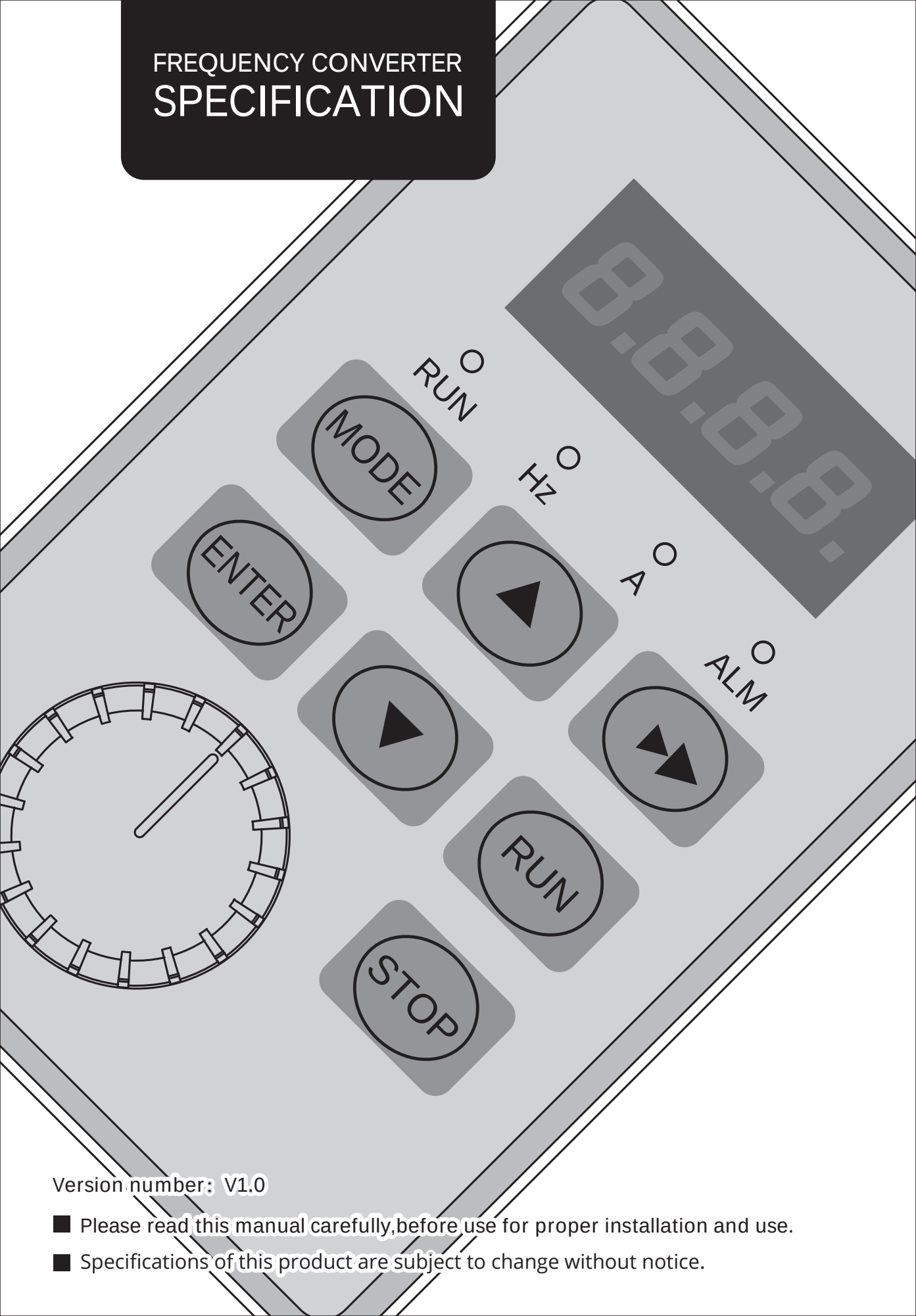
FREQUENCY CONVERTER

SPECIFICATION



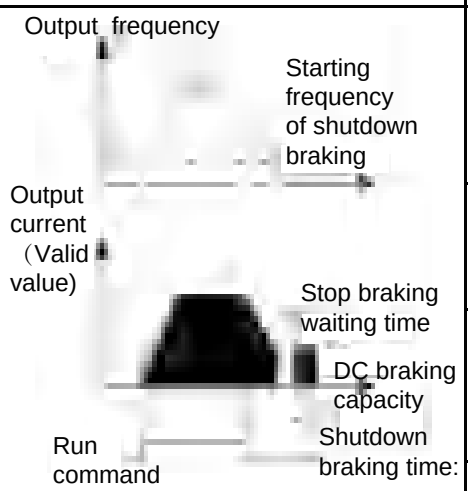
Version number: V1.0

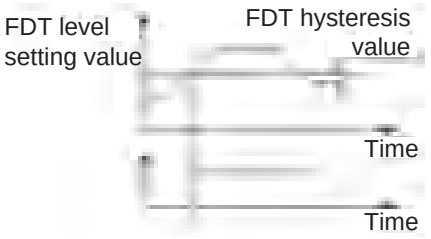
- Please read this manual carefully,before use for proper installation and use.
- Specifications of this product are subject to change without notice.

○—Parameter that can be modified in any state
×—Unmodifiable parameters in the running state
◆——Actual test parameters cannot be modified
◇—Factory parameters which are limited to the manufacturer's modification, the user is prohibited frommodifying

Group P0 - Basic operating parameters					
Function Code	Name	Content	Predetermined Area	Factory Default	Modification
P0.00	Run command channel selection	0: The panel runs the command channel 1: The terminal runs the command channel 2: The communication runs command channels	0～2	0	○
P0.01	Frequency source	0：digital set 1（preset frequency P0.06, operation keypad▲、▼key can be modified） 1：digital set 2（preset frequency P0.06,Terminal UP/DOWN can be modified） 2：AI analog（0～20mA/0～5V） 3：reserved 4：panel potentiometer 5：reserved 6：multistage speed 7：reserved 8：PID 9：communication set	0～9	4	○
P0.02	Motor control mode	0：vector control 1：reserved 2：V/F control Note: this parameter can not be initialized, please modify it manually.	0～2	2	×
P0.03	Maximum output frequency	The maximum output frequency is the highest frequency allowed by the frequency converter and the reference for the acceleration/ deceleration setting.	MAX｛50.00,【P0.04】｝～ 300.00	50.00	×

P0.04	Upper frequency	The operating frequency cannot exceed this frequency	Lower limit frequency【P0.05】～Maximum frequency【P0.03】	50.00	×
P0.05	Low limit frequency	The operating frequency cannot be lower than this frequency	0.00～Upper limit frequency【P0.04】	0.00	×
P0.06	Operation frequency digital setting	The set value is a given initial value of thefrequency number	0.00～upper limit frequency	50.00	○
P0.07	Acceleration time	Time required for the frequency converter to accelerate from zero frequency to the maximum output frequency	0.1～6000.0S 0.05～4.0KW 7.5S 5.5～11.0KW 15.0S 15.0～ 30.0KW 30.0S	Device setting	○
P0.08	Deceleration time	Time required for the frequency converter to decelerate from maximum output frequency to zero frequency		Device setting	○
P0.09	Runtime operator panel ▲、▼key FM reference	0：operating frequency 1：set frequency	0～1	1	×
P0.10	Running direction	0：same direction 1：opposite direction	0～1	0	×
P0.11	Carrier frequency setting	For the occasion of silent operation, the carrier frequency can be increased to meet the requirements appropriately, but increasing the carrier frequency will increase the heat of frequency converter.	2.0～16.0KHz 0.05～4.0KW 6.0KHz 5.5～11.0KW 4.5KHz 15.0～ 30.0KW 3.0KHz	Device setting	○
P1 Group - Auxiliary Operating Parameters					

P1.00	Frequency setting of jog operation	Set the jog forward running frequency	0.00～upper limit frequency	10.00	○
P1.01	Jog Acc time	Set jog acceleration time	0.1～6000.0S 0.05～4.0KW 7.5S 5.5～11.0KW 15.0S 15.0～30.0KW 30.0S	Depending on model	○
P1.02	Jog Dec time	Set jog deceleration time		Depending on model	○
P1.03	Stop mode	0: Slowing down to stop 1: Stopping freely	0～1	0	×
P1.04	Starting frequency of stop DC braking		0.00～upper limit frequency	0.00	○
P1.05	Stop DC braking voltage		0.0～6000.0s	0.0	○
P1.06	Stop DC braking voltage		0.0～50.0％ *Rated voltage of motor	0.0	○
P1.07	Waiting time of stop DC braking		0.0～100.0s	0.0%	○
P1.08	Hopping frequency	Set hopping frequency rang	0.00～upper limit frequency	0.00	○
P1.09	Hopping frequency rang		0.00～upper limit frequency	0.00	○
P1.10	Torque boost settings	Manual torque boost, this setting is a percentage relative to the rated voltage of the motor.	0.0～30.0％	Depending on model	×
P1.11	Torque boost cutoff frequency	0.00～rated current of motor	0.00～rated current of motor	15.00	×

P1.12	Action when the set frequency is lower than the lower limit frequency	0：Operate at the lower limit frequency 1：zero frequency operation 2：stop	0～2	0	×
P1.13	FDT level setting value		0.00Hz～frequency uppe r limit	10.00	○
P1.14	FDT hysteresis value		0.00Hz～frequency uppe r limit	1.00	○
P1.15	Frequency reaches FAR detection width	the output frequency is within the positive and negative detection width of the set frequency, the terminal outputs a valid signal (low level).	0.00～upper limit frequency	5.00	○
P1.16	MS frequency 0	set MS frequency 0	-upper limit frequency～upper limit frequency	5.00	○
P1.17	Multi-speed frequency 1	Set the frequency in velocity period 1	Negative upper limit frequency~ Upper limit	10.00	○
P1.18	Multi-speed frequency 2	Set the frequency in velocity period 2	Negative upper limit frequency~ Upper limit	15.00	○
P1.19	Multi-speed frequency 3	Set the frequency in velocity period 3	Negative upper limit frequency~ Upper limit	20.00	○
P1.20	Multi-speed frequency 4	Set the frequency in velocity period 4	Negative upper limit frequency~ Upper limit	25.00	○

P1.21	Multi-speed frequency 5	Set the frequency in velocity period 5	Negative upper limit frequency~ Upper limit	37.50	○
P1.22	Multi-speed frequency 6	Set the frequency in velocity period 6	Negative upper limit frequency~ Upper limit	50.00	○
P1.23	Multi-speed frequency 6	Set the frequency in velocity period 7	Negative upper limit frequency~ Upper limit	0.00	○
P1.24	Operation monitoring parameter item selection	By changing the setting value of this function code, the monitoring items of the main monitoring interface can be changed. For example, setting 4, i.e. selecting output current d-04, the default display item of the main monitoring interface is the current output current value.	0～07FFH	0011H	○
P1.25	Stop monitoring parameter item selection		0-00FFH	0003H	○
P1.26	Display mode	LED one's place: adjust frequency and PID given amount display selection 0：display frequency, PID given amount 1：only display monitoring parameters LED ten's place: reserved LED hundred's place: reserved LED thousand's place: reserved	0-0001H	0	○
P1.27	Oscillation suppressing selection	0: Invalid 1: Valid	0～1	0	○

P1.28	Oscillation suppressing coefficient	When motor oscillation occurs, need to set P1.27 to select valid, turn on the oscillation suppression function, and then adjust it by setting the oscillation suppression coefficient. Under normal circumstances, if the oscillation amplitude is large, increase the oscillation suppression coefficient P2.28.	0～1000	100	○
P1.29	Cooling fan control	0: auto control mode 1: always running when power on 2: The fan is operated at a temperature higher than 50 °C, and the fan does not operate below 45 °C.	0～2	0	○
P1.30	PWM mode selection	0：seven segments of full band 1：five segments of full band 2：switch from 7 segments to five segments	0～2	0	×
P1.31	AVR function	0: Invalid 1: Valid throughout 2: Invalid only during deceleration	0～2	2	×
P1.32	Parameter initialization	0：no operation 1：restore to factory defaults (all user parameters 2：clear fault record	0～2	0	×
Group P2-Motor parameters					
P2.00	Motor’s rated power	Set motor parameters	0.05～99.99KW	Depending on model	×
P2.01	Motor’s rated voltage		0～999V	Depending on model	×
P2.02	Motor’s rated current		0.1～600.00A	Depending on model	×
P2.03	Motor’s rated frequency		0.01Hz～maximum frequency	50.00	×
P2.04	Motor’s rated speed		0～60000RFM	Depending on model	×

P2.05	Stator resistance of asynchronous motor	Set stator resistance of asynchronous motor	0.001～20.000Ω	Depending on model	×
P2.06	No-load current of asynchronous motor	Set the no-load current of asynchronous motor	0.1～motor rated current	Depending on model	×
Group P3-Input/output terminals					
P3.00	Input DI1 function	0: control terminal idle 1: forward run (FWD) 2: reverse run (REV) 3: three-wire running control 4: forward jog control 5: reverse jog control 6: frequency increment command（UP） 7: frequency decrement command（DOWN） 8: free shutdown control 9: external reset signal input (RST) 10: reserved 11: external fault normally-open input 12: multi-speed selection DI1 13: multi-speed selectionD I2 14: multi-speed selection DI3 15～17: reserved 18: frequency source switch 19: UP/DOWN frequency zero clearing 20: run command channel force to terminal 21: ACC/DEC prohibit 22～47：reserved 48: external stop signal input(STOP) 49: Stop DC braking command 50: reserved 51: run command channel to force communication 52～61: reserved	0～51	1	×
F3-01	Input DI2 function		0～51	2	×
P3.02	Input DI3 function		0～51	4	×
P3.03	Input DI4 function		0～51	5	×

P3.04～P3.05	Reserved	—	-	-	◆
P3.06	FWD/REV terminal control mode	0: Two-wire control mode 1 1: Two-wire control mode 2 2: Three-wire control mode 1 3: Three-wire control mode 2 4～5：Reserved	0～3	0	×
P3.07	Terminal function detection selection at power-on	0: Terminal run command is invalid at power-on 1: Terminal run command is valid at power-on	0～1	0	○
P3.08	UF/DOWN terminal end rate	The function code is the frequency end rate when the UP/DOWN terminal setting frequency is set, that is, the amount of frequency change when UP/DOWN terminal is shorted to the COM terminal for one second.	0.01～50.00Hz/S	1.00	○
P3.09	Effective logic setting of input terminal（DI1～DI4）	LED one's place: DI1 logical selection LED ten's place: DI2 logical selection LED hundred's place: DI3 logical selection LED thousand's place: DI4 logical selection 0 is positive logic, i.e. terminal DI1 is enabled when it connects with common terminal and disabled if disconnected. 1 is negative logic, i.e. terminal DI2 is disabled when it connects with common terminal and enabled when disconnected.	0000～1111	0	○
P3.10	Reserved	—	-	-	◆

P3.11	AI input lower limit	Set AI lower limit	0.00V/0.00mA～10.00V/20.00mA	0.00	○
P3.12	AI lower limit corresponding setting	Set the AI lower limit corresponding setting, which corresponds to the percentage of the upper limit frequency.	-100.0%～100.0%	0.0%	○
P3.13	AI input upper limit	Set AI upper limit	0.00V/0.00mA～10.00V/20.00mA	10.00	○
P3.14	AI upper limit corresponding setting	Set the AI upper limit corresponding setting, which corresponds to the percentage of the upper limit frequency.	-100.0%～100.0%	100.0%	○
P3.15	AI analog input signal filter time constant	This parameter is used to filter the AI input signal to eliminate the influence of interference.	0.1～5.0s	0.1s	○
P3.16～P3.20	Reserved	—	-	-	◆
P3.21	Relay R output setting	0: idle 1: VFD running 2: VFD fault 3: frequency/speed level detection signal（FDT） 4: frequency/speed arrival signal（FAR） 5: VFD zero-speed running 6: VFD pre-alarm signal of overload 7: VFD is ready for operation 8: upper limit arrival of output frequency 9: lower limit arrival of output frequency 10: communication settings 11: alarm output (continue running) 12: shutdown due to external	0～18	2	×
P3.22	Reserved		-	-	◆
P3.23	Reserved		-	-	◆
P3.24	R output delay time	The delay from the change of the status of the switching	0.0～255.0s	0.0	×

P3.25	R disconnect delay time	output terminal Y to the change of the output.	0.0～255.0s	0.0	×
P3.26～P3.29	Reserved	—	-	-	◆
GroupP4 -Protectionfunction parameters					
P4.00	Voltage limiting factor	This parameter is used to adjust the inverter's ability to suppress overvoltage during deceleration. Encountering a motor with large inertia coefficient setting 101	0: close，1～101	20	×
P4.01	Overvoltage limit level	The overvoltage limit level defines the operating voltage of overvoltage stall protection.	350～600/400～850V	370/700V	×
P4.02	Current limiting factor in accelerating	This parameter is used to adjust the ability of the inverter's to restrain overcurrent during acceleration.	0: close，1～100	20	×
P4.03	Acceleration current limit level	The current limit level defines the current threshold for automatic current limiting action, and its setting value is a percentage relative to the rated current of the inverter.	50％～250％	160%	×
P4.04	Fault auto reset times	The number of fault reset is set to 0, no automatic reset function, only manual reset, 10 means the number of times is not limited, i.e. countless times.	0～10	0	×
P4.05	Fault auto reset interval	Set the fault auto reset interval	0.5～25.0s	3.0s	×
P4.06	Output phase loss protection coefficient	Set the input phase loss protection coefficient	0.0～20.00	10.00	○
P4.07	Constant speed current limit coefficient	This parameter is used to adjust the inverter's ability to suppress overcurrent during constant speed.	0: close，1～5000	0	×
P4.08	Undervoltage protection level	This function code specifies the lower limit voltage allowed on the DC bus when the inverter is operating normally.	50～280/50～480V	180/360V	×

P4.09	VFD overload pre-warning level	The current threshold for the overload pre-warning action of the inverter is set as a percentage relative to the rated current of the inverter.	0～150％	120%	○
P4.10	VFD overload pre-warning delay	VFD output current from consistently greater than the overload pre-warning level amplitude （P4.09）, delay time to output overload pre-alarm signal.	0.0～15.0s	5.0s	×
Group P5 - PID parameters					
P5.00	PID input channel	0：digital setting PID is given by numbers and set by function code P5.01. 1：AI 2～6：reserved 7：pressure setting（MPa、Kg） 8：panel potentiometer	0～8	7	○
P5.01	Digital reference input setting	Use the operation keyboard to set the given amount of PID control,Only when the PID given channel selects digital given (P5.00 is 0 or 7), the function is valid. If P5.00 is7, used as pressure setting, this parameter is consistent with the units of P5.04.	0.0～100.0%	50.0%	○
P5.02	PID feedback channel	0：AI 1: reserved	0～1	0	○

P5.03	PID regulation characteristics	0：positive effect When the feedback signal is greater than the given amount of PID, the inverter output frequency is required to decrease (i.e., reduce the feedback signal). 1：negative effect When the feedback signal is greater than the given amount of PID, the inverter output frequency is required to increase (i.e. reduce the feedback signal).	0～1	0	○
P5.04	Sensor range	0.0～6000.0（MPa、Kg）	0.0～6000.0（MPa、	10.0	○
P5.05	Proportional gain Kp1	The speed of PID adjustment is set through the two parameters of proportional gain and integral time, fast adjustment speeds require increased proportional gains and reduced integration times, low adjustment speeds require reduced proportional gains and increased integration times. In general, the differential time is not set.	0.01～10.00	2.00	○
P5.06	Integration time Ti1		0.00～10.00s	0.10s	○
P5.07	PID sleep selection	0：invalid 1：Normal sleep This method requires setting specific parameters such as P5.08~P5.11.	0～1	1	○
P5.08	Threshold value of sleeping	If the actual feedback value is greater than the set value and the frequency output by the inverter reaches the lower limit frequency, the inverter will enter the sleep state (i.e. running at zero speed) after the delay waiting time defined by P5.10; this value is the percentage of PID set value.	0.0～150.0%	100.0%	○

P5.09	Threshold value of awaking	If the actual feedback value is less than the set value, the inverter will leave the sleep state and start working after the delay waiting time defined by P5.11; this value is the percentage of the PID set value.	0.0～150.0%	90.0%	○
P5.10	Delay time of sleep	Set delay time of sleep	0.0～6000.0s	100.0s	○
P5.11	Delay time of awaking	Set delay time of awaking	0.0～6000.0s	1.0s	○
P5.12	PID sleep frequency	Set PID sleep frequency	0.00Hz～ upper limit frequency	20.00	×
P5.13	PID pressure setting	P5.00=7 as PID setting amount	0～10.0	5.0	○
Group P6 -RS485 Communication parameters					
P6.00	Communication protocol selection	0：compatible with MD380 protocol 1：compatible with Delta M protocol	0～1	1	○
P6.01	Baud rate setting	0～4：reserved 5：9600BPS 6：reserved 7：reserved	0～7	5	×
P6.02	Data format	0：no parity（N，8，1）for RTU 1：even parity（E，8，1）for RTU	0～2	0	×
P6.03	Local address	Set local address，0 is broadcast address.	0～247	1	×
P6.04	Communication timeout detection time	If the machine does not receive the correct data signal within the time interval defined by this function code, then the machine considers that there is a communication failure, and the inverter will decide whether to protect or maintain the status quo operation according to the communication failure action mode setting; this When the value is set to 0.0, no RS485 communication timeout detection is performed.	0.1～100.0s	10.0s	×

P6.05	Ratio correlation coefficient	This function code is used to set the weight coefficient of the frequency command received by the inverter as a slave through the RS485 interface, the actual operating frequency of the machine is equal to the value of this function code multiplied by the frequency setting command value received through the RS485 interface. In linked control, this function code can set the ratio of the operating frequencies of multiple inverters.	0.01～10.00	1.00	○
PF group - manufacturer parameters					
PF.00	Manufacturer password	The password is set successfully, it will take 3 minutes to take effect.	0～65535	0	○
PF.01	VFD model	220V: 0:0.05KW 1:0.1KW 2:0.2KW 3:0.4KW 4:0.55KW 5:0.75KW	0～39	Depending on model	◇
PF.02	Dead time	Set dead time	2.5～6.5μS 0.4～4.0KW 2.8μS 5.5～22KW	Depending on model	◇
PF.03	Software overvoltage point	Set software overvoltage point	220V:0～ 450V 400V	Depending on model	◇
PF.04	Voltage correction factor	Set voltage correction factor	0.01～3.00	1.00	◇
PF.05	Current correction coefficient	Set current correction coefficient	0.01～3.00	1.00	◇
PF.06	Temperature detection method selection	0: Ⅰ type (sensor connected to power supply) 1: Ⅱ type (sensor grounded) 2: Y type (Y series within 0.4KW)	0～1	0	◇

PF.07	Temperature sensor protection threshold	Set temperature sensor protection threshold	80.0℃～120.0℃	95.0℃	◇
PF.08	Special function selection	LED one's place：Accumulated running time clear selection 0：invalid 1：valid LED ten's place：model selection 0：General model（G） 1：Light load model（P） 2：Heavy duty model（Z） LED hundred's place：reserved LED thousand's place：reserved	0～0021H	Depending on model	◇

Group D - Monitoring parameter group and fault record					
Functio ncode	Name	Setting range	Minimum Unit	default	Modifi cation
d-00	Output frequency	0.00～maximum output frequency	0.01Hz	0	◆
d-01	Set frequency	0.00～maximum output frequency	0.01Hz	0	◆
d-02	Output voltage	0～999V	1V	0	◆
d-03	Bus voltage (V)	0～999V	1V	0	◆
d-04	Output current	0.0～6000.0A	0.1A	0	◆
d-05	Motor revolving speed(RPM/min)	0～36000（RPM/min）	1	0	◆
d-06	Analog input AI(V/mA)	0.00V/0.00mA～10.00V/20.00mA	0.01	0	◆
d-07	Reserved	—	-	-	◆
d-08	Reserved	—	-	-	◆
d-09	Reserved	—	-	-	◆
d-10	PID set value(V)	0.00～10.00V	0.01V	0.00	◆
d-11	PID set value(V)	0.00～10.00V	0.01V	0.00	◆
d-12	Reserved	—	-	-	◆
d-13	Reserved	—	-	-	◆
d-14	Input terminal status	0～FH Note: the sequence from high to low order digit in binary system X4/X3/X2/X1	1	0	◆
d-15	Output terminal status	0～1H Note: 1 means the relay R	1	0	◆
d-16	Module temperature ℃	0.0℃～+110.0℃	0.1℃	0	◆

d-17	Frequency converter status	0 ~ FFFFH BIT0: Run/Stop BIT2: Jog BIT3: DC braking BIT4: Reserve BIT5: Overvoltage limit BIT6: Frequency decreasing in constant speed BIT7: Overcurrent limit BIT8~9:00-zero speed/01-acceleration/10-deceleration/11- constant speed BIT10: Overload pre-alarm BIT11: Reserve BIT12~13 running command channel: 00-panel/01- terminal /10-reserve BIT14~15 bus voltage status: 00-normal/01-low voltage protection/10-overvoltage protection	1	0	◆
d-18	Accumulative run time of VFD（h）	0～65535h	1	0	◆
d-19	Software upgrade date (year)	2019～2039	1	0	◆
d-20	Software upgrade date (month, day)	0～1231	1	0	◆
d-21	Reserved	—	—	0	◆
d-22	Third fault type	0～21	1	0	◆
d-23	Second fault type	0～21	1	0	◆
d-24	The latest fault type	0～21	1	0	◆
d-25	Run frequency of current fault	0.00～upper limit frequency	0.01Hz	0	◆
d-26	Output current of current fault	0.0～6553.5A	0.1A	0	◆
d-27	Busbar voltage of current fault	0～999V	1V	0	◆
d-28	Module temperature of current fault ℃	0.0℃～+110.0℃	0.1℃	0	◆
d-29	Frequency converter status	0 ~ FFFFH BIT0: Run/Stop BIT1: Reverse / Forward BIT2: Jog BIT3: DC braking BIT4: Reserve BIT5: Overvoltage limit	1	0	◆

		BIT6: Frequency decreasing in constant speed BIT7: Overcurrent limit BIT8~9:00-zero speed/01-acceleration/10-deceleration/11- constant speed BIT10: Overload pre-alarm BIT11: Reserve BIT12~13 running command channel: 00-panel/01- terminal /10-reserve BIT14~15 bus voltage status: 00-normal/01-low voltage protection/10-overvoltage protection			
d-30	PID pressure setting	0.0～100.0（bar/Kg）	0.1	0	◆
d-31	PID pressure feedback	0.0～100.0（bar/Kg）	0.1	0	◆

E Group-Fault Code			
Fault code	Fault Descriptions	Possible Reasons	Actions
E0C1	Overcurrent during acceleration	Acceleration time is too short	Extend acceleration time
		Inverter power is too small	Choose a larger power inverter
		Improper setting of V/F curve or torque boost	Adjust V/F curve or torque boost
E0C2	Overcurrent during deceleration	Deceleration time is too short	Extend deceleration time
		Inverter power is too small	Choose a larger power inverter
E0C3	Overcurrent during uniform speed running	Grid voltage is low	Check input power
		Load mutation or abnormality	Check the load or reduce the load mutation
		Inverter power is too small	Choose a larger power inverter
EHU1	Overvoltage during acceleration	Abnormal input voltage	Check input power
		Restart the rotating motor	Set to start after DC braking

EHU2	Overvoltage during deceleration	Deceleration time is too short	Extend deceleration time
		Abnormal input voltage	Check input power
EHU3	Overvoltage during uniform speed running	Abnormal input voltage	Check input power
EHU4	Overvoltage when stop	Abnormal input voltage	Check the power supply voltage
ELU0	Undervoltage during running	The input voltage is abnormal or the relay is not drawn	Check the power supply voltage or seek service from the manufacturer
ESC1	Power module fault	Inverter output short circuit or ground	Check motor wiring
		Inverter instantaneous	Refer to overcurrent
		The control board is abnormal or interfered seriously	Seek service from the manufacturer
		Power device damage	Seek service from the manufacturer
E-OH	radiator overheating	Ambient temperature is too	reduce ambient temperature
		fan damage	replace the fan
		Air duct blocked	Dredge the air duct
EOL1	Inverter overload	Improper setting of V/F curve or torque boost	Adjust V/F curve and torque boost
		Grid voltage is low	Check grid voltage
		Acceleration time is too short	Extend acceleration time
		Motor load is too heavy	Choose a larger power inverter
EOL2	Motor overload	Improper setting of V/F curve or torque boost	Adjust V/F curve and torque boost
		Grid voltage is low	Check grid voltage
		The motor stalls or the sudden change of load is too large	Check the load
		Motor overload protection factor setting is incorrect	Correctly set the motor overload protection coefficient

E-EF	External device fault	External device fault input terminal closed	Disconnect the external device fault input terminal and clear the fault (pay attention to check the cause)
EPI D	PID feedback disconnection	PID feedback line is loose	Check feedback wiring
		The feedback value is less than the disconnection detection value	Adjust detection input threshold
E485	RS485 communication fault	Does not match the baud rate of the upper computer	Adjust baud rate
		RS485 channel interference	Check whether the communication connection is shielded, whether the wiring is reasonable, and if necessary, consider connecting the filter capacitor in parallel
		communication timeout	Retry
ECCF	Current detection fault	Current sampling circuit fault	Seek service from the manufacturer
		Auxiliary power fault	
EEEP	EEPROM read and write errors	EEPROM fault	Seek service from the manufacturer
EPAO	Burst tube fault	The feedback pressure is less than the low pressure detection threshold or greater than or equal to the high	Check the feedback connection or adjust the detection high and low pressure threshold
EPOF	Dual CPU communication fault	CPU communication fault	Seek service from the manufacturer

Communication Protocol

(The following data are all in hexadecimal)

1.RTU Mode And Format

When the controller communicates on the Modbus bus in RTU mode, each 8-bit byte in the information is divided into two 4-bit hexadecimal characters. The main advantage of this mode is the density of the characters it transmits at the same baud rate is above ASCII mode, each message must be transmitted consecutively

（1）Format Of Each Byte In RTU Mode

Coding system: 8-bit binary, hexadecimal 0-9, A-F.

Data bit: 1 start bit, 8 data bits (lower bit send first), 1 stop bit, parity bit can be selected.

(Refer to thesequence diagram of the RTU data frame)

Error check area: cyclic redundancy check (CRC)

(2)RTU Data Frame Bit Order Diagram

With parity check

Start	1	2	3	4	5	6	7	8	Par	Stop

No parity check

Start	1	2	3	4	5	6	7	8	Stop

2．Read And Write Function Codes Description:

Function Code	Function Description
3	Read register
6	Write register

3．Communication Protocol Parameter Address Description

Function Description	Address Definition	Data Meaning Description	R/W
Communication Control Command	2000H	0001H：Stop 0012H：Forward running 0013H：Forward jog running 0022H：Reverse running 0023H：Reverse jog running	W

Communication setting frequency address	2001H	Communication setting frequency range is -10000～10000. Note: The communication setting frequency is the percentage relative to the maximum frequency, and its range is -100.00%～100.00%). -100.00%～100.00%）。	W
Communication Control Command	2002H	0001H：External fault input 0002H：Fault reset	W
Read run/stop parameter description	2102H	Set frequency (two decimal places)	R
	2103H	Output frequency (two decimal places)	R
	2104H	Output current (one decimal place)	R
	2105H	Bus voltage (one decimal place)	R
	2106H	Output voltage (one decimal place)	R
	2107H	Analog input AVI (two decimal places)	R
	2108H	Reserved	R
	2109H	Reserved	R
	210AH	Motor speed	R
	210BH	Reserved	R
	210CH	Reserved	R
	210DH	Inverter temperature (one decimal place)	R
	210EH	PID feedback value (two decimal places)	R
	210FH	PID set value (two decimal places)	R
	2110H	Reserved	R
	2111H	Reserved	R
Read run/stop parameter description	2112H	Current fault	R
	2113H	Reserved	R
	2114H	Input terminal state	R
	2115H	Output terminal state	R
	2116H	BIT0：Run/Stop BIT1： Forward/Rever se BIT2：Jog BIT3：DC braking BIT4：Reserved BIT5：overvoltage limit BIT6：constant speed down frequency	

		BIT7：overcurrent limit BIT8~9：00-Zero speed/01- Acc/10- Dec/11-uniform speed BIT10：Overload pre-alarm BIT11：Reserved BIT12~13： running command channel：00- panel/01-termnial/10-communication BIT14~15： bus voltage status：00- normal/01-Low voltage protection/ 10- Overvoltage protection	R
Read run/stop parameter description	2101H	Bit0：Run Bit1：Stop Bit2： Jog Bit3：Forward Bit4：Reverse Bit5～ Bit7：Reserved Bit8:Communication given Bit9：Analog signal input Bit10：Communication run command channel Bit11：parameter lock Bit12：running Bit13：Jog command Bit14～Bit 15：Reserved	R
Read fault code description	2100H	00：No abnormality 01：Module fault 02：Overvoltage 03：temperature fault 04：Inverter overload 05：Motor overload 06：external fault 07～09：Reserved 10：Overcurrent during acceleration 11：Overcurrent during deceleration 12：Overcurrent in constant speed 13：Reserved 14：Undervoltage 15: Reserved 16：485 Communication failure 17--21：Reserved 22：Current detection fault 23--24：Reserved 25：Output phase loss	R

4.03 Read Function Mode：

Inquiry information frame format（send frame）:

Address	01H
Function	03H
Starting data address	21H
	02H
Data(2Byte)	00H
	02H
CRC CHK Low	6FH
CRC CHK High	F7H

Analysis of this segment of data：

01H is the inverter address
03H is the read function code
2102H is the starting address
0002H is the number of read addresses, and 2102H and 2103H
F76FH is 16-bit CRC check code

Response information frame format（return frame）:

Address	01H
Function	03H
DataNum*2	04H
Data1[2Byte]	17H
	70H
	00H
Data2[2Byte]	
	00H
CRC CHK Low	FEH
CRC CHK High	5CH

Analysis of this segment of data：

01H is the inverter address
03H is the read function code
04H is the product of read items*2
1770H is to read the data of 2102H (setting frequency)
0000H is to read the data of 2103H (output frequency)
5CFEH is 16-bit CRC check code

5.06H W rite Function Mode

Inquiry information frame format（send frame）:

Address	01H
Function	06H
Starting data address	20H
	00H
Data(2Byte)	00H
	01H
CRC CHK Low	43H
CRC CHK High	CAH

Analysis of this segment of

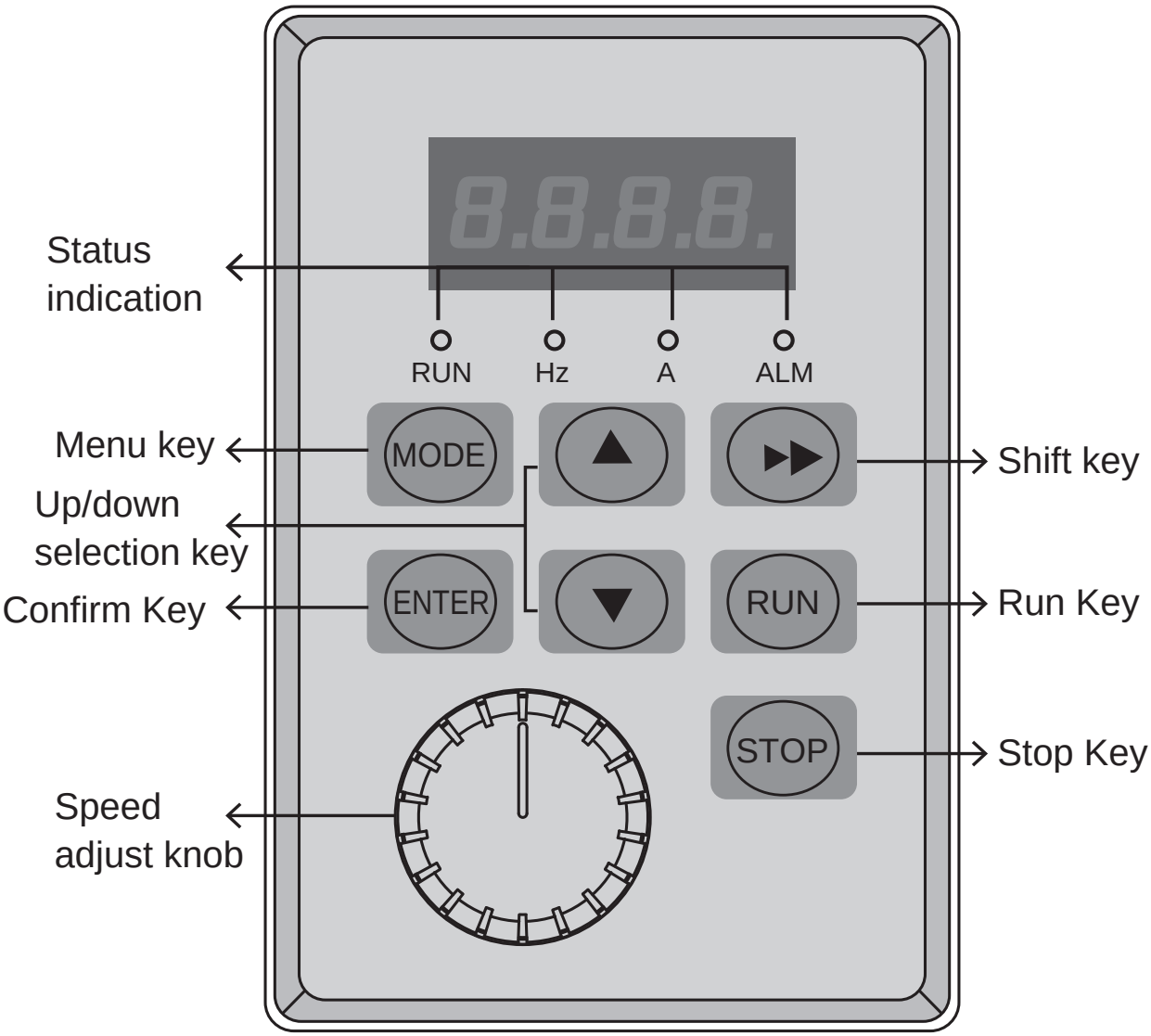
01H is the inverter address
06H is the write function code
2000H is the control command address
0001H is the stop command
43CAH is 16-bit CRC check code

Response information frame format（return frame）:

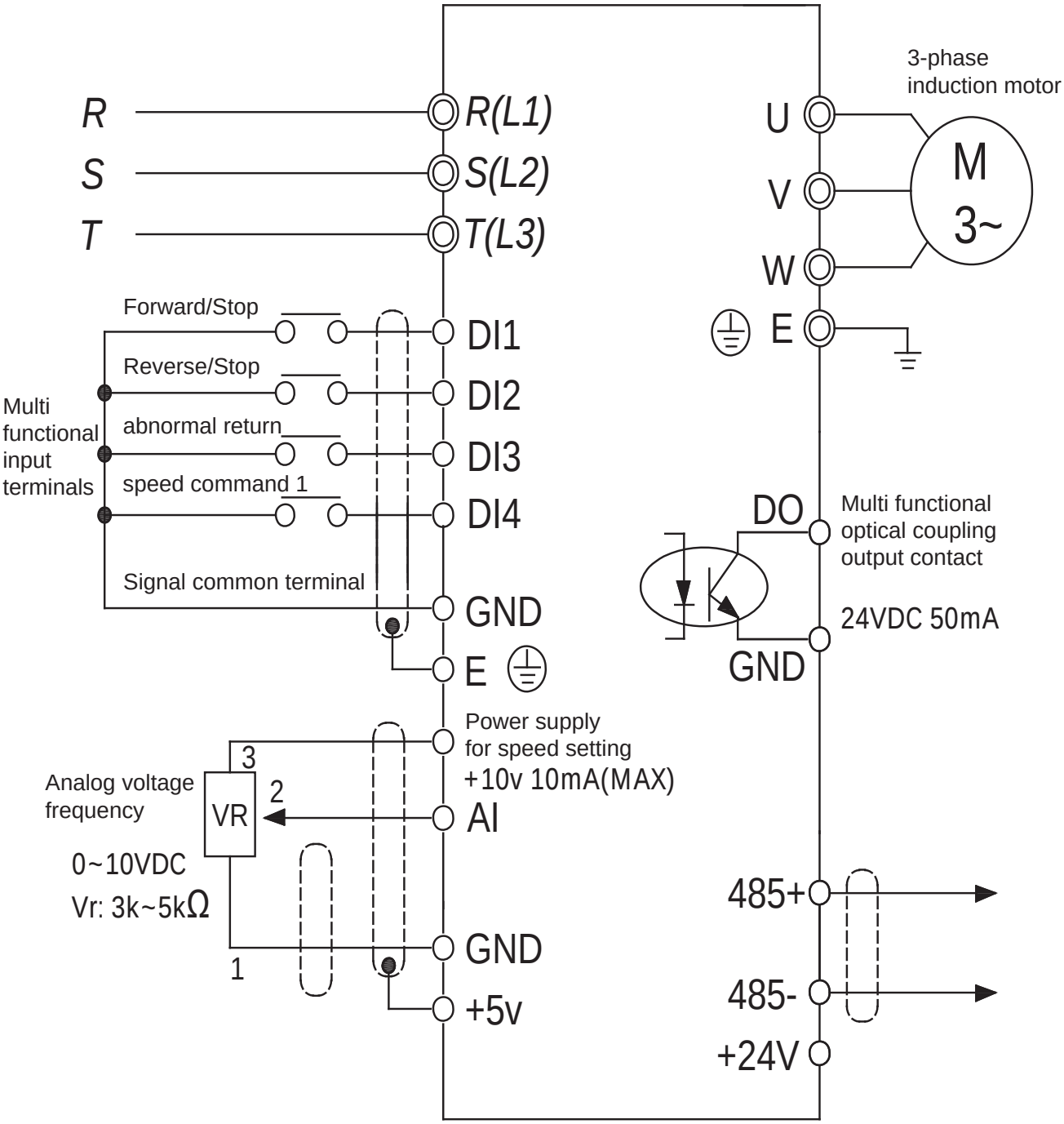
Address	01H
Function	06H
Starting data address	20H
	00H
Number of Data(Byte)	00H
	01H
CRC CHK Low	43H
CRC CHK High	CAH

Data analysis of this segment: If the settings are correct, return the same

Operation Keypad Description



Wiring


R
S
T
R(L1)
S(L2)
T(L3)
3-phase
induction motor
U
V
W
E
M
3~
Forward/Stop
Reverse/Stop
abnormal return
speed command 1
Multi
functional
input
terminals
DI1
DI2
DI3
DI4
Signal common terminal
GND
E
DO
Multi functional
optical coupling
output contact
24VDC 50mA
GND
Power supply
for speed setting
+10v 10mA(MAX)
3
2
1
Analog voltage
frequency
VR
0~10VDC
Vr: 3k~5kΩ
AI
GND
+5v
485+
485-
+24V

Installation Dimensions unit:mm

