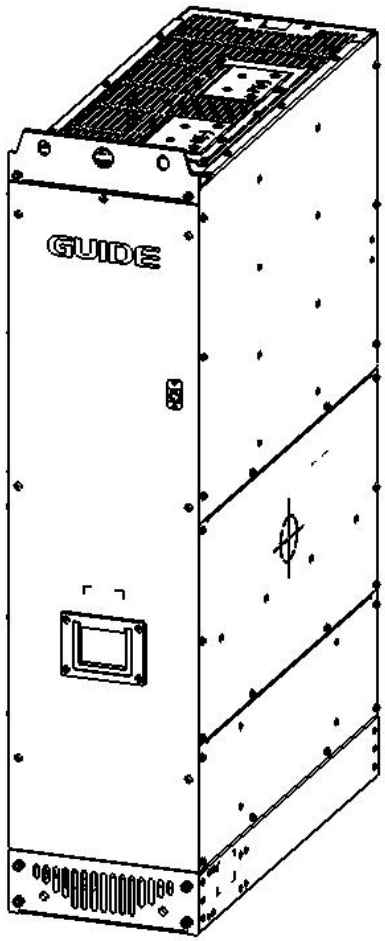
HF680N13M

690V

1.00

Wuhan Guide Technology Co.,Ltd.



HF680N

.....1
1.1
1.2
1.3
.....3
2.1
2.2
2.2.1
2.2.2
2.2.3
2.2.4
2.3 EMC
2.4
2.5
2.6
2.7
.....13
3.1
3.2
3.3
3.4
3.5
.....19
4.1
4.2
4.3
4.4
.....26
5.1
5.2
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5.2.2
5.2.3
5.2.4
5.3
5.3.1
5.3.2
.....31
6.1 P2
6.2 P3

6.3 P4
6.4 P5
6.5 P6
6.6 P7
6.7 P8
6.8 P16

.....38

7.1
7.2
7.3
7.4
7.5

.....42

8.1
8.2

.....45

9.1
9.2
9.3
9.4
9.5

1.1



1.2

(1)

(2)

(3)

(4)

LVD	2014/35/EU	EN 61800-5-1
EMC	2014/30/EU	EN 61800-3

1.3

2.1



a.必须正确选型，选型不正确可能会运转异常或制动器损坏。

1.
2.
3.
4.

2.2


1. / “ ” / 2. 3. - U V W - P N 4. 12 5.

1. 2. 3. 40

4. 1.2

2.2.1

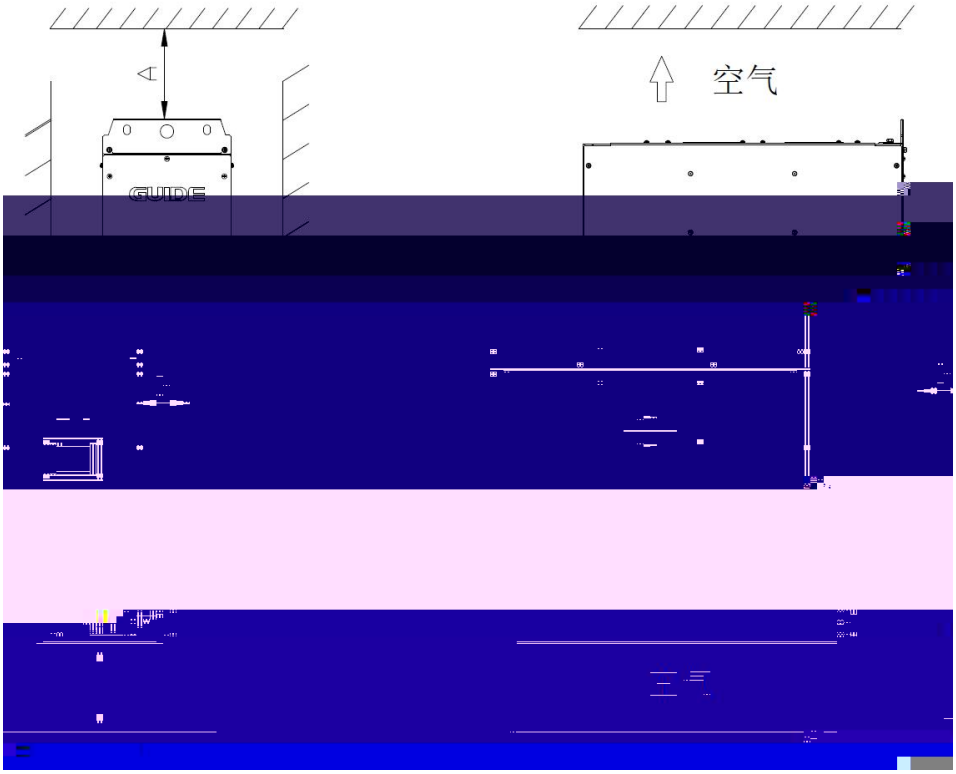
-
- -20 +60
- 0% 95%
-
-
-

1 5

2.2.2

-
-
- -15 +40 +40 +50 1
  2% +50
- 95%RH
-
-
-
-
-
-
- 1000 1000 100 1%
  3000

2.2.3



		A ≥ 200mm	B1 ≥ 50mm	B2 ≥ 50mm

2.2.4

1 1 4

2 2

EMC

EMC

EMC EMC

2 EMC

EMC

a PWM

b

c

3 EMC

EMC

EMC

5 EMC

a

360

b

4

3 1

PLC

20cm

20cm

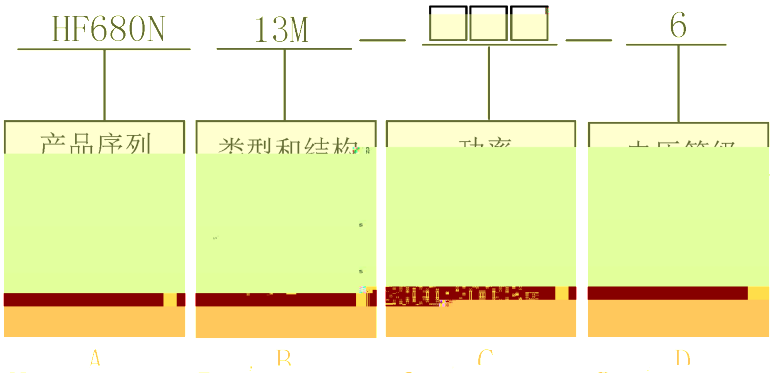
90

c

EMC

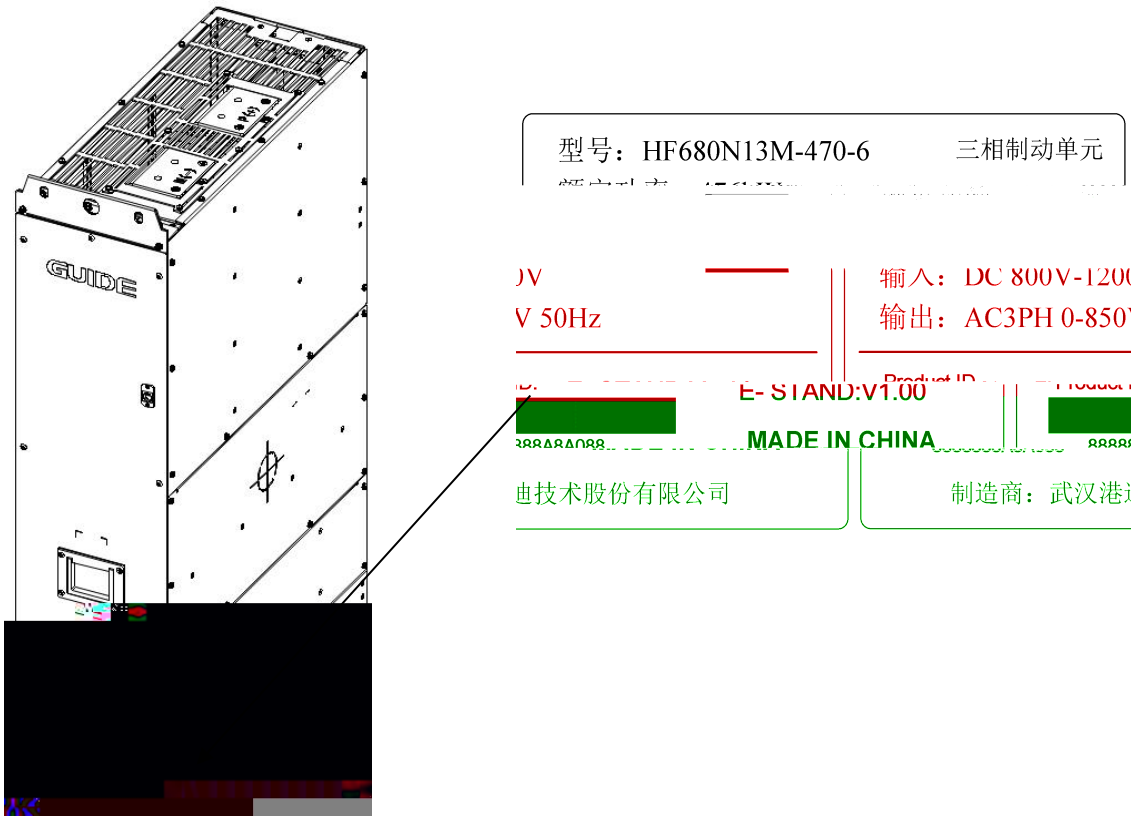
d

2.4



A	HF680N
B	13M
C	470：470kW 2000：2000kW
D	6 690V

:



HF680N13M-470-6 HF680N13M 470kW 690V

DC

AC

3PH

800V-1200V

0-850V 0-50Hz

		3 1 2 2 0 +10V 0mA/4mA 20mA
	LCD	
		1000m
		-15 +40 40 50
		95%RH
		-20 +60

2.7



		mm				mm			8.8	kg
		H1	H2	W	D	A	B1	B2		
1	B7A	979	936	240	600	936	150	150	2-M12 2-M10	100

3.1

1

2 12

3 U V W

4

5

6

7

10cm

8 0.75mm² 50m

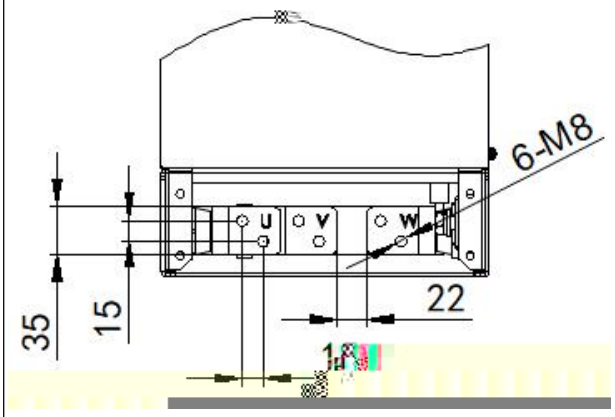
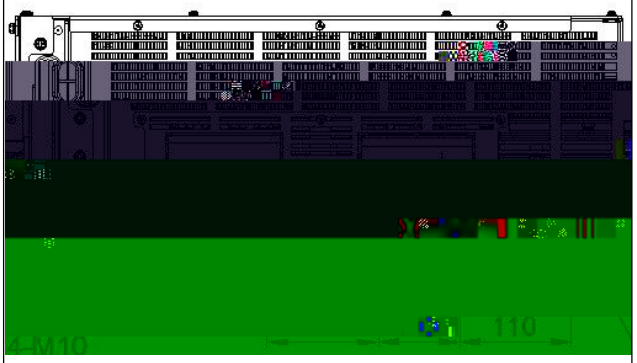
9 10cm

10

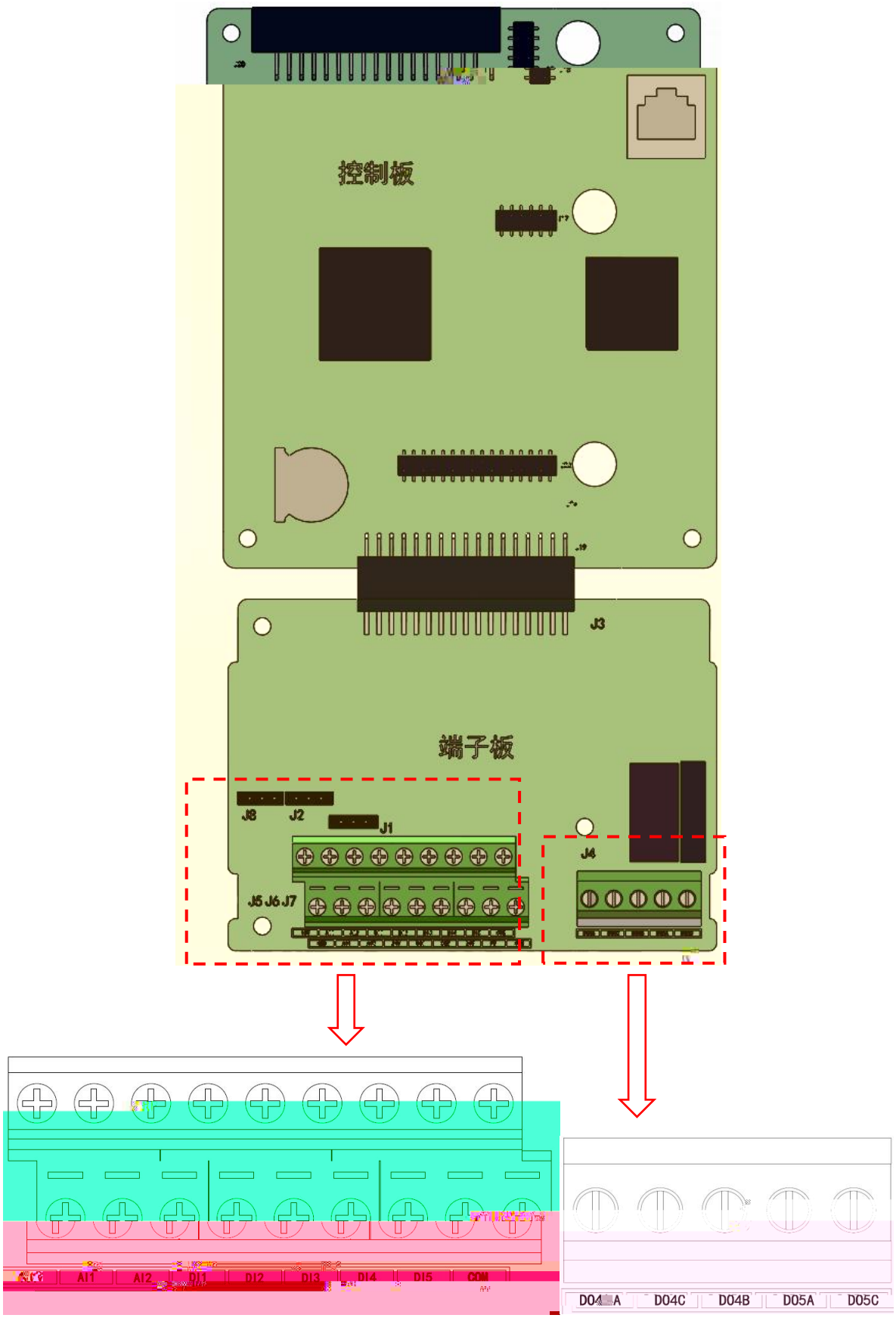
11

3.2

U V W	
P	
N	
PE	

B7	
	

3.3


控制板
J3
端子板
J8
J2
J1
J5 J6 J7
J4
AI1
AI2
DI1
DI2
DI3
DI4
DI5
COM
DO4A
DO4C
DO4B
DO5A
DO5C

	+10V-GND	10V	+10V 50mA 1kΩ~5kΩ
	+24V-COM	24V	+24V 200mA
	PW		24V DI1~DI5 DO1 PW 24V
	AI1-GND	1	DC -10V~10V 100kΩ
	AI2-GND	2	-10VDC~10VDC/0mA~20mA J1 100kΩ 500Ω
	DI1- PW	1	3.3kΩ 9V~30V DI1-DI4 500Hz DI5 20KHz
	DI2- PW	2	
	DI3- PW	3	
	DI4- PW	4	
	DI5- PW	5	
	AO1-GND	1	J2 0V~10V 0mA~20mA
	AO2-GND	2	J8 0V~10V 0mA~20mA
	DO1-COM	1	0V~24V 0mA~50mA
	DO4A-DO4C	1	250VAC 3A COS =0.4 30VDC 1A
	DO4B-DO4C	2	
	DO5A-DO5C	3	250VAC 2A COS =0.4 30VDC 1A

	J1	AI2	
	J2	AO1	
	J8	AO2	

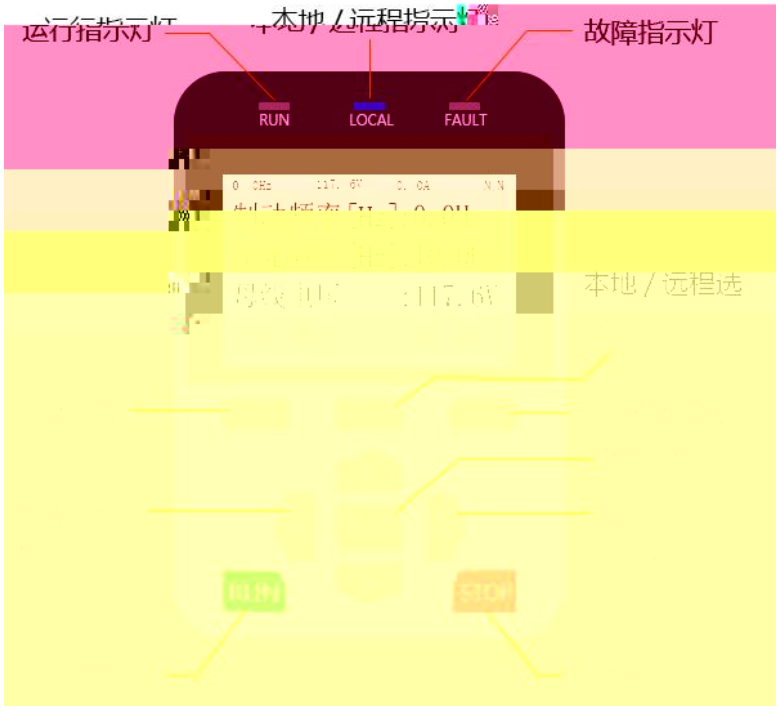
3.5

	A	mm² mm²
HF680N13M-470-6	425	150
HF680N13M-570-6	515	150
HF680N13M-730-6	660	2 × 120
HF680N13M-830-6	750	2 × 120
HF680N13M-900-6	810	2 × 150
HF680N13M-1000-6	900	2 × 150

4.1

HF680N F1

LOCAL/REMOTE F2 RUN STOP /RESET ENTER



4.2

▼

▲

ENTER

RUN STOP

LOCAL/REMOTE /

4.3



“ ” “ ” 2

|

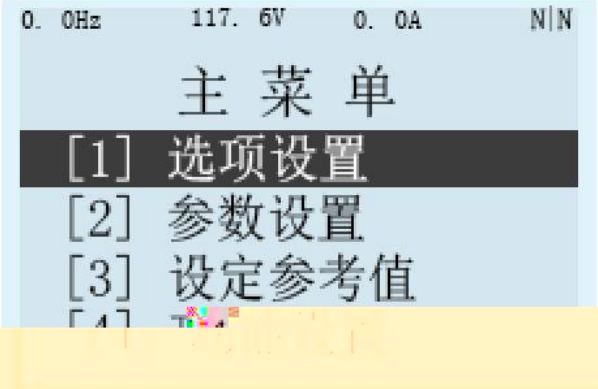
	“ - ”
	:V
	A
	N|N W E

4

ENTER (50Hz,)

F1/F2

4.4



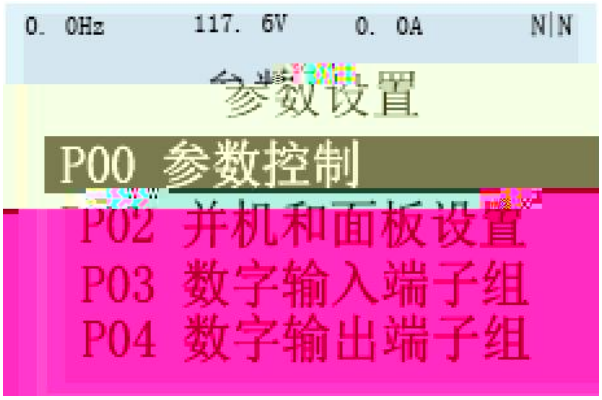
1	Option Set	
2	Parameter Setting	/
3	Reference Set	
4	Function Setting	
5	Fault Record	
6	Security	

4.4.1



1	Choose Direction	,
2	Reset Error	
3	Menu Language	
4	Monitor Setting	
5	LCD Contrast	
6	Time Setting	
7	Version	
8	OLD COM	

4.4.2



Parameter Setting

4.4.3



Function Setting

1	MotoTuning I	
2	MotoTuning II	
3	MotoTuning III	
4	DC-Link Tuning (AFE)	AFE

5	Shortcut Paras Setting	
6	Parameter Initialization	
7	Delete Fault Records	
8	System Restart	
9	Backup Parameter	
10	Recover Parameter	
11	Compare Parameter	
12	Backup Para DSP DSP	DSP
13	Restore Para DSP DSP	DSP

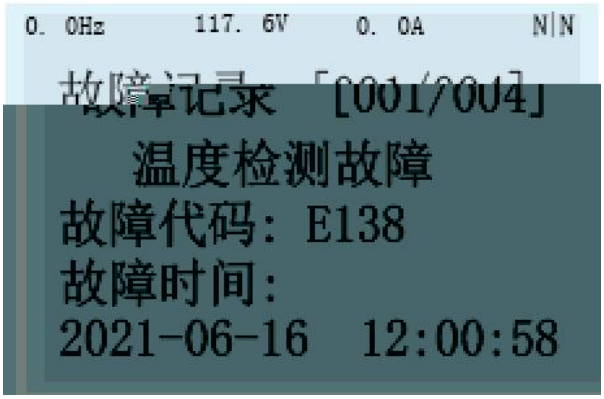
1

2

5

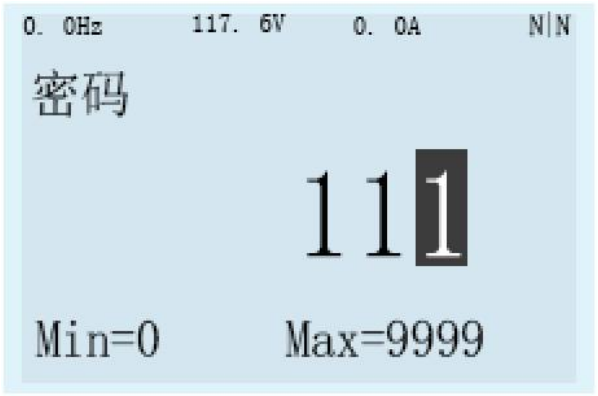
▼ ▲ “ Enter ”

4.4.4



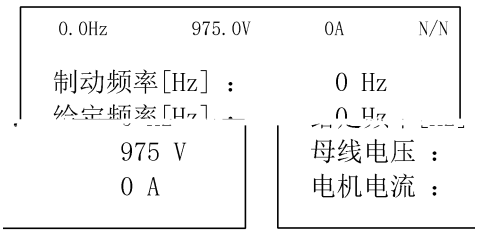
Fault Record

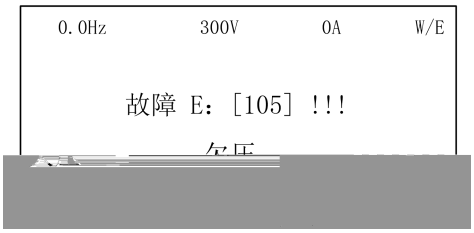
4.4.6



Access Permissions

5.2.2





5.2.3

6.7

P8.0		[0] [1] [3]MODBUS [5]	5
P8.10		[0] [1] 1 [2] 2	0
P07.65		-25~150V	0
P07.66		-25~150V	100

5.2.4

STOP

1

2 LOC/REM LOCAL LOCAL

3 P07.59=1

4 RUN RUN

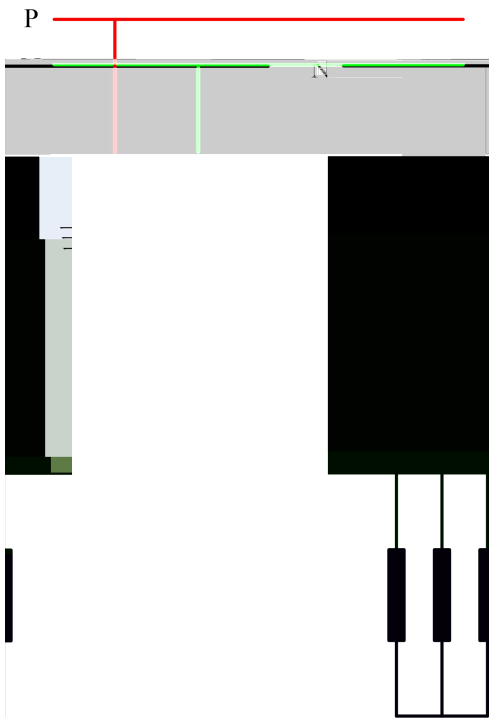
5 1.075*1.414*P16.0+40

6

7 STOP

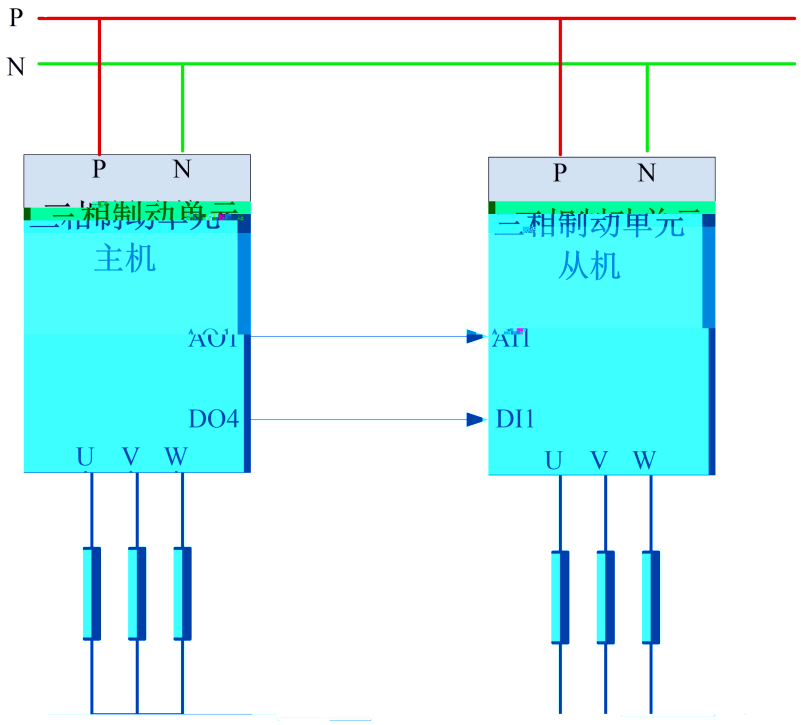
5.3

5.3.1



P08.00		5
P08.10		0
P07.65		0V
P07.66		100V

5.3.2

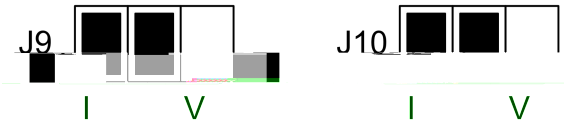


AO1 AI1 DO4 DI1

1(AO1

COM) 1 (AI1+ AI1-)

J9 1 J10 2



a.



b.

P06.00	A01	10
P06.02	A01	0.0
P06.03	A01	100.0
P06.08	A01	5.0
P04.03	4	1
P08.00		5
P08.10		0
P07.65		0V
P07.66		100V

P5.0	AI1	0~20mA
P5.1	AI1	20ms
P5.3	AI1	
P5.6	AI1	0
P5.9	AI1	100
P3.1	1	1
P08.00		0

6.1 P2

P2.2		[0] [1]	0 1	0	

6.2 P3

P3.0	1		0 32	1	
P3.1	2		0 32	2	
P3.2	3		0 32	5	
P3.3	4		0 32	6	
P3.4	5		0 32	7	
P3.5	6		0 32	8	
P3.6	7		0 32	0	
P3.7	8		0 32	0	

0

15	.NC	

6.3 P4

P4.0	1		0 64	0	
P4.1	2		0 64	0	
P4.2	3		0 64	0	
P4.3	4		0 64	0	
P4.4	5		0 64	0	

0		
1		
2		ON
4		
5		
12		
13		
14		

6.4 P5

P5.0	AI1	[0] [1]0 +10V [2]-10 +10V [3]0 20mA	0 3	1	
P5.1	AI1	AI1	0.0 1000.0 [ms]	25.0 [ms]	
P5.2	AI1	AI1	-10.00 10.00 [V]	0.000 [V]	7.4

P5.3	AI1	AI1	-20.00 20.00 [mA]	0.000 [mA]	7.4
P5.4	AI1	AI1	-10.00 10.00 [V]	0.000 [V]	7.4
P5.5	AI1	AI1	0.00 20.00 [mA]	0.000 [mA]	7.4
P5.6	AI1	AI1	-300.0 300.0 [%]	0.0 [%]	7.4
P5.7	AI1	AI1	-10.00 10.00 [V]	10.000 [V]	7.4
P5.8	AI1	AI1	0.00 20.00 [mA]	20.000 [mA]	7.4
P5.9	AI1	AI1	-300.0 300.0 [%]	100.0 [%]	7.4
P5.18	AI2	[0] [1]0 +10V [2]-10 +10V [3]0 20mA	0 3	3	
P5.19	AI2	AI2	0.0 1000.0 [ms]	25.0 [ms]	
P5.20	AI2	AI2	-10.00 10.00 [V]	0.000 [V]	
P5.21	AI2	AI2	-20.00 20.00 [mA]	0.000 [mA]	
P5.22	AI2	AI2	-10.00 10.00 [V]	0.000 [V]	
P5.23	AI2	AI2	0.00 20.00 [mA]	0.000 [mA]	
P5.24	AI2	AI2	-300.0 300.0 [%]	0.0 [%]	
P5.25	AI2	AI2	-10.00 10.00 [V]	10.000 [V]	
P5.26	AI2	AI2	0.00 20.00 [mA]	20.000 [mA]	

P5.27	AI2	AI2	-300.0 300.0 [%]	100.0 [%]	

6.5 P6

P6.0	AO1		7-1		0 14	2	
P6.2	AO1		AO1		-300.0 300.0 [%]	0.0 [%]	7.2
P6.3	AO1		AO1		-300.0 300.0 [%]	100.0 [%]	7.2
P6.4	AO1	[mA V]	AO1		0.0 100.0 [%]	0.0 [%]	7.2
P6.5	AO1	[mA V]	AO1		0.0 100.0 [%]	100.0 [%]	7.2
P6.6	AO1		AO1		-100.00 100.00 [%]	0.00 [%]	
P6.7	AO1		AO1 [13]	(P6.0)	0.0 100.0 [%]	0.0 [%]	
P6.8	AO1			AO1	0.0	10.0	
P6.14							

[13]) [%] [%]

AO1

P6.22 AO2

			[%]	[%]	
P7.49	1	1	0.00 60.00 [s]	60.00 [s]	7.3
P7.50	2	2	0.0 300.0 [%]	200.0 [%]	7.3
P7.51	2	2	0.00 5.00 [s]	5.00 [s]	7.3
P7.59		[0] [1]	0 1	1	
P7.60			0.10 3.00 [s]	0.30 [s]	
P7.60			0.10 3.00 [s]	0.30 [s]	
P7.65			-25~150V	0V	
P7.66			-25~150V	85V	

6.7 P8

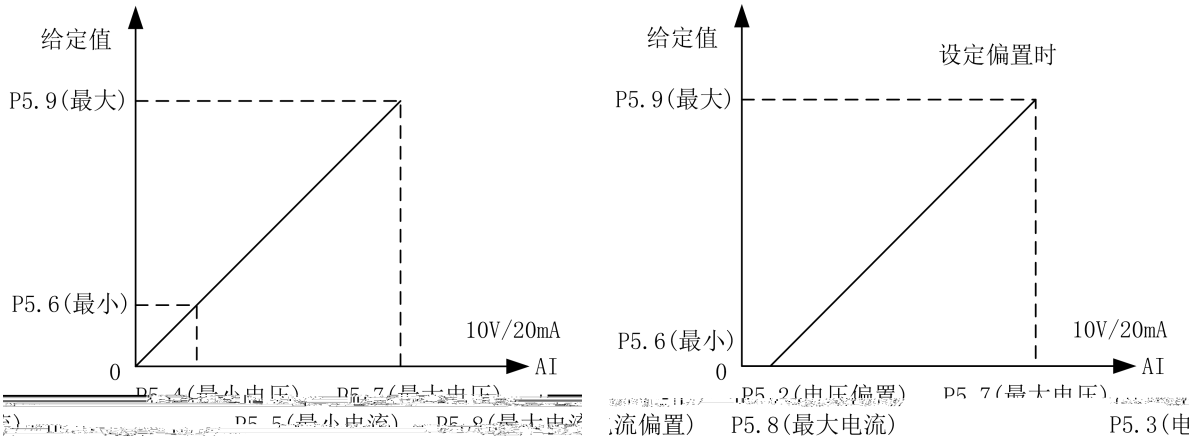
P8.0		[0] [1] [2] [3]MODBUS [4] [5]	0 5	5	7.3
P8.3		[1]	0 1	1	7.3
P8.10		[0] [1] 1 [2] 2 [3] [4] [5] [6]	0 6	0	7.3

6.8 P16

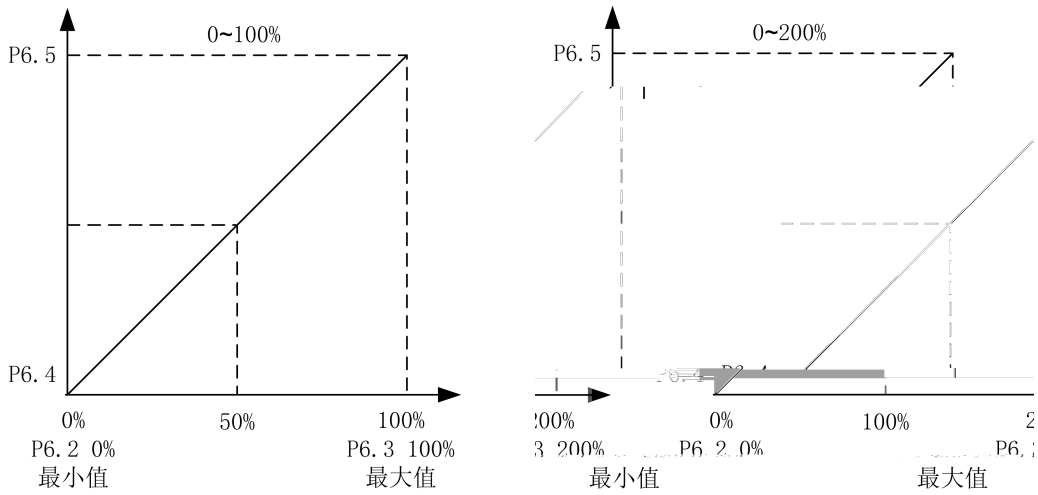
P16.0			320 760 [V]	690 [V]	7.8

P16.3			320 850 [V]	810[V]	7.8
P16.4			0.0 3000.0 [A]	[A]	7.8
P16.11		[0]	0	0	7.8

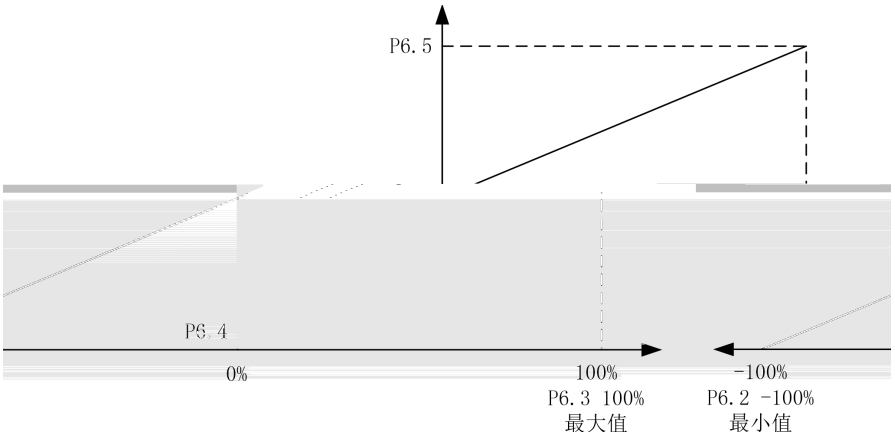
7.1



7.2



(a) 0~100% b 0~200%



c -100~100%

7.3

1

P7.0

2

P7.4 P7.4 P16.4

3

P7.8 $I_a + I_b + I_c$ P16.4

$\frac{(I_a + I_b + I_c)}{3} > P7.8 \quad P16.4 \quad 1.414$

4

P7.12 P7.13 P7.12

P7.13

5

P7.14 IGBT P7.14

P7.15 IGBT P7.15

7.5

1

P16.0

2

P16.3 850V ; 810V,

3

P16.4 ,

4

P16.11 ,

8.2

[E050] U

ERR_UT pon M, b

ERR_T [illegible]

D

[E137]	FAN STA	
[E138]	TEMP_SENSING FAIL	
[E152]	U IGBT	IGBT
	PDP [UB]	IGBT
[E154]	V IGBT	IGBT
	PDP[VB]	IGBT
[E155]	W IGBT	IGBT
	PDP [WT]	



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.

9.3

	2	1 2
PCB		

9.4

5

5

(400-0077-570)

1 40

2 80%

3 24 /

9.5

1

2

5

HF680 13

690

1.00



1

2

3

Wuhan Guide Technology Co.,Ltd.

6

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400-0077-570

G C ., .