TETRANCA

T580 Series

HIGHER ORDER VARIABLE FREQUENCY DRIVE

User Manual

This manual describes how to use the T580 series frequency inverters correctly. Be sure to read this manual carefully before using (installation, operation, maintenance, inspection, etc.) the inverter. Also, please use the product only after understanding its safety precautions.

Caveat

- In order to illustrate detailed parts of the product, the illustrations in this manual are sometimes shown with the outer cover or safety cover removed.
- When using this product, be sure to mount the case or cover as specified and follow the instructions.
- The illustrations in this manual are for illustrative purposes only and may differ from the product you ordered.
- The contents of this manual are subject to change without notice due to product upgrades or changes in specifications, as well as to improve the convenience and accuracy of the manual.
- If you need to order the instruction manual due to damage or loss, please contact our regional agents or directly contact our customer service centre.
- If you still have some questions about the use of the product, please contact our customer service centre.

CATAIOG

Chapter I
Product Overview

1.1 Security matters

To ensure safe and proper use of this product, please use the product only after you fully understand the safety precautions described in this manual.

Warning signs and their meanings

The following symbols are used in this manual to indicate that the location is an important one regarding safety. Failure to observe these precautions may result in personal injury or death, damage to this product and associated systems.

⚠ 危险	DANGER: If operated incorrectly, it may cause death or a major safety incident.
⚠ 注意	Note: If done incorrectly, minor injuries may result.

Operational qualifications

This product must be operated by trained professionals. Moreover, the operator must be trained in professional skills, be familiar with the installation, wiring, operation and maintenance of the equipment, and respond correctly to various emergencies that arise during use.

Security guidance

Warning signs are presented for your safety and are measures taken to prevent injury to the operator and damage to this product and associated systems; please read this manual carefully before use and strictly follow the safety rules and warning signs in this manual.

Correct transport,storage, installation, and careful operation and maintenance are essential for the safe operation of the frequency inverter. In the transport and storage period to ensure that the frequency converter is not subjected to shock and vibration, but also must ensure that the storage in a dry, non-corrosive gases, no conductive dust and ambient temperature of less than 60 ℃ place.

★ This product carries a hazardous voltage and it controls a potentially hazardous motion mechanism that may cause personal injury or death and damage to the product and associated systems if it is not observed or operated in accordance with this manual.

★ Do not perform wiring work while the power is on, as this may cause death by electric shock. When performing wiring, inspection, or maintenance work, disconnect the power supply

to all related equipment, make sure that the DC voltage in the main circuit has dropped to a safe level, and wait 5 minutes before performing the related work.

★ Power lines, motor lines, control lines must be tightly connected, the grounding terminal must be reliably grounded, and the grounding resistance is less than 10Ω.

★ Human static electricity can seriously damage internal sensitive devices. Observe the measures and methods specified in the electrostatic discharge prevention (ESD) measures before carrying out related operations, otherwise the frequency inverter may be damaged.

★ Since the output voltage of the frequency inverter is a pulse waveform, if there is a device such as a capacitor for power factor improvement or a varistor for lightning protection installed on the output side, be sure to remove or modify it on the input side of the frequency inverter.

★ Do not add switching devices such as circuit breakers and contactors to the output side of the frequency inverter (if you must connect switching devices to the output side, you must ensure that the output current of the frequency inverter is zero when the switch operates on the control).

★ No matter where the malfunction occurs in the control equipment, it may cause a production stoppage or a major accident. Therefore, take the necessary external protection measures or back-up equipment.

★ This product may be used only for the purpose specified by the manufacturer and may not be used without permission in special areas related to emergency response, rescue, marine, medical, aviation, nuclear facilities, etc.

★ Maintenance of this product can only be carried out by the Company or by professionals authorised and licensed by the Company. Unauthorised modification or use of accessories not approved by the Company may result in product failure. During maintenance, any defective devices must be replaced in a timely manner.

1.2 Caveat

Use of contactors

If a contactor is added to the power input side of the frequency inverter, do not make the contactor operate on and off frequently, and the interval between ON/OFF through the contactor should not be less than one hour, as frequent charging and discharging will reduce the service life of the capacitors in the frequency inverter.

If a contactor is fitted between the frequency inverter output terminals (U, V, W) and the motor, make sure that the on/off operation is carried out when there is no output from the frequency inverter, otherwise the frequency inverter will be damaged.

lightning protection

Although this series of frequency inverter is equipped with lightning overcurrent protection device, which has certain self-protection ability for induced lightning, customers should also install lightning protection device at the front of the frequency inverter for the place where lightning occurs frequently.

Altitude and derating use

In areas with an altitude of more than 1000m above sea level, the heat dissipation effect of the frequency inverter deteriorates due to thin air, and it is necessary to use it at a reduced rate. Please contact us for technical advice in this case.

Input Power

Do not exceed the operating voltage range specified in this manual for the frequency inverter input power supply, if necessary use a boost or buck device to convert the power supply to the specified voltage range.

Do not change the three-phase frequency inverter to a two-phase input for use, as this will result in malfunction or damage to the frequency inverter.

Output Filtering

When the cable length between the frequency inverter and the motor exceeds 100 metres, it is recommended that an output AC reactor be selected to avoid overcurrents generated by excessive distributed capacitance leading to frequency inverter failure. The output filter is optional according to the site requirements.

The output of the frequency inverter is PWM wave, please do not install capacitors to improve the power factor or varistors for lightning protection on the output side, otherwise it is easy to cause instantaneous overcurrent or even damage to the frequency inverter.

About motor heat and noise

Since the output voltage of the frequency converter is a PWM wave, which contains certain harmonics, the temperature rise, noise and vibration of the motor will increase slightly compared with that of industrial frequency operation.

Scrapping of frequency inverters

Electrolytic capacitors in the main circuit and on printed boards may explode when incinerated, and toxic gases are produced when plastic parts are incinerated. Please dispose of them as industrial waste.

Scope of application

This product is not designed or manufactured to be used in life-critical situations. Please contact us if you need to use this product for manned mobility, medical, aerospace, nuclear energy, or other special applications.

This product is manufactured under strict quality control. If it is to be used in equipment where a major accident or damage may be caused by a malfunction of the frequency inverter, configure a safety device.

1.3 Product information

When you receive the product you ordered, please check the outer package for damage and open the package after confirming that it is intact and undamaged, and confirm that the frequency inverter has no damage, scratches, or dirt (damage caused by the transport of the product does not fall within the scope of the company's "three guarantees"). If you receive the product transport damage, please contact us or the transport company immediately. After confirming that the received product is complete and undamaged, please confirm whether the received frequency inverter model is the same as the product you ordered.

1) Naming rules

T580 - 4 T 11G / 15P B

Code name	Name
T580	Product series number
T510	Product series number

Code name	The input voltage
2	220V
4	380V
5	480V
7	690V

Code name	Number of phases
S	Single phase
T	three-phase

Code name	Constant torque universal adaptive motor power
0.75G	0.75
---	---
710G	710

Code name	Built-in brake unit
Blank	None
B	Yes

Code name	Fan water pump special type suitable for motor power
1.5P	1.5
---	---
800P	800

2) Nameplate

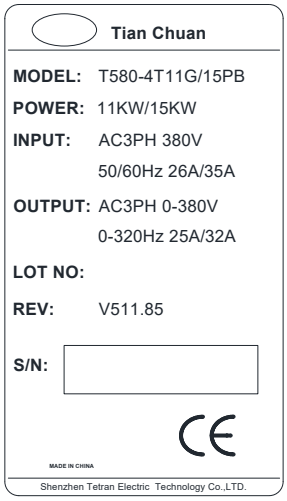


Table 1-1 T580 frequency inverter Model and Technical Data

Frequency inverter Model	Power capacity (of an appliance etc) (KVA)	Output Current (A)	Adapted motors	
			G	P
Single-phase power supply: 220V, 50/60Hz				
T580-0.4G/0.7P-2S	1.0	2.3	0.4	0.5
t580-0.7g/1.5p-2s	1.5	4.0	0.75	1.5
T580-1.5G/2.2P-2S	3.0	7.0	1.5	2.2
t580-2.2g/4.0p-2s	4.0	9.6	2.2	3.7
Three-phase power supply: 380V, 50/60Hz				
t580-0.7g/1.5p-4t	1.5	2.1	0.75	1.5
T580-1.5G/2.2P-4T	3.0	3.8	1.5	2.2
t580-2.2g/4.0p-4t	4.0	5.1	2.2	3.7
t580-4.0g/5.5p-4t	5.9	9.0	4.0	5.5
T580-5.5G/7.5P-4T	8.9	13.0	5.5	7.5
t580-7.5g/011p-4t	11.0	17.0	7.5	11
t580-011g/015p-4t	17.0	25.0	11.0	15
t580-015g/018p-4t	21.0	32.0	15.0	18.5
t580-018g/022p-4t	24.0	37.0	18.5	22
T580-022G/030P-4T	30.0	45.0	22	30
T580-030G/037P-4T	40.0	60.0	30	37
T580-037G/045P-4T	57.0	75.0	37	45
T580-045G/055P-4T	69.0	90.0	45	55
T580-055G/075P-4T	85.0	110.0	55	75
T580-075G/090P-4T	114.0	150.0	75	90
T580-090G/110P-4T	134.0	176.0	90	110
T580-110G/132P-4T	160.0	210.0	110	132
T580-132G/160P-4T	190.0	253.0	132	160
T580-160G/185P-4T	225.0	304.0	160	185
T580-185G/200P-4T	251.0	360.0	185	200
T580-200G/220P-4T	272.0	380.0	200	220

T580-220G/250P-4T	303.0	426.0	220	250
T580-250G/280P-4T	344.0	465.0	250	280
T580-280G/315P-4T	398.0	520.0	280	315
T580-315G/355P-4T	440.0	585.0	315	355
T580-355G/400P-4T	504.0	650.0	355	400
T580-400G/450P-4T	567.0	725.0	400	450

1.4 Product technical specifications

Table 1-2 T580 frequency inverter Technical Specifications

Sports event		Norm
Electrical source	Input supply voltage	Single-phase/three-phase 220V model: 200V～240V Three-phase 380V model: 380V～440V
	Allowable voltage fluctuation range	-15% to 10%
	Input power frequency	50 Hz or 60 Hz with less than 5 per cent fluctuation
Enter (a password) go out	Maximum Output Voltage	3-phase: 0 to input voltage
	Overload capacity	G-type machine: 150% of rated output current for 60 seconds Model P: 120% of rated output current for 60 seconds
Sue regulate distinguished suffix forming noun from adjective, corresponding -ness or -ity	Control method	VVVF control Speed Sensorless Vector Control (SLVC) Closed-loop flux vector control (FOCPG)
	Operating mode	Speed control, torque control (SLVC, FOCPG)
	Speed range	1:100 (VVVF) 1:200 (SLVC) 1:1000 (FOCPG)
	Speed control accuracy	±0.5% (VVVF) ±0.2 per cent (SLVC) ± 0.05 per cent (FOCPG)
	Frequency control range	0.00 to 5000.0Hz
	Input frequency resolution	Digital input: 0.01Hz/0.1Hz Analogue input: 0.1% of maximum frequency
	Starting torque	150 per cent/0.5 Hz (VVVF) 150 per cent/0.25 Hz (SLVC) 150 per cent/0.00 Hz (FOCPG)
	Torque control accuracy	SLVC: 10 per cent up to 5 Hz, 5 per cent above 5 Hz; FOCPG: 3 per cent
	VVVF characteristics	VVVF curve types: straight line, multipoint, power function, VF separation; Torque raising support: Automatic torque raising (factory setting), manual torque raising
	Frequency Setting Ramp	Supports acceleration and deceleration in straight lines and S-curves; 4 sets of acceleration and deceleration time, setting range 0.00s～6000.0s

	DC bus voltage control	Busbar overvoltage control, busbar undervoltage control
	carrier frequency	1.0kHz～16.0kHz
	activation method	Direct start (DC brake can be superimposed); speed tracking start
	stopping mode	Deceleration stop (DC braking can be superimposed); Free stop
Achievement (usually used in the negative) have the possibility of	correspond (by letter etc)	MODBUS communication
	Digital Input Terminal	4 normal digital input terminals 1 high-speed digital input terminal (HDI)
	Digital output terminals	1 high-speed digital output terminal (DO1/HDO) 1 relay output terminal (TA/TB/TC) 1 relay output terminal (KA/KC)
	Analogue input terminals	2 analogue input terminals, support 0-20mA current input or 0-10V voltage input
	Analogue output terminals	2 analogue output terminals, supporting 0-20mA current output or 0-10V voltage output
Bulgaria protect	For protection functions, see Chapter 5, Fault Analysis and Handling.	
Classifier for scores in archery etc territory	Location	Indoors, out of direct sunlight, free of dust, corrosive gases, flammable gases, oil mist, water vapour, dripping water or salt, etc.
	altitude	0 to 3000 m. Above 1000 m, use at a reduced rating; for every 100 m, the rated output current is reduced by 1%.
	environmental temperature	-10℃～+40℃, maximum 50℃. From 40℃, every 1℃ increase, the rated output current is reduced by 1.5%.
	humidity level	Less than 95% RH, no condensation
	vibratory	Less than 5.9m/s^2 (0.5g)
	Storage temperature	-20℃～+60℃
Other than	Installation	Wall-mounted, floor-to-ceiling electric control cabinet type, through-wall type
	protection class	IP20
	Cooling method	forced air cooling

Chapter 2
Mechanical and Electrical Installations

In order to ensure the safe use of the product and maximise the performance of the frequency inverter, please use the product in strict accordance with the environmental, wiring and ventilation requirements described in this chapter.

2.1 External dimensions and mounting of the frequency inverter Hole position

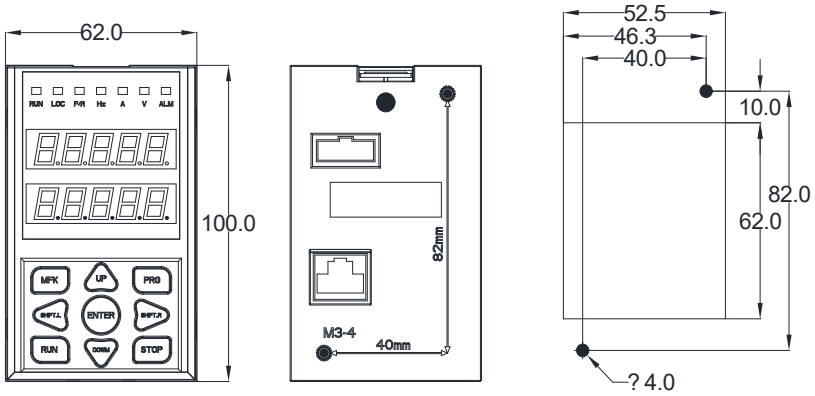
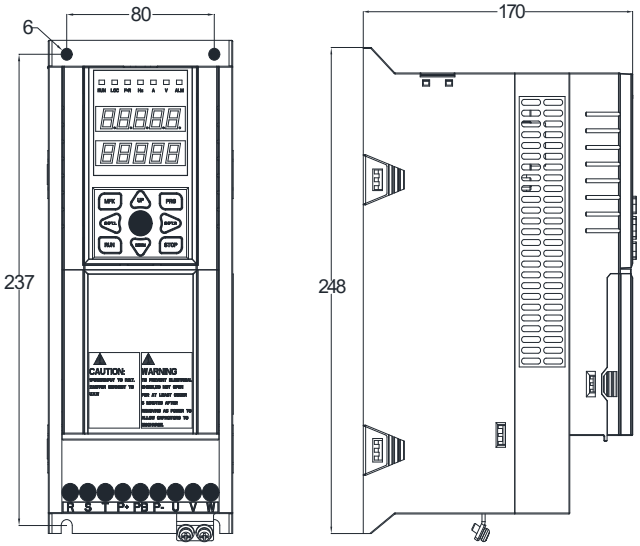


Figure 2-1 Keyboard and Opening Dimensions



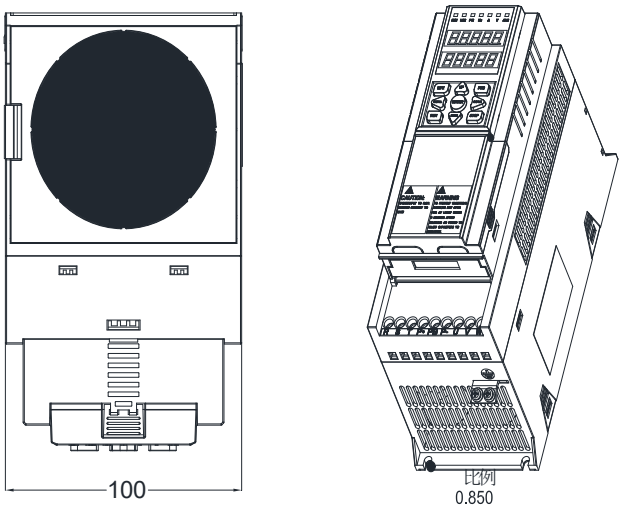


Figure 2-2 T580 External Dimension Drawing

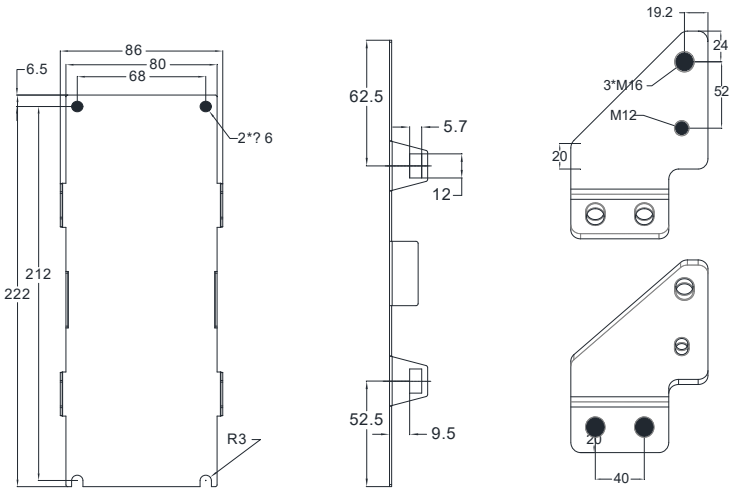


Figure 2-3 T580 Sheet Metal Dimension Drawing

Table 2-1 External Dimensions of T580 Plastic Case Structure

Frequency inverter Model	Overall dimensions (mm)				Mounting dimensions (mm)				Diameter of hole	Gross weight
	W	H	H1	L	A1	A2	B	HB	φd	(Kg)
T580-0.4G-4T	85	200	222	/	68	/	212	/	6	
T580-0.7G-4T										
T580-1.5G-4T										
T580-2.2G-4T										
T580-0.4G-2S										
T580-0.7G-2S										
T580-1.5G-2S										
T580-2.2G-2S										
t580-4.0g/5.5p-4t										
T580-5.5G/7.5P-4T	100	225	248	/	80	/	237	/	6	
T580-7.5G/11P-4T										

2.2 Standard Wiring

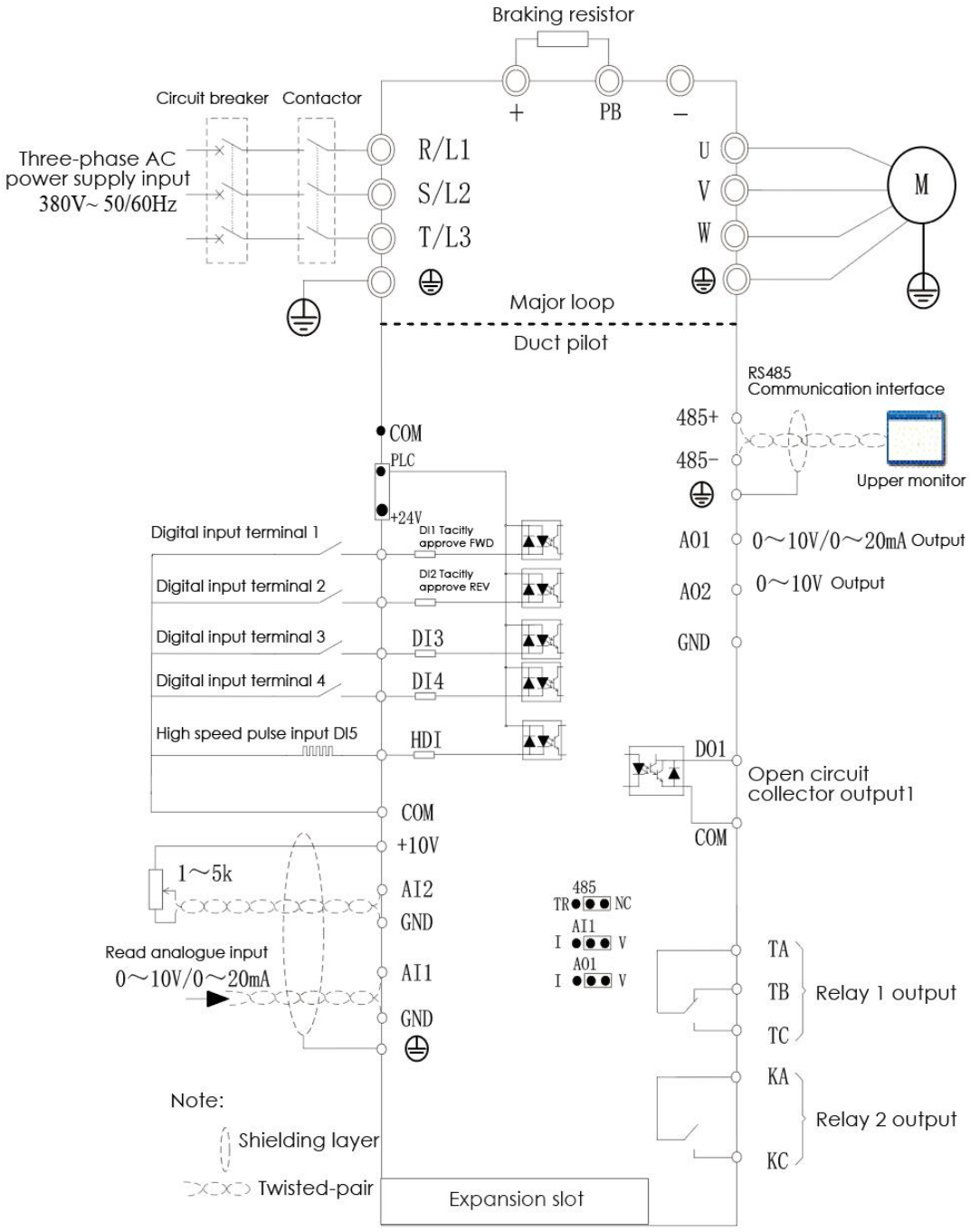


Figure 2-4 Standard Wiring Diagram

2.3 Multi-function input contact connection

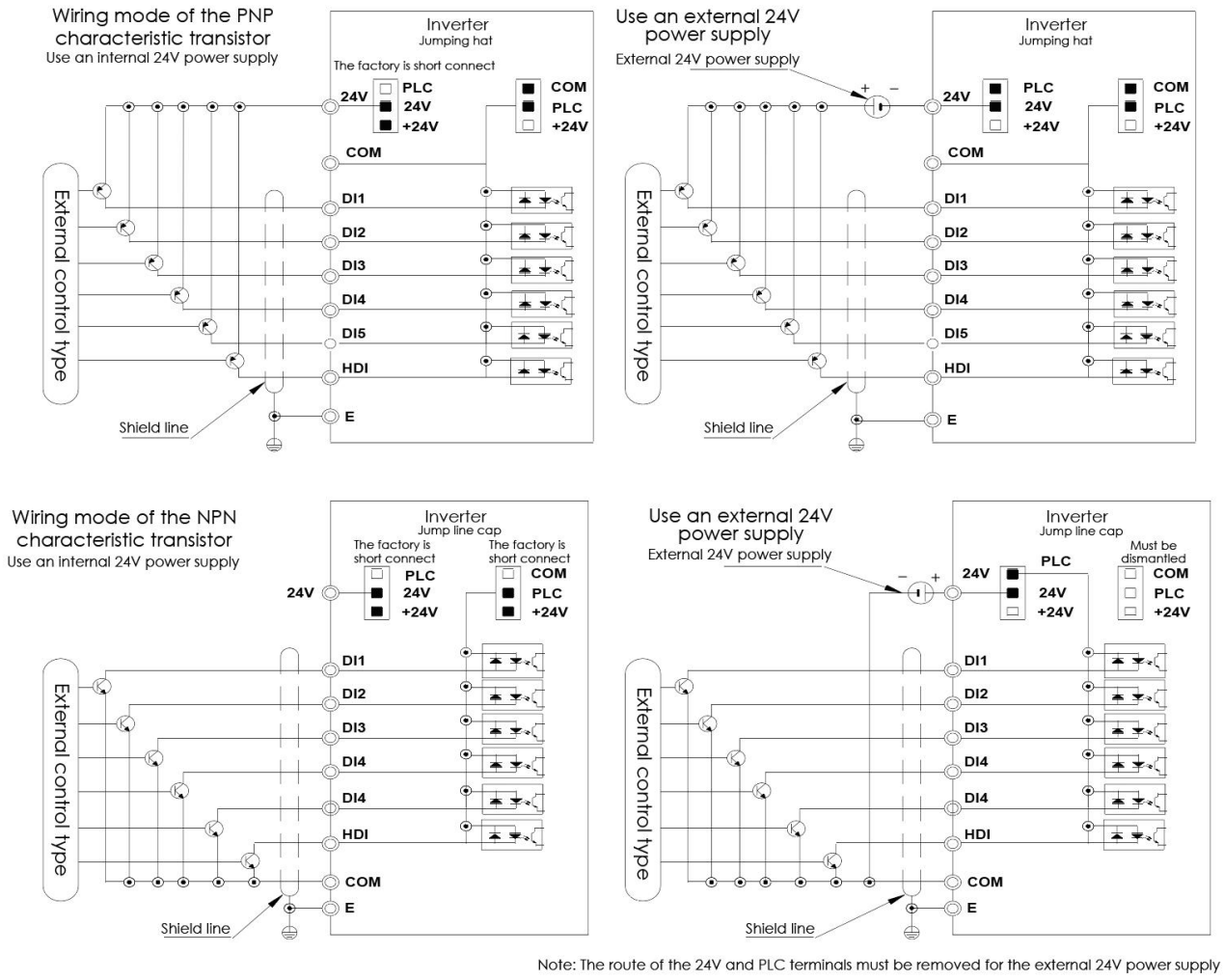


Figure 2-5 Multi-function Input Contact Connection Mode

2.4 Main circuit terminals

1) The main circuit terminals are shown below:

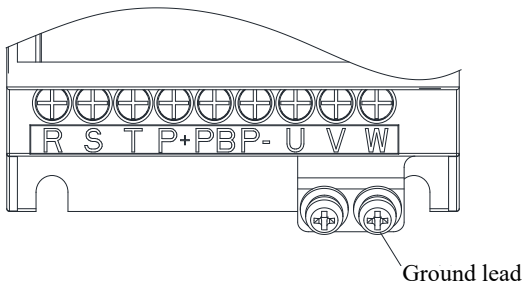


Figure 2-6 T580 Main Circuit Terminal Schematic

2) Description of main circuit terminal definitions

Terminal Marking	Name (of a thing)	Instructions
r/l1, s/l2, t/l3	Three-phase power input terminal	AC input three-phase power connection point
P+, P-	DC bus positive and negative terminals	Common DC bus input point, connection point for external brake units 45kW and above
P+, PB	Brake Resistor Connection Terminal	Built-in brake unit connection point, 37kw and below support
P+, P1	External reactor connection terminals	External reactor connection point
U, V, W	frequency inverter output terminals	Connecting a three-phase motor
⏚	ground terminal	ground terminal

2.5 Control circuit terminals

1) The control circuit terminals are shown below:

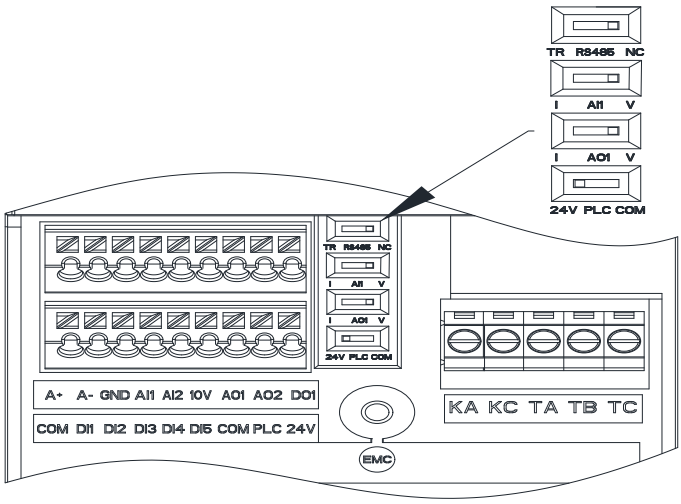


Figure 2-7 T580 Control Circuit Terminal Schematic

2) Description of control terminal definitions:

Table 2-2 T580 Control Circuit Terminal Definition Description

Form	Terminal Symbols	Terminal Name	Functional Description
Power supply	+10V-GND	External +10V power supply	Supply +10V externally, max. output current: 10mA Generally used as external potentiometer power supply, potentiometer resistance range: 1kΩ~10kΩ.
	+24V-COM	External +24V power supply	Provide +24V external power supply, generally used as the digital input and output terminals and external sensor power supply Maximum output current: 200mA
Analogue importation	AI1-GND	Analogue input terminal 1	1、Input voltage range：DC 0V~10V 2、Input impedance: 22kΩ
	AI2-GND	Analogue input terminal 2	1. Input range: DC 0V~10V/4mA~20mA, determined by the J4 jumper selection on the control board. 2、Input impedance: 22kΩ for voltage input, 500Ω for current input.
Numeric importation	DI1-COM	Digital Input 1	1. optical coupling isolation. 2、Input impedance: 2.4kΩ 3、Voltage range at level input: 9V~30V
	DI2-COM	Digital Input 2	
	DI3-COM	Digital Input 3	
	DI4-COM	Digital Input 4	
	DI5-COM	Digital Input 5	
	HDI-COM	High-speed pulse input	
Analogue exports	AO1-GND	Analogue output 1	Voltage or current output determined by corresponding jumper selection on the control board Output voltage range: 0V~10V Output current range: 0mA~20mA
	AO2-GND	Analogue output 2	
Numeric exports	DO1/HDO-COM	Digital output	Optical coupling isolation, bipolar open collector output, support 0~50.00kHz pulse output Output voltage range: 0V~24V Output current range: 0mA~50mA
Relay (electronics) exports	T/A-T/B	Normally closed terminal	Contact drive capability: AC250V, 3A, COSø=0.4 DC 30V, 1A
	T/A-T/C	Normal open terminal	
	K/A-K/C	Normal open terminal	

Chapter 3
Keyboard and Operation

3.1 LED Keypad Interface

With the operation panel, you can modify the functional parameters of the frequency converter, monitor the working status of the frequency converter and control the operation of the frequency converter (start, stop), etc. Its appearance and functional areas are shown in Figure 3-1:

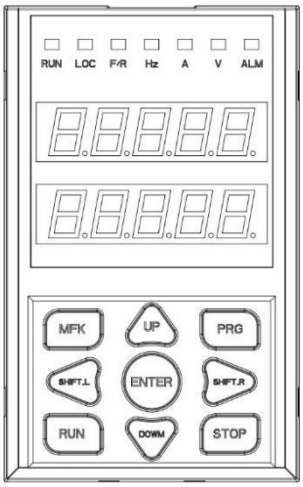


Figure 3-1 Schematic diagram of operation panel

1) Function indicator description:

RUN: When the light is off, it means that the frequency inverter is in the stopping state, when the light is on, it means that the frequency inverter is in the running state, and flashing means that it is in the decelerating stopping state.

F/R: Forward and Reverse indicator, light indicates positive rotation.

ALM: Fault indicator, in fault condition.

2) Unit indicator:

Hz	unit of frequency
A	unit of electric current
V	unit of voltage

3) Digital display area:

The 5-digit LED display shows the set frequency, output frequency, various monitoring data and alarm codes.

4) Description of what the keys do:

keystrokes	Name (of a thing)	Functionality
PRG	Programming key	First level menu entry or exit
ENT	Confirmation key	Step-by-step access to the menu screen and confirmation of setting parameters
△	Incremental key	Incrementing of data or function codes
▽	Decrement key	Decrement of data or function codes
▷	Shift key	Under the shutdown and running display interface, the display parameters can be selected cyclically; when modifying the parameters, the modification bit of the parameters can be selected
RUN	Run key (on a computer keyboard)	For running operations in keyboard mode
STOP	Stop/Reset	For stopping operation in running state; for fault reset operation in case of fault; Running deceleration stop, triple press STOP key, emergency free stop.
MFK	Multifunction key	Switching between selected functions according to the setting of A6-01

3.2 LED Keypad Operation

The display of the T580 digital keypad is divided into three levels, from the top to the bottom: the monitor menu level, the function code selection menu level, and the function code content viewing and editing menu level, as shown in Figure 3-2.

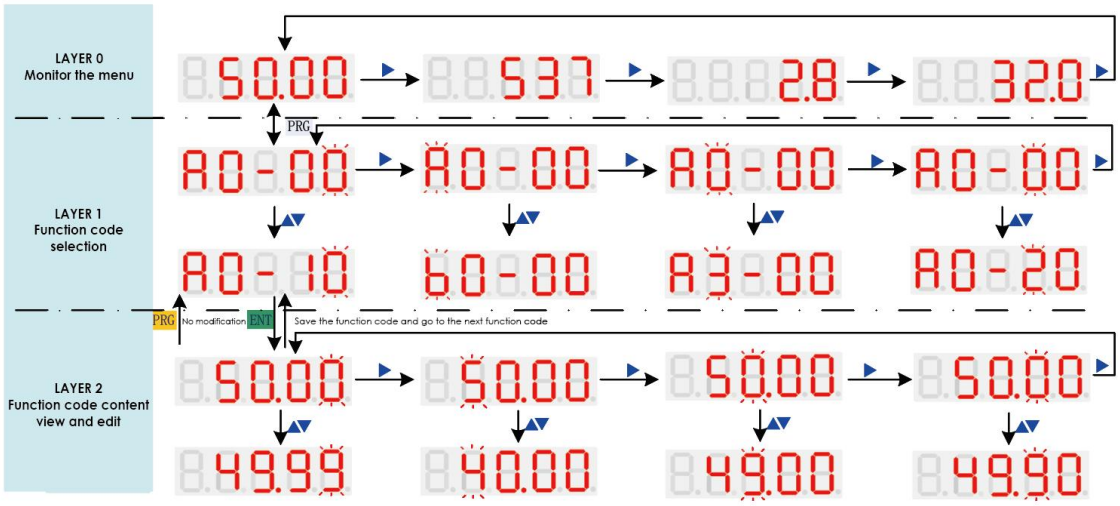


Figure 3-2 Keyboard Operation Schematic

Chapter 4
Troubleshooting Analysing and Handling

The following types of faults may be encountered during the use of the frequency inverter, please refer to the following method for simple fault analysis.

Malfunctions coding	Fault name	Troubleshooting	Troubleshooting measures
Err.01	Drive short circuit	1. Frequency inverter output circuit short circuit 2. Motor and frequency inverter wiring is too long 3. Module overheating 4.Loose wiring inside the frequency inverter 5. Main control board abnormality 6. Driver board abnormality 7. Frequency inverter module abnormality	1. Troubleshooting peripheral faults 2. Adding reactors or output filters 3. Check the air ducts and fans and eliminate any problems 4. Plug in all connecting cables 5. Seeking technical support 6. Seek technical support 7. Seeking technical support
Err.02	Drive shorted to ground		
Err.03	Hardware overcurrent		
Err.04	Fast Current Limit Timeout	1. Whether the load is too large or occurs motor blocking 2. Frequency inverter selection is small	1. Reduce the load and check the motor and mechanical conditions 2. Select a larger power level frequency inverter
Err.05	Busbar overvoltage	1. High input voltage 2. The existence of external drag motor operation 3. The acceleration and deceleration time is too short 4. No braking unit and braking resistor installed	1. Adjust the voltage to the normal range 2. Cancel this power or add braking resistance 3. Increase acceleration time 4. Adding brake unit and resistor
Err.06	Busbar undervoltage	1. Instantaneous power failure 2. Frequency inverter input voltage is not in the range of specification requirements 3. Bus voltage is not normal 4. Rectifier bridge and buffer resistance is not normal 5. Driver board abnormality 6. Control board abnormality	1. Reset fault 2. Adjust the voltage to the normal range 3. Seeking technical support 4. Seek technical support 5. Seeking technical support 6. Seek technical support
Err.07	Input out of phase	1. three-phase input power is not normal 2. Driver board abnormality 3. Lightning protection board abnormality 4. Main control board abnormality	1. Check and eliminate problems in the peripheral wiring 2. Seek technical support 3. Seek technical support 4. Seek technical support
Err.08	Output Out-of-Phase	1. The frequency inverter to the motor lead is not normal 2. Motor running frequency inverter three-phase output imbalance 3. Driver board abnormality 4. Module exceptions	1. Troubleshooting peripheral faults 2. Check whether the motor winding is normal and troubleshooting 3. Seeking technical support 4. Seek technical support

Malfunctions coding	Fault name	Troubleshooting	Troubleshooting measures
Err.09	Contactor does not engage	1. Instantaneous power failure 2. Frequency inverter input voltage is not in the range of specification requirements 3. Bus voltage is not normal 4. Rectifier bridge and buffer resistance is not normal 5. Driver board abnormality 6. Control board abnormality	1. Reset fault 2. Adjust the voltage to the normal range 3. Seeking technical support 4. Seek technical support 5. Seeking technical support 6. Seek technical support
Err.10	Current Detection Fault	1. Check the Hall device abnormality 2. Driver board abnormality 3. Main control board abnormality	1. Replacement of Hall devices 2. Replace the driver board 3. Seeking technical support
Err.11	Encoder feedback faults	1. Incorrect encoder parameter setting 2. Incorrect encoder wiring	1.Correctly set the encoder parameters 2. Check the encoder wiring
Err.12	Excessive speed deviation	1. Incorrect encoder parameter setting 2. No parameter identification 3. Speed deviation is too large detection parameters are not set reasonably	1.Correctly set the encoder parameters 2. Motor parameter identification 3. Reasonable setting of detection parameters according to the actual situation
Err.13	Motor tuning fault 1	1. Motor parameters are not set according to the nameplate 2.Parameter identification process timeout	1.Correctly set the motor parameters according to the nameplate 2. Check the frequency inverter to motor lead
Err.14	Motor tuning fault 2	1. Motor parameters are not set according to the nameplate 2.Parameter identification process timeout	1.Correctly set the motor parameters according to the nameplate 2. Check the frequency inverter to motor lead
Err.17	Frequency converter overload	1. Whether the load is too large or occurs motor blocking 2. Frequency inverter selection is small	1. Reduce the load and check the motor and mechanical conditions 2. Select a larger power level frequency inverter
Err.18	Motor overload	1. Whether the motor protection parameters are set appropriately 2, whether the load is too large or occurs motor blocking 3、Motor selection is small	1. Set this parameter correctly 2. Reduce the load and check the motor and mechanical conditions 3. Select the motor with bigger power level
Err.19	IGBT overheating	1. High ambient temperature 2. Air duct blockage 3. Fan damage 4. Module thermistor damage 5. Damage to the frequency inverter module	1. Reduce the ambient temperature 2. Clean the air duct 3. Replace the fan 4. Replacement of thermistor 5. Replacement of frequency inverter module
Err.20	Motor over-temperature	1. High ambient temperature 2. Motor selection is too small 3. Motor frequently works in overload state 4. Temperature sensor failure	1. Reduce the ambient temperature 2. Clean the air duct 3. Replace the fan 4. Replacement of thermistor

Malfunctions coding	Fault name	Troubleshooting	Troubleshooting measures
Err.21	External equipment failure	Communication from the host computer to the drive, faulty external equipment	Check for faults in other equipment in the system
Err.22	Motor overspeed fault	1. Incorrect encoder parameter setting 2. No parameter identification 3. the motor over speed detection parameters are not set reasonably	1. Correctly set the encoder parameters 2. Motor parameter identification 3. Reasonable setting of detection parameters according to the actual situation
Err.23	unloading fault	1. Frequency inverter running current is less than the set parameters	1. Confirm that the load is disengaged 2. Whether the parameter setting is in line with the actual operating conditions
Err.24	Motherboard EEP read/write failure	1. EEPROM operation is too frequent 2. EEPROM chip damage	1. The upper computer reasonable operation EEPROM 2. Replace the main control board
Err.25	Keypad EEP read/write failure	1. EEPROM chip damage	1. Replacement of the keyboard
Err.26	485 Communication Failure	1. The upper computer is not working properly 2. Communication line is not normal 3. Incorrect setting of communication parameter groups	1. Check the upper computer wiring 2. Check the communication connection line 3. Correctly set communication parameters
Err.27	PID feedback disconnection	1. PID feedback is less than AA-23 and AA-24 is not 0 2. PID feedback greater than AA-25 and AA-26 is not 0	1. Check the PID feedback signal 2. AA-23 and AA-25 set reasonable values
Err.28	Customised faults 1	1. DI terminal input user-defined fault 1 signal	1. Reset operation
Err.29	Customised faults 2	1. DI terminal input user-defined fault 2 signal	1. Reset operation
Err.32	Parameter copy error	1. the two machines software version number is not consistent 2. Communication cable is not connected or communication port selection error 3. Communication parameters such as baud rate or slave address are set incorrectly.	1. Check the software version 2. Check communication wiring 3. Check communication parameters

Appendix A Modbus Communication Protocol

A.0 Networking approach

There are two ways to network frequency inverters: the single-master/multiple-slave method and the single-master/single-slave method.

A.1 Interface

RS485 asynchronous half-duplex.

The default data format of RS485 terminal is: 1-8-N-1, and the default baud rate is: 9600bps.

A.2 Means of communication

1. The frequency inverter is a slave with master-slave point-to-point communication. The slave does not answer when the master sends commands using the broadcast address;

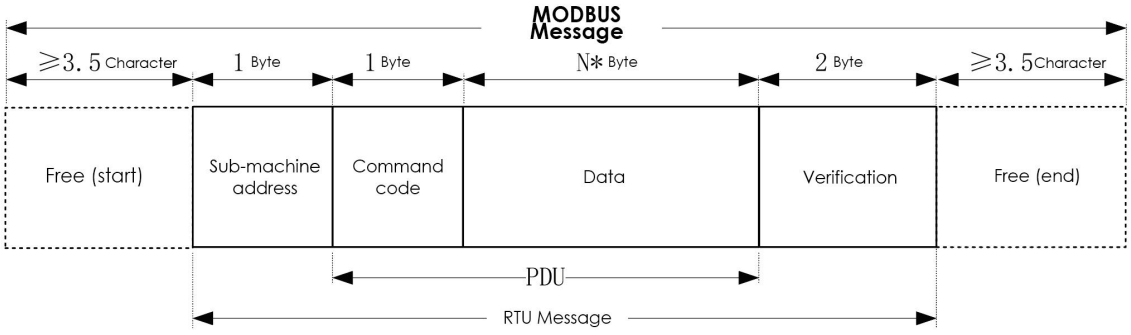
2. Set the frequency inverter's local address, baud rate and data format using the slave operation panel or serial communication;

3. The slave reports the current fault information in the answer frame of the most recent poll to the master;

4. The frequency converter uses a local RS-485 interface.

A.3 Message format

T580 frequency inverter Modbus messages include a start flag, an RTU message, and an end flag.



Where RTU message includes address code, PDU and CRC checksum.PDU includes command code and data part.

- Data Frame Field Description:

Start of frame START	Greater than 3.5 characters transmission time idle.	
Slave Address ADDR	Communication address range: 1 to 247 slave address, 0 is broadcast address.	
Command Code CMD	Command code	Descriptions
	0x03	Reads multiple registers of the frequency inverter.
	0x06	Write a single register to the frequency inverter.
	0x10	Write multiple registers to the frequency inverter.
Numbers	It mainly includes register address, number of registers and register contents, etc. The specific format is shown in section A.4.	
CRCL	CRC16 checksum value. Transmitted with the low byte first and the high byte second.	
CRCH		
End of frame END	Greater than 3.5 characters transmission time idle.	

A.4 Explanation of command codes

A.4.1 Command code 0x03 to read multiple registers

- Request PDU

Command code	1 byte	0x03
Starting address	2 bytes	0x0000 to 0xFFFF (high 8-bit address first)
Number of registers	2 bytes	0x0001 to 0x0010 (1 to 16, high 8 bits first)

- Response PDU

Command code	1 byte	0x03
Byte count	1 byte	2*N (N is the number of registers)
Register value	2*N bytes	The higher 8 bits of the register value come first; The register value of the start address is sent first.

- Error PDU

Command code	1 byte	0x83
Exception code	1 byte	See Section A.5 Exception Response Messages

WARNING: Currently Modbus protocol 0x03 command code does not support reading multiple function codes across groups, and will reply with an error frame if it exceeds the number of function codes in the current group!

A.4.2 Command code 0x06 to write a single register

- Request PDU

Command code	1 byte	0x06
Starting address	2 bytes	0x0000 to 0xFFFF (high 8-bit address first)
Register value	2 bytes	0x0000 to 0xFFFF (register value high 8 bits first)

- Response PDU

Command code	1 byte	0x06
Register address	2 bytes	0x0000 to 0xFFFF (high 8-bit address first)
Register value	2 bytes	0x0000 to 0xFFFF (register value high 8 bits first)

- Error PDU

Command code	1 byte	0x86
Exception code	1 byte	See Section A.5 Exception Response Messages

A.4.3 Command Code 0x10 Write Multiple Registers

- Request PDU

Command code	1 byte	0x10
Starting address	2 bytes	0x0000 to 0xFFFF (high 8-bit address first)
Number of registers	2 bytes	0x0001 to 0x0010 (1 to 16, high 8 bits first)
Byte count	1 byte	2*N (N is the number of registers)
Register value	2*N bytes	The higher 8 bits of the register value come first; The register value of the start address is sent first.

- Response PDU

Command code	1 byte	0x10
Starting address	2 bytes	0x0000 to 0xFFFF (high 8-bit address first)
Number of registers	2 bytes	0x0001 to 0x0010 (1 to 16, high 8 bits first)

- Error PDU

Command code	1 byte	0x90
Exception code	1 byte	See Section A.5 Exception Response Messages

A.5 Exception response messages

Abnormal Response Command Code = Normal Response Command Code + 0x80, the values and meanings of the abnormal code are shown in the following table:

Exception code	Name	Descriptions
0x01	Invalid command code	Invalid command code received from slave
0x02	Illegal register address	The register address received from the slave does not exist; The number of registers read or written is out of range; The number of bytes in the PDU is not equal to the number of registers when writing multiple registers.
0x03	frame format error	CRC checksum failed; Incorrect frame length;
0x04	Data out of range	The data received from the slave is out of the range of minimum to maximum values of the corresponding registers.
0x05	Read and write requests rejected	Write operations to read-only registers; Running state write operations to running read-only registers.

A.6 CRC checks

Considering the need to improve the speed, CRC-16 is usually implemented in a tabular way. The following is the C source code for the implementation of CRC-16, note that the final result has exchanged the high and low bytes, i.e. the result is the CRC checksum to be sent:

```
Uint16CRC16(const Uint16 *data, Uint16 len)
{
Uint16 crcValue = 0xffff;
Uint16 i.
while (len--)
{
crcValue ^= *data++;
for (i = 0; i <= 7; i++)
{
if (crcValue & 0x0001)
```

```
{
crcValue = (crcValue >> 1) ^ 0xa001;
}
else
{
crcValue = crcValue >> 1;
}
}
}
return (crcValue);
}
```

A.7 Register Addresses

The T580 frequency inverter register address is 16-bit data, the high 8 bits indicate the function code group number, the low 8 bits indicate the serial number within the group, and the high 8 bits come first when sending. When performing register write operations, in order to avoid memory damage caused by frequent EEPROM writes, when operating the function codes, it is sufficient to operate only the RAM contents of frequently operated function codes, and only when it is necessary to deposit into the EEPROM, use the EEPROM address to perform the function code operation.

The function code address consists of the function code group number and the serial number within the group, and the address content of the high 8 bits of the AX group = 0x40 + X (hex)

Sequence number in the group is decimal, e.g. 30 means low 8 for address 0x1E

A1-30 Address = (0x4100 + 0x1E)=0x411E,

When a write operation is performed on A1-30 and a save to EEPROM is required, the operation address = 0x411E + 0x8000 = 0xC11E.

Other function code communication addresses and so on.

The register address table for the T580 frequency inverter is shown below:

Address space	Descriptions	
	RAM address	EEPROM address
Groups A0 to AF	4000H to 4FFFH	C000H to CFFFH
Groups B0 to BF	5000H to 5FFFH	D000H to DFFFH
Groups C0 to CF	6000H to 6FFFH	E000H to EFFFH
Groups D0 to DF	7000H to 7FFFH	Not have
Correspond (by letter etc) Categorical address	0x2000	Communication control commands, defined as follows: 0x0000: No communication command; 0x0001: Positive rotation operation; 0x0002: Reverse run; 0x0003: Positive rotation point movement; 0x0004: Reverse dot motion; 0x0005: Free parking; 0x0006: Slow down and stop; 0x0007: Quick stop; 0x0008: Fault reset.
	0x2001	DO communication control Bit0: DO1; Bit1: RO1; Bit2: RO2; Bit3: EDO1 Bit4: EDO2; Bit5: EDO3; Bit6: EDO4; Bit7: EDO5 Bit8: VDO1; Bit9: VDO2; Bit10: VDO3; Bit11: VDO4 Bit12～Bit15: Reserved
	0x2002	AO1 communication control 0 to 0x7FFF corresponds to 0.0 to 100.0%.
	0x2003	AO2 communication control 0 to 0x7FFF corresponds to 0.0 to 100.0 per cent
	0x2004	HDO communication control 0～0x7FFF corresponds to 0.0～100.0%
	0x2005	Communication frequency given. 0.01% (-100.00% to 100.00%)
	0x2006	Communication ceiling frequency. 0.01 per cent (-100.00 per cent to 100.00 per cent)
	0x2007	Process PID given. 0.01% (-100.00% to 100.00%)
	0x2008	Process PID feedback. 0.01% (-100.00% to 100.00%)
	0x2009	Electric torque limit. 0.1% (0 to 300.0%)
	0x200A	Generation torque limit. 0.1% (0 to 300.0%)
	0x200B	Communication torque given. 0.01% (-300.00% to 300.00%)
	0x200C	Torque control positive frequency limit. 0.01% (-100.00% to 100.00%)
	0x200D	Torque control reversal frequency limit. 0.01% (-100.00% to 100.00%)
	0x200E	VF separation voltage given. 0.1% (0 to 100.0%)
	0x200F	Communication external fault setting.
Converter state of affairs	0x3000	1: forward; 2: reverse; 3: shutdown
Converter malfunctions	0x3001	Refer to Chapter 5 for description of fault codes.

Appendix B Function Code List

Symbol Description:

"☆" indicates that the set value of this parameter can be modified at any moment of the frequency inverter.

"★" indicates that the set value of this parameter cannot be changed when the frequency inverter is in running state.

"●" indicates that the value of the parameter is the actual test record value and cannot be changed.

Batch number	Function Name	Mail address	
A - Standard Functional Group		RAM	EEPROM
Group A0	Basic Functions	40XXH	C0XXH
Group A1	Start-stop control	41XXH	C1XXH
Group A2	Digital input	42XXH	C2XXH
Group A3	Digital output	43XXH	C3XXH
Group A4	AI&HDI	44XXH	C4XXH
Group A5	AO&HDO	45XXH	C5XXH
Group A6	Keyboard and Display Settings	46XXH	C6XXH
Group A7	Troubleshooting and Setting 1	47XXH	C7XXH
Group A8	Troubleshooting and Setting 2	48XXH	C8XXH
Group A9	Multi-speed with PLC	49XXH	C9XXH
Group AA	Process PID parameters	4AXXH	CAXXH
Group AB	Built-in Logic Functions	4BXXH	CBXXH
AC group	Communication parameter sets	4CXXH	CCXXH
B - Performance Parameter Group		RAM	EEPROM
Group B0	Motor parameters	50XXH	d0XXH
Group B1	Motor VF control parameters	51XXH	d1XXH
Group B2	Motor Vector Parameters	52XXH	d2XXH
Group B3	Torque control parameter set	53XXH	d3XXH
Group B4	Encoder parameter set	54XXH	d4XXH
Group B5	Control Enhancement Parameter Set	55XXH	d5XXH
C-Industry-specific parameter sets		RAM	EEPROM
Group C0	Reserve	60XXH	E0XXH
.....	.....	.....	.....
CF Group	Reserve	6FXXH	EFXXH
D-Monitoring parameter set		RAM	EEPROM
Group D0	Monitoring group 1 (system operation monitoring volume)	70XXH	-

Group D1	Monitoring group 2 (standard function monitoring volume)	71XXH	-
D2-Group	Monitoring group 3 (user function monitoring volume)	72XXH	-
DE Group	Monitoring group E (fault messages)	7EXXH	-
Group DF	Monitor Group F (Drive Information)	7FXXH	-

Note: XX indicates the hexadecimal value of the serial number (decimal) within the function code group, e.g. A0-20 RAM address 4014H, EEPROM address C014H.

Note: This manual applies to T580 frequency inverter products.

FUNC	Name	Descriptions	Factory default	Attribute	Address
A0 - Basic Functional Group					
A0-00	Product Information	Thousand digits:Single-phase/Three-phase 1:single-phase;3:three-phase Hundred:Voltage level 2:220V;4:380V;5:500V;6:660V;A:1140V Tenth/Individual:Power	Model Decision	●	4000H
A0-01	Control mode selection	Bit: Motor 1 control mode 0: VVVF (scalar control) 1: SLVC (Sensorless vector control) 2: FOCPG (closed-loop vector control) Ten positions: Motor 1 operation mode selection 0: Speed control 1: Torque control Hundred bits: Motor 2 control mode Same bit (Motor 1 control mode) Thousand bits: Motor 2 operation mode selection Same as ten bits (Motor 2 operation mode selection) Ten thousand bits:Motor selection 0: Motor 1 1: Motor 2	00000	★	4001H
A0-02	Run command source	0: Keypad 1: Terminal 2: Communication	0	★	4002H
A0-04	Frequency command unit	0: 0.01Hz 1: 0.1Hz	0	★	4004H
A0-05	Maximum frequency	10.00 to 500.00Hz	50.00 Hz	★	4005H
A0-06	Upper Frequency Selection	0: Maximum frequency 1：AI1 2：AI2 3：AI3 4：HDI 5：Communication	0	☆	4006H
A0-07	Lower frequency	0.00Hz to maximum frequency	0.00Hz	★	4007H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A0-08	Below Lower Frequency Limit Handling	0: Run at lower frequency limit 1: Stop after delay 2: Run at zero speed	0	★	4008H
A0-09	Shutdown delay below lower frequency limit	0.000s～60.000s	0.000s	★	4009H
A0-10	Preset Frequency	0.00 to maximum frequency	50.00 Hz	★	400AH
A0-11	Main Frequency Source Selection	0: Digital setting 1：AI1　2：AI　3: AI3　4: AI4 5: HDI　6: Communication 7: Multi-segment　8: Process PID 9: Built-in PLC	0	★	400BH
A0-12	Auxiliary frequency source selection	Same master frequency source selection	0	★	400CH
A0-13	Auxiliary frequency source reference	0: relative to the maximum frequency 1: relative to the main frequency	0	★	400DH
A0-14	Auxiliary Frequency Gain	0.0 to 300.0 per cent	100.0 percent	★	400EH
A0-15	Frequency setting method	Bit:Frequency setting mode selection 0: Main 1: Auxiliary 2: main and auxiliary operation result 3: Main and auxiliary switching 4: Main and operation result switching 5: Auxiliary, operation result switching Ten: main and auxiliary operation formula 0: main + auxiliary 1：Main-Auxiliary 2：Maximum value of both 3: Minimum value of both	00	★	400FH
A0-21	Carrier frequency	1.0 to 16.0kHz	Model Decision	★	4015H
A0-23	Parameter batch processing	0: No action 11: Restore factory settings (without parameters, self-learning associations and factory parameters) 22: Restore factory settings (all non-factory parameters) 33: Clear fault record 44: Parameter upload 55: Parameter download (Motor, self-learning association and factory parameters not included) 66: Parameter download (all non-factory parameters)	Model Decision	☆	4017H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A1-Start-Stop parameter group					
A1-00	Activation method	0: Direct start 1: RPM tracking mode	0	★	4100H
A1-01	Start-up frequency	0.00Hz to 10.00Hz	0	★	4101H
A1-02	Start-up frequency hold time	0.000s～30.000s	0	★	4102H
A1-03	Fast excitation enable	0: not enabled 1: Enable	0	★	4103H
A1-04	Pre-excitation current	0 to 200% Percentage of rated motor current	Model Decision	★	4104H
A1-05	Pre-excitation time	Automatically calculated when the motor rotor time constant is changed	Model Decision	★	4105H
A1-06	Starting DC braking current	0 to 200% % of rated motor current	100%	★	4106H
A1-07	Start DC braking time	0.000s～30.000s	0.000s	★	4107H
A1-08	RPM tracking method	Bit: Tracking mode 0: Start from maximum frequency 1: Starting from the stop frequency 2: Start from grid frequency Ten bits: Direction selection 0: Search only in the direction of command frequency 1: Search in the other direction after failing to search in the direction of command frequency	0x01	★	4108H
A1-09	RPM tracking deceleration time	0.1s～20.0s	1.0s	★	4109H
A1-10	RPM Tracking Current	10% to 150%	50%	★	410AH
A1-11	Speed tracking compensation factor	0 to 10.00	0.00	★	410BH
A1-12	PM RPM Tracking KP	0.200 to 2.000	0.800	★	410CH
A1-13	PM RPM Tracking KI	0.200 to 2.000	1.000	★	410DH
A1-14	Ticking frequency	0.00 to Fmax	5.00 Hz	☆	410EH
A1-15	Pointing priority	0: Invalid 1: Priority	0	★	410FH
A1-16	Tap acceleration time	0.00 to 600.00s	6.00s	☆	4110H
A1-17	Tap deceleration time	0.00 to 600.00s	6.00s	☆	4111H
A1-18	Evasive frequency 1 lower limit	0.00Hz to Fmax	0.00Hz	☆	4112H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A1-19	Evasive frequency 1 cap	0.00Hz to Fmax	0.00Hz	☆	4113H
A1-20	Evasion frequency 2 lower limit	0.00Hz to Fmax	0.00Hz	☆	4114H
A1-21	Evasive frequency 2 cap	0.00Hz to Fmax	0.00Hz	☆	4115H
A1-22	Evasive frequency 3 lower limit	0.00Hz to Fmax	0.00Hz	☆	4116H
A1-23	Evasive frequency 3 cap	0.00Hz to Fmax	0.00Hz	☆	4117H
A1-24	Over-excitation braking factor	1.00 to 1.50	1.00	☆	4118H
A1-25	Parking	0: Deceleration stop 1: Free parking	0	☆	4119H
A1-26	Stopping DC braking start frequency	0.00Hz to 50.00Hz	0.00Hz	☆	411AH
A1-27	Stopping DC braking current	0 to 200% (% of rated motor current)	50%	☆	411BH
A1-28	Stopping DC braking time	0.000s～30.000s	0.000s	☆	411CH
A1-29	Parking delay frequency	0.00Hz to 20.00Hz	0.00Hz	☆	411DH
A1-30	Parking delay time	0.000s～30.000s	0.100s	☆	411EH
A1-31	Tap stop delay time	0.000s～30.000s	0.100s	☆	411FH
A1-32	degaussing time	0.010s～30.000s	Model Decision	☆	4120H
A1-33	PM shutdown undo current time	0-3000ms	0ms	☆	4121H
A1-34	Running direction	0: forward; 1: reverse	0	☆	4122H
A1-35	Invert the prohibition of selection (physics)	0: inversion not prohibited; 1: prohibited anyway	0	☆	4123H
A1-36	Forward and reverse dead time	0.000s~30.000s	0.000s	☆	4124H
A1-37	Acceleration and deceleration time reference	0: Maximum frequency 1： Motor rated frequency 2： 100Hz	1	★	4125H
A1-38	Acceleration and deceleration time units	0: 1s 1: 0.1s 2: 0.01s	2	★	4126H
A1-39	Acceleration and deceleration curve type	0: Straight line 1: S-curve way 1 2： S-curve way 2	0	★	4127H
A1-40	Acceleration time 1	0.00 to 600.00s	6.00s	☆	4128H
A1-41	Deceleration time 1	0.00 to 600.00s	6.00s	☆	4129H
A1-42	Acceleration time 2	0.00 to 600.00s	6.00s	☆	412AH
A1-43	Deceleration time 2	0.00 to 600.00s	6.00s	☆	412BH

FUNC	Name	Descriptions	Factory default	Attribute	Address
A1-44	Acceleration time 3	0.00 to 600.00s	6.00s	☆	412CH
A1-45	Deceleration time 3	0.00 to 600.00s	6.00s	☆	412DH
A1-46	Acceleration time 4	0.00 to 600.00s	6.00s	☆	412EH
A1-47	Deceleration time 4	0.00 to 600.00s	6.00s	☆	412FH
A1-48	S time of start of acceleration	0.01 to 30.00s	0.50s	☆	4130H
A1-49	S time of end of acceleration	0.01 to 30.00s	0.50s	☆	4131H
A1-50	S time of the start of deceleration	0.01 to 30.00s	0.50s	☆	4132H
A1-51	S time of the end of deceleration	0.01 to 30.00s	0.50s	☆	4133H
A1-52	Acceleration time switching frequency	0.00Hz to Fmax	0.00Hz	☆	4134H
A1-53	Deceleration time switching frequency	0.00Hz to Fmax	0.00Hz	☆	4135H
A1-54	PID deceleration stopping time	0.00 to 600.00s	6.00s	☆	4136H
A1-55	PLC deceleration stop time	0.00 to 600.00s	6.00s	☆	4137H
A1-56	Emergency stop deceleration time	0.00 to 600.00s	6.00s	☆	4138H
A2-Digital Input (DI) parameter set					
A2-00	DI1 function selection	0: No function 1: Run 2: Inversion 3: Three-wire control 4: Positive rotation point movement 5: Reverse point movement 6: Multi-speed 1 7: Multi-speed 2 8: Multi-speed 3 9: Multi-speed 4 10: Terminal UP 11: Terminal DOWN 12: UP/DOWN clearing 13: Free parking 14: Fault reset 15: Inversion Prohibition 16: Command source switch to keyboard 17: Switching command source between terminals/communication 18: Frequency source switching 19: Main frequency source switches to digital frequency setting value 20: Main frequency source switched to AI1 21: Main frequency source switched to AI2 22: Main frequency source switched to HDI input	1	☆	4200H
A2-01	DI2 function selection		2	☆	4201H
A2-02	DI3 function selection		0	☆	4202H
A2-03	DI4 function selection		0	☆	4203H
A2-04	DI5 function selection		0	☆	4204H

A2-05	DI6 (HDI) function selection	23: Main frequency source switched to communication given 24: Auxiliary frequency source switched to digital feeds 25: Quick Stop 26: External parking terminal 27: Switching of motors 1 and 2 28: Running pause 29: DC braking 30: Acceleration and deceleration time terminal 1 31: Acceleration and deceleration time terminal 2 32: Acceleration and deceleration stops 33: Speed/torque switching 34: Moment Control Prohibition 35: Process PID pause 36: Process PID integral pause 37: PID parameter switching 38: PID positive/reverse action switching 39: Simple PLC status reset 40: Simple PLC Time Pause 41: Pendulum pause 42: Fixed-length pulse input 43: Length counter reset 44: Counter pulse input 45: Counter reset 46: Timed runtime reset 47: User-defined fault 1 48: User-defined faults 2 49~63: Reserved 64: Spindle orientation position selection 0 65: Spindle orientation position selection 1 66: Spindle orientation position selection 2 67: Spindle orientation position selection 3 68: Spindle orientation enable signal 69: Zero servo enable signal 70: Disable pulse input 71: Return of origin enables 72: Home signal input 73: Positional deviation removal 74: Multi-segment position selection 0 75: Multi-segment position selection 1 76: Multi-segment position selection 2 77: Multi-segment position selection 3 78: Positive step position trigger signal 79: Reverse step position trigger signal	0	☆	4205H
A2-06	DI7 function selection (expansion card)		0	☆	4206H
A2-07	DI8 function selection (expansion card)		0	☆	4207H
A2-08	DI9 function selection (expansion card)		0	☆	4208H
A2-09	DI10 function selection (expansion card)		0	☆	4209H
A2-12	Virtual DI1 (VDI1) Feature Selection		0	☆	420CH
A2-13	Virtual DI2 (VDI2) Feature Selection		0	☆	420DH
A2-14	Virtual DI3 (VDI3) Feature Selection		0	☆	420EH
A2-15	Virtual DI4 (VDI4) Feature Selection		0	☆	420FH
A2-16	VDI input bit selection	Bit: Virtual VDI1 Input Bit Selection (Bit X of A2-17) 0 to F: 0 to 15 bits, the same as below. Tenth Bit: Virtual VDI2 Input Bit Selection (X bits of A2-18) Hundredths: Virtual VDI3 input bit selection (X bits of A2-19) Thousand bits: virtual VDI4 input bit selection (X bits of A2-20)	0000	☆	4210H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A2-17	Virtual DI1 Input Function Code Index	All visible function codes	nd0.00	☆	4211H
A2-18	Virtual DI2 Input Function Code Index	All visible function codes	nd0.00	☆	4212H
A2-19	Virtual DI3 Input Function Code Index	All visible function codes	nd0.00	☆	4213H
A2-20	Virtual DI4 Input Function Code Index	All visible function codes	nd0.00	☆	4214H
A2-21	Digital Input Valid Logic Selection	Bit0 to bit11 correspond to DI1 to DI12. Bit12 to bit15 correspond to VDI1 to VDI4.	0	☆	4215H
A2-22	DI function is mandatory1	Bit0 to bit15 corresponds to the mandatory setting of DI function number 1 to 16. set high and force it to take effect	0	☆	4216H
A2-23	DI function is mandatory2	Bit0 to bit15 corresponds to the mandatory setting of DI function number 17 to 32. set high and force it to take effect	0	☆	4217H
A2-24	DI function is mandatory3	Bit0 to bit15 corresponds to the mandatory setting of DI function number 33 to 48. set high and force it to take effect	0	☆	4218H
A2-25	DI function is mandatory4	Bit0 to bit14 corresponds to the mandatory setting of DI function numbers 49 to 63. bit15 is reserved, set high to force	0	☆	4219H
A2-28	Effective delay time of DI1 terminal	0.00s～600.00s	0.00s	☆	421CH
A2-29	DI1 terminal invalid delay time	0.00s～600.00s	0.00s	☆	421DH
A2-30	Effective delay time of DI2 terminal	0.00s～600.00s	0.00s	☆	421EH
A2-31	DI2 terminal invalid delay time	0.00s～600.00s	0.00s	☆	421FH
A2-32	Effective delay time of DI3 terminal	0.00s～600.00s	0.00s	☆	4220H
A2-33	DI3 terminal invalid delay time	0.00s～600.00s	0.00s	☆	4221H
A2-34	Effective delay time of DI4 terminal	0.00s～600.00s	0.00s	☆	4222H
A2-35	DI4 terminal invalid delay time	0.00s～600.00s	0.00s	☆	4223H
A2-36	Effective delay time of DI5 terminal	0.00s～600.00s	0.00s	☆	4224H
A2-37	DI5 terminal invalid delay time	0.00s～600.00s	0.00s	☆	4225H
A2-40	Digital input terminal filter time	0 to 100ms	10ms	☆	4226H
A2-41	Two-wire and three-wire options for terminal control	0: 2-wire 1 1: 2-wire 2 2: 3-wire 1 3: 3-wire 2	0	★	4227H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A2-42	UPDOWN rate setting	Amount of frequency change per second while UPDOWN is continuously active 0.000～60.000Hz/s , 0.000Hz/s auto rate	1.000	☆	4228H
A2-43	UPDOWN control mode selection	Single digit: UPDOWN clear selection 0: Non-operational status clear 1： No clearing, power down clearing 2： No clear, power down save Ten position: UPDOWN over zero selection 0: Prohibited 1: Enabling	01	☆	4229H
A2-44	Terminal start-up protection function	0: No protection 1: Protection	0	☆	422AH
A2-45	DI terminal power-up invalid time	0.000 to 10.000s	1.000s	☆	422BH
A3-Digital Output (DO) parameter set					
A3-00	DO1/HDO function selection	0: No function 1: frequency inverter ready 2: frequency inverter in operation 3: All faults 4: Downtime faults 5: Can run faults 6: Upper limit frequency reached 7: The lower limit frequency reaches, the shutdown is not output. 8: Lower limit frequency reached, stop output 9: FDT1 10: FDT2 11: Setting frequency arrival 12: Arrival at arbitrary frequency 1 13: Arbitrary frequency 2 arrivals 14: Zero-speed output, no output for stopping the machine. 15: Zero speed output, stop output 16: Torque limited 17: Zero current 18: Current overrun 19: Module temperature reached 20: Drive overload warning 21: Motor overload warning 22: Motor over-temperature warning 23: Dropped in 24: Cumulative power-up time reached 25: Cumulative running time reached	0	☆	4300H
A3-01	Local relay RO1 function selection		0	☆	4301H
A3-02	Local relay RO2 function selection		0	☆	4302H
A3-03	Extended Digital Output 1 Function Selection		0	☆	4303H
A3-04	Extended Digital Output 2 Function Selection		0	☆	4304H
A3-05	Extended Digital Output 3 Function Selection		0	☆	4305H
A3-06	Extended Digital Output 4 Function Selection		0	☆	4306H
A3-07	Extended Digital Output 5 Function Selection		0	☆	4307H
A3-08	Virtual DO1 (VDO1) function selection		0	☆	4308H
A3-09	Virtual DO2 (VDO2) function selection		0	☆	4309H

A3-10	Virtual DO3 (VDO3) function selection	26: The set time for this run is reached 27: Reverse running 28: Pendulum frequency limited 29: PLC cycle complete 30-32: Reserved 33: Setting the counter value to reach 34: Specify the counter value to reach 35: Length Arrival 36: Communication control	0	☆	430AH
A3-11	Virtual DO4 (VDO4) function selection		0	☆	430BH
A3-12	Digital Output Logic Inversion	Bit0 to bit11 corresponds to DO1, RO1, RO2, EDO1 to EDO5, VDO1 to VDO4. Bit12 to bit15: reserved	0	☆	430CH
A3-13	DO1 effective delay time	0.00s～600.00s	0.00s	☆	430DH
A3-14	DO1 Invalid Delay Time	0.00s～600.00s	0.00s	☆	430EH
A3-15	RO1 effective delay time	0.00s～600.00s	0.00s	☆	430FH
A3-16	RO1 Invalid Delay Time	0.00s～600.00s	0.00s	☆	4310H
A3-17	RO2 effective delay time	0.00s～600.00s	0.00s	☆	4311H
A3-18	RO2 Invalid Delay Time	0.00s～600.00s	0.00s	☆	4312H
A3-21	Frequency Detection Value 1 (FDT1)	0.00Hz/0.0Hz to maximum frequency	50.00 Hz	☆	4315H
A3-22	Frequency detection hysteresis value 1	0.0% to 100.0%	3.0 per cent	☆	4316H
A3-23	Frequency Detection Value 2 (FDT2)	0.00Hz/0.0Hz to maximum frequency	50.00 Hz	☆	4317H
A3-24	Frequency detection hysteresis value 2	0.0% to 100.0%	3.0 per cent	☆	4318H
A3-25	Frequency reach width	0.0% to 100.0% (maximum frequency)	3.0 per cent	☆	4319H
A3-26	Arbitrary arrival frequency detection value 1	0.00Hz/0.0Hz to maximum frequency	50.00 Hz	☆	431AH
A3-27	Arbitrary arrival frequency detection width1	0.0% to 100.0% (maximum frequency)	3.0 per cent	☆	431BH
A3-28	Arbitrary arrival frequency detection value 2	0.00Hz/0.0Hz to maximum frequency	50.00 Hz	☆	431CH
A3-29	Arbitrary arrival frequency detection width2	0.0% to 100.0% (maximum frequency)	3.0 per cent	☆	431DH
A3-30	Zero speed detection width	0.00H to 5.00Hz/0.0Hz to 5.0Hz	0.25Hz	☆	431EH
A3-31	Zero current detection level	0.0% to 100.0% Rated motor current	3.0 per cent	☆	431FH
A3-32	Zero current detection delay time	0.000 to 30.000s	0.100s	☆	4320H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A3-33	Output current overrun	0.0% to 300.0% Motor rated current	200.0 per cent	☆	4321H
A3-34	Current overrun detection delay time	0.000 to 30.000s	0.100s	☆	4322H
A3-35	Module temperature reaches set point	00.0 to 100.0°C	75.0°C	☆	4323H
A3-36	Setting the power-up time (cumulative)	0 to 65530h	0h	☆	4324H
A3-37	Setting operation arrival time (cumulative)	0 to 65530h	0h	☆	4325H
A3-38	Runtime arrival action selection	0: Continued operation 1: Shutdown	0	☆	4326H
A3-39	Arrival time setting for this run	0 to 65530min	0min	☆	4327H
A3-40	This runtime monitoring	0 to 65535min	0min	☆	4328H
A4-Pulse input (HDI) and analogue input (AI) parameter sets					
A4-00	HDI Input Minimum Frequency	0.00kHz to HDI input maximum frequency (A4-01)	1.00kHz	☆	4400H
A4-01	HDI Input Maximum Frequency	HDI input minimum frequency (A4-00) ~ 50.00kHz	32.00kHz	☆	4401H
A4-02	HDI Minimum Frequency Corresponding Conversion Values	-100.0 per cent to 100.0 per cent	0.0 per cent	☆	4402H
A4-03	Conversion value for HDI maximum frequency	-100.0 per cent to 100.0 per cent	100.0 per cent	☆	4403H
A4-04	HDI detection frequency filter time	0.000s～10.000s	0.100s	☆	4404H
A4-05	AI1 mapping curve selection	Single digit: mapping curve selection 0: Curve 1 1: Curve 2 2: Curve 3 3: Curve 4 Tenth digit position: Processing when the input signal is lower than the Min input 0: Equal to Min input 1: Equal to 0.0 per cent	00	★	4405H
A4-06	AI1 filter time	0.000s～10.000s	0.100s	☆	4406H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A4-07	AI2 mapping curve selection	Single digit: mapping curve selection 0: Curve 1 1: Curve 2 2: Curve 3 3: Curve 4 Tenth digit position: Processing when the input signal is lower than the Min input 0: Equal to minimum input 1: Equal to 0.0 per cent	01	★	4407H
A4-08	AI2 filter time	0.000s～10.000s	0.100s	☆	4408H
A4-09	AI3 mapping curve selection	Single digit: mapping curve selection 0: Curve 1 1: Curve 2 2: Curve 3 3: Curve 4 Tenth digit position: processing when the input signal is lower than the Min input 0: Equal to Min input 1: Equal to 0.0 per cent	02	★	4409H
A4-10	AI3 filter time	0.000s～10.000s	0.100s	☆	440AH
A4-11	AI4 mapping curve selection	Single digit: mapping curve selection 0: Curve 1 1: Curve 2 2: Curve 3 3: Curve 4 Tenth digit position: Processing when the input signal is lower than the Min input 0: Equal to Min input 1: Equal to 0.0 per cent	03	★	440BH
A4-12	AI4 filter time	0.000s～10.000s	0.100s	☆	440CH
A4-13	Min input for curve 1	0.00V to A4-15	0.01V	☆	440DH
A4-14	Min input setting value for curve 1	-100.0 per cent to 100.0 per cent	0.0 per cent	☆	440EH
A4-15	Max input for curve 1	A4-13 to 10.00V	10.00V	☆	440FH
A4-16	Max input setting value for curve 1	-100.0 per cent to 100.0 per cent	100.0 per cent	☆	4410H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A4-17	Min input for curve 2	0.00V to A4-19	0.01V	☆	4411H
A4-18	Min input setting value for curve 2	-100.0 per cent to 100.0 per cent	0.0 per cent	☆	4412H
A4-19	Max input for curve 2	A4-17 to 10.00V	10.00V	☆	4413H
A4-20	Max input setting value for curve 2	-100.0 per cent to 100.0 per cent	100.0 per cent	☆	4414H
A4-21	Min input for curve 3	0.00V to A4-23	0.01V	☆	4415H
A4-22	Min input setting value for curve 3	-100.0 per cent to 100.0 per cent	0.0 per cent	☆	4416H
A4-23	Input at inflection point A of curve 3	A4-21 to A4-25	3.00V	☆	4417H
A4-24	Setting value of inflection point A of curve 3	-100.0 per cent to 100.0 per cent	30.0 per cent	☆	4418H
A4-25	Input for inflection point B of curve 3	A4-23 to A4-27	7.00V	☆	4419H
A4-26	Setting value of inflection point B of curve 3	-100.0 per cent to 100.0 per cent	70.0 per cent	☆	441AH
A4-27	Max input for curve 3	A4-25 to 10.00V	10.00V	☆	441BH
A4-28	Max input setting value for curve 3	-100.0 per cent to 100.0 per cent	100.0 per cent	☆	441CH
A4-29	Min input for curve 4	0.00V to A4-31	0.01V	☆	441DH
A4-30	Min input setting value for curve 4	-100.0 per cent to 100.0 per cent	0.0 per cent	☆	441EH
A4-31	Input at inflection point A of curve 4	A4-29 to A4-33	3.00V	☆	441FH
A4-32	Setting value of inflection point A of curve 4	-100.0 per cent to 100.0 per cent	30.0 per cent	☆	4420H
A4-33	Input for inflection point B of curve 4	A4-31 to A4-35	7.00V	☆	4421H
A4-34	Setting value of inflection point B of curve 4	-100.0 per cent to 100.0 per cent	70.0 per cent	☆	4422H
A4-35	Max input for curve 4	A4-33 to 10.00V	10.00V	☆	4423H
A4-36	Max input setting value for curve 4	-100.0 per cent to 100.0 per cent	100.0 per cent	☆	4424H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A5 - Pulse output (HDO) and analogue output (AO) parameter set					
A5-00	HDO output function selection	0: Operating frequency 1: Setting frequency 2: Output voltage 3: Busbar voltage 4: Output current 5: Output torque 6: Torque command 7: Output power 8to9: Reserved 10: AI1 11: AI2 12: User-defined 1 13: User-defined 2 14: Communication control	0	☆	4500H
A5-01	HDO Min output frequency	0.00kHz to 50.00kHz	1.00kHz	☆	4501H
A5-02	HDO Max Output Frequency	0.00kHz to 50.00kHz	32.00kHz	☆	4502H
A5-03	AO1 output signal selection	Same as A5-00 HDO output function selection	0	☆	4503H
A5-04	AO1 bias setting	-100.0 per cent to 100.0 per cent	0	☆	4504H
A5-05	AO1 gain	-10.00 to 10.00	1.00	☆	4505H
A5-06	AO2 output signal selection	Same as A5-00 HDO output function selection	0	☆	4506H
A5-07	AO2 bias setting	-100.0 per cent to 100.0 per cent	0	☆	4507H
A5-08	AO2 gain	-10.00 to 10.00	1.00	☆	4508H
A5-09	AO custom Parameter 1	All visible function codes	nd0.00	☆	4509H
A5-10	AO Max custom Parameter 1	1 to 65535	1000	☆	450AH
A5-11	AO custom Parameter 2	All visible function codes	nd0.01	☆	450BH
A5-12	AO Max custom Parameter 2	1 to 65535	1000	☆	450CH
A6-Keypad and Display Setting Parameter Group					
A6-00	user password				4600H
A6-01	MF.K function selection	0: No function 1: Positive rotation point movement 2: Reverse point movement 3: Positive and reverse switching 4: Quick Parking 5: Free parking	1	☆	4601H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A6-02	STOP button priority selection	0: valid for keyboard mode only 1: Any model is valid	1	☆	4602H
A6-03	Display selection when user password takes effect	0: not displayed 1: Display	0	☆	4603H
A6-04	Shutdown Monitoring Parameters	bit0: Frequency command bit1: Bus voltage bit2: Di status bit3: Do status bit4: Radiator temperature bit5: Hdi setting value bit6: Hdi input frequency bit7: Reserved bit8: Ai1 set value bit9: Ai1 input voltage bit10: Ai2 setting value bit11: Ai2 input voltage bit12: Pid instruction bit13: Pid feedback bit14: custom parameter 1 bit15: custom parameter 2	(Upper 8 bits) 00000000 00010011 (lower 8 bits)	☆	4604H
A6-05	Operation monitoring parameter 1	bit0: Output frequency bit1: Frequency command bit2: Acceleration and deceleration frequency instruction bit3: Busbar voltage bit4: Output current 2 bit5: Output voltage bit6: Torque command bit7: Torque output bit8: Drive temperature bit9: Reserved bit10: Di status bit11: Do status bit12: Hdi setting value bit13: Hdi input frequency bit14: Ai1 setting value bit15: Ai1 input voltage	(Upper 8 bits) 00000001 00111011 (lower 8 bits)	☆	4605H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A6-06	Operation Monitoring Parameter 2	Bit0: Ai2 setting value Bit1: Ai2 input voltage Bit2: Pid command Bit3: Pid feedback Bit4: Pid output Bit5: PLC current stage Bit6: PLC current remaining time Bit7: Main frequency Bit8: Auxiliary frequency Bit9: UpDn frequency value Bit10: Output power Bit11～Bit13: Reserved Bit14: custom parameter 1 Bit15: custom parameter 2	(Upper 8 bits) 00000000 00000000 (lower 8 bits)	☆	4606H
A6-07	Custom Parameter 1	All visible function codes	nd0.00	☆	4607H
A6-08	Custom Parameter 2	All visible function codes	nd0.01	☆	4608H
A6-09	Line 2 Shutdown Monitoring Parameter Selection	0: Frequency command 1: Busbar voltage 2: Radiator temperature 3: Hdi corresponds to the setting value 4: Hdi input frequency 5: Reservations 6: AI1 corresponds to the setting value 7: AI1 input voltage 8: AI2 corresponds to the setting value 9: AI2 input voltage 10: Pid given 11: Pid Feedback	1	☆	4609H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A6-10	Line 2 operation monitoring parameter selection	0: Output frequency 1: Frequency command 2: Frequency during acceleration and deceleration 3: Busbar voltage 4: Output current 5: Output voltage 6: Torque command 7: Torque output value 8: Radiator temperature 9: HDI Correspondence Setting 10: HDI Input frequency 11: Output power 12: Ai1 correspond setting 13: Ai1 actual input 14: Ai2 Correspond setting 15: Ai2 actual input 16: Pid given 17: Pid Feedback 18: Pid output 19: PLC current segment 20: PLC time remaining 21: Main frequency setting value 22: Auxiliary frequency values 23: Up/Dn frequency setting	4	☆	460AH
A6-11	Load speed factor	0.001 to 60.000	30.000	☆	460BH
A6-12	Load speed decimal point	0 to 3	0	☆	460CH
A6-13	The meter display value is reset to zero	0: No operation 1: Zeroing	0	☆	460DH
A7/A8 - Troubleshooting and Setting Parameter Groups					
A7-00	GP Model Selection	0-G machine; 1-P machine	0	★	4700H
A7-01	Motor overload protection options	0:No motor overload protection 1:Motor overload protection enable	1	☆	4701H
A7-02	Motor overload warning factor	50-100 per cent	80 per cent	☆	4702H
A7-03	High speed motor overload gain	20% to 300%	115 per cent	☆	4703H
A7-04	Low-speed motor overload gain	20% to 300%	110 per cent	☆	4704H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A7-05	Motor temperature Sensor	Bit: Channel selection 0: None 1: PTP-PTN terminal (expansion port) Ten bits: temperature sensor selection 0: KTY84-130 1: PTC145	0	☆	4705H
A7-06	Motor over-temperature protection value	20.0 to 200.0°C	120.0°C	☆	4706H
A7-07	Busbar voltage control	Bit: Overpressure stall selection 0: Invalid overpressure stall speed 1: Overpressure stall always active 2: Adaptive overvoltage stall control Tenth digit: Undervoltage stall speed selection 0: Undervoltage stall invalid 1: Undervoltage stall mode 1 (deceleration to 0 standby, voltage recovery to re-run) 2: Undervoltage stall mode 2 (decelerate to stop)	0x01	☆	4707H
A7-08	Overvoltage stall gain	0 to 10.0	1.0	☆	4708H
A7-09	Undervoltage stall gain	0 to 20.0	4.0	☆	4709H
A7-10	Overvoltage stall voltage	70 to 130 per cent	100%	☆	470AH
A7-11	Undervoltage stall voltage	70 to 130 per cent	100%	☆	470BH
A7-12	Undervoltage fault voltage	70 to 130 per cent	100%	☆	470CH
A7-13	Undervoltage detection time	0.00 to 10.00s	1.00s	☆	470DH
A7-14	Energy Braking Options	0: Not enabled 1: Enable 2: Enable only for deceleration stop	1	☆	470EH
A7-15	Energy Brake Utilisation Rate	0% to 100%	100%	☆	470FH
A7-16	Energy consumption braking voltage	70 to 130 per cent	100%	☆	4710H
A7-17	Fast overcurrent protection	0:Not enable 1:Enable	0	☆	4711H
A7-18	Input phase loss protection	0:Not enable 1:Enable	1	☆	4712H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A7-19	Output phase loss protection	0:Not enable 1:Enable	1	☆	4713H
A7-20	Fan Control Options	0:Effective during operation 1:Effective all the time after power on 2:Automatic control according to temperature	0	☆	4714H
A7-22	Excessive speed deviation	0.0% to 100.0% * Motor rated frequency	20.0 per cent	☆	4716H
A7-23	Excessive speed deviation detection time	0.00s (non-detectable) ~ 30.00s	0.00s	☆	4717H
A7-24	Overspeed detection value	0.0% to 150.0% * Fmax	120.0 per cent	☆	4718H
A7-25	Overspeed detection time	0.00s (non-detectable) ~ 30.00s	1.00 per cent	☆	4719H
A7-26	Dropout detection level	0.0 (Load shedding protection not effective) to 100.0 per cent	0.0 per cent	☆	471AH
A7-27	Load shedding detection time	0.00 to 60.00s	1.00s	☆	471BH
A7-28	Input phase failure detection time	0.0s to 30.0s	6.0s	☆	471CH
A7-29	Output phase imbalance	5 to 100 per cent	12 per cent	☆	471DH
A7-30	Fault continue operation frequency selection	0: Continue to run at the current frequency 1：Continue to run at the setting frequency 2：Continue to run at upper limit frequency 3：Continue to run at the lower frequency limit 4：Continue to run at standby frequency	0	☆	471EH
A7-31	Abnormal Standby Frequency	0.00Hz to Fmax	5.00 Hz	☆	471FH
A7-32	Max rise frequency of overpressure stall	0.0% to 100.0% (motor rated frequency)	10.0 per cent	☆	4720H
A7-33	Overcurrent reset waiting time	0.00s～20.00s	3.00s	☆	4721H
A7-34	Fail-safe action selection 1	Single digit: Fault 1 action selection Tenth digit: Fault 2 action selection Hundred digit:Fault 3 action selection Thousand digit:Fault 4 action selection Ten thousand digit:Fault 5 action selection 0: Free parking 1: Emergency stop 2: Parking by stopping 3: Keep running	00000 (octal)	★	4722H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A7-35	Fail-safe action selection 2	Single digit: Fault 6 action selection Tenth digit digit:Fault 7 action selection Hundred digit:Fault 8 action selection Thousand digit:Fault 9 action selection Ten thousand digit:Fault 10 action selection	00000 (octal)	★	4723H
A7-36	Fail-safe action selection 3	Single digit: Fault 11 action selection Tenth digit digit:Fault 12 action selection Hundred digit:Fault 13 action selection Thousand digit:Fault 14 action selection Ten thousand digit:Fault 15 action selection	00000 (octal)	★	4724H
A7-37	Fail-safe action selection 4	Single digit:Fault 16 action selection Tenth digit digit:Fault 17 action selection Hundred digit:Fault 18 action selection Thousand digit:Fault 19 action selection Ten thousand digits:Fault 20 action selection	00000 (octal)	★	4725H
A7-38	Fail-safe action selection 5	Single digit:Fault 21 action selection Tenth digit digit:Fault 22 action selection Hundred digit:Fault 23 action selection Thousand digit:Fault 24 action selection Ten thousand digit:Fault 25 action selection	00000 (octal)	★	4726H
A7-39	Fail-safe action selection 6	Single digit:Fault 26 action selection Tenth digit digit:Fault 27 action selection Hundred digit:Fault 28 action selection Thousand digit:Fault 29 action selection Ten thousand digit:Fault 30 action selection	00000 (octal)	★	4727H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A7-40	Fail-safe action selection 7	Single digit:Fault 31 action selection Tenth digit digit:Fault 32 action selection Hundred digit:Fault 33 action selection Thousand digit:Fault 34 action selection Ten thousand digit:Fault 35 action selection	00000 (octal)	★	4728H
A7-41	Fail-safe action selection 8	Single digit:Fault 36 action selection Tenth digit digit:Fault 37 action selection Hundred digit:Fault 38 action selection Thousand digit:Fault 39 action selection Ten thousand digit:Fault 40 action selection	00000 (octal)	★	4729H
A7-42	Fail-safe action selection 9	Single digit:Fault 41 action selection Tenth digit:Fault 42 action selection Hundred digits:Fault 43 action selection Thousand digit:Fault 44 action selection Ten thousand digit:Fault 45 action selection	00000 (octal)	★	472AH
A7-43	Fail-safe action selection 10	Single digit:Fault 46 action selection Tenth digit digit:Fault 47 action selection Hundred digits:Fault 48 action selection Thousand digit:Fault 49 action selection Ten thousand digit:Fault 50 action selection	00000 (octal)	★	472BH
A7-48	Fault 1 Auto reset count setting	0 (non-resettable) to 999	0	★	4730H
A7-49	Fault 1 Auto reset interval	0.1 to 6000.0s	1.0s	★	4731H
A7-50	Fault 1 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4732H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A7-51	Fault 2 Auto reset count setting	0 (non-resettable) to 999	0	★	4733H
A7-52	Fault 2 Auto reset interval	0.1 to 6000.0s	1.0s	★	4734H
A7-53	Fault 2 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4735H
A7-54	Fault 3 Auto reset count setting	0 (non-resettable) to 999	0	★	4736H
A7-55	Fault 3 Auto reset interval	0.1 to 6000.0s	1.0s	★	4737H
A7-56	Fault 3 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4738H
A7-57	Fault 4 Auto reset count setting	0 (non-resettable) to 999	0	★	4739H
A7-58	Fault 4 Auto reset interval	0.1 to 6000.0s	1.0s	★	473AH
A7-59	Fault 4 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	473BH
A7-60	Fault 5 Auto reset count setting	0 (non-resettable) to 999	0	★	473CH
A7-61	Fault 5 Auto reset interval	0.1 to 6000.0s	1.0s	★	473DH
A7-62	Fault 5 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	473EH
A7-63	Fault 6 Auto reset count setting	0 (non-resettable) to 999	0	★	473FH
A7-64	Fault 6 Automatic reset interval	0.1 to 6000.0s	1.0s	★	4740H
A7-65	Fault 6 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4741H
A7-66	Fault 7 Auto reset count setting	0 (non-resettable) to 999	0	★	4742H
A7-67	Fault 7 Auto reset interval	0.1 to 6000.0s	1.0s	★	4743H
A7-68	Fault 7 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4744H
A7-69	Fault 8 Auto reset count setting	0 (non-resettable) to 999	0	★	4745H
A7-70	Fault 8 Automatic reset interval	0.1 to 6000.0s	1.0s	★	4746H
A7-71	Fault 8 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4747H
A7-72	Fault 9 Auto reset count setting	0 (non-resettable) to 999	0	★	4748H
A7-73	Fault 9 Auto reset interval	0.1 to 6000.0s	1.0s	★	4749H
A7-74	Fault 9 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	474AH
A7-75	Fault 10 Auto reset count setting	0 (non-resettable) to 999	0	★	474BH

FUNC	Name	Descriptions	Factory default	Attribute	Address
A7-76	Fault 10 Auto reset interval	0.1 to 6000.0s	1.0s	★	474CH
A7-77	Fault 10 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	474DH
A7-78	Fault 11 Auto reset count setting	0 (non-resettable) to 999	0	★	474EH
A7-79	Fault 11 Auto reset interval	0.1 to 6000.0s	1.0s	★	474FH
A7-80	Fault 11 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4750H
A7-81	Fault 12 Auto reset count setting	0 (non-resettable) to 999	0	★	4751H
A7-82	Fault 12 Auto reset interval	0.1 to 6000.0s	1.0	★	4752H
A7-83	Fault 12 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4753H
A7-84	Fault 13 Auto reset count setting	0 (non-resettable) to 999	0	★	4754H
A7-85	Fault 13 Auto reset interval	0.1 to 6000.0s	1.0s	★	4755H
A7-86	Fault 13 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4756H
A7-87	Fault 14 Auto reset count setting	0 (non-resettable) to 999	0	★	4757H
A7-88	Fault 14 Auto reset interval	0.1 to 6000.0s	1.0s	★	4758H
A7-89	Fault 14 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4759H
A7-90	Fault 15 Auto reset count setting	0 (non-resettable) to 999	0	★	475AH
A7-91	Fault 15 Auto reset interval	0.1 to 6000.0s	1.0s	★	475BH
A7-92	Fault 15 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	475CH
A7-93	Fault 16 Auto reset count setting	0 (non-resettable) to 999	0	★	475DH
A7-94	Fault 16 Auto Reset Interval	0.1 to 6000.0s	1.0s	★	475EH
A7-95	Fault 16 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	475FH
A7-96	Fault 17 Auto reset count setting	0 (non-resettable) to 999	0	★	4760H
A7-97	Fault 17 Auto reset interval	0.1 to 6000.0s	1.0s	★	4761H
A7-98	Fault 17 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4762H
A8-00	Fault 18 Auto reset count setting	0 (non-resettable) to 999	0	★	4800H
A8-01	Fault 18 Auto reset interval	0.1 to 6000.0s	1.0s	★	4801H
A8-02	Fault 18 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4802H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A8-03	Fault 19 Auto reset count setting	0 (non-resettable) to 999	0	★	4803H
A8-04	Fault 19 Auto reset interval	0.1 to 6000.0s	1.0s	★	4804H
A8-05	Fault 19 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4805H
A8-06	Fault 20 Auto reset count setting	0 (non-resettable) to 999	0	★	4806H
A8-07	Fault 20 Auto reset interval	0.1 to 6000.0s	1.0s	★	4807H
A8-08	Fault 20 Auto reset times clear time	0.1 to 6000.0s	12.0s	★	4808H
A8-09	Fault 21 Auto reset count setting	0 (non-resettable) to 999	0	★	4809H
A8-10	Fault 21 Auto reset interval	0.1 to 6000.0s	1.0s	★	480AH
A8-11	Fault 21 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	480BH
A8-12	Fault 22 Automatic reset count setting	0 (non-resettable) to 999	0	★	480CH
A8-13	Fault 22 Auto reset Interval	0.1 to 6000.0s	1.0s	★	480DH
A8-14	Fault 22 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	480EH
A8-15	Fault 23 Auto reset count setting	0 (non-resettable) to 999	0	★	480FH
A8-16	Fault 23 Auto reset interval	0.1 to 6000.0s	1.0s	★	4810H
A8-17	Fault 23 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4811H
A8-18	Fault 24 Auto reset count setting	0 (non-resettable) to 999	0	★	4812H
A8-19	Fault 24 Auto reset Interval	0.1 to 6000.0s	1.0s	★	4813H
A8-20	Fault 24 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4814H
A8-21	Fault 25 Automatic reset count setting	0 (non-resettable) to 999	0	★	4815H
A8-22	Fault 25 Auto Reset Interval	0.1 to 6000.0s	1.0s	★	4816H
A8-23	Fault 25 Auto reset times Clear time	0.1 to 6000.0s	12.0s	★	4817H
A8-24	Fault 26 Automatic reset count setting	0 (non-resettable) to 999	0	★	4818H
A8-25	Fault 26 Auto reset interval	0.1 to 6000.0s	1.0s	★	4819H
A8-26	Fault 26 Auto reset times clear time	0.1 to 6000.0s	12.0s	★	481AH
A8-27	Fault 27 Auto reset count setting	0 (non-resettable) to 999	0	★	481BH
A8-28	Fault 27 Auto Reset Interval	0.1 to 6000.0s	1.0s	★	481CH

FUNC	Name	Descriptions	Factory default	Attribute	Address
A8-29	Fault 27 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	481DH
A8-30	Fault 28 Auto reset count setting	0 (non-resettable) to 999	0	★	481EH
A8-31	Fault 28 Auto reset interval	0.1 to 6000.0s	1.0s	★	481FH
A8-32	Fault 28 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4820H
A8-33	Fault 29 Auto reset count setting	0 (non-resettable) to 999	0	★	4821H
A8-34	Fault 29 Auto reset interval	0.1 to 6000.0s	1.0	★	4822H
A8-35	Fault 29 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4823H
A8-36	Fault 30 Auto reset count setting	0 (non-resettable) to 999	0	★	4824H
A8-37	Fault 30 Auto reset Interval	0.1 to 6000.0s	1.0s	★	4825H
A8-38	Fault 30 Auto reset times clear time	0.1 to 6000.0s	12.0s	★	4826H
A8-39	Fault 31 Auto reset count setting	0 (non-resettable) to 999	0	★	4827H
A8-40	Fault 31 Auto reset interval	0.1 to 6000.0s	1.0s	★	4828H
A8-41	Fault 31 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4829H
A8-42	Fault 32 Automatic reset count setting	0 (non-resettable) to 999	0	★	482AH
A8-43	Fault 32 Auto reset Interval	0.1 to 6000.0s	1.0s	★	482BH
A8-44	Fault 32 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	482CH
A8-45	Fault 33 Auto reset count setting	0 (non-resettable) to 999	0	★	482DH
A8-46	Fault 33 Auto reset interval	0.1 to 6000.0s	1.0s	★	482EH
A8-47	Fault 33 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	482FH
A8-48	Fault 34 Auto reset count setting	0 (non-resettable) to 999	0	★	4830H
A8-49	Fault 34 Auto reset interval	0.1 to 6000.0s	1.0s	★	4831H
A8-50	Fault 34 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4832H
A8-51	Fault 35 Auto reset count setting	0 (non-resettable) to 999	0	★	4833H
A8-52	Fault 35 Auto reset interval	0.1 to 6000.0s	1.0s	★	4834H
A8-53	Fault 35 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4835H
A8-54	Failure 36 Auto reset count setting	0 (non-resettable) to 999	0	★	4836H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A8-55	Fault 36 Auto reset interval	0.1 to 6000.0s	1.0s	★	4837H
A8-56	Fault 36 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4838H
A8-57	Fault 37 Auto reset count setting	0 (non-resettable) to 999	0	★	4839H
A8-58	Fault 37 Auto reset interval	0.1 to 6000.0s	1.0s	★	483AH
A8-59	Fault 37 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	483BH
A8-60	Fault 38 Auto reset count setting	0 (non-resettable) to 999	0	★	483CH
A8-61	Fault 38 Auto Reset Interval	0.1 to 6000.0s	1.0s	★	483DH
A8-62	Fault 38 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	483EH
A8-63	Fault 39 Auto reset count setting	0 (non-resettable) to 999	0	★	483FH
A8-64	Fault 39 Auto reset interval	0.1 to 6000.0s	1.0s	★	4840H
A8-65	Fault 39 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4841H
A8-66	Fault 40 Auto reset count setting	0 (non-resettable) to 999	0	★	4842H
A8-67	Fault 40 Auto reset interval	0.1 to 6000.0s	1.0s	★	4843H
A8-68	Fault 40 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4844H
A8-69	Fault 41 Auto reset count setting	0 (non-resettable) to 999	0	★	4845H
A8-70	Fault 41 Auto reset interval	0.1 to 6000.0s	1.0s	★	4846H
A8-71	Fault 41 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4847H
A8-72	Fault 42 Auto reset count setting	0 (non-resettable) to 999	0	★	4848H
A8-73	Fault 42 Auto reset interval	0.1 to 6000.0s	1.0s	★	4849H
A8-74	Fault 42 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	484AH
A8-75	Fault 43 Auto reset count setting	0 (non-resettable) to 999	0	★	484BH
A8-76	Fault 43 Auto reset interval	0.1 to 6000.0s	1.0s	★	484CH
A8-77	Fault 43 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	484DH
A8-78	Fault 44 Auto reset count setting	0 (non-resettable) to 999	0	★	484EH
A8-79	Fault 44 Auto reset interval	0.1 to 6000.0s	1.0s	★	484FH
A8-80	Fault 44 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4850H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A8-81	Fault 45 Auto reset count setting	0 (non-resettable) to 999	0	★	4851H
A8-82	Fault 45 Auto reset interval	0.1 to 6000.0s	1.0s	★	4852H
A8-83	Fault 45 Auto reset count Clear time	0.1 to 6000.0s	12.0s	★	4853H
A8-84	Fault 46 Auto reset count setting	0 (non-resettable) ～999	0	★	4854H
A8-85	Fault 46 Auto reset interval	0.1 to 6000.0s	1.0	★	4855H
A8-86	Fault 46 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4856H
A8-87	Fault 47 Auto reset count setting	0 (non-resettable) to 999	0	★	4857H
A8-88	Fault 47 Auto reset interval	0.1 to 6000.0s	1.0s	★	4858H
A8-89	Fault 47 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	4859H
A8-90	Fault 48 Auto reset count setting	0 (non-resettable) to 999	0	★	485AH
A8-91	Fault 48 Auto reset interval	0.1 to 6000.0s	1.0s	★	485BH
A8-92	Fault 48 Auto reset count clear time	0.1 to 6000.0s	12.0s	★	485CH
A9-Multi-Segment Speed with simple PLC					
A9-00	Multi-band speed 0 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4900H
A9-01	Multi-speed 1 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4901H
A9-02	Multi-speed 2 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4902H
A9-03	Multi-speed 3 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4903H
A9-04	Multi-speed 4-frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4904H
A9-05	Multi-speed 5 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4905H
A9-06	Multi-speed 6 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4906H
A9-07	Multi-speed 7 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4907H
A9-08	Multi-speed 8-frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4908H
A9-09	Multi-speed 9 Frequency setting	0.00Hz to Max frequency	0.00Hz	☆	4909H
A9-10	Multi-band speed 10 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	490AH

FUNC	Name	Descriptions	Factory default	Attribute	Address
A9-12	Multi-speed 12 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	490CH
A9-13	Multi-speed 13 Frequency setting	0.00Hz to Max frequency	0.00Hz	☆	490DH
A9-14	Multi-speed 14 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	490EH
A9-15	Multi-Speed 15 frequency setting	0.00Hz to Max frequency	0.00Hz	☆	490FH
A9-16	Multi-speed direction setting	bit0～bit15: Multi-speed 0～15 direction	0	☆	4910H
A9-17	PLC operation mode selection	Single digit: mode of operation 0: End stop after the set number of running 1: Keep the final value after running the set number of times 2: Keep looping 3: PLC reset after running the set number of times to end the shutdown Tenth digit: Power-down memory 0: No memory for power down 1: Memory for power down Hundred digit: Downtime Memory 0: No memory for shutdown 1: Memory for shutdown	003	☆	4911H
A9-18	Number of PLC runs	1 to 60,000	1	☆	4912H
A9-19	PLC segment 0 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4913H
A9-20	PLC segment 1 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4914H
A9-21	PLC segment 2 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4915H
A9-22	PLC segment 3 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4916H
A9-23	PLC segment 4 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4917H
A9-24	PLC segment 5 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4918H
A9-25	PLC segment 6 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4919H
A9-26	PLC segment 7 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	491AH
A9-27	PLC segment 8 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	491BH

FUNC	Name	Descriptions	Factory default	Attribute	Address
A9-28	PLC paragraph 9 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	491CH
A9-29	PLC paragraph 10 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	491DH
A9-30	PLC paragraph 11 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	491EH
A9-31	PLC segment 12 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	491FH
A9-32	PLC paragraph 13 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4920H
A9-33	PLC paragraph 14 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4921H
A9-34	PLC paragraph 15 runtime	0.0 to 6553.5, units determined by A9-35	0.0	☆	4922H
A9-35	PLC runtime unit	0: seconds; 1: minutes; 2: hours	0	☆	4923H
A9-36	0th speed parameter setting	Single digit: Band 0 frequency setting 0: Preset frequency (F0-06) 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication 7: Multi-speed 0 8: Process PID Tenth digit place: reserved Hundredths: Acceleration and deceleration time setting for segment 0 0: acceleration/deceleration 1; 1: acceleration/deceleration 2 2: acceleration/deceleration 3; 3: acceleration/deceleration 4	007	☆	4924H

FUNC	Name	Descriptions	Factory default	Attribute	Address
A9-37	1st to 5th stage PLC acceleration and deceleration selection	Single digit: paragraph 1 acceleration and deceleration options Tenth digit: paragraph 2 acceleration and deceleration options Hundred digit: Paragraph 3 acceleration and deceleration options Thousand digit: paragraph 4 acceleration and deceleration options Ten thousand digit: paragraph 5 acceleration and deceleration options 0: acceleration/deceleration 1; 1: acceleration/deceleration 2 2: acceleration/deceleration 3; 3: acceleration/deceleration 4.	00000	☆	4925H
A9-38	6th to 10th stage PLC acceleration and deceleration selection	Single digit: paragraph 6 acceleration and deceleration options Tenth digit: paragraph 7 acceleration and deceleration options Hundred digit: paragraph 8 acceleration and deceleration options Thousand digit: paragraph 9 acceleration and deceleration options Ten thousand digit: 10th paragraph acceleration and deceleration options 0: acceleration/deceleration 1; 1: acceleration/deceleration 2 2: acceleration/deceleration 3; 3: acceleration/deceleration 4	00000	☆	4926H
A9-39	11th to 15th stage PLC acceleration and deceleration selection	Single digit: paragraph 11 acceleration and deceleration options Tenth digit position: paragraph 12 acceleration and deceleration options Hundred digit: paragraph 13 acceleration and deceleration options Thousand digit: paragraph 14 acceleration and deceleration options Ten thousand positions: paragraph 15 acceleration and deceleration options 0: acceleration/deceleration 1; 1: acceleration/deceleration 2 2: acceleration/deceleration 3; 3: acceleration/deceleration 4	00000	☆	4927H

FUNC	Name	Descriptions	Factory default	Attribute	Address
AA-Process PID parameter set					
AA-00	PID given source	0: Number given 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication given	0	☆	4A00H
AA-01	PID feedback range	0.01 to 655.35	100.00	☆	4A01H
AA-02	PID digital feed	0.00 to (AA-01)	0.00	☆	4A02H
AA-03	PID feedback source	0: AI1 1: AI2 2: AI3 3: AI4 4: HDI 5: Communication given 6: Motor output current 7: Motor output frequency 8: Motor output torque 9: Motor output power A: AI1+AI2 b: AI1-AI2 C: Min(AI1,AI2) d: Max(AI1,AI2)	0	☆	4A03H
AA-04	PID output characteristics selection	0: Positive effect 1: Counterproductive	0	☆	4A04H
AA-05	PID output upper limit	-100.0 per cent to 100.0 per cent	100.0 per cent	☆	4A05H
AA-06	PID output lower limit	-100.0 per cent to 100.0 per cent	0.0 per cent	☆	4A06H
AA-07	Proportional gain KP1	0.0 to 500.0 per cent	20.0 per cent	☆	4A07H
AA-08	Integration time TI1	0.01s～20.00s (no integration effect)	1.00s	☆	4A08H
AA-09	Differential time TD1	0.000s to 0.100s	0.000s	☆	4A09H
AA-10	Proportional gain KP2	0.0 to 500.0 per cent	20.0 per cent	☆	4A0AH
AA-11	Integration time TI2	0.01s～20.00s (no integration effect)	1.00s	☆	4A0BH
AA-12	Differential time TD2	0.000s to 0.100s	0.000s	☆	4A0CH
AA-13	PID switching conditions	0: No switching, use KP1, TI1, TD1 1: Switching via DI terminal 2: Auto switching according to deviation 3: Auto adjustment according to operating frequency	0	☆	4A0DH

FUNC	Name	Descriptions	Factory default	Attribute	Address
AA-14	PID parameter switching deviation1	0.0% to AA-15	20.0 per cent	☆	4A0EH
AA-15	PID parameter switching deviation2	AA-14 to 100.0 per cent	80.0 per cent	☆	4A0FH
AA-16	PID integral separation threshold	0.0% to 100.0%	100.0 per cent	☆	4A10H
AA-17	PID initial value	0.0% to 100.0%	0.0 per cent	☆	4A11H
AA-18	PID initial value holding time	0.00 to 650.00s	0.00s	☆	4A12H
AA-19	PID Deviation Limit	0.0% to 100.0%	0.0 per cent	☆	4A13H
AA-20	PID differential limiting	0.00% to 100.00%	1.00 per cent	☆	4A14H
AA-21	PID feedback filtering time	0.000 to 30.000s	0.010s	☆	4A15H
AA-22	PID output filter time	0.000 to 30.000s	0.010s	☆	4A16H
AA-23	Lower limit of feedback loss detection value	0.0 per cent (non-detectable) to 100.0 per cent	0.0 per cent	☆	4A17H
AA-24	Feedback loss lower limit detection Time	0.000s (non-detectable) ~ 30.000s	0.000s	☆	4A18H
AA-25	Feedback loss detection value upper limit	0.0% to 100.0% (non-detectable)	100.0 per cent	☆	4A19H
AA-26	Feedback loss upper limit detection time	0.000s (non-detectable) ~ 30.000s	0.000s	☆	4A1AH
AA-27	PID stopping operation	0: shutdown without computing 1: Downtime computing	0	☆	4A1BH
AA-28	PID command acceleration and deceleration time	0.0s～6000.0s	0.0s	☆	4A1CH
AB - Built-in logic function parameter set					
AB-00	Swing mode	0: Relative to the centre frequency 1: Relative to the Max frequency	0	☆	4B00H
AB-01	Swing amplitude	0.0% to 100.0%	0.0 per cent	☆	4B01H
AB-02	Burst frequency amplitude	0.0% to 50.0%	0.0	☆	4B02H
AB-03	Swing period	0.1s～3000.0s	10.0s	☆	4B03H
AB-04	Triangular wave rise time coefficient	0.1% to 100.0%	30.0 per cent	☆	4B04H

FUNC	Name	Descriptions	Factory default	Attribute	Address
AB-05	Sleep/Wake source selection	Single digit: Sleep function selection 0: No hibernation function 1: Sleep Enable Tenth digit: dormant source selection 0: Frequency command sleep 1: AI1 dormant 2: AI2 hibernation 3: AI3 hibernation 4: AI4 hibernation Hundred digit: Wake Source Selection 0: Frequency command wake-up 1: AI1 Wake Up 2: AI2 Wake Up 3: AI3 Wake Up 4: AI4 Wake Up Thousand digit: AI hibernation wake-up direction 0: positive direction 1: Reverse direction	0000	☆	4B05H
AB-06	Frequency sleep setting	0.00～500.00Hz, less than the value of sleep	0.00Hz	☆	4B06H
AB-07	Frequency sleep-wake value	0.00 to 500.00Hz, greater than the value of the wake-up	0.00Hz	☆	4B07H
AB-08	Pressure sleep setting	0 to 100.0 per cent	0.0 per cent	☆	4B08H
AB-09	Pressure sleep wake-up value	0 to 100.0 per cent	0.0 per cent	☆	4B09H
AB-10	Entry hibernation delay	0.0s～6000.0s	0.0s	☆	4B0AH
AB-11	Hibernation wake-up delay	0.0s～6000.0s	0.0s	☆	4B0BH
AB-12	Hibernation deceleration time	0 (free stop) to 60000 (*acceleration and deceleration time unit)	0s	☆	4B0CH
AB-13	Setting length	1 to 65535	1000	☆	4B0DH
AB-14	Pulses per metre	0.1 to 6553.5	100.0	☆	4B0EH
AB-15	Length unit setting	0:0.001m;1:0.01m;2:0.1m;3:1m; 4:10m	3	☆	4B0FH
AB-16	Length arrival stop selection	0: No downtime 1: Downtime	0	☆	4B10H
AB-17	Current length display	0 to 65535	-	●	4B11H
AB-18	Set count value	1 to 65535	1000	☆	4B12H
AB-19	Specify count value	1 to 65535	1000	☆	4B13H
AB-20	Current pulse count display	0 to 65535	-	●	4B14H

FUNC	Name	Descriptions	Factory default	Attribute	Address
AC-Communication Parameter Group					
AC-00	Communication type	0: Modbus	0	☆	4C00H
AC-01	Local address	0 (broadcast address), 1 to 247	1	☆	4C01H
AC-02	Modbus baud rate setting	0: 1200 bps 1: 2400 bps 2: 4800 bps 3: 9600 bps 4: 19200 bps 5: 38400 bps 6: 57600 bps 7: 115200 bps	3	☆	4C02H
AC-03	Modbus data format (RTU)	0: 1-8-N-1 1: 1-8-E-1 2: 1-8-0-1 3: 1-8-N-2 4: 1-8-E-2 5: 1-8-0-2	0	☆	4C03H
AC-04	Modbus answer delay	Delay time for local response to host, 1 to 20ms	2ms	☆	4C04H
AC-05	Modbus communication timeout	0.0s (invalid) to 60.0	0.0s	☆	4C05H
AC-06	Modbus master-slave selection	0: Slave 1: Host (broadcast transmission) 2: Parameter copying to AC-13 slave by keyboard 485 communication 3: Parameter copy to AC-13 slave by terminal 485 communication	0	☆	4C06H
AC-07	Slave registers operated on when master	2002H to 200EH	2002H	☆	4C07H
AC-08	Host sends content	Single digit: first set of sent content selection 0: Output frequency 1: Setting frequency 2: Output torque 3: Given torque 4: Output current 5: PID given 6: PID feedback Tenth digit: second set of run command send selection 0: Not sent 1: Send	0	☆	4C08H

FUNC	Name	Descriptions	Factory default	Attribute	Address
AC-09	Host transmit interval	0.010 to 10.000s	0.100s	☆	4C09H
AC-10	Slave reception scaling factor	-10.00 to 10.00	1.00	☆	4C0AH
B0-Motor parameter group					
B0-00	Motor 1 type	0: AC asynchronous motor 1: AC permanent magnet synchronous motors	0	★	5000H
B0-01	Motor 1 rated power	0.1kW～1000.0kW	Model Decision	★	5001H
B0-02	Motor 1 rated voltage	10V to 2000V	Model Decision	★	5002H
B0-03	Motor 1 rated current	0.01～655.35A (B0-01<30kw) 0.1～6553.5A (B0-01≥30kW)	Model Decision	★	5003H
B0-04	Motor 1 rated frequency	1.00Hz to 5000.0Hz	Model Decision	★	5004H
B0-05	Motor 1 rated speed	1 to 65535rpm	Model Decision	★	5005H
B0-07	Motor 1 pole pair	1 to 80	-	●	5007H
B0-08	Motor 1 power factor	0.500 to 1.000	0.820	★	5008H
B0-09	Motor 1 rated torque	0.1～6553.5Nm(B0-01<30kw) 1~65535Nm (B0-01≥30kW)	Model Decision	★	5009H
B0-10	Asynchronous motor 1 stator resistance Rs	1～65535mΩ(B0-01<30kw) 0.01～655.35mΩ(B0-01≥30kW)	tuning parameter	★	500AH
B0-11	Asynchronous motor 1 rotor resistance Rr	1～65535mΩ(B0-01<30kw) 0.01～655.35mΩ(B0-01≥30kW)	tuning parameter	★	500BH
B0-12	Asynchronous motor 1 leakage inductance Lx	0.01～655.35mH(B0-01<30kw) 0.001～65.535mH (B0-01≥30kW)	tuning parameter	★	500CH
B0-13	Asynchronous motor 1 mutual inductance Lm	0.1～6553.5mH(B0-01<30kw) 0.01～655.35mH (B0-01≥30kW)	tuning parameter	★	500DH
B0-14	Asynchronous motor 1 no-load current I0	0.01～655.35A (B0-01<30kw) 0.1～6553.5A (B0-01≥30kW)	tuning parameter	★	500EH
B0-15	Asynchronous motor1 Magnetic saturation factor1	0.001 to 2.000	tuning parameter	★	500FH
B0-16	Asynchronous motor 1 magnetic saturation factor 2	0.001 to 2.000	tuning parameter	★	5010H
B0-17	Asynchronous motor 1 magnetic saturation factor 3	0.001 to 2.000	tuning parameter	★	5011H
B0-18	Synchronous motor 1 stator resistance PmRs	1～65535mΩ(B0-01<30kw) 0.01～655.35mΩ(B0-01≥30kW)	tuning parameter	★	5012H

FUNC	Name	Descriptions	Factory default	Attribute	Address
B0-19	Synchronous motor 1 straight axis inductance Ld	0.01～655.35mH(B0-01<30kw) 0.001～65.535mH (B0-01≥30kW)	tuning parameter	★	5013H
B0-20	Synchronous motor 1 cross-axis inductance Lq	0.01～655.35mH(B0-01<30kw) 0.001～65.535mH (B0-01≥30kW)	tuning parameter	★	5014H
B0-21	Synchronous motor 1 reverse electromotive force coefficient	0.1V to 1000.0V	300.0V	★	5015H
B0-24	Motor 2 type	0: AC asynchronous motor 1: AC permanent magnet synchronous motors	0	★	5018H
B0-25	Motor 2 rated power	0.1kW～1000.0kW	Model Decision	★	5019H
B0-26	Motor 2 rated voltage	10V to 2000V	Model Decision	★	501AH
B0-27	Motor 2 rated current	0.01～655.35A (B0-25<30kw) 0.1～6553.5A (B0-25≥30kW)	Model Decision	★	501BH
B0-28	Motor 2 rated frequency	1.00 to 5000.0Hz	Model Decision	★	501CH
B0-29	Motor 2 rated speed	1～65535rpm	Model Decision	★	501DH
B0-31	Motor 2-pole logarithm	1 to 80	2	●	501FH
B0-32	Motor 2 power factor	0.500 to 1.000	0.820	★	5020H
B0-33	Motor 2 rated torque	0.1～6553.5Nm(B0-25<30kw) 1~65535Nm (B0-25≥30kW)	Model Decision	★	5021H
B0-34	Asynchronous motor 2 stator resistance Rs	1～65535mΩ(B0-25<30kw) 0.01～655.35mΩ(B0-25≥30kW)	tuning parameter	★	5022H
B0-35	Asynchronous motor 2 rotor resistance Rr	1～65535mΩ(B0-25<30kw) 0.01～655.35mΩ(B0-25≥30kW)	tuning parameter	★	5023H
B0-36	Asynchronous motor 2 leakage inductance Lx	0.01～655.35mH(B0-25<30kw) 0.001～65.535mH (B0-25≥30kW)	tuning parameter	★	5024H
B0-37	Asynchronous motor 2 mutual inductance Lm	0.1～6553.5mH(B0-25<30kw) 0.01～655.35mH (B0-25≥30kW)	tuning parameter	★	5025H
B0-38	Asynchronous motor 2 no-load current I0	0.01～655.35A (B0-25<30kw) 0.1～6553.5A (B0-25≥30kW)	tuning parameter	★	5026H
B0-39	Asynchronous motor2 magnetic saturation factor1	0.001 to 2.000	tuning parameter	★	5027H
B0-40	Asynchronous motor2 magnetic saturation factor2	0.001 to 2.000	tuning parameter	★	5028H
B0-41	Asynchronous motor2 magnetic saturation factor3	0.001 to 2.000	tuning parameter	★	5029H

FUNC	Name	Descriptions	Factory default	Attribute	Address
B0-42	Synchronous motor 2 stator resistance PmRs	1～65535mΩ(B0-25<30kw) 0.01～655.35mΩ(B0-25≥30kW)	tuning parameter	★	502AH
B0-43	Synchronous motor 2 straight axis inductance Ld	0.01～655.35mH(B0-25<30kw) 0.001～65.535mH (B0-25≥30kW)	tuning parameter	★	502BH
B0-44	Synchronous motor 2 cross-axis inductance Lq	0.01～655.35mH(B0-25<30kw) 0.001～65.535mH (B0-25≥30kW)	tuning parameter	★	502CH
B0-45	Synchronous Motor 2 reverse potential coefficient	0.1V to 1000.0V	Model Decision	★	502DH
B0-48	Synchronous motor reverse potential calculation	0: No operation 1: Automatic calculation based on motor nameplate parameters	0	★	502EH
B0-49	Motor self-learning commands	0: No operation 1: Static learning 2: Rotational learning	0	★	502FH
B1-VF control parameter set					
B1-00	Motor 1 VF curve type	00: Linear V/F 01: Multi-segment Folding Line 02: 1.3 powers 03: 1.7 powers 04: 2.0 powers 10: VF full separation 11: VF semi-separated	00	★	5100H
B1-01	Motor 1 multi-point VF curve F0	0.00Hz～multi-point VF curve F1(B1-03)	0.00Hz	★	5101H
B1-02	Motor 1 multi-point VF curve V0	0.0% to 100.0%	0.0 per cent	★	5102H
B1-03	Motor 1 multi-point VF curve F1	Multi-point VF curve F0(B1-01) ~ Multi-point VF curve F2(B1-05)	50.00 Hz	★	5103H
B1-04	Motor 1 multi-point VF curve V1	0.0% to 100.0%	100.0 per cent	★	5104H
B1-05	Motor 1 Multi-point VF curve F2	Multi-point VF curve F1(B1-03)～ Multi-point VF curve F3(B1-07)	50.00 Hz	★	5105H
B1-06	Motor 1 multi-point VF curve V2	0.0% to 100.0%	100.0 per cent	★	5106H
B1-07	Motor 1 Multi-point VF Curve F3	Multi-point VF curve F2(B1-05)~500.00Hz	50.00 Hz	★	5107H
B1-08	Motor 1 multi-point VF curve V3	0.0% to 100.0%	100.0 per cent	★	5108H
B1-09	Motor 1 torque increase	0% (auto torque boost) to 200%	0 per cent	★	5109H
B1-10	Motor 1 slip compensation gain	0 to 200 per cent	100%	★	510AH

FUNC	Name	Descriptions	Factory default	Attribute	Address
B1-11	Motor 1 slip compensation filter time	0.01s～10.00s	1.00s	☆	510BH
B1-12	Motor 1 oscillation suppression factor 1	0 to 200.0 per cent	20.0 per cent	☆	510CH
B1-13	Motor 1 oscillation suppression frequency1	0.00Hz to oscillation suppression frequency 2 (B1-15)	60.00Hz	☆	510DH
B1-14	Motor 1 oscillation suppression factor 2	0 to 200.0 per cent	0	☆	510EH
B1-15	Motor 1 oscillation suppression frequency2	Oscillation suppression frequency1(B1-13)～500.00/5000.0Hz	80.00 Hz	☆	510FH
B1-16	Motor 2 VF curve type	00: Linear V/F 01: Multi-segment Folding Line 02: 1.3 powers 03: 1.7 powers 04: 2.0 powers 10: VF full separation 11: VF semi-separated	00	★	5110H
B1-17	Motor 2 multi-point VF curve F0	0.00Hz～Multi-point VF curve F1(B1-19)	0.00Hz	★	5111H
B1-18	Motor 2 multi-point VF curve V0	0.0% to 100.0%	0.0 per cent	★	5112H
B1-19	Motor 2 multi-point VF curve F1	Multi-point VF curve F0(B1-17) ~ Multi-point VF curve F2(B1-21)	50.00 Hz	★	5113H
B1-20	Motor 2 multi-point VF curve V1	0.0% to 100.0%	100.0 per cent	★	5114H
B1-21	Motor 2 multi-point VF curve F2	Multi-point VF curve F1 (B1-19) ~ Multi-point VF curve F3 (B1-23)	50.00 Hz	★	5115H
B1-22	Motor 2 multi-point VF curve V2	0.0% to 100.0%	100.0 per cent	★	5116H
B1-23	Motor 2 Multi-Point VF Curve F3	Multi-point VF curve F2(B1-21)~500.00Hz	50.00 Hz	★	5117H
B1-24	Motor 2 multi-point VF curve V3	0.0% to 100.0%	100.0 per cent	★	5118H
B1-25	Motor 2 torque increase	0% (Auto torque boost) to 200%	0 per cent	★	5119H
B1-26	Motor 2 slip compensation gain	0 to 200 per cent	100%	★	511AH
B1-27	Motor 2 slip compensation filter time	0.01s～10.00s	1.00s	☆	511BH
B1-28	Motor 2 oscillation suppression factor1	0 to 200.0 per cent	20.0 per cent	☆	511CH
B1-29	Motor 2 oscillation suppression frequency1	0.00Hz to oscillation suppression frequency 2 (B1-31)	60.00Hz	☆	511DH
B1-30	Motor 2 oscillation suppression factor 2	0 to 200.0 per cent	0	☆	511EH
B1-31	Motor 2 oscillation suppression frequency 2	Oscillation suppression frequency1(B1-29)~500.00Hz	80.00 Hz	☆	511FH

FUNC	Name	Descriptions	Factory default	Attribute	Address
B1-32	Current limit function selection	0: Invalid 1: Regulating the output voltage 2: Regulating the output frequency	2	★	5120H
B1-33	Current limit level	20%～180% frequency inverter rated current	150 per cent	☆	5121H
B1-34	Weak magnetic region current limiting factor	0.50 to 2.00	0.70	☆	5122H
B1-35	VF separation voltage source selection	0: Digital setting 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication 7: PID	0	★	5123H
B1-36	VF separation voltage digital setting	0.0% to 100.0%	0.0 per cent	☆	5124H
B1-37	VF separation voltage acceleration and deceleration time	0.00s～60.00s	1.00s	☆	5125H
B1-38	Rate of change of VF separation voltage with time	-50.00 per cent to 50.00 per cent	0.00 per cent	☆	5126H
B1-45	Automatic energy-saving control options	0: Invalid; 1: Effective	0	☆	512DH
B1-46	Energy-saving adjustment of voltage amplitude	0% to 50%	0 per cent	☆	512EH
B1-47	Energy saving control filter time	0.0 to 10.0s	1.0s	☆	512FH
B1-51	PMVF no-load current 0	0.0% to 100.0%	30.0 per cent	★	5133H
B1-52	PMVF no-load current1	0.0% to 100.0%	25.0 per cent	★	5134H
B1-53	PMVF no-load current2	0.0% to 100.0%	20.0 per cent	★	5135H
B1-54	PMVF efficiency control Ti	0.01s～10.00s	1.00s	★	5136H
B1-55	PMVF efficiency control filter time	0.001s～1.000s	0.040s	★	5137H
B1-56	PMVF zero frequency back EMF compensation	0 to 100 per cent	20 per cent	★	5138H
B1-57	PMVF back EMF compensation cut-off frequency	1.0 per cent to 100.0 per cent	50.0 per cent	★	5139H
B1-58	PMVF voltage drop compensation gain	0 to 100 per cent	50%	★	513AH
B1-59	PMVF drop compensation filter time	0.001s～1.000s	0.010s	★	513BH

FUNC	Name	Descriptions	Factory default	Attribute	Address
B2 - Vector control parameter set					
B2-00	Velocity loop proportional gain 1	0.1 to 100.0	Model Decision	☆	5200H
B2-01	Velocity loop integration time1	0.001s～30.000s	0.200s	☆	5201H
B2-02	Speed loop parameter switching frequency1	0.00Hz to B2-05	5.00 Hz	☆	5202H
B2-03	Velocity loop proportional gain 2	0.1 to 100.0	Model Decision	☆	5203H
B2-04	Velocity loop integration time2	0.001s～30.000s	0.300s	☆	5204H
B2-05	Speed loop parameter switching frequency2	B2-04 to 500.00Hz	10.00 Hz	☆	5205H
B2-06	Velocity loop output filter time factor	0 to 100ms	2ms	☆	5206H
B2-07	Torque limiting source selection	Position: Electric torque limiter 0: Digital setting 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication Tenth digit: Generation torque limit same position	00	★	5207H
B2-08	Electric torque limit	0.0% to 300.0%	160.0 per cent	☆	5208H
B2-09	Braking torque limit	0.0% to 300.0%	160.0 per cent	☆	5209H
B2-10	Q-axis current loop Kp adjustment factor	1 to 1000 per cent	100%	☆	520AH
B2-11	Q-axis current loop Ki adjustment factor	1 to 1000 per cent	100%	☆	520BH
B2-12	D-axis current loop Kp adjustment factor	1 to 1000 per cent	100%	☆	520CH
B2-13	D-axis current loop Ki adjustment factor	1 to 1000 per cent	100%	☆	520DH
B2-16	Internal output voltage feed-forward gain	0 to 100 per cent	100%	★	5210H
B2-20	Asynchronous machine vector control differential gain	50 per cent to 200 per cent	100%	☆	5214H
B2-21	Asynchronous SVC zero frequency threshold	0.00 to 2.00Hz	0.20Hz	☆	5215H
B2-22	Asynchronous SVC zero speed command processing	0: No treatment 1: Output DC	1	★	5216H

FUNC	Name	Descriptions	Factory default	Attribute	Address
B2-23	Asynchronous machine SVC zero frequency current factor	10.0% to 120.0% (excitation current)	70.7 per cent	★	5217H
B2-24	PM weak magnetic control method	0: No weak magnetic control 1: Weak magnetic control mode 1 2: Weak magnetic control mode 2	2	★	5218H
B2-25	Max weak magnetic current	50-120 per cent	100%	★	5219H
B2-26	PM excitation Max voltage	0.600 to 1.000	0.850	★	521AH
B2-27	PM Weak magnetic KP	0.0 to 10.000	0.100	★	521BH
B2-28	PM Weak magnetic TI	0.01ms～500.00ms	20.00ms	★	521CH
B2-29	PM initial position recognition method	0: Voltage vector injection method 1: High-frequency injection method 2: No identification	1	★	521DH
B2-30	PM initial position recognition 2 current	50 per cent to 180 per cent	75 per cent	★	521EH
B2-31	PM High-frequency injection amplitude	5% to 40%	20 per cent	☆	521FH
B2-32	PM high-frequency injection velocity discrimination filtering	0.001s～0.100s	0.002s	☆	5220H
B2-33	PM high-frequency injection convergence rate	1～200rad/s	40rad/s	☆	5221H
B2-34	PM Low-speed IF pull-in current	0.0 per cent to 150.0 per cent	50.0 per cent	★	5222H
B2-35	PM initial position angle compensation	0.0° to 90.0°	0.0°	★	5223H
B2-36	PM SLVC low speed operation mode	0: Full adaptive estimation 1: Low-speed high-frequency injection + medium- and high-speed adaptive estimation 2: Low-speed IF + medium and high-speed adaptive estimation	0	★	5224H
B2-37	PM SLVC low speed operating range	0.0% to 100.0%	10.0 per cent	☆	5225H
B2-38	PM SLVC low speed no-load current	0.0% to 100.0%	30.0 per cent	☆	5226H
B2-39	PM SLVC high speed no-load current	0.0% to 50.0%	10.0 per cent	☆	5227H
B2-40	PM MTPA enable	0: not enabled 1: Enable	0	★	5228H
B2-41	PM MTPA filter time	1-2000ms	200ms	★	5229H

FUNC	Name	Descriptions	Factory default	Attribute	Address
		B3-Torque control parameter set			
B3-00	Torque control torque input Source	0: Digital setting (B3-01) 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication	0	★	5300H
B3-01	Torque reference digital setting	-200.0 to 200.0 per cent	0	☆	5301H
B3-02	Max torque	10.0% to 300.0%	200.0 per cent	★	5302H
B3-03	Torque command acceleration time	0.000s～30.000s	0.100s	☆	5303H
B3-04	Torque command deceleration time	0.000s～30.000s	0.100s	☆	5304H
B3-05	Torque control speed limit source	Position: Positive rotation command speed limit source 0: Positive speed digital limit 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication settings Tenth digit position: reverse command speed limit source 0: Reverse speed digital limit 1: AI1 2: AI2 3: AI3 4: AI4 5: HDI 6: Communication settings	00	★	5305H
B3-06	Digital limitation of forward frequency	0.00Hz to Max frequency	50.00 Hz	☆	5306H
B3-07	Digital limitation of inversion frequency	0.00Hz to Max frequency	50.00 Hz	☆	5307H
B3-09	Static friction torque compensation	0.0% to 100.0%	10.0 per cent	☆	5309H
B3-10	Static friction range	0.00Hz to 50.00Hz	10.00 Hz	★	530AH
B3-11	Dynamic friction torque compensation	0.0% to 50.0%	0.0 per cent	☆	530BH

FUNC	Name	Descriptions	Factory default	Attribute	Address
B4-Encoder parameters					
B4-00	frequency inverter type	0: No encoder feedback 1: Incremental ABZ 2: Incremental ABZUVW 3: Rotary Transformer	0	★	5400H
B4-01	Number of encoder lines	1 to 65535	1024	★	5401H
B4-03	Encoder direction	0: positive direction 1: negative direction Incremental encoder: AB phase sequence Rotary transformer: absolute position change direction	0	★	5403H
B4-04	Incremental UVW direction	0: positive direction 1: negative direction	0	★	5404H
B4-05	Encoder mounting angle	0.0° to 359.9°.	0.0°	★	5405H
B4-07	Motor to encoder speed ratio molecule	1 to 65535	1000	★	5407H
B4-08	Denominator of motor to encoder speed ratio	1 to 65535	1000	★	5408H
B4-09	Encoder break detection time	0.0s (non-detectable)~10.0s	2.0s	★	5409H
B4-11	Encoder feedback speed filter time	0-32ms	1	★	540BH
B4-12	logarithm of the spin pole (math)	1 to 80	1	★	540CH
B4-13	Rotary transformer delay compensation factor	0 to 200	100	★	540DH
B5 - Enhanced control parameter sets					
B5-00	Low-speed Max carrier frequency limit	1.0kHz～15.0kHz	3.0kHz	☆	5500H
B5-01	High-speed Min carrier frequency limit	1.0kHz～15.0kHz	8.0kHz	☆	5501H
B5-02	Low-speed carrier frequency limit cut-off frequency	0.00Hz to 50.00Hz/0.0Hz to 50.0Hz	5.00 Hz	☆	5502H
B5-03	High-speed carrier frequency limit start frequency	50.00Hz to 500.00Hz/50.0Hz to 5000.0Hz	150.00 Hz	☆	5503H
B5-04	PWM optimisation selection	Single digits: carrier modulation mode 0: SVPWM 1: SVPWM+DPWM automatic switching 2: Random carrier 3: SPWM Tenth digit: Adjust the carrier frequency according to the rotational speed	010	★	5504H

		0: No. 1: Low-speed limiting of the Max carrier frequency. 2: High-speed limitation of the minimum carrier frequency. 3: Both low and high speed restrictions Hundred digit: whether or not the frequency is limited with temperature 0: No; 1: Yes			
B5-06	Max output voltage factor	50 per cent to 110 per cent	105 per cent	★	5506H
B5-07	AVR selection	0: Invalid 1: Effective	1	★	5507H
B5-09	Deadband compensation method	digits: open-loop control 0: No compensation 1: Compensation modality 1 2: Compensation modality 2 Ten positions: closed-loop vector 0: No compensation 1: Compensation modality 1 2: Compensation modality 2	21	★	5509H
D0 group monitoring group 1					
D0-00	Target frequency	Unit: 0.01Hz/0.1Hz	-	●	7000H
D0-01	Ramp output frequency	Unit: 0.01Hz/0.1Hz	-	●	7001H
D0-02	Actual output frequency	Unit: 0.01Hz/0.1Hz	-	●	7002H
D0-03	Output Current	Unit: 0.1A (generally used for communication, decimal point fixed)	-	●	7003H
D0-04	Output voltage	Unit: 1V	-	●	7004H
D0-05	Target torque	Unit: 0.1 per cent	-	●	7005H
D0-06	Output torque	Unit: 0.1 per cent	-	●	7006H
D0-07	Busbar voltage	Unit: 1V	-	●	7007H
D0-08	VF Separation Voltage	Unit: 0.1 per cent	-	●	7008H
D0-09	Frequency inverter overload rate	Unit: 0.1 per cent	-	●	7009H
D0-10	Motor overload rate	Unit: 0.1 per cent	-	●	700AH
D0-11	Output power	Unit: 0.1kw	-	●	700BH
D0-12	Power factor	-1.000 to 1.000	-	●	700CH
D0-13	Load speed	-	-	●	700DH
D0-16	Output current 2	Unit: 0.01A (drive power ≤ 22kw) 0.1A (drive power ≥30kw)	-	●	7010H
D0-17	Motor temperature1	Motor temperature detection channel 1 (AI3) detection value, unit: 0.1 ℃	-	●	7011H
D0-18	Motor temperature2	Motor temperature detection channel 2 (AI4) detection value, unit: 0.1 ℃	-	●	7012H

FUNC	Name	Descriptions	Factory default	Attribute	Address
D0-19	Encoder feedback frequency	Unit: 0.1Hz	-	●	7013H
D0-20	Current encoder position	0 to (encoder resolution - 1)	-	●	7014H
D0-21	Encoder UVW status	0 to 7	-	●	7015H
D0-22	Encoder Z signal pulse position	0 to (encoder resolution - 1)	-	●	7016H
D0-23	System status word 1	Bit0: Drive operation status 0: Stop; 1: Run Bit1: Direction of operation Bit2: Drive power up and ready to go Bit3: Drive Failure Status Bit5/4: Troubleshooting type Bit6: JOG status Bit7: Tuning Status Bit8: DC braking status Bit 10/9: Acceleration and deceleration processes Bit11: Current Limit Status Bit13/12: Overpressure stall condition Bit14: Undervoltage stall condition Bit15: Base blocking state (reserved)	-	●	7017H
D0-25	Cumulative power-up time	Unit: hours	-	●	7019H
D0-27	Cumulative running time	Unit: hours	-	●	701BH
D0-29	Meter Low 16-bit	Electricity consumption = (D0-30)*65536+(D0-29) degrees (Unit: 0.1 degrees)	-	●	701DH
D0-30	Meter High 16-bit		-	●	701EH
D1 group monitoring group 2					
D1-00	Main frequency	Unit: 0.01Hz/0.1Hz	-	●	7100H
D1-01	Subsidiary frequency	Unit: 0.01Hz/0.1Hz	-	●	7101H
D1-02	UpDown frequency	Unit: 0.01Hz/0.1Hz	-	●	7102H
D1-04	DI port status		-	●	7104H
D1-05	DO output port status		-	●	7105H
D1-06	DI function status 1		-	●	7016H
D1-07	DI Function Status 2		-	●	7107H
D1-08	DI Function Status 3		-	●	7108H
D1-09	DI Function Status 4		-	●	7109H
D1-10	DI Function Status 5		-	●	710AH

FUNC	Name	Descriptions	Factory default	Attribute	Address
D1-11	DI Function Status 6		-	●	710BH
D1-12	DO Function Status 1		-	●	710CH
D1-13	DO Functional State 2		-	●	710DH
D1-14	DO Functional State 3		-	●	710EH
D1-15	DO Functional State 4		-	●	710FH
D1-16	AI1 actual input value	Unit: 0.01V	-	●	7110H
D1-17	AI1 actual set value	Unit: 0.1 per cent	-	●	7111H
D1-18	AI2 actual input value	Unit: 0.01V	-	●	7112H
D1-19	AI2 actual set value	Unit: 0.1 per cent	-	●	7113H
D1-20	AI3 actual input value	Unit: 0.01V	-	●	7114H
D1-21	AI3 actual set value	Unit: 0.1 per cent	-	●	7115H
D1-22	AI4 actual input value	Unit: 0.01V	-	●	7116H
D1-23	AI4 actual set value	Unit: 0.1 per cent	-	●	7117H
D1-24	HDI actual input frequency	Unit: 0.01kHz	-	●	7118H
D1-25	HDI actual set value	Unit: 0.1 per cent	-	●	7119H
D1-26	HDO actual output frequency	Unit: 0.01kHz	-	●	711AH
D1-27	AO1 actual output value	Unit: 0.1 per cent	-	●	711BH
D1-28	AO2 actual output value	Unit: 0.1 per cent	-	●	711CH
D1-29	Radiator temperature	Unit: 0.1°C	-	●	711DH
Group D2 Monitoring Group 3					
D2-00	PID command	Unit: 0.1 per cent	-	●	7200H
D2-01	PID feedback	Unit: 0.1 per cent	-	●	7201H
D2-03	PID deviation	Unit: 0.1 per cent	-	●	7203H
D2-04	PID output	Unit: 0.1 per cent	-	●	7204H
D2-05	PLC current operating phase	-	-	●	7205H
D2-06	PLC current segment remaining time	-	-	●	7206H
D2-07	Number of PLC runs remaining	-	-	●	7207H
DE - Fault message logging					
DE-00	Current Fault Code	-	-	●	7E00H
DE-01	Output frequency at current fault	Unit: 0.1Hz	-	●	7E01H
DE-02	Busbar voltage at current fault	Unit: 1V	-	●	7E02H
DE-03	Output current at current fault	Unit: 0.1A	-	●	7E03H
DE-04	Status word 1 at current fault	-	-	●	7E04H

FUNC	Name	Descriptions	Factory default	Attribute	Address
DE-05	Current runtime at fault	-	-	●	7E05H
DE-06	Accumulated runtime at current fault	-	-	●	7E06H
DE-07	Radiator temperature at current fault	-	-	●	7E07H
DE-08	DI input status at current fault	-	-	●	7E08H
DE-09	Previous 1 fault code	-	-	●	7E09H
DE-10	Output frequency at first fault	Unit: 0.1Hz	-	●	7E0AH
DE-11	Busbar voltage at previous 1 fault	Unit: 1V	-	●	7E0BH
DE-12	Output current at first 1 fault	Unit: 0.1A	-	●	7E0CH
DE-13	Status word 1 at the first fault	-	-	●	7E0DH
DE-14	Running time at first failure	-	-	●	7E0EH
DE-15	Cumulative running time of the previous fault	-	-	●	7E0FH
DE-16	Radiator temperature at the time of the previous failure	-	-	●	7E10H
DE-17	DI input status at the previous fault	-	-	●	7E11H
DE-18	First 2 fault codes	-	-	●	7E12H
DE-19	Output frequency at first 2 faults	Unit: 0.1Hz	-	●	7E13H
DE-20	Busbar voltage at first 2 faults	Unit: 1V	-	●	7E14H
DE-21	Output current at first 2 faults	Unit: 0.1A	-	●	7E15H
DE-22	Status word 1 for the first 2 faults	-	-	●	7E16H
DE-23	Running time at first 2 failures	-	-	●	7E17H
DE-24	Cumulative running time of the first 2 failures	-	-	●	7E18H
DE-25	Radiator temperature at first 2 failures	-	-	●	7E19H
DE-26	DI input status during the first 2 failures	-	-	●	7E1AH
DE-27	First 3 fault codes	-	-	●	7E1BH
DE-28	Output frequency at first 3 faults	Unit: 0.1Hz	-	●	7E1CH
DE-29	Bus voltage at first 3 faults	Unit: 1V	-	●	7E1DH
DE-30	Output current at first 3 faults	Unit: 0.1A	-	●	7E1EH

FUNC	Name	Descriptions	Factory default	Attribute	Address
DE-31	Status word 1 for the first 3 failures	-	-	●	7E1FH
DE-32	Running time at first 3 failures	-	-	●	7E20H
DE-33	Cumulative running time of the first 3 failures	-	-	●	7E21H
DE-34	Radiator temperature at first 3 failures	-	-	●	7E22H
DE-35	DI input status during the first 3 failures	-	-	●	7E23H
DE-36	First 4 fault codes	-	-	●	7E24H
DE-37	Output frequency at first 4 faults	Unit: 0.1Hz	-	●	7E25H
DE-38	Busbar voltage at first 4 faults	Unit: 1V	-	●	7E26H
DE-39	Output current at first 4 faults	Unit: 0.1A	-	●	7E27H
DE-40	Status word 1 for the first 4 failures	-	-	●	7E28H
DE-41	Running time at first 4 failures	-	-	●	7E29H
DE-42	Cumulative running time of the first 4 failures	-	-	●	7E2AH
DE-43	Radiator temperature at first 4 failures	-	-	●	7E2BH
DE-44	DI input status during the first 4 faults	-	-	●	7E2CH
DF-Drive Information					
DF-00	Rated power of frequency inverter	Unit: 0.1kw	Model Decision	●	7F00H
DF-01	Rated voltage of frequency inverter	Unit: 1V	Model Decision	●	7F01H
DF-02	frequency inverter rated current	Unit: 0.1A	Model Decision	●	7F02H
DF-03	G/P type	0:G Heavy Duty 1: P light duty	0	●	7F03H
DF-06	Standard functional software versions	0.00 to 655.35	Factory setting	●	7F06H
DF-07	Extended functionality software version	0.00 to 655.35	Factory setting	●	7F07H
DF-09	Driver software version	0.00 to 655.35	Factory setting	●	7F09H

Appendix C Options

C.1 Brake assembly selection

The braking resistor is used to consume the energy fed back to the frequency converter when the motor is running in braking or power generation, in order to realise fast braking or to avoid the frequency converter from reporting the over-voltage fault in the main circuit. There are two parameters for the selection of braking resistor: resistance value and power. Normally, the larger the inertia of the system, the shorter the deceleration time and the more frequent the braking, the braking resistor should be selected with larger power and smaller resistance value.

1、Selection of braking resistor resistance value

The resistance value of the braking resistor can be calculated according to the following formula:

$$R = \frac{U^2}{P_B}$$

In the formula:

U : DC bus voltage during braking (different systems, generally 700V for 380VAC system)
R : Braking resistor resistance value, unit: Ω
PB: Brake power in W.

2, Braking resistor power selection

The power of the braking resistor can be calculated according to the following formula:

$$P_R = P_B \times D$$

Where.

P_R: Power of braking resistor
D : braking frequency (braking process accounted for the proportion of the entire working process), by the load characteristics of the working conditions to determine the typical values of common occasions as shown in the table below:

Table C-1 Braking Frequency for Common Occasions

Applications	The value of D
lifts	10% to 20%
Unwinding and winding	40-50 per cent
centrifuges	40 to 60 per cent
Occasional braking loads	5%
General	10%

3、Brake components selection table

Table C-2 T580　frequency inverter Brake Component Selection Table

Three-phase 380V rating			
Frequency inverter Model	Recommended power of braking resistor (10 per cent braking frequency)	Recommended Resistance Value of Braking Resistor	Brake unit
T580-0.7g/1.5p-4t	100W	≥ 300Ω	Standard built-in
T580-1.5G/2.2P-4T	150W	≥ 220Ω	
T580-2.2g/4.0p-4t	300W	≥ 180Ω	
T580-4.0g/5.5p-4t	500W	≥ 130Ω	
T580-5.5g/7.5p-t4	800W	≥ 90Ω	
T580-7.5g/011p-4t	1000W	≥ 68Ω	
T580-011g/015p-4t	1.2KW	≥ 45Ω	
T580-015g/018p-4t	1.5KW	≥ 32Ω	
T580-018g/022p-4t	2.0KW	≥ 25Ω	
T580-022G/030P-4T	2.5KW	≥ 22Ω	
T580-030G/037P-4T	3.0KW	≥ 15Ω	Built-in optional
T580-037G/045P-4T	3.7 KW	≥ 15Ω	
T580-045G/055P-4T ~ T580-630G/710P-4T	Adapted to external brake units		

C.2 PG Card Selection

Warranty agreement

1	The warranty period of this product is eighteen months (based on the body barcode information), the warranty period in accordance with the Use instructions for normal use, product failure or damage, our company is responsible for free of charge Maintenance.
2	During the warranty period, a repair fee will be charged for damages caused by
	A. Damage to the machine caused by errors in use and unauthorised repairs or modifications on your own;
	B. As a result of earthquakes, fires, wind and water hazards, lightning strikes, abnormal voltages or other natural disasters that do not Damage to the product caused by force majeure and various human factors;
	C. Hardware damage due to human drop and shipping after purchase;
	D. Damage to the machine caused by not following the user manual provided by our company;
	E. Malfunctions and damages caused by obstacles other than the machine (e.g. external equipment factors);
	F. Unauthorised removal of product identification (e.g. nameplate).
3	In case of product failure or damage, please fill in the Product Warranty Card correctly and in detail. The elements of the
4	Maintenance fees are charged in accordance with our latest adjusted Maintenance Price List.
5	This warranty card will not be reissued under normal circumstances, please be sure to keep this card, the product is under warranty. Show it to the maintenance personnel when repairing.
6	If you have any problems during the service, please contact our agent or our company in time.
7	The right of interpretation of the agreement is vested in the Company.

Customer service centre