-decel time 1	I35	3.0	bA-71	20.00	-	-
Multi-accel time 2	I36	4.0	bA-72	30.00	-	-
Multi-decel time 2	I37	4.0	bA-73	30.00	-	-
Multi-accel time 3	I38	5.0	bA-74	40.00	-	-
Multi-decel time 3	I39	5.0	bA-75	40.00	-	-
Multi-accel time 4	I40	6.0	bA-76	50.00	-	-
Multi-decel time 4	I41	6.0	bA-77	50.00	-	-
Multi-accel time 5	I42	7.0	bA-78	40.00	-	-
Multi-decel time 5	I43	7.0	bA-79	40.00	-	-
Multi-accel time 6	I44	8.0	bA-80	30.00	-	-
Multi-decel time 6	I45	8.0	bA-81	30.00	-	-
Multi-accel time 7	I46	9.0	bA-82	20.00	-	-
Multi-decel time 7	I47	9.0	bA-83	20.00	-	-
Analog output item select	I50	0	OU-01	0	I50	OU-01
					0: Output frequency	0: Frequency
					1: Output current	1: Output current
					2: Output voltage	2: Output voltage
					3: DC link voltage	3: DC link voltage
					-	4: Torque
					-	5: Output power
					-	6: Idse
					-	7: Iqse
					-	8: Target freq
					-	9: Ramp freq
					-	10: Speed fdb
					-	12: PID ref value
					-	13: PID fdb value
					-	14: PID output
					-	15: Constant OU.05

Function/Parameter	C100		G100		Setting			
	Parameter No.	Initial Value	Parameter No.	Initial Value	C100		G100	
Frequency Detection Level	I52	30.00	OU-57	30.00	-			
Frequency Detection Bandwidth	I53	10.00	OU-58	10.00	-			
Multi-function relay select	I55	17	OU.31/OU.33	I55	OU-31/OU-33			
				0: FDT-1	1: FDT-1			
				1: FDT-2	2: FDT-2			
				2: FDT-3	3: FDT-3			
				3: FDT-4	4: FDT-4			
				4: FDT-5	23: FTD-5 (Zspd)			
				5: Overload (OL)	5: Overload (OL)			
				6: Inverter overload (IOL)	6: Inverter overload (IOL)			
				7: Motor stall (STALL)	9: Stall			
				8: Over voltage trip (Ovt)	10: Over voltage			
				9: Low voltage trip	11: Low voltage			
				10: Inverter overheat (Oht)	12: Overheat			
				11: Command loss	13: Lost command			
				12: During run	14: Run			
				13: During stop	15: Stop			
				14: During constant run	16: Steady			
				15: During speed search	19: Speed search			
				16: Wait time for run signal	22: Ready			
				17: Trip	29: Trip			
				18: Cooling fan trip	8: Fan warning			
				19: Brake signal select	35: BR control			
				-	17: Inverter line			
				-	18: Comm line			
				-	21: Regeneration			
				-	28: Timer out			
				-	31: DB Warn%ED			
				-	34: On/Off control			
				-	37: FAN Exchange			
				-	38: Fire mode			
				-	40: KEB Operating			
				-	41: Pre overheat			
				-	42: Minor fault			
				-	43: Torque detect 1			
				-	44: Torque detect 2			
Fault relay output select	I56	2	OU.30	010	I56	Final failure of automatic restart	Faults other than low voltage	Low voltage
					0	0	0	0
					1	0	0	1
					2	0	1	0
					3	0	1	1
					4	1	0	0
					5	1	0	1
					6	1	1	0
					7	1	1	1
Communication protocol select	I59	0	CM-02	0	I59	CM-02		
					0: Modbus RTU	0: Modbus RTU		
					1: LS BUS	1: LS Inv 485		
Inverter Number	I60	1	CM-01	1				
Baud rate	I61	3	CM-03	3	I61	CM-03		
					0: 1200	0: 1200		
					1: 2400	1: 2400		
					2: 4800	2: 4800		
					3: 9600	3: 9600		
					4: 19200	4: 19200		
					5: 38400	5: 38400		
					-	6: 56 Kbps		
-	7: 115 Kbps							
Parity/stop bit setting	I65	0	CM-04	0	-			
Brake open current	I82	50.0	Ad-41	50.0	-			
Brake open delay time	I83	1.00	Ad-42	1.00	-			
Brake open FX frequency	I84	1.0	Ad-44	1.0	-			
Brake open RX frequency	I85	1.0	Ad-45	1.0	-			
Brake close delay time	I86	1.0	Ad-46	1.0	-			
Brake close frequency	I87	2.0	Ad-47	2.0	-			