Canroon

CV800E Compact Frequency Inverter User Manual

1.	Techn	ical Index	and Specificat	tion			
Inp	Rated \ Freque	/oltage, hcy	3-phase (4T) 380 1-phase (2S) 220	0V; 50/60Hz 0V; 50/60Hz			
ut	Allowed Range	l Voltage	3-phase (4T) 320 1-phase (2S) 190	0V~460V 0V~250V			
þ	Voltage	•	4T: 0~380V 2S: 0~220V				
Itput	Freque	псу	0~999.9Hz				
~	Overloa	d Capacity	10% for long-term	n, 150% for 1 min, 180% for 5s			
Co	ntrol Mo	de	V/F Control / Sin	nple vector control / Advanced vector control /			
	F	0.00		0.1% of movimum output froquency			
	Resolut	ion	Digital Setting				
	Freque	псу	Analog Input	Within 0.2% of maximum output frequency			
	Precisio	on	Digital Setting	Within 0.01% of set output frequency			
			V/F Curve (voltage frequency character)	Three ways: the first is linear torque characteristic curve the second is square torque characteristic curve, and the third is user-set V/F curve			
Co	V/F Co	ntrol	Torque Compensation	Manual setting: 0.0~30% of rated output Automatic lifting: automatically determine the lifting torque based on the output current combined with the motor			
ntrol Charact			Automatic Current-limiting and Voltage-limiting	During acceleration, deceleration or steady running, detect automatically the current and voltage of motor stator, and control it within bounds based on unique algorithm, minimize fault-trip chance			
ler			Voltage Frequency Character	Adjust pressure / frequency ratio according to motor parameter and unique algorithm			
	Sensele	ess	Torque Character	Starting torque 100% rated torque at 5.0 Hz (V/F control)			
	vector	Control		150% rated torque at 1.0 Hz (vector control)			
			Current and Voltage Bestrain	Current closed-loop control, free from current impact,			
	Underv Restrai	oltage n during g	Specially for users v allowable voltage ra time based on its u	with a low or unsteady voltage power grit even lower than the ange, the system can maintain the longest possible operating nique algorithm and residual energy allocation strategy			
	Multi-ve Travers	elocity and e Operation	7–segment program	mmable multi-velocity control, multiple operating modes are			
	PID Co	ntrol	Built-in PID controller (able to preset frequency). Standard configuratic				
	RS485 Communication		RS485 communication function, multiple communication protocol for choice synchronizing control function.				
	Freque	ncy	Analog Input	Direct voltage 0~10V, direct current 0~20mA (optional up limit and lower limit)			
	Setting	,	Digital Output	Operation panel setting, RS485 port setting, UP/DW terminal control, or combined with analog input			
	0.4.4	O'ana al	Digital Output	1 channel OC output and one channel relay output (TA, TC), up to 17 choices			
Typica	Output	Signal	Analog Input	1 channel analog signal output, output ranging within 0~20mA or 0~10V with flexibly setting, achievable output of physical quantities like set frequency, output frequency			
I Functic	Automa Steady- Operati	atic -voltage on	Dynamic steady sta obtain the steadies	ate, static steady state, and unsteady voltage for choices to st operation			
ă	Acceler Deceler Time S	ation and ation etting	0.1s~999.9min cc	ontinuous setting			
		Dynamic Braking	Dynamic braking continuous adjusta	initial voltage, backlash voltage and dynamic braking able			
	Brake	DC Braking	Halt DC braking in Braking time: 0.0~ Braking current: 0.	itial frequency: 0.00~ [F0.05] upper limit frequency ~30.0s; 0%~50.0% of rated current			
	Low No	ise Running	Carrier frequency 2	2.0kHz~20.0kHz continuous adjustable, minimize motor noise			
	Counte	r	A built-in counter,	facilitate system integration			
	Operati Functio	on n	Upper limit and lowe running restraint, sli control of progressi	er limit frequency setting, frequency hopping operation, reversal ip frequency compensation, RS485 communication, frequency ve increase and decrease, failure recovery automatically, etc.			
D	Opera-	Running State	Output frequency, module temperatur	output current, output voltage, motor speed, set frequency, re, PID setting, feedback, analog input and output.			
isplay	tion Panel Display	Alarm	The latest 1 faults n happens including o DC voltage and mo	ecord; running parameters record when the latest fault tripping output frequency, set frequency, output current, output voltage, dule temperature etc 6 running parameters record.			
Pro	otective	Function	Overcurrent, overvo overheat, short circ adjustment abnorn	oltage, undervoltage, module fault, electric thermal relay, cuit, default phase of input and output, motor parameter nality, internal memory fault, etc.			
Envi.	Ambien Temper	t ature	−10°C~+40°C (please run the VFD	in derated capacity when ambient temperature is 40°C \sim 50°C)			
ronn	Ambien	t Humidity	5%~95%RH, with	out condensing drops			
hent	Surrour	ndings	Indoors (without di	irect sunlight, corrosive or flammable gas, oil fog and dust)			
Str	Altitude	ion level	Running in derated	a capacity above 1000m, derate 10% for every 1000m rise.			
ucture.	Coolinc	Method	Air cooling with far	n control			
Ins	tallation	Method	Wall-hanging type				





<u>CV800E</u> - <u>001</u> G - <u>1</u> <u>4</u> <u>T</u> <u>F</u>									
Product series	Model power	Load type	Output	Voltage grade	Input	Cooling meth			
CV800E	00A: 0.4KW	G: constant	1: 3-phase	1: 110V	T: 3-phase	F: air coolir			
Compact	00B: 0.75KW	torque	2: 1-phase	2: 220V	S: 1-phase	W: water coo			
Frequency Inverter	001: 1.5KW 002: 2.2KW			4: 380V					

c. VFD Series Type:								
Voltage Class	Specification Model	Rated Power (KW)	Rated Output Current					
220V 1-phase	CV800E-00AG-12SF	0.4	2.4					
220V 1-phase	CV800E-00BG-12SF	0.75	4.5					
220V 1-phase	CV800E-001G-12SF	1.5	7					
220V 1-phase	CV800E-002G-12SF	2.2	10					
380V 3-phase	CV800E-00AG-14TF	0.4	1.2					
380V 3-phase	CV800E-00BG-14TF	0.75	2.5					
380V 3-phase	CV800E-001G-14TF	1.5	3.7					

Setting Range

2.2

5

Minimum Unit Factory fica-

380V 3-phase CV800E-002G-14TF

Name



d. Overall Dimensions:

2.4 Wiring N	otices										
(1) Cut off the(2) Switching	input po of motor	wer of V or work	FD while frequen	e dismar cy powe	ntling an er supply	d chang / should	ing the i only be	motor. conduc	ted whe	n the VF	D sto
(3) To reduce netic connect	the effector the and rel	t of EMI ay are cl	(electro lose to \	magnetio /FD.	c interfe	rence), a	add a su	irge abs	orber wł	nen elect	troma
(4) Do not co (5) Add an iso	nect AC	input po	wer to c	output te	rminal L	J, V, W c	of VFD.				
(6) Input orde	signal lir	ne should	d be wire	ed separ	ately wi	th shield	ding, and	I away f	from maj	or loop	wiring
(7) When can	ier freque	ency is le	ess than	1 4kHz, k	keep the	e distand	ce betwe	een VFD) and mo	otor with	nin 50
when carrier in wire in metal	equency ube.	exceeds	s 4kHZ, n	nake an	appropr	late redi	uction of	r the dis	stance, a	na pette	riay
(8) When add	ng periph	erals (fil	ters, rea	ictors, et	tc.) to th	ne VFD, o	check th	e groun	id resista	ance with	h 100
(9) Do not ad	l ensure t I phase a	the value dvance o	e is abov capacito	e 4 MΩ. r or RC :	snubber	to the l	J. V. W 1	terminal	of VFD.		
(10) If the VF	D starts	frequent	ly, do no	ot cut o	ff the p	ower, us	se the C	OM/RU	N of co	ntrol ter	minal
conduct start (11) The earth	and stop	so as no must be	ot to dar	nage the ed reliab	e rectifie lv (arou	er bridge nding im). Inedance	e should	l he unde	er 10 O)	to av
accidents, or	here mig	ht be ele	ectric lea	akage.	., (g. ou	i ang in	poduno	o chould			
(12) Choose 1	ne wire d	iameter a	accordir	ng to nat	ional ele	ectrical o	code wh	ile cond	lucting m	najor loo	p wir
2.5 Control	oop Ter	minals									
10V GNI	Al	AO	485+	485-	X1	X2	Х3	X4	COM	TA	TC
2.6 Main Cir	uit Torn	ninals									
			/1.0					1			
К	o/LI	1/	L2	U	V	VV	÷				
		F	-4 Grou	p – Adva	ance Fu	nction P	aramete	er			
-											

tion Code	Name	Setting Range	Minimum Unit	Factory Setting	fica- tion		tion Code	
F2.02	Al lower limit setting	Set Al upper/lower limit, the setting is	-100.0%	0.0%	0		F2.30	X1 1
F2.03	Al Upper limit voltage setting	percentage	100.0%	100.0%	0		F2.31	X2 1 X3 1
F2.04 F2.07	Reserve			0	•		F2.33	X4 1
F2.08	Time of analog input signal filter	The parameter is used to filter of the input signal of Al and potentiometer to eliminate the influence of interference	0.1~5.0s	0.1s	0		F2.34	Res
F2.09	Error limit of analog input	When analog input signal shows frequent fluctuation around the set point, set F2.09 to restrain the frequency fluctuation caused by this fluctuation.	0.00~0.10V	0.00V	0			
F2.10	AO function analog output terminal	0: Output frequency 1: Output current 2: Speed of motor 3: Output voltage 4: Al 5: Reserved	0~5	0	0			
F2.11	AO output lower limit	Set AO output upper/lower limit	0.00~10.00V/	0.00V	0			
F2.12	AO output upper limit Output terminal X1 function	0: Control terminal idle 1: Forward jog control 2: Reverse jog control 3: Orward control (FVD) 4: Reverse control (REV) 5: Three-wire running control 6: Const termine	0~30	3	×	-	F3.00	PID
F2.14	Output terminal X2 function	6: Coast to stop 7: External stop signal input (STOP) 8: External reset signal input (RST) 9: External fault normally–open input 10: Frequency increase (UP) 11: Frequency decrease (DOWN) 13: Multi–speed selection S1 14: Multi–speed selection S2	0~30	4	×			
F2.15	Output terminal X3 function	 Multi-speed selection S3 Run command channel must be terminal The run command channel is forced to be communication Dc brake instruction Dc brake instruction Frequency switch to Al Frequency switch to digital frquency 1 	0~30	0	×	-		
F2.16	Output terminal X4 function	 21: Frequency switch to digital frequency 2 22: Reserve 23: Clear the counter to zero signal 24: Signal to trigger the counter 25: Clear the timer to zero signal 26: Signal to trigger the timer 27: Accelerate (deselerate time selection) 	0~30	0	×			Sott
F2.17	Reserve	23: Swing frequency pause (stop at the current frequency) 29: Swing frequency reset (return to center frequency) 30: External stop/reset signal input (STOP /RST)		0	×		F3.01	num
F2.18	FWD/REV terminal control mode	0: 2-wire control mode 1 1: 2-wire control mode 2 2: 3-wire control mode 1 3: 3-wire control mode 2 4: 3-wire control mode 3 5: Reserve	0~5	0	×	-	F3.02 F3.03	Fee Prop
F2.19	Terminal function detection when power up	0: Terminal control invalid when power up 1: Terminal control valid when power up	0~1	0	×		F3.04	Inte
F2.20	R output setting	0: Idle 1: VFD driver ready 2: VFD running 3: VFD zero-speed running 4: Stop for the external fault 5: VFD fault 6: Freq./speed level detection signal (FAR) 7: Freq./speed level detection signal (FDT) 8: Upper limit arrival of output frequency 0: Leven finit arrival of output frequency	0~17	5	0		F3.05 F3.06 F3.07	Deri San
F2.21	Reserve	S. Lower limit with of Oddut frequency To: Pre-aliar m of overload T: Timer overflow signal T: Counter detection signal S: Counter reset signal A: Auxiliary motor S: Forward Reverse T: Output indicator signal when the output frequency drops to the speed detection level		0	0		F3.08 F3.09	Clos freq Pres
F2.22	R close delay	The changes of relay state to the delay of the output change	0.0~255.0s	0.0s	×			
F2.24	Frequency up to FAR detection range	The output frequency is within the positive and negative detection width of the set frequency, and the terminal outputs a valid signal (low level).	0.0Hz~15.0Hz	5.0Hz	0		F3.11	Wał coe
F2.25	FDT horizontal setting value	FDT horizontal setting value	0.0Hz~ Upper limit frequency rate	10.0Hz	0		F3.12 F3.13	Dela Dela
F2.26	FDT lagged value	Y Time	0.0Hz~30.0Hz	1.0Hz	0		F3.14 F3.15	Dev feec slee with Burs
F2.27	UP/DOWN terminal modifying speed rate	This function code is used to setting the frequency modifying rate of UP/DOWN terminal, i.e. the changed value of frequency when short-circuit UP/DOWN terminal with COM for one second	0.1Hz~99.9Hz/s	1.0Hz/s	0		F3.16	High dete
F2.28	Input terminal pulse trigger mode setting (X1~X4)	0: Indicates the level trigger mode 1: Indicates the pulse trigger mode Note: X1-X4 correspond to 1H, 2H, 4H, 8H in hexadecimal order.	0~FH	0	0			
F2.29	Input terminal effective logic setting (X1~X4)	0: Indicates positive logic, the Mi terminal is connected to the common terminal, and the disconnection is invalid. 1: Indicates the inverse logic, the connection between the Mi terminal and the common terminal is invalid, and the disconnection is effective.	0~FH	0	0		F3.17	Low thre
		8H in hexadecimal order.					F3.18	Sen

Madi Tuna

.30	X1 filtering coefficient	Used to set the sensitivity of the input	0~9999	5	
.31	X2 filtering coefficient	terminal. If the digital input terminal is susceptible to interference and cause	0~9999	5	_
.32	X3 filtering coefficient	malfunction, increase this parameter to	0~9999	5	_
.33	X4 filtering coefficient	if the setting is too large, the sensitivity of	0~9999	5	_
.34	Reserve	1: Represents the 2MS scan time unit		5	_
		F3 Group – PIN Parameters			
.00	PID function setting	LED one's place: PID adjustment characteristics C: Irwalid 1: Positive effects When feedback signal is larger than PID given, the driver output frequency should be decreased (decrease feedback signal) 2: Negative effects When feedback signal is larger than PID given, the driver output frequency should be increased (decrease feedback signal) LED ten's place: PID given input channel 0: Keyboard potentiometer The PID given quantity is depend on the potentiometer on the operation panel. 1: Digital given The PID given quantity is depend on the potentiometer on the operation panel. 1: Digital given The PID given quantity. 2: Pressure given (MPa, Kg) By setting F3.01, F3.18 given pressure LED hundred place: PID sleep selection 0: Al 1: Reserve LED thousand place: PID sleep selection 0: Irwalid 1: Ordinary sleep This method needs to set specific parameters such as F3.10~F3.13. 2: Disturbing sleep The parameter setting is the same as when the sleep mode is selected as 0. If the PID gleodback value is within the range of the F3.14 set value, the sleep delay time is maintained and the disturbance sleep is entered. When the feedback value is less than the wake threshold (the PID polarity is positive), it will wake up	0000~2122	1010	
8.01	Setting a quantitative number	Immediately. Use the operation keyboard to set the given amount of PID control. This function is valid only when the PID reference channel selects the digital reference (F3.00 tens is 1 or 2). If the F3.00 tens place is 2, it is used as the pressure reference, and this parameter is consistent with the unit of F3.18.	0.0~100.0%	0.0%	
1.02	Feedback channel gain	When the feedback channel is inconsis- tent with the set channel level, this function can be used to adjust the gain of the feedback channel signal.	0.01~10.00	1.00	
.03	Proportional gain P	The speed of the PID adjustment speed is set by the two parameters of proportional gain and integration time. It is required to	0.01~5.00	2.00	
.04	Integral time Ti	increase the proportional gain and reduce the integration time. It is required to reduce the proportional gain and increase	0.1~50.0s	1.0s	
.05	Derivative time Td	the integration time. In general, the derivative time is not set.	0.1~10.0s	0.0s	
.06	Sampling cycle T	The longer of the cycle, the slower of the response, but the better of the suppress effect to interference signal. Normally no need to set this parameter.	0.1~10.0s	0.0s	
.07	Error limit	Error limit is the ratio of deviation (feedback and reference) absolute value to reference. PID regulator stops operation when feedback is within this range.	0.0~20.0%	0.0%	
.08	Closed loop preset	The driver rupping frequency and time	0.0~upper	0.0Hz	
000	treq.	before PID control operates		0.0-	_
1.10	Wake-up threshold	If the actual feedback value is greater than the set value, and the frequency output by the inverter reaches the lower limit frequency, the VFD enters the sleep state (ie, zero speed running) after the delay waiting time defined by F3.12; The percentage of the PID setpoint.	0.0~150.0%	100.0%	
.11	Wake threshold coefficient	If the actual feedback value is less than the set value, the VFD will go out of sleep and start working after the delay waiting time defined by F3.13; this value is the percentage of the PID set value.	0.0~150.0%	90.0%	
1.12	Delay time of sleep	Set delay time of sleep	0.0~999.9s	100.0s	_
.13	Delay time of wake-up	Set delay time of wake-up	0.0~999.9s	1.0s	
8.14	Deviation limit of feedback when entering sleep state compared with set pressure	This function parameter is only valid to the disturbed sleep mode.	0.0~10.0%	0.5%	
.15	Burst detection delay time	Set burst detection delay time	0.0~130.0s	30.0s	
.16	High pressure detection	When the feedback pressure is greater than or equal to this set value, the explosion alarm "EPAO" is reported after the F3.15 bursting delay, and the explosion alarm "EPAO" is automatically reset when the feedback pressure is less than this set value; the threshold is given the percentage of constant pressure.	0.0~200.0%	150.0%	
.17	Low pressure detection threshold	When the feedback pressure is less than this set value, the explosion alarm "EPA0" is reported after the delay of F3.15 bursting. When the feedback pressure is greater than or equal to this set value, the explosion alarm "EPA0" is automatically reset; the threshold is given the percent- age of constant pressure.	0.0~200.0%	50.0%	
.18	Sensor range	Set the maximum range of the sensor	0.00~99.99 (MPa、Kg)	10.00 MPa	
			-	· · · · ·	_

		F4 Group - Advance Function Parameter	ər		
Func- tion	Name	Setting Range	Minimum Unit	Factory Setting	Modi fica-
F4.00	Motor's rated voltage		0~500V: 380V	Model	×
F4.01	Motor's rated current		0.1~999.9A	Model	×
F4.02	Motor's rated speed	Setting of motor parameters	0~9999RPM	Model	×
F4.03	Motor's rated freq.		1.0~999.9Hz	50.0Hz	×
F4.04	Stator resistance of motor	Set stator resistance of asynchronous motor	0.001~20.000Ω	Model setting	0
F4.05	No–load current of motor	Set no-load current of motor	0.1~【F4.01】	Model setting	×
F4.06	AVR function	1: Full effective 2: Invalid only when decelerating	0~2	0	×
F4.07	Cooling fan control	0: Auto control mode 1: Always running when power on	0~1	0	0
F4.08	Auto reset times	When the fault resets is set to 0, there is no automatic reset function, only manual reset,10 means that the times is not limited that is countless times	0~10	0	×
F4.09	Auto reset interval	Set the fault auto reset interval	0.5~25.0s	3.0s	×
F4.10	Initial voltage of dynamic braking	If the internal DC side voltage is higher than the initial voltage of dynamic braking, the internal brake unit will act. If there is brake	330~380V/ 660~800V	350V/ 780V	0
F4.11	Action ratio of dynamic braking	resistor connected, the pumping voltage energy will be released via the brake resistor to achieve drop of DC voltage.	10~100%	100%	0
F4.12	Overmodulation function selection	0: Invalid 1: Valid	0~1	0	×
F4.13	PWM mode	0: Full frequency seven segment 1: Full frequency five segment	0~2	0	×
F4.14	Slip compensation coefficient	2: Seven segment to two segment After the asynchronous motor is loaded, the speed will decrease. The use of slip compensation can make the motor speed close to its synchronous speed, so that the motor speed control accuracy is higher. This coefficient is only valid for ordinary V/F and simple vector.	0~200%	100%	×
F4.15	Slip compensation mode	0: Invalid 1: Low frequency compensation Note: This parameter is only valid for advanced V/F.	0~1	0	×
F4.16	Motor parameter self-learning	0: Invalid 1: Static self-learning (START is displayed immediately after startup, after ending display END 1s it goes out.	0~1	0	×
F4.17	Motor rated power		0.0~2000.0KW	Model setting	0
F4.18	Motor rotor resistance	After change the motor rated power F4.17, F4.01, F4.02, F4.04, F4.05, F4.18	0.00~200.00Ω	Model setting	0
F4.19	Motor stator, rotor inductance	motor default parameters of the corresponding power.	0.00~200.00mH	Model setting	0
F4.20	Motor stator, rotor mutual inductance	Jan Stranger	0.00~200.00mH	Model setting	0
F4.21	Speed Ring (ASR1) proportional gain		1~100	30	×
F4.22	Speed Ring (ASR1) integration time	Function codes F4.21 ~ F4.26 are valid	0.01~10.00s	0.50	0
F4.23	Switch low frequency	in vector control mode. By setting the proportional gain P and the integral time L the aread reasonable	0.0~10.0Hz	5.0	×
F4.24	Speed Ring (ASR2) proportional gain	characteristics of the vector control can	1~100	20	0
F4.25	Speed Ring (ASR2) integration time	be ondriged.	0.01~10.00s	1.00	0
F4.26	Switch high frequency	In the vector control mode, this parameter	[F4.23]~320.0Hz	10.0	×
F4.27	Vector slip compensation	is used to adjust the speed stability accuracy of the motor. When the motor is overloaded and the speed is low, increase this parameter; otherwise, decrease this parameter.	50%~200%	100	0
F4.28	Speed ring filter time constant	Set the speed ring filter time constant	0.000~1.000s	0.010	0
F4.29	Reserve			0	•
F4.30	Speed ring torque limit	This setting value is a percentage of the rated current of the motor.	0.0%~200.0%	150.0	0
F4.31	Torque command selection	0: Keyboard number given 1: Al 2: Reserve	0~2	0	×
F4.32	Torque digital given	This setting value is a percentage of the rated current of the motor.	0.0%~200.0%* motor rated current	150.0	0
F4.33	Torque control forward maximum frequency	Used to set the maximum forward or reverse operating frequency of the	0.0~3200.0Hz	50.0	0
F4.34	Torque control reverse maximum frequency	inverter under torque control mode.	0.0~3200.0Hz	50.0	0
F4.35 F4.36	Torque rise time Torque fall time	Torque rise/fall time defines the time when the torque rises from 0 to the maximum value or falls from the maximum value to 0.	0.00~1.00s 0.00~1.00s	0.00	0
F5.00	Protection settings	F5 Group – Protection Function Paramet LED one place: Motor overload protection selection 0: Invalid 1: Valid LED ten digits: PID feedback disconnection protection 0: Invalid 1: Protect action and free stop LED Hundred place: 485 Communication Failure Processing 0: Protect action and free stop 1: Alarm but maintain the status operation 2: Alarm and stop according to the set mode LED Thundres discussed place: Gillation suppression option 0: Invalid 1: Valid	0000 ~ 1211	0001	×

	2.7 Iviain Control Be	Jaru Jumper	Desci	·									
					J1								
	<u>+</u>	Main co	ntrol b	bard gr	ound	ling	h.a: 1	in di		a al			
	OFF	The gro	und of	the ma	IN CO	ontrol	board	IS disco	onnect	ed			
	AVO	Analog	AO out	out volt	aqe	siana	. 0~1	0V					
1 <u>4</u>	ACO	Analog	AO out	put curi	rent	signal	, 0~2	OmA					
ňFT					J4								
°Щţ	P–I	Select b	ouilt–in	keypad	pote	ention	neter						
	P-E	Select E	External	Keypa	d Po	tentic	meter						
					J5								
	AVI	Analog	Al input	t voltag	e sig	gnal, C	~10V						
nstallation	ACI	Analog	Al input	curren	t sig	inal, 0	~20m	A					
Hole (mm)													
	3. Communicati	on Protoco	ol										
		F	-										
4	When controller com characters of 4 bits. density compared wi must be transported (1) Each Byte Form Encoding system: 8 b	imunicates vi The main ac th ASCII mod continuously. at in RTU Mo its binary, he	a Mod Ivantag le giver ode xadecir	bus in e of th n the co mal 0-9	RTU is m ondit	I mod iode i tion o F.	e, eac s that f the s	h byte it can same b	is div transfe aud ra	ided i er cha te, an	nto ract d ea	2 he ers w ach ir	xadecim vith high nformatio
	Data bits: 1 bit of sta parity chec	rt bit, 8 bits o k bit (refer to	of data	(send f	rom of R	the lo TU da	ower bi ata frar	t), 1 bi ne)	t of sto	op bit,	opt	ional	
	Error check zone: cyc	clic redundance	cy chec	k (CRC).		ita irai						
	(2) Bit sequence of	RTU data fr	ame							,			
	With parity check	Start	1	2	3	4	5	6	7	8	F	Par	Stop
users can	Without parity check	Start	1	2		3	4	5	6	7		8	Stop
ig to the	3.2 Read & write Fu	nction Desc	ription								_		
	FI	unction Code			_	Funct	ion De	scriptic	n			1	
		03			_	Re	ad rec	isters	Л			1	
		06				W	rite re	gister				1	
								0				1	
	3.3 Register Addres	SS											
													_
	Register Fun	iction						Addr	ess				
	Register Fun Control com	nction mand input	ding (c	L00~r	1_31)		Addro	ess H H~00	1EH			_
	Register Fun Control com Monitoring p	iction mand input arameter rea	ding (c	1-00~c	1–31)		Addro 2000 1000	ess H H~00 H	1FH			_
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		Func- tion	Name	Setting Range	Minimum Unit	Factory	Modi- fica-
Factory Setting	Modi- fica- tion	Code	Motor overload	The factor is the percentage of motor	30%~110%	100%	tion
Model setting	×	10.01	protection factor	of the driver. This function code specifies the lower	50~2901/	100%	^
Model setting Model	×	F5.02	protection level	limit of DC bus voltage when the driver operates normally.	50~480V	360V	×
setting 50.0Hz	×	F5.03	Voltage limit factor in decelerating	This parameter is used to adjust the ability of the inverter to suppress over-voltage during deceleration.	0: close, 1~255	1	×
Model setting	0	F5.04	Overvoltage limit level	The overvoltage limit level defines the operating voltage for overvoltage stall protection.	350~400V/ 660~850V	375V/ 700V	×
Model setting	×	F5.05	Current limit factor in accelerating	This parameter is used to adjust the ability of the vfd to suppress overcurrent during acceleration.	0: close, 1~99	10	×
0	0	F5.06	Constant speed current limiting factor	This parameter is used to adjust the ability of the inverter to suppress overcurrent during constant speed.	0: close, 1~10	0	×
0	×	F5.07	Current amplitude limiting	urrent amplitude The current limit level defines the current limit action, and its set value is relative to the rated current of the VFD.		160%	×
3.0s	Х			The value is the percentage given by the PID. When the feedback value of the PID			
350V/ 780V	0	F5.08	Feedback disconnection detection value	continues to be less than the feedback disconnection detection value, the VFD will make the corresponding protection action according to the setting of F5.00.	0.0~100.0%	0.0%	×
0	×	F5.09	Detection time of feedback disconnection	After voltage feedback disconnection, the duration time before protection action.	0.1~999.9s	10.0s	×
0	×	F5.10	The VFD overload pre-alarm level	The current threshold of the inverter overload pre-alarm action, the set value is relative to the return of the set value is	0~150%	120%	0
		F5.11	Inverter overload pre–alarm delay	The output current of the VFD is continu- ously longer than the overload pre-alarm level (F5.10), and the delay time between the output overload pre-alarm signals	0.0~15.0s	5.0s	×
100%	×	F5.12	Jog priority enable	0: Invalid 1: When the vfd is running, the jog priority is the highest.	0~1	0	×
0	×	F5.13	Oscillation suppression coefficient	When the motor is oscillating, set F5.00 thousand effective, turn on the	0~200	30	0
0	~	F5.14	Amplitude suppression coefficient	oscillation suppression function, and then adjust by setting the oscillation suppression coefficient. Under normal	0~12	5	0
0	×	F5.15	Oscillation suppression lower limit frequency	circumstances, the oscillation amplitude is large, and the oscillation suppression coefficient F5.13, F5.14~F5.16 is	0.0~【F5.16】	5.0Hz	0
Model		F5.16	Oscillation suppression upper limit frequency	increased. No need to be set; if it encounters special occasions, it needs to be used together with F5.13~F5.16.	[F5.15]~[F0.05]	45.0Hz	0
setting	0			LED one's place: acceleration selection			
setting	0			1: Valid LED ten's place: slow down selection			
setting	0		Wave-by-wave current	0: Invalid 1: Valid LED Hundred's place:			
Model setting	0	F5.17	limit selection	constant speed selection 0: Invalid	000~111	1011	×
30	×			LED thousand's place: dead zone compensation			
0.50	0			1: Valid			
20	~		Output phase loss	When the ratio of the maximum value to the minimum value of the three-phase output current is greater than this coefficient, and			
1.00	0	F5.18	protection detection coefficient	the duration exceeds 6 seconds, the inverter reports the output current imbalance fault EPI is when E5 18=0.00 the	0.00~20.00	2.00	0
10.0	×			output phase loss protection is invalid.			
100	0	F5.19	Instantaneous power failure frequency decreasing factor	Set the frequency decreasing factor	0: Instantaneous stop non-stop function is invalid 1~9999	0	0
0.010		F5.20	Instantaneous power failure frequency decreasing point	Set the instantaneous power failure frequency decreasing point.	220V: 180~330V 250V 380V: 300~550V 450V	Model setting	0
0.010	•		F6 Group – Commu	nication Parameter (Extended hardware	is needed to supp	oort)	1
150.0	0	F6.00	Local address	Set the local address, 0 is the broadcast address.	0~247	1	×
0	×			LED one's place: baud rate selection 0: 9600BPS 1: 19200BPS			
150.0	0			2: 38400BPS LED ten's place: data Format 0: No parity			
50.0	0	F0.04	MODBUS	1: Even parity 2: Odd parity	0000 0000	0000	
50.0	0	ro.U1	configuration	communication Response 0: Normal response	0000~0322	0000	
0.00	0			1: Only respond to the slave address 2: Not responding			
0.00	0			3: Slave does not respond to the free stop command of the host in broadcast			
				mode LED Thousands: reserved			
0001	×	F6.02	Communication timeout detect	If the unit does not receive the correct data signal within the time interval defined by this function code, then the unit thinks that the communication has failed, and the inverter will decide whether to protect or maintain the current operation according to the setting of the communication failure action mode; When the value is set to 0.0, no RS485 communication timeout is detected.	0.1~100.0s	10.0s	×

Function Description	Address Definition	Data Me	aning Description	R/W	4. Abn	ormal Phenor	mena Solution				
		BIT0: Run/Downtime BIT1: Forward/Reverse			following	table:					
		BIT2: Jog			F	henomena	Possible Reasons of Fault and Actions to Take				
		BIT3: DC brake BIT4: Reserve				LED no display	Check whether there is power failure, or phase loss of input power, check if the power line is connected correctly.				
	2116H	BITS: Overvoitage infinit BIT6: Constant speed fre BIT7: Overcurrent limit BIT8~9: 00-Zero speed/ 10-slow down/11-Unifor	quency reduction '01-Speed up/ m speed	R		LED no display, but the internal charging indicator is on	Check if there is problems with wiring or socket related to keypad. Measure the voltage of internal control source to check if the switching power supply is functioning well. If not, check its inlet wire, start oscillation and stabilivolt to see if they works well.				
		BIT10: Overload pre-alar	m		Motor	Motor droning	The motor load is too much. Reduce the load.				
Read run/stop parameter		BIT12~13 Run command 01-terminal/10-commun BIT14~15 Bus voltage st 01-Lowvoltage protectio	l channel: 00-panel/ ication tatus: 00-normal/ n/10-Over voltage protection		running	No abnormal	Check if it is in trip status or hasn't reset after tripping, check whether it is in restart status after power down, whether the keypad is reset, whether it is in program running status, multi-speed operation status, some specific operation status or non-operation status. Try recovering factory set.				
description		Bit0: Bun				phenomena	Check whether the running command is sent.				
		Bit1: Downtime					Check whether the operation frequency is set at 0.				
		Bit2: Jog Bit3: Forward					Improper setting of Acc/Dec time. Increase the value of Acc/Dec time.				
		Bit4: Reverse					The current limit is set too low. Increase the value.				
	2101H	Bit8: Communication give	en	R			Over-voltage protection action during decelerating. Increase theating time.				
		Bit9: Analog signal input	nning command channol				Improper setting of carrier frequency, too much load may cause oscillation.				
		Bit10: Communication running command channel Bit11: Parameter lock Bit12: running Bit13: Jog command Bit14~Bit15: Reserved 00: No abnormality 01: Module failure			The mo Acc / D	or can not ec successfully	The load is too heavy and the torque is not enough. Increase the torque boost value in V/F mode, if it still cannot meet the requirements, can switch to the simple vector control mode, at this time, pay attention to the motor parameters must be consistent with the actual value. If still can not meet the requirements, it is recommended to use advanced vector control. At this time, it is still necessary to pay attention to whether the motor parameters are consistent with the actual value. and it is best to ture the				
		02: Over-voltage 03: Temperature failure 04: Inverter overload					motor parameters. The motor power does not match the inverter power. Please set the motor				
		05: Motor overload 06: External fault 07~09: Reserved 10: Overcurrent in acceleration					One driver for several motor. Please change the torque boost mode to manual mode.				
							Improper setting of upper and lower limit of frequency.				
		12: Overcurrent in consta	ant speed		_		The frequency is set too low, or the frequency gain is set too low.				
Read the fault code description	2100H	13: Reserved 14: Undervoltage		R	but spe	ed regulation	Check whether the speed adjustment mode is in consistent with frequency setting.				
		16: RS485 Communication 17: Burst tube failure	on failure		Carrebe	Tealizeu.	Check whether the load is too heavy, whether it is in overvoltage stalled state or overcurrent limiting state.				
		18: Reserve 19: Dual CPU communica	ation failure				Frequent fluctuation of load. Decrease the changing.				
		20: Reserve 21: Reserve			Speed o	hanaina durina	Serious mismatching of rated value of the driver and motor. Set the motor parameters as actual value.				
		22: Current detection fail 23: Reserve 24: Reserve 25: Output phase loss	ure		motor ri	unning	Frequency setting potentiometer is in bad connect or the frequency setting signal is in fluctuation. Switch to digit setting mode or increase filter time constant of analog input signal.				
							Adjust phase sequence of output terminal U, V, W.				
5 03 Read Function	on Mode				The rota	ition direction	Set the running direction as reverse (P0.21=1).				
quiry information fra	ame format (s	send frame):	Address	01H			Caused by phase loss of output. Check the motor wiring immediately.				
			Function	03H							
nalysis of this segm	ent data:			21H							
01H is the addr	ess of the dri	ver	Starting data address	02H	5. Fun	ction Parame	ter Table				
03H read fund	ction code			00	NOTE						
102H is start add	ress		Data (2Byte)	001	0 — — I	Aodifiable param	eter under any condition				
002H read the	number of ad	dresses,		U2H	×!	Not modifiable pa	arameter under run status ted parameter, not modifiable				
and 2102	H and 2103H	I	CRC CHK Low	6FH		actory paramete	er, only modifiable for factory, not allowed for users modifying				
76FH is 16 bits of CRC check code			CRC CHK High	F7H							

01H

CAH

F76FH is 16 bits of CRC check code Response information frame format (return frame):

- Analysis of this segment data: 01H is the address of the driver
- 03H read function code 04H is the product of (read item)*2 1770H read the data of 2102H (Setting frequency) 0000H read the data of 2103H(Output frequency)
- 5CFEH is 16 bits of CRC check code 3.6 06H Write Function Mode
- Inquiry information frame format (send frame):
- Analysis of this segment data: 01H is the address of the driver
- 06H write function code
- 2000H is control command address 0001H is stop command

Analysis of this segment data:

If set right, return the same input data

- 43CAH is 16 bits of CRC check code
- Response information frame format (return frame):

Address

CRC CHK High

03H nction DataNum*2 04H 17H Data1 [2Byte] 70H 00H Data2 [2Byte] 00H CRC CHK Low FEH 5CH CRC CHK High unction 06H 20H Starting data address 00H Data (2Byte) 01H CRC CHK Low 43H CRC CHK High CAH 06H 20H Starting data address 00H DOH Number of Data (Byte) 01H CRC CHK Low 43H

	- Factory parameter, only modifiable for factory, not allowed for users modifi									
		F0 Group – Basic Run Parameters								
)- 1 le	Name	Content	Set Rang							
0	Function macro definition	0: Common mode 1: Single pump constant pressure water supply mode 2~3: Reserved 4: Engraving machine mode 5~10: Reserved	0~10							
)1	Motor control method	0: VF control 1: Advanced VF Control 2: Simple vector control 3: Advanced vector control 4: Torque control	0~4							
)2	Run command channel selection	0: Panel running command channel 1: Terminal running command channel 2: Communication running command channel	0~2							
13	Frequency selection	0: Panel potentiometer 1: Digital setting 1, operation panel ▲, ▼ keys adjustment 2: Digital reference 2, terminal UP/DOWN adjustment 3: Al analog reference (0~10V/0~20mA) 4: Combination given 5: Reserve 6: Communication given 7: Reserve 8: MPPT on (photvoltaic water pump) Note: Extended hardware is needed to support; select combination timing, combination selection method is selected in F1.15.	0~8							
14	Maximum output frequency	The maximum output frequency is the highest frequency that the inverter can output, and it is the reference for acceleration and deceleration setting.	MAX {50.0, 【F0.0 ~999.9H							
)5	Maximum frequency	The operating frequency cannot exceed this frequency	MAX {0.1, [F0 ~ [F0.04							
6	Lower limit frequency	The operating frequency cannot be lower than this frequency	0.0~Maxin frequence							
)7	Reach the lower limit of frequency processing	0: Zero running 1: Lower frequency operation 2: Down time	0~2							

0.0Hz

Func- tion Code	Name	Setting Range	Minimum Unit	Factory Setting	Modi- fica- tion	Fun tio Cor
F6.03	Response delay	This function code defines the interme- diate time interval between the end of the data frame reception of the inverter and the response data frame sent by the host computer. If the response time is less than the system processing time, the system processing time shall prevail.	0~200ms	5ms	×	F8.0
F6.04	Ratio correlation	This function code is used to set weight coefficient of frequency command received via RS485 when the driver is set as slave. The actual operation frequency is this parameter value multiplied by the command value received via RS485. In jointly control, this function code can set running frequency ratio of multiple VFD.	0.01~10.00	1.00	0	d-(d-(d-(
F6.05	Reserve	<u> </u>	_	0	×	0-0
	F7	Group – Supplementary Function Param	neter	1		d–0
F7.00	Counting and timing mode	LED onle s place: count annual processing O: Single cycle count, stop output 1: Single cycle count, stop output 2: Loop count, stop output 3: Loop count, stop output LED Hundred's place: timing Arrival Processing 0: One-week timing, stop output 1: Single-cycle timing, continue output 2: Cycle timing, stop output 3: Cycle timing, stop output 2: Cycle timing, stop output 3: Cycle timing, stop output 2: Cycle timing, continue output 2: Cycle timing, stop output 3: Cycle timing, stop output 3: Cycle timing, continue output 4: Cycle timing, continue output 5:	000~303	103	×	d-(d-(d-1 d-1 d-1
F7.01	Counter reset value	Set counter reset value	[F7.02]~9999	1	0	d-1
F7.02	Counter detection value	Set counter detection value	0~(F7.01)	00		d–1
F7.04		Get timing setting	0 33338	03	- V	d–1
F7.07	Reserve			0	•	d-1
F7.08	control	1: Valid	0~1	0	×	d–1
F7.09	Swing control	0: Fixed swing The swing reference value is the maximum output frequency (F0.04). 1: Variable swing The swing reference value is the given channel frequency.	0~1	0	×	d–1 d–1 d–2
F7.10	Swing frequency stop start mode selection	0: Start according to the state of memory before shutdown 1: Restart	0~1	0	×	d-2
F7.11	Swing frequency amplitude	The swing frequency amplitude is a percentage relative to the maximum output frequency (F0.04).	0.0~100.0%	0.0%	0	d-2
F7.12	Kick frequency	This function code refers to the amplitude of the rapid decrease when the frequency of the swing frequency during the swing frequency process. Of course, it also refers to the amplitude of the rapid increase after the frequency reaches the lower limit frequency of the swing frequency. This value is relative to the percentage of the swing frequency amplitude (F7.11). If it is set to 0.0%, there will be no sudden jump frequency.	0.0~50.0%	0.0%	0	d-2
F7.13	Swing frequency rise time	The running time from the lower limit frequency of the swing frequency to the upper limit frequency of the swing frequency.	0.1~3600.0s	5.0	0	d–2
F7.14	Swing frequency fall time	The running time from the upper limit frequency of the swing frequency to the lower limit frequency of the swing frequency.	0.1~3600.0s	5.0	0	
F7.15	Swing frequency upper limit frequency delay	Cat the upper and lower limit frequency	0.1~3600.0s	5.0	0	
F7 16	Swing frequency lower	delay of the swing frequency.	0.1~3600.0s	5.0		0-2
	limit frequency delay	Crown Management and Diaplay Param		0.0		d-2
F8.00	Monitoring parameter selection	For example: F8.00=2, that is, select the output voltage (d-02), then the default display item of the main monitoring interface is the current output voltage value.	0~31	0	0	d–2 d–3 d–3
F8.01	Shutdown status monitoring parameter item selection	For example: F8.01=3, that is, select the bus voltage (d-O3), then the default display item of the main monitoring interface is the current bus voltage value.	0~31	1	0	Fau Co
F8.02	Run auxiliary display (only valid for dual display)	For example: F8.02=4, that is, select the output current (d-02), then the default display item on the main monitoring interface is the current output voltage value.	0~31	4	0	EOC
F8.03	Stop auxiliary display (only valid for dual display)	For example: F8.03=3, that is, select the bus voltage (d03), then the default display item on the main monitoring interface is the current bus voltage value.	0~31	3	0	EOC
F8.04	Motor speed display coefficient	Used to correct the display error of the speed scale and has no effect on the actual speed.	0.01~99.99	1.00	0	EOC
F8.05	Parameter initialization	0: No operation The inverter is in the normal parameter read and write state. Function code setting value. Whether it can be changed depends on the setting status of the user password and the current working status of the inverter. 1: Restore factory settings All user parameters are restored to factory defaults by model. 2: Clear the fault record Clear the fault record Clear the contents of the fault record (d-19~d-24). This function code is automatically cleared to 0 after the parameters	0~2	0	×	EHL EHL EHL
		oporation is completed.		1	ı I	

Func- tion Code	Name		Setting Range		Minimum Unit	Factory Setting	Modi- fica- tion
F8.06	Reserve					0	×
			F9 Group – Manufacturer Para	ameters			
F9.00	Factory password		1~9999	or Crour	1	****	\diamond
d-00	Output Frequency (H	Hz)	0.0~999.9Hz	ei Gioup	, 0.1Hz	0.0Hz	٠
d–01	Set Frequency (Hz)		0.0~999.9Hz		0.1Hz	0.0Hz	٠
d-02	Output voltage (V)		0~999V		1V	0V	٠
d-03	Bus voltage (V)		0~999V		1V	0V	•
a–04	Output current (A)		0.0~999.9A		U.1A	Model	•
d-05	Motor speed (Krpm)	• • • •	0~60000Krpm		1Krpm	setting 0.00V/	•
d-06	Analog Input AI (V/m	1A)	0.00~10.00V/0.00~20.00mA		0.01V/0.01mA	mA	•
d–07	Reserve		—		0	0	•
d–08	(V/mA)		0.00~10.00V/0.00~20.00mA		0.01V/0.01mA	mA	•
d–09	Reserve				0.01)//	0	•
d–10	value		0.00~10.00V/0.00~99.99 (MPa,	、Kg)	(MPa、Kg)	(MPa、Kg)	•
d–11	PID pressure feedba value	ck	0.00~10.00V/0.00~99.99 (MPa、Kg)		0.01V/ (MPa、Kg)	0.00V/ (MPa,Kg)	٠
d-12	Current count value	()	0~9999s		1s	0s	•
d–13	Current timing value	(s)	0~9999s		1s	0s	•
d–14	(X1–X4)	<u> </u>	0~FH		1H	OH	•
d-15	Output status (R)	ŝ	0~1H		1H	0H	•
d-16	Software upgrade da	ate	0.0~132.3 C		0.10	0.0 C	•
d-1/	(years)	oto	2010~2026		1	2021	•
d–18	(month, date)	ale	0~1231		1	0615	•
d-19	Second fault code		0~19		1	0	•
d-20	Last fault code Output frequency (H	z)	0~19		1	0	•
d-21	at the latest fault Output current (A)		0.0~999.9Hz		0.1Hz	0.0Hz	•
d-22	at latest fault		0.0~999.9A		0.1A	0.0A	•
d–23	Bus voltage at last fault (V)		0~999V		1V	0V	٠
d-24	Module temperature at last fault (°C)		0.0~132.3°C		0.1°C	0.0°C	٠
d–25	Inverter running time	(h)	0~9999h		1h	0h	٠
d–26	VFD Running Status		BTD: Run/stop BIT1: Reverse/forward BIT2: Inching BIT3: DC braking BIT4: Reserve BIT5: Over-voltage limit BIT6: Constant speed down BIT7: Over current limit BIT8~9: 00-0 speed/01-accelerate/ 10-decelerate/11- Uniform speed BIT10: Overload pre-alarm BIT11: Reserve BIT12~13: Run command channel: 00-Panel/01-Terminal/10-Reserve BIT14~15: Bus voltage status: 00-normal/01-low voltage protection/		1H	ОН	•
d-27	Software version				0.01	1 00	•
/ d-28	Power model		0.10~99.9KW		0.01KW	Model	
u-20				[E0.04]	0.01100	setting	•
d–29	Motor estimated frequency		Note: Motor running frequency co from motor estimated speed	nverted	0.1Hz	0.0Hz	٠
d–30	Output torque		-200~+200%		1%	0%	٠
d–31	Input voltage (V)		0~999V		1V	OV	•
Fault	Nama		E Group - Fault Code		Maintananaa		Carl
Code	Name	A	Possible Cause of Fault				Code
E0C1	Over-current when accelerating	Th	e inverter power is too small proper setting of V/F curve or	Get a lar Adjust th	ge power rating le V/F curve or tor	que	1
E0C2	Over-current when		celeration time is too short Increase		deceleration time		2
2002	decelerating		ne inverter power is too small Get a lar		rge power rating		2
E0C3	Overcurrent at constant speed	Lo Ab	Low grid voltage Check ir Abrupt or abnormal load Check lo		nput power oad or reduce load change		3
		Th	he inverter power is too small Get a large power rating			-	
EHU1	Accelerating over-voltage during	Ab	normal input voltage Check in		nput power		4
	Over-voltage		eceleration time is too short		e deceleration time		-
EHU2	during deceleration operation	Ab	normal input voltage Check in		nput power		5
EHU3	Over-voltage during constant speed operation	Ab	Abnormal input voltage Check in		nput power		
EHU4	Over-voltage	Ab	normal input voltage	Check in	nput power		7
FLIM	Under-voltage in	Th	The input voltage is abnormal or Check		he power supply voltage or		
LLUU	operation	the relay is not connected seek se		seek sen	vice from the manufacturer		

Func- tion Code	Name	Content	Set Range	Factory Default	Modi- fica- tion
F0.08	Operating frequency digital setting	The set value is the initial value of the frequency digital setting	0.0~Maximum frequency	10.0Hz	0
F0.09	Digital frequency control	LED bit: power-off storage 0: Storage 1: Do not store LED tens: stop and keep 0: Keep 1: Do not keep LED hundred position: UP/DOWN negative frequency adjustment 0: Invalid 1: Effective LED thousands: PID, PLC frequency superposition selection 0: Invalid 1: F0.03+PID 2: F0.03+PLC	0000~2111	0000	0
F0.10	Acceleration time	The time required for the inverter to accelerate from zero frequency to the maximum output frequency	0.1~999.9s 0.4~4.0KW 7.5s	Model	0
F0.11	Deceleration time	The time of vtd decelerates from maximum output frequency to zero frequency	5.5~7.5KW 15.0s	ootting	
F0.12	Running direction setting	0: Forward 1: Reverse 2: Ban reversal	0~2	0	0
F0.13	V/F curve setting	0: Linear curve 1: Square curve 2: Multi-point V/F curve	0~2	0	×
F0.14	Torque boost	Manual torque boost, this value is set as a percentage of motor rated voltage	0.0~30%	Model setting	0
F0.15	Torque boost cut–off frequency	This setting is the boost cut-off frequency point when the manual torque is boosted.	0.0~50.0Hz	15.0Hz	×
F0.16	Carrier wave frequency setting	Raise the carrier frequency properly when there is demand for quiet running. Meanwhile, raising the carrier frequency will increase heat production and electromagnetic interference from the VFD	2.0~16.0KHz 0.4~3.0KW 4.0KHz 4.0~7.5KW 3.0KHz	Model setting	×
F0.17	V/F frequency value F1		0.1~frequency value F2	12.5Hz	×
F0.18	V/F Voltage value V1	Voltage	0.0~Voltage value 2	25.0%	×
F0.19	V/F frequency value F2	Motor rated frequency V3	Frequency value F1 Frequency value F3	25.0Hz	×
F0.20	V/F Voltage value V2	V2	Voltage value V1 Voltage value V3	50.0%	×
F0.21	V/F frequency value F3	F1 F2 F3 Maximum Frequency	Frequency value F2 ~ motor rated frequency [F4.03]	37.5Hz	×
F0.22	V/F Voltage value V3	frequency	Voltage value V2 ~100.0%*Uoute (motor rated voltage [F4.00])	75.0%	×
F0.23	User password	Set any non-zero number, wait for 3 minutes or power down to take effect.	0~9999	0	0
F0.24	Frequency display resolution selection	0: 0.1Hz 1: 1Hz Note: To set this parameter, be sure to check the maximum output frequency (F0.04), frequency upper limit (F0.05), motor rated frequency (F4.03) and other frequency-related parameters.	0~1	0	0
Func-		F1 Group – Auxiliary Operating Paramete	ers	Fastary	Modi-
tion Code	Name	Setting Range	Minimum Unit	Setting	fica- tion
F1.00	Start mode	LED one's place: start mode 0: Starting from the starting frequency 1: First DC braking and then starting from the starting frequency. 2: Reserved LED ten's place: power outage or abnormal restart mode 0: Invalid 1: Starting from the starting frequency LED housand's place: reserved LED thousand's place: reserved	0000~0012	00	×
F1.01	Start frequency	Output frequency	0.0~50.0Hz	1.0Hz	0
F1.02	Starting DC braking voltage	Output current (valid value) dc braking	0.0~50.0% × Motor rated voltage	0.0%	0
F1.03	DC brake time at startup	Run command	0.0~30.0s	0.0s	0
F1.04	Stop mode	0: Decelerate to stop 1: Coast to stop	0~1	0	×
F1.05	Frequency threshold of DC brake at stop	Output frequency	0.0~Upper limited freq	0.0Hz	0
F1.06	DC brake voltage at stop	Output current	0.0~50.0% × Motor rated voltage	0.0%	0
		(valid value)			
F1.07	DC brake time at stop	(valid value) □ -Brake delay time of stop □ C braking	0.0~30.0s	0.0s	×

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Func- tion Code	Name	Setting Range	Minimum Unit	Factory Setting	Modi- fica- tion
F1.09	Frequency setting of forward jog operation		0.0~50.0Hz	10.0Hz	0
F1.10	Frequency setting of reverse jog operation	Set frequency of forward jogging	0.0~50.0Hz	10.0Hz	0
F1.11	Jog Acc time	Catting ing Ass time or Des time	0.1~999.9s	Model	0
F1.12	Jog Dec time	Setting jog Acc time or Dec time	5.5~7.5KW 15.0s	setting	0
F1.13	Hopping freq	Setting hopping freq and hopping range to keep the VFD away from resonance	0.0~Upper frequency	0.0Hz	0
F1.14	Hopping range	frequency of mechanical	0.0~10.0Hz	0.0Hz	0
F1.15	Frequency combinational setting mode	0: Potentiometer+digital frequency 1 1: Potentiometer+digital frequency 2 2: Potentiometer+Al 3: Digital freq1+Al 4: Digital freq2+Al 5: Digital freq2+Multistage speed 6: Digital freq2+multistage speed 7: Potentiometer+multistage speed 8: Al+PLC (same direction superposition) 9: Reserve	0~9	0	×
F1.16	Programmable operation control (simple PLC running)	LED unit: PLC enable control 0: Invalid 1: Valid LED tens: choose running mode 0: Single cycle 1: Continuous cycle 2: Maintain value of the last stage after single cycle LED hundred position: start mode 0: Start from the first stage 1: Continue from the stage where the driver stops 2: Start from the frequency where it stops (fault) LED Thousand's place: power-down storage options 0: No storage 1: Storage	0000~1221	0000	×
F1.17	Multi-speed freq. 1	Set multi-speed freq. 1	Upper limit	5.0Hz	0
F1.18	Multi-speed freq. 2	Set multi-speed freq. 2	Upper limit	10.0Hz	0
F1.19	Multi-speed freq. 3	Set multi-speed freq. 3	Upper limit	15.0Hz	0
F1.20	Multi-speed freq. 4	Set multi-speed freq. 4	Upper limit	20.0Hz	0
F1.21	Multi-speed freq. 6	Set multi-speed freq. 6	Upper limit	37.5Hz	0
F1.23	Multi-speed freq. 7	Set multi-speed freq. 7	Upper limit	50.0Hz	0
F1.24	Run time of MS	Set run time of MS stage 1 (unit is	0.0~999.9s	10.0s	0
F1.25	Run time of MS stage 2	Set run time of MS stage 2 (unit is depend on [F1.35], default is second	0.0~999.9s	10.0s	0
F1.26	Run time of MS stage 3	Set run time of MS stage 3 (unit is depend on [F1.35], default is second	0.0~999.9s	10.0s	0
F1.27	Run time of MS stage 4	Set run time of MS stage 4 (unit is depend on [F1.35], default is second	0.0~999.9s	10.0s	0
F1.28	Run time of MS stage 5	Set run time of MS stage 5 (unit is depend on [F1.35], default is second	0.0~999.9s	10.0s	0
F1.29	Run time of MS stage 6	Set run time of MS stage 6 (unit is depend on [F1.35], default is second	0.0~999.9s	10.0s	0
F1.30	Run time of MS stage 7	Set run time of MS stage 7 (unit is depend on [F1.35], default is second	0.0~999.9s	10.0s	0
F1.31	Acc/Dec time of MS stage 1	LED one's place: Acc/Dec time of MS stage 1 0~1 LED tens' place: Acc/Dec time of MS stage 2 0~1 LED hundred's place: Acc/Dec time of MS stage3 0~1 LED thousand's place: Acc/Dec time of MS stage4 0~1	0000~1111	0000	×
F1.32	Acc/Dec time of MS stage 2	LED one's place: Acc/Dec time of MS stage 5 0~1 LED tens' place: Acc/Dec time of MS stage 6 0~1 LED hundred's place: Acc/Dec time of MS stage 7 0~1 LED thousand's place: save	000~111	000	×
F1.33	Accelerate time 2	Set Acc/Dec time 2	0.1~999.9s 0.4~4.0KW 10.0s	10.0s	0
F1.34	Decelerate time 2		5.5~7.5KW 15.0s		
F1.35	Time unit	LED one's place: process of PID time unit LED ten's place: simple PLC time unit LED hundred's place: prdinary Acc/Dec time unit LED thousand's place: save 0: The unit is 1s 1: The unit is 1Min 2: The unit is 0.1s	000~211	000	×
F1.36	Forward and reverse dead time	The transition time for the inverter to wait at the output zero frequency during the transition from the forward operation to the reverse operation, or from the reverse operation to the forward operation.	0.0~999.9s	0.0	0
	F2 Group	 Analog and Quantity Input and Output 	Parameters		
F2.00	AI INPUT IOWER limit	Sat Al upper and lower limit unliner	0.00~【F2.01】	0.00V	0
F2.01	Al input upper limit	Set Al upper and lower limit voltage	[F2.01]~10.00V	10.00V	0

Fault Code	Name	Possible Cause of Fault	Maintenance	Code	
		Inverter output short circuit or ground	Check motor wiring		
		Inverter transient over-current	See over-current countermeasures		
ESC1	Power module fault	The control board is abnormal or the interference is serious	Seek service from manufacturers	9	
		Power device damage	Seek service from manufacturers		
		Ambient temperature is too high	Reduce ambient temperature		
E-OH	Heat sink overheating	Fan damage	Replace the fan	10	
		Air duct blockage	Ventilation		
	Inverter overload	Improper setting of V/F curve or torque boost	Adjust V/F curve and torque boost		
EOL1		Grid voltage is too low	Check grid voltage	11	
		Acceleration time is too short	Increase acceleration time		
		Motor overload	Select a higher power inverter		
		Improper setting of V/F curve or torque boost	Adjust V/F curve and torque boost		
	Motor overlagd	Grid voltage is too low	Check grid voltage	12	
EULZ	NOLOF OVERIOAD	Motor stalled or the load is too large	Check the load		
		Motor overload protection factor setting is incorrect	Correctly set the motor overload protection factor		
E-EF	External device failure	External device fault input terminal is closed	Disconnect the external device fault input terminal and clear the fault (note the cause of the check)	13	
EPOF	Dual CPU communication failure	CPU communication failure	Seek service from manufacturers	14	
	PID feedback disconnection	PID feedback line is loose	Check feedback connection		
EPID		The feedback amount is less than the disconnection detection value	Adjust the detection input threshold	15	
		Does not match the host computer baud rate	Adjust baud rate		
E485	RS485 communication fault	RS485 channel interference	Check whether the communication connection is shielded, whether the wiring is reasonable, and if necessary, consider connecting the filter capacitor.	16	
		Communication timeout	Retry		
ETUN	Motor tuning failure	Motor parameter setting error	Reset motor parameters		
	Current detection	Current sampling circuit failure		18	
ECCF	fault	Auxiliary power failure	Seek service from manufacturers		
EEEP	EEPROM read and write error	EEPROM failure	Seek service from manufacturers	19	
EPLI	Output phase loss protection	Output U, V, W has phase loss	Check the output wiring	20	
EPAO	Burst failure	The feedback pressure is less than the low pressure detection threshold or higher than or equal to the high pressure detection threshold	¹ Detect feedback connection or adjust detection high and low pressure threshold		
E-24	Water shortage failure	Water pump running in reverse direction	Check the water pump	24	

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Product Information:			
Product Name:	Customer Name:		
Model Type:	Customer Address:		
Purchase Date:	Contact Number:		
1 			
Warranty Terms:			
1. From the date of original shipment, we guarantee warranty of 12 months for free, and p service for a lifetime;			
2. Product failure caused by the following reasons	s are not included in 12 months warranty guara		

Warranty Card

2. Pro (1) Users didn't conduct right operation according to user's manual;

(2) Eguipment has been repaired or modified by user's without consent of manufacturer;(3) Fault caused by operation outside standard scope of application;

(4) Abnormal aging or fault result from bad operating environment;

(5) Damage caused by force majeure lie earthquke, fire, flood, thunderstrike, abnormal voltage, or other naturtal disasters;

(6) Damage caused by improper delivery or extermal force.

3. Manufacturer preserves the right to refuse warranty service for the following conditon:(1) Damage of beyond recognition of brand, trade mark, serial number, nameplate, and other

manufacturer marks; (2) Payment is not finished according to contrace;
 (3) Intenional concealment to our after–sale service provider of wrong operation during setting,

wirting, operation, maintenance or other process.

¹/₁4. For failing products, Canroon preserve the right to entrust others for warranty issues.

Certificate

QC 001 Inspector:

Test Date:

The product is inspected according to the standard. L-----'

Canroon

Headquarter Add: 9/F, Building 2–B, Skyworth Innovation Valley, Tangtou1 Road, Shiyan Street, Headquarter Add: 9/F, Bulliding 2–D, Skyword Hussenson Bao'an District, Shenzhen, China. Factory Add: 8/F, Bullding 8, Zhongyuntai Hi-tech Ind Zone, Songbai Road, Shiyan Street, Boo'an District, Shenzhen, China. E-mail: sales@canroon.com Website: www.canroon.com National unified free service hotline: 400-069-9960



Shenzhen Canroon Electrical Appliances Co., Ltd