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Version Change Log

Date	Version	Content
2026.01	V1.0	First version released
2026.03	V1.1	Modify the default values of F01.01 and F01.02

1 Overview

1.1 Safety Precaution

To ensure safe and proper use of this product, please fully understand the safety precautions outlined in this manual before using.

Signs and Meanings

The following signs are used in this manual to highlight the key safety points. Failure to observe these points may result in damages to this product and the associated system, or personal injuries and even loss of life.

⚠	DANGER: Incorrect operation may result in death or major safety incidents.
⚠	CAUTION: Incorrect operation may result in minor injuries.

Operator

This product must be installed operated and maintained by trained professionals. The personnel working on this product must be trained with specialized skills and knowledge about installation, wiring, operation and maintenance of the equipment, so they can respond correctly to various emergencies that arise during use.

Security guidelines

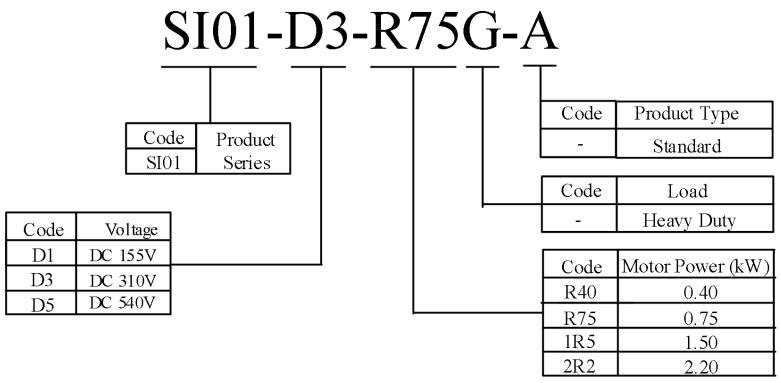
The safety rules and warning signs presented for safety are taken to prevent personal injuries and damages to the products and the associated systems. Please read this manual carefully before use and strictly follow the safety guidelines and warning signs in this manual.

- Correct transportation, storage, installation, as well as careful operation and maintenance, for the safe operation of the AC drive is essential. During transportation and storage, it is crucial to protect the AC drive from shocks and vibrations. Additionally, it should be stored in a dry environment free of corrosive gases and conductive dust below 60℃.
- This product is equipped with hazardous voltage to control potentially dangerous motion mechanisms. Failure to observe the regulations or this manual may lead to damages to the products and associated systems, or even personal injuries and death.
- Do not perform wiring work while the power is on, as there is a risk of death by electric shock. Before performing wiring, inspection, maintenance, etc., disconnect the power supply to all associated equipment and make sure that the DC voltage in the main circuit has dropped to a safe level for 5 minutes.
- The power cables, motor cables, and control cables must all be tightly connected, and the grounding terminal must be grounded with resistance lower than 10Ω.
- The static electricity of human body may cause significant harm to internal sensitive devices. So, it is crucial for professionals to adhere to the measures and methods outlined in the Electrostatic Discharge Prevention (ESD) guidelines before commencing work on the AC drives.
- Due to the pulse waveform output voltage of the AC drive, it is essential to remove the installed power factor improvement capacitors, lightning protection varistors or other devices on the output side of the AC drive, or move the devices to the input side.

- Do not add switching devices such as circuit breakers and contactors to the output side of the AC drive. (If it is necessary to connect switching devices to the output side, please ensure that the output current of the AC drive is zero when the switch is on or off.)
- Failure of the control device could lead to production halt and significant accidents. Therefore, please apply the necessary external protection measures or backup devices.
- This product is intended for the manufacturer's specified purposes. Unauthorized applications in such as emergency, rescue, marine, medical, aviation, or facility-related settings are seriously prohibited.
- Maintenance of this product can only be carried out by VEICHI or by professionals authorized and licensed by VEICHI. Unauthorized modification or accessories may result in product failure. Any defective devices during maintenance must be replaced timely.

1.2 Pre-use

Please check the outer packaging for any damage upon receiving the ordered products. And then check the product inside for any damage, scratches, or dirt.(Please note that damage during transportation is not covered by the Three Guarantees warranty policy.) If the product received is damaged during transportation, please contact us or the transportation company immediately. Please confirm that the type of the received product matches the model you ordered.



Voltage	110V	220V	380V
Power	Rated Output Current (A)		
0.4	4.0	3.0	-
0.75	7.0	4.0	2.5
1.5	10.0	7.0	3.7
2.2	16.0	10.0	5.0
4	-	16.0	10.0
5.5	-	-	13.0
7.5	-	-	17.0

1.3 Technical Specifications

Item		Specification
Power Input	Voltage/frequency	D1: Single-phase 110VAC~130VAC 50Hz/60Hz; 80VDC~350VDC D3: Single-phase 200VAC~240VAC 50Hz/60Hz; 150VDC~450VDC D5: Three-phase 380VAC~480VAC 50Hz/60Hz; 250VDC~850VDC
	Allowable fluctuation	D1: -10%~0% D3: -10%~0% D5: -15%~10% Voltage imbalance rate: <3% Frequency: ± 5% Distortion rate meets IEC61800-2 requirements
	Switching surge current	<rated current
Output	Output voltage	Output under rated conditions: Three-phase, 0V~input voltage, bias<5%
	Output frequency range	0Hz~599Hz
	Output frequency accuracy	±0.5% of the max. frequency
	Overload capacity	D5 model: 150% of rated current for 89 seconds, 180% of rated current for 10 seconds, 200% of rated current for 3 seconds D3 model: 150% of rated current for 24 seconds, 180% of rated current for 3.4 seconds
Main Control Performance	Control mode	V/F, SVC
	Modulation mode	PWM
	Motor type	Three-phase asynchronous motors, and permanent magnet synchronous motors
	Carrier frequency	2.0kHz~12.0kHz
	Speed control range	SVC: Rated load 1:100;
	Speed stabilizing accuracy	SVC: ≤2% rated synchronous speed
	Starting torque	SVC: 150% of the motor rated torque at 0.5Hz
	Torque ripple	SVC: ≤0.1% of the motor rated torque
	Torque response	SVC: <20ms;

	Frequency accuracy	Digit setting: max. frequency × ±0.01%; analog setting: max. frequency × ±0.2 %
	Frequency resolution	Digit setting: 0.01Hz; analog setting: Max. frequency × ±0.05 %
Basic Functions	Torque control	Torque calculation and speed limit in torque mode
	DC brake	Starting frequency: 0.00Hz~50.00Hz; Braking time: 0.0s~60.0s; Braking current: 0.0%~150.0% of rated current
	Torque boost	Auto torque boost: 0.0%~100.0%; Manual torque boost: 0.0%~30.0%.
	V/F curve	4 patterns: Linear, self-defined, 1.1~2.0 power, and square
	ACC/DEC curve	2 patterns: Linear and S-curve ACC/DEC 4 sets of ACC/DEC time, unit: 0.01s, 65000s max.
	Rated output voltage	50%~100% with the rated voltage of the motor as 100% (the output cannot exceed the input voltage) by the power voltage compensation function
	Auto voltage regulation	Auto constant holding during grid voltage fluctuates
	Auto ECO mode	Auto energy optimization according to the load in V/F control mode
	Auto current limit	Auto current limit during operation to prevent frequent tripping and over-current fault
	Instantaneous power loss mode	Bus voltage control against instantaneous power loss
	Standard functions	PID control, fly track and power-off restart, jump frequency, upper/lower frequency limit control, programmed operation, multi-speed, RS485 communication, analog output, frequency pulse output, parameter access level, common parameters, monitoring parameter comparator output, counting and timing, and swing frequency
	Frequency source	Analog voltage/current terminal AS/VS, communication and multi-channel terminals, and main and auxiliary combined channels
	Command source	Communication from host controller Terminal from X terminal input Digits from keypad
	Input command signal	Start, stop, forward and reverse operation, jog, multi-speed, coasting stop, reset, ACC/DEC time, frequency reference source, and external error prompts
	Output signal	1 × relay output, 1 × open collector output
Protections		Over-voltage, low-voltage, current limit, over-current, overload, electronic thermal relay, over-heat, over-voltage stall, data protection, overspeed, and I/O phase loss
Display	Parameter copy	Upload and download the information of the AC drive to realize fast parameter copying

	Status monitoring	1. Monitor parameter settings including output frequency, target frequency, output current, input voltage, output voltage, motor speed, PID feedback, PID target, module temperature, target torque, output torque, etc. 2. Status monitoring by three LED indicators POWER: It's red when everything is normal after power on RUN: It's green during operation FAULT: It's red under errors or alarms
	Error prompt	Overvoltage, low-voltage, overcurrent, short-circuit, phase loss, overload, overheat, overvoltage stall, current limit, data protection, operating conditions of current errors, error history
Environment	Installation	<1000 meters, derate 1% for every 100 meters rise when above 1000m No condensation, icing, rain, snow, hail, etc., solar radiation <700W/m2, air pressure 70kPa~106kPa
	Temperature, humidity	-20℃~+50℃, derate above 40℃, 50℃ max. (no-load) ≤95%RH(Relative humidity change rate not exceeding 5% per hour without condensation at 20℃)
	Vibration	5.9m/s^2 (0.6G) at 9Hz~200Hz
	Storage temperature	-30℃~+60℃
	Installation method	Wall-mounting
	Protection level	IP20
	Pollution class	C2
	Cooling method	V1-Natural cooling V2/V3-Forced-air cooling

2 Installation and Wiring

See this section for installation and wiring of the AC drive in order to maintain the performance of the product in a long-term and stable manner.

Installation Direction and Space

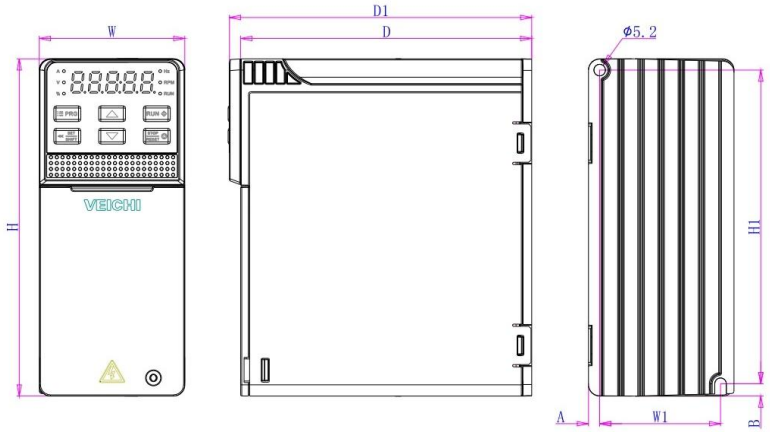
- Direction

Be sure to install the AC drive vertically to ensure the cooling effect.

- Space

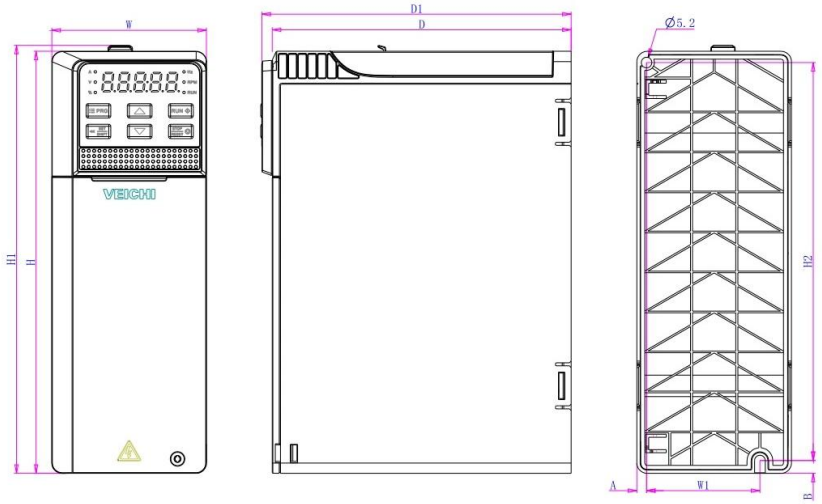
Be sure to comply with the installation conditions shown in the figure below and install the AC drive with its back closely attached to the wall for smooth ventilation and convenient wiring.

External Dimensions of Drive and Keypad



V1 Installation Dimensions

Model	Outer Dimension (mm)				Front Dimension (mm)				Aperture (mm)
	W	H	D	D1	A	B	W1	H1	
SI01-D1-R40G-A	65	150	130	135	5	5.5	54	139.5	Φ5.2
SI01-D3-R40G-A									
SI01-D3-R75G-A									
SI01-D5-R75G-A									
SI01-D5-1R5G-A									



V2/V3 Installation Dimensions

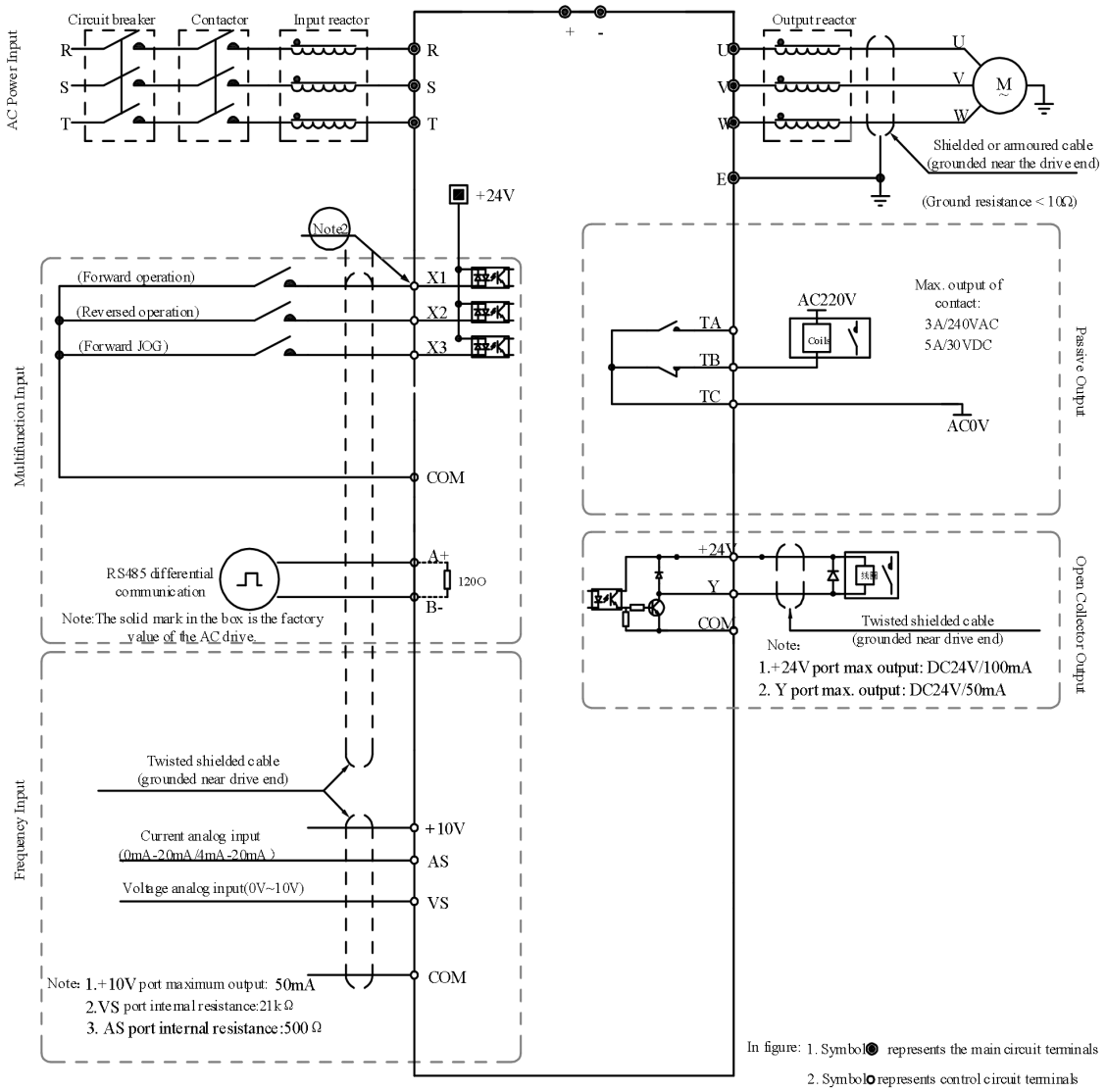
Model	Outer dimension (mm)				Front Dimension (mm)				Aperture (mm)
	W	H	D	D1	A	W1	H1	H2	
SI01-D1-R75G-A	75	205	145	150	4.7	55	207.9	193.25	Φ5.2
SI01-D1-1R5G-A									
SI01-D3-1R5G-A									
SI01-D3-2R2G-A									
SI01-D5-2R2G-A									
SI01-D5-004G-A									
SI01-D1-2R2G-A	100	230	165	-	6.0	82	232.9	218	Φ6.2
SI01-D3-004G-A									
SI01-D5-5R5G-A									
SI01-D5-7R5G-A									

Note:

If the product is equipped with KBD01-15 keypad as standard, its size is added into the external dimension D1.

The D5 series with the "-A(H)" suffix supports 850V DC input, and its installation dimensions are the same as those of the "-A" suffix model.

Standard Wiring



1. Multi-function input terminal (X1~X3) supports NPN transistor input.

2. Multi-function input terminal (X1~X3) supports PNP transistor input, please contact the manufacturer for procurement.

3. Digital and analog are combined into COM terminals in control circuits.

- Auxiliary terminal output capability

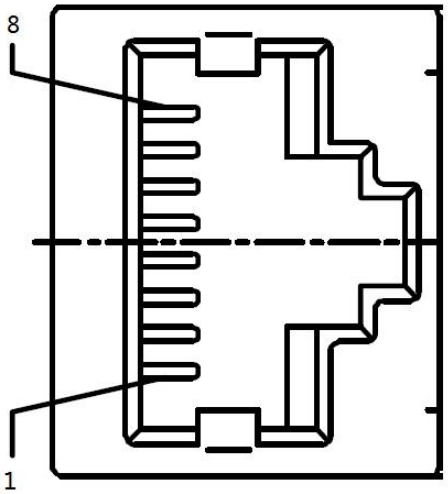
Terminal	Definition	Max. Output
+10V	10V auxiliary power supply, forming a circuit with COM.	50mA
+24V	24V auxiliary power supply, forming a circuit with COM.	100mA
COM	Digital ground and analog ground	-
X1, X2, X3	DI terminal	NPN
Y	Open collector output, can be programmed in the software	DC24V/50mA

TA/TB/TC	TA TC: NO, TB TC: NC Passive contact output, can be programmed in the software	3A/240VSI 5A/30VDC
AS	Current analog input	0mA~20mA/4mA~20mA
VS	Voltage analog input	0V~10V
A+, B-	RS485 communication	-

- Main circuit terminals

Mark	Name	Description
R/L	Main circuit input terminal	D5: Three-phase power input R-phase D3: Single-phase power input L-line
S		D5: Three-phase power input S-phase D3: Not connected (NC)
T/N		D3: Three-phase power input T-phase D3: Single-phase power input N-line
U	Main circuit output terminal	Drive U-phase output
V		Drive V-phase output
W		Drive W-phase output
+/-	DC bus power terminal +/-	PV DC power input
⏚	Grounding terminal	Ground the drive to earth

- Drive RJ45 interface definition



It's the top view above, and here's the specific interpretation:

Pin No.	Pin	Description
1	COM	5V power ground
2	NC	Suspend
3	COM	5V power ground
4	5V	5V power
5	5V	5V power
6	LOAD	Software burning
7	B-	RS485 B- and terminal B- in one
8	A+	RS485 A+ and terminal A- in one

3 Indicator, Keypad Layout and Operation Instructions

- Indicator introduction

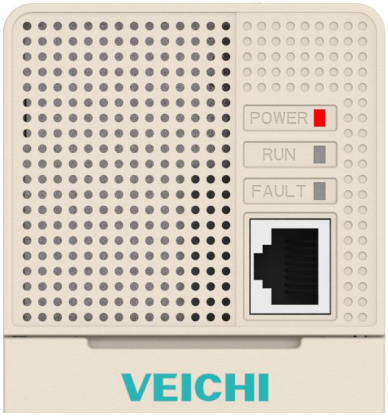


Figure 3-1 SI01 Series AC Drive Main Circuit

Users can tell the states by the three indicator lights on the interface of the SI01 series drive:

Mark	Indicator	Status	Description
POWER	Red	ON	AC drive ready for operation after power-up
		OFF	Abnormal power supply
RUN	Green	ON	Drive in forward operation
		Flash (500ms on and 500ms off in cycle)	Drive in reverse operation
		OFF	Drive not in operation
FAULT	Red	ON	Errors represented by master codes 1-11
		Flash (100ms on and 100ms off in cycle)	Errors represented by master codes 12-117
		Slow flash (100ms on and 100ms off + 100ms off and 1700ms off in cycle)	Drive alarm
		OFF	No errors

Note:

For main error/alarm codes 1~163, please refer to “4.23 Fault Code Table”.

Users can confirm the status of the drive by the external keypad, without having to check the three indicator lights.

- External keypad appearance

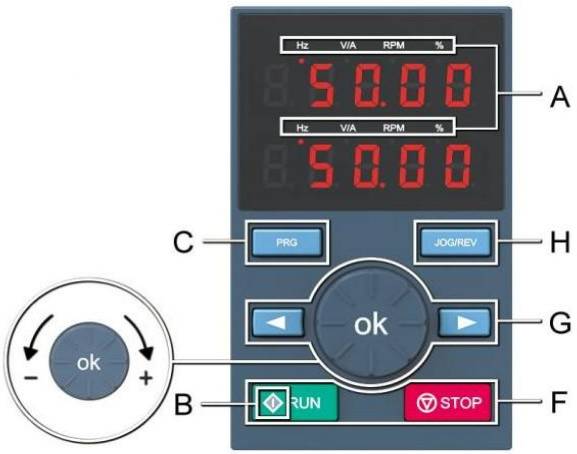


Figure 3-2 KBD300-25 Dual-row Keypad

Figure 3-3 KBD10-15 Single-row Keypad

- External keypad buttons

Mark	Dual-row keypad	Function
A	Unit indicator	Hz: Frequency; A: Current; V: Voltage; V/A: Voltage or current; RPM: Speed; %: Percentage
B	Status indicator	ON: Forward; Flash: Reverse; OFF: Stop
C	PRG Program	Enter the function menu under standby or operation status; Press it to exit during parameter modification; Long press it(1 second) under standby or operation to enter the status interface
F	RUN RUN	When Run/Stop is controlled by the keypad, press this key to make the AC drive operate in forward direction. The status indicator is on for forward operation and flashing for reverse operation.
	STOP Stop/Reset	When the commands are given from the keypad, press this key to stop the AC drive; Define other command source to be valid or not by parameter F11.03 [Keypad STOP Button]; Press this key to reset AC drive errors.
G	ok	Potentiometer: Rotate clockwise to increase the value, and counterclockwise to decrease it.
		Confirm: After modification, press it to confirm.
	Left/Right	Shift the bit to the left and right.
H	Multi-function key JOG/REV	The functions of the key are selected via parameter F11.02 [Keypad JOG/REV Button].

- Fixable keypad

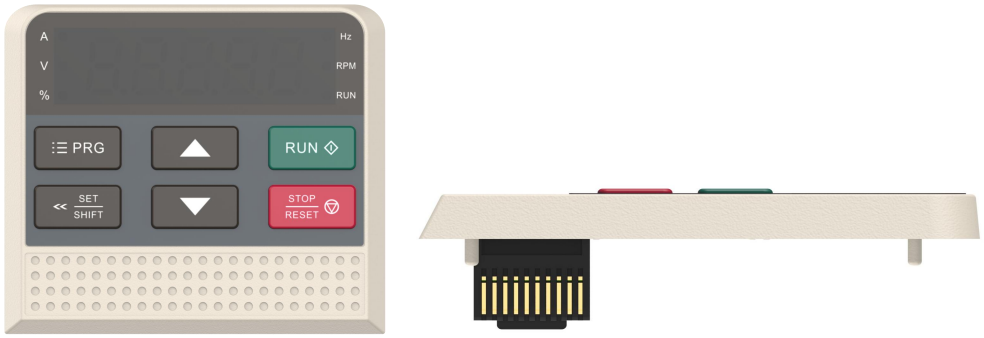


Figure 3-4 Fixable Keypad KBD01-15 (Front and Side View)

Note:

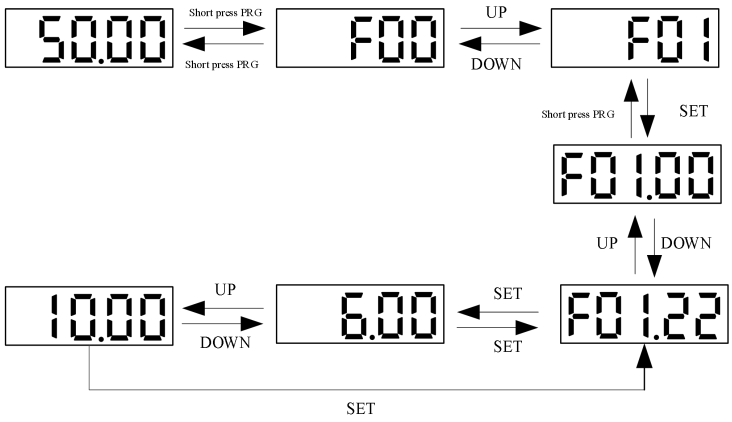
1. The buttons on this keypad is the same as the external keypad.
2. This keypad is fixed by direct hard connection through the RJ45 network port on the SI01 product.

- Keypad indicator

Name		Status	Description
Unit indicator on external keypad	Hz	Flash/ON	Frequency unit
	A	ON	Current unit
	V	ON	Voltage unit
	RPM	ON	Speed unit
	%	Flash/ON	Percentage unit

- Basic parameter setting steps

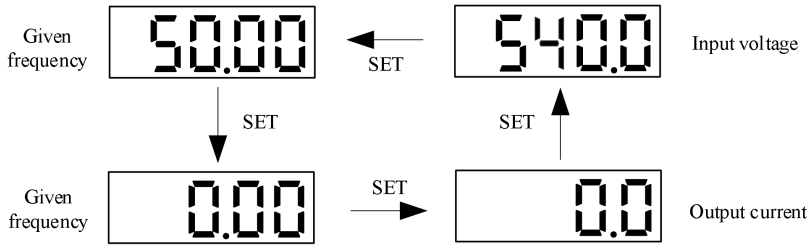
Take F01.22 [ACC Time]=10.00s as an example.



Note:

To modify the tens-, hundreds- and thousands-bit of a parameter, press Shift for quick positioning.

- Monitoring status check

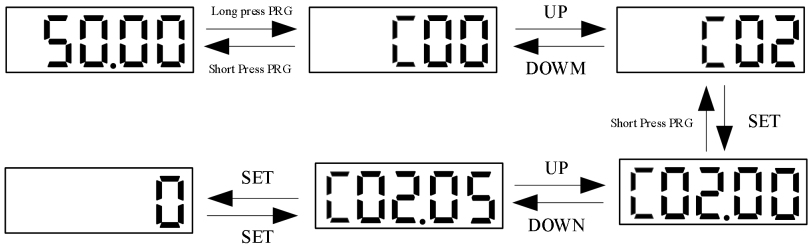


Note:

Press Left to cycle through the first row of monitoring parameters and Right to cycle through the second row on the external keypad.

- Monitoring parameter check

The following is an example of checking C02.05 [PLC Stage] to illustrate basic LED keypad operation.



Note:

- The SI01 product can achieve 485 communication either through an external keypad connected via the RJ45 port or via wiring to the A+B- terminal block. These two functions cannot be used simultaneously.
- No adjustment of parameter F11.30 is required. If an external keypad is connected when powered off, the SI01 will automatically recognize it as active upon power-up, and 485 communication will be disabled. Conversely, if no external keypad is connected, the SI01 will enable 485 communication upon power-up, and the external keypad function will be disabled.
- Communication parameters are saved immediately after adjustment.
- Users can still use RS485 communication on the A+ and B- terminals together with KBD01-15 keypad.

4 Funcode Table

This section only provides a brief list of functions. Please refer to the SI01 Technical Manual or consult our company for detailed information.

4.1 Safety Precaution

Danger
● Please pay attention to all information in this book regarding safety. ● Failure to observe the warnings may result in death or serious injuries. VEICHI will not be held liable for injuries and equipment damage caused by your company or your customers' failure to comply with the contents of this book.

4.2 Parameter List Comments

● Marks and terms of control modes

Mark	Content	Mark	Content
V/F	Parameters valid in V/F control mode	RUN	Parameters that can be modified during operation
SVC	Parameters valid in open-loop vector control	STOP	Parameters that cannot be modified during operation
-	-	READ	The parameter can only be read, not modified

4.3 Funcode Group

Note
The RS485 and external keypad are valid for one or the other.

● Code types for this product

Code	Name	Code	Name
F00.0x	Environment Settings	F07.0x	Start Control
F00.1x	Common Parameters	F07.1x	Stop Control
F01.0x	Basic Commands	F07.2x	DC Brake and Speed Tracking
F01.1x	Frequency Commands	F07.3x	Jog
F01.2x~F01.3x	ACC/DEC Time	F07.4x	Start/Stop Hold/Jump Frequency
F01.4x	PWM Control	F08.0x	Counting and Timing
F02.0x	Basic Motor Parameters and Auto-tuning	F08.1x	Reserved
F02.1x	AM Advanced Parameters	F08.2x	Reserved
F02.2x	PM Advanced Parameters	F08.3x	Swing Frequency
F02.3x~F02.4x	Reserved	F10.0x	Current Protection
F02.5x	Motor Application	F10.1x	Voltage Protection
F03.0x	ASR	F10.2x	Auxiliary Protection
F03.1x	ACR and Torque Limit	F10.3x	Load Protection

F03.2x	Torque Optimization	F10.4x	Stall Protection
F03.3x	Flux Optimization	F10.5x	Error Reset and Motor Overload Protection
F03.4x~F03.5x	Torque Control	F11.0x	Keypad Operation
F04.0x	V/F Control	F11.1x	Cyclic Monitoring of Status Interface
F04.1x	Customized V/F Curves	F11.2x	Monitoring Parameters
F04.2x	Reserved	F11.3x	Special Keypad Functions
F04.3x	V/F ECO Control	F12.0x	Modbus Slave
F05.0x	DI Terminal	F12.1x	Reserved
F05.1x	X1~X3 Detection Delay	F13.00~F13.06	PID Target and Feedback
F05.2x	DI Terminal Mode	F13.07~F13.24	PID Setting
F05.3x	Reserved	F13.25~F13.28	PID Feedback Disconnection
F05.4x	Analog Type	F13.29~F13.33	Sleep
F05.5x	Analog Process	F14.00~F14.14	Multi-frequency
F05.6x	AS/VS Curve 1	F14.15	PLC Mode
F05.7x	AS/VS Curve 2	F14.16~F14.30	PLC Runtime
F05.8x	AS/VS as DI Terminal	F14.31~F14.45	PLC Direction and ACC/DEC Time
F06.0x	Reserved	F16.0x	Reserved
F06.1x	Reserved	C00.xx	Basic Monitoring
F06.2x~F06.3x	Digital and Relay Output	C01.xx	Error Monitoring
F06.4x	Frequency Detection	C02.xx	App Monitoring
F06.5x	Monitoring Comparator	C03.xx	Reserved
F06.6x~F06.7x	Virtual I/O Terminal	-	-

4.4 F00: Environment

F00.0x: Environment Settings

Code (Address)	Name	Content	Default (Range)	Modification Mode
F00.00 (0x0000)	Parameter Access Level	V/F SVC Set the parameter access level according to access restriction. 0: Standard parameters(Fxx.yyy, Cxx.yy) 1: Common parameter (F00.00, Pxx.yyy) 2: Monitoring parameters(F00.00, Cxx.yyy) 3: Changed parameters (F00.00, Hxx.yy)	0 (0~3)	RUN

F00.03 (0x0003)	Initialization	V/F SVC Set the drive initialization mode. 0: OFF 11: Set parameters according to actual needs (motor parameters excl.) 22: All parameters initialized 33: Clear error records	0 (0~33)	STOP
F00.04 (0x0004)	Keypad Parameter Copy	V/F SVC 0: OFF 11: Upload parameters to the keypad 22: Download parameters to the drive	0 (0~30)	STOP
F00.07 (0x0007)	Free Parameter 1	V/F SVC Set the machine codes or purpose codes when multiple drives are used.	0 (0~65535)	RUN
F00.08 (0x0008)	Free Parameter 2	V/F SVC Set the machine codes or purpose codes when multiple drives are used.	0 (0~65535)	RUN

F00.10~F00.39: Common Parameters

Code (Address)	Name	Content	Default (Range)	Modification Mode
(F00.10~ F00.39 (0x000A~ 0x0027)	Often Used Funcode	V/F SVC Ones-and tens-bit: set 00~99 to yy in Fxx.yy Hundreds- and thousands-bit: set 00~31 to xx in Fxx.yy	Up to F00.01 (0000~2999)	RUN

4.5 F01: Basic Settings

F01.0x: Basic Commands

Code (Address)	Name	Content	Default (Range)	Modification Mode
F01.00 (0x0100)	Motor 1 Control Mode	V/F SVC Set the motor control mode. AM control mode: 0: AM-V/F, V/F control 1: AM-SVC, open loop vector control, current closed loop control PM control mode: 10: PM-V/F, V/F control 11: PM-SVC, open loop vector control, current closed loop control	0 (0~11)	STOP

F01.01 (0x0101)	Command Source	V/F SVC Set the source for start/stop commands and the direction of operation to the drive. 0: Keypad (external keypad first) 1: Terminal 2: RS485 3: Reserved	0 (0~3)	RUN
F01.02 (0x0102)	Frequency Source A	V/F SVC Set the frequency source. 0: Keypad 1: Potentiometer 2: Analog current AS 3: Analog voltage VS 4: Reserved 5: Reserved 6: RS485 communication 7: UP/DW terminal 8: PID 9: Program (PLC) 10: Reserved 11: Multi-speed	0 (0~11)	RUN
F01.03 (0x0103)	Frequency Source A Gain	V/F SVC Set the gain of frequency source A.	100.0% (0.0%~500.0%)	STOP
F01.04 (0x0104)	Frequency Source B	V/F SVC Set the frequency source B. The same as F01.02 [Frequency Source A].	0 (0~11)	RUN
F01.05 (0x0105)	Frequency Source B Gain	V/F SVC Set the gain of frequency source B.	100.0% (0.0%~500.0%)	STOP
F01.06 (0x0106)	Frequency Source B Reference	V/F SVC Set the reference for frequency source B. 0: Max. output frequency as reference 1: Source A frequency as reference	0 (0~1)	RUN
F01.07 (0x0107)	Frequency Source Combination	V/F SVC Set the combination method of source A and source B of the drive. 0: Source A 1: Source B 2: Source A + Source B 3: Source A – Source B 4: Max (A, B) 5: Min (A, B)	0 (0~5)	RUN

F01.08 (0x0108)	Frequency/ Command Source Binding	V/F SVC Set to bond each command sources to frequency sources. Ones-bit: Keypad commands Tens-bit: Terminal commands Hundreds-bit: Communication commands Thousands-bit: Reserved 0: No binding 1: Keypad 2:Potentiometer	3: Analog current AS 4: Analog voltage VS 5: Reserved 6: Reserved 7: Communication 8: UP/DW terminal 9: PID A: Program (PLC) B: Reserved C: Multi-speed D: Reserved	0x0000 (0x0000~ 0xDDDD)	RUN
F01.09 (0x0109)	Target Frequency (Keypad)	V/F SVC Set and modify the specific frequency values by this funcode.		50.00Hz (0.00Hz~ Upper freq)	RUN

F01.1x: Frequency Commands

Code (Address)	Name	Content		Default (Range)	Modification Mode
F01.10 (0x010A)	Max. Frequency	V/F SVC Set the maximum frequency for the drive.		50.00Hz (Upper freq~599.00Hz)	STOP
F01.11 (0x010B)	Upper Limit Frequency Source	V/F SVC Set the upper limit frequency source. 0: Keypad 1: Potentiometer 2: Analog current AS	3: Analog voltage VS 4: Reserved 5: Reserved 6: RS485 7: Reserved	0 (0~7)	RUN
F01.12 (0x010C)	Upper Limit Frequency (Keypad)	V/F SVC Set the upper limit frequency when F01.11[Upper Limit Frequency Source] is set to 0.		0.00Hz Lower limit freq~ Max. freq)	RUN
F01.13 (0x010D)	Lower Limit Frequency	V/F SVC Set the lower limit to the target frequency.		0.00Hz (0.00Hz~Upper freq)	RUN

F01.14 (0x010E)	Frequency Command Resolution	V/F SVC Set the frequency command resolution. 0: 0.01Hz 1: 0.1Hz 2: 0.1rpm 3: 1rpm 4: 10rpm	0 (0~4)	STOP

F01.2x~F01.3x: ACC/DEC Time

Code (Address)	Name	Content	Default (Range)	Modification Mode
F01.20 (0x0114)	ACC/DEC Time Reference	V/F SVC Set the reference frequency to calculate the acceleration and deceleration time. 0: Maximum frequency 1: Fixed frequency 50Hz 2: Target frequency	0 (0~2)	STOP
F01.21 (0x0115)	ACC/DEC Time Unit	V/F SVC Set the unit for the acceleration and deceleration time. 0: 1s 1: 0.1s 2: 0.01s	2 (0~2)	STOP
F01.22 (0x0116)	ACC Time 1	V/F SVC Set the time required to accelerate the output frequency from 0.00Hz to the reference frequency 1s~65000s(F01.21=0); 0.1s~6500.0s(F01.21=1) 0.01s~650.00s (F01.21=2)	Up to model (0.01s~650.00s)	RUN
F01.23 (0x0117)	DEC Time 1	V/F SVC Set the time required to decelerate the output frequency from the reference frequency to 0.00Hz.	Up to model (0.01s~650.00s)	RUN
F01.24 (0x0118)	ACC Time 2	V/F SVC Set the time required to accelerate the output frequency from 0.00 Hz to the reference frequency	Motor setting (0.01s~650.00s)	RUN
F01.25 (0x0119)	DEC Time 2	V/F SVC Set the time required to decelerate the output frequency from the reference frequency to 0.00Hz.	Up to model (0.01s~650.00s)	RUN
F01.26 (0x011A)	ACC Time 3	V/F SVC Set the time required to accelerate the output frequency from 0.00 Hz to the reference frequency	Motor setting (0.01s~650.00s)	RUN
F01.27 (0x011B)	DEC Time 3	V/F SVC Set the time required to decelerate the output frequency from the reference frequency to 0.00Hz.	Up to model (0.01s~650.00s)	RUN

F01.28 (0x011C)	ACC Time 4	V/F SVC Set the time required to accelerate the output frequency from 0.00Hz to the reference frequency	Motor setting (0.01s~650.00s)	RUN
F01.29 (0x011D)	DEC Time 4	V/F SVC Set the time required to decelerate the output frequency from the reference frequency to 0.00Hz.	Up to model (0.01s~650.00s)	RUN
F01.30 (0x011E)	S-curve ACC/DEC	V/F SVC Set the S-curve acceleration/deceleration on or off. 0:OFF 1: ON 2: S-curve	1 (0~2)	STOP
F01.31 (0x011F)	ACC S-Curve Start Time	V/F SVC Set the start point for s-curve acceleration.	0.20s (0.00s~10.00s)	STOP
F01.32 (0x0120)	ACC S-Curve End Time	V/F SVC Set the end point for s-curve acceleration.	0.20s (0.00s~10.00s)	STOP
F01.33 (0x0121)	DEC S-Curve Start Time	V/F SVC Set the start point for s-curve deceleration.	0.20s (0.00s~10.00s)	STOP
F01.34 (0x0122)	DEC S-Curve End Time	V/F SVC Set the end point for s-curve deceleration.	0.20s (0.00s~10.00s)	STOP
F01.35 (0x0123)	ACC Time 1/2 Shift Frequency	V/F SVC Set the shift frequency of ACC. Time 1 and ACC. Time 2.	0.00Hz (0.00Hz~ Max. freq)	RUN

F01.4x : PWM Control

Code (Address)	Name	Content	Default (Range)	Modification Mode
F01.40 (0x0128)	Carrier Frequency	V/F SVC Set the switch frequency of IGBT drive	Up to model (2.0kHz~12.0kHz)	RUN

F01.41 (0x0129)	PWM Mode	V/F SVC Ones-bit: Carrier-temperature correlation 0: Irrelevant 1: Relevant Tens-bit: Carrier-output frequency correlation 0: Irrelevant 1: Relevant	Hundreds-bit: Random PWM 0: OFF 1: ON under V/F control 2: ON under vector control Thousands-bit: PWM mode 0: Three-phase modulation only 1: Auto switching between two-/three-phase modulation	1111 (0000~1211)	RUN
F01.43 (0x012B)	Deadband Compensation Gain	V/F SVC Set the deadband compensation gain.		306 (0~512)	RUN
F01.45 (0x012D)	Bootstrap Time	V/F SVC Set the bootstrap time.		50 (0ms~60000ms)	STOP
F01.46 (0x012E)	PWM Random Depth	V/F SVC The larger the setting, the greater the carrier fluctuation when this setting is valid.		0 (0~20)	RUN

4.6 F02: Motor 1 Parameters

F02.0x: Basic Motor Parameters and Auto-tuning

Code (Address)	Name	Content	Default (Range)	Modification Mode
F02.00 (0x0200)	Motor Type	V/F SVC Set the motor type. 0: Asynchronous motor (AM) 1: Permanent magnet synchronous motor (PM)	0 (0~1)	READ
F02.01 (0x0201)	Motor Poles	V/F SVC Set the motor pole number.	4 (2~98)	STOP
F02.02 (0x0202)	Motor Rated Power	V/F SVC Set the rated power of the motor.	Up to model (0.1kW~22.0kW)	STOP
F02.03 (0x0203)	Motor Rated Frequency	V/F SVC Set the rated frequency of the motor.	Up to model (0.01Hz~ Max. freq)	STOP

F02.04 (0x0204)	Motor Rated Speed	V/F SVC Set the rated speed of the motor.	Up to model (0rpm~65000rpm)	STOP
F02.05 (0x0205)	Motor Rated Voltage	V/F SVC Set the rated voltage of the motor.	Up to model (0V~2000V)	STOP
F02.06 (0x0206)	Motor Rated Current	V/F SVC Set the rated current of the motor.	Up to model (0.1A~3000.0A)	STOP
F02.07 (0x0207)	Motor Auto-tuning	V/F SVC After the parameter auto-tuning is finished, the set value of F02.07 will be set to "0" automatically. 0: OFF 1: Dynamic auto-tuning 2: Static auto-tuning 3: Stator resistance auto-tuning	0 (0~3)	STOP

Note:

When F02.00 [Motor Type] is a synchronous motor, F02.04 [Motor Rated Speed] is calculated from F02.01 [Motor Poles] and F02.03 [Motor Rated Frequency], please set the corresponding parameters correctly. The calculation formula is: F02.04[Motor Rated Speed]=60* F02.03[Motor Rated Frequency]/(F02.01[Motor Poles]/2)

F02.1x : AM Advanced Parameters

Code (Address)	Name	Content	Default (Range)	Modification Mode
F02.10 (0x020A)	AM No-load Current	V/F SVC Set the no-load current of the asynchronous motor.	Up to model (0.1A~3000.0A)	STOP
F02.11 (0x020B)	AM Stator Resistance	V/F SVC Set the stator resistance of the asynchronous motor.	Up to model (0.01mΩ~ 60000.00mΩ)	STOP
F02.12 (0x020C)	AM Rotor Resistance	V/F SVC Set the rotor resistance of the asynchronous motor.	Up to model (0.01mΩ~ 60000.00mΩ)	STOP
F02.13 (0x020D)	AM Stator Leakage Inductance	V/F SVC Set the stator leakage inductance for asynchronous motors.	Up to model (0.01mH~ 65535.00mH)	STOP
F02.14 (0x020E)	AM Stator Inductance	V/F SVC Set the stator inductance for asynchronous motors.	Up to model (0.01mH~ 65535.00mH)	STOP
F02.15 (0x020F)	AM Per-unit Stator Resistance	V/F SVC Set the per-unit stator resistance for asynchronous motors.	Up to model (0.01%~50.00%)	READ

F02.16 (0x0210)	AM Per-unit Rotor Resistance	V/F SVC Set the per-unit rotor resistance for asynchronous motors.	Up to model (0.01%~50.00%)	READ
F02.17 (0x0211)	AM Per-unit Stator Leakage Inductance	V/F SVC Set per-unit stator leakage inductance for asynchronous motors.	Up to model (0.01%~50.00%)	READ
F02.18 (0x0212)	AM Per-unit Stator Inductance	V/F SVC Set the per-unit stator inductance for asynchronous motors.	Up to model (0.1%~999.0%)	READ
F02.19 (0x0213)	F02.11~F02.14 Decimal	V/F SVC Set the decimal point of the four parameters from F02.11 to F02.14. This parameter is read-only	0x0000 (0x0000~0x2222)	READ

F02.2x: PM Advanced Parameters

Code (Address)	Name	Content	Default (Range)	Modification Mode
F02.20 (0x0214)	PM Stator Resistance	V/F SVC Set the stator resistance for the permanent magnet synchronous motors.	Up to model (0.01mΩ~60000mΩ)	STOP
F02.21 (0x0215)	PM D-axis Inductance	V/F SVC Set the D-axis inductance for the permanent magnet synchronous motors.	Up to model (0.001mH~6553.5mH)	STOP
F02.22 (0x0216)	PM Q-axis Inductance	V/F SVC Set the Q-axis inductance for the permanent magnet synchronous motors.	Up to model (0.001mH~6553.5mH)	STOP
F02.23 (0x0217)	PM Back Emf	V/F SVC Set the back emf for the permanent magnet synchronous motors. It can only be identified under dynamic auto-tuning.	Up to model (0V~1500V)	STOP
F02.24 (0x0218)	PM Encoder Installation Angle	V/F SVC Set the encoder installation angle for permanent magnet synchronous motors.	Up to model (0.0°~360.0°)	RUN
F02.25 (0x0219)	PM Per-unit Stator Resistance	V/F SVC Set the per-unit stator resistance for the permanent magnet synchronous motors.	Up to model (Monitored values)	READ
F02.26 (0x021A)	PM Per-unit D-axis Inductance	V/F SVC Set the per-unit d-axis inductance for permanent magnet synchronous motors.	Up to model (Monitored values)	READ
F02.27 (0x021B)	PM Per-unit Q-axis Inductance	V/F SVC Set the per-unit q-axis inductance for permanent magnet synchronous motors.	Up to model (Monitored values)	READ
F02.28 (0x021C)	PM Pulse Width Factor	V/F SVC Set the pulse width factor for permanent magnet synchronous motors.	Up to model (00.00~99.99)	STOP

F02.29 (0x021D)	F02.20~F02.22 Decimal	V/F SVC Set the decimal point of the three parameters from F02.20to F02.22. This parameter is read-only	0x0000 (0x0000~0x2222)	READ

F02.3x~F02.4x: Reserved

F02.5x~F02.6x: Motor Application

Code (Address)	Name	Content	Default (Range)	Modification Mode
F02.50 (0x0232)	Stator Resistance Auto-tuning	V/F SVC 0: OFF 1: Tune only without update >1: Tune and update	0 (0~3)	STOP
F02.51 (0x0233)	Stator Resistance Tuning Factor 1	V/F SVC Set the stator resistance tuning factor 1.	0 (0~1000)	RUN
F02.52 (0x0234)	Stator Resistance Tuning Factor 2	V/F SVC Set the stator resistance tuning factor 2.	0.00% (-20.00%~20.00%)	RUN
F02.53 (0x0235)	Stator Resistance Tuning Factor 3	V/F SVC Set the stator resistance tuning factor 3.	0 (0~65535)	RUN
F02.60 (0x023C)	PM Pole Search	V/F SVC Ones-bit: Reserved Tens-bit: SVC 0: OFF 1: ON 2: ON during the first power-up only Hundreds-bit: V/F 0: OFF 1: ON 2: ON during the first power-up only	0010 (0000~3223)	STOP
F02.61 (0x023D)	Pole Search Current	V/F SVC Set the value of pole search current.	0.0% (0.0%~6553.5%)	STOP

4.7 F03: Vector Control

F03.0x: ASR

Code (Address)	Name	Content	Default (Range)	Modification Mode
F03.00 (0x0300)	ASR Rigidity	SVC Set the rigidity, the higher the setting, the better the speed rigidity.	32 (0~128)	RUN
F03.01 (0x0301)	ASR Rigidity Mode	SVC Set the rigidity mode of the speed loop.	0x0000 (0x0000~0xFFFF)	RUN
F03.02 (0x0302)	ASR HF Gain	SVC Set the proportional gain for high-frequency operation of the speed loop.	10.00 (0.01~100.00)	RUN

F03.03 (0x0303)	ASR HF Integral Time	SVC Set the integral time for high-frequency operation of the speed loop.	0.100s (0.000s~6.000s)	RUN
F03.04 (0x0304)	ASR HF Filter Time	SVC Set the filter time for high-frequency operation of the speed loop.	0.0ms (0.0ms~100.0ms)	RUN
F03.05 (0x0305)	ASR HF Shift Frequency	SVC Set the switching frequency for high-frequency operation of the speed loop.	0.00Hz (0.00Hz~ Max. freq)	RUN
F03.06 (0x0306)	ASR LF Gain	SVC Set the proportional gain for low-frequency operation of the speed loop.	10.00 (0.01~100.00)	RUN
F03.07 (0x0307)	ASR LF Integral Time	SVC Set the integral time for low-speed operation of the speed loop.	0.100s (0.000s~6.000s)	RUN
F03.08 (0x0308)	ASR LF Filter Time	SVC Set the filter time for low-frequency operation of the speed loop.	0.0ms (0.0ms~100.0ms)	RUN
F03.09 (0x0309)	ASR LF Shift Frequency	SVC Set the switching frequency for low-frequency operation of the speed loop.	0.00Hz (0.00Hz~ F03.05)	RUN

F03.1x: ACR and Torque Limit

Code (Address)	Name	Content	Default (Range)	Modification Mode
F03.10 (0x030A)	ACR D-axis Gain	SVC Set the d-axis proportional gain for the current loop.	1.000 (0.001~4.000)	RUN
F03.11 (0x030B)	ACR D-axis Integral Gain	SVC Set the d-axis proportional gain for the current loop.	1.000 (0.001~4.000)	RUN
F03.12 (0x030C)	ACR Q-axis Gain	SVC Set the q-axis proportional gain for the current loop.	1.000 (0.001~4.000)	RUN
F03.13 (0x030D)	ACR Q-axis Integral Gain	SVC Set the q-axis integral gain for the current loop.	1.000 (0.001~4.000)	RUN
F03.15 (0x030F)	Motoring Torque Limit	SVC Set the torque limit when motor is running.	250.0% (0.0%~400.0%)	RUN
F03.16 (0x0310)	Generating Torque Limit	SVC Set the torque limit during power generation.	250.0% (0.0%~400.0%)	RUN

F03.17 (0x0311)	Regenerative Torque Limit	SVC Set the regenerative torque limit at low speeds.	0.0% (0.0%~400.0%)	RUN
F03.18 (0x0312)	Frequency Hysteresis under Torque Limit	SVC Set the frequency hysteresis for torque limit at low speeds.	6.00Hz (0.00Hz~30.00Hz)	RUN
F03.19 (0x0313)	Torque Limit	SVC Ones-bit: Torque limit source during motoring 0: Keypad digits 1: Potentiometer (on optional external single-row keypad) 2: AS 3: VS 4~5: Reserved 6: RS485(0x3014) 7: Reserved Tens-bit: Torque limit source during generating 0: Keypad digits 1: Potentiometer (on optional external single-row keypad) 2: AS 3: VS 4~5: Reserved 6: RS485(0x3015) 7: Reserved Hundreds-bit: 0: C00.06 displays the torque limit during motoring 1: C00.06 displays the torque limit during generating Thousands-bit: Reserved	0x0000 (0x0000~0x0177)	RUN

F03.2x: Torque Optimization

Code (Address)	Name	Content	Default (Range)	Modification Mode
F03.20 (0x0314)	PM LF Drag Current	SVC When the SVC mode of the PM is on, the larger the drag current, the larger the torque output.	20.0% (0.0%~50.0%)	RUN
F03.21 (0x0315)	PM HF Drag Current	SVC When the SVC mode of the PM is on, the larger the drag current, the larger the torque output.	10.0% (0.0%~50.0%)	RUN

F03.22 (0x0316)	PM Drag Current Frequency	SVC The set value 100.0% corresponds to F01.10 [Max. Frequency]	10.0% (0.0%~100.0%)	RUN
F03.23 (0x0317)	Slip Compensation	SVC Set the slip compensation under AM vector control.	100.0% (0.0%~250.0%)	RUN
F03.24 (0x0318)	Initial Starting Torque	SVC Set the initial starting torque.	0.0% (0.0%~250.0%)	RUN

F03.3x: Flux Optimization

Code (Address)	Name	Content	Default (Range)	Modification Mode
F03.30 (0x031E)	Field-Weakening Feed-Forward Factor	SVC Set the field-weakening feedforward factor.	10.0% (0.0%~500.0%)	RUN
F03.31 (0x031F)	Field-weakening Gain	SVC Set the field-weakening control gain.	10.0% (0.0%~500.0%)	RUN
F03.32 (0x0320)	Field-Weakening Current Upper Limit	SVC Set the field-weakening current upper limit.	60.0% (0.0%~250.0%)	RUN
F03.33 (0x0321)	Field-Weakening Voltage Factor	SVC Set the field-weakening voltage factor.	90.0% (0.0%~120.0%)	RUN
F03.34 (0x0322)	Axis Output Power Limit	SVC Set the axis output power limit.	250.0% (0.0%~400.0%)	RUN
F03.35 (0x0323)	Over-excitation Brake Gain	SVC Set the over-excitation brake gain.	100.0% (0.0%~500.0%)	RUN
F03.36 (0x0324)	Over-excitation Brake Limit	SVC Set the over-excitation brake limit.	100.0% (0.0%~250.0%)	RUN
F03.37 (0x0325)	ECO Mode	SVC 0: OFF 1: ON	0 (0~1)	RUN
F03.38 (0x0326)	ECO Excitation Lower Limit	SVC Set the excitation lower limit during auto energy-saving operation.	50.0% (0.0%~80.0%)	RUN
F03.39 (0x0327)	ECO Filter Time	SVC Set the filter time during auto energy-saving operation.	0.010s (0.000s~6.000s)	RUN

F03.4x~F03.5x: Torque Control

Code (Address)	Name	Content		Default (Range)	Modification Mode
F03.40 (0x0328)	Torque Control Mode	SVC 0: Torque limited by speed control 1: Speed limited by torque control		0 (0~1)	RUN
F03.41 (0x0329)	Torque Command Source	SVC Ones-bit: Channel A: 0: Keypad digits 1: Potentiometer (on optional external single-row keypad) 2: AS 3: VS 4: Reserved 5: Reserved 6: RS485 7: Reserved 8: Reserved 9: Reserved	Tens-bit: Channel B: Like channel A Hundreds-bit: combination method 0: Source A 1: Source B 2: Source A + Source B 3: Source A – Source B 4: Min(A, B) 5: Max(A, B)	0000 (0000~0599)	RUN
F03.42 (0x032A)	Target Torque (Keypad)	SVC Set the specific torque values by this funcode.		0.0% (0.0%~100.0%)	RUN
F03.43 (0x032B)	Torque Input Lower Limit	SVC Set the torque input lower limit.		0.00% (0.00%~100.00%)	RUN
F03.44 (0x032C)	Torque Lower Limit Percent	SVC Set the corresponding percentage to the torque lower limit.		0.00% (-250.00%~300.00%)	RUN
F03.45 (0x032D)	Torque Input Upper Limit	SVC Set the torque input upper limit.		100.00% (0.00%~100.00%)	RUN
F03.46 (0x032E)	Torque Upper Limit Percentage	SVC Set the corresponding percentage to the torque upper limit.		100.00% (-250.00%~300.00%)	RUN
F03.47 (0x032F)	Torque Filter Time	SVC Set the torque filter time.		0.100s (0.000s~6.000s)	RUN

F03.52 (0x0334)	Torque Output Upper Limit	SVC Set the output torque upper limit under torque mode.	150.0% (0.0%~300.0%)	RUN
F03.53 (0x0335)	Torque Output Lower Limit	SVC Set the output torque lower limit under torque mode.	0.0% (0.0%~300.0%)	RUN
F03.54 (0x0336)	FWD Speed Limit	SVC 0: F03.56 setting 1: Potentiometer(external single-row keypad)× F03.56 2: AS × F03.56 3: VS × F03.56 4: Reserved 5: Reserved 6: RS485 × F03.56 7: Reserved 8: Reserved	0 (0~8)	RUN
F03.55 (0x0337)	REV Speed Limit	SVC 0: F03.57 setting 1: Potentiometer(external single-row keypad)× F03.57 2: AS × F03.57 3: VS × F03.57 4: Reserved 5: Reserved 6: RS485 × F03.57 7: Reserved 8: Reserved	0 (0~8)	RUN
F03.56 (0x0338)	Max. FWD Speed	SVC Set the max. forward speed under torque mode.	100.0% (0.0%~100.0%)	RUN
F03.57 (0x0339)	Max. REV Speed Limit	SVC Set the max. reverse speed under torque mode.	100.0% (0.0%~100.0%)	RUN
F03.58 (0x033A)	Torque Gain Shift Frequency	SVC Set the torque gain switching frequency.	1.00Hz (0.00Hz~50.00Hz)	RUN
F03.59 (0x033B)	Torque Gain	SVC Set the torque gain.	100.0% (0.0%~500.0%)	RUN

4.8 F04: V/F Control

F04.0x: V/F Control

Code (Address)	Name	Content	Default (Range)	Modification Mode
F04.00 (0x0400)	V/F Curve Type	V/F Set the type of V/F curve according to different load characteristics. 0: Linear 1~9: 1.1~1.9 power respectively 10: Square 11: Customized	0 (0~11)	STOP
F04.01 (0x0401)	Torque Boost	V/F 0.0%: Automatic torque boost 0.1%~30.0%: Manual torque boost	Up to model (0.0%~30.0%)	RUN
F04.02 (0x0402)	Torque Boost Cutoff Frequency	V/F Set the range of the torque boost function. It will be cut off when the output frequency exceeds this value.	100.0% (0.0%~100.0%)	RUN
F04.03 (0x0403)	Slip Compensation Gain	V/F Set the slip compensation gain.	0.0% (0.0%~200.0%)	RUN
F04.04 (0x0404)	Slip Compensation Limit	V/F Set the slip compensation limit.	100.0% (0.0%~300.0%)	RUN
F04.05 (0x0405)	Slip Compensation Filter Time	V/F Enter the parameters on the motor's nameplate correctly to implement parameter tuning for best performance.	0.200s (0.000s~6.000s)	RUN
F04.06 (0x0406)	Vibration Protection Gain	V/F Set this value to suppress low frequency resonance, but an excessively low value will cause instability.	100.0% (0.0%~900.0%)	RUN
F04.07 (0x0407)	Vibration Protection Filter Time	V/F Set the filter time for vibration protection.	1.0s (0.0s~100.0s)	RUN
F04.08 (0x0408)	Output Voltage Percentage	V/F Set the output voltage percentage.	100.0% (25.0%~120.0 %)	STOP

F04.1x: Customized V/F Curve

Code (Address)	Name	Content	Default (Range)	Modification Mode
F04.10 (0x040A)	Customized Voltage 1	V/F Set the customized voltage 1.	3.0% (0.0%~100.0%)	STOP

F04.11 (0x040B)	Customized Frequency 1	V/F Set the customized frequency 1.	1.00Hz (0.00Hz~ Max. freq)	STOP
F04.12 (0x040C)	Customized Voltage 2	V/F Set the customized voltage 2.	28.0% (0.0%~100.0%)	STOP
F04.13 (0x040D)	Customized Frequency 2	V/F Set the customized frequency 2.	10.00Hz (0.00Hz~ Max. freq)	STOP
F04.14 (0x040E)	Customized Voltage 3	V/F Set the customized voltage 3.	55.0% (0.0%~ 100.0%)	STOP
F04.15 (0x040F)	Customized Frequency 3	V/F Set the customized frequency 3.	25.00Hz (0.00Hz~ Max. freq)	STOP
F04.16 (0x0410)	Customized Voltage 4	V/F Set the customized voltage 4.	78.0% (0.0%~100.0%)	STOP
F04.17 (0x0411)	Customized Frequency 4	V/F Set the customized frequency 4.	37.50Hz (0.00Hz~ Max. freq)	STOP
F04.18 (0x0412)	Customized Voltage 5	V/F Set the customized voltage 5.	100.0% (0.0%~100.0%)	STOP
F04.19 (0x0413)	Customized Frequency 5	V/F Set the customized frequency 5.	50.00Hz (0.00Hz~ Max. freq)	STOP

F04.2x: Reserved

F04.3x: V/F ECO Mode

Code (Address)	Name	Content	Default (Range)	Modification Mode
F04.30 (0x041E)	ECO Control	V/F 0: OFF 1: ON	0 (0~1)	STOP
F04.31 (0x041F)	ECO Frequency Lower Limit	V/F Set the lower limit of the energy-saving frequency.	15.0Hz (0.0Hz~50.0Hz)	STOP
F04.32 (0x0420)	ECO Voltage Lower Limit	V/F Set the lower limit of the energy-saving voltage.	50.0% (20.0%~100.0%)	STOP
F04.33 (0x0421)	ECO Voltage Regulation Rate	V/F Set the voltage deceleration rate of the energy-saving voltage.	0.010V/ms (0.000V/ms~ 0.200V/ms)	RUN
F04.34 (0x0422)	ECO Voltage Recovery Rate	V/F Set the voltage acceleration rate of the energy-saving voltage.	0.200V/ms (0.010V/ms~ 0.200V/ms)	RUN

4.9 F05: Input Terminal

F05.0x: Digital Input Terminal

Code (Address)	Name	Content	Default (Range)	Modification Mode
F05.00 (0x0500)	X1 Function	V/F SVC Pos operation for example, see the functions of terminal X.	1 (0~95)	STOP
F05.01 (0x0501)	X2 Function	V/F SVC Coasting stop for example, see the functions of terminal X.	6 (0~95)	STOP
F05.02 (0x0502)	X3 Function	V/F SVC Error reset for example, see the functions of terminal X.	8 (0~95)	STOP

F05.1x: X1~X3 Detection Delay

Code (Address)	Name	Content	Default (Range)	Modification Mode
F05.10 (0x050A)	X1 ON Delay	V/F SVC Set the delay time for terminal X1 from OFF to ON.	0.010s (0.000s~6.000s)	RUN
F05.11 (0x050B)	X1 OFF Delay	V/F SVC Set the delay time for terminal X1 from ON to OFF.	0.010s (0.000s~6.000s)	RUN
F05.12 (0x050C)	X2 ON Delay	V/F SVC Set the delay time for terminal X2 from OFF to ON.	0.010s (0.000s~6.000s)	RUN
F05.13 (0x050D)	X2 OFF Delay	V/F SVC Set the delay time for terminal X2 from ON to OFF.	0.010s (0.000s~6.000s)	RUN
F05.14 (0x050E)	X3 ON Delay	V/F SVC Set the delay time for terminal X3 from OFF to ON.	0.010s (0.000s~6.000s)	RUN
F05.15 (0x050F)	X3 OFF Delay	V/F SVC Set the delay time for terminal X3 from ON to OFF.	0.010s (0.000s~6.000s)	RUN

F05.2x: DI Terminal Operation

Code (Address)	Name	Content	Default (Range)	Modification Mode
F05.20 (0x0514)	Terminal Operation Pattern	V/F SVC 0: Two-wire 1 1: Two-wire 2 2: Three-wire 1 3: Three-wire 2	0 (0~3)	STOP

F05.22 (0x0516)	X1~X3 Terminal Characteristics	V/F SVC 0: Valid when closed 1: Valid when open Ones-bit: X1 terminal Tens-bit: X2 terminal Hundreds-bit: X3 terminal Thousands-bit: Reserved	0000 (0000~1111)	RUN
F05.25 (0x0519)	Terminal UP/DW Frequency Regulation Mode	V/F SVC 0: Power-down save ON 1: Power-down save OFF 2: Modifiable during operation, cleared after shutdown	0 (0~2)	STOP
F05.26 (0x051A)	Terminal UP/DW ACC/DEC Rate	V/F SVC Set the frequency regulation rate by the UP/DW terminal.	0.50Hz/s (0.01Hz/s~50.00Hz/s)	RUN
F05.27 (0x051B)	Emergency Stop DEC Time	V/F SVC Set the deceleration time once emergency stop command is given via the terminals.	1.00s (0.01s~650.00s)	RUN

F05.3x: Reserved

F05.4x: Analog Processing

Code (Address)	Name	Content		Default (Range)	Modification Mode
F05.43 (0x052B)	AI Curve	V/F SVC 0: Straight curve (default) 1: Curve 1 2: Curve 2	Ones-bit: AS Tens-bit: VS Hundreds-bit: Reserved Thousands-bit: Reserved	0000 (0000~2222)	RUN

F05.5x: Analog Linear Processing

Code (Address)	Name	Content	Default (Range)	Modification Mode
F05.50 (0x0532)	AS Lower Limit	V/F SVC Set the signal received by the terminal. The drive will process as the lower limit if the voltage signal is below this value.	0.0% (0.0%~100.0%)	RUN
F05.51 (0x0533)	AS Lower Limit Percentage	V/F SVC Set the percentage of the upper limit value of AS.	0.00% (-100.00%~100.00%)	RUN
F05.52 (0x0534)	AS Upper Limit	V/F SVC Set the signal received by the terminal. The drive will process as the upper limit if the voltage signal is above this value.	100.0% (0.0%~100.0%)	RUN

F05.53 (0x0535)	AS Upper Limit Percentage	V/F SVC Set the percentage of the upper limit value of AS.	100.00% (0.00%~100.00%)	RUN
F05.54 (0x0536)	AS Filter Time	V/F SVC Set the size of the filter applied to the analog signal to remove interfering signals.	0.100s (0.000s~6.000s)	RUN
F05.55 (0x0537)	VS Lower Limit	V/F SVC Set the signal received by the terminal. The drive will process as the lower limit if the voltage signal is below this value.	0.0% (0.0%~100.0%)	RUN
F05.56 (0x0538)	VS Lower Limit Percentage	V/F SVC Set the percentage of the upper limit value of VS.	0.00% (-100.00%~ 100.00%)	RUN
F05.57 (0x0539)	VS Upper Limit	V/F SVC Set the signal received by the terminal. The drive will process as the upper limit if the voltage signal is above this value.	100.0% (0.0%~100.0%)	RUN
F05.58 (0x053A)	VS Upper Limit Percentage	V/F SVC Set the percentage of the upper limit value of VS.	100.00% (0.00%~100.00%)	RUN
F05.59 (0x053B)	VS Filter Time	V/F SVC Set the size of the filter applied to the VS analog signal to remove interfering signals.	0.100s (0.000s~6.000s)	RUN

F05.6x: Analog Curve 1

Code (Address)	Name	Content	Default (Range)	Modification Mode
F05.60 (0x053C)	Curve 1 Lower Limit	V/F SVC Set the lower limit for Curve 1.	0.0% (0.0%~100.0%)	RUN
F05.61 (0x053D)	Curve 1 Lower Limit Percentage	V/F SVC Set the percentage of F05.60.	0.00% (-100.00%~ 100.00%)	RUN
F05.62 (0x053E)	Curve 1 Inflection Point 1	V/F SVC Set the voltage at the Curve 1 inflection point 1.	30.0% (0.0%~100.0%)	RUN
F05.63 (0x053F)	Inflection Point 1 Percentage	V/F SVC Set the percentage of F05.62.	30.00% (-100.00%~ 100.00%)	RUN
F05.64 (0x0540)	Curve 1 Inflection Point 2	V/F SVC Set the voltage for Curve 2 inflection point 2.	60.0% (0.0%~100.0%)	RUN

F05.65 (0x0541)	Curve 1 Inflection Point 2 Percentage	V/F SVC Set the percentage of F05.64.	60.00% (-100.00%~ 100.00%)	RUN
F05.66 (0x0542)	Curve 1 Upper Limit	V/F SVC Set the upper limit for Curve 1.	100.0% (0.0%~100.0%)	RUN
F05.67 (0x0543)	Curve 1 Upper Limit Percentage	V/F SVC Set the percentage of F05.62.	100.00% (-100.00%~ 100.00%)	RUN

F05.7x: Analog Curve 2

Code (Address)	Name	Content	Default (Range)	Modification Mode
F05.70 (0x0546)	Curve 2 Lower Limit	V/F SVC Set the lower limit for Curve 2.	0.0% (0.0%~100.0%)	RUN
F05.71 (0x0547)	Curve 2 Lower Limit Percentage	V/F SVC Set the percentage of F05.70.	0.00% (-100.00%~ 100.00%)	RUN
F05.72 (0x0548)	Curve 2 Inflection Point 1	V/F SVC Set Curve 2 inflection point 2 input voltage.	30.0% (0.0%~100.0%)	RUN
F05.73 (0x0549)	Curve 2 Inflection Point 1 Percentage	V/F SVC Set the percentage of F05.72.	30.00% (-100.00%~ 100.00%)	RUN
F05.74 (0x054A)	Curve 2 Inflection Point 2	V/F SVC Set the voltage at the Curve 2 inflection point 2.	60.0% (0.0%~100.0%)	RUN
F05.75 (0x054B)	Curve 2 Inflection Point 2 Percentage	V/F SVC Set the percentage of F05.74.	60.00% (-100.00%~ 100.00%)	RUN
F05.76 (0x054C)	Curve 2 Upper Limit	V/F SVC Set the upper limit for Curve 2.	100.0% (0.0%~100.0%)	RUN
F05.77 (0x054D)	Curve 2 Upper Limit Percentage	V/F SVC Set the percentage of F05.76.	100.00% (-100.00%~ 100.00%)	RUN

F05.8x: AS/VS as DI Terminal

Code (Address)	Name	Content	Default (Range)	Modification Mode

F05.80 (0x0550)	VS as DI Terminal	V/F SVC 0: Valid at low level 1: Valid at high level	Ones-bit: AS Tens-bit: VS Hundreds-bit: Reserved Thousands-bit: Reserved	0000 (0000~1111)	RUN
F05.81 (0x0551)	AS as DI Terminal	V/F SVC See X terminal functions.		0 (0~95)	STOP
F05.82 (0x0552)	AS High Level	V/F SVC Any value beyond this setting is considered as high level.		70.00% (0.00%~100.00%)	RUN
F05.83 (0x0553)	AS Low Level	V/F SVC Any value below this setting is considered as low level.		30.00% (0.00%~100.00%)	RUN
F05.84 (0x0554)	VS as DI Terminal Function	V/F SVC See X terminal functions.		0 (0~95)	STOP
F05.85 (0x0555)	VS High Level	V/F SVC Any value beyond this setting is considered as high level.		70.00% (0.00%~100.00%)	RUN
F05.86 (0x0556)	VS Low Level	V/F SVC Any value below this setting is considered as low level.		30.00% (0.00%~100.00%)	RUN

4.10 F06: Output Terminal

F06.0x: Reserved

F06.1x: Reserved

F06.2x~F06.3x: DO and RO

Code (Address)	Name	Content		Default (Range)	Modification Mode
F06.20 (0x0614)	Output Terminal Polarity	V/F SVC 0: Forward 1: Reverse	Ones-bit: Y terminal Tens-bit: RO terminal Hundreds-bit: Reserved Thousands-bit: Reserved	0000 (0000~1111)	RUN
F06.21 (0x0615)	Y Terminal Function	V/F SVC See terminal Y functions.		1 (0~63)	RUN
F06.22 (0x0616)	Relay Function	V/F SVC See terminal Y functions.		4 (0~63)	RUN
F06.25 (0x0619)	Y Terminal ON Delay	V/F SVC Set the delay time when Y terminal is switched on.		0.010s (0.000s~60.000s)	RUN

F06.26 (0x061A)	Relay Terminal ON Delay	V/F SVC Set the delay time when the relay terminal is switched on.	0.010s (0.000s~60.000s)	RUN
F06.29 (0x061D)	Y Terminal OFF Delay	V/F SVC Set the delay time when Y terminal is switched off.	0.010s (0.000s~60.000s)	RUN
F06.30 (0x061E)	Relay Terminal OFF Delay	V/F SVC Set the delay time when relay terminal is switched off.	0.010s (0.000s~60.000s)	RUN

F06.4x: Frequency Detection

Code (Address)	Name	Content	Default (Range)	Modification Mode
F06.40 (0x0628)	Frequency Detection Level 1	V/F SVC Set the frequency detection threshold 1.	2.00Hz (0.00Hz~ Max. freq)	RUN
F06.41 (0x0629)	Frequency Detection Range 1	V/F SVC Set the frequency detection range 1.	1.00Hz (0.00Hz~ Max. freq)	RUN
F06.42 (0x062A)	Frequency Detection Level 2	V/F SVC Set the frequency detection threshold 2.	2.00Hz (0.00Hz~ Max. freq)	RUN
F06.43 (0x062B)	Frequency Detection Range 2	V/F SVC Set the frequency detection range 2.	1.00Hz (0.00Hz~ Max. freq)	RUN
F06.44 (0x062C)	Frequency Completion Range	V/F SVC Set the detection range of the given frequency to check if the target is reached.	2.00Hz (0.00Hz~ Max. freq)	RUN

F06.5x: Monitoring Parameter Comparator

Code (Address)	Name	Content	Default (Range)	Modification Mode
F06.50 (0x0632)	Comparator 1 Item	V/F SVC Ones- and tens-bit: Set 00~63 to yy in monitor parameter in Cxx.yy Hundreds and thousands-bit: Set 00~07 to xx in monitor parameter Cxx.yy	0001 (0000~0763)	RUN
F06.51 (0x0633)	Comparator 1 Upper Limit	V/F SVC Set the comparator 1 upper limit.	(up to F06.50)	RUN
F06.52 (0x0634)	Comparator 1 Lower Limit	V/F SVC Set the comparator 1 lower limit.	(up to F06.50)	RUN
F06.53 (0x0635)	Comparator 1 Offset	V/F SVC Set the comparator 1 offset value.	(up to F06.50)	RUN

F06.54 (0x0636)	Comparator 1 Fault Mode	V/F SVC 0: Continue operation (DO terminal only) 1: Report error and coasting stop 2: Report alarm and continue operation 3: Forced stop	0 (0~3)	RUN
F06.55 (0x0637)	Comparator 2 Item	V/F SVC Ones- and tens-bit: Set 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set 00~07 to xx in Cxx.yy.	0002 (0000~0763)	RUN
F06.56 (0x0638)	Comparator 2 Upper Limit	V/F SVC Set the comparator 2 upper limit.	(up to F06.55)	RUN
F06.57 (0x0639)	Comparator 2 Lower Limit	V/F SVC Set the comparator 2 lower limit.	(up to F06.55)	RUN
F06.58 (0x063A)	Comparator 2 Offset	V/F SVC Set comparator 2 bias.	(up to F06.55)	RUN
F06.59 (0x063B)	Comparator 2 Fault Mode	V/F SVC 0: Continue operation (DO terminal only) 1: Report error and coasting stop 2: Report alarm and continue operation 3: Forced stop	0 (0~3)	RUN

F06.6x~F06.7x: Virtual I/O Terminal

Code (Address)	Name	Content		Default (Range)	Modification Mode
F06.60 (0x063C) ~ F06.63 (0x063F)	vX1~vX4 Function	V/F SVC See terminal X functions.		0 (0~95)	STOP
F06.64 (0x0640)	vX Source	V/F SVC 0: By internal connection with vYn terminal 1: By physical connection with Xn terminal 2: By function code setting	Ones-bit: vX1 Tens-bit: vX2 Hundreds-bit: vX3 Thousands-bit: vX4	0000 (0000~0222)	RUN
F06.65 (0x0641)	vX ON/OFF	V/F SVC 0: OFF 1: ON	Ones-bit: vX1 Tens-bit: vX2 Hundreds-bit: vX3 Thousands-bit: vX4	0000 (0000~0111)	RUN

F06.66 (0x0642) ~ F06.69 (0x0645)	vY1~vY4 Function	V/F SVC See the Y terminal functions.	0 (0~63)	RUN
F06.70 (0x0646) ~ F06.73 (0x0649)	vY1~vY4 ON Delay	V/F SVC Set the delay time from OFF to ON of vY1~vY4.	0.010s (0.000s~60.000s)	RUN
F06.74 (0x064A) ~ F06.77 (0x064D)	vY1~ vY4 OFF Delay	V/F SVC Set the delay time from ON to OFF of vY1~ vY4.	0.010s (0.000s~60.000s)	RUN

4.11 F07: Operation Control

F07.0x: Start Control

Code (Address)	Name	Content	Default (Range)	Modification Mode
F07.00 (0x0700)	Start Mode	V/F SVC 0: Start at starting frequency 1: Start from DC braking and then at starting frequency 2: Start from fly track and direction identification	0 (0~2)	STOP
F07.01 (0x0701)	Pre-excitation Start Time	V/F SVC It is only valid under AM-SVC.	0.00s (0.00s~60.00s)	STOP
F07.02 (0x0702)	Starting Frequency	V/F SVC The drive will not start but stay in standby when the target frequency is lower than this setting.	0.00Hz (0.00Hz~ F01.12)	STOP

F07.03 (0x0703)	Starting Protection	V/F SVC 0: OFF 1: ON Ones-bit: ON when terminals under abnormal exit Tens-bit: ON when jogging terminals under abnormal exit Hundreds-bit: ON when command source switching o terminal Thousands-bit: Reserved Note: The terminal protection is enabled by default when coasting stop, emergency stop or forced stop command is valid, report A. runx during protection.		0111 (0000~1111)	STOP
F07.05 (0x0705)	Motor Direction	V/F SVC Ones-bit: Direction inversion 0: OFF 1: ON Tens-bit: Operation direction 0: FWD/REV 1: FWD only 2: REV only Hundreds-bit: Frequency-based direction control 0: OFF 1: ON Thousands-bit: Reserved Note: This value will not be reset during initialization; And the ones-bit value will not be changed after parameter download.		0000 (0000~1121)	STOP
F07.06 (0x0706)	Power-down Restart	V/F SVC 0: OFF 1: Fly track 2: Start as starting mode setting		0 (0~2)	STOP
F07.07 (0x0707)	Power-down Restart Delay	V/F SVC Set the delay time for restart after power failure.		0.50s (0.00s~60.00s)	STOP

F07.1x: Stop Control

Code (Address)	Name	Content	Default (Range)	Modification Mode
F07.10 (0x070A)	Stop Mode	V/F SVC 0: Deceleration stop 1: Coasting stop	0 (0~1)	RUN
F07.11 (0x070B)	Stopping Frequency	V/F SVC In deceleration stop mode, the drive will stop if the output frequency is lower than this setting.	0.50Hz (0.00Hz~F01.12)	RUN

F07.12 (0x070C)	Stop-Restart Delay	V/F SVC Set the delay time to restart after shutdown.	0.000s (0.000s~60.000s)	STOP
F07.15 (0x070F)	Underfrequency Work Mode	V/F SVC 0: Run at target frequency 1: Coasting stop 2: Run at lower limit frequency 3: Run at zero speed	2 (0~3)	RUN
F07.16 (0x0710)	Zero-speed Torque Hold Current	V/F SVC Set the zero-speed torque current where 100.0% corresponds to the drive's rated current.	60.0% (0.0%~150.0%)	RUN
F07.17 (0x0711)	Zero-speed Torque Hold Time	V/F SVC Set the zero-speed torque holding time.	0.0s (0.0s~6000.0s)	RUN
F07.18 (0x0712)	FWD/REV Dead Time	V/F SVC Set the zero-frequency holding time during FWD/REV switching.	0.0s (0.0s~120.0s)	STOP

F07.2x: DC Brake and Fly Track

Code (Address)	Name	Content	Default (Range)	Modification Mode
F07.20 (0x0714)	Starting DC Braking Current	V/F SVC Its reference is the rated current of the motor, and the internal limit does not exceed the rated drive current.	60.0% (0.0%~150.0%)	STOP
F07.21 (0x0715)	Starting DC braking time	V/F SVC Set the duration of startup DC braking.	0.0s (0.0s~60.0s)	STOP
F07.22 (0x0716)	Stopping DC Braking Frequency	V/F SVC Set the threshold for entering the stopping DC brake.	1.00Hz (0.00Hz~50.00Hz)	STOP
F07.23 (0x0717)	Stopping DC Braking Current	V/F SVC Its reference is the rated current of the motor, and the internal limit does not exceed the rated drive current.	60.0% (0.0%~150.0%)	STOP
F07.24 (0x0718)	Stopping DC Braking Time	V/F SVC Set the time for the stopping DC braking to be held.	0.0s (0.0s~60.0s)	STOP

F07.25 (0x0719)	Fly Track	V/F SVC Ones-bit: Search mode 0: Search from max. frequency 1: Search from stopping frequency Tens-bit: Reverse search 0: OFF	1: ON Hundreds-bit: Search source 0: Software 1: Hardware Thousands-bit : Reserved	0000 (0000~1111)	STOP
F07.26 (0x071A)	Fly Track Time	V/F SVC Set the running speed track time.		0.50s (0.00s~60.00s)	STOP
F07.27 (0x071B)	Fly Track Stop Delay	V/F SVC Set the speed tracking stop delay.		1.00s (0.00s~60.00s)	STOP
F07.28 (0x071C)	Fly Track Current	V/F SVC Set the speed tracking current.		120.0% (0.0%~400.0%)	STOP

F07.3x: Jog

Code (Address)	Name	Content	Default (Range)	Modification Mode
F07.30 (0x071E)	Jog Frequency	V/F SVC Set the jogging frequency.	5.00Hz (0.00Hz~ Max. freq)	RUN
F07.31 (0x071F)	Jog ACC Time	V/F SVC Set the jogging acceleration time.	10.00s (0.00s~650.00s)	RUN
F07.32 (0x0720)	Jog DEC Time	V/F SVC Set the jogging deceleration time.	10.00s (0.00s~650.00s)	RUN
F07.33 (0x0721)	Jog S-curve	V/F SVC Set the S-curve for jogging. 0: OFF 1: ON	1 (0~1)	RUN
F07.34 (0x0722)	Jog Stop Mode	V/F SVC Set the jogging stop mode. 0: F07.10[Stop Mode] setting 1: Deceleration stop only	0 (0~1)	RUN

F07.4x: Start/Stop Hold and Jump Frequency

Code (Address)	Name	Content	Default (Range)	Modification Mode
F07.40 (0x0728)	Starting Hold Frequency	V/F SVC It is higher than the starting frequency and lower than the upper limit frequency set from the keypad.	0.50Hz (0.00Hz~F01.12)	STOP
F07.41 (0x0729)	Starting Hold Frequency Time	V/F SVC This setting should be greater than the starting frequency, and if it is lower, the drive will start at starting frequency.	0.00s (0.00s~60.00s)	STOP

F07.42 (0x072A)	Stopping Hold Frequency	V/F SVC Set the hold frequency during stopping.	0.50Hz (0.00Hz~F01.12)	STOP
F07.43 (0x072B)	Stopping Hold Frequency Time	V/F SVC Set the stop hold frequency time.	0.00s (0.00s~60.00s)	STOP
F07.44 (0x072C)	Jump Frequency 1	V/F SVC Set the jump frequency 1.	0.00Hz (0.00Hz~ Max. freq)	RUN
F07.45 (0x072D)	Jump Frequency Range 1	V/F SVC Set the range 1 for jump frequency.	0.00Hz (0.00Hz~ Max. freq)	RUN
F07.46 (0x072E)	Jump Frequency 2	V/F SVC Set the jump frequency 2.	0.00Hz (0.00Hz~ Max. freq)	RUN
F07.47 (0x072F)	Jump Frequency Range 2	V/F SVC Set the range 2 for jumping frequency.	0.00Hz (0.00Hz~ Max. freq)	RUN

4.12 F08: Auxiliary Control

F08.0x: Counting and Timing

Code (Address)	Name	Content		Default (Range)	Modification Mode
F08.00 (0x0800)	Counter Source	V/F SVC 0: X terminal	1: Reserved 2: Reserved	0 (0~2)	RUN
F08.01 (0x0801)	Counter Divider	V/F SVC Set the counter divider.		0 (0~6000)	RUN
F08.02 (0x0802)	Max. Counting	V/F SVC Set the max. value of counter.		1000 (0~65000)	RUN
F08.03 (0x0803)	Counter Target	V/F SVC Set the counter target value.		500 (0~65000)	RUN
F08.04 (0x0804)	Pulse/m	V/F SVC Set the counting value per meter.		10.0 (0.1~6553.5)	RUN
F08.05 (0x0805)	Length	V/F SVC Increase the length trigger output, while reset when one terminal length is reached.		1000m (0m~65535m)	STOP
F08.06 (0x0806)	Actual Length	V/F SVC Set the actual length which is not saved during power cut.		0m (0m~65535m)	STOP
F08.07 (0x0807)	Timer Unit	V/F SVC 0: Second	1: Minute 2: Hour	0 (0~2)	STOP
F08.08 (0x0808)	Timer Target	V/F SVC Set the target value of the timer.		0 (0~65000)	STOP

F08.1x~F08.2x: Reserved

F08.3x: Swing Frequency

Code (Address)	Name	Content		Default (Range)	Modification Mode
F08.30 (0x081E)	Swing Frequency Control	V/F SVC 0: OFF 1: ON		0 (0~1)	STOP
F08.31 (0x081F)	Swing Frequency Range	V/F SVC Ones-bit: Enable mode 0: Auto 1: Manual via terminal Tens-bit: Swing frequency range 0: Center frequency-based	1: Max. frequency-based Hundreds-bit: Preset frequency enable 0: OFF 1: ON Thousands-bit: Reserved	0000 (0000~0111)	STOP
F08.32 (0x0820)	Swing Frequency	V/F SVC Set the swing frequency.		0.00Hz (0.00Hz~ Max. freq)	STOP
F08.33 (0x0821)	Swing Interval Time	V/F SVC Set the swing frequency interval time.		0.0s (0.0s~3600.0s)	STOP
F08.34 (0x0822)	Swing Frequency Range	V/F SVC Set the swing frequency range.		10.0% (0.0%~50.0%)	STOP
F08.35 (0x0823)	Kick Frequency	V/F SVC Set the kick frequency.		10.0% (0.0%~50.0%)	STOP
F08.36 (0x0824)	Triangular Wave Rise Time	V/F SVC Set the triangular wave rise time.		5.00s (0.00s~650.00s)	STOP
F08.37 (0x0825)	Triangular Wave Drop Time	V/F SVC Set the triangular wave drop time.		5.00s (0.00s~650.00s)	STOP

4.13 F09: Auxiliary Control 2

F09.0x: Maintenance

Code (Address)	Name	Content	Default (Range)	Modification Mode
F09.02 (0x0902)	Maintenance Error Enable	V/F SVC Ones-bit: Cooling fan 0: OFF 1: ON Tens-bit: Main relay 0: OFF 1: ON Hundreds-bit: Reserved Thousands-bit: Reserved	0x0000 (0x0000~0x1111)	RUN

F09.03 (0x0903)	Fan Lifespan	V/F SVC Set it to 0 when replacing with a new fan, unit in hour.	0 (0~65535)	STOP
F09.04 (0x0904)	Main Relay Lifespan	V/F SVC Set it to 0.0% when replacing with a new relay.	0.0% (0.0%~150.0%)	STOP

4.14 F10: Protection Parameters

F10.0x: Current Protection

Code (Address)	Name	Content	Default (Range)	Modification Mode
F10.00 (0x0A00)	Overcurrent Protection Enable	V/F SVC Set to automatically limit the current below F10.01[Overcurrent Protection Level] to prevent overcurrent error. 0: ON 1: ON during acceleration and deceleration and OFF during constant operation	0 (0~1)	RUN
F10.01 (0x0A01)	Overcurrent Protection Level	V/F SVC Set the current protection level, which is 100% of the drive rated current.	160.0% (0.0%~300.0%)	RUN
F10.02 (0x0A02)	Overcurrent Protection Gain	V/F SVC Set the response effect of overcurrent protection function.	100.0% (0.0%~500.0%)	RUN
F10.03 (0x0A03)	Current Protection 1 Enable	V/F SVC Set the current protection on/off. Ones-bit: CBC 0: OFF 1: ON Tens-bit: OC protection interference protection 0: OFF 1: L1 2: L2 Hundreds-bit: SC protection interference protection 0: OFF 1: L1 2: L2 Thousands-bit: Reserved	0001 (0000~F221)	STOP

F10.04 (0x0A04)	Current Protection 2 Enable	V/F SVC Ones-bit: Three-phase current sum protection 0: OFF 1: ON Tens-bit: Three-phase current imbalance protection 0: OFF 1: ON	0001 (0000~0011)	STOP
F10.05 (0x0A05)	Current Imbalance Level	V/F SVC Compare the ratio of the largest to the smallest phase of the three with the setting here to judge current imbalance.	160% (0%~500%)	STOP
F10.06 (0x0A06)	Current Imbalance Filter Time	V/F SVC Increase this parameter under high current fluctuation.	2.0 (0.0~60.0)	STOP

F10.1x: Voltage Protection

Code (Address)	Name	Content	Default (Range)	Modification Mode
F10.11 (0x0A0B)	Overvoltage Protection Enable	V/F SVC If the bus voltage is higher than the overvoltage protection point, acceleration and deceleration will be slowed down or canceled to prevent overvoltage faults. Ones-bit: Overvoltage protection function 0: OFF 1: ON Tens-bit: Overexcitation function 0: OFF 1: ON during deceleration 2: ON during operation	0011 (0000~0021)	STOP
F10.12 (0x0A0C)	Overvoltage Protection Level	V/F SVC Set the bus voltage value to trigger the overvoltage protection. Note: T3 overvoltage level: 820V(750V~820V) S2 overvoltage point: 400V(360V~360V)	T3: 750V S2: 370V (0V~Overvoltage level) Simultaneously limited by overvoltage points.	STOP
F10.13 (0x0A0D)	Overvoltage Protection Gain	V/F SVC Set the response effect of overvoltage protection function.	100.0% (0.0%~500.0%)	RUN

F10.14 (0x0A0E)	Dynamic Brake Enable	V/F SVC Set the dynamic brake on or off. 0: OFF 1: ON, with overvoltage protection off 2: ON, with overvoltage protection on	2 (0~2)	RUN
F10.15 (0x0A0F)	Dynamic Brake Voltage	V/F SVC Set the dynamic brake voltage to start when the bus voltage is higher than this value. Note: T3 overvoltage level: 820V(750V~820V) S2 overvoltage point: 400V(360V~360V)	T3: 740V S2: 360V (0V~Overvoltage level) Simultaneously limited by overvoltage points.	RUN
F10.16 (0x0A10)	Undervoltage Protection Enable	V/F SVC Auto adjust the operation frequency when the bus voltage is lower than the undervoltage protection point to prevent undervoltage error. 0: OFF 1: ON	0 (0~1)	STOP
F10.17 (0x0A11)	Undervoltage Protection Level	V/F SVC Set the bus voltage value to trigger the undervoltage protection function. Note: T3 overvoltage level: 820V(750V~820V) S2 overvoltage point: 400V(360V~360V)	T3: 430V S2: 240V (0V~Overvoltage level) Simultaneously limited by overvoltage points.	STOP
F10.18 (0x0A12)	Undervoltage Protection Gain	V/F SVC Set the response effect of undervoltage protection.	100.0% (0.0%~500.0%)	RUN
F10.19 (0x0A13)	Undervoltage Protection Level	V/F SVC Set the lower limit voltage of the busbar voltage allowed, report undervoltage error when below this value. Note: T3 overvoltage level: 820V(750V~820V) S2 overvoltage point: 400V(360V~360V)	T3: 320V S2: 190V (0V~Overvoltage level) Simultaneously limited by overvoltage points.	STOP

F10.2x: Auxiliary Protection

Code (Address)	Name	Content	Default (Range)	Modification Mode

F10.20 (0x0A14)	I/O Phase Loss Protection Enable	V/F SVC Set the I/O phase loss protection function on or off. Ones-bit: Output phase loss protection 0: OFF 1: ON Tens-bit: Input phase loss protection 0: OFF 1: ON, report A.iLF and continue operation 2: ON, report E.iLF and coasting stop Hundreds-bit: Reserved Thousands-bit: Reserved	0021 (0000~1121)	STOP
F10.21 (0x0A15)	Input Phase Loss Level	V/F SVC Set the voltage detection percentage for the input phase loss detection, 100% of the rated bus voltage.	20.0% (0.0%~30.0%)	STOP
F10.22 (0x0A16)	Ground Short Circuit Protection	V/F SVC Set the drive output and fan to ground short circuit protection on/off. Ones-bit: Output to ground short circuit protection 0: OFF 1: ON Tens-bit: Reserved Hundreds-bit: Reserved Thousands-bit: Reserved	0001 (0000~0001)	STOP
F10.23 (0x0A17)	Fan Enable	V/F SVC Set the drive fan operation mode. 0: ON after the drive is powered up 1: ON with the drive, temperature-related 2: ON for the set time on F10.24 and OFF, temperature-related	1 (0~2)	RUN
F10.24 (0x0A18)	Fan Delay	V/F SVC Set the delay time from fan stop command to actual fan shutdown.	30.00s (0.00s~600.00s)	STOP
F10.25 (0x0A19)	Drive Overheat Error Level	V/F SVC Set the value for overheat error.	80.0℃ (0.0℃~100.0℃)	RUN

F10.3x: Load Protection

Code (Address)	Name	Content	Default (Range)	Modification Mode

F10.32 (0x0A20)	Load Fault Mode	V/F SVC Set the drive load detection mode and the fault mode. Ones-bit: Load detection mode 1 0: OFF 1: Detect overload 2: Detect overload only during constant operation 3: Detect underload 4: Detect underload only during constant operation Tens-bit: Load fault mode 1 0: Report A. LD1 and continue operation 1: Report E. LD1 and coasting stop Hundreds-bit: Load detection mode 2 0: OFF 1: Detect overload 2: Detect overload only during constant operation 3: Detect underload 4: Detect underload only during constant operation Thousands-bit: Load fault mode 2 0: Report A. LD2 and continue operation 1: Report E. LD2 and coasting stop	0000 (0000~1414)	STOP
F10.33 (0x0A21)	Load Fault Level 1	V/F SVC Set the load fault value 1 for detection. For V/F control, it is 100% of the rated motor current. And for vector control, it is 100% of the motor rated output torque.	130.0% (0.0%~200.0%)	STOP
F10.34 (0x0A22)	Load Fault Time 1	V/F SVC Set the detection duration 1 for load fault prompt if the load is higher than the load fault level.	5.0s (0.0s~60.0s)	STOP
F10.35 (0x0A23)	Load Fault Level 2	V/F SVC Set the load fault value 2 for detection. For V/F control, it is 100% of the rated motor current. And for vector control, it is 100% of the motor rated output torque.	30.0% (0.0%~200.0%)	STOP
F10.36 (0x0A24)	Load Fault Time 2	V/F SVC Set the detection duration 2 for load prompt if the load is higher than the load fault level.	5.0s (0.0s~60.0s)	STOP

F10.4x: Stall Protection

Code (Address)	Name	Content	Default (Range)	Modification Mode
F10.40 (0x0A28)	Speed Deviation Detection and Fault Mode	V/F SVC Set the detection mode and fault mode of deviation between the motor's target speed and the feedback speed. Ones-bit: Detection mode 0: OFF 1: ON only during constant operation 2: ON Tens-bit: Fault mode 0: Report error and coasting stop 1: Report alarm and continue operation	0000 (0000~0012)	STOP
F10.41 (0x0A29)	Speed Deviation Fault Level	V/F SVC Set the detection value for excessive speed deviation, 100% of F01.10 [Max. Frequency].	10.0% (0.0%~60.0%)	STOP
F10.42 (0x0A2A)	Speed Deviation Fault Time	V/F SVC Set the detection duration for speed deviation fault prompt if the speed deviation is higher than the fault level.	2.0s (0.0s~60.0s)	STOP
F10.43 (0x0A2B)	Stall Detection Mode and Fault Mode	V/F SVC Set the detection mode and fault mode of stall. Ones-bit: Detection mode 0: OFF 1: ON only during constant operation 2: ON Tens-bit: Fault mode 0: Report error and coasting stop 1: Report alarm and continue operation	0002 (0000~0012)	STOP
F10.44 (0x0A2C)	Stall Fault Level	V/F SVC Set the value of the stall alarm, 100% of F01.10 [Max. Frequency].	110.0% (0.0%~150.0%)	STOP
F10.45 (0x0A2D)	Stall Fault Time	V/F SVC Set the detection duration for stall alarm if it is higher than the alarm level for the set time here.	0.100s (0.000s~2.000s)	STOP

F10.5x: Error Reset and Motor Overload

Code (Address)	Name	Content	Default (Range)	Modification Mode

F10.50 (0x0A32)	Error Reset No.	V/F SVC Set the number of times allowed to perform auto error reset. Note: 0 indicates that the auto error reset function is disabled; otherwise, it is enabled.	0 (0~10)	STOP
F10.51 (0x0A33)	Error Reset Delay	V/F SVC Set the waiting time from error occurrence to error reset.	1.0s (0.0s~100.0s)	STOP
F10.52 (0x0A34)	Performed Error Reset No.	V/F SVC It indicate the times of already performed auto error reset, read-only.	0	READ
F10.55 (0x0A37)	Motor Overload Model	V/F SVC 0: Common motor 1: Variable frequency motor (50Hz) 2: Variable frequency motor (60Hz) 3: Motor without cooling fan	0 (0~3)	RUN
F10.56 (0x0A38)	Motor Insulation Class	V/F SVC 0: Class A 1: Class E 2: Class B 3: Class F 4: Class H 5: Special class S	3 (0~5)	STOP
F10.57 (0x0A39)	Motor Work Pattern	V/F SVC 0-1: S1 (continuous operation) 2: S2 3-9: S3~S9	0 (0~9)	STOP
F10.58 (0x0A3A)	Motor Overload Accumulation Level	V/F SVC Set the motor overload threshold beyond which the drive starts to accumulate the overload quantity.	105.0% (0.0%~130.0%)	STOP
F10.59 (0x0A3B)	Motor Overload Current Factor	V/F SVC Motor overload current = actual current * motor overload current coefficient	100.0% (0.0%~250.0%)	STOP

4.15 F11: Keypad Parameters

F11.0x: Keypad Operation

Code (Address)	Name	Content	Default (Range)	Modification Mode
F11.00 (0x0B00)	Key Lock	V/F SVC 0: OFF 1: Function parameter modification key locked 2: Function parameter and non-start/stop key locked 3: All locked	0 (0~3)	RUN

F11.01 (0x0B01)	Key Lock Password	V/F SVC Set to unlock the keys, please remember the password, otherwise the keys will remain locked.	0 (0~65535)	RUN
F11.02 (0x0B02)	Multi-function Key	V/F SVC 0: OFF 1: REV operation 2: FWD jogging 3: REV jogging 4: Command source shift between keypad and terminal 5: Command source shift between keypad and communication 6: Command source shift between terminal and communication 7: Command source shift among keypad, terminal and communication cyclically	0 (0~7)	STOP
F11.03 (0x0B03)	STOP Key	V/F SVC 0: Non-keypad stop control OFF 1: Non-keypad stop works as stop mode 2: Non-keypad stop works as coasting stop	0 (0~2)	STOP
F11.04 (0x0B04)	UP/DW Key (Knob)	V/F SVC Ones-bit: UP/DW modification 0: OFF 1: ON for F01.09 [Target Frequency] 2: ON for F13.01[PID Target/Feedback(Keypad)] 3: ON for funcode Tens-bit: Power-down save 0: OFF 1:ON Hundreds-bit: Modification status 0: Modifiable in operation and shutdown 1: Modifiable during operation, keep after shutdown 2: Modifiable during operation, clear after shutdown Thousands-bit: Reserved	0011 (0000~0213)	STOP
F11.05 (0x0B05)	UP/DW Key for Funcode Modification	V/F SVC Ones-and tens-bit: Set 00~99 to yy in Fxx.yy Hundreds- and thousands-bit: Set 00~15 to xx in Fxx.yy	0109 (0000~2999)	RUN

F11.1x: Status Interface Cyclic Monitoring

Code (Address)	Name	Content	Default (Range)	Modification Mode

F11.10 (0x0B0A)	Left/Right Shift	V/F SVC Ones-bit: Left shift key to adjust the first row 0: OFF 1: ON Tens-bit: Right shift key to adjust the second row 0: OFF 1: ON	0011 (0000~0011)	STOP
F11.11 (0x0B0B)	Row 1 Parameter 1 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0000 (0000~0763)	RUN
F11.12 (0x0B0C)	Row 1 Parameter 2 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0001 (0000~0763)	RUN
F11.13 (0x0B0D)	Row 1 Parameter 3 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0002 (0000~0763)	RUN
F11.14 (0x0B0E)	Row 1 Parameter 4 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0011 (0000~0763)	RUN
F11.15 (0x0B0F)	Row 2 Parameter 1 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0002 (0000~0763)	RUN
F11.16 (0x0B10)	Row 2 Parameter 2 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0004 (0000~0763)	RUN
F11.17 (0x0B11)	Row 2 Parameter 3 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0010 (0000~0763)	RUN
F11.18 (0x0B12)	Row 2 Parameter 4 for Cyclic Display	V/F SVC Ones- and tens-bit: Set monitor parameter 00~63 to yy in Cxx.yy. Hundreds and thousands-bit: Set monitor parameter 00~07 to xx in Cxx.yy.	0012 (0000~0763)	RUN

F11.2x: Monitoring Parameters

Code (Address)	Name	Content	Default (Range)	Modification Mode
F11.20 (0x0B14)	Keypad Display Item	V/F SVC Ones-bit: Output frequency display 0: Target frequency 1: Operating frequency ≥2: Operating frequency, filter depth becomes larger with this value Tens-bit: Reserved 0: OFF 1: Active power with stator resistance loss removed Hundreds-bit: Power display unit 0: In percentage(%) 1: In kilowatt(kW) Thousands-bit: Reserved	0x0002 (0x0000~0x111F)	RUN
F11.21 (0x0B15)	Speed Display Factor	V/F SVC Adjust the display of C00.05.	100.0% (0.0%~500.0%)	RUN
F11.22 (0x0B16)	Power Display Factor	V/F SVC Adjust the display of C00.10.	100.0% (0.0%~500.0%)	RUN
F11.23 (0x0B17)	Monitoring Parameter Display	V/F SVC Ones-bit: Reserved Tens-bit: C05 display item 0: Auto switching with control modes 1: V/F mode related parameters 2: V/C mode related parameters Hundreds-bit: C00.40~C00.63 display 0: OFF 1: ON Thousands-bit: Reserved	0x0000 (0x0000~0xFFFF)	RUN
F11.24 (0x0B18)	Monitoring Parameter Filter	V/F SVC Ones-bit: Output current display with filter 0~F: The larger the value, the deeper the filter	0x0002 (0x0000~0x000F)	RUN
F11.25 (0x0B19)	Motor Auto-Tuning Display	V/F SVC 0: ON 1: OFF Note: This function is not available on T/S2 models.	0 (0~1)	STOP

F11.27 (0x0B1B)	Error Reset Display	V/F SVC Ones-bit: error reset display enable 0: OFF 1: ON	0x0001 (0x0000~0x0001)	RUN

F11.3x: Special Keypad Functions

Code (Address)	Name	Content	Default (Range)	Modification Mode
F11.30 (0x0B1E)	SI01 Serial Port Function	V/F SVC 0: RS485 communication 1: External keypad Not valid at the same time.	0 (0~1)	STOP
F11.31 (0x0B1F)	Potentiometer Voltage Lower Limit	V/F SVC Set the lower limit value of the voltage given by the keypad potentiometer, any value smaller is treated as such (valid for external signal-line keypad).	0.50V (0.00V~3.00V)	RUN
F11.32 (0x0B20)	Potentiometer Voltage Lower Limit Percentage	V/F SVC Set the percentage of F11.31(valid for external signal-line keypad).	0.00% (0.00%~100.00%)	RUN
F11.33 (0x0B21)	Potentiometer Upper Voltage Limit	V/F SVC Set the upper limit value of the voltage given by the keypad potentiometer, any value smaller is treated as such (valid for external signal-line keypad).	2.80V (0.00V~3.00V)	RUN
F11.34 (0x0B22)	Potentiometer Upper Voltage Limit Percentage	V/F SVC Set the percentage of F11.34(valid for external signal-line keypad).	100.0% (0.0%~100.0%)	RUN
F11.35 (0x0B23)	Potentiometer Source	V/F SVC Set the keypad potentiometer source. 0: Reserved 1: External keypad potentiometer	0 (0~1)	STOP

4.16 F12: Communication Parameters

Note:

Communication parameters are saved immediately after adjustment.

F12.0x: Modbus Slave

Code (Address)	Name	Content	Default (Range)	Modification Mode

F12.00 (0x0C00)	Master/Slave	V/F SVC 0: Slave 1: Reserved		0 (0~1)	STOP
F12.01 (0x0C01)	Modbus Address	V/F SVC Set the Modbus slave communication address.		1 (1~247)	STOP
F12.02 (0x0C02)	Baud Rate	V/F SVC 0: 1200bps 1: 2400bps 2: 4800bps	3: 9600bps 4: 19200bps 5: 38400bps 6: 57600bps	3 (0~6)	STOP
F12.03 (0x0C03)	Modbus Data Format	V/F SVC 0: (N,8,1) no parity Data bit: 8, Stop bit: 1 1: (E,8,1) even parity, Data bit: 8, Stop bit: 1 2: (N,8,1) odd parity Data bit: 8, Stop bit: 1	3: (E,8,2) no parity, Data bit: 8, Stop bit: 2 4: (E,8,2) even parity, Data bit: 8, Stop bit: 2 5: (0,8,2) odd parity Data bit: 8, Stop bit: 2	0 (0~5)	STOP
F12.04 (0x0C04)	Modbus Response Enable	V/F SVC 0: ON to write operation 1: OFF to write operation		0 (0~1)	RUN
F12.05 (0x0C05)	Modbus Response Delay	V/F SVC Set the interval between data receipt and the master response.		0ms (0ms~5000ms)	RUN
F12.06 (0x0C06)	Modbus Timeout	V/F SVC Set the time level between two communications to detect a communication disconnection.		1.0s (0.1s~100.0s)	RUN
F12.07 (0x0C07)	Communication Disconnection Detection Mode	V/F SVC 0:OFF 1: Report error and coasting stop 2: Report alarm and continue operation 3: Forced stop		0 (0~3)	RUN
F12.08 (0x0C08)	Received Data Offset (0x3000)	V/F SVC Set the offset value for the target frequency from communication (100.00 corresponds to 100.00Hz).		0.00 (-100.00~100.00)	RUN

F12.09 (0x0C09)	Received Data Gain (0x3000)	V/F SVC Set the gain value for the target frequency from communication. Target frequency = Actual frequency from communication × gain + offset	100.0% (0.0%~500.0%)	RUN
F12.41 (0x0C29)	Comm. Force Reset Enable Time	V/F SVC Set to 0 to disable this function. When any of terminals X1~X3 is shorted to COM, and terminal VS is shorted to +24V for the time set here, external keypad is forced to be valid. This operation has higher priority than F11.30[SI01 Serial Port Function].	30s (0s~60s)	RUN
F12.51	Dual-CPU Communication Mode	V/F SVC 0: Polling mode 1: Trigger mode	0 (0~2)	STOP

F12.1x: Reserved

4.17 F13: PID Process Control

F13.00~F13.06: PID Target and Feedback

Code (Address)	Name	Content		Default (Range)	Modification Mode
F13.00 (0x0D00)	PID Source	V/F SVC 0: Keypad digits 1: Keypad potentiometer 2: Analog current AS 3: Analog voltage VS	4: Reserved 5: Reserved 6: RS485 7: Reserved 8: Terminal 9: Active current from communication	0 (0~9)	RUN
F13.01 (0x0D01)	PID Target/Feedback(Keypad)	V/F SVC This parameter is valid when F13.00 or F13.03 is set to keypad digits.		50.0% (0.0%~100.0%)	RUN
F13.02 (0x0D02)	PID Target ACC Time	V/F SVC Set the time required when PID increases from 0.0% to 100.0%.		1.00s (0.00s~60.00s)	RUN
F13.03 (0x0D03)	PID Feedback Source	V/F SVC 0: Keypad digits 1: Keypad potentiometer 2: Analog current AS 3: Analog voltage VS 4: Reserved	5: Reserved 6: RS485 communication 7: Reserved 8: Terminal 9: Local active current	2 (0~9)	RUN

F13.04 (0x0D04)	Feedback Signal Filter Time	V/F SVC The longer the filter time, the greater the interference immunity, but the response becomes slower.	0.010s (0.000s~6.000s)	RUN
F13.05 (0x0D05)	Feedback Signal Gain	V/F SVC Set to enable linear proportional adjustment of the feedback input signal.	1.00 (0.00~10.00)	RUN
F13.06 (0x0D06)	Feedback Signal Width	V/F SVC This setting is dimensionless, used to regulate PID feedback and display.	100.0 (0.0~100.0)	RUN

F13.07~F13.24: PID Regulation

Code (Address)	Name	Content	Default (Range)	Modification Mode
F13.07 (0x0D07)	PID Control	V/F SVC Ones-bit: Feedback characteristic 0: Positive 1: Negative Tens-bit: Reserved Hundreds-bit: Reserved Thousands-bit: Differential regulation 0: Differential for deviation 1: Differential for feedback	0100 (0000~1111)	RUN
F13.08 (0x0D08)	Preset PID Target	V/F SVC When PID operation is initiated, output as the pre-settings.	100.0% (0.0%~100.0%)	RUN
F13.09 (0x0D09)	Preset PID Target Runtime	V/F SVC Set the time for the PID preset output, and then the normal PID setting works.	0.0s (0.0s~6500.0s)	RUN
F13.10 (0x0D0A)	PID Deviation	V/F SVC Set the maximum deviation between PID feedback and target.	0.0% (0.0%~100.0%)	RUN
F13.11 (0x0D0B)	PID Gain 1	V/F SVC Set the PID proportional gain 1.	0.100 (0.000~4.000)	RUN
F13.12 (0x0D0C)	PID Integral Time 1	V/F SVC Set the PID integral time 1.	1.0s (0.0s~600.0s)	RUN
F13.13 (0x0D0D)	PID Differential Time 1	V/F SVC Set the PID differential time 1.	0.000s (0.000s~6.000s)	RUN
F13.14 (0x0D0E)	PID Gain 2	V/F SVC Set the PID proportional gain 2.	0.100 (0.000~4.000)	RUN
F13.15 (0x0D0F)	PID Integral Time 2	V/F SVC Set the PID integral time 2.	1.0s (0.0s~600.0s)	RUN

F13.16 (0x0D10)	PID Differential Gain 2	V/F SVC Set the PID differential time 2.	0.000s (0.000s~6.000s)	RUN
F13.17 (0x0D11)	PID Shift Condition	V/F SVC 0: OFF 1: DI terminal-based 2: Deviation-based	0 (0~2)	RUN
F13.18 (0x0D12)	PID Shift Lower Limit	V/F SVC Gain 1 parameter is valid when the PID deviation is lower than this value.	20.0% (0.0%~100.0%)	RUN
F13.19 (0x0D13)	PID Shift Upper Limit	V/F SVC Gain 2 parameter is valid when the PID deviation is greater than this value.	80.0% (0.0%~100.0%)	RUN
F13.21 (0x0D15)	Differentiation Range	V/F SVC Set the range of the PID differential output.	5.0% (0.0%~100.0%)	RUN
F13.22 (0x0D16)	PID Output Upper Limit	V/F SVC Set the PID output upper limit.	100.0% (0.0%~100.0%)	RUN
F13.23 (0x0D17)	PID Output Lower Limit	V/F SVC Set the PID output lower limit.	0.0% (-100.0%~F13.22)	RUN
F13.24 (0x0D18)	PID Output Filter Time	V/F SVC Set the PID output filter time.	0.000s (0.000s~6.000s)	RUN

F13.25~F13.28: PID Feedback Disconnection Detection

Code (Address)	Name	Content	Default (Range)	Modification Mode
F13.25 (0x0D19)	PID Feedback Disconnection Fault Mode	V/F SVC 0: No error report, continue PID control 1: Report error and coasting stop 2: Report alarm and continue PID control 3: Report alarm and run at current frequency	0 (0~3)	RUN
F13.26 (0x0D1A)	Feedback Disconnection Error Time	V/F SVC Set the PID feedback disconnection detection duration.	1.0s (0.0s~120.0s)	RUN
F13.27 (0x0D1B)	Feedback Disconnection Error Upper Limit	V/F SVC If the feedback signal exceeds this value and continues for F13.26, the sensor is considered disconnected.	100.0% (0.0%~100.0%)	RUN
F13.28 (0x0D1C)	Feedback Disconnection Error Lower Limit	V/F SVC If the feedback signal is lower than this value and continues for F13.26, the sensor is considered disconnected.	0.0% (0.0%~100.0%)	RUN

F13.29~F13.33: PID Sleep

Code (Address)	Name	Content	Default (Range)	Modification Mode
F13.29 (0x0D1D)	PID Sleep Enable	V/F SVC 0: OFF 1: ON	0 (0~1)	RUN
F13.30 (0x0D1E)	PID Sleep Frequency	V/F SVC When the sleep function is valid, the PID output frequency is lower than this setting for F13.31 [Sleep Delay], then PID control enters sleep.	10.00Hz (0.00Hz~ Max. freq)	RUN
F13.31 (0x0D1F)	PID Sleep Delay		60.0s (0.0s~3600.0s)	RUN
F13.32 (0x0D20)	PID Wakeup Deviation	V/F SVC When PID feedback is smaller/greater than (positive/negative) PID setting minus/plus(positive/negative) F13.32 [PID Wakeup Deviation] for F13.33 [PID Wakeup Delay], the drive exits from sleep status and start the normal operation.	5.0% (0.0%~50.0%)	RUN
F13.33 (0x0D21)	PID Wakeup Delay		1.0s (0.0s~60.0s)	RUN

4.18 F14: Multi-speed and Simple PLC

F14.00~F14.14: Multi-speed Frequency Target

Code (Address)	Name	Content	Default (Range)	Modification Mode

F14.00 (0x0E00) ~ F14.14 (0x0E0E)	PLC Multi-speed 1~15	V/F SVC F01.02 [Frequency Source A] set to 9: Program (PLC), frequency and running direction of the drive are controlled by simple PLC process by up to 15 speed segments; the running mode is shown in the F14.15 setting. If the running time of a segment is set to "0", that segment is skipped during operation. F01.02 [Frequency Source A] set to 11: Multi-speed, the setting frequency is selected by "Multi-speed terminal", the running direction and acceleration/deceleration time are set by F14.31~F14.45. If all the multi-speed terminals are invalid, the multi-speed setting is set to zero. For the details, see F05.00 to F05.03. The default values are set as shown below: F14.00 [Multi-speed 1]=10.00Hz F14.08 [Multi-speed 9]=10.00Hz F14.01 [Multi-speed 2]=20.00Hz F14.09 [Multi-speed 10]=20.00Hz F14.02 [Multi-speed 3]=30.00Hz F14.10 [Multi-speed 11]=30.00Hz F14.03 [Multi-speed 4]=40.00Hz F14.11 [Multi-speed 12]=40.00Hz F14.04 [Multi-speed 5]=40.00Hz F14.12 [Multi-speed 13]=50.00Hz F14.05 [Multi-speed 6]=40.00Hz F14.13 [Multi-speed 14]=40.00Hz F14.06 [Multi-speed 7]=30.00Hz F14.14 [Multi-speed 15]=30.00Hz F14.07 [Multi-speed 8]=30.00Hz	See description on the left. (0.00Hz~ Max. freq)	RUN

F14.15: PLC Operation Mode

Code (Address)	Name	Content		Default (Range)	Modification Mode
F14.15 (0x0E0F)	PLC Operation Mode	V/F SVC Ones-bit: Cycle mode 0: Stop after single cycle 1: Run in continuous cycles 2: Keep the final value after single cycle Tens-bit: Time unit 0: Second 1: Minute 2: Hour	Hundreds-bit: power-off storage 0: OFF 1: ON Thousands-bit: Start mode 0: Restart from the first segment 1: Restart from the segment upon shutdown last time 2: Continue operation for the remaining of the shutdown segment	0000 (0000~2122)	RUN

F14.16~F14.30 : PLC Runtime

Code (Address)	Name	Content	Default (Range)	Modification Mode
F14.16 (0x0E10) ~ F14.30 (0x0E1E)	PLC 1~15 Segment Runtime	V/F SVC Set the PLC 1~15 segment runtime.	10.0(s/m/h) (0.0 (s/m/h))~6500.0 (s/m/h)	RUN

F14.31~F14.45 : PLC Direction and Time

Code (Address)	Name	Content	Default (Range)	Modification Mode
F14.31 (0x0E1F) ~ F14.45 (0x0E2D)	PLC 1~15 Direction and ACC/DEC Time	V/F SVC Ones-bit: Current segment direction (compared with the running command) 0: FWD 1: REV Tens-bit: Current segment ACC/DEC time 0: Time 1 2: Time 3 1: Time 2 3: Time 4 Hundreds-bit: Reserved Thousands-bit: Reserved	0000 (0000~0031)	RUN

4.19 F21: PV Pump Parameters

Code (Address)	Name	Description	Default	Modification Mode
F21.00 (0x5500)	PV Pump Mode	V/F SVC LED0 Mode 0: Variable frequency mode (Protection off) 1: CVT mode 2: MPPT mode 3: Variable frequency mode (Protection on) LED1 Work Pattern 0: Continuous operation(FWD start only) 1: Intermittent operation 2: Pump clear (Display CLRER. On the screen) LED2 Reserved LED3 motor 0: Three-phase motor 1: Single-phase motor 2: Single-phase motor two-phase control	0002	STOP
F21.01 (0x5501)	Operation Status	V/F SVC 0: Stop 1: Operation 2: Sleep 3: Low-frequency protection 4: Dry-out protection 5: Over-current protection 6: Low-power protection 7: Overflow protection	0 (Read-only)	STOP
F21.02 (0x5502)	VOC Voltage (Display)	V/F SVC 0.0V~999.9V	0.1V (Read-only)	STOP
F21.03 (0x5503)	CVT Target Voltage	V/F SVC 70.0%~95.0%	81.0%	STOP
F21.04 (0x5504)	MPPT Upper Limit Voltage	V/F SVC 20.0%~200.0%	100.0%	RUN
F21.05 (0x5505)	MPPT Lower Limit Voltage	V/F SVC 20.0%~200.0%	50.0%	RUN
F21.06 (0x5506)	Frequency Gain	V/F SVC 0.1%~500.0%	10.0%	RUN
F21.07 (0x5507)	MPPT Sampling Interval	V/F SVC 0.1s~30.0s	1.0s	RUN
F21.08 (0x5508)	MPPT Gain	V/F SVC 0~9999	100	RUN

F21.09 (0x5509)	Quick Frequency Drop Gain	V/F SVC 0~20	2	RUN
F21.10 (0x550A)	Frequency Regulation Filter Time	V/F SVC 0.001s~2.000s	0.020s	RUN
F21.11 (0x550B)	Sleep Voltage Range	V/F SVC 0V~1000V	0V	RUN
F21.12 (0x550C)	Sleep Exit Voltage	V/F SVC F21.10~1000V	400V	RUN
F21.13 (0x550D)	Sleep Restart Time	V/F SVC 0.0s~3000.0s	10.0s	RUN
F21.14 (0x550E)	LF Protection Level	V/F SVC 0.00Hz~300.00Hz	0.00Hz	RUN
F21.15 (0x550F)	LF Protection Time	V/F SVC 0.0s~3000.0s	10.0s	RUN
F21.16 (0x5510)	LF Protection Auto Reset Time	V/F SVC 2.0s~3000.0s	10.0s	RUN
F21.17 (0x5511)	Dry-out Protection Level	V/F SVC 0.0A~999.9A	0.0A	RUN
F21.18 (0x5512)	Dry-out Protection Time	V/F SVC 2.0s~3000.0s	10.0s	RUN
F21.19 (0x5513)	Dry-out Protection Auto Reset Time	V/F SVC 2.0s~3000.0s	10.0s	RUN
F21.20 (0x5514)	Overcurrent Protection Level	V/F SVC 0.0A~999.9A	0.0A	RUN
F21.21 (0x5515)	Overcurrent Protection Time	V/F SVC 0.0s~3000.0s	10.0s	RUN
F21.22 (0x5516)	Overcurrent Protection Auto Reset Time	V/F SVC 2.0s~3000.0s	10.0s	RUN
F21.23 (0x5517)	Min Power Protection Level	V/F SVC 0.00kW~650.00kW	0.00kW	RUN
F21.24 (0x5518)	Min Power Protection Time	V/F SVC 0.0s~3000.0s	10.0s	RUN
F21.25 (0x5519)	Min Power Protection Auto Reset Time	V/F SVC 2.0s~3000.0s	10.0s	RUN
F21.26 (0x551A)	Protection Reset Mode	V/F SVC 0:Auto 1: Manual LED0: Low frequency operation LED1: Dry-out LED2: Overcurrent and overload LED3: Min power	0000	STOP
F21.27 (0x551B)	Overflow Protection Time	V/F SVC 0.0s~3000.0s	10.0s	RUN
F21.28 (0x551C)	Overflow Protection Exit Time	V/F SVC 0.0s~3000.0s	10.0s	RUN

F21.29 (0x551D)	Auxiliary Function 1	V/F SVC 0: OFF 1: ON V/F SVC LED0: Upper limit frequency 0: Upper limit frequency below target frequency 1: Upper limit frequency below rated frequency LED1: Lower limit frequency 0: 0 1: 1/4 of motor rated frequency LED2: Error power-down save (reserved) LED3: Dry-out alarm 0: Without sensor (current-based) 1: With sensor 2: Auto detection	0110	RUN
F21.30 (0x551E)	DC Current Calculation Offset	V/F SVC 0.00A~99.99A	0.00A	RUN
F21.31 (0x551F)	DC Current Calculation Gain	V/F SVC 0.0%~999.9%	100.0%	RUN
F21.32 (0x5520)	Power Curve Point 0	V/F SVC 0.00kW~99.99kW	0.50kW	RUN
F21.33 (0x5521)	Power Curve Point 1	V/F SVC 0.00kW~99.99kW	1.00kW	RUN
F21.34 (0x5522)	Power Curve Point 2	V/F SVC 0.00kW~99.99kW	1.50kW	RUN
F21.35 (0x5523)	Power Curve Point 3	V/F SVC 0.00kW~99.99kW	2.00kW	RUN
F21.36 (0x5524)	Power Curve Point 4	V/F SVC 0.00kW~99.99kW	2.50kW	RUN
F21.37 (0x5525)	Flow Curve Point 0	V/F SVC 0.0m³/h~999.9m³/h	0.0m³/h	RUN
F21.38 (0x5526)	Flow Curve Point 1	V/F SVC 0.0m³/h~999.9m³/h	5.0m³/h	RUN
F21.39 (0x5527)	Flow Curve Point 2	V/F SVC 0.0m³/h~999.9m³/h	10.0m³/h	RUN
F21.40 (0x5528)	Flow Curve Point 3	V/F SVC 0.0m³/h~999.9m³/h	15.0m³/h	RUN
F21.41 (0x5529)	Flow Curve Point 4	V/F SVC 0.0m³/h~999.9m³/h	20.0m³/h	RUN
F21.42 (0x552A)	Flow Calculation Offset	V/F SVC 0.0m³~999.9m³	0.0m³/h	RUN

F21.43 (0x552B)	Flow Calculation Correction Gain	V/F SVC 0.1%~500.0%	100.0%	RUN
F21.44 (0x552C)	Daily Flow/Power Clear Cycle	V/F SVC 0.1h~24.0h	7.0h	RUN
F21.46 (0x552D)	PV Pump Function 1	V/F SVC 0: OFF 1: ON LED0: Constant torque frequency limit LED1: Reserved LED2: Voc update after voltage ACC LED3: Quick Frequency Drop	1100	RUN
F21.47 (0x552E)	Quick Frequency Drop Level	3.0%~15.0%	5.0%	RUN
F21.48 (0x552F)	Constant Torque Frequency Limit	V/F SVC 80.0%~150.0%	100.0%	RUN
F21.49 (0x5530)	Quick Voltage Surge Level	V/F SVC 0.0%~20.0%	5.0%	RUN
F21.53 (0x5535)	Intermittent Operation and Error Stop Mode	V/F SVC LED0: Intermittent operation save 0: OFF 1: ON LED1: Error stop mode 0: Slow down to 0Hz 1: Stop output at once LED2: Reserved LED3: Reserved	0000	RUN
F21.54 (0x5536)	Intermittent Operation Cycle	V/F SVC 0~1000 times	0	RUN
F21.55 (0x5537)	Intermittent Operation Start time	V/F SVC 0min~3000min	0min	RUN
F21.56 (0x5538)	Intermittent Operation Stop time	V/F SVC 0min~3000min	0min	RUN
F21.57 (0x5539)	Clean Frequency	V/F SVC 0.00Hz~300.00Hz	25.00Hz	RUN
F21.58 (0x553A)	FWD Clean Runtime	V/F SVC 0s~3000s	30s	RUN
F21.59 (0x553B)	REV Clean Runtime	V/F SVC 0s~3000s	30s	RUN
F21.60 (0x553C)	Pump Clean Cycle	V/F SVC 0~60 times	5	RUN
F21.61 (0x553D)	Upper Power Limit	V/F SVC 0.0~1000.0	0.0	RUN
F21.62 (0x553E)	Power Limit (Kp)	V/F SVC 0.0~100.0	1.0	RUN

F21.63 (0x553F)	Power Limit (Ki)	V/F SVC 0.0~100.0	1.0	RUN
F21.64 (0x5540)	Secondary/main winding voltage ratio	V/F SVC 0.00~2.00	1.10	STOP
F21.65 (0x5541)	AC/DC switching mode	V/F SVC 0: invalid 1: terminal control 2: Voltage detection automatic control	0	STOP
F21.66 (0x5542)	AC power cut-out threshold	V/F SVC 0.0~2000.0V	600V	RUN
F21.67 (0x5543)	AC power cut-in delay	V/F SVC 0.0min~2000.0min	5min	RUN
F21.68 (0x5544)	Macro Definition Batch Parameter Change	V/F SVC 0000~001F	0000	STOP
F21.69 (0x5545)	Terminal input and output delay amplification	V/F SVC 1~10000	1	RUN
F21.70 (0x5546)	Dry run protection detection frequency	V/F SVC 0.00Hz~599.00Hz	50.00Hz	RUN
F21.71 (0x5547)	Deep protection mode selection	V/F SVC 0: Invalid 1: Valid	0	STOP
F21.72 (0x5548)	Deep protection fault recovery times	V/F SVC 0~10000	5	RUN
F21.73 (0x5549)	Battery board power insufficiency detection period	V/F SVC 0 min ~60000 min	15min	RUN
F21.74 (0x554A)	Device protection interval time	V/F SVC 0 min ~60000 min	30min	RUN
F21.75 (0x554B)	Undervoltage protection times threshold	V/F SVC 0~60000	5	RUN
F21.76 (0x554C)	AC power access duration	V/F SVC 0 min ~60000 min	60min	RUN

4.20 F25: AS and VS Correction (Reserved)

4.21 C0x: Monitoring Parameters

C00: Basic Monitoring

Code (Address)	Name	Code (Address)	Name	Code (Address)	Name
C00.00 (0x2100)	Target Frequency	C00.14 (0x210E)	Input Terminal X Status	C00.28 (0x211C)	Software Version
C00.01 (0x2101)	Output Frequency	C00.15 (0x210F)	Output Terminal Y Status	C00.29 (0x211D)	Reserved

C00.02 (0x2102)	Output Current	C00.16 (0x2110)	AS Value	C00.30 (0x211E)	Timer Value
C00.03 (0x2103)	Input Voltage	C00.17 (0x2111)	VS Value	C00.31 (0x211F)	PID Output
C00.04 (0x2104)	Output Voltage	C00.18 (0x2112)	Keypad Potentiometer Input	C00.32 (0x2120)	Drive Software Sub-version
C00.05 (0x2105)	Mechanical Speed	C00.19 (0x2113)	Reserved	C00.33 (0x2121)	Reserved
C00.06 (0x2106)	Target Torque	C00.20 (0x2114)	Reserved	C00.34 (0x2122)	Reserved
C00.07 (0x2107)	Output Torque	C00.21 (0x2115)	Reserved	C00.35 (0x2123)	Reserved
C00.08 (0x2108)	PID Target	C00.22 (0x2116)	Counter Value	C00.36 (0x2124)	Error/Alarm Code
C00.09 (0x2109)	PID Feedback	C00.23 (0x2117)	Current Runtime	C00.37 (0x2125)	Cumulative Power Consumption (Low byte)
C00.10 (0x210A)	Output Power	C00.24 (0x2118)	Total Runtime	C00.38 (0x2126)	Cumulative Power Consumption (High byte)
C00.11 (0x210B)	Bus Voltage	C00.25 (0x2119)	Drive Power	C00.39 (0x2127)	Power Factor Angle
C00.12 (0x210C)	Module Temperature 1	C00.26 (0x211A)	Drive Voltage	-	-
C00.13 (0x210D)	Module Temperature 2	C00.27 (0x211B)	Drive Current	-	-

C01: Error Monitoring

Code (Address)	Name	Code (Address)	Name	Code (Address)	Name
C01.00 (0x2200)	Type	C01.08 (0x2208)	Error-X Status	C01.16 (0x2210)	Last 1 Error-Module Temperature
C01.01 (0x2201)	Error Info	C01.09 (0x2209)	Error-Y Status	C01.17 (0x2211)	Last 1 Error-Drive Status
C01.02 (0x2202)	Error-Operation Frequency	C01.10 (0x220A)	Last 1 Error-Type	C01.18 (0x2212)	Last 1 Error-X Status
C01.03 (0x2203)	Error-Output Voltage	C01.11 (0x220B)	Last 1 Error-Error Info	C01.19 (0x2213)	Last 1 Error-Y Status

C01.04 (0x2204)	Error-Output Current	C01.12 (0x220C)	Last 1 Error-Operation Frequency	C01.20 (0x2214)	Last 2 Error-Error Type
C01.05 (0x2205)	Error-Bus Voltage	C01.13 (0x220D)	Last 1 Error-Output Voltage	C01.21 (0x2215)	Last 2 Error-Error Info
C01.06 (0x2206)	Error-Module Temperature	C01.14 (0x220E)	Last 1 Error-Output Current	C01.22 (0x2216)	Last 3 Error-Error Type
C01.07 (0x2207)	Error-Drive Status	C01.15 (0x220F)	Last 1 Error-Bus Voltage	C01.23 (0x2217)	Last 3 Error-Error Info

Note:

Drive fault status bit indicates:

Ones-bit: Operation direction 0: Forward 1: Reverse

Tens-bit: Operation status 0: Stop 1: Constant operation 2: Accelerating 3: Decelerating

Hundreds-bit: overvoltage and overcurrent 0: Normal 1: Overvoltage 2: Overcurrent 3: Overvoltage and overcurrent

Thousands-bit: Reserved

C02: App Monitoring

Code (Address)	Name	Code (Address)	Name
C02.00 (0x2300)	PID Target	C02.13 (0x230D)~C02.14(0x230E)	Reserved
C02.01 (0x2301)	PID Feedback	C02.15 (0x230F)	Drive Overload Timing Factor
C02.02 (0x2302)	PID Output	C02.16 (0x2310)	Motor Overload Timing Factor
C02.03 (0x2303)	PID Control Status	C02.17 (0x2311)~C02.18(0x2312)	Reserved
C02.05 (0x2305)	PLC Operation Segment	C02.19 (0x2313)	CBC No.
C02.06 (0x2306)	PLC Segment Frequency	C02.20 (0x2314)~C02.31(0x231F)	Reserved
C02.07 (0x2307)	PLC Segment Runtime	C02.32 (0x2320)~C02.47(0x232F)	Power-down Save Parameter 1~16
C02.08 (0x2308)	FWD/REV Command	C02.48 (0x2330)~C02.49(0x2331)	Reserved
C02.09 (0x2309)	Jog Command	C02.50 (0x2332)~C02.59(0x233B)	Cache Register 0~9
C02.10 (0x230A)	Pre-AS Correction Current	C02.60 (0x233C)~C02.61(0x233D)	Expansion Chip Software Version/Subversion

C02.11 (0x230B)	Pre-VS Correction Current	C02.62 (0x233E)	External Keypad Version
C02.12 (0x230C)	Reserved	-	-

C03: Maintenance Monitoring

Code (Address)	Name	Code (Address)	Name
C03.00 (0x2400)	Current Runtime	C03.23 (0x2417)	Reserved
C03.01 (0x2401)	Cumulative Runtime (hour)	C03.24 (0x2418)	Reserved
C03.02 (0x2402)	Cumulative Runtime (hour)	C03.25 (0x2419)	Reserved
C03.03 (0x2403)	Total Runtime(m)	C03.26 (0x241A)	Reserved
C03.04 (0x2404)	Cooling Fan Runtime	C03.27 (0x241B)	Reserved
C03.05 (0x2405)	Cooling Fan Maintenance	C03.28 (0x241C)	Reserved
C03.06 (0x2406)	Reserved	C03.29 (0x241D)	Reserved
C03.07 (0x2407)	Main Relay Maintenance	C03.30 (0x241E)	Reserved
C03.08 (0x2408)~ C03.19 (0x2413)	Reserved	C03.31 (0x241F)~C03.39 (0x2427)	Reserved
C03.20 (0x2414)	Reserved	C03.50 (0x2432)	Machine Code 1
C03.21 (0x2415)	Reserved	C03.51 (0x2433)	Machine Code 2
C03.22 (0x2416)	Reserved	C03.52 (0x2434)	Machine Code 3

4.22 Terminal I/O Functions

X	Function	X	Function	X	Description
0	OFF	24	PID target shift 1	48	Command source to keypad
1	FWD	25	PID target shift 2	49	Command source to terminal
2	REV	26	PID target shift 3	50	Command source to communication
3	Three-wire operation (Xi)	27	PID feedback shift 1	51	Reserved
4	FWD jogging	28	PID feedback shift 2	52	Operation disable
5	REV jogging	29	PID feedback shift 3	53	FWD operation inhibit
6	Coasting stop	30	Program (PLC) pause	54	REV operation inhibit
7	Emergency stop	31	Program(PLC) restart	55	Reserved
8	Error reset	32	ACC/DEC time terminal 1	56	Reserved
9	External error input	33	ACC/DEC time terminal 2	57	Reserved
10	Frequency up (UP)	34	ACC/DEC pause	58	Reserved
11	Frequency down (DW)	35	Swing frequency input	59	Reserved

12	Frequency UP/DW reset	36	Swing frequency pause	60	Speed/torque mode shift
13	Source A to source B	37	Swing frequency reset	62	Jog frequency as torque mode frequency upper limit
14	Combined frequency source to source A	38	Keypad keys and display self-test	63~87	Reserved
15	Combined frequency source to source B	39	Reserved	88	Reserved
16	Multi-frequency 1	40	Timer input	89	Reserved
17	Multi-frequency 2	41	Timer reset	90	Reserved
18	Multi-frequency 3	42	Counter input	91	Reserved
19	Multi-frequency 4	43	Counter reset	92	Reserved
20	PID control cancel	44	DC brake	93	Reserved
21	PID control pause	45	Pre-excitation	94	Reserved
22	PID characteristic shift	46	Reserved	95	Reserved
23	PID parameter shift	47	Reserved	-	-
Y	Function	Y	Function	Y	Function
0	OFF	13	Upper limit frequency completion	26	Emergency stop
1	Drive in operation	14	Lower limit frequency completion	27	Overload error 1
2	Drive in reverse operation	15	Program cycle completion	28	Underload error 2
3	Drive in forward operation	16	Program segment completion	29	Drive in alarm
4	Trip error 1 (report during auto reset)	17	PID feedback above upper limit	30	Output under 0x3018 control
5	Trip error 2 (no report during auto reset)	18	PID feedback below lower limit	31	Drive overheat alarm
6	External error stop	19	PID feedback disconnection	32	Reserved
7	Drive undervoltage	20	Reserved	33~36	Reserved
8	Drive ready for operation	21	Timer target completion	37	Comparator 1 detection
9	Output frequency detection level 1	22	Counter overflow	38	Comparator 2 detection
10	Output frequency detection level 2	23	Counter target completion	39~63	Reserved
11	Target frequency completion	24	Dynamic brake	-	-
12	Zero-frequency operation	25	Reserved	-	-

4.23 Fault List

Note:

1. For information on inverter faults/operating status, please refer to the indicator light descriptions in "Chapter 3 Indicators, Keypad Layout, and Operating Instructions."
2. The numbers in parentheses within the communication code column are error codes or alarms codes (Dec. indicates decimal), which can be read from external keypad or communication by 0x3003/0x3010.

Display (DEC)	Name	Type	Display (DEC)	Name	Type
E. SC1(1)	System error during acceleration	Error	E. Ld2(80)	Load protection 2	Error
E. SC2(2)	System error during deceleration	Error	E. Cpu(81)	CPU timeout error	Error
E. SC3(3)	System error during constant operation	Error	E. LoC(85)	Chip lock error	Error
E. SC4(4)	System error during stop	Error	E. EEP(86)	Parameter storage error	Error
E. oC1(5)	Overcurrent error during acceleration	Error	E. CP1(97)	Monitor comparator output 1 error	Error
E. oC2(6)	Overcurrent error during deceleration	Error	E. CP2(98)	Monitor comparator output 2 error	Error
E. oC3(7)	Overcurrent error during constant operation	Error	E. dAT(99)	Parameter setting error	Error
E. oC4(8)	SI01 software overcurrent error	Error	E. FA1(110)	External expansion reservation 1	Error
E. ou1(9)	Overvoltage error during acceleration	Error	E. FA2(111)	External expansion reservation 2	Error
E. ou2(10)	Overvoltage error during deceleration	Error	E. FA3(112)	External expansion reservation 3	Error
E. ou3(11)	Overvoltage error during constant operation	Error	E. FA4(113)	External expansion reservation 4	Error
Reserved (12)	Reserved	Error	E. FA5(114)	External expansion reservation 5	Error
E. LoC(13)	Undervoltage during operation	Error	E. FA6(115)	External expansion reservation 6	Error
E. oL1(14)	Motor overload error	Error	E. FA7(116)	External expansion reservation 7	Error
E. oL2(15)	Drive overload error 1	Error	E. FA8(117)	External expansion reservation 8	Error
E. oL3(16)	Drive overload error 2	Error	Alarm		

E. oL4(17)	Drive overload error 3	Error	A. Lu1(128)	Undervoltage alarm during stop	Alarm
E. LoC (18)	Input phase loss error	Error	A. ou(129)	Overvoltage alarm during stop	Alarm
E. LoC(19)	Three-phase output phase loss error	Error	A. iLF(130)	Input phase loss alarm	Alarm
E. oLF1(20)	U-phase loss error	Error	A. Pid(131)	PID feedback disconnection alarm	Alarm
E. oLF2(21)	V-phase loss error	Error	A. EEP(132)	Parameter storage alarm	Alarm
E. oLF3(22)	W-phase loss error	Error	A. dEF(133)	Excessive speed deviation alarm	Alarm
Reserved (23- 29)	Reserved	Error	A. SPd(134)	Overspeed alarm	Alarm
E. oH1(30)	Rectifier overheat error	Error	A. GPS1(135)	GPS lock alarm	Alarm
E. oH2(31)	Drive overheat error	Error	A. GPS2(136)	GPS disconnection alarm	Alarm
Reserved (32)	Reserved	Error	A. CE(137)	Modbus communication disconnection alarm	Alarm
E. EF(33)	External error	Error	A. Ld1(138)	Load Protection 1	Alarm
E. CE(34)	Modbus communication error	Error	A. Ld2(139)	Load Protection 2	Alarm
E. HAL1(35)	Large U-phase zero drift error	Error	Reserved (140)	Reserved	Alarm
E. HAL2(36)	Large V-phase zero drift error	Error	A. oH1(141)	Module overheat	Alarm
E. HAL(37)	Non-0 three phase current sum error	Error	A. run1(143)	Alarm 1 during operation	Alarm
E. HAL3(38)	Large W-phase zero drift error	Error	A. PA2(144)	External keypad disconnection alarm	Alarm
Reserved (39)	Reserved	Error	A. CoP(145)	Parameter copy alarm	Alarm
E. SGxx(40)	Short circuit to ground error	Error	A. CP1(146)	Monitor comparator output 1 alarm	Alarm
E. FSG(41)	Fan short circuit error	Error	A. CP2(147)	Monitor comparator output 2 alarm	Alarm
E. Pid(42)	PID feedback disconnection error	Error	A. run2(148)	Alarm 2 during operation	Alarm
A. CoP(43)	Parameter copy alarm	Alarm	A. run3(149)	Alarm 3 during operation	Alarm
Reserved (44)	Reserved	Error	A. FA1(150)	External expansion reservation 1	Alarm
Reserved(45-49)	Reserved	Error	A. FA2(151)	External expansion reservation 2	Alarm
E. bru(50)	Braking unit error	Error	A. FA3(152)	External expansion reservation 3	Alarm

Reserved (51)	Reserved	Error	A. FA4(153)	External expansion reservation 4	Alarm
E. Texx(52)	Auto-tuning output current over limit error	Error	A. FA5(154)	External expansion reservation 5	Alarm
Reserved (53~70)	Reserved	Error	A. FA6(155)	External expansion reservation 6	Alarm
E. iAE1(71)	Motor angle tuning error 1	Error	A. FrA(157)	Reserved	Alarm
E. iAE2(72)	Motor angle tuning error 2	Error	A. 161(161)	Fan lifespan alarm	Alarm
E. iAE3(73)	Motor angle tuning error 3	Error	A. 163(163)	Main relay lifespan alarm	Alarm
E. PST1(74)	PM step loss error 1	Error	A.LPn	Sleep alarm	Alarm
E. PST2(75)	PM step loss error 2	Error	A.LFr	Low-frequency alarm	Alarm
E. PST3(76)	PM step loss error 3	Error	A.LuT	Dry-out alarm	Alarm
E. dEF(77)	Excessive speed deviation error	Error	A.Old	Overcurrent alarm	Alarm
E. SPd(78)	Stall error	Error	A.LPr	Min. power alarm	Alarm
E. Ld1(79)	Load protection 1 error	Error	A.FuL	Overflow alarm	Alarm

5 Regular Inspection and Maintenance

5.1 Inspection

The drives consist of semiconductor devices, passive electronic devices, and motion devices, all of which have a service life, and even under normal operating conditions, some of the devices may change in characteristics or fail if their service life is exceeded. To prevent malfunction, please perform preventive inspections and maintenance such as daily inspections, periodic inspections, and device replacement. It is recommended to inspect the machine every 3-4 months after installation.

Daily inspection: To avoid damage to the drive and shortening of its service life, check the following items on a daily basis.

Item	Content	Solutions
Power supply	Check mains voltage and phase loss	Match nameplate specs.
Surroundings	Check the installation environment condition	Troubleshoot properly.
Cooling system	Check for hot or discoloration spot on the drive and motor, and the fan condition	Clean heatsink, check for overload/blockage, and tighten screws.
Motor	Check for unusual noise/vibration	Tighten mechanical and electrical connections and lubricate mechanical parts.
Load	Check if output current exceeds ratings for extended time	Confirm no overload, and verify drive model.

- Periodic inspection: It is appropriate to conduct periodic inspections every 3 to 4 months, however, please determine the actual inspection period based on product usage and working environment.

Item	Content	Solutions
Overall	● Check insulation resistance & environment	● Tighten/replace parts; clean the environment.
Electrical connections	● Check wires and connections for discoloration, damaged insulation, cracking, discoloration, or signs of aging ● Check terminals for wear, damage, or looseness ● Check grounding	● Replace damaged wires. ● Tighten loose terminals and replace damaged ones. ● Measure grounding resistance and tighten the grounding terminals.
Mechanical connections	● Check for abnormal vibration, unusual noise, and loose fastenings	● Tighten, lubricate, and replace defective parts.
Semiconductor devices	● Check for dirt and dust ● Check for visible changes in appearance	● Clean the operating environment ● Replace the damaged parts
Electrolytic capacitor	● Check for fluid leakage, discoloration, cracking, exposed safety vents, bulging, rupture, or leakage	● Replace the damaged parts.
Peripherals protection	● Check appearance and insulation of peripheral equipment	● Clean the environment and replace damaged parts

Printed circuit board	● Check for odor, discoloration, and severe rust, and whether connectors are correct	● Fasten connectors ● Clean the printed circuit board ● Replace the damaged printed circuit board
Cooling system	● Check the cooling fan for damage and blockage; ● Check for dirt and dust on the cooling fin ● Check that the air inlet and exhaust ports are not clogged or contaminated with foreign matter	● Clean the operating environment ● Replace the damaged parts.
Keypad	● Check the cooling fan for damage and blockage	● Replace the damaged parts.
Motor	● Check for unusual vibration or noise	● Tighten mechanical and electrical connections and lubricate mechanical parts

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Do not carry out work with the power supply on, as there is fatal electrocution hazard. Before performing any wiring, inspection, or maintenance, disconnect all power and ensure the main circuit DC bus voltage has discharged to a safe level for at least 15 minutes.

5.2 Maintenance

Please remember: all parts wear out over time. Good maintenance slows this down but won't fix existing damage. When a device is worn out, you will need to replace it as required.

Name	Life	Name	Life	Name	Life
Fan	2~3 years	Electrolytic capacitor	4~5 years	Printed circuit board	8~10 years

Replacing internal components requires specialized technical knowledge and must be rigorously tested before use. Therefore, we do not recommend that users perform these replacements themselves. Should you require a replacement, our sales team or your original vendor will be happy to assist you.

5.3 Product Warranty

1. 1Warranty Coverage: For any malfunction occurring within the warranty period, please refer to the terms and conditions outlined in the warranty card for details on coverage.

2. Troubleshooting & Service: Initial troubleshooting is the responsibility of your company. Upon your request, Veichi or an authorized service provider can perform this service for a fee. If the malfunction is determined to be Veichi's responsibility, no charges will apply for the repair, as mutually agreed.

3. Liability Exclusion: Veichi is not liable for any incidental or consequential damages. This includes, but is not limited to, operational inconveniences to your company or your customers, or damages to non-Veichi products, regardless of whether the failure occurs within the warranty period.

Appendix I: Modbus Communication Protocol

- Communication frame structure

The communication data format consists of start bit, 8 data bits, parity bit and stop bit.

Start bit	Bit1	Bit2	Bit3	Bit4	Bit5	Bit6	Bit7	Bit8	Parity bit	Stop bit

A frame must be transmitted without interruption. An inter-frame silence lasting longer than 1.5-character times will cause the receiver to discard the current incomplete frame and mistake the next byte for the start of a new frame (i.e., the address field). Conversely, an insufficient delay (less than 3.5-character times) between frames will cause the receiver to append the new frame to the previous one, resulting CRC mismatch and communication error.

- Communication control parameter address

Function	Address	Description			R/W
Target Frequency (Communication)	0x3000 or 0x2000	0~50000 corresponds to 0.00Hz~500.00Hz			W/R
Communication Command	0x3000 or 0x2001	0000H: None 0001H: FWD operation 0002H: REV operation 0003H: FWD jogging 0004H: REV jogging		0005H: Deceleration stop 0006H: Coasting stop 0007H: Error reset 0008H: Operation disable 0009H: Operation enable	W/R
Drive Status	0x3002 or 0x2002	Bit0	0: Shutdown	1: Operation	R
		Bit1	0: Non-accelerating	1: Accelerating	
		Bit2	0: Non-decelerating	1: Decelerating	
		Bit3	0: FWD	1: REV	
		Bit4	0: No error	1: Drive error	
		Bit5	0: GPRS unlocked	1: GPRS locked	
		Bit6	0: No alarm	1: Drive alarm	
Drive fault code	0x3000 or 0x2003	Current error code (see error code table)			R
Communication giving upper limit frequency	0X3004 or 0x2004	0~32000 corresponds to 0.00Hz~320.00Hz			W/R
Target Torque (Communication)	0X3000 or 0x2005	0~1000 corresponds to 0.0%~100.0%			W/R

Torque Mode-FWD Upper Frequency Limit	0x3006 or 0x2006	0~1000 corresponds to 0.0%~100.0%		W/R
Torque Mode-REV Upper Frequency Limit	0x3007 or 0x2007	0~1000 corresponds to 0.0%~100.0%		W/R
PID Target (Communication)	0x3008 or 0x2008	0~1000 corresponds to 0.0%~100.0%		W/R
PID Feedback (Communication)	0x3009 or 0x2009	0~1000 corresponds to 0.0%~100.0%		W/R
Error/Alarm Code Read	0x3010 or 0x2010	0~63 are error codes, 64~ are alarm codes		R
Output terminal status	0x3018 or 0x2018	External borrowed AC drive output terminal, BII0-Y	BIT1-TA1-TB1-TC1 BIT2-TA2-TB2-TC2	W
AO	0x3019 or 0x2019	0~10000 corresponds to output 0V~10V, 0mA~20mA		W

Note:

Other function code addresses are listed in the "Communication Address" column of the function code table.

- When write command (06H) is used to write the F00~F15 parameter group, if the highest bit of the address field of function code parameter is 0, it will be written into the RAM of drive only, and will not be stored during power down; if the high half byte of the address field of function code parameter is 1, it will be written into EEPROM, that is to say, it will be stored during power down. Like F00 group: 0x00XX (write RAM) 0x10XX (stored in EEPROM).

- When write command (06H) is used to write the F16~F29 parameter group, if the highest bit of the address field of function code parameter is 5, it will be written into the RAM of drive only, and will not be stored during power down; if the high half byte of the address field of function code parameter is D, it will be written into EEPROM, that is to say, it will be stored during power down. For example, group F16: 0x50XX (write RAM) 0xD0XX (store in EEPROM); group F17: 0x51XX (write RAM) 0xD1XX (store in EEPROM).

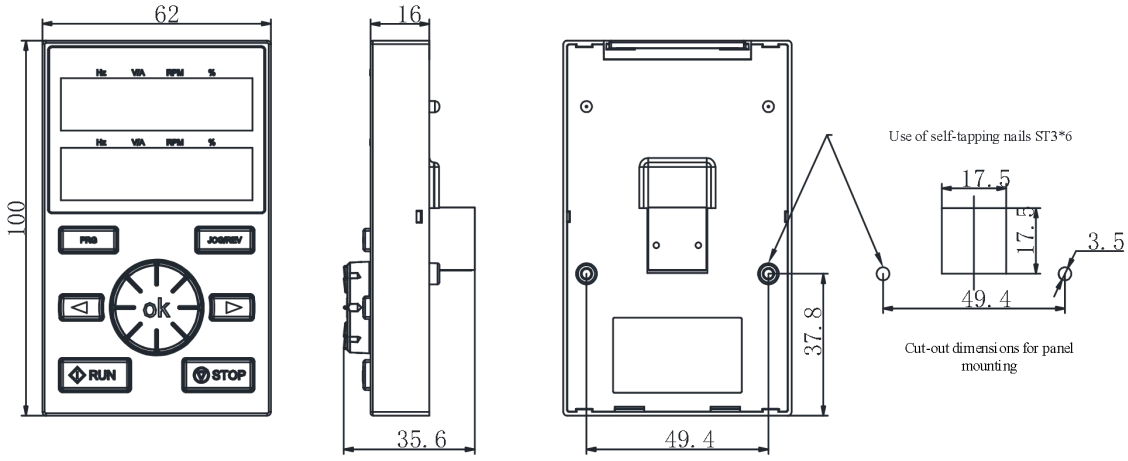
- Abnormal Slave Response Code:

Fault code	Description	Fault code	Description	Fault code	Description
1	Command code error	3	CRC error	4	Illegal address
5	Illegal data	6	Parameters not for modification during operation	8	Drive busy (saving to EEPROM)
9	Parameter over range	10	Reserved parameters not for modification	11	Parameter bytes read error

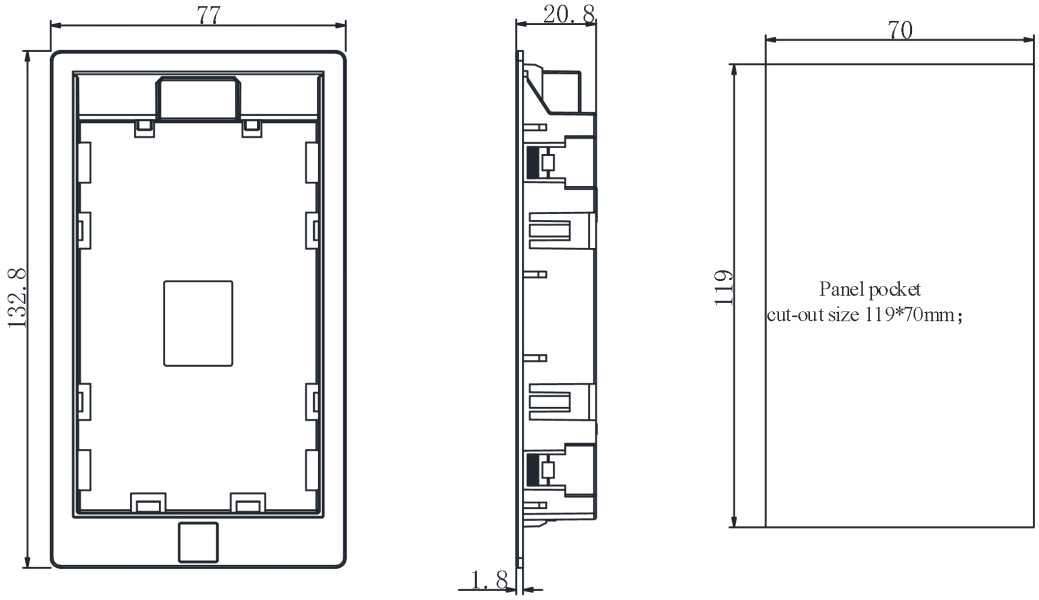
Appendix II: External Keypad Dimensions and Models

- External dual-row keyboard and opening dimensions

Model : KBD300-25 (Note: LCD and LED keypad external dimensions and opening dimensions are fully compatible, unit in the drawing: mm).



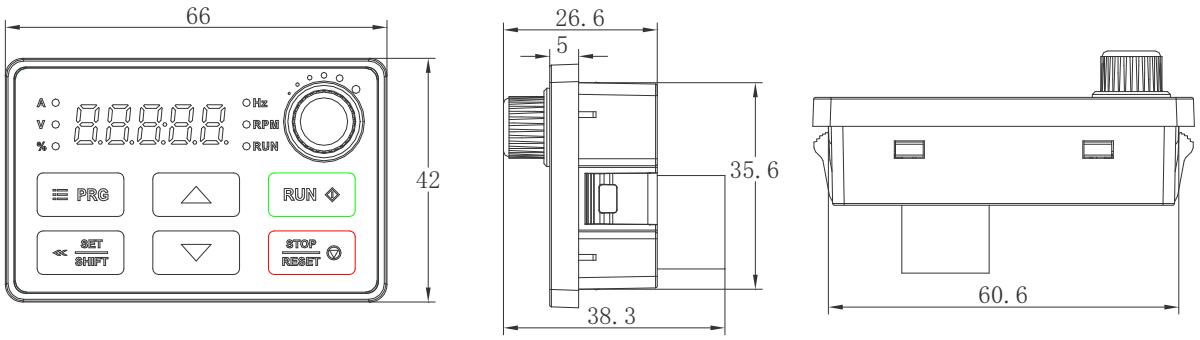
SI01 External Dual-Row Keypad Dimensions



SI01 External Dual-Row Keypad Pocket and Opening Dimensions

- External dual-row keyboard and opening dimensions

Model: KBD10-15(Note: Mounting plate opening size: 61mmx36mm(unit in the drawing: mm).


66
42
A
V
%
Hz
RPM
RUN
PRG
RUN
SET
SHIFT
STOP
RESET
26. 6
5
35. 6
38. 3
60. 6