Func. Code	Name / Description	Default Value –FE / –FU / –FR	Set Value
B_89	Data select for digital operator OPE-J • 01 Output frequency (D_01) • 02 Output current (D_02) • 03 Motor direction (D_03) • 04 PID PV feedback (D_04) • 05 Input states for input terminals (D_05) • 06 Output states for output terminals (D_06) • 07 Scaled output frequency (D_07)	01	
B_90	Dynamic braking usage ratio	0.0	
B_91	Stop mode selection	00	
B_92	Cooling fan control • 00 Fan always ON • 01 Fan ON during Run, OFF during Stop	00	

“C” Group: Intelligent Terminal Functions

Func. Code	Name / Description		Default Value –FE / –FU / –FR	Set Value
C_01	Terminal [1] function	Nineteen option codes available (see page 22)	00	
C_02	Terminal [2] function		01	
C_03	Terminal [3] function		02 / 16 / 02	
C_04	Terminal [4] function		03 / 13 / 03	
C_05	Terminal [5] function		18 / 09 / 09	
C_06	Terminal [6] function		09 / 18 / 18	
C_11	Terminal [1] active state	• 00 Normally open [NO] • 01 Normally closed [NC]	00	
C_12	Terminal [2] active state		00	
C_13	Terminal [3] active state		00	

Func. Code	Name / Description		Default Value –FE / –FU / –FR	Set Value
C_14	Terminal [4] active state	• 00 Normally open [NO] 01 Normally closed [NC]	00 / 01 / 00	
C_15	Terminal [5] active state		00	
C_16	Terminal [6] active state		00	
C_21	Terminal [11] function	Six option codes available (see page 22)	01	
C_22	Terminal [12] function		00	
C_24	Alarm relay terminal function		05	
C_23	[FM] signal selection	Three option codes available (see page 23)	00	
C_31	Terminal [11] active state (–FU)	• 00 Normally open (NO) • 01 Normally closed (NC)	— / 00 / —	
	Reserved (–FE / –FR)		00 / — / 00	
C_32	Terminal [12] active state (–FU)		— / 00 / —	
	Terminal [11] active state (–FE / –FR)		00 / — / 00	
C_33	Alarm relay terminal active state		01	
C_41	Overload level setting		Rated current of inverter	
C_42	Frequency arrival setting for accel		0.0	
C_43	Arrival frequency setting for decel		0.0	
C_44	PID deviation level setting		3.0	
C_81	O input span calibration		Factory calibrated	
C_82	OI input span calibration			
C_91	Debug mode enable • 00 Display • 01 No display		00	
C_92	Core monitor address (reserved)		0000	
C_93	Core monitor date (reserved)		—	
C_94	Core set address (reserved)		D001	
C_95	Core set date (reserved)		00	

“H” Group: Motor Constants Functions

Func. Code	Name / Description	Default Value –FE / –FU / –FR	Set Value
H_01	Auto-tuning Setting • 00 Auto-tuning OFF • 01 Auto-tune (measure motor resistance and inductance, without rotating) • 02 Auto-tune (rotate motor)	00	
H_02/ H202	Motor data selection • 00 Standard motor data • 01 Auto-tuning data • 02 Adaptive tuning data	00	
H_03/ H203	Motor capacity	Factory set	
H_04/ H204	Motor poles setting • 2 poles • 4 poles • 6 poles • 8 poles	4	
H_05/ H205	Motor speed constant	20	
H_06/ H206	Motor stabilization constant	100	
H_20/ H220	Motor constant R1	Inverter rating	
H_21/ H221	Motor constant R2	Inverter rating	
H_22/ H222	Motor constant L	Inverter rating	
H_23/ H223	Motor constant I_0	Inverter rating	
H_24/ H224	Motor Constant J	Inverter rating	
H_30/ H230	Auto-tuned motor constant R1	Inverter rating	
H_31/ H231	Auto-tuned motor constant R2	Inverter rating	
H032/ H232	Auto-tuned motor constant L	Inverter rating	
H_33/ H233	Auto-tuned motor constant I_0	Inverter rating	
H_34/ H234	Auto-tuned motor constant J	Inverter rating	

Intelligent Input Terminal Listing

Symbol	Code	Input Terminal Name
FW	00	Forward Run/Stop
RV	01	Reverse Run/Stop
CF1	02	Multi-speed select, Bit 0 (LSB)
CF2	03	Multi-speed select, Bit 1
CF3	04	Multi-speed select, Bit 2
CF4	05	Multi-speed select, Bit 3 (LSB)
JG	06	Jogging
DB	07	External DC braking
SET	08	Set (select) second motor data
2CH	09	2-stage accel and decel
FRS	11	Free-run stop
EXT	12	External trip
USP	13	Unattended start protection
SFT	15	Software lock
AT	16	Analog input voltage/current sel.
RS	18	Reset inverter
PTC	19	PTC thermistor thermal protection
UP	27	Remote control Up func.
DWN	28	Remote control Down func.

Intelligent Output Terminal Listing

Symbol	Code	Input Terminal Name
RUN	00	Run signal
FA1	01	Freq. arrival type 1 – constant speed
FA2	02	Freq. arrival type 2 – over-frequency
OL	03	Overload advance notice signal
OD	04	Output deviation for PID control
AL	05	Alarm signal

Analog Input Configuration

The following tables show the parameter settings required for various analog input signal types.

[AT]	External Frequency Command Input
OFF	[O] — [L]
ON	[OI] — [L]
(not assigned to any input terminal)	Summation of [O] — [L] and [OI] — [L]

Analog Output Function Listing

The following table shows all three functions available for assignment to the analog output terminal:

- Terminal [FM], option set by C_23

Option Code	Function Name	Description	Corresponding Signal Range
00	Output frequency	Actual motor speed, represented by PWM signal	0 to max. freq. in Hz
01	Output current	Motor current (% of maximum rated output current), represented by PWM signal	0 to 200%
02	Digital output frequency	Output frequency	0 to max. freq. in Hz

Auto-tuning Procedure

The SJ100 auto-tuning feature calibrates the inverter to the parameters of a specific motor such as winding resistance and reactance. For optimum sensorless vector control, it is important to auto-tune during the initial installation, and after replacing either the motor or the inverter.

Auto-tuning requires that you configure the inverter for SLV control (set A_44 = 02). Then you can perform the auto-tuning procedure, which is detailed in the SJ100 Inverter Instruction Manual.