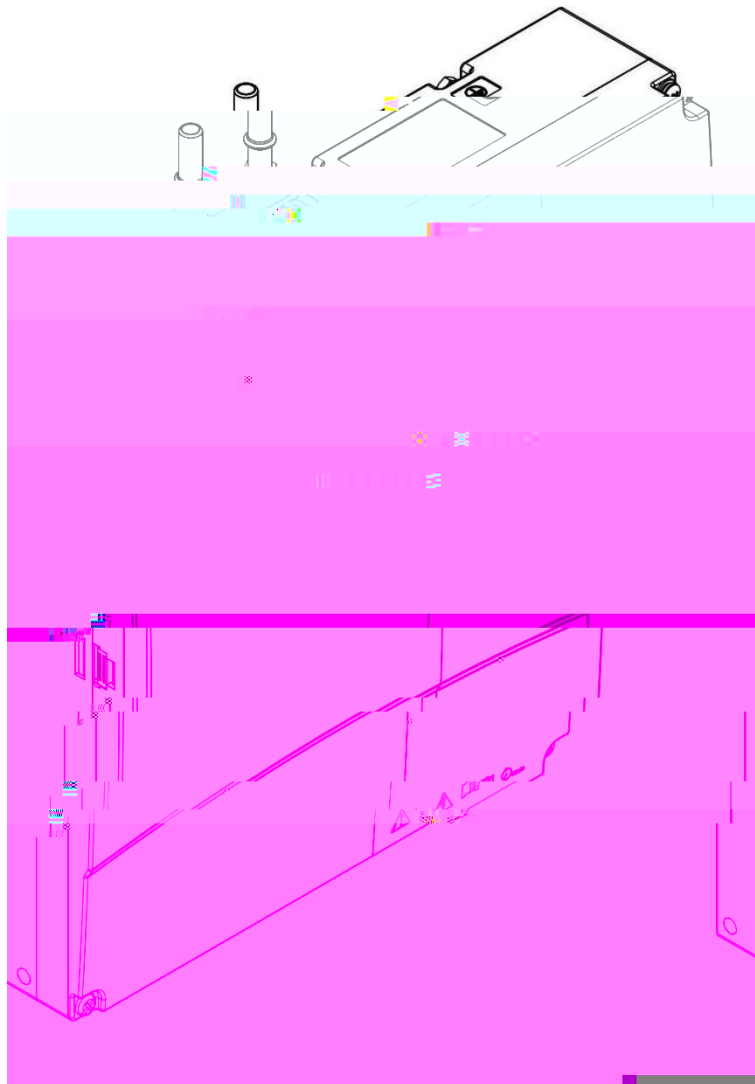


HF631NLC

1.01



HF631NLC

Modbus485

1. Å

W m "



10



U V W



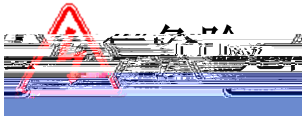
,





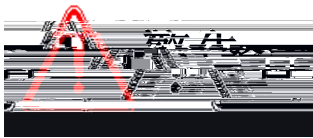
3



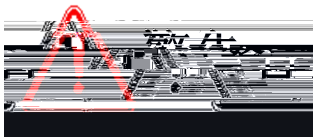
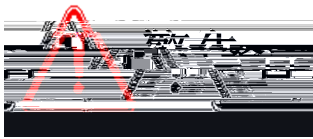
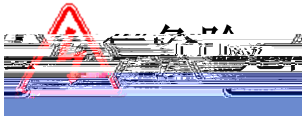


10

ESD



ě



1

RCD

RCM

RCD

RCM

B

RCD

RCD

RCD

RCD

2

500V

5M Ω

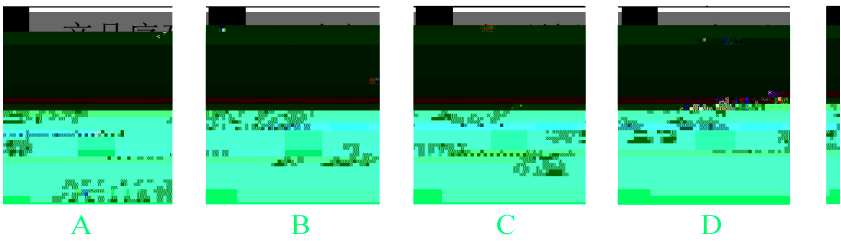
3

1	.....	3
1.1	.....	3
1.2	.....	3
1.3	.....	4
1.4	.....	5
1.5	.....	5
1.6	.....	7
1.7	.....	7
1.8	.....	6
2	.....	7
2.1	.....	7
2.2	.....	8
2.3	.....	9
2.4	.....	9
3	.....	10
3.1	.....	10
3.2	.....	11
3.2.1	.....	11
3.2.2	(mm)	11
3.2.3	.....	11
3.3	.....	13
3.	m	

1

1.1

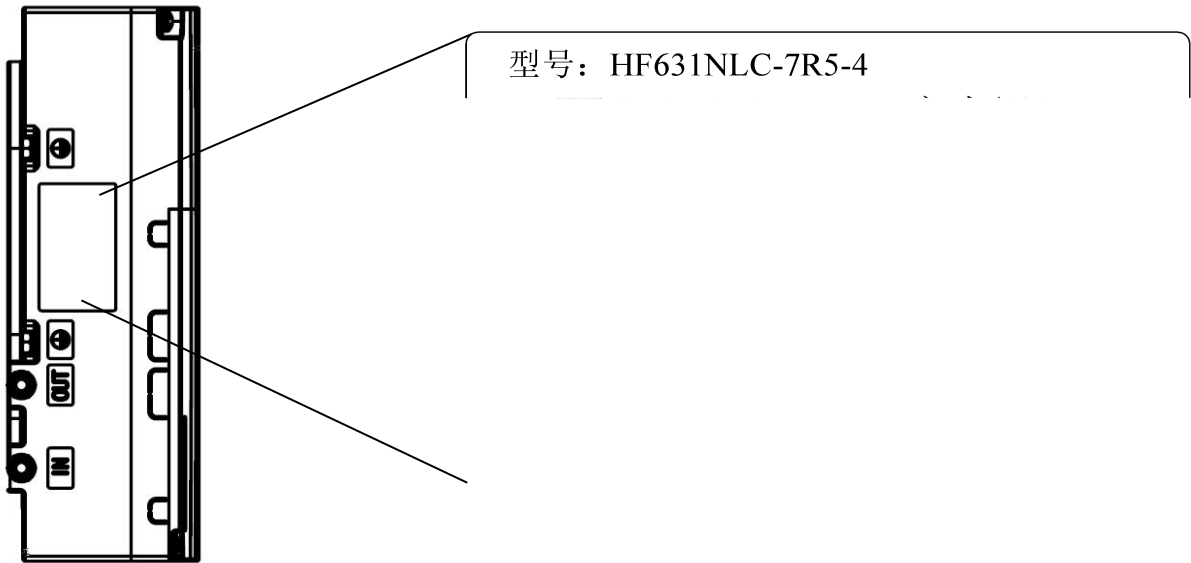
图 1-1 HF631NLC 系列变频器规格书



A	HF631NLC
B	2R2:2.2kW 4R5:4.5kW 011:11kW
C	2 220V 4 400V
D	WG

HF631NLC

7.5kW



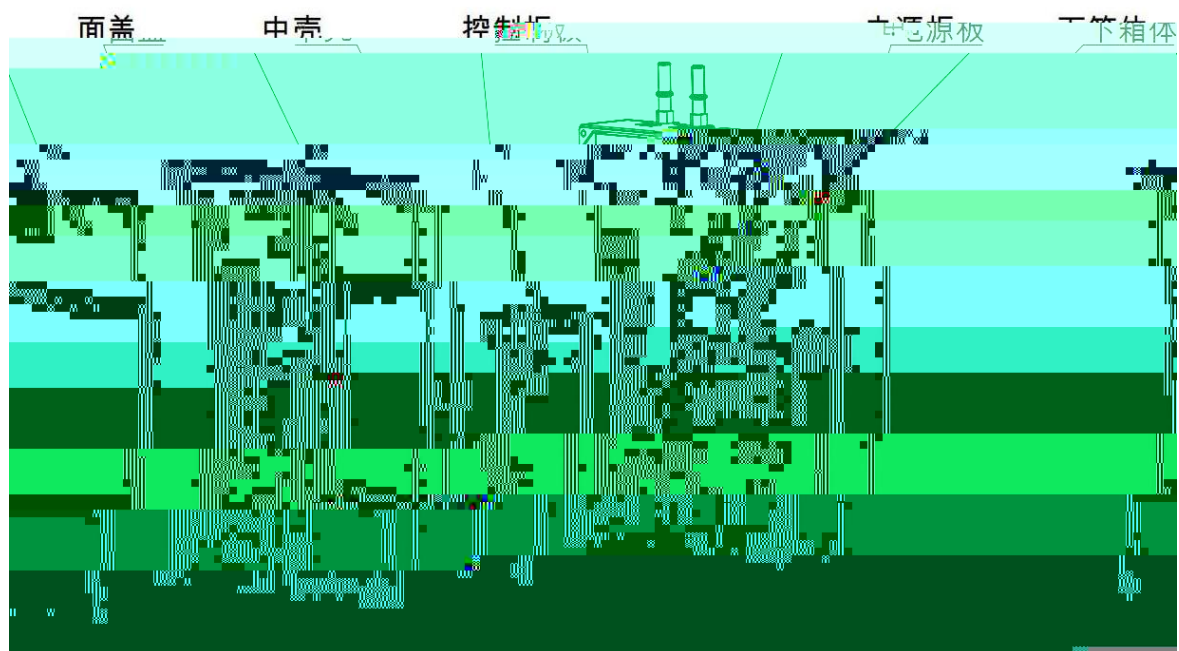
HF631NLC-7R5-4 HF631NLC 7.5kW 400V
 AC
 3PH
 380V-480V 50/60Hz
 0-480V 0-500Hz

HF631NLC

	[A]	[kW]	
HF631NLC-2R2-2	10	2.2	/
HF631NLC-2R2-2+WG			
HF631NLC-4R5-2	18	4.5	
HF631NLC-4R5-2+WG			
HF631NLC-7R5-2	30	7.5	
HF631NLC-7R5-2+WG			
HF631NLC-4R5-4+WG	12	4.5	
HF631NLC-7R5-4	18	7.5	
HF631NLC-7R5-4+WG			
HF631NLC-011-4	24	11	
HF631NLC-011-4+WG			

1.2

HF631NLC



1.4

		(mm)			mm		8.8	
								kg
	H	W	D	A	B	φ	M	
220V	2.2kW	280						
	m "							

1.5

				AC 3PH 200	240V(	220V	)	
				AC 3PH 380	480V(	400V	)	
					50/60Hz			
					-15%	+10%		

	$fLN \pm 2$	± 4
	$\leq 2 \quad fLN/s$	
0	2	

1.6

- (1)
- (2) 150%
- (3)

1.7

	[kW]	[kW]
HF631NLC-2R2-2	2.2	0.092
HF631NLC-2R2-2+WG		
HF631NLC-4R5-2	4.5	0.144
HF631NLC-4R5-2+WG		
HF631NLC-7R5-2	7.5	0.218
HF631NLC-7R5-2+WG		
HF631NLC-4R5-4+WG	4.5	0.144
HF631NLC-7R5-4	7.5	0.218
HF631NLC-7R5-4+WG		
HF631NLC-011-4	11	0.277
HF631NLC-011-4+WG		

1.8

1.

2.

3.

- R S

-

4.

5.

1.

2.

33A/6B

etec

5

2.3

		A	CEFR / 40% mm ²	A (AC-3)
220V	2.2 kW	10	2.5	9
	4.5 kW	18	4	12
	7.5 kW	30	6	25
400V	4.5 kW	12	2.5	12
	7.5 kW	18	4	18
	11 kW	24	6	18

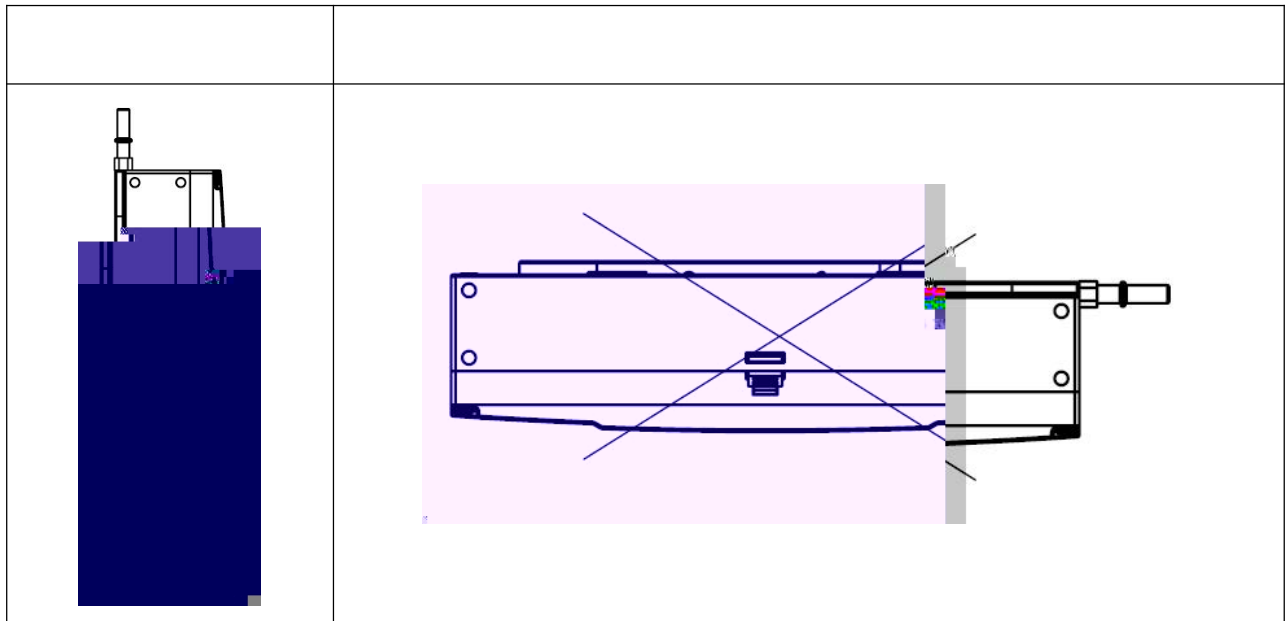
2.4

		2%		1%	
		A	mH	A	mH
220V	2.2 kW	12.0	0.8	10	0.4
	4.5 kW	21.0	0.45	18	0.23
	7.5 kW	35.0	0.27	30	0.14
400V	4.5 kW	14	1.0	12	0.5
	7.5 kW	21.0	0.67	18	0.34
	11 kW	28.0	0.5	24	0.25

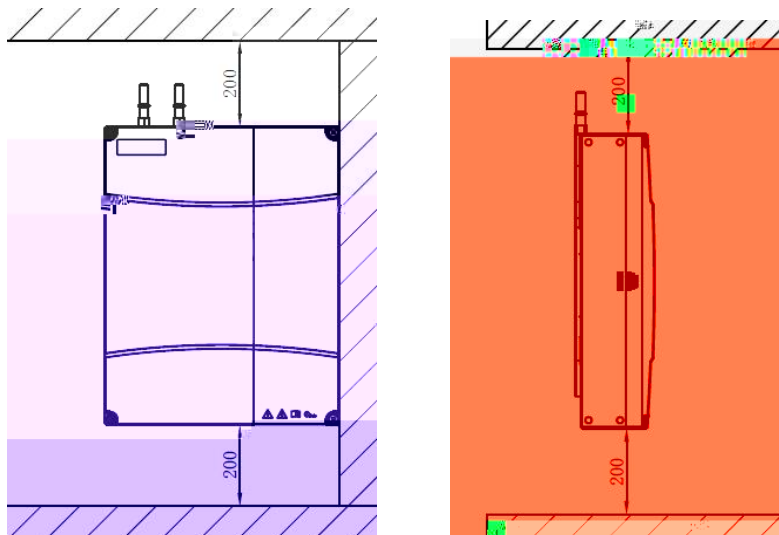
20cm			6				
-10	+40						
40							
	1	1%	-20	+60			
	50		1	/	-20	+60	
	-10						
	70	106 kPa		70	106 kPa		
	0.7	1.05		0.7	1.05		
	10Hz ≤ f ≤ 57Hz			10Hz ≤ f ≤ 57Hz			
	0.075mm			0.075mm			
	57Hz ≤ f ≤ 150Hz	9.8		57Hz ≤ f ≤ 150Hz		II	
	m/s2			9.8 m/s2			
				100m/s ²	11ms		
				250mm	<100kg		
				100mm	≥ 100kg	100mm	
	95%RH						
	1000			1000		100	1%
				3000			
	2						

3.2

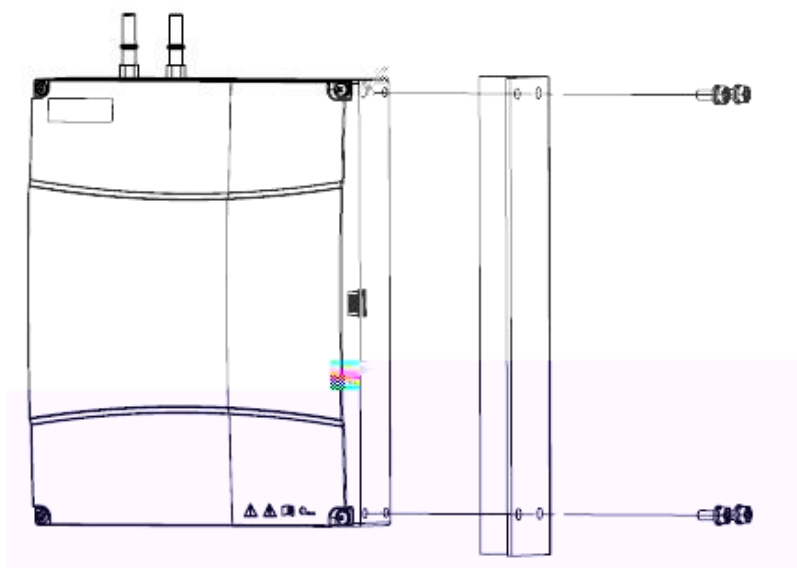
3.2.1



3.2.2 (mm)



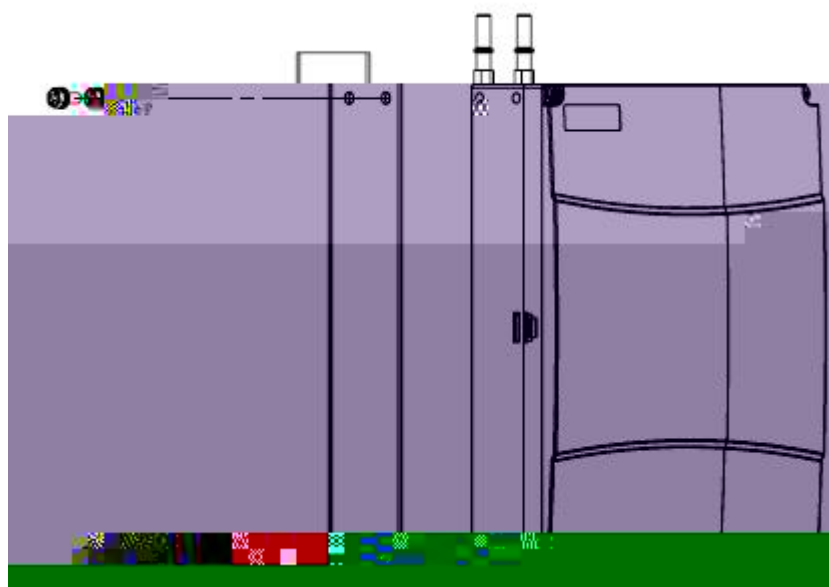
3.2.3



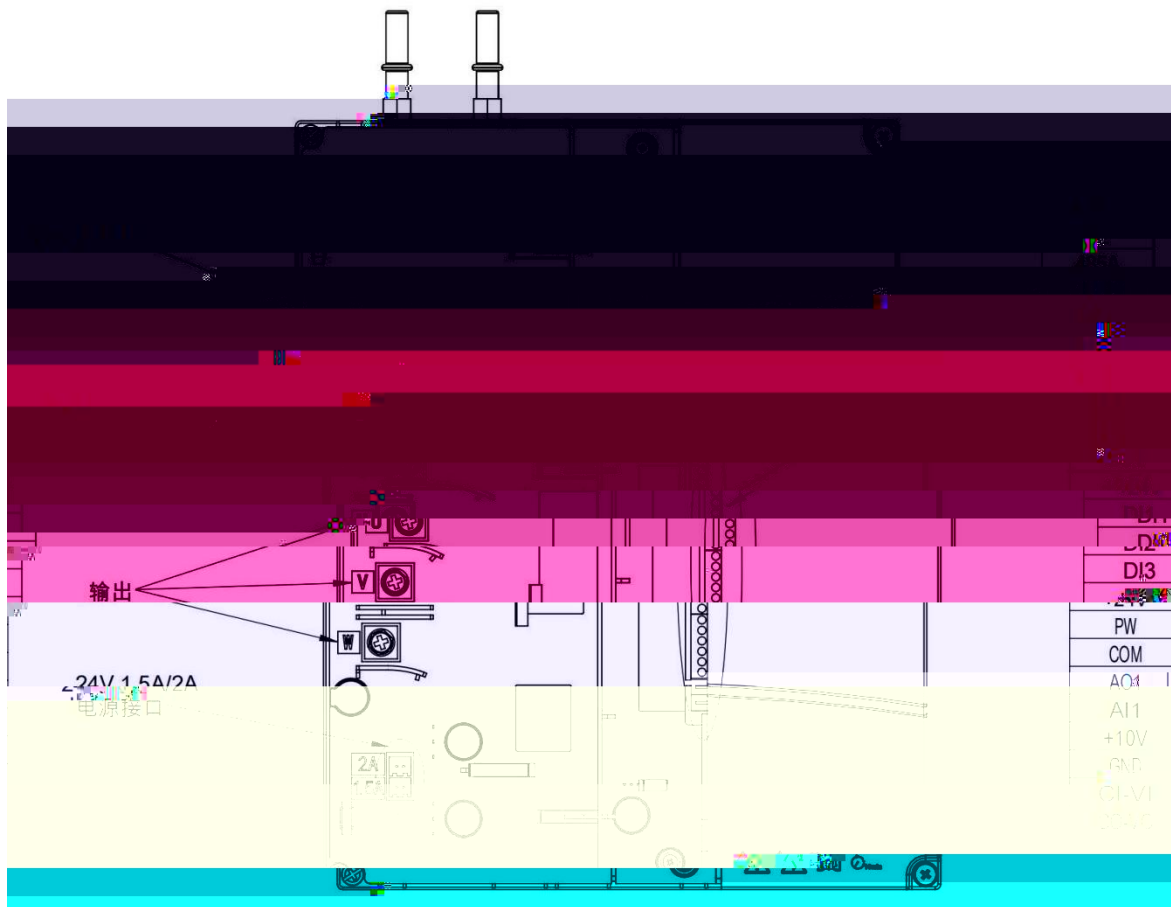
1

2

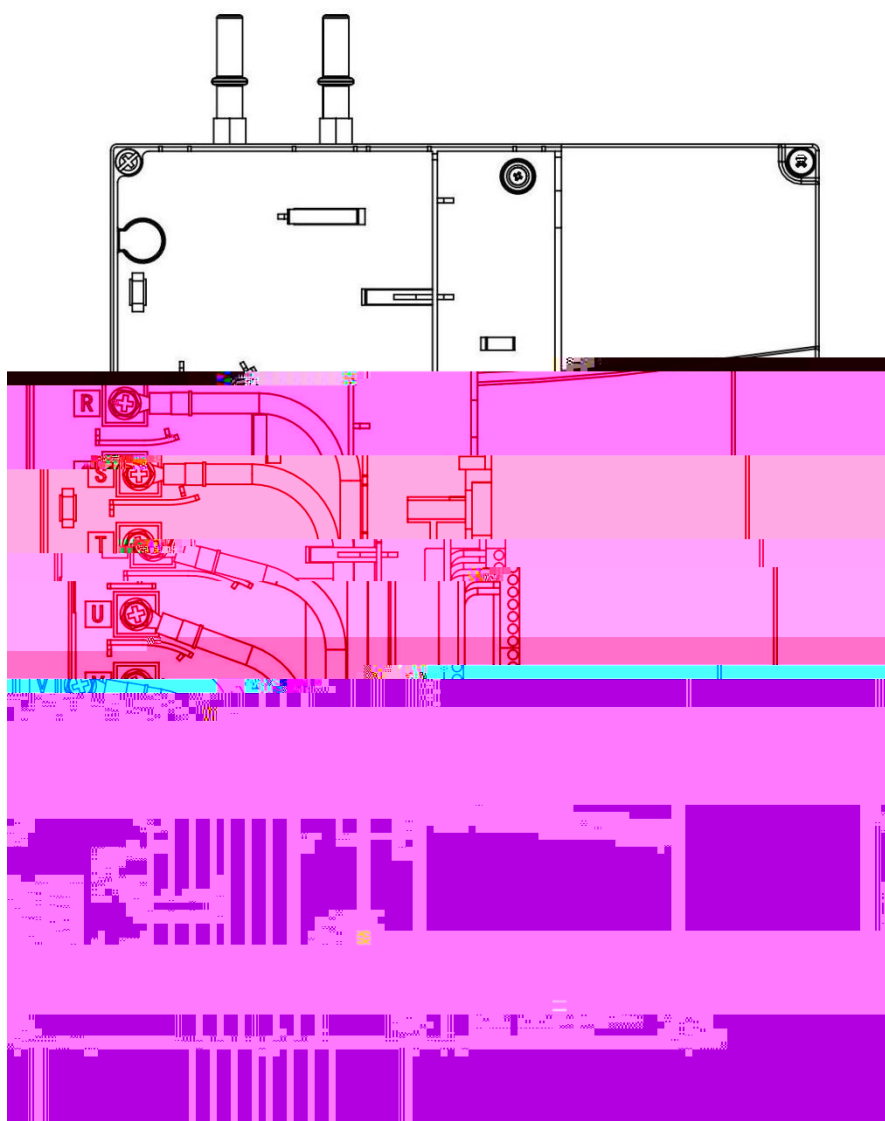
M6: $30 \pm 3\text{KGF} \cdot \text{CM}$

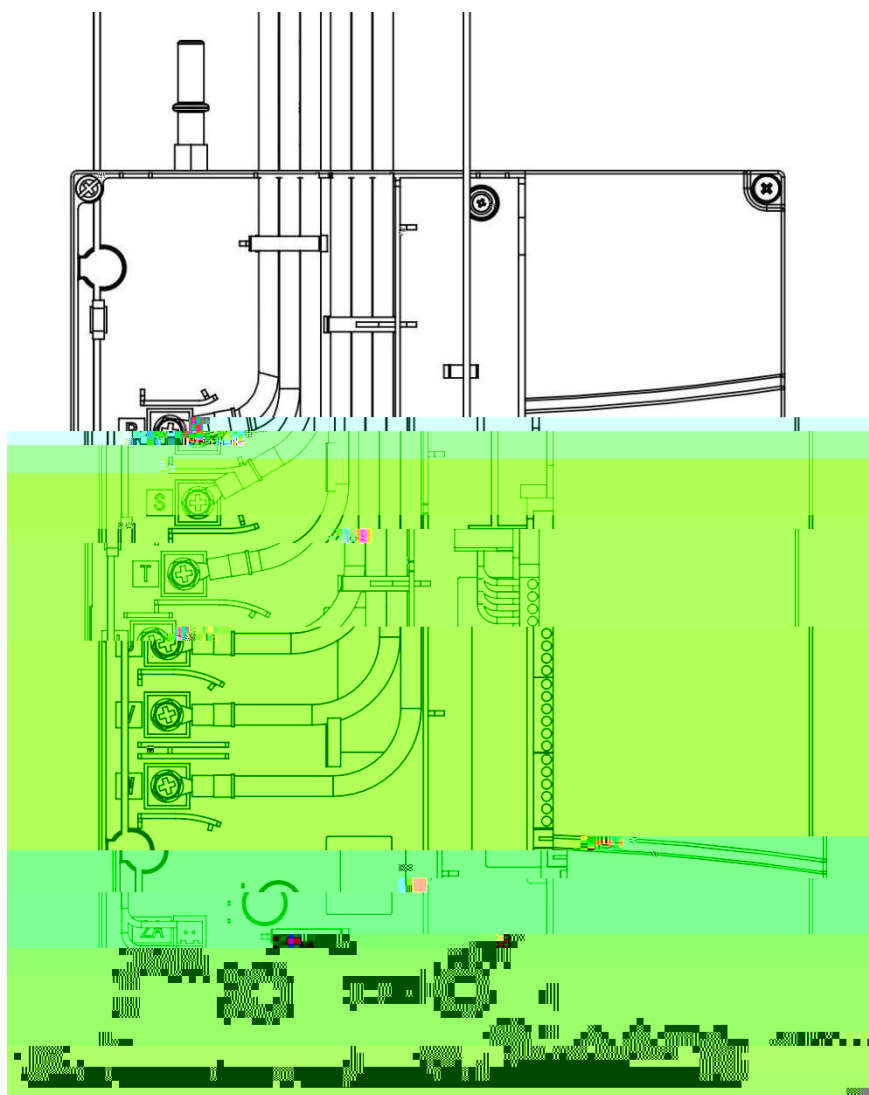


3.3.2



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	10V—GND	10V	10V 50mA 5k Ω
	24V—COM	24V	24V $\pm$ 10% 200mA
	PW—COM		12 24V

	AI1—GND	1	1 AI1/AI2 0~10V 0~20mA 2 20kΩ 250Ω 3 CI-VI 4 10V 50Hz 5mV 5 ±1% 25
	A01—GND	1	1 0 10V 0 20mA 2 (CO-V0) 3 10bit 1% 4 ±1% 25
	DI1—COM	1	1 3.3kΩ 2 12 30V 3 4 1kHz
	DI2—COM	2	
	DI3—COM	3	
	DO1—COM		1 200mA/30V 2 0 1kHz
	RA1	1	1 1 3A/AC250V 1A/DC30V 100 mA 2 2 3A/250Vac 1A/30Vdc 10 mA 3 ()
	RC1	1	
	RA2	1	
	RB2	2	
	RC2	2	
RS485	485A	485 +	1 485
	485B	485 -	
	PE		
	RJ45		1

3.3.3

1		
2	10	
3	U V W	
4		

6	
7	
8	
9	
10	
11	
12	
13	
14	
15	3

4

4.1 ý ÆM'

HF631NLC

LED

1 LED ý Æ('

“ RUN ”

“ LOCAL ” /

“ FAULT ” /

“ HZ ” Hz RPM

“ A ” A RPM %

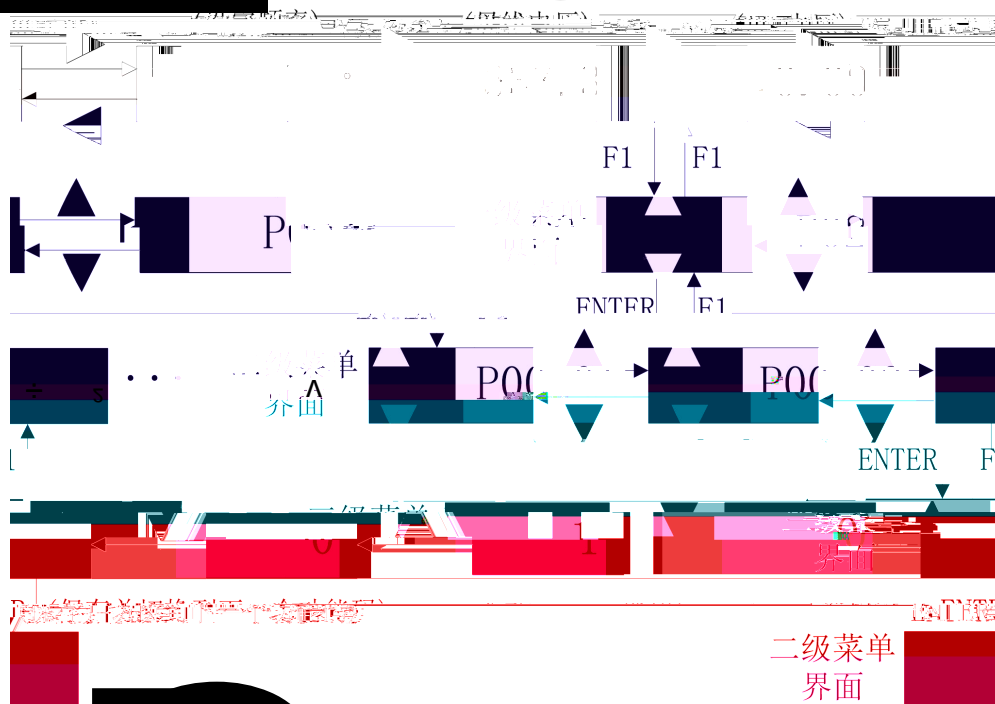
“ V ” V %

4.2.2 LED

1

LED

/



() /

(

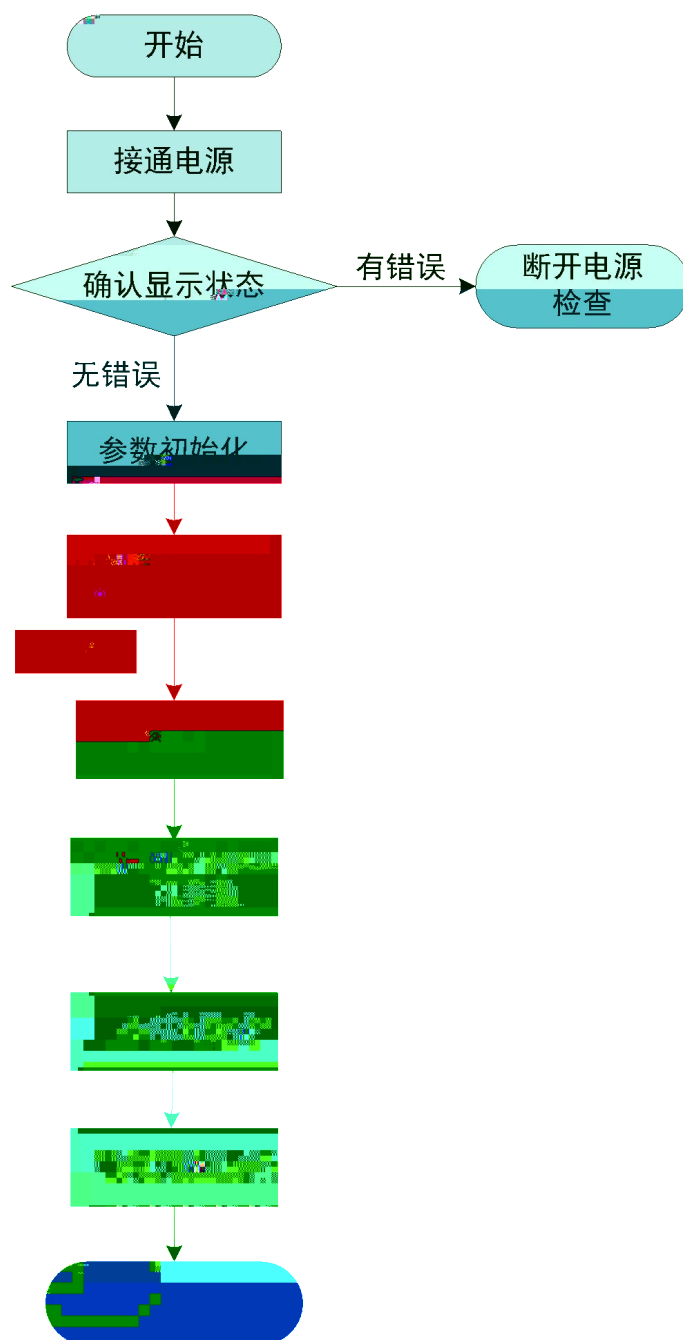
P02.05

я ,



5

5.1



5.2

AC380~480V

50/60Hz

U,V,W

5.3

LED

50.00

E

P00.01

P00.01	0: 1 () 2 ()	0

5.4

V/F

P08.10	(Hz)	/ / / /	50 [Hz]
P08.12	(Hz)		
P10.35	(Kw)		
P10.36	(V)		
P10.37	(A)		
P10.38	(Hz)		
P10.39		(r/min)	
P08.01		[0] [1] [2] V/F	2

P08.10	(Hz)	/ / / /	50[Hz]
P08.12	(Hz)		
P10.35	(Kw)		
P10.36	(V)		
P10.37	(A)		
P10.38	(Hz)		
P10.39	(r/min)		
P08.01		[0] [1] [2] V/F	0
P10.54	(V)		

5.5

	1. (P10.54) 2. P10.71 11 ENTER TUNE 3. RUN FAULT	1. (P10.50); 2. D (P10.51); 3. Q (P10.52)
	1. 2. P10.71 12 ENTER TUNE 3. RUN FAULT	1. (P10.50); 2. D (P10.51); 3. Q (P10.52); 4. (P10.54)

1

HF631NLC

P02.03	LED	1	0000 FFFF Bit00: 1 Hz Bit01: Hz Bit02: V Bit03: V Bit04: A Bit05: kW Bit06: % Bit07: DI Bit08: DO Bit09: Bit10: AI1 V Bit11: Bit12: Bit13: Bit14: Bit15: PID	1F	
P02.04	LED	2	0000 FFFF Bit00 PID Bit01 PLC Bit02 Bit03 2 Hz Bit04 Bit05 Bit06 AI1 V Bit07 Bit08 Bit09 Hour Bit10 Min Bit11 Bit12 Bit13 Hz Bit14 X Hz Bit15 Y Hz	0	

		0000 FFFF		
		Bit00:	Hz	
		Bit01:	V	
		Bit02:	DI	
		Bit03:	DO	
		Bit04:		
P02.05	LED	Bit05:	AI1 V	33
		Bit06:		
		Bit07:		
		Bit08:		
		Bit09:	PLC	
		Bit10:		
		Bit11:	PID	
		Bit12:		
P02.06		0.0001	6.5000	1
P02.07		0.0	100.0	- •
P02.08		-		- •
P02.09		0h	65535h	-

P03.06		31 32 33 34 35 PID	0	
P03.07		36 1 37 2 38 PID 39 X 40 Y 41 1 42 2	0	
P03.08		43 PID 44 1 45 2 46 / 47	0	
P03.09		48 2 49 50 51.59:	0	
P03.10		0.000s 1.000s	0.010s	
P03.11		0 1 1 2 2 1 3 2	0	
P03.12	UP/DOWN	0.001Hz/s 65.535Hz/s	1.00Hz/s	
P03.13		0 1 DI1 DI2 DI3	0	

P03.14

P04.11		0	1	0	
		1			
			1		
			2		
		D01			

6.5

P5

P05.00	AI	1	-10.00V	P05.02	-10.00V
P05.01	AI	1	-100.0%	+100.0%	-100.00%
P05.02	AI	1	P05.00	+10.00V	

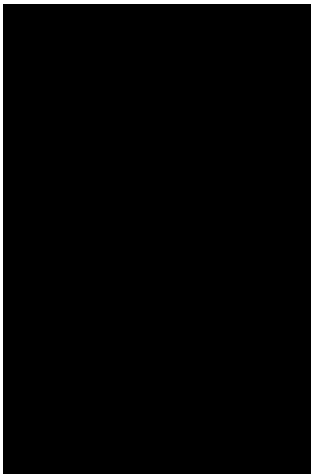
b0 J

+J000% D Q -J`00^

P05.20	AI	AI1 1 1 2 P05.00 P05.03 2 2- 2 P05.05 P05.08 3 3 2 P05.10 P05.13 4 4 4 P19.00 P19.07 5 5 4 P19.08 P19.15	321	
P5.21	AI	: AI1 0: 1:0.0%	m 0	

6.6

P6



P06.02		11 12 13 14 100.0% 1000.0A 15 100.0% 1000.0V 16		
P06.03				
P06.04	A01	-100.0% +100.0%	0.00%	
P06.05	A01	-10.00 +10.00	1	
P06.06				
P06.07				
P06.08				
P06.09				
P06.10				

6.7 P7

P07.00		0 1	1	
P07.01		0.20 10.00	1	
P07.02		50% 100%	80%	
P07.03		0 100	0	
P07.04		200.0 2200.0	760.0	
P07.05		0 100	20	
P07.06		50% 200%	150%	
P07.07		0 1	11	
P07.08		200.0V 2000.0V		
P07.09		0 20	0	

P07.10

P07.15		25 26 27: 1 28: 2 29: 30 31 PID 40 41 45 51 100		•
P07.16		101 102 105 108 111 112 113 114 115 118 /PG 119: 120 170 202		•
P07.17				•
P07.18				•
P07.19				•
P07.20				•
P07.21				•

P07.22	•
P07.23	•
P07.24	• •
P07.25	•
P07.26	
P07.27	•
P07.28	•
P07.29	•
P07.30	•
P07.31	•
P07.32	•
P07.33	•
P07.34	•
P07.35	•
P07.36	
P07.37	•
P07.38	•
P07.39	•
P07.40	•
P07.41	•
P07.42	•
P07.43	•
P07.44	

P07.47	1	11 0 1 2 113 114 15 202	0	
P07.48	2	/PG 118 0 21 0 1 111 45 26	0	
P07.49	3	1 27 0 1 2 2 28 0 1 2 29 0 1 2 30 0 1 2 7% PID 31 0 1 2	0	

				119	
			0		
P07.50	4		1		0
			2		
				115	
				51	
P07.51	5				
P07.52	1				
P07.53	2				
			0		
			1		
P07.54			2		0
			3		
			4		
P07.55		0%	100.0%	100.0%	100.00%
			P08.10		
P07.56					
P07.57					
P07.58					
P07.59					
P07.60					
P07.61					
P07.62					
P07.63					

P07.70

		1	X	
P08.06	Y	0% 150%		100%
		0	X	
		1		
		2	X	Y
P08.07		3	X	
		4	Y	0
		0 +		
		1 -		
		2		
		3		
P08.08		0.00Hz	P08.10	50.00Hz
P08.09		0		0
		1		
P08.10		50.00Hz 500.00Hz		50.00Hz
		0 P08.12		
		1 %		
P08.11				

		1 0.1 2 0.01		
P08.20				
P08.21		0.00Hz P08.10	0.00Hz	
P08.22		2 0.01Hz	2	
P08.23		0 1	0	
P08.24		0 1 1 2	0	
P08.25		0 P08.10 1 2 100Hz	0	
P08.26	UP/DOWN	0 1	0	
P08.27		0 1 2 3 AI1 4 5 6 7 PLC 8 PID 9	0	
P08.28		0 1 2	0	
P08.29		0 1	0	

		2		
P08.30		1 100	20	
P08.31		0.00Hz 10.00Hz	0.00Hz	
P08.32		0.0s 100.0s	0.0s	
P08.33	/	0% 100%	0%	
P08.34	/	0.0s 100.0s	0.0s	
P08.35		0 1 S A 2 S B	0	
P08.36	S	0.0% 100.0%- P08.37	30.00%	
P08.37	S	0.0% 100.0%- P08.36	30.00%	
P08.38		0 1	0	
P08.39		0.00Hz	0.00Hz	
P08.40		0.0s 100.0s	0.0s	
P08.41		0% 100%	0%	
P08.42		0.0s 100.0s	0.0s	
P08.43		0% 100%	100%	
P08.44		0s 65000s	0s	
P08.45				
P08.46				
P08.47				
P08.48				
P08.49				

6.9**P9**

P09.00	0		0
	1		
P09.01	0.0%	100.0%	0.00%
P09.02	0.0%	50.0%	0.00%
P09.03	0.1s	3000.0s	10.0s
P09.04	0.1%	100.0%	50.00%
P09.05	0m		

		0
P09.27	PLC	1

P09.42	PLC 7	0.0s h 6553.5s h	0.0s h	
P09.43	PLC 7	0 3	0	
P09.44	PLC 8	0.0s h 6553.5s h	0.0s h	
P09.45	PLC 8	0 3	0	
P09.46	PLC 9	0.0s h 6553.5s h	0.0s h	
P09.47	PLC 9	0 3	0	
P09.48	PLC 10	0.0s h 6553.5s h	0.0s h	
P09.49	PLC 10	0 3	0	
P09.50	PLC 11	0.0s h 6553.5s h	0.0s h	
P09.51	PLC 11	0 3	0	
P09.52	PLC 12	0.0s h 6553.5s h	0.0s h	
P09.53	PLC 12	0 3	0	
P09.54	PLC 13	0.0s h 6553.5s h	0.0s h	
P09.55	PLC 13	0 3	0	
P09.56	PLC 14	0.0s h 6553.5s h	0.0s h	
P09.57	PLC 14	0 3	0	
P09.58	PLC 15	0.0s h 6553.5s h	0.0s h	

P10.08	VF	3	0.0%	100.0%	0.00%
P10.09	VF		0.0%	200.0%	0.00%
P10.10	VF		0	200	64
P10.11	VF		0	100	
P10.12			0	4	3
			0	P10.14	
			1		
			2	AI1	
			3		
P10.13	VF		4		
			5		
			6	Ê	

P10.25		0	100		30
P10.26		0	50Hz		5Hz
P10.27					
P10.28					
P10.29					
P10.30					
P10.31					
P10.32					
P10.33					
P10.34	1		2		2
P10.35	1		0.1kW	1000.0kW	
P10.36	1		1V	2000V	9
P10.37	1		0.01A	"	0



		>55kW		
P10.52	1Q	0.01mH 655.35mH ≤55kW 0.001mH 65.535mH >55kW		
P10.53	1	0 12	0	
P10.54	1	0.1V 6553.5V		
P10.55	1	0 60000	0	
P10.56~ P10.60				
P10.61				
P10.62				
P10.63				
P10.64				
P10.65				
P10.66				
P10.67				
P10.68				
P10.69				
P10.70				
P10.71		0 1 2 11 12	0	

6.11 2 P11

--	--	--	--	--

P11.00	2	2	2
P11.01		0.1kW 1000.0kW	
P11.02		1V 2000V	
P11.03		0.01A 655.35A	<=55kW
		0.1A 6553.5A	>55kW
P11.04		0.01Hz	
P11.05		1rpm 65535rpm	
P11.06			
P11.07			
P11.08			
P11.09			
P11.10			

P11.29

0

P11.30

P11.31

P11.32

0

P11.33

0.0 °

P11.34

P11.35

34

	0	P12.12	
	1		
	2	AI1	
	3		
P12.11	4		0.00%
	5		
	6		
	7		
	1-7	P12.12	
P12.12	0.0%	200.0%	150.00%
P12.13	0	60000	2000
P12.14	0	60000	1300
P12.15	0	60000	2000
P12.16	0	60000	1300
P12.17	0		0
	1		
	0:		
P12.18	1:		1
	2:		
P12.19	0	50	5
P12.20	1%	300%	50%
P12.21	10%	500%	100%
P12.22	0		0
	1		
P12.23	1%	50%	5%
P12.24	50%	180%	80%
P12.25	0,1,2		0
P12.26			
P12.27	50	500	100

P12.30	Kp	1 100	6	
P12.31	Ki	1 100	6	
P12.32	Z	0,1	1	
P12.33	SVC	10 1000	100	
P12.34	SVC	5 200	40	
P12.35	SVC	5 200	30	
P12.36	SVC	0 80%	30%	
P12.37	SVC	0.8K P08.15	1.5K	
P12.38		0,1	0	
P12.39		0 1000	200	
P12.40				
P12.41		0 80	50	
P12.42	SVC	0 1	0	
P12.43		0 1	0	
P12.44		0.00 P12.02	0.30Hz	
P12.45		1 100	10	
P12.46		0.01s 10.00s	0.50s	
P12.47		0 1	0	
P12.48		0.0 ° 10.0 °	0.8 °	
P12.49		0,1,2	0	
P12.50		0,1	0	
P12.51	SVC	0 360.0	0	

6.13 2 P13

P13.00 1 1 100

P13.05	2	P13.02	10.00Hz	
P13.06		50% 200%	100%	
P13.07		0.000s 0.100s	0.000s	
P13.08		0 200	64	
P13.09		0 P13.10 1 2 A11 3 4 5 6 7 1.7 P13.10	0	
P13.10		0.0% 200.0%	150.00%	
P13.11		0 P13.12 1 2 A11 3 4 5 6 7 1.7 P13.12	0.00%	
P13.12		0.0% 200.0%	150.00%	
P13.13		0 60000	2000	
P13.14		0 60000	1300	
P13.15		0 60000	2000	
P13.16		0 60000	1300	
P13.17		0 1	0	

P13.18		0: 1: 2:	1	
P13.19		0 50	5	
P13.20				
P13.21				
P13.22		0,1	0	
P13.23	2	0 SVC 1 FVC 2 V/F	0	
P13.24	2	0 1 1 1 2 2 3 3 4 4	0	
P13.25		0.0% 0.1% 30.0%		
P13.26				
P13.27		0 100		
P13.28		1% 50%	5%	
P13.29		50% 180%	80%	
P13.30		0,1,2	0	
P13.31				
P13.32		50 500	100	
P13.33		0,1	0	
P13.34		0	0	
P13.35	Kp	1 100	6	
P13.36	Ki	1 100	6	
P13.37	Z	0,1	1	
P13.38	SVC	10 1000	100	
P13.39	SVC	5 200	40	

P13.40	SVC	5 200	30	
P13.41	SVC	0 80%	30%	
P13.42	SVC	0.8K P08.15	1.5K	
P13.43		0,1	0	
P13.44		0 1000	200	
P13.45				
P13.46		0 80	50	
P13.47	SVC	0 1	0	
P13.48		0 1	0	
P13.49		0.00 P12.02	0.30Hz	
P13.50		1 100	10	
P13.51		0.01s 10.00s	0.50s	

6.14 P14

P14.00		0 Modbus 1 2	0	
P14.01		MODBUS 0 300BPS 1 600BPS 2 1200BPS 3 2400BPS 4 4800BPS 5 9600BPS 6 19200BPS 7 38400BPS 8 57600BPS 9 115200BPS	5009	
P14.02	MODBUS	0 (8-N-2) 1 (8-E-1) 2 (8-O-1) 3 (8-N-1) (MODBUS)	3	
P14.03		1 247 0	1	

P14.04

0ms ms

0

P15.09	PID		0.0%	100.0%		0.00%
P15.10	PID		0.00%	100.00%		0.10%
P15.11	PID		0.00	650.00s		0.00s
P15.12	PID		0.00	60.00s		0.00s
P5.13	PID		0.00	60.00s		0.00s
P15.14			-			-
P15.15		Kp2	0.0	100.0		20
P15.16		Ti2	0.01s	10.00s		2.00s
P15.17		Td2	0.000s	10.000s		0.000s
			0			
P15.18	PID		1	DI		0
			2			
			3			
P15.19	PID					



6.16

P16

P16.00	VDI1		0	59		0
P16.01	VDI2		0	59		0
P16.02	VDI3		0	59		0
P16.03	VDI4		0	59		0
P16.04	VDI5		0	59		0
			0	VD0x	VDI	
			1	P16.06	VDI	
P16.05	VDI			VDI1		0
				VDI2		
				VDI3		
				VDI4		
			0			
			1			
				VDI1		
P16.06	VDI			VDI2		0
				VDI3		
				VDI4		
				VDI5		
P16.07	AI1	DI	0	59		0
P16.08	AI2	DI	0	59		0
P16.09	AI3	DI	0	59		0
			0			
			1			
P16.10	AI	DI				0
				AI1		
P16.11	VD01		0	0	n	Ô

P16.12	VD02	0	Dlx
--------	------	---	-----

P19.10	AI	5	1	P19.08 P19.12	-3.00V	
P19.11	AI	5	1	-100.0% +100.0%	-30.00%	
P19.12	AI	5	2	P19.10 P19.14	3.00V	
P19.13	AI	5	2	-100.0% +100.0%	30.00%	
P19.14	AI	5		P19.12 +10.00V	10.00V	
P19.15	AI	5		-100.0% +100.0%	100.00%	
P19.16~ P19.23						
P19.24						
P19.25						
P19.26	AI1			-100.0% 100.0%	0.00%	
P19.27	AI1			0.0% 100.0%	0.50%	
P19.28						
P19.29						
P19.30						
P19.31						
P19.32						
P19.33						
P19.34	AI1		1	-10.000V 10.000V		
P19.35	AI1		1	-10.000V 10.000V		
P19.36	AI1		2	-10.000V 10.000V		
P19.37	AI1		2	-10.000V 10.000V		
P19.38						
P19.39						
P19.40						
P19.41						
P19.42	A01		1	0.500V 4.000V		
P19.43	A01		1	0.500V 4.000V		
P19.44	A01		2	6.000V 9.999V		
P19.45	A01		2	6.000V 9.999V		

P19.46				
P19.47				
P19.48				
P19.49				

6.18 P20

P20.00	/	0 1	0	
P20.01		0 1 P20.03 1 2 AI1 3 4 5 6 7 1-7 P20.03	0	
P20.02				
P20.03		-200.0% 200.0%	150.00%	
P20.04		0 10.00	0.00%	
P20.05		0.00Hz	50.00Hz	
P20.06		0.00Hz	50.00Hz	
P20.07		0.00s 650.00s	0.00s	
P20.08		0.00s 650.00s	0.00s	

6.19 P21

P21.00		0.00Hz	2.00Hz	

P21.01		0.0s	6500.0s	20.0s
P21.02		0.0s	6500.0s	20.0s
P21.03	2	0.0s	6500.0s	
P21.04	2	0.0s	6500.0s	
P21.05	3	0.0s	6500.0s	
P21.06	3	0.0s	6500.0s	
P21.07	4	0.0s	6500.0s	
P21.08	4	0.0s	6500.0s	
P21.09	1	0.00Hz		0.00Hz
P21.10	2	0.00Hz		0.00Hz
P21.11		0.00Hz		0.00Hz
P21.12		0.0s	3000.0s	0.0s
P21.13		0	1 ¢	0

3

0202

?

9

w

0.0s

00 3

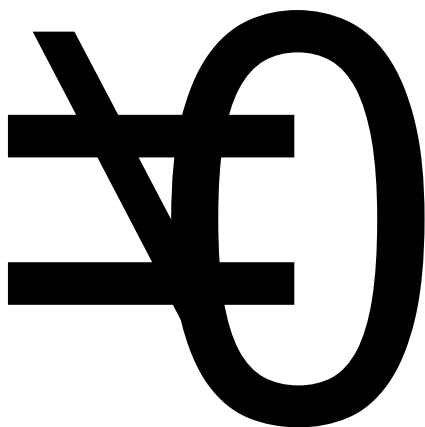
J

00

b

0

P21.50		P 0.0s 6500.0s	0.0s
P21.51		0.00Hz	P21.49 0.00Hz
P21.52		0.0s 6500.0s	0.0s
P21.53		0.0Min 6500.0Min	0.0Min
P21.54		0.00% 200.0%	100.00%
P21.55		0~200%	100.00%
P21.56		0,1	0
P21.57	DPWM	5.00Hz P08.10	12.00Hz
P21.58	PWM	0	0
P21.59		1 1	1
P21.60	PWM	0 PWM	
		1 10 PWM v	("



P23.08	D0	1	7008H
P23.09			
P23.10	AI1	<i>f</i>	

P23.38	ABZ	1	7026H	
P23.39	VF	1V	7027H	
P23.40	VF	1V	7028H	
P23.41	DI	1	7029H	
P23.42	DO	1	702AH	
P23.43	DI	1	702BH	
P23.44	DO	1	702CH	
P23.45		1	702DH	
P23.46			702EH	
P23.47~ P 23.57				
P23.58	Z	100.00%	703AH	
P23.59	(%)	0.01%	703BH	
P23.60	(%)	0.01%	703CH	
P23.61		1	703DH	
P23.62		1	703EH	
P23.63		0.01%	703FH	
P23.64		1	7040H	
P23.65		0.01%	7041H	
P23.66				
P23.67				
P23.68				
P23.69				
P23.70	1RMP			
P23.71				
P23.72				
P23.73				
P23.74		0.1V	704AH	

7.1 P0

P00.00

		0
	0	
P00.01	1	
	2	

 $\frac{0}{0} \cdot \frac{0}{0} = \frac{0}{0} \cdot \frac{\infty}{\infty} = 0$

P00.02				11
			P23,P27	
		0		
		1		
			P11,P13,P16,P19,P20,P21	
		0		
		1		

P00.04				0
		0		
		1		

0

1

7.2 P2

P02.01	F2			0
		0	F2	
		1		
		2		
		3		
		4		

F2

F2

0

1

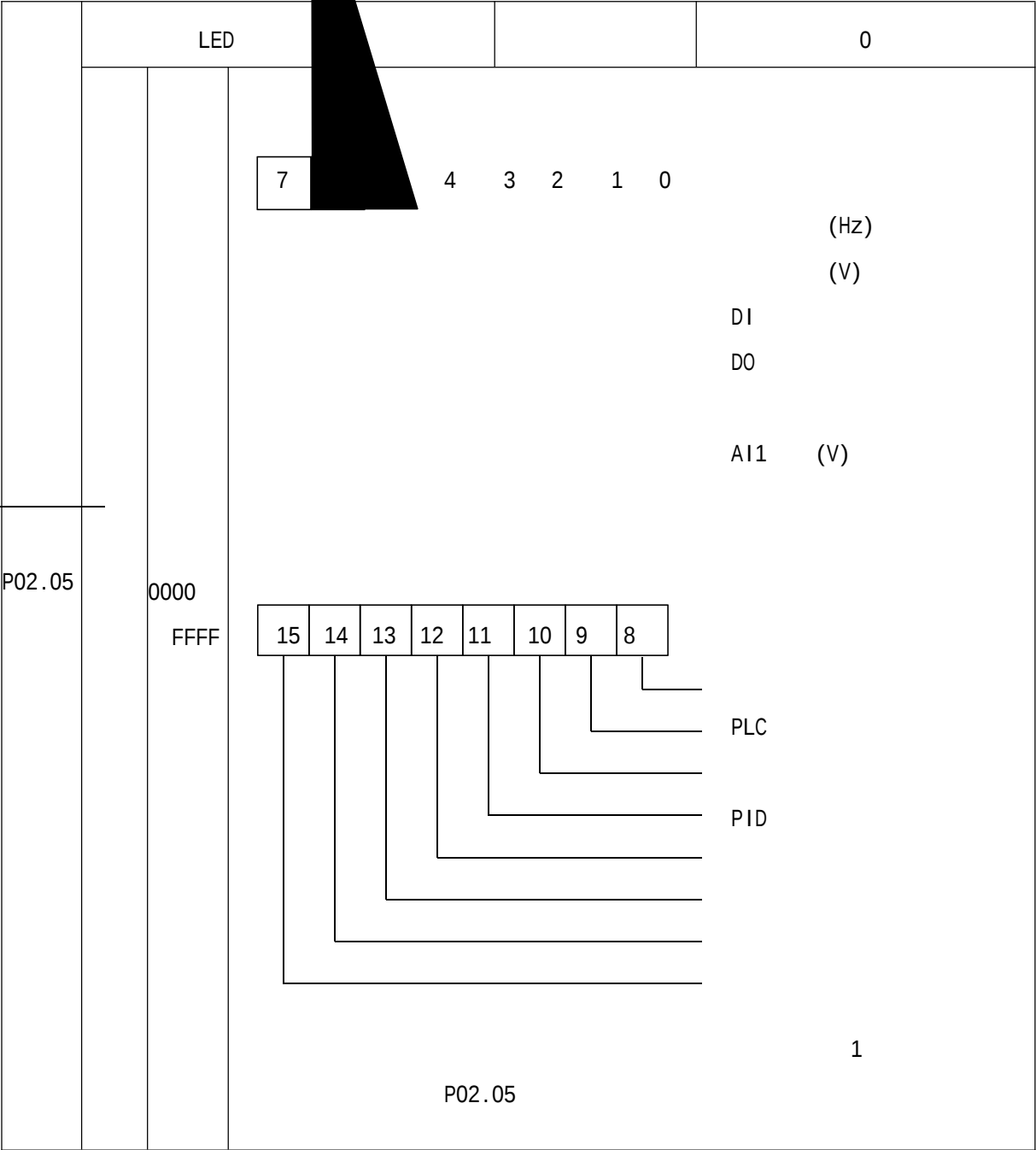
2

F2

3

4	F2	FJOG
	F2	RJOG

P02.02	STOP/RESET			1
		0	, STOP/RES	
		1	, STOP/RES	



P02.06			1.0000
		0.0001 6.5000	

P02.12

P21.17

24

ON

P02.14			-
		0 65535	

7.3

P3

HF631NLC

3

1

P03.00	DI1	1	
P03.01	DI2	4	
P03.02	DI3	9	
P03.03			
P03.04			
P03.05			
P03.06			
P03.07			
P03.08			
P03.09			

0		“ ”
1	FWD	

2

REV

3

P03.01 “

21				
22	PID	PID	PID	
23	PLC	PLC	PLC	
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				E015
34				
35	PID			

	Y			Y	P08.08				
40									
41		1		4		4			
42		2							
			PID	DI	P15.18=1				
43	PID		PID	P15.05	P15.07				
			P15.15	P15.17					
44		1		1	2		E027	E028	
						P07.49			
						m "			

6	1	0	1	0
7	0	1	1	0
8	1	1	1	0
9	0	0	0	1
10	1	0	0	1
11	0	1	0	1
12	1	1	0	1
13	0	0	1	1
14	1	0	1	1
15	0	1	1	1
16	1	1	1	1
0 OFF 1 ON				

2	1		
OFF	OFF	1	P08.17 P08.18
OFF	ON	2	P21.03 P21.04
ON	OFF	3	P21.05 P21.06
ON	ON	4	P21.07 P21.08

2	1		
OFF	OFF	1	P10 P12
OFF	ON	2	P11

P03.10	DI		0.010s
		0.000s 1.000s	

DI

DI

Dly	2	REV
Dln	3	

DIn DIx DIy

DIn

DIx DIy DI_n DI1 DI10

Dlx Dly

DIn

3

2

DIn

Dix

Dly

Dlx	1	FWD
Dly	2	REV
Dln	3	

O

 $|\lambda$
$$\#$$

DIT

		0.0s 3600.0s
--	--	--------------

DI

DI1 DI2 DI3

P03.13	DI	1		00000
			DI1	
		0		
		1		
			DI2	0 1
			DI3	0 1

DI COM

DI COM

7.4 P4
 HF631NLC 1 (A01) 1
 (D01) 2

P04.02	1		2
P04.03	2		0
P04.04	D01		1

3 3

0		

T 50

1

È

ON

2

ON

3

FDT1

P21.19 P21.20

4

17				ON
18				ON
		OFF		
19				ON
20				
21				
22				
23	2		0	ON

38		
40		P21.53 ON

P04.07	1		0.0s
		0.0s 3600.0s	
P04.08	2		0.0s
		0.0s 3600.0s	
P04.09 3	D01		0.0s
		0.0s 3600.0s	

1 2 D01

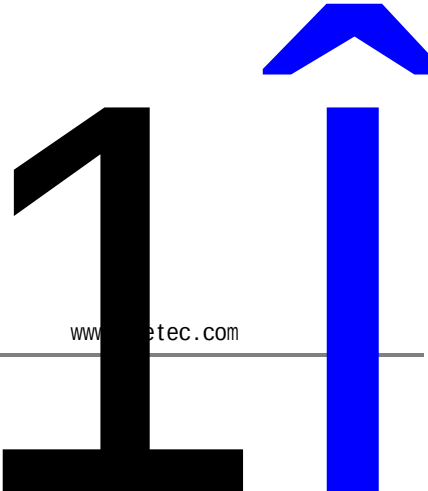
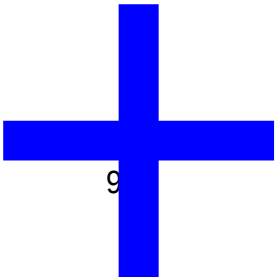
D0 00000

1

0

P04.11

1



HF631NLC

1

P05.21	AI			000
			AI1	
		0		
		1	0.0%	

“ ”

0 AI “ ”

“ ” P05.06

1 AI 0.0%

7.6

P6

P06.00			
P06.01	A01		0
P06.02			

A01 0V 10V 0mA 20mA

		0.0%~100.0%
0		0
1		0
2		0 2
3		0 2
4		0 2

5

0 1.2

6

PULSE

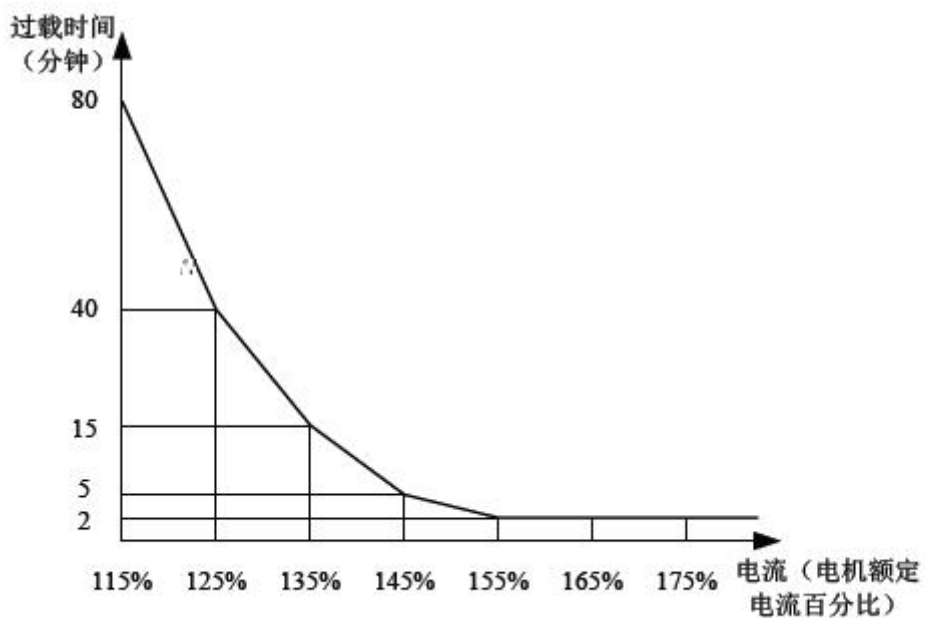
0.01kHz

7.7 P7

P07.00			1
		0	
		1	
P07.01			1.00
			0.20 10.00

P07.00=0

P07.00=1



$$I_x = 129\%$$

$$(40 - 30) \div (125\% - 135\%) = (40 - 15) \div (125\% - 135\%)$$

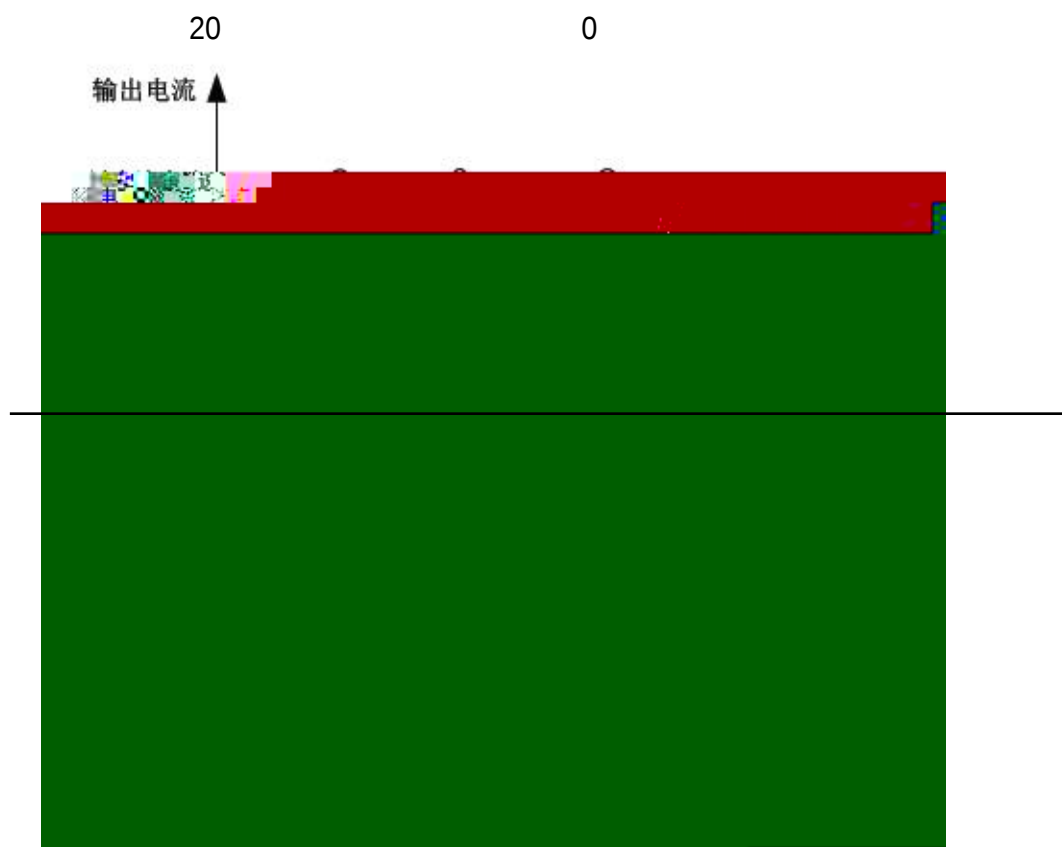
$$I_x = 129\%$$

$$P07.01 = 120\% \div I_x = 120\% \div 129\% = 0.93$$

P07.01

P07.02			80%
		50% 100%	

D0



P07.07			11
P07.08			
		200.0V~2000.0V	

UVW

* Đ Ǧ

P07.09

P07.10

D0

1

P07.20

BI T9	BI T8	BI T7	BI T6	BI T5	BI T4	BI T3	BI T2	BI T1	BI T0
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------

DI 3
DI 2
DI 1
1 OFF

ON

0 DI

BIT4 BIT3

P07.21

P07.43		
P07.44		

1

00000

E011

0

1

2

P07.47

2

E113

E114

E015

E0202

2

P07.48

1	E027	P07.47
2	E028	P07.47
	E029	P07.47

		0.0s 60.0s
--	--	------------

P07.69

P07.70

E119

0.0s

7.8

P8

1

0

P08.01

0

1

2

SVC

FVC

V/F

0

“ LOCAL ”

RUN

STOP

1

)

RJOG(

“ LOCAL ”

FWD() REV() FJOG(

2

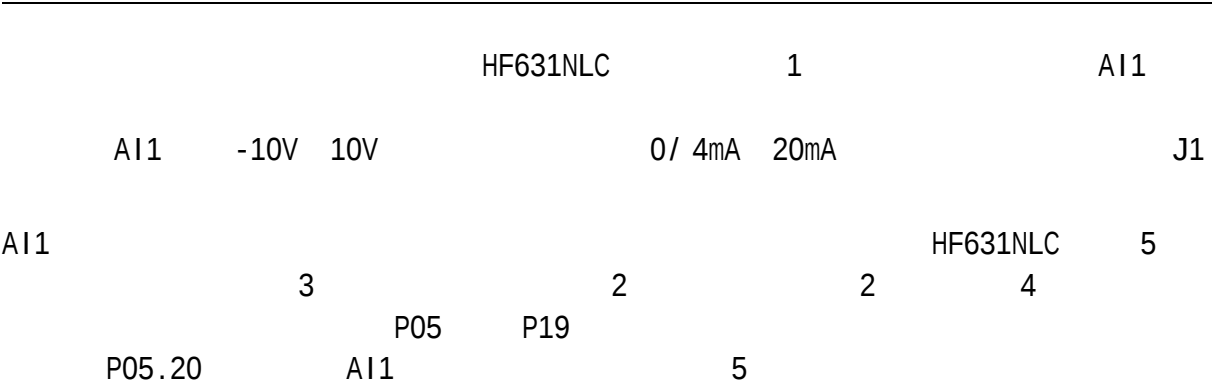
“ LOCAL ”

Ä

P08.03	X		0
	0	.08 UP/DOWN	
	1	3.08 UP/DOWN	
	2		
	3	AI1	
	4		
	5	D 00	
	6		
	7	PLC	
	8	PID	
	9		

0

10



X Y
 1 X- Y
 X Y
 2 MAX X Y X Y

P08.08			50.00Hz
			0.00

“ ” “ UP/DOWN ”

P08.09			0
		0	
		1	

U V W

P08.10			50.00 Hz
			5.00Hz 500.00Hz

HF631NLC DI5 100.0%

P08.10

HF631NLC 500Hz

P08.22

P08.22 1 0.1Hz P08.10 50.0Hz 500.0Hz

P08.22 2 0.01Hz P08.10 50.00Hz
500.00Hz

P08.11			0
		0	P08.12
		1	
		2	AI1

		3	
		4	
		5	

P08.12

100%

P08.12

“ ” '00%

	→
	→
	→

P08.16

0

0
1

„LΓ\$

„LΓU9 „L\$ QQ #.

„LΚ

„L\$9@ Q!2B K

„L B@ W0 Q. „@

„L b

„LB„@ Q ṽP iT Ó.

P21.03 P21.04

P21.05 P21.06

P21.07 P21.08

P08.19				1
			„Lλ	
		0	1	
		1	0.1	
		2	0.01	

HFBR1C 2 n

HFBR1C 2 n

SOT

0 3-49•

		8	PID
		9	
			0 9
			0 9

X
P08.03
P08.03

P08.03~ P08.07

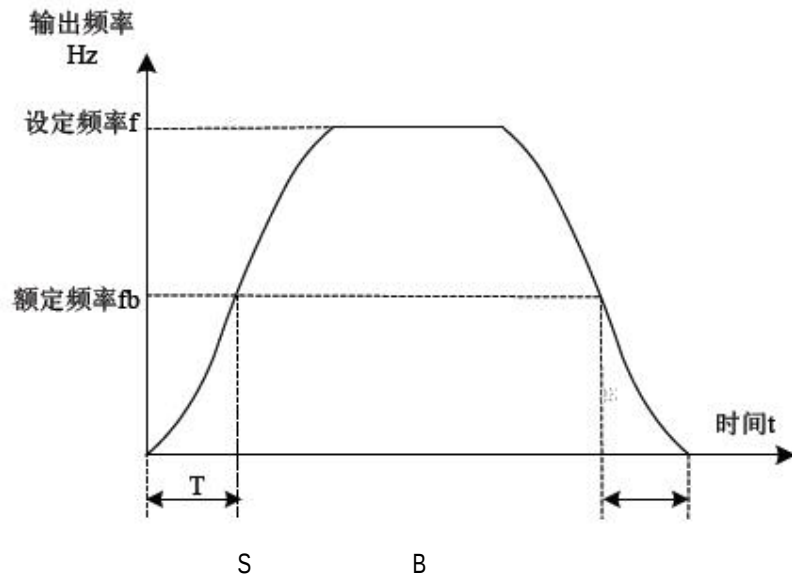
P08.28				0
		0		
		1		
		2		

0
0
0
1
2

P08.31			0.00Hz
		0.00Hz 10.00Hz	
P08.32			0.0s
		0.0s 100.0s	

P08.31

PLC
1



P08.38			0
		0	
		1	

0
1

0

P08.39		0.00Hz
		0.00Hz
P08.40		0.0s
		0.0s 36.0s
P08.41		0%
		0% 100%
P08.42		0.0s
		0.0s 36.0s

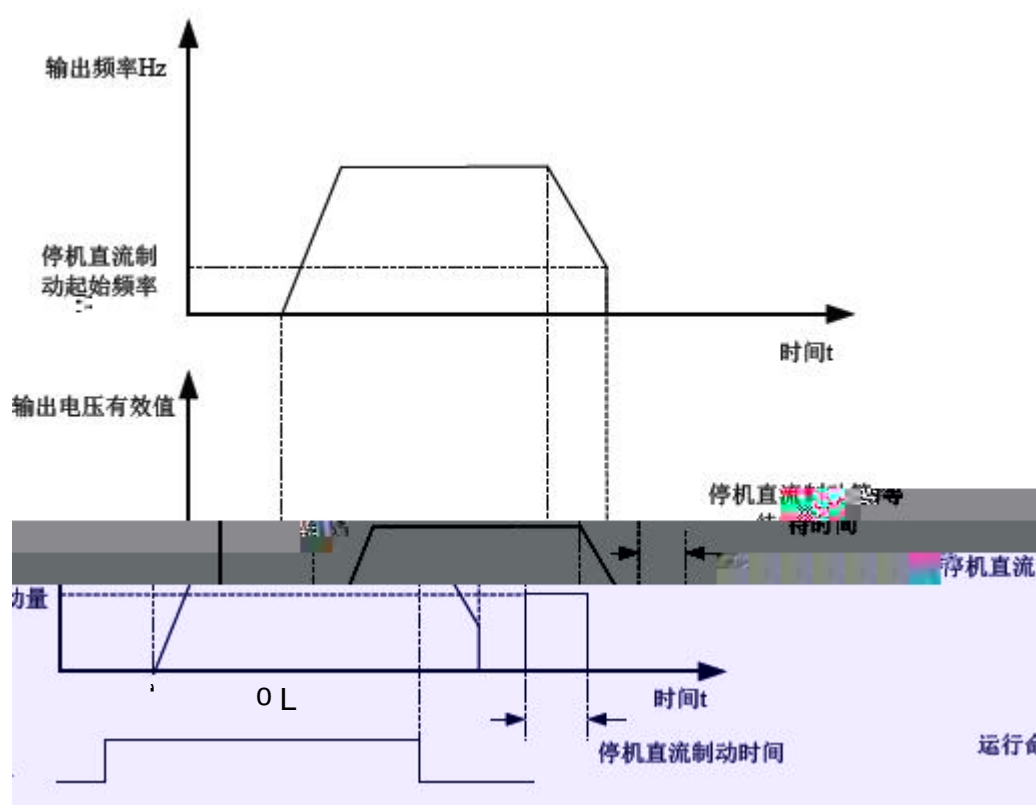
1

80%

2

80%

80%

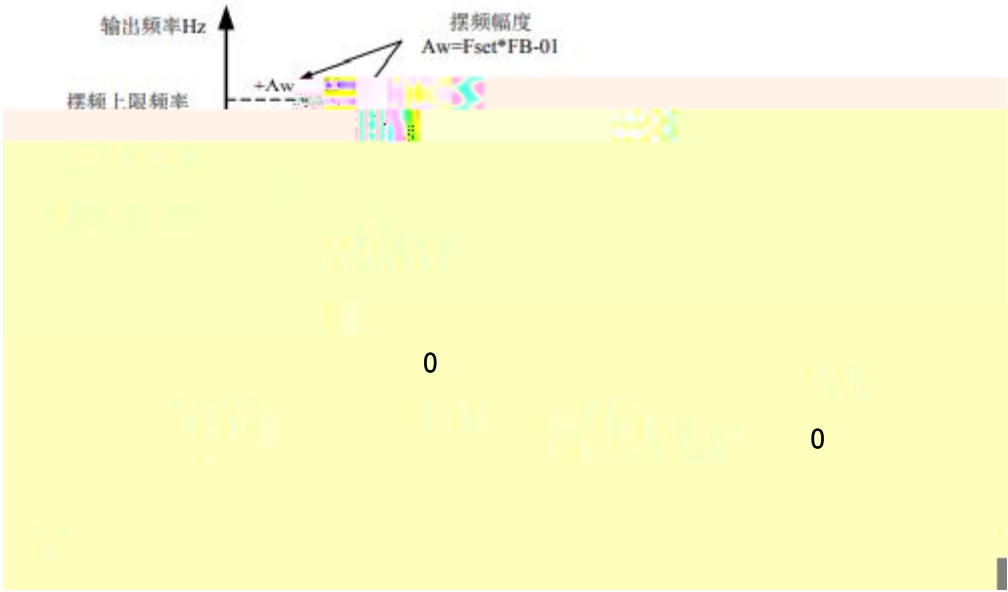


100%

P08.43

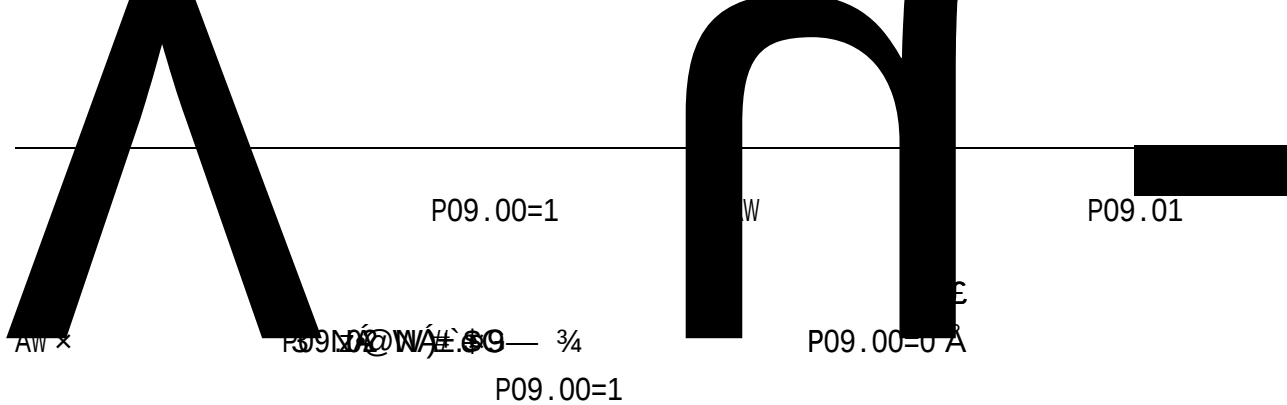
0% 100%

P09.00 P09.01 P09.01 0 0



0

P09.00 0 09



P09.03			10.0s
			0.0s 3000.0s
P09.04			50.0%
			0.0% 100.0%

www.gdetec.com

P09.04

P09.03

P09.03 x

P09.04

P09.03 h 1

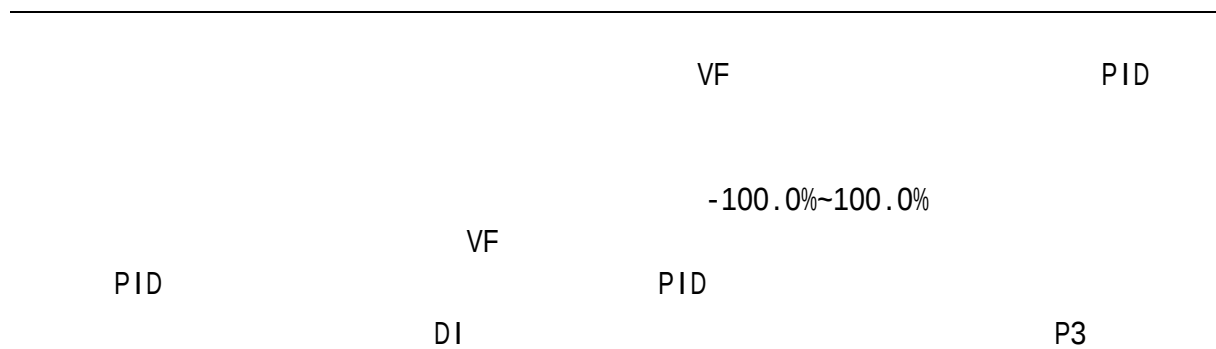
P09.04

P09.05		1000m
		0m 65535m
P09.06		0m
		0m 65535m
P09.07		100.0
		0.1 6553.5

P09.08

P09.14	4	0.0%	-100.0%	100.0%
P09.15	5	0.0%	-100.0%	100.0%
P09.16	6	0.0%	-100.0%	100.0%
P09.17	7	0.0%	-100.0%	100.0%
P09.18	8	0.0%	-100.0%	100.0%
P09.19				

Q 1000000 1



7.10 V/F 1 P10

P10.35			
		0.1kW 1000.0kW	
P10.36			
		1V 2000V	
P10.37			
		0.01A 655.35A <=55kW 0.1A 6553.5A >55kW	
P10.38			
		0.01Hz	
P10.39			
		1rpm 65535rpm	

VF

VF

P10.50			
		0.001 65.535 <=55kW 0.0001 6.5535 >55kW	
P10.51	D		

RUN

0

11

12

40%

7.11

P21

P21.00			2.00Hz
		0.00Hz	
P21.01			20.0s
		0.0s 6500.0s	
P21.02			20.0s
		0.0s 6500.0s	

(,

P21.07	4		20.0s
			0.0s 6500.0s
P21.08	4		20.0s
			0.0s 6500.0s

HF631NLC

4

P08.17\

P08.18

3

4

P08.17

P08.18

DI

4

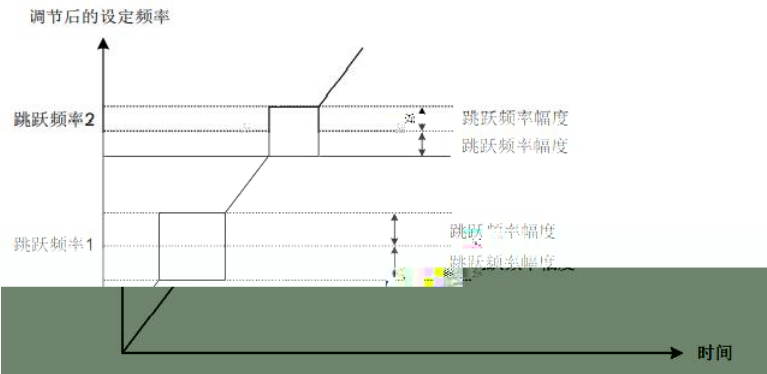
P03.01

P03.05

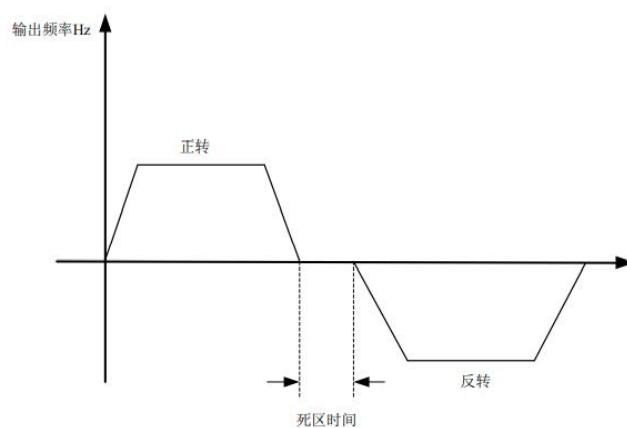
P21.09	1		0.00Hz
			0.00Hz
P21.10	2		0.00Hz
			0.00 Hz
P21.11			0.00Hz
			0.00

HF631NLC

0



P21.12			0.0s
			0.00s 3000.0s



0Hz

P21.13				0
		0		
		1		

P21.13=1

P21.14				0
		0		
		1		
		2		

HF631NLC

P21.15				0.0%
			0.0% 100.0%	

0

P21.15

$$= \quad \times \quad (\%) \times \quad (\%)$$

$$P21.15 = 10.0\% \quad 50\text{Hz} \quad 50\%$$

$$= 50\text{Hz} \times 50\% \times 10\% = 2.5\text{Hz}$$

$$= 50\text{Hz} - 2.5\text{Hz} = 47.5\text{Hz}$$

	P21.18			1
			0	1

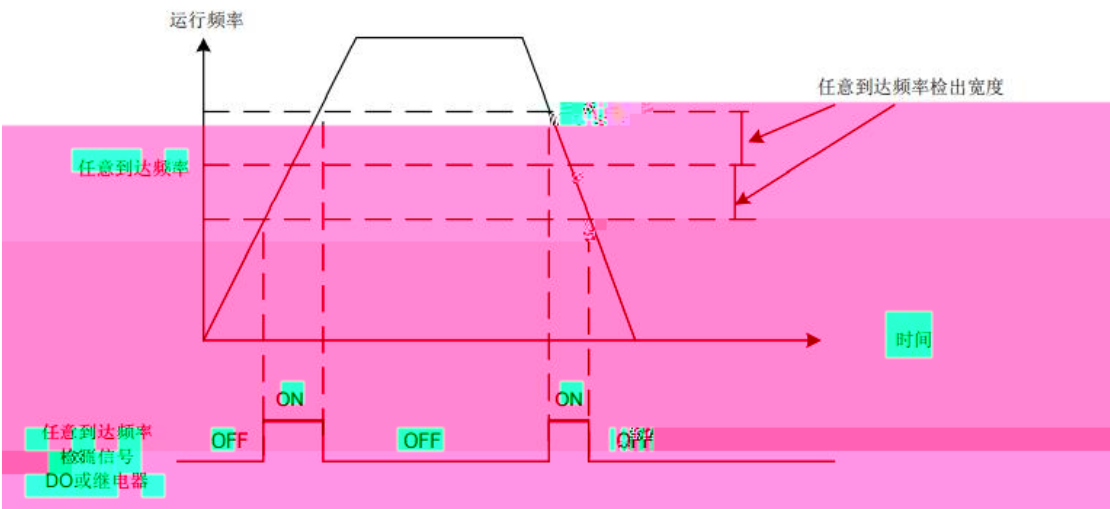
1

1

1

0

P21.22



P21.42			0
		0	
		1	
P21.43			0
		0	P21.44
		1	
		2	AI1
		3	
			100% P21.44
P21.44			0.0Min
		0.0Min 6500.0Min	

P21.42

DO

ON

0

P23.20

P21.43

P21.44

P21.61				1
		0		
		1		

E040

7.12

P19

P19.34	AI1	1	
			-10.000V 10.000V
P19.35	AI1	1	
			-10.000V 10.000V
P19.36	AI1	2	

P19. / 1

8

8.1

	E001	1 2 3 4 5 6 7	1 2 3 4 5 6 7
	E003	1 2 3 4 5 6	1 2 3 4 5 6
	E004	1 2 3 4 5	1 2 3 4 5
	E008	1	1
	E011	1 P07.10 2 3	1 2 3
	E015	1 DI 2 IO	1 2
	E018	1 2	1 2

	PB	“ + ”		PB	“ + ”	
E060						
E061	1	P08.44		1	P08.44	0
E100	1 2 3 4			1 2 3 4		
E101	1 2 3 4			1 2 3 4		
E102	1 2			1 2		
E105	1 2 3 4 5 6			1 2 3 4 5 6		
E108	1 2			1 2		
E110	1 2 3 4 5 6 7 8			1 2 3 4 - y		
		V/F				

E112	1					1			
	1					1			
E113	2					2			
	3					3			
	4					4			
	1					1			
E114	2					2			
	3					3			
	4					4			
	1					1			
E115	2					2			
	3				P07.67	3			
	P07.68								
					P23.45				
		P19.45	1	7			Z		B
	11	12	9						
	1	P23.45=1							
		PG							
	2	P23.45=3			Z				
E118	3	P23.45=5			Z				
	3	P23.45=6			Z				
	ABZ								
		P10.65							
	4	P23.45=7							
	5	P23.45=12				PG			



HF631	1 2 3 4 5	1 2~5 34
“ E112 ”	1 2	1 2
“ HF631 ”	1 2	1 2
E120	1 2 3	1 2 3 P08.15
	1 2 3 4	1 2 3 4
DI	1 2 3 PW +24V 4	1 2 3 PW +24V 4 P3
	1 2 3 PG 4	1 2 3~4 PG
	1 2 3	1 2 3
Err17	1	1 2 3 24V 4
8.8.8.8.8	1	1

	
1.	
2.	
3.	
4.	
	
1.	CMOS
2.	
3.	

9.1

9.2

	1. 2.	1. > 40 < 95% 2.
	1. 2.	1. 2.
	1. 2. 3.	1. 2. 3.
	1. 2.	1. 2.
	1. 2.	1. 2.

9.3

	2	1 2
PCB		

9.4

		5	
		5	
			(400-0077-570)
1	40		
2	80%		
3	24	/	

9.5

1			
2			
			5

1
2
3. **Ã**

Wuhan Guide Technology Co.,Ltd.
d.