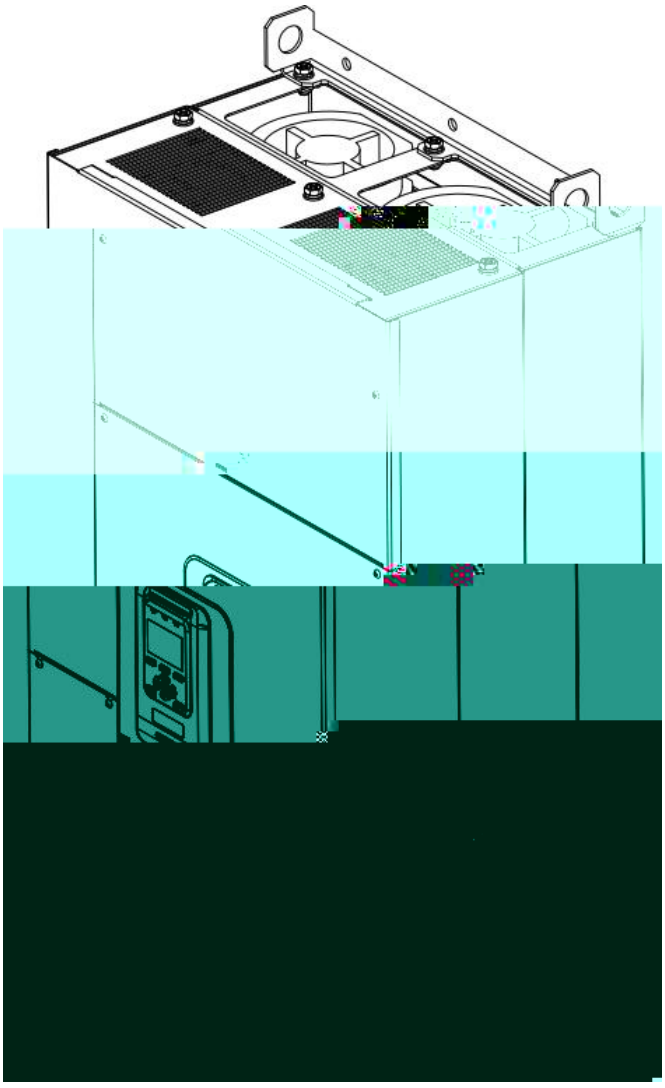
GUIDE



HF620

1.
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10.5 182

1.

1.1

(1)在通电十分钟后或断电后一段时间内禁止用手触摸散热器，以防灼伤；

(1)变频器禁止安装在易燃物上；

(2)本系列变频器不适用于易燃易爆环境，若有需要，请向厂家订购特种变频器

1

RCD

RCM RCD

RCM

B RCD RCD

RCD RCD

2

500V

5MΩ

3

1.2

(1)

(2)

(3)

(4)

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

1.3

2.

2.1

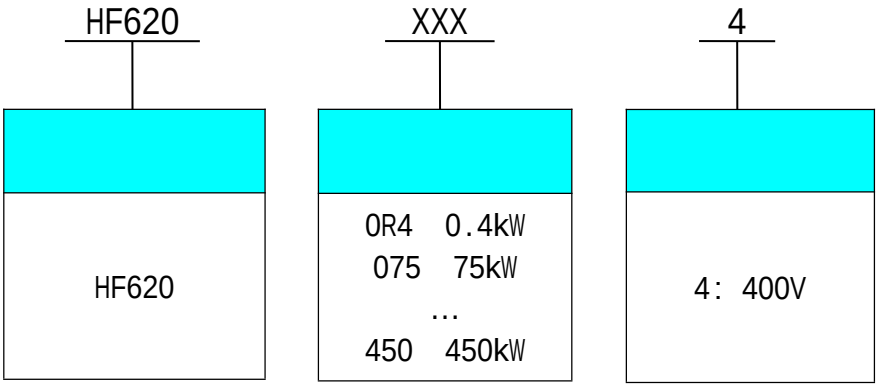
1.

2.

3.

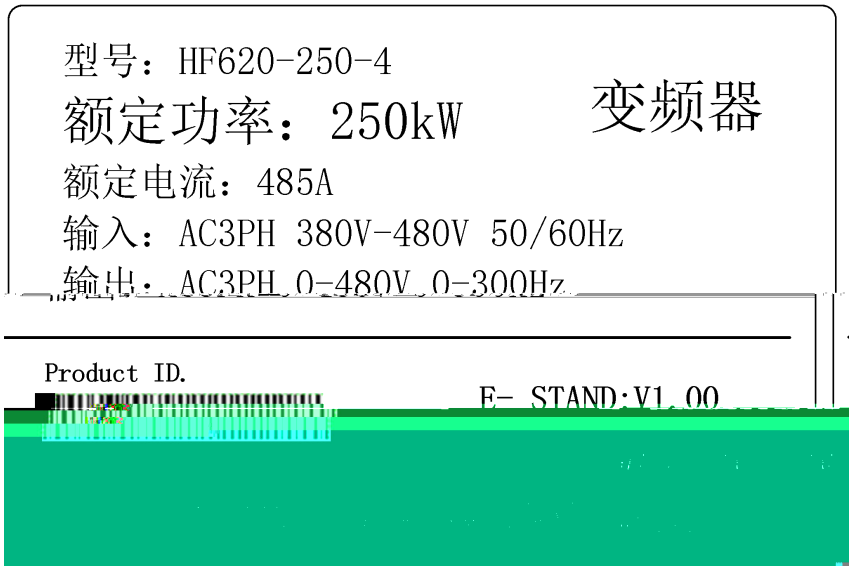
4.

2.2



2-1

HF620 2-2 250kW



2-2

HF620-250-4 HF620 250kW 400V

AC

3PH

380V-480V 50/60Hz

0-480V 0-300Hz

2.3

2-3 HF620

	[A]	[kW]	[A]	[kW]		(kg)
HF620-0R4-4	1.8	0.4	--	--	I1	3
HF620-0R7-4	3.3	0.75	1.8	0.4		
HF620-1R5-4	4.8	1.5	3.3	0.75		
HF620-2R2-4	5.7	2.2	4.8	1.5		
HF620-3R7-4	10.2	3.7	5.7	2.2	I2	3.5
HF620-5R5-4	15	5.5	10.2	3.7		
HF620-7R5-4	18	7.5	15	5.5		
HF620-011-4	24	11	18	7.5		
HF620-015-4	32	15	24	11	I3	4.5
HF620-018-4	41	18.5	32	15		

HF620-022-4	47	22	41	18.5	I4	10.5
HF620-030-4	65	30	47	22		
HF620-037-4	75	37	65	30		
HF620-045-4	94	45	75	37	I5	35
HF620-055-4	115	55	94	45		
HF620-075-4	155	75	115	55		
HF620-090-4	188	90	155	75	I6	52
HF620-110-4	215	110	188	90		
HF620-132-4	265	132	215	110	I7	108.5
HF620-160-4	330	160	265	132		
HF620-185-4	365	185	330	160		
HF620-220-4	438	220	365	185	I8	146
HF620-250-4	485	250	438	220		
HF620-280-4	545	280	485	250		
HF620-315-4	610	315	545	280		
HF620-355-4	668	355	610	315	I9	210
HF620-400-4	720	400	668	355		
HF620-450-4	820	450	720	400		

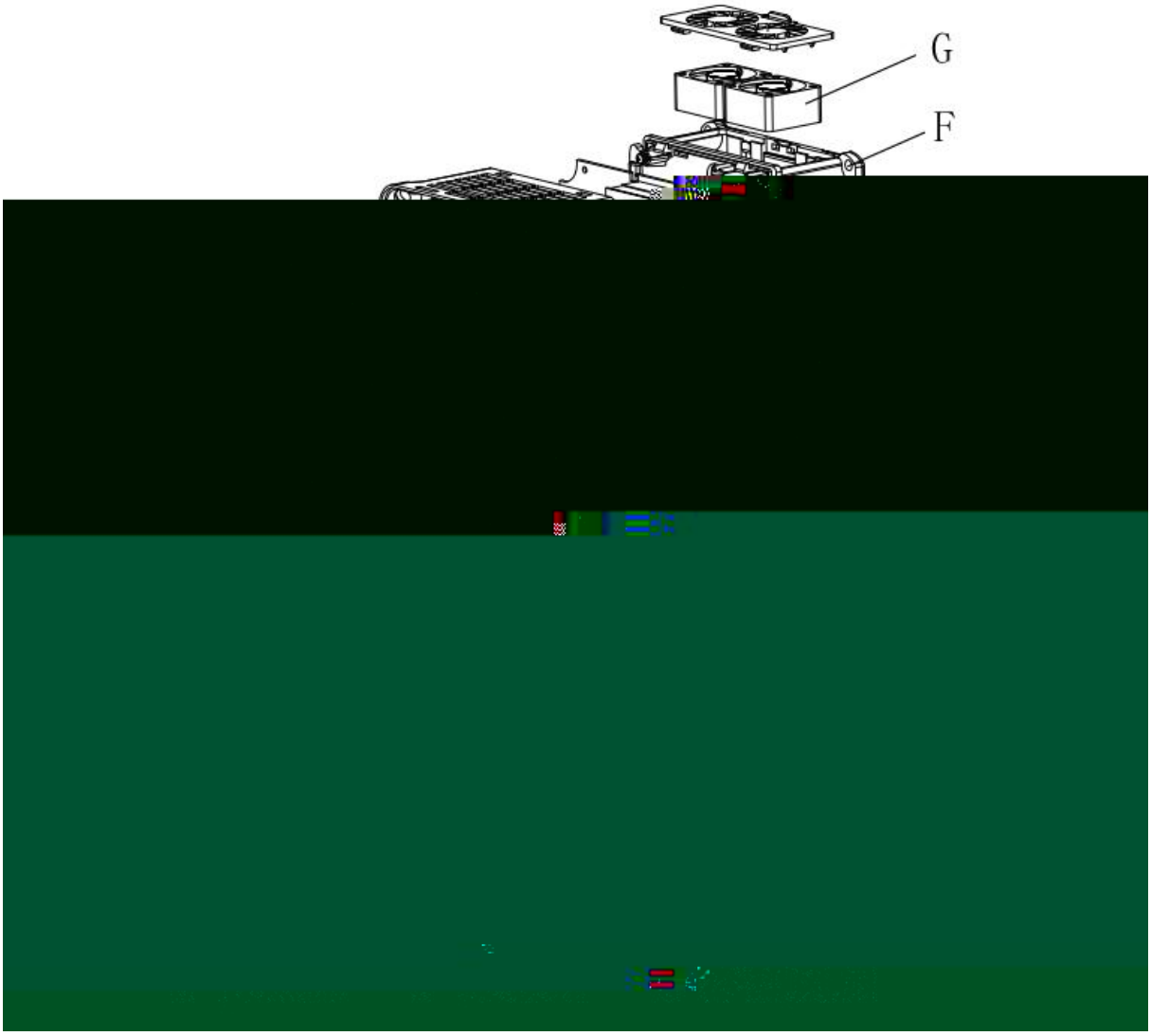
120% 5 1

150% 5 1

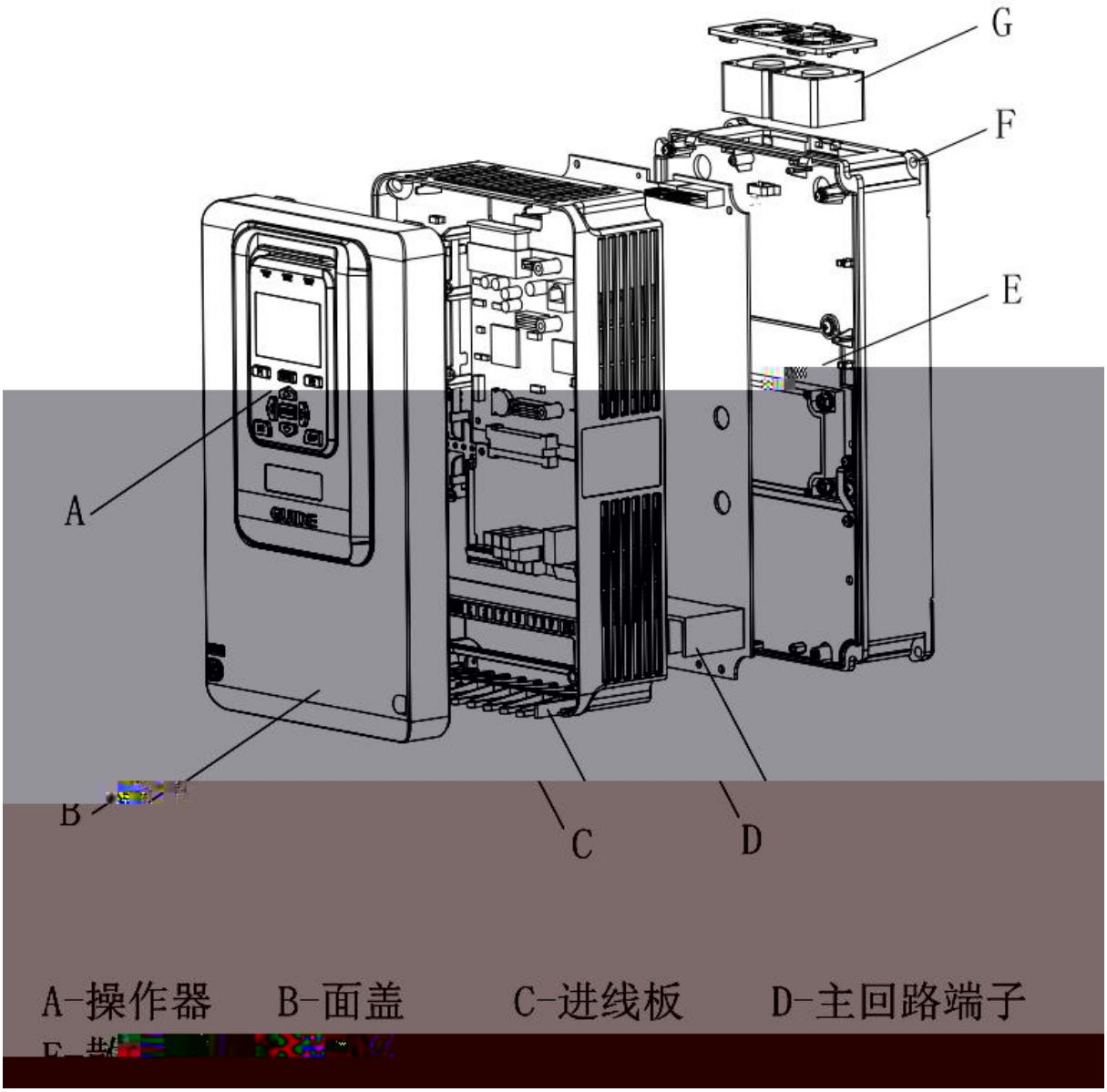
2.4

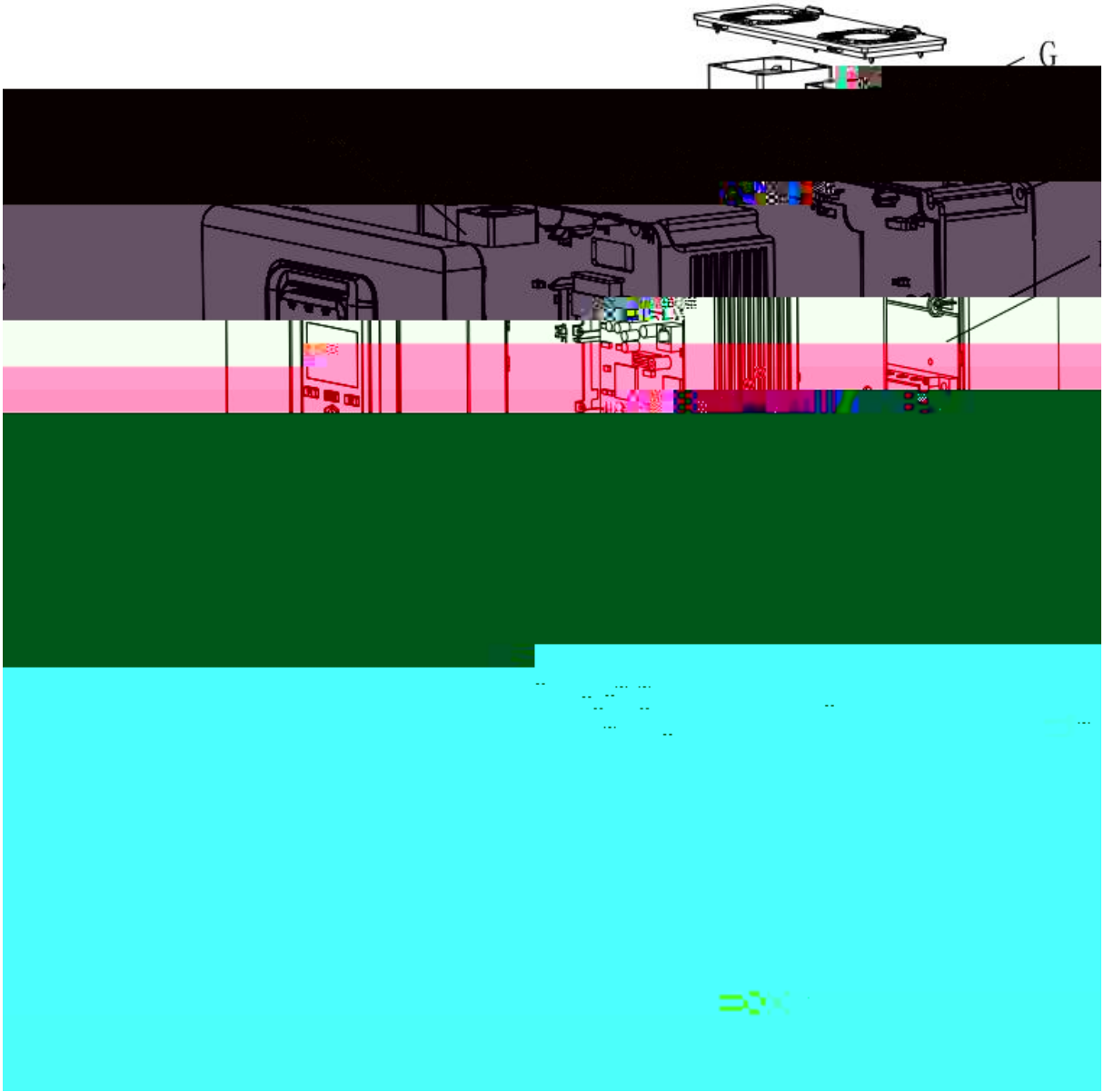
HF620

HF620-0R4-4　HF620-011-4



HF620-015-4　HF620-018-4

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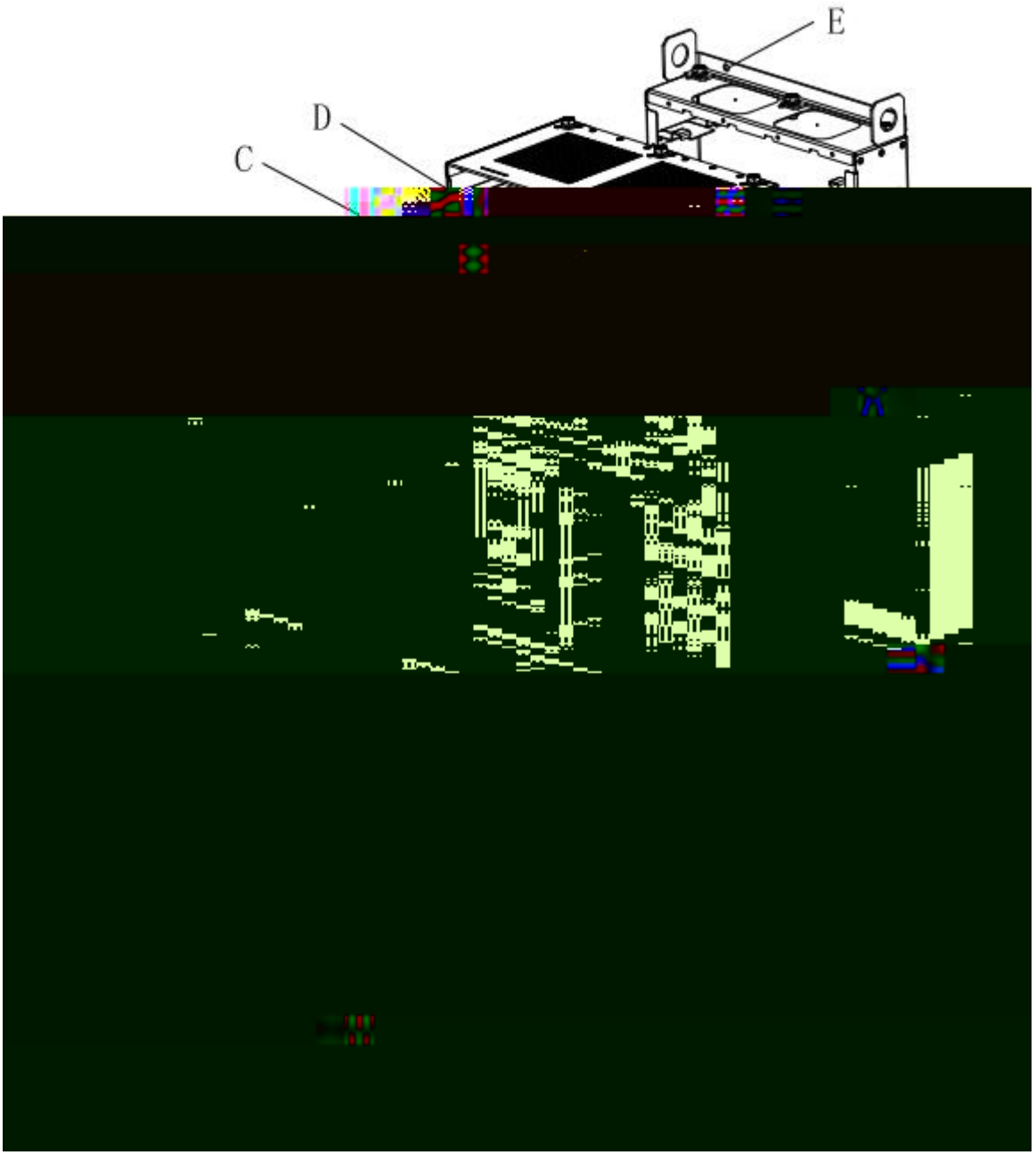
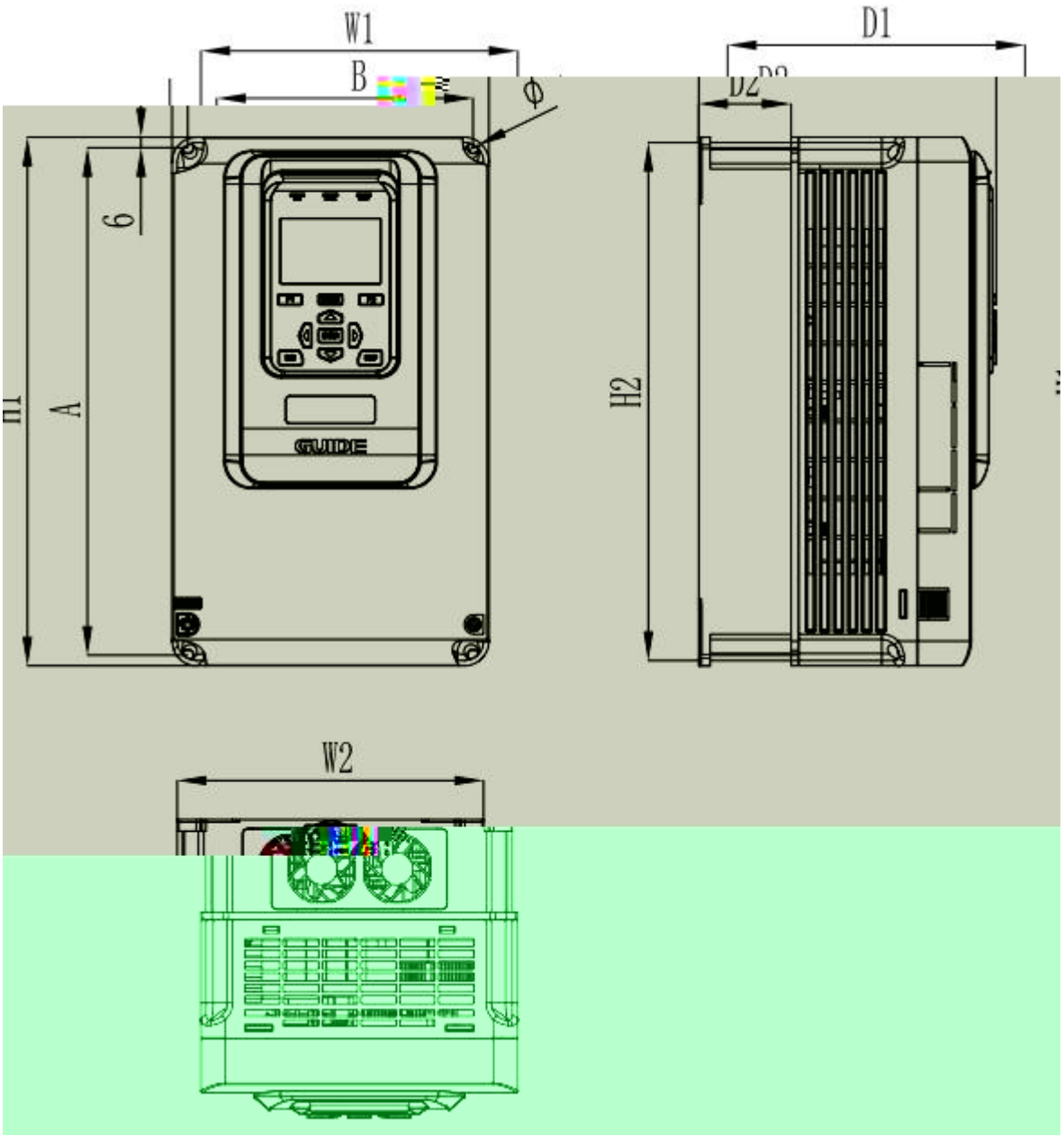
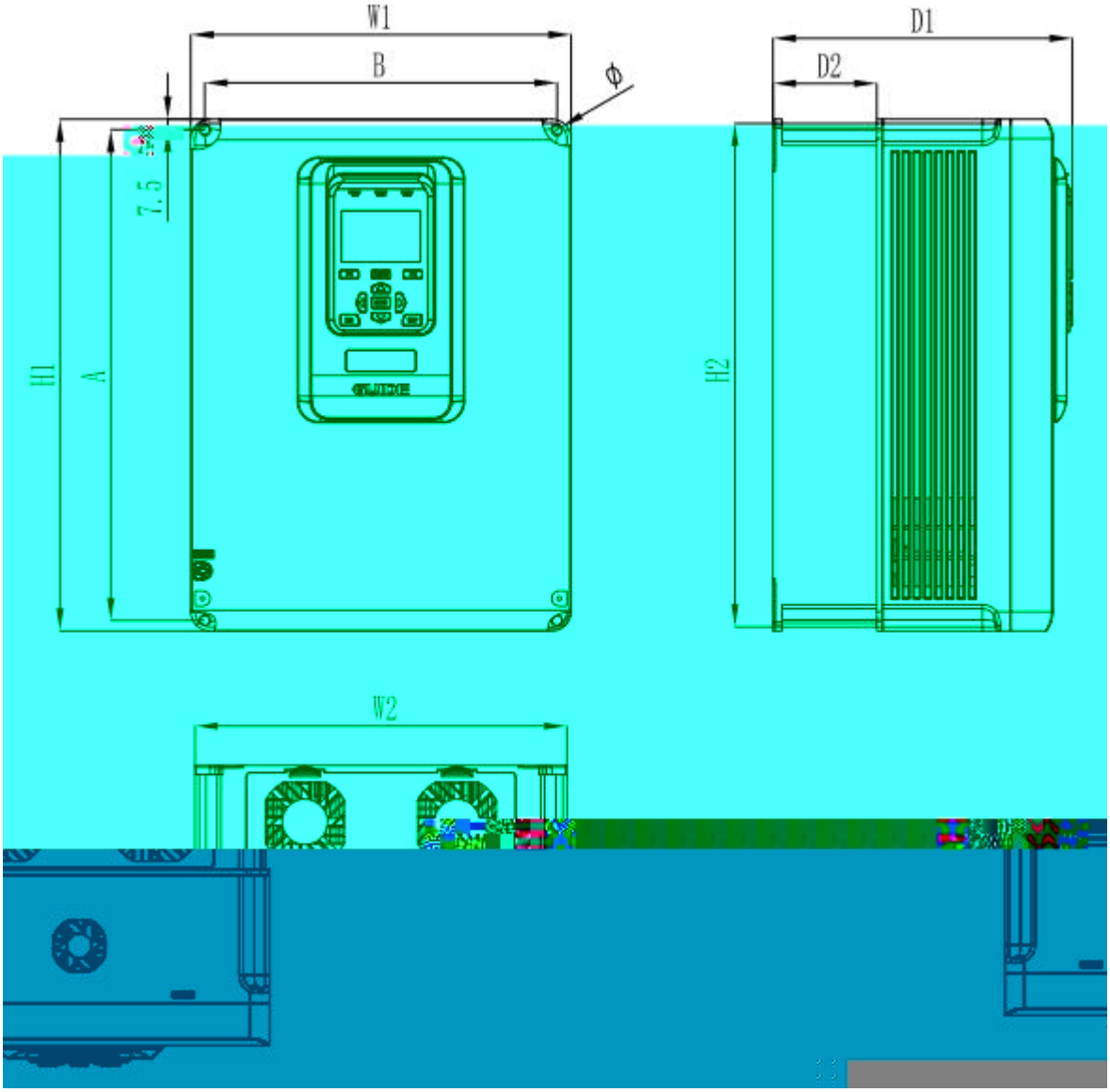
HF620-045-4 HF620-075-4



2.5



I1-I3



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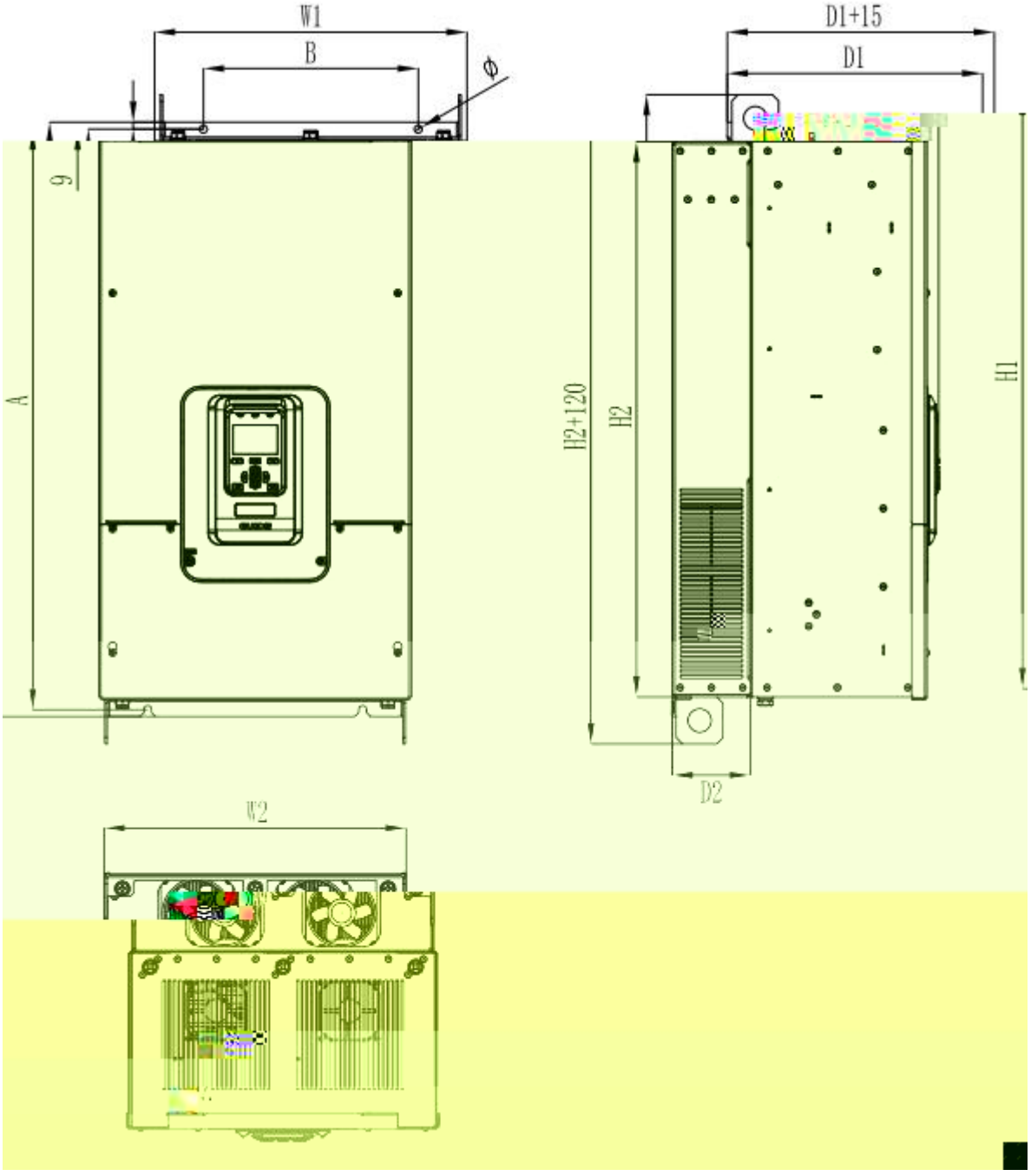
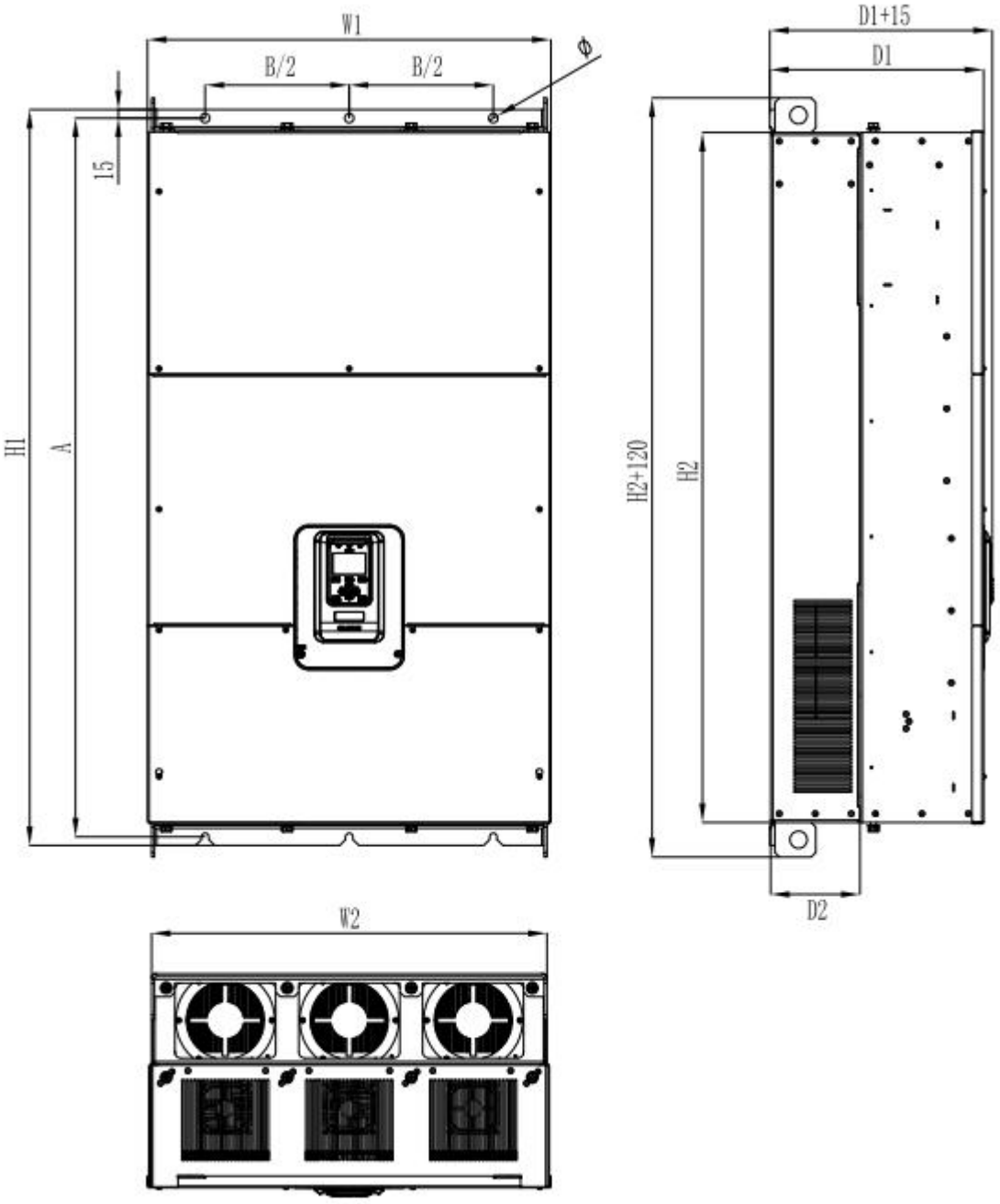


I5-I6



17-19

		(mm)						mm			8.8	Kg
		H1	H2	W1	W2	D1	D2	A	B	φ	M	
I1	0.4KW	260	254	140	134	170	52.5	248	122	4-φ6	4-M5	3
	0.75KW											
	1.5KW											
	2.2KW											
I2	3.7KW	260	254	140	134	170	52.5	248	122	4-φ6	4-M5	3.5
	5.5 KW											
	7.5 KW											
	11 KW											
I3	15 KW	300	294	180	174	170	52.5	288	162	4-φ6	4-M5	4.5
	18.5KW											
I4	22 KW	370	364	275	269	215	75	355	255	4-φ7	4-M6	10.5
	30 KW											
	37 KW											
I5	45 KW	600	565	340	326	282	110	585	225	2-φ9	4-M8	35
	55 KW											
	75 KW											
I6	90 KW	760	710	400	386	327	100	742	275	2-φ9	4-M8	52
	110 KW											
I7	132 KW	930	850	490	476	335	155	900	350	3-φ13	6-M12	108.5
	160 KW											
	185 KW											
I8	220 KW	1140	1060	500	486	355	155	1110	350	3-φ13	6-M12	146
	250 KW											
	280 KW											
	315 KW											
I9	355 KW	1275	1195	700	686	370	155	1245	500	3-φ15	6-M14	210
	400 KW											
	450 KW											

2.6

380V 480V

50/60Hz

-15% +10%

fLN ± 2 ± 4

≤ 2 fLN/s

0

1

0 300Hz

1kHz 10kHz

0.01Hz x0.1%

(VC) (SVC) V/F

V/F

PG PG

300Hz

0Hz/200%(VC SVC) 0.8Hz/150%(V/F)

1:500(SVC) 1:1000(VC)

<5ms(SVC) <5ms(VC)

±5%(SVC) ±3%(VC)

±0.02% (VC) ±0.2% (SVC) ±0.5% (V/F)

5 120% 1 150% 5

PID

DP CAN Modbus Ethernet Profinet

PID

/ /

		/ /
		8 2 -10 +10V 0mA/4mA 20mA
		5 3 2 2 0 +10V 0mA/4mA 20mA
	LED	
		1000 1000 100 1% 3000
		-10 +40 40 1 1% 50 -10
		95%RH
		-20 +60 10-30
		>0.85 >0.999
		98%
		3 J14 IO J15 IO J13 PG
		IP20
		2
		≤80db

2.7

(1) 200%

(2) 50% HF620

(3) HF620

2.8

GDHF-DP03	GDHF-DP03 Profibus HF620
GDHF-PGC2 PG	GDHF-PGC2 PG HF620 15V
GDHF-PGD2 PG	GDHF-PGD2 PG HF620 15V
GDHF-MB02	GDHF-MB02 MODBUS HF620
GDHF-PN02	PROFINET TCP/IP IT GDHF-PN02 PROFINET HF620
GDHF-K6E1	GDHF-K6E1 LED HF620

1	BU055-4	45KW-75KW
	BU090-4	90KW-110KW
	BU110-4	132KW
	BU160-4	160KW-185KW
2	DL055-4	45KW-75KW
	DL090-4	90KW-110KW
	DL160-4	132KW-185KW
	DL250-4	220KW-280KW
	DL400-4	315KW-450KW

1 HF620 45KW-185KW
220KW

2 HF620 45KW
HF620

2.9

2.8

400V 132KW

HF620-132-4 + BU110-4 + DL160-4

3.

1. / “ ”

/

2.

3.

- R S T
- U V W
- P1 P N

4. 10

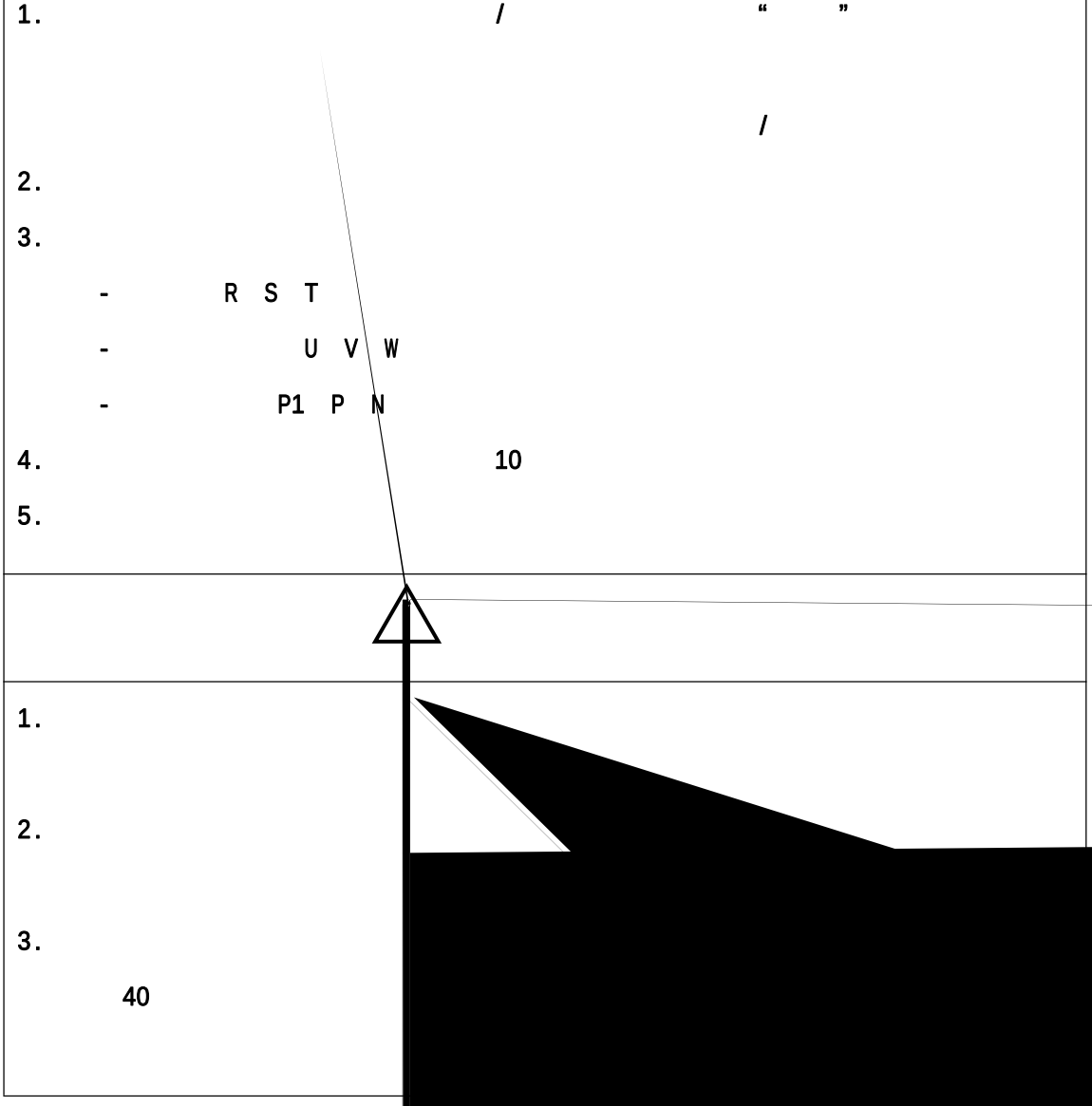
5.

1.

2.

3.

40



3.1

10cm
5cm

6

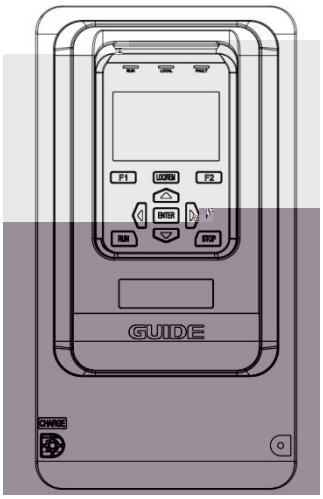
-10 +40
40
1 1%
-20 +60
50
1 /
-20 +60

A

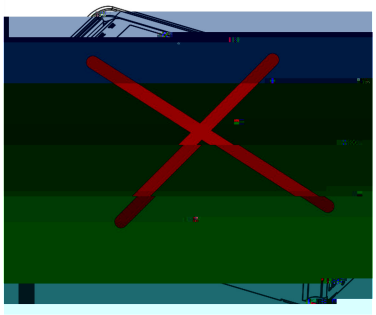
0

3.2

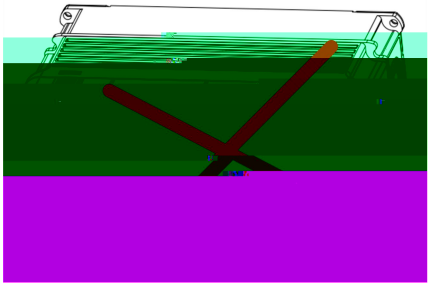
3.2.1



OK



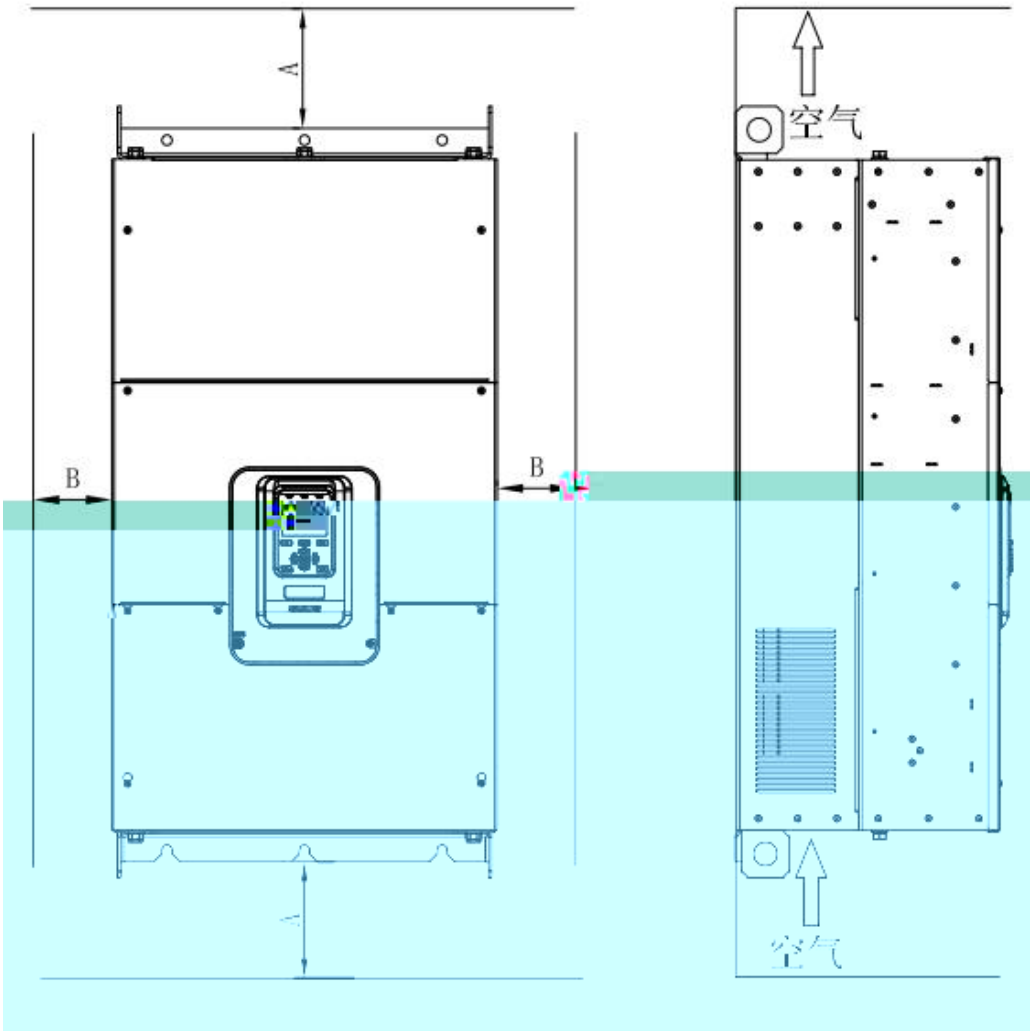
NG



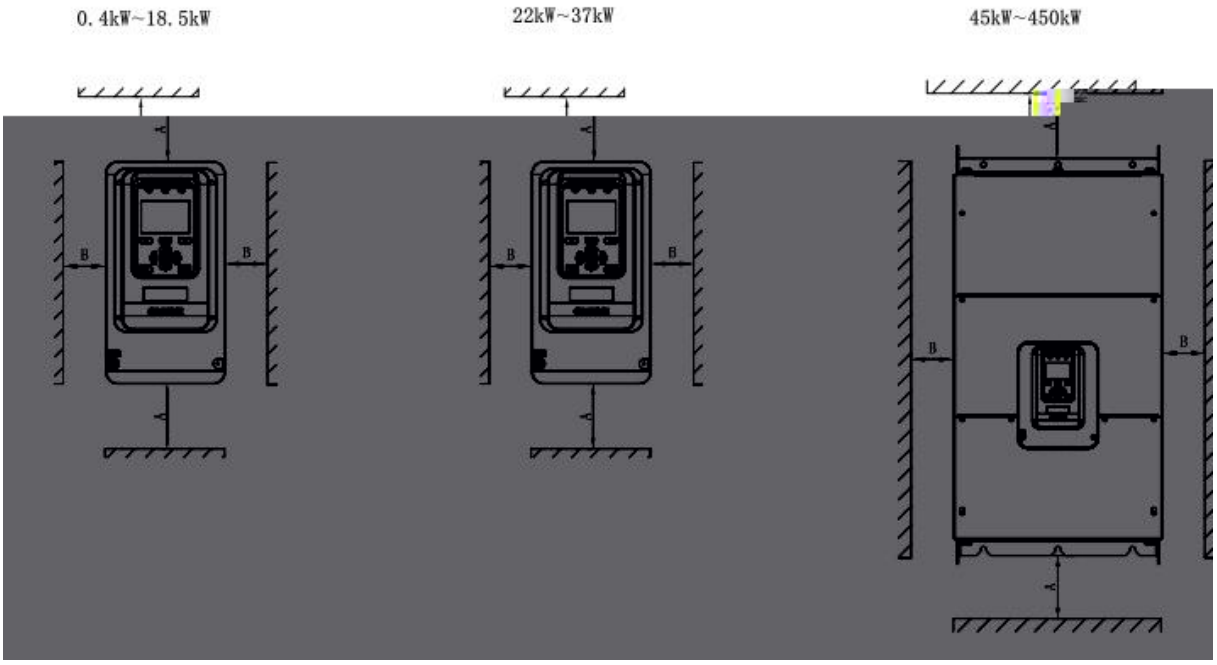
NG

3.2.2

1

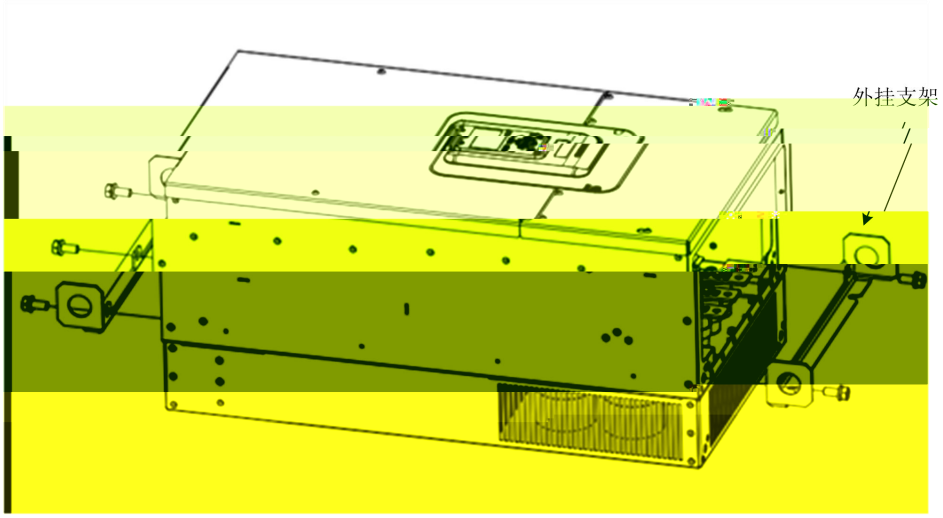


3-1

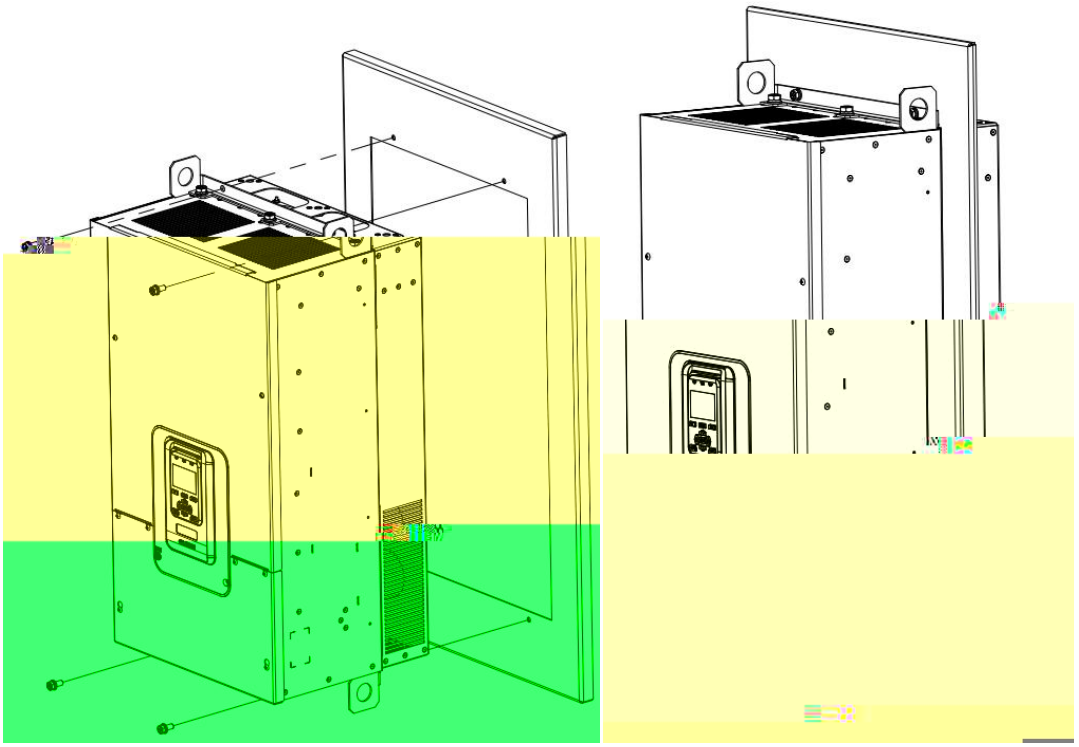


0.4kW~18.5kW	A ≥ 100mm	B ≥ 40mm
22kW~37kW	A ≥ 200mm	B ≥ 50mm
45kW~450kW	A ≥ 300mm	B ≥ 50mm

2



3-2



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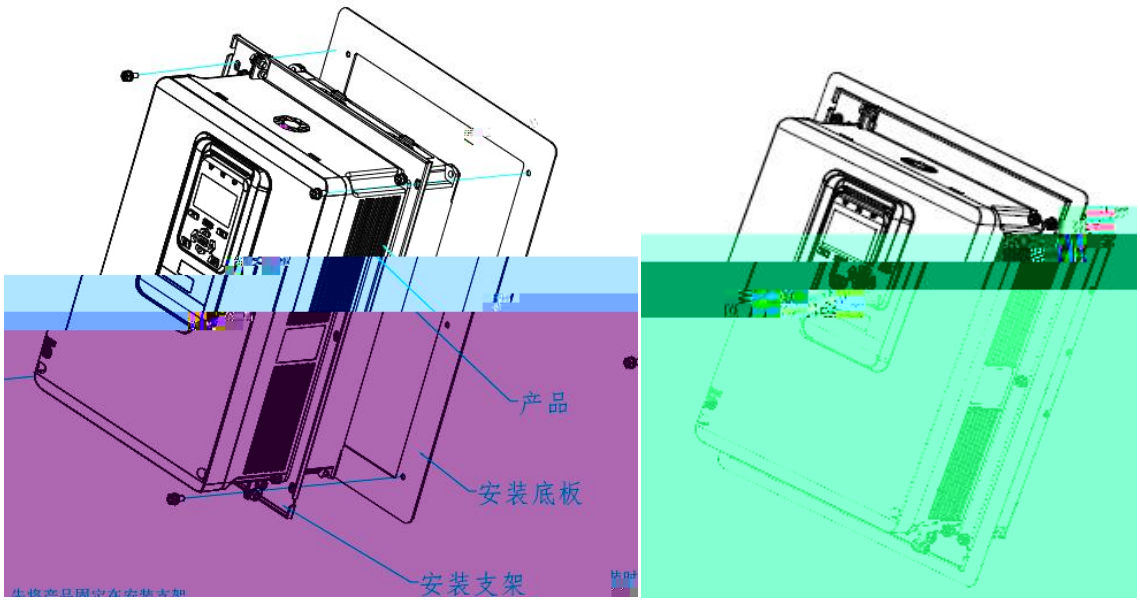


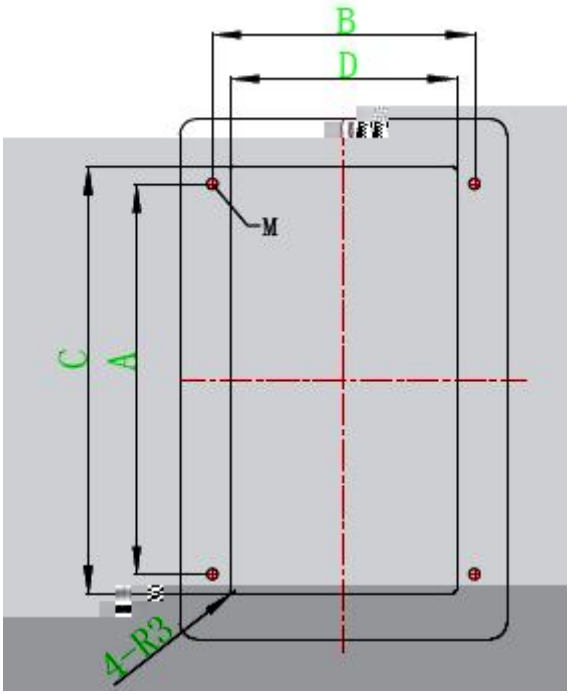
3-4

1

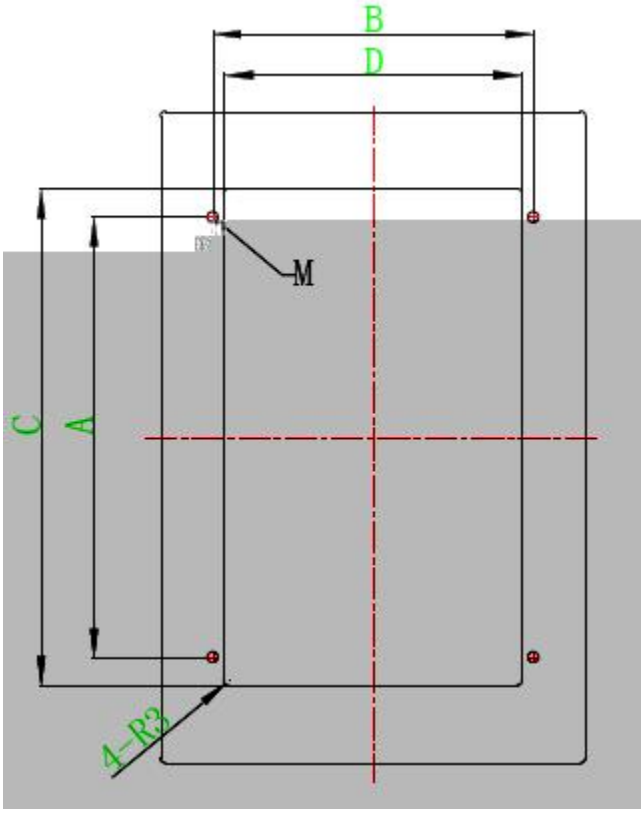
2

3

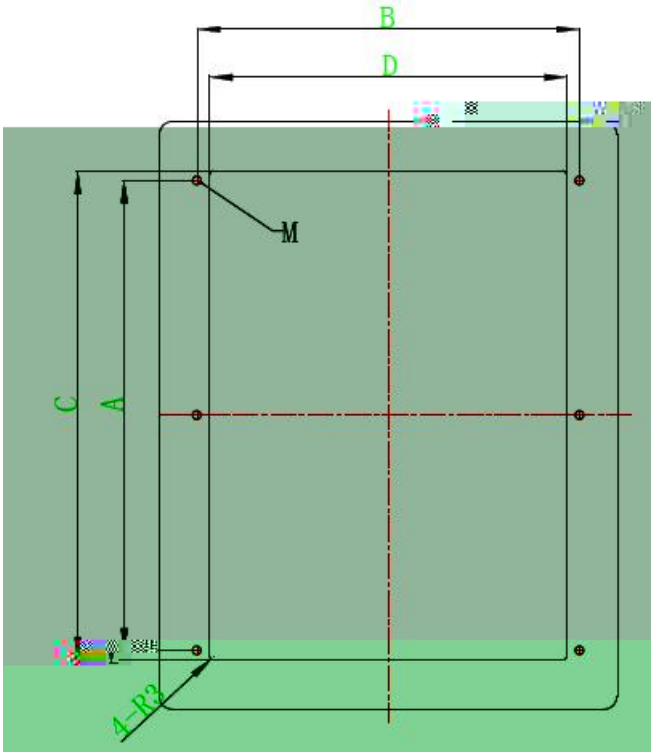
3



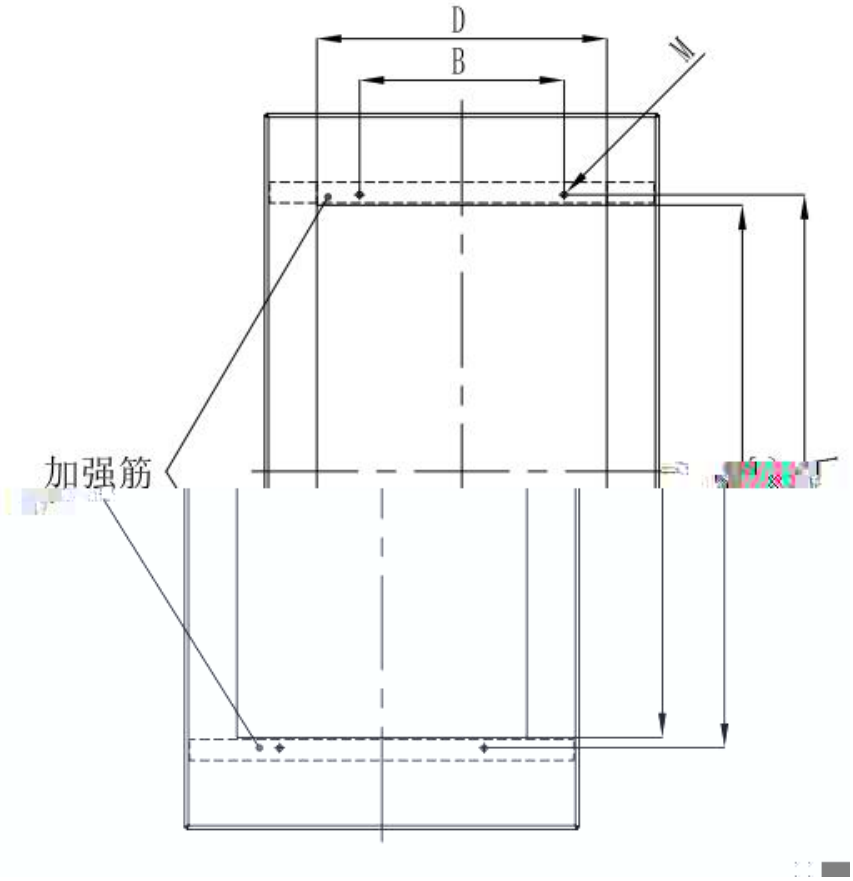
3-5 I1-I2



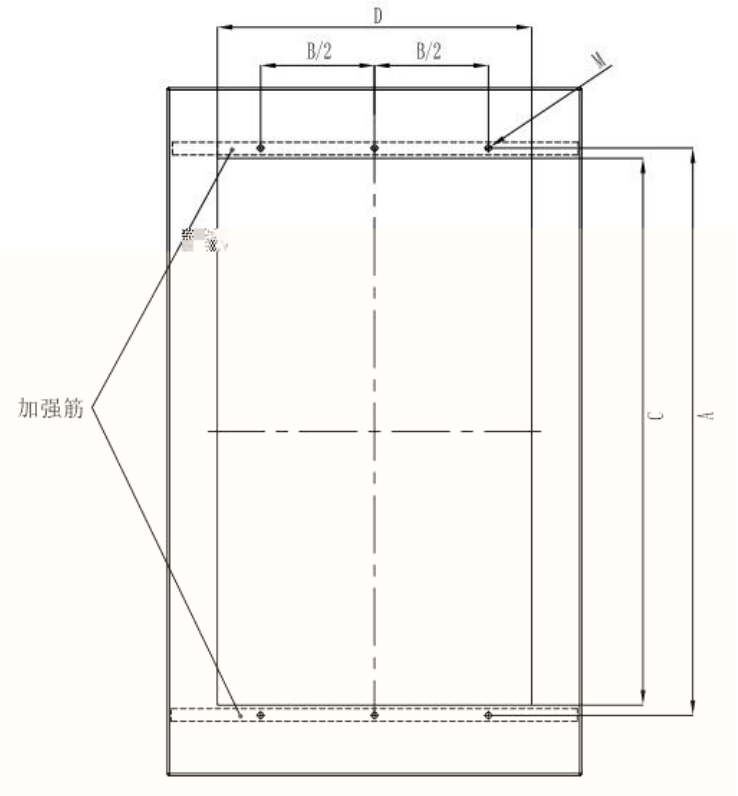
3-6 I3



3-7 I4



3-8 I5-I6



3-9 I7-I9

	(mm)		(mm)		
	A	B	C	D	
I1	240	160	262.5	138	4-M6
I2	240	160	262.5	138	4-M6
I3	270	197	304	182	4-M6
I4	360	292	374	273	6-M6
I5	585	275	570	330	4-M6
I6	742	275	715	390	4-M8
I7	900	350	855	480	6-M12

I8	1110	350	1065	490	6-M12
I9	1245	500	1200	690	6-M14

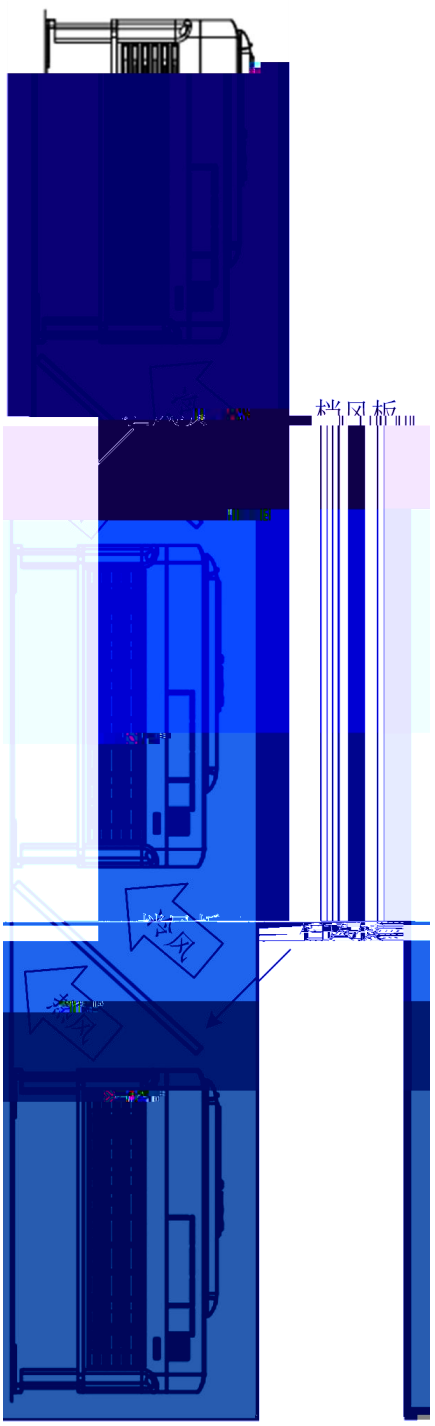
3.2.3

1

100mm

2

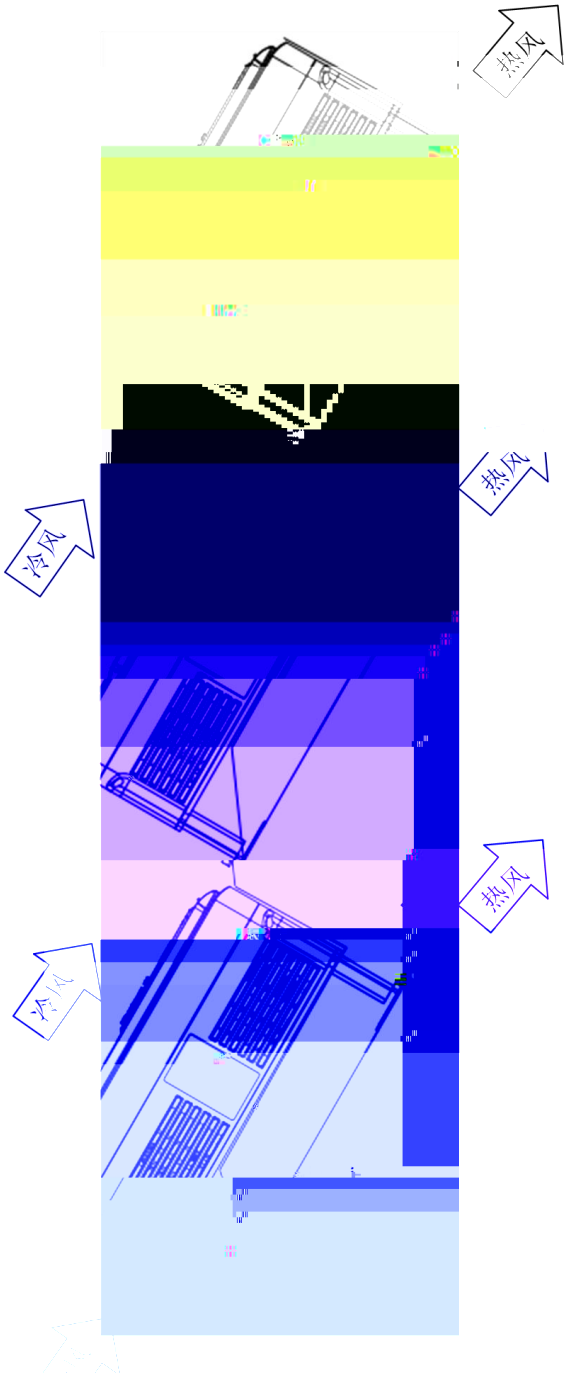
3-10



3-10

3

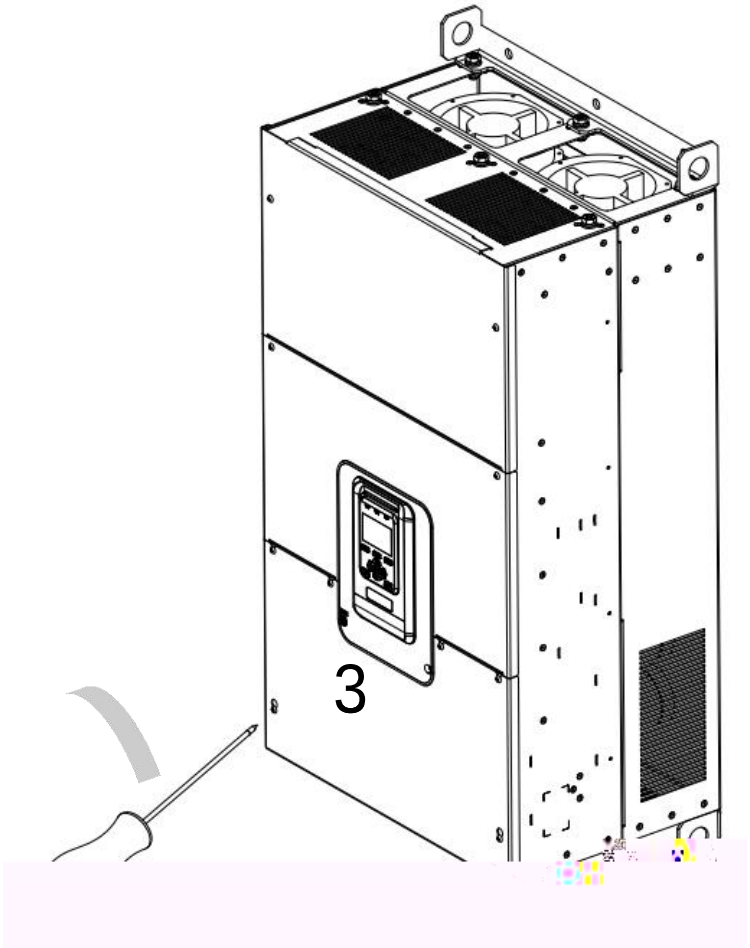
3-11



3-11

3.3

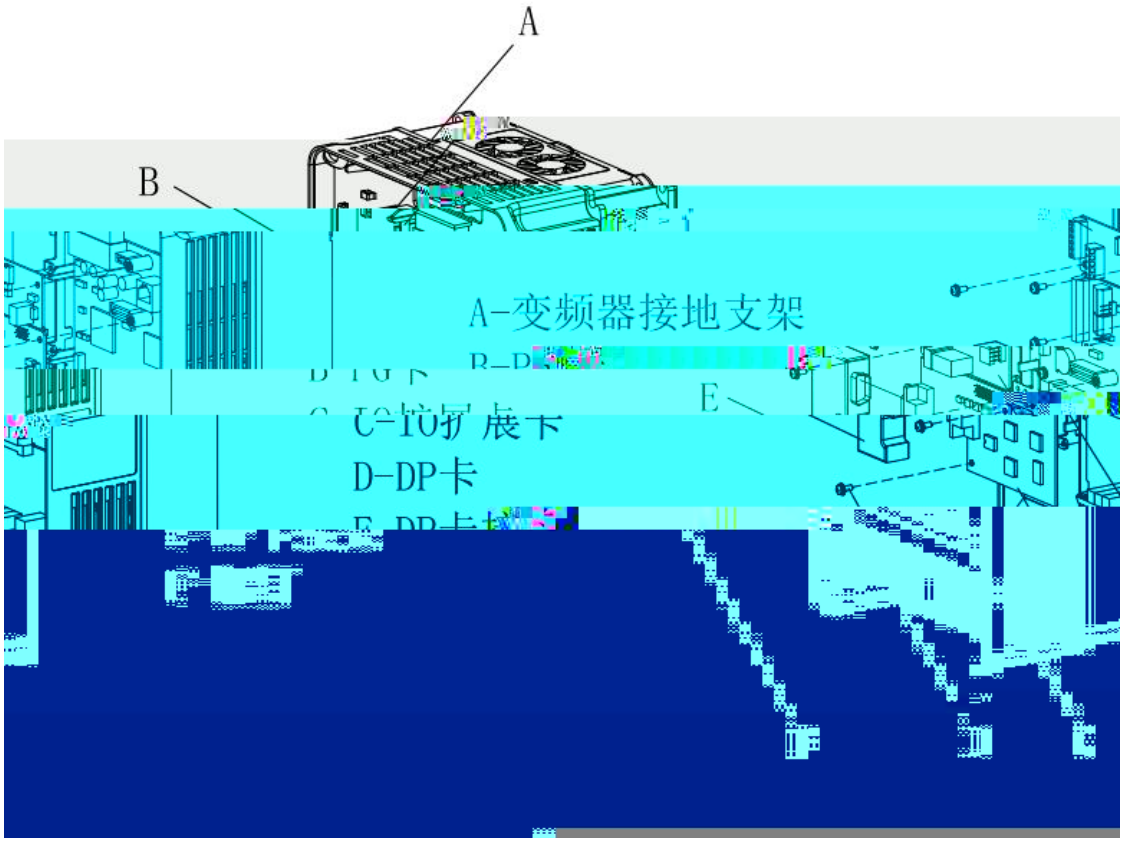
1	1	4	5mm
2	2		
3	3		



3-12

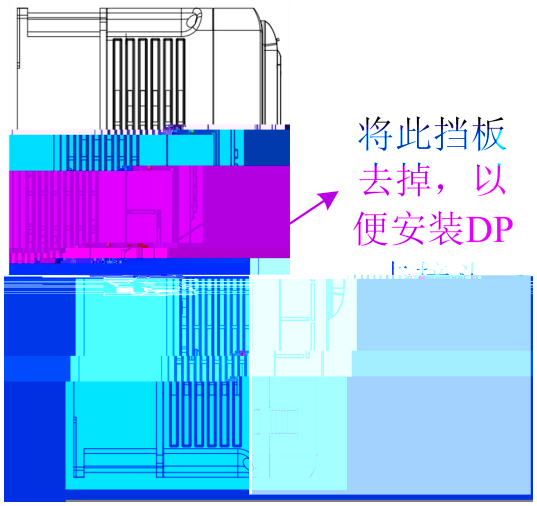
3.4

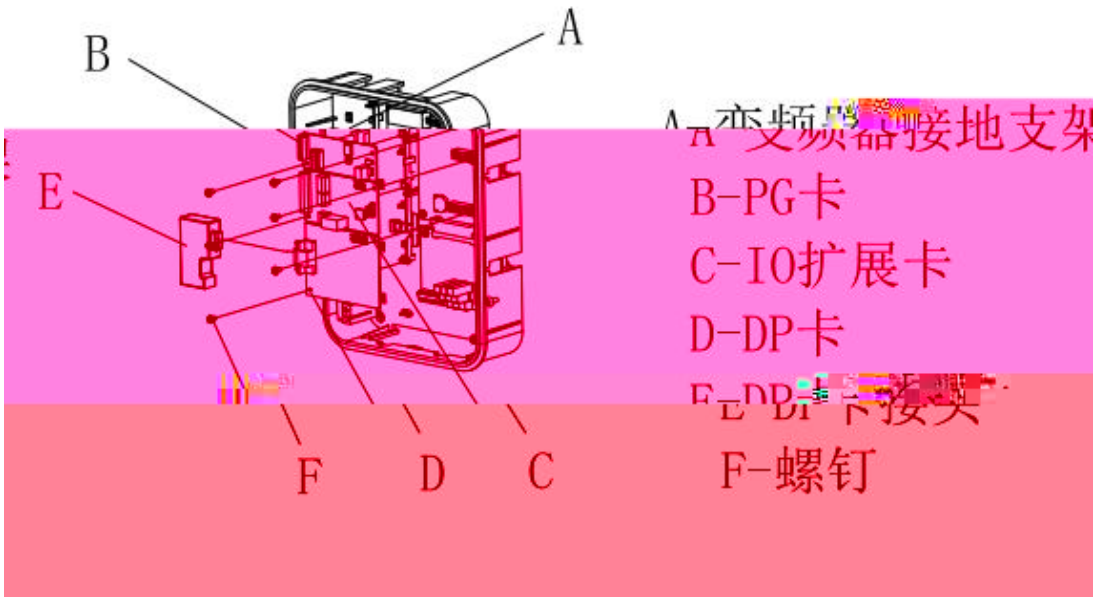
HF620



37kW

18.5KW DP





37KW

3.5 PGC2

GDHF-PGC2 PG 11

A+	A-	B+	B-	Z+	Z-
+15V	GND	AO	GND	BO	

+15V,GND		…	15V ± 5%	300mA
A+,A- B+,B- Z+,Z-		0-80kHz	0-15V	…
AO,GND BO		0-50kHz	0-24V	…

PE PE

PGC2

1 PG

2 PG

3 PE

4 PG A- B- Z- GND

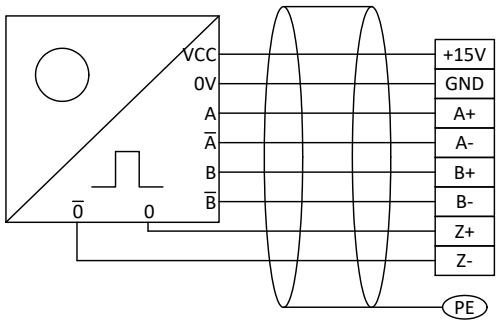
5 PGC2 15V RS-422

PGC2

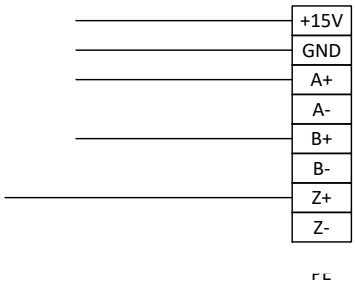
15V

1

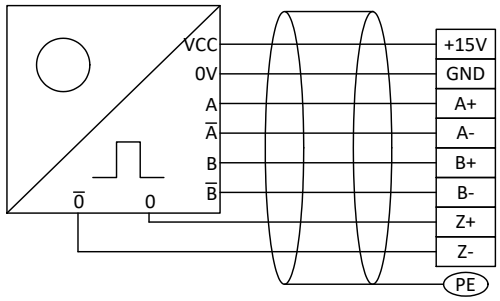
a

		
		HLE45-1024L-6F.AC
		RHI90N-ONAK1R61N-1024
		EC120P45-H6PR-1024

b



4 15V

		
		HLE-45-600L-6LY.AC
		RHI58N-0BAK1R6XN-1024
		EC120P45-L6TR-1024

3.6 PGD2

GDHF-PGD2 PG 10

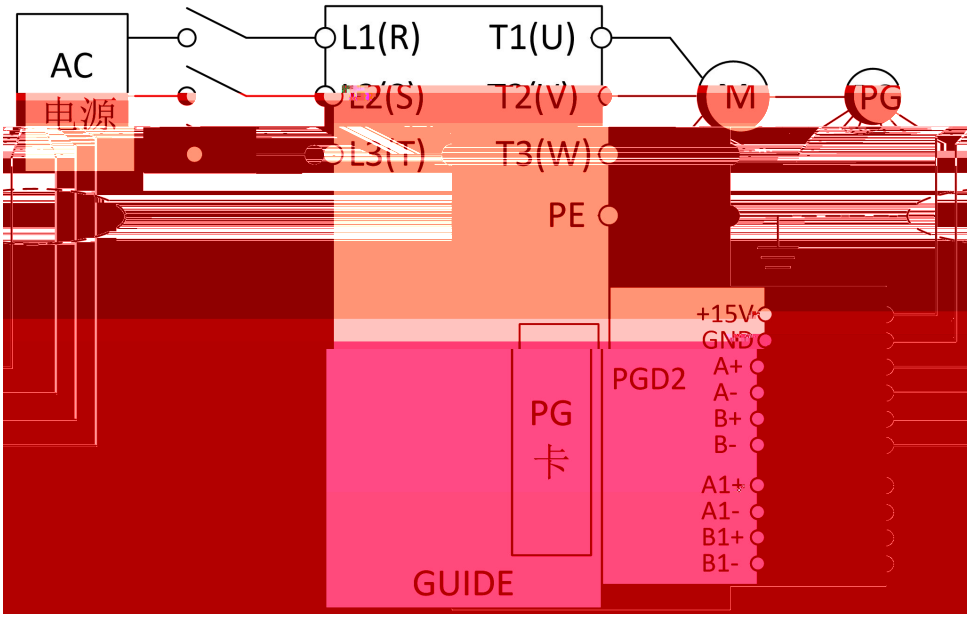
B-	B+	A-	A+	GND	+15V

B1-	B1+	A1-	A1+

+15V,GND		…	15V ± 5%	300mA
A+,A- B+,B-		0-80kHz	0-15V	…
A1+,A1- B1+,B1-		0-80kHz	0-15V	…

PE PE

PGD2



1 PG

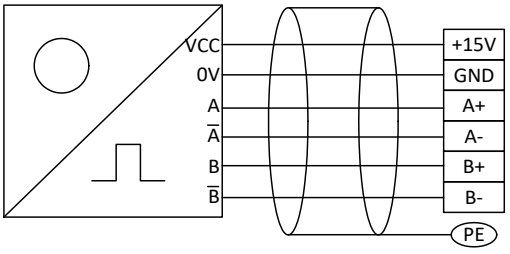
2 PG

3 PE

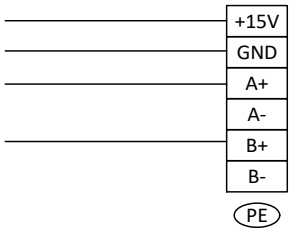
PGD2

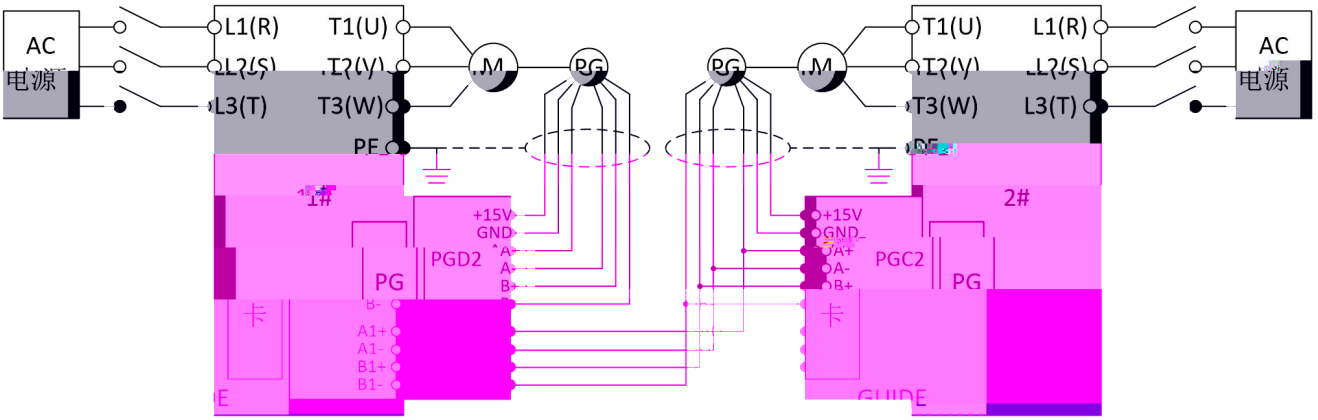
1

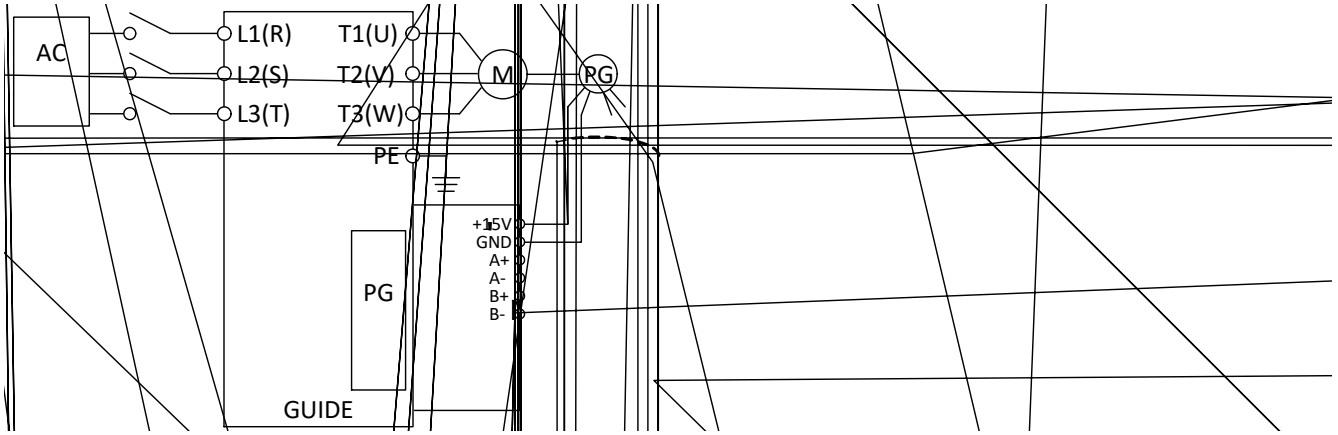
a

		
		HLE45-1024L-6F.AC
		RHI90N-0NAK1R61N-1024
		EC120P45-H6PR-1024

b




AC
电源
L1(R)
L2(S)
L3(T)
T1(U)
T2(V)
T3(W)
PE
M
PG
1#
2#
+15V
GND
A+
A-
B+
B-
PGD2
PGC2
PG
A1+
A1-
B1+
B1-
GUIDE


AC
L1(R)
L2(S)
L3(T)
T1(U)
T2(V)
T3(W)
PE
M
PG
+15V
GND
A+
A-
B+
B-
GUIDE

4.

4

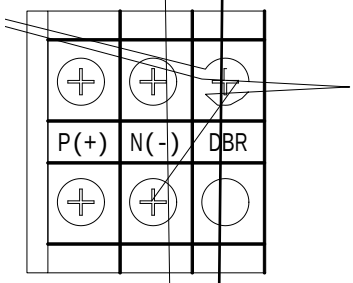
14

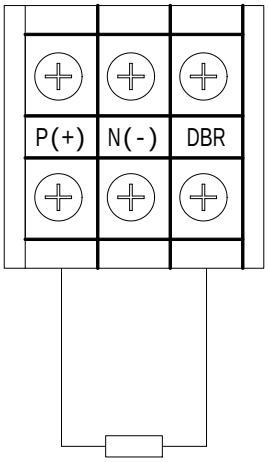
15 30 m

4.2

1

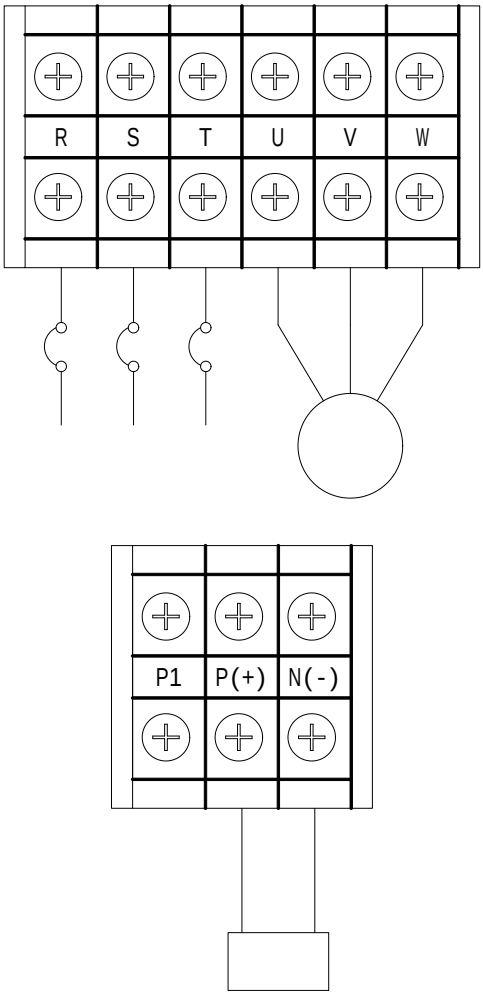
0.4kW~75kW +





(3)

220kW~450kW



I1	0.4KW	M4	
	0.75KW		
	1.5KW		
	2.2KW		
I2	3.7KW		
	5.5 KW		
	7.5 KW		
	11 KW		
I3	15 KW	M5	
	18.5 KW		
I4	22 KW	M6	
	30 KW		
	37 KW		
I5	45 KW	M8	+
	55 KW		
	75 KW		
I6	90 KW		
	110 KW		
I7	132 KW	M10	
	160 KW		
	185 KW		
I8	220 KW		
	250 KW		
	280 KW		
	315 KW		
I9	355 KW	M12	
	400 KW		
	450 KW		

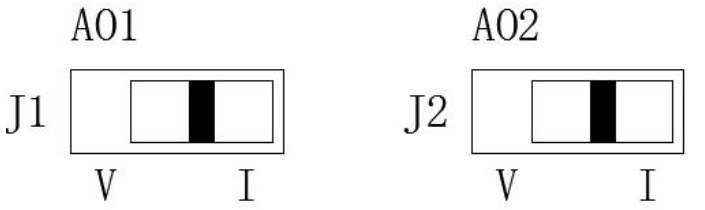
P(+)	
P1	45KW
N(-)	
R S T	
U V W	
DBR	185KW
PE	

4.3

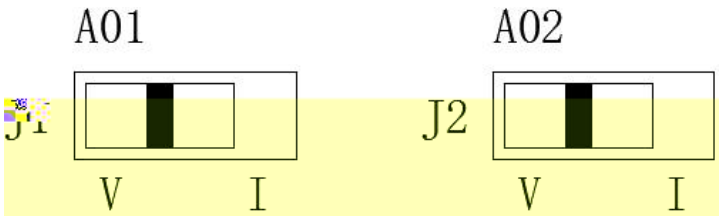
1

	1	2	3	4	5	6	7	8
	+10V	GND	AI1+	AI1-	AI2+	AI2-	AO1	AO2
	9	10	11	12	13	14	15	16
	DI1	DI2	DI3	DI4	DI5	DI6	DI7	DI8
	17	18	19	20	21	22	23	24
	PW	COM	PW	+24V	+24V	DO1	+24V	DO2
	25	26	27	28	29	30	31	
	+24V	DO3	DO4A	DO4C	DO4B	DO5A	DO5C	

2



a.

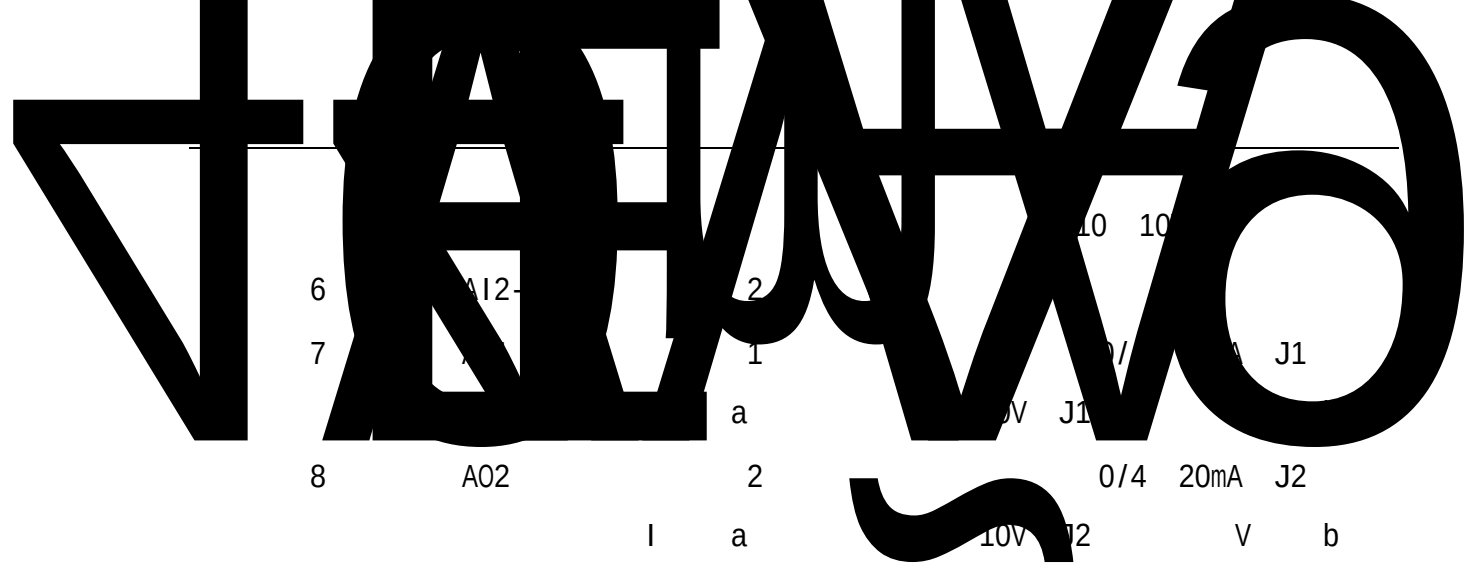


b.

3

1 +10V 10V

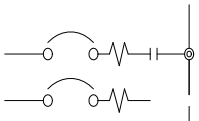
2 GND



					10	10	
6		AI2-		2			
7				1		0/	A J1
				a		V J1	
8	AO2			2		0/4	20mA J2
			I	a		10V	J2 V b
9	DI1			1			
10	DI2			2			
11	DI3			3			
12	DI4			4			
13	DI5			5			
14	DI6			6			
15	DI7			7			
16	DI8			8			
17	PW						
18	COM	24V					
19	PW						
20	+24V	24V		+			
21	+24V	24V					
22	DO1			1		DC24V 50mA	
23	+24V	24V					
24	DO2			2		DC24V 50mA	
25	+24V	24V					
26	DO3			3		DC24V 50mA	
27	DO4A			4			^

29	DO4B		4
		250VAC 3A COS =0.4	
	30VDC 1A		
30	DO5A		5
		250VAC 2A COS =0.4	
	30VDC 1A		
31	DO5C		5

4.4



4.

4.7

	A	/ mm² CEFR 40%	A (AC-3)
HF620-0R4-4	1.8	2.5	9
HF620-0R7-4	3.3	2.5	9
HF620-1R5-4	4.8	2.5	9
HF620-2R2-4	5.7	2.5	9
HF620-3R7-4	10.2	2.5	12
HF620-5R5-4	15	2.5	18
HF620-7R5-4	18	2.5	18
HF620-011-4	24	2.5	25
HF620-015-4	32	4	32
HF620-018-4	41	4	50
HF620-022-4	47	6	50
HF620-030-4	65	10	65
HF620-037-4	75	10	80
HF620-045-4	94	16	95
HF620-055-4	115	16	115
HF620-075-4	155	25	150
HF620-090-4	188	35	205
HF620-110-4	215	50	245
HF620-132-4	265	70	300
HF620-160-4	330	95	410
HF620-185-4	365	95	410
HF620-220-4	438	120	475
HF620-250-4	485	150	620
HF620-280-4	545	70*2	620
HF620-315-4	610	95*2	620
HF620-355-4	668	120*2	2*410
HF620-400-4	720	120*2	2*410
HF620-450-4	820	150*2	2*475

4.8

		2%		1%	
HF620-0R4-4	0.4 kW	2.2A	6.4 mH	2.2A	3.2mH
HF620-0R7-4	0.7 kW	4A	3.5 mH	4A	1.8 mH
HF620-1R5-4	1.5 kW	6A	2.4 mH	6A	1.2 mH
HF620-2R2-4	2.2 kW	7A	2.0 mH	7A	1.0 mH
HF620-3R7-4	3.7 kW	12A	1.1 mH	12A	0.6 mH
HF620-5R5-4	5.5kW	19A	743uH	19A	371 uH
HF620-7R5-4	7.5kW	22A	644 uH	22A	322 uH
HF620-011-4	11kW	28A	493 uH	28A	247 uH
HF620-015-4	15kW	38A	368 uH	38A	184 uH
HF620-018-4	18.5kW	49A	283 uH	49A	141 uH
HF620-022-4	22kW	57A	247 uH	57A	123 uH
HF620-030-4	30kW	76A	184 uH	76A	92 uH
HF620-037-4	37kW	88A	159 uH	88A	79 uH
HF620-045-4	45kW	113A	123 uH	113A	62 uH
HF620-055-4	55kW	131A	106 uH	131A	53 uH
HF620-075-4	75kW	178A	78 uH	178A	39 uH
HF620-090-4	90kW	227A	62 uH	227A	31 uH
HF620-110-4	110kW	259A	54 uH	259A	27 uH
HF620-132-4	132kW	320A	44 uH	320A	22 uH
HF620-160-4	160kW	398A	35 uH	398A	18 uH

HF620-185-4	185kW	446A	31 uH	446A	16 uH
HF620-220-4	220kW	528A	26 uH	528A	13 uH
HF620-250-4	250kW	573A	24 uH	573A	12 uH
HF620-280-4	280KW	657A	21 uH	657A	11 uH
HF620-315-4	315kW	735A	19 uH	735A	10 uH
HF620-355-4	355kW	805A	17 uH	805A	9 uH
HF620-400-4	400kW	856A	16 uH	856A	8 uH
HF620-450-4	450kW	856A	16 uH	856A	8 uH

4.9

				KW	KW
		Ω	Ω	30% Kc	50% Kc
HF620-0R4-4	0.4 kW	750	115	≥0.2	≥0.3
HF620-0R7-4	0.7 kW	750	115	≥0.2	≥0.35
HF620-1R5-4	1.5 kW	400	100	≥0.5	≥0.7
HF620-2R2-4	2.2 kW	250			

2R2

HF620-037-4	37kW	21	20	≥ 12	≥ 16
HF620-045-4	45kW	13	8	≥ 15	≥ 20
HF620-055-4	55kW	10	8	≥ 20	≥ 26
HF620-075-4	75kW	7.5	6	≥ 26	≥ 35
HF620-090-4	90kW	6.8	3.5	≥ 29	≥ 38
HF620-110-4	110kW	5.1	3.5	≥ 38	≥ 50
HF620-132-4	132kW	4.2	3.5	≥ 46	≥ 60
HF620-160-4	160kW	3.6	2.5	≥ 54	≥ 71
HF620-185-4	185kW	3.3	2.5	≥ 59	≥ 78

1 185kW 100%

2 Kc

3 Kc a 20 Kc=10% - 20%

b Kc=30%

c Kc=40 - 50%

4

4.10 EMC

1 EMC

EMC electromagnetic compatibility

EMC

EMC

EMC

EMC

EMC EMC

2 EMC

EMC

a

b PWM

c

d

3 EMC

EMC

EMC

5 EMC

a

www.gde com

20cm

90

5.

5.1

F1 ESC

LOCAL/REMOTE F2 FOREARD/REVERSE RUN STOP /RESET

ENTER

LED

ENTER

F1
ESC

RUN

F2 LOCAL

LOCAL/REMOTE

STOP

RUN

LOCAL

FAULT

FAULT

5.2

▼

▲

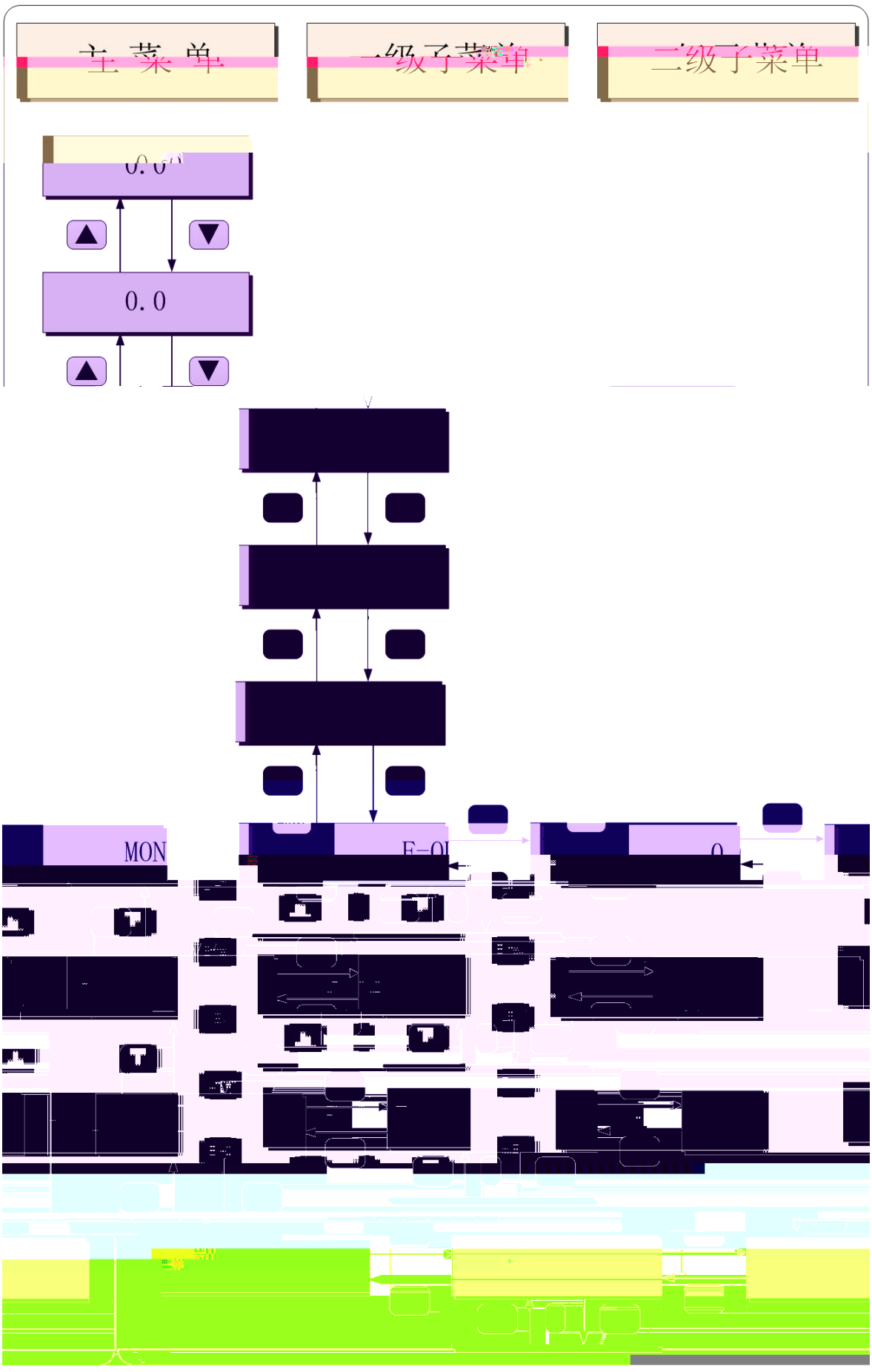
ENTER

RUN STOP LOCAL

F2 LOCAL/REMOTE /

5.3

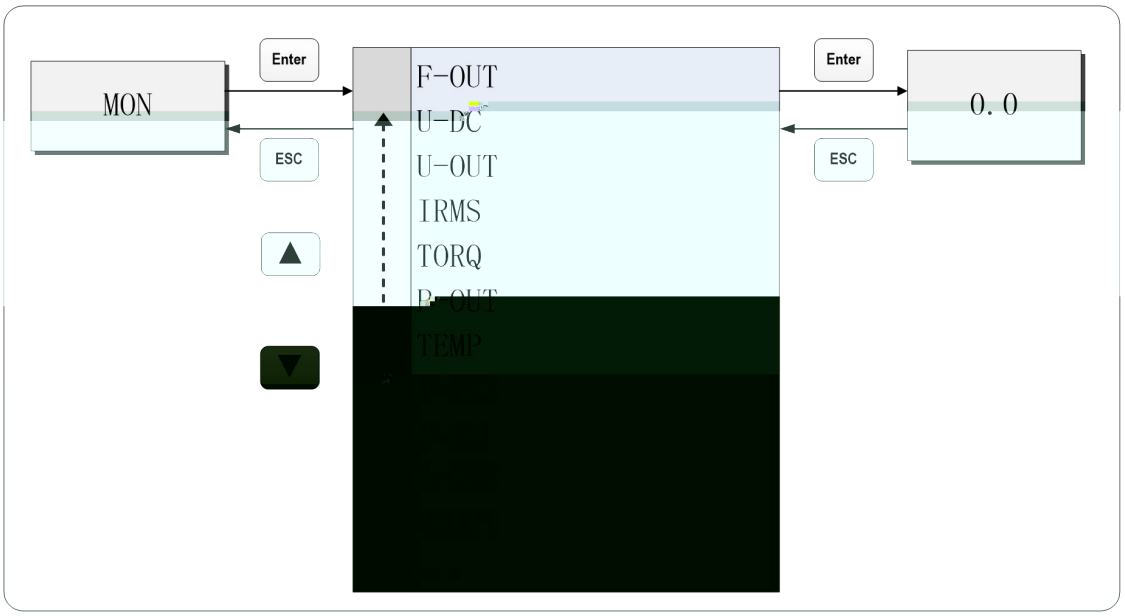
0.0	HZ	HZ
0.0	A	A
0.0	V	V
0.		
0.0	V	V
MON		
REFST		
FUNC		
PAR		


主 菜 单
0.0
0.0
MON

5.4

1 Drive Monitor

(I/O)

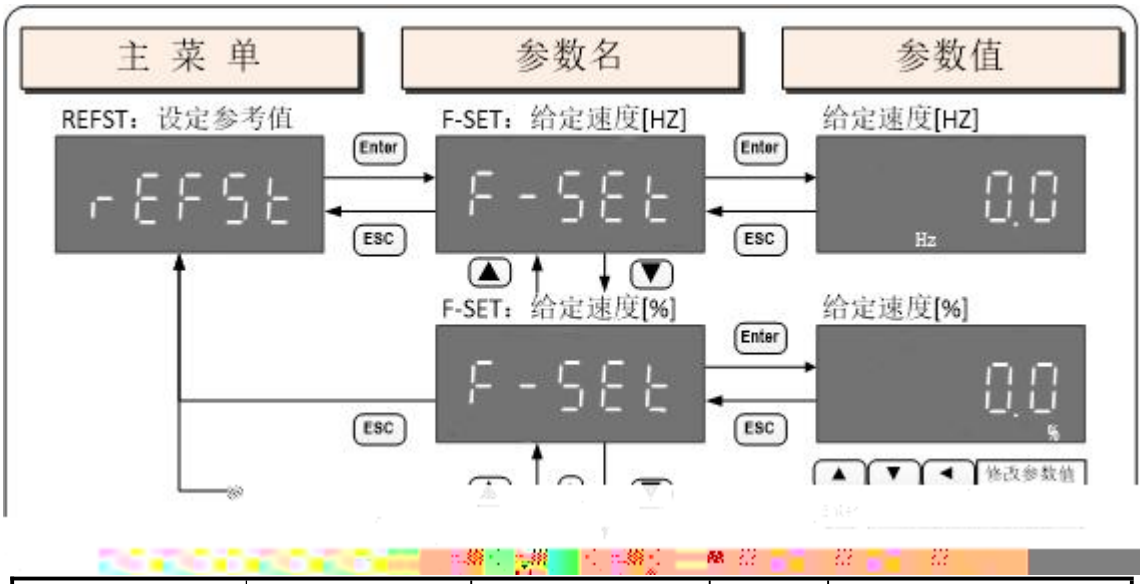


F-OUT	[Hz]	Hz	
V-DC		V	
V-OUT		V	
IRMS		A	
TORQ		%	
P-OUT		kW	
TEMP			IGBT
F-SET	[Hz]	Hz	
D-IN			
D-OUT			

MON

	PUL1L	1		1
	PUL1H	1		1
	PUL2L	2		2
	PUL2H	2		2
	TC-IN			

2 REFST



REFST	F-SET		[Hz]	Hz
	F-SET		[%]	%
	T-SET		[%]	%
	TLIM		[%]	%
	A1SET	1	[%]	1
	A2SET	2	[%]	2

3 FUNC

FUNC

ENTER

FUNC	F.CODE		
	F.RST		
	F.HIS		
	F.CLR		
	SY.RST		
	DATE		
	DR.VER		
	PD.VER		

F.CODE 5 ESC

F.RST ENTER **YES ?**

ENTER **DONE** ESC

CANCE.

F.HIS ENTER

S-XXX XXX XX.EEE

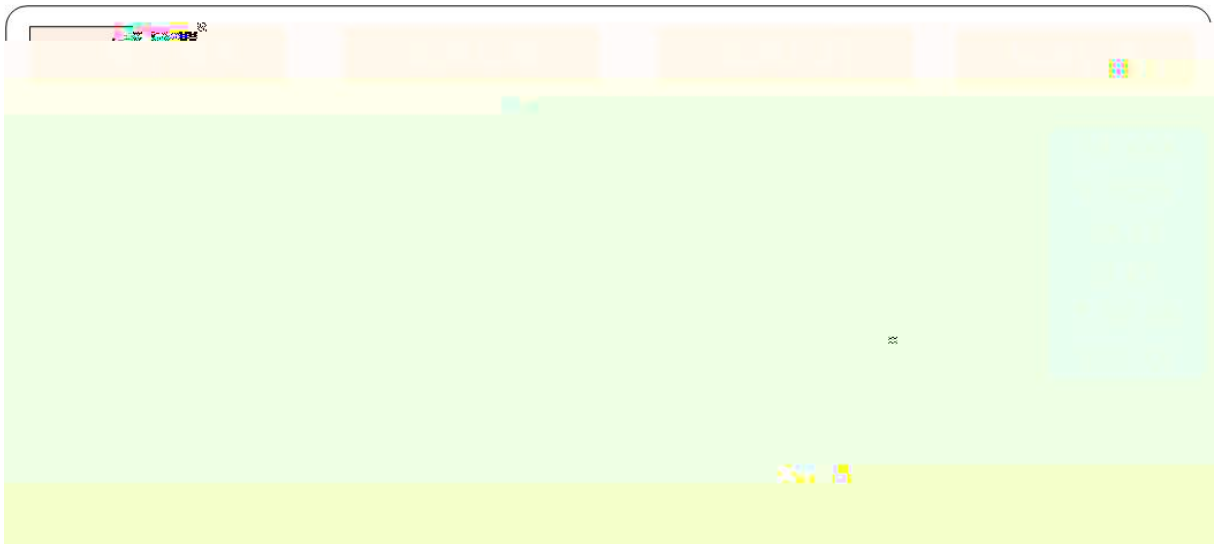
XX 0 0 EEE

ENTER

ER.XXX Y.20XX

20XX M.XX XX D.XX XX T.XX.XX XX XX SEC.XX XX

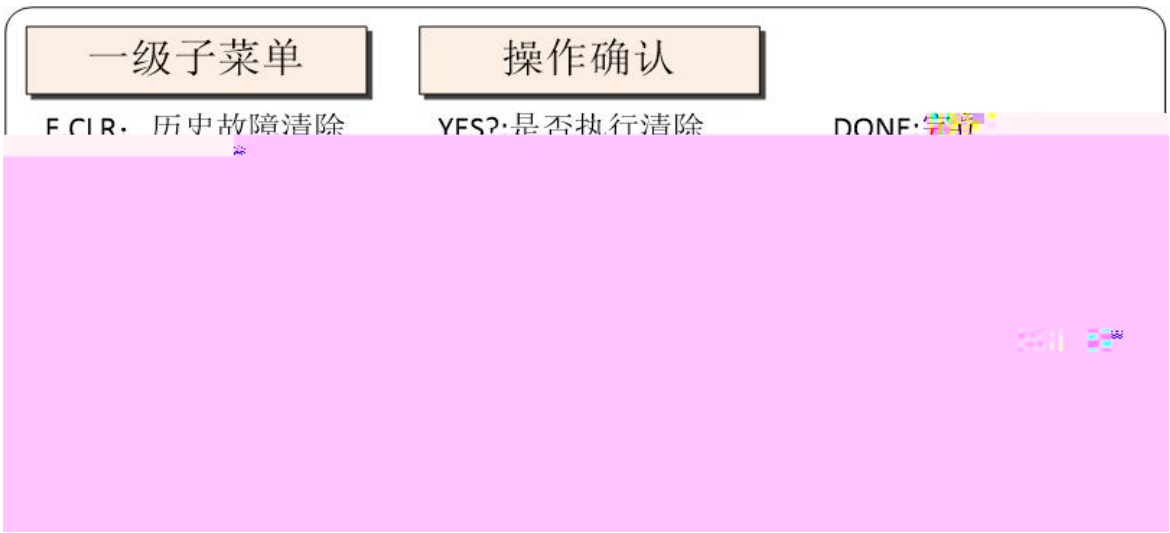
ESC



F.CLR ENTER

YES ? ENTER DONE

CANCE.

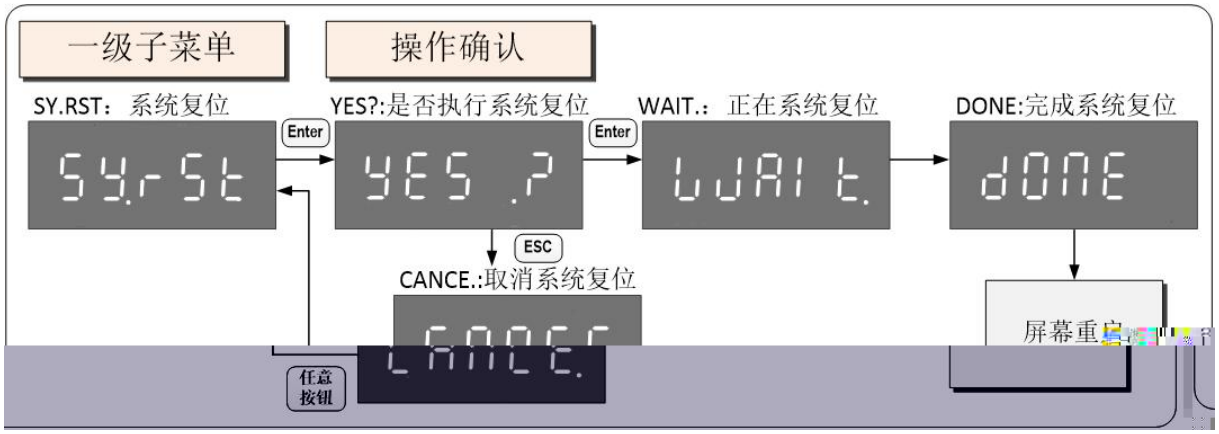


SY.RST ENTER YES ?

ENTER WAIT.

DONE

CANCE.

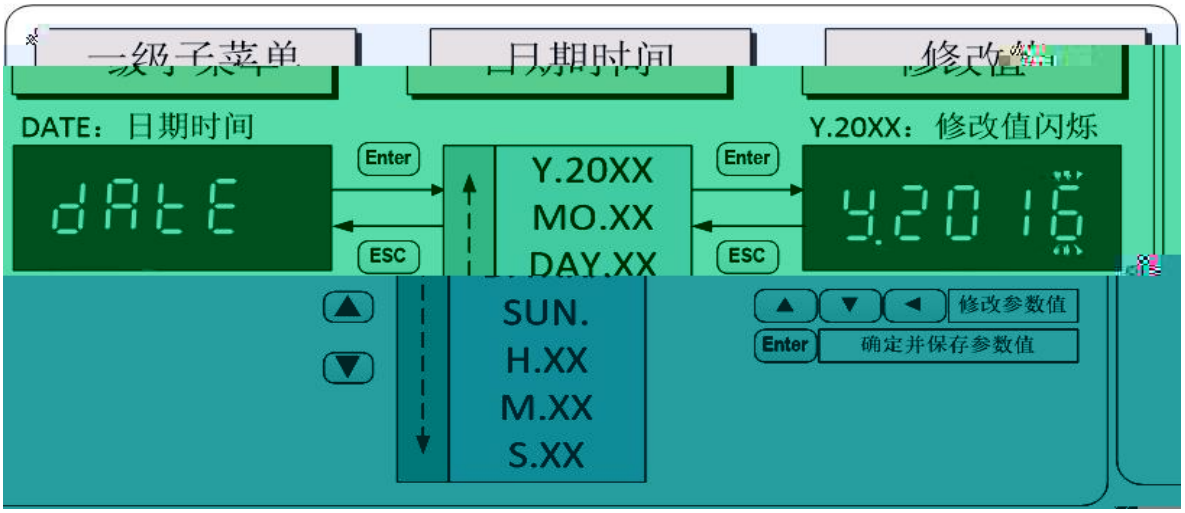


DATE ENTER

ENTER

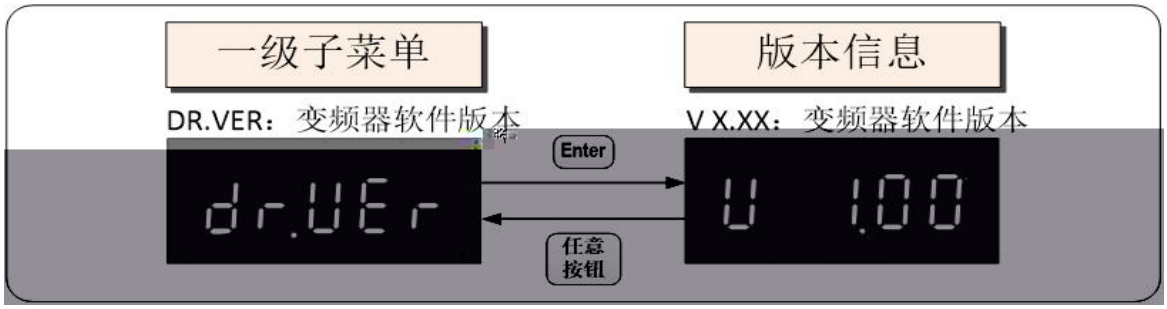
ENTER

DATE	Y.20XX		20XX
	MO.XX		XX
	DAY.XX		XX
	XXXX.		MON. TUES. WED. THUR. FRI. SAT. SUN.
	H.XX		XX
	M.XX		XX
	S.XX		XX



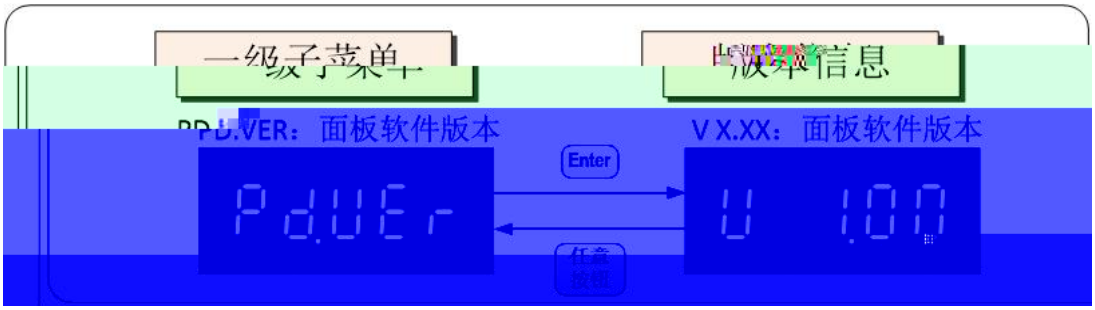
DR.VER ENTER **VX.XX**

5



PD.VER ENTER **VX.XX**

5



4 **PAR**

PAR

1 2 3 4

ENTER

PAR	PA.SET		PASW.
	QK.SET		
	PA.INI		
	TUNE.1		
	TUNE.2		
	TUNE.3		
	TUNE.4	AFE	AFE
	PASW.		
	P.LOCK		

PA.SET ENTER “P.AA.BB”

AA BB

ENTER

QK.SET	P.16.04	
	P.16.05	
	P.16.06	
	P.16.07	
	P.16.09	
	P.16.11	
	P.16.14	V/F
	P.16.24	
	P.08.16	1
	P.08.35	1
	P.08.00	
	P.08.10	
	P.08.03	
	P.07.00	[1]
	P.07.04	[1]
	P.07.19	[1]

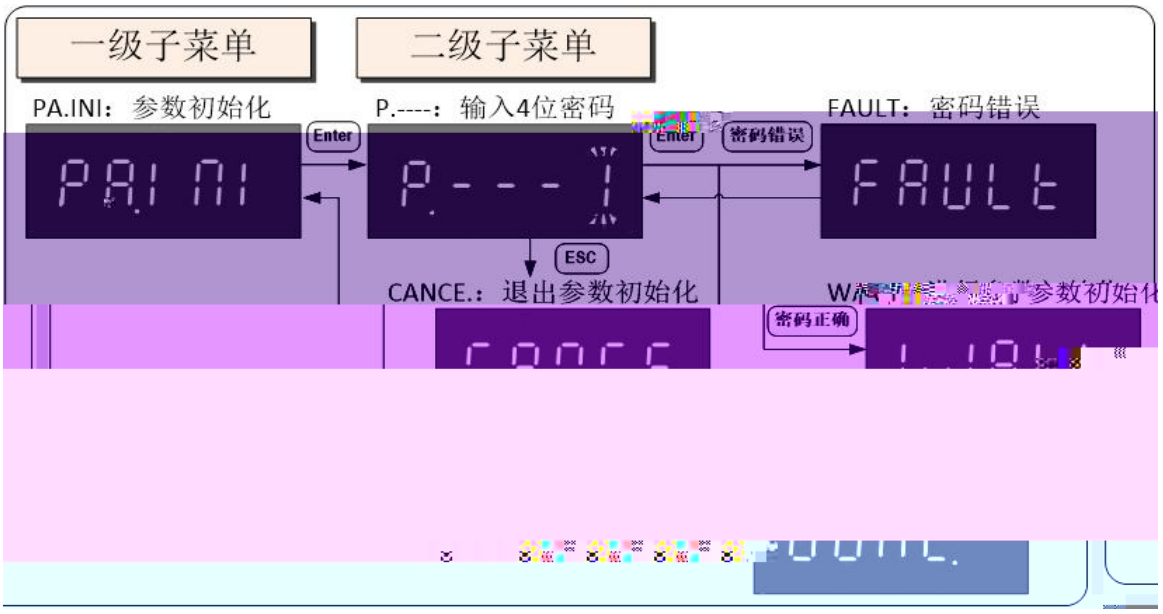
PA.INI ENTER

“P.----”

“WAIT.”

“DONE” **“FAULT”**

ESC



TUNE.1 TUNE.2 TUNE.3 TUNE.4

(AFE)

“TUNE.X” ENTER

“TX.PRC.” “TX-OK”

“YES ?”

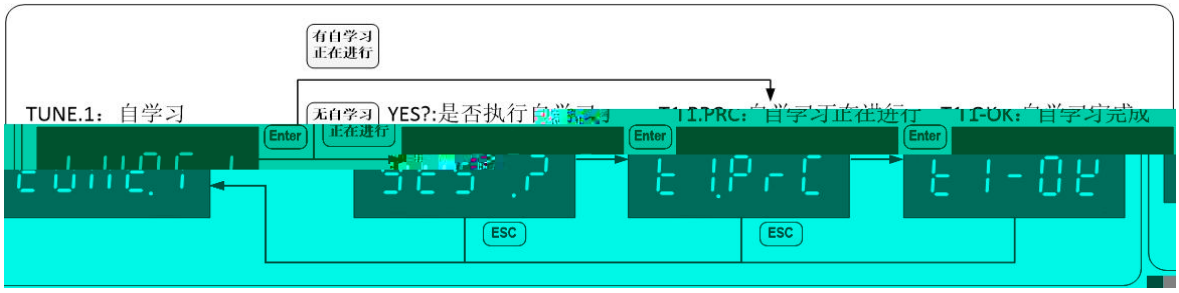
ENTER “TX.PRC.”

“TX.PRC.” ESC

ENTER

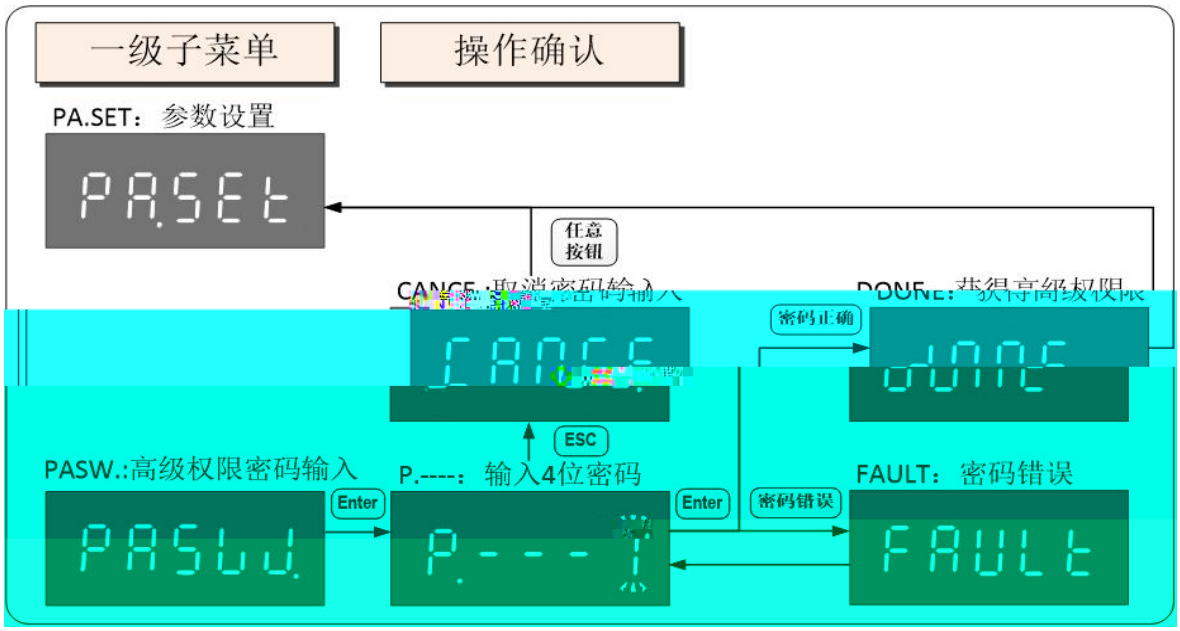
“TX.PRC.” “TX-OK”

TUNE.1



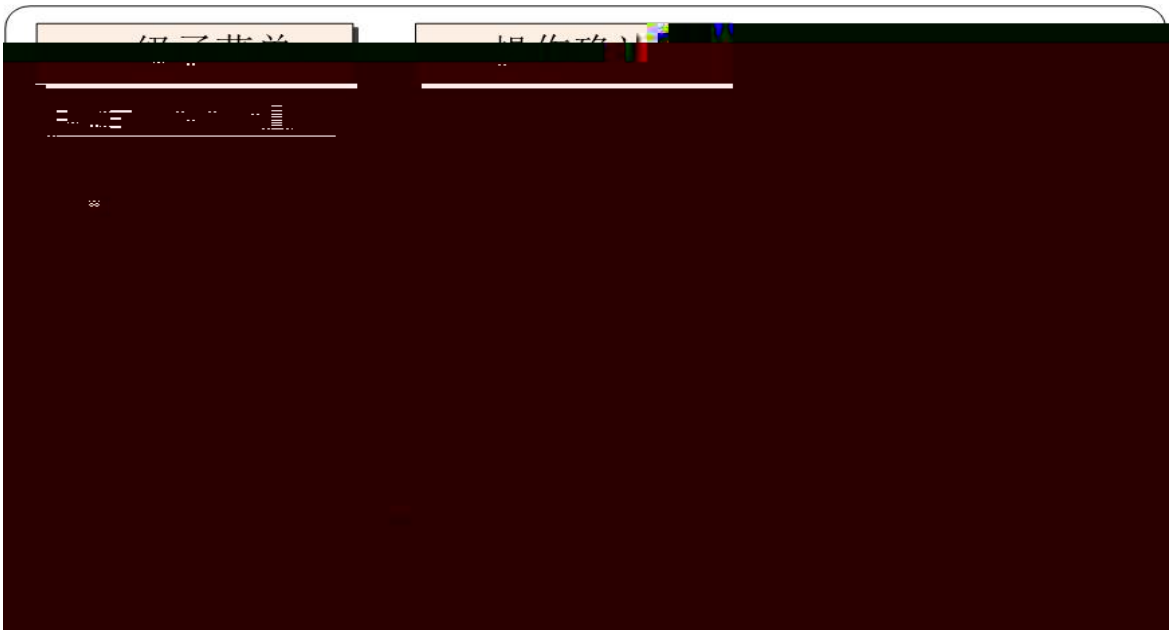
PASW.

PA.SET



P.LOCK ENTER

PA.SET



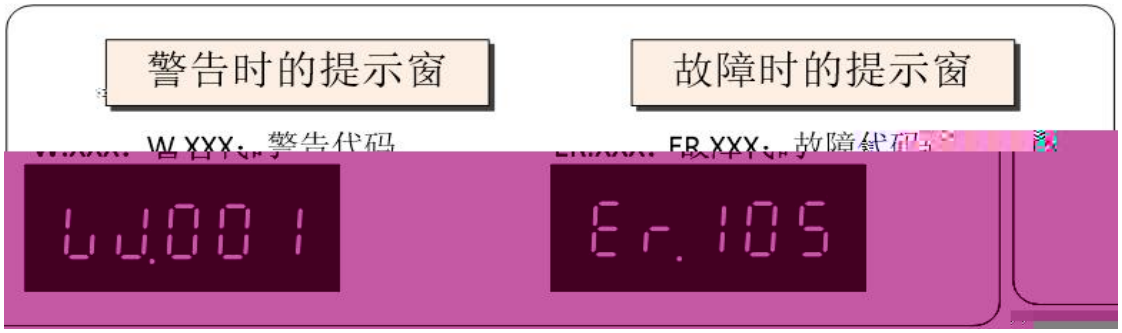
5 Warning and Error

“ RESET ” “ ESC ” 15

RESET

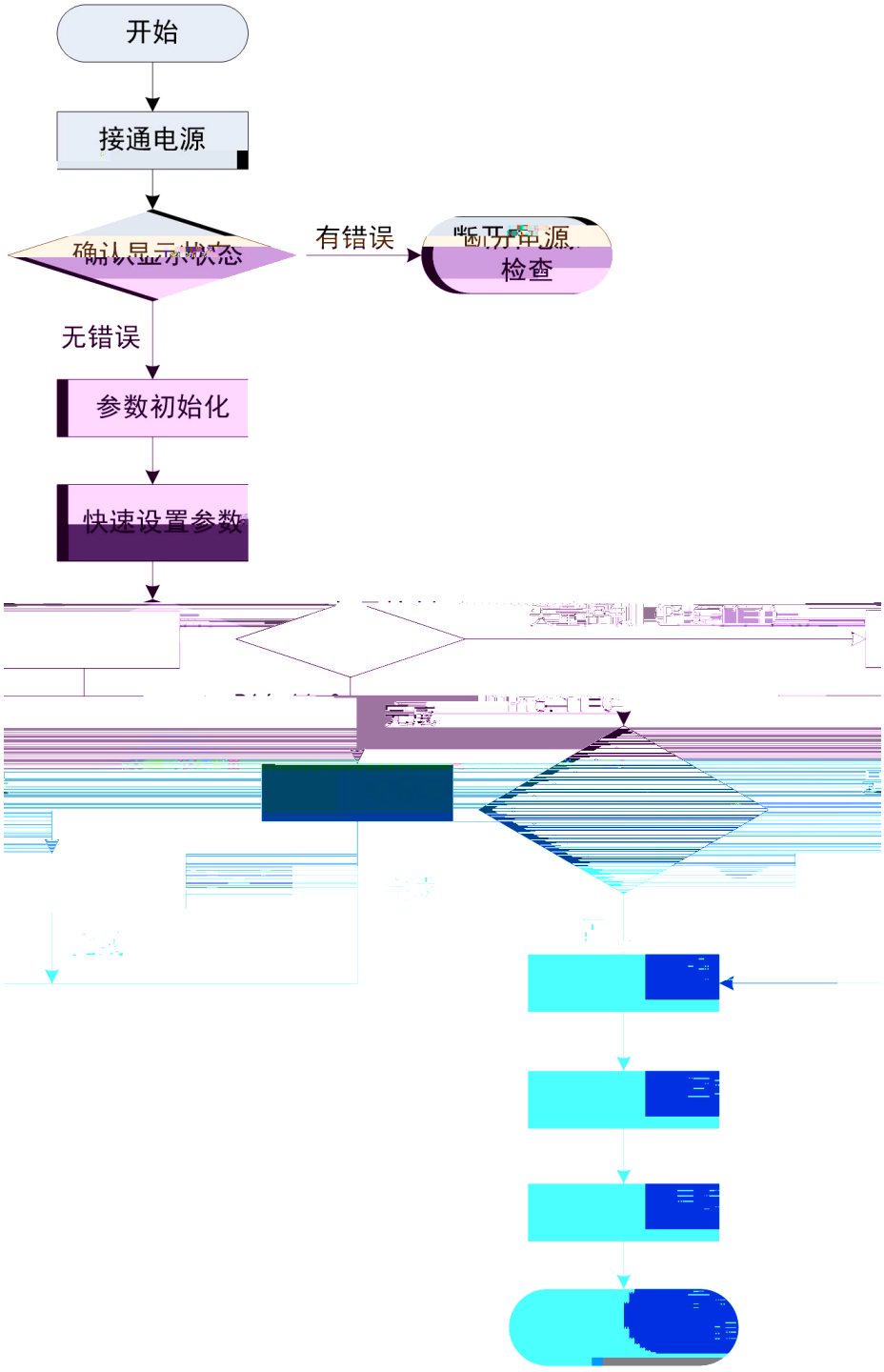
“ F.CODE ”

XXX



6.

6.1



/

V/F P16.11=0 V/F

P16.11=2 P16.11=1

6.2

6.2.1

1 AC380~480V 50/60Hz

2 U,V,W

3

4 PG PG

5

6.2.2

6.2.3

5.4 “ ”

6.2.4

P16.2			
P16.3			
P16.4			
P16.5			
P16.6			
P16.7		120×P16.5 / P16.6	
P16.9		120×P16.5/P16.7	
P16.11		[0]V/F [1] [2]	0
P16.14	V/F	[0] V/F [1] V/F [2]	0
P16.24		V/F	50 [Hz]
P8.16	1	P8.15	3
P8.35	1	P8.34	3
P8.0		[0] [1] [2]DP [3]MODBUS [4]	1
P8.10		[0]I/O [1] 1 [2] 2 [3] [4]DP [5]MODBUS [6]	3

P8.3			
P7.0	[1]	00[%]	
P7.4	1]	00[%]	5%
P7.19	[1]	100.0 720.0[%]	12

6.2.5

1

1

È

6.2.6

HF620

	7.5%
	50% 50%
	1/5
	P16
	V/F

6.2.7

1

2 LOC/REM LOCAL LOCAL

3 ENTER [1] RUN

RUN 5Hz

4

5 4 50Hz

6 STOP

6.2.8

1

2

3

4

5

6 STOP

1

2

1

2

6.2.9

7.

7.1 P0

P0.0		[0] [1]	0 1	0	
P0.1			0 27	14	
P0.3		[0]50HZ [1]60HZ	0 1	0	
P0.4					

7.2 P2

P2.0		[0] [1] [2]	0 2	0	8.1
P2.1		[0] [1]DP	0 1	0	
P2.2		[0] [1]	0 1	0	
P2.3			0 5	1	
P2.33			1 100min	10	10min

7.3 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	

19	AFE	
20		AFE
21	FUNC 21	
22		8.2
23		8.10
24		
25	FUNC 28	
26		
27	FUNC 27	
28		8.10
29 64	FUNC 29 FUNC 64	

7.4 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	
P4.16	1		0 500	0	
P4.17	2		0 500	0	
P4.18	3		0 500	0	
P4.19	4		0 500	0	

0		
1		8.3
2		ON
3		8.3
4		
5		
6	1	[6] [9]
7	2	
8	3	
9	4	
10	FUNC 10	
11		
12		
13		
14		
15		
16		8.8
17	0	1

18	1	2
19	2	3
20	3	4
21 31	FUNC 21 FUNC 31	
32		AFE
33 48	FUNC 33 FUNC 48	
49	PROFIBUS 1	PROFIBUS 1 1
50	PROFIBUS 2	PROFIBUS 2 1
51	PROFIBUS 3	PROFIBUS 3 1
52	PROFIBUS 4	PROFIBUS 4 1
53	PROFIBUS 5	PROFIBUS 5 1
54 56	FUNC 54 FUNC 56	
57	1	1 1
58	2	2 1
59	3	3 1
60	4	4 1
61	1	1 1
62	2	2 1
63	3	3 1
64	4	4 1

7.5 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]	8.4
P5.3	AI1	AI1	-20.00 20.00 [mA]	0.000 [mA]	8.4
P5.4	AI1	AI1	-10.00 10.00 [V]	0.000 [V]	8.4
P5.5	AI1	AI1	0.00 20.00 [mA]	0.000 [mA]	8.4
P5.6	AI1	AI1	-300.0 300.0 [%]	0.0 [%]	8.4
P5.7	AI1	AI1	-10.00 10.00 [V]	10.000 [V]	8.4
P5.8	AI1	AI1	0.00 20.00 [mA]	20.000 [mA]	8.4
P5.9	AI1	AI1	-300.0 300.0 [%]	100.0 [%]	8.4
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 [%]	

7.6 P6

P6.0	AO1	7-1	0 14	2	
P6.2	AO1	AO1	-300.0 300.0 [%]	0.0 [%]	8.5
P6.3	AO1	AO1	-300.0 300.0 [%]	100.0 [%]	8.5
P6.4	AO1 [mA V]	AO1	0.0 100.0 [%]	0.0 [%]	8.5
P6.5	AO1 [mA V]	AO1	0.0 100.0 [%]	100.0 [%]	8.5
P6.6	AO1	AO1	-100.00 100.00 [%]	0.00 [%]	
P6.7	AO1	AO1 (P6.0 [13])	0.0 100.0 [%]	0.0 [%]	
P6.8	AO1	AO1	0.0 1000.0 [ms]	10.0 [ms]	
P6.14	AO2	7-1	0 14	4	
P6.16	AO2	AO2	-300.0 300.0 [%]	0.0 [%]	
P6.17	AO2	AO2	-300.0 300.0 [%]	100.0 [%]	
P6.18	AO2 [mA V]	AO2	0.0 100.0 [%]	0.0 [%]	
P6.19	AO2 [mA V]	AO2	0.0 100.0 [%]	100.0 [%]	
P6.20	AO2	AO2	-100.00 100.00 [%]	0.00 [%]	
P6.21	AO2	AO2 (P6.14 [13])	0.0 100.0 [%]	0.0 [%]	

P6.22	AO2	AO1	0.0 1000.0 [ms]	10.0 [ms]	

7-1

0		
1		
2		
3		
4		
5		
6		
7		
8	(%)	( )
9		
10		
11	(%)	(150)
12	DP	Profibus
13		P6.7 P6.21
14		

7.7 P7

P7.0	[1]	1	0.0	300.0 [%]	180.0 [%]	8.6
P7.1	[2]	2	0.0	300.0 [%]	180.0 [%]	8.6
P7.2	[3]	3	0.0	300.0 [%]	180.0 [%]	8.6
P7.3	[4]	4	0.0	300.0 [%]	180.0 [%]	8.6
P7.4	[1]	1	0.0	300.0 [%]	235.0 [%]	8.6
P7.5	[2]	2	0.0	300.0 [%]	235.0 [%]	8.6
P7.6	[3]	3	0.0	300.0 [%]	235.0 [%]	8.6
P7.7	[4]	4	0.0	300.0 [%]	235.0 [%]	8.6
P7.8	[1]	1	0.0	100.0 [%]	20.0 [%]	8.6
P7.9	[2]	2	0.0	100.0 [%]	20.0 [%]	8.6
P7.10	[3]	3	0.0	100.0 [%]	20.0 [%]	8.6
P7.11	[4]	4	0.0	100.0 [%]	20.0 [%]	8.6
P7.12			600	820	800	8.6
P7.13	/					

P7.22	[4]	4	100.0 720.0 [%]	120.0 [%]	8.6
P7.23	1 M1	1	0.00 3.00 [s]	0.50 [s]	8.6
P7.24	1 M2	2	0.00 3.00 [s]	0.50 [s]	8.6
P7.25	1 M3	3	0.00 3.00 [s]	0.50 [s]	8.6
P7.26	1 M4	4	0.00 3.00 [s]	0.50 [s]	8.6
P7.27	1	1	0.00 3.00 [s]	2.00 [s]	
P7.28	2	2	0.00 3.00 [s]	2.00 [s]	
P7.29	3	3	0.00 3.00 [s]	2.00 [s]	
P7.30	4	4	0.00 3.00 [s]	2.00 [s]	
P7.31			0.0 100.0 [%]	25.0 [%]	
P7.32			0.00 5.00 [s]	1 [s]	
P7.33			0.0 1000.0 [s]	360.0 [s]	
P7.47			0.0 300.0 [%]	100.0 [%]	8.6
P7.48	1	1	0.0 300.0 [%]	150.0 [%]	8.6
P7.49	1	1	0.00 60.00 [s]	60.00 [s]	8.6
P7.50	2	2	0.0 300.0 [%]	200.0 [%]	8.6
P7.51	2	2	0.00 5.00 [s]	5.00 [s]	8.6
P7.55		[0] [1]	0 1	0	
P7.56			0.0 200.0 [%]	120.0 [%]	
P7.57			0.0 12.0 [s]	5 [s]	
P7.59		[0] [1]	0 1	1	

P7.60			0.10 3.00 [s]	0.30 [s]	
P7.64		[0] [1]	0 1	0	8.6
P7.65			-25 150 [V]	50 [V]	8.6
P7.66			-25 150 [V]	100 [V]	8.6
P7.69		[0] [1]	0 1	0	8.6
P7.70			-25 150 [V]	100 [V]	8.6
P7.71	1	[0] [1]	0 1	0	8.6
P7.73		[0] [1]	0 1	0	
P7.74			300 500 [V]	460 [V]	
P7.75			0.0 1000.0 [%]	100.0 [%]	
P7.76			0.00 300.00 [s]	1.00 [s]	
P7.77			0.0 200.0 [%]	15.0 [%]	
P7.94		[0] [1]	0 1	1	
P7.95		AFE	0.0 3000.0 [s]	15.0 [s]	
P7.96			0.00 300.00 [s]	0.00 [s]	

7.8 1 P8

P8.0		[0] [1] [2]DP [3]MODBUS [4]	0 4	0	
P8.3		[0] [1]	0 1	0	8.7
P8.6			0.00 300.00 [s]	0.00 [s]	8.7
P8.7			0.00 300.00 [s]	0.00 [s]	8.7
P8.10		[0]I/O [1] 1 [2] 2 [3] [4]DP [5]MODBUS [6]	0 6	0	
P8.15	1		0.0 300.0 [%]	100.0 [%]	8.7
P8.16	1	P8.15	0.0 300.0 [s]	3.00 [s]	8.7
P8.17	2		0.0 300.0 [%]	200.0 [%]	8.7
P8.18	2	P8.15 P8.17	0.0 300.0 [s]	4.00 [s]	8.7
P8.19	3		0.0 300.0 [%]	240.0 [%]	8.7
P8.20	3	P8.17 P8.19	0.0 300.0 [s]	7.00 [s]	8.7
P8.21	4		0.0 300.0 [%]	300.0 [%]	8.7
P8.22	4	P8.19 P8.21	0.0 300.0 [s]	10.00 [s]	8.7

P8.42	5		0.0 300.0 [%]	300.0 [%]	8.7
P8.43	5	P8.40 P8.42	0.0 300.0 [s]	10.00 [s]	8.7
P8.44	6		0.0 300.0 [%]	300.0 [%]	8.7
P8.45	6	P8.42 P8.44	0.0 300.0 [s]	10.00 [s]	8.7
P8.46	7		0.0 300.0 [%]	300.0 [%]	8.7
P8.47	7	P8.44 P8.46	0.0 300.0 [s]	10.00 [s]	8.7
P8.48	8		0.0 300.0 [%]	300.0 [%]	8.7
P8.49	8	P8.46 P8.48	0.0 300.0 [s]	10.00 [s]	8.7
P8.53		[0] [1]	0 1	0	8.7
P8.54			0.0 300.0 [%]	0.0 [%]	8.7
P8.55		[0] [1]	0 1	0	8.7
P8.56			0.00 300.00 [s]	1.50 [s]	8.7
P8.57		[0] [1]	0 1	1	
P8.58			0.00 300.00 [s]	1.50 [s]	

P9.42	5		0.0 300.0 [%]	300.0 [%]	8.7
P9.43	5	P9.40 P9.42	0.0 300.0 [s]	10.00 [s]	8.7
P9.44	6		0.0 300.0 [%]	300.0 [%]	8.7
P9.45	6	P9.42 P9.44	0.0 300.0 [s]	10.00 [s]	8.7
P9.46	7		0.0 300.0 [%]	300.0 [%]	8.7
P9.47	7	P9.44 P9.46	0.0 300.0 [s]	10.00 [s]	8.7
P9.48	8		0.0 300.0 [%]	300.0 [%]	8.7
P9.49	8	P9.46 P9.48	0.0 300.0 [s]	10.00 [s]	8.7
P8.53		[0] [1]	0 1	0	8.7
P8.54			0.0 300.0 [%]	0.0 [%]	8.7
P8.55		[0] [1]	0 1	0	8.7
P8.56			0.00 300.00 [s]	1.50 [s]	8.7
P9.57		[0] [1]	0 1	1	
P9.58			0.00 300.00 [s]	1.50 [s]	

P10.23	5			0.0 300.0 [%]	300.0 [%]	8.7
P10.24	5	P10.21	P10.23	0.0 300.0 [s]		

P10.42	5		0.0 300.0 [%]	300.0 [%]	8.7
P10.43	5	P10.40 P10.42	0.0 300.0 [s]	10.00 [s]	8.7
P10.44	6		0.0 300.0 [%]	300.0 [%]	8.7
P10.45	6	P10.42 P10.44	0.0 300.0 [s]	10.00 [s]	8.7
P10.46	7		0.0 300.0 [%]	300.0 [%]	8.7
P10.47	7	P10.44 P10.46	0.0 300.0 [s]	10.00 [s]	8.7
P10.48	8		0.0 300.0 [%]	300.0 [%]	8.7
P10.49	8	P10.46 P10.48	0.0 300.0 [s]	10.00 [s]	8.7
P8.53		[0] [1]	0 1	0	8.7
P8.54			0.0 300.0 [%]	0.0 [%]	8.7
P8.55		[0] [1]	0 1	0	8.7
P8.56			0.00 300.00 [s]	1.50 [s]	8.7
P10.57		[0] [1]	0 1	1	
P10.58			0.00 300.00 [s]	1.50 [s]	

7.11 4 P11

0.0 300.0

P11.23 5

P11.42	5		0.0 300.0 [%]	300.0 [%]	8.7
P11.43	5	P11.40 P11.42	0.0 300.0 [s]	10.00 [s]	8.7
P11.44	6		0.0 300.0 [%]	300.0 [%]	8.7
P11.45	6	P11.42 P11.44	0.0 300.0 [s]	10.00 [s]	8.7
P11.46	7		0.0 300.0 [%]	300.0 [%]	8.7
P11.47	7	P11.44 P11.46	0.0 300.0 [s]	10.00 [s]	8.7
P11.48	8		0.0 300.0 [%]	300.0 [%]	8.7
P11.49	8	P11.46 P11.48	0.0 300.0 [s]	10.00 [s]	8.7
P8.53		[0] [1]	0 1	0	8.7
P8.54			0.0 300.0 [%]	0.0 [%]	8.7
P8.55		[0] [1]	0 1	0	8.7
P8.56			0.00 300.00 [s]	1.50 [s]	8.7
P11.57		[0] [1]	0 1	1	
P11.58			0.00 300.00 [s]	1.50 [s]	

7.12 1 P12

P12.0		[0] [1]	0	1	1	8.8
P12.1		[0][%] [1][Hz] [2][rpm]	0	2	1	
P12.2	1		0.0	3000.0	10.0	
P12.3	2		0.0	3000.0	20.0	
P12.4	3		0.0	3000.0	35.0	
P12.5	4		0.0	3000.0	50.0	
P12.6	5		0.0	3000.0	50.0	
P12.7	6		0.0	3000.0	50.0	
P12.8	7		0.0	3000.0	50.0	
P12.9	8		0.0	3000.0	50.0	
P12.10	9		0.0	3000.0	50.0	
P12.11	10		0.0	3000.0	50.0	
P12.12	11		0.0	3000.0	50.0	
P12.13	12		0.0	3000.0	50.0	
P12.14	13		0.0	3000.0	50.0	
P12.15	14		0.0	3000.0	50.0	
P12.16	15		0.0	3000.0	50.0	
P12.17	16		0.0	3000.0	50.0	
P12.22			0.0 [%]	20.0	2.0 [%]	8.8
P12.23			0.0 [%]	20.0	0.0 [%]	8.8
P12.24			0.0 [%]	200.0	30.0 [%]	8.8
P12.25			0.0 [%]	200.0	20.0 [%]	8.8
P12.26						

P12.27			0.00 2.00 [s]	0.00 [s]	8.8
P12.28			0.00 2.00 [s]	0.07 [s]	8.8
P12.29			0.00 2.00 [s]	0.07 [s]	8.8
P12.32			0.0 20.0 [%]	0.0 [%]	8.8
P12.33			0.0 20.0 [%]	0.0 [%]	8.8
P12.34			0.00 2.00 [s]	0.00 [s]	8.8
P12.35			0.00 2.00 [s]	0.00 [s]	8.8
P12.36			0.00 2.00 [s]	0.50 [s]	8.8
P12.37			0.00 2.00 [s]	0.50 [s]	8.8
P12.38		[0] [1]	0 1	0	8.8
P12.40			0.0 100.0 [%]	0.5 [%]	8.8
P12.41			0.00 100.00 [s]	0.20 [s]	8.8
P12.42			0 3000 [s]	300 [s]	8.8
P12.43			0.0 50.0 [%]	20.0 [%]	8.8
P12.44			0 5 [s]	0.20 [s]	8.8
P12.45			20.0 100.0 [%]	25.0 [%]	8.8
P12.46			0 5 [s]	0.10 [s]	8.8
P12.47			0 30.0 [%]	10.0 [%]	8.8

P12.48			0 5 [s]	0 [s]	8.8
P12.49			0~1.0	0.1	8.8
P12.50			0.0 10.0 [%]	3.0 [%]	8.8

7.13 2 P13

P13.0		[0] [1]	0 1	1	8.8
P13.1		[0][%] [1][Hz] [2][rpm]	0 2	1	
P13.2	1		0.0 3000.0	10.0	
P13.3	2		0.0 3000.0	20.0	
P13.4	3		0.0 3000.0	35.0	
P13.5	4		0.0 3000.0	50.0	
P13.6	5		0.0 3000.0	50.0	
P13.7	6		0.0 3000.0	50.0	
P13.8	7		0.0 3000.0	50.0	
P13.9	8		0.0 3000.0	50.0	
P13.10	9		0.0 3000.0	50.0	
P13.11	10		0.0 3000.0	50.0	
P13.12	11		0.0 3000.0	50.0	
P13.13	12		0.0 3000.0	50.0	
P13.14	13		0.0 3000.0	50.0	
P13.15	14		0.0 3000.0	50.0	
P13.16	15		0.0 3000.0	50.0	
P13.17	16		0.0 3000.0	50.0	
P13.22			0.0 20.0 [%]	2.0 [%]	8.8
P13.23			0.0 20.0 [%]	0.0 [%]	8.8

P13.24	0.0 [%]	200.0 [%]	30.0 [%]	8.8
P13.25	0.0 [%]	200.0 [%]	20.0 [%]	8.8
P13.26	0.00 [s]	2.00 [s]	0.00 [s]	8.8
P13.27	0.00 [s]	2.00 [s]		

P15.13	12	0.0	3000.0	50.0
P15.14	13	0.0	3000.0	50.0
P15.15	14	0.0	3000.0	50.0
P15.16	15	0.0	3000.0	50.0
P15.17	16	0.0	3000.0	50.0

P15.22

P15.41			0.00 100.00 [s]	0.20 [s]	8.8
P15.42			0 3000 [s]	300 [s]	8.8
P15.43			0.0 50.0 [%]	20.0 [%]	8.8
P15.44			0 5 [s]	0.20 [s]	8.8
P15.45			20.0 100.0 [%]	25.0 [%]	8.8
P15.46			0 5 [s]	0.10 [s]	8.8
P15.47			0 30.0 [%]	10.0 [%]	8.8
P15.48			0 5 [s]	0 [s]	8.8
P15.49			0~1.0	0.1	8.8
P15.50			0.0 10.0 [%]	3.0 [%]	8.8

7.16 1 V/F P16

P16.0			320 460 [V]	380 [V]	
P16.2			0.0 4000.0 [kW]	[kW]	
P16.3			320 460 [V]	380 [V]	
P16.4			0.0 6500.0 [A]	[A]	
P16.5			0.0 300.0 [Hz]	50.0 [Hz]	
P16.6			0 6000 [rpm]	1465 [rpm]	
P16.7			2 12 [pole]	4 [pole]	8.9
P16.9			0 7200 [rpm]	1500 [rpm]	8.9

P16.11		[0]V/F [1] [2] [3] [4]	0 4	0	
P16.12			1.00 10.00 [kHz]	3.00 [kHz]	8.9
P16.14	V/F	[0] V/F [1] V/F [2]	0 3	0	8.9
P16.15		[0] [1]	0 1	0	8.9
P16.16			2 500 [ms]	500 [ms]	
P16.17	V/F	[0] [1]	0 1	0	
P16.18			10 1000 [ms]	200 [ms]	
P16.19		[0] [1]	0 1	0	
P16.22			0.00 100.00 [s]	0.00 [s]	8.9
P16.23		V/F	0.00 300.00 [Hz]	0.00 [Hz]	
P16.24		V/F	0.00 300.00 [Hz]	50.00 [Hz]	
P16.25			0.0 120.0 [%]	100.0 [%]	
P16.26	V/F	V/F	0.00 10.00 [%]	0.75 [%]	8.9
P16.27			0.0 200.0 [%]	100.0 [%]	8.9
P16.30			0.0 100.0 [%]	0.0 [%]	8.9
P16.33	V/F	V/F	0 6	2	8.9
P16.34	V/F 1		0.0 300.0 [Hz]	5.0 [Hz]	
P16.35	V/F 1		0.0 125.0 [%]	11.5 [%]	
P16.36	V/F 2		0.0 300.0 [Hz]	50.0 [Hz]	

P16.37	V/F 2		0.0 125.0 [%]	100.0 [%]	
P16.38	V/F 3		0.0 300.0 [Hz]	50.0 [Hz]	
P16.39	V/F 3		0.0 125.0 [%]	100.0 [%]	
P16.40	V/F 4		0.0 300.0 [Hz]	50.0 [Hz]	
P16.41	V/F 4		0.0 125.0 [%]	100.0 [%]	
P16.42	V/F 5		0.0 300.0 [Hz]	50.0 [Hz]	
P16.43	V/F 5		0.0 125.0 [%]	100.0 [%]	
P16.44	V/F 6		0.0 300.0 [Hz]	50.0 [Hz]	
P16.45	V/F 6		0.0 125.0 [%]	100.0 [%]	
P16.48		[0] [1]PID 1 [2]PID 2 [3]	0 3	0	
P16.50			0.00 300.00 [s]	0.00 [s]	8.9
P16.51			0.0 150.0 [%]	70.0 [%]	8.9
P16.52			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P16.54			0.00 300.00 [s]	0.00 [s]	8.9
P16.55			0.0 150.0 [%]	75.0 [%]	8.9
P16.56			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P16.59			0.0 1000.0 [%]	100.0 [%]	
P16.60			0.0 1000.0 [%]	100.0 [%]	
P16.61			0.0 1000.0 [%]	100.0 [%]	
P16.62			0.0 1000.0 [%]	100.0 [%]	
P16.64	V/F	V/F	0.0 1000.0 [%]	100.0 [%]	8.9

P16.66		V/F	0.0 1000.0 [%]	100.0 [%]	
P16.67			0.0 1000.0 [%]	100.0 [%]	
P16.68			0.0 1000.0 [%]	100.0 [%]	
P16.69			0.0 1000.0 [%]	100.0 [%]	
P16.70			0.0 1000.0 [%]	100.0 [%]	

7.17 2 V/F P17

P17.0			320 460 [V]	380 [V]	
P17.2			0.0 4000.0 [kW]	 [kW]	
P17.3			320 460 [V]	380 [V]	
P17.4			0.0 6500.0 [A]	 [A]	
P17.5			0.0 300.0 [Hz]	50.0 [Hz]	
P17.6			0 6000 [rpm]	1465 [rpm]	
P17.7			2 12 [pole]	4 [pole]	8.9
P17.9			0 7200 [rpm]	1500 [rpm]	8.9
P17.11		[0]V/F [1] [2] [3] [4]	0 4	0	
P17.12			1.00 10.00 [kHz]	3.00 [kHz]	8.9
P17.14	V/F	[0] V/F [1] V/F [2]	0 3	0	8.9
P17.15		[0] [1]	0 1	0	8.9
P17.16			2 500 [ms]	500 [ms]	
P17.17	V/F	[0] [1]	0 1	0	
P17.18			10 1000 [ms]	200 [ms]	
P17.19		[0] [1]	0 1	0	

P17.22			0.00 100.00 [s]	0.00 [s]	8.9
P17.23		V/F	0.00 300.00 [Hz]	0.00 [Hz]	
P17.24		V/F	0.00 300.00 [Hz]	50.00 [Hz]	
P17.25			0.0 120.0 [%]	100.0 [%]	
P17.26	V/F	V/F	0.00 10.00 [%]	0.75 [%]	8.9
P17.27			0.0 200.0 [%]	100.0 [%]	8.9
P17.30			0.0 100.0 [%]	0.0 [%]	8.9
P17.33	V/F	V/F	0 6	2	8.9
P17.34	V/F 1		0.0 300.0 [Hz]	5.0 [Hz]	
P17.35	V/F 1		0.0 125.0 [%]	11.5 [%]	
P17.36	V/F 2		0.0 300.0 [Hz]	50.0 [Hz]	
P17.37	V/F 2		0.0 125.0 [%]	100.0 [%]	
P17.38	V/F 3		0.0 300.0 [Hz]	50.0 [Hz]	
P17.39	V/F 3		0.0 125.0 [%]	100.0 [%]	
P17.40	V/F 4		0.0 300.0 [Hz]	50.0 [Hz]	
P17.41	V/F 4		0.0 125.0 [%]	100.0 [%]	
P17.42	V/F 5		0.0 300.0 [Hz]	50.0 [Hz]	
P17.43	V/F 5		0.0 125.0 [%]	100.0 [%]	
P17.44	V/F 6		0.0 300.0 [Hz]	50.0 [Hz]	
P17.45	V/F 6		0.0 125.0 [%]	100.0 [%]	
P17.48		[0] [1]PID 1 [2]PID 2 [3]	0 3	0	

P17.50			0.00 300.00 [s]	0.00 [s]	8.9
P17.51			0.0 150.0 [%]	70.0 [%]	8.9
P17.52			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P17.54			0.00 300.00 [s]	0.00 [s]	8.9
P17.55			0.0 150.0 [%]	75.0 [%]	8.9
P17.56			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P17.59			0.0 1000.0 [%]	100.0 [%]	
P17.60			0.0 1000.0 [%]	100.0 [%]	
P17.61			0.0 1000.0 [%]	100.0 [%]	
P17.62			0.0 1000.0 [%]	100.0 [%]	
P17.64	V/F	V/F	0.0 1000.0 [%]	100.0 [%]	8.9
P17.66		V/F	0.0 1000.0 [%]	100.0 [%]	
P17.67			0.0 1000.0 [%]	100.0 [%]	
P17.68			0.0 1000.0 [%]	100.0 [%]	
P17.69			0.0 1000.0 [%]	100.0 [%]	
P17.70			0.0 1000.0 [%]	100.0 [%]	

7.18 3 V/F P18

P18.0			320 460 [V]	380 [V]	
P18.2			0.0 4000.0 [kW]	 [kW]	
P18.3			320 460 [V]	380 [V]	
P18.4			0.0 6500.0 [A]	 [A]	
P18.5			0.0 300.0 [Hz]	50.0 [Hz]	
P18.6			0 6000 [rpm]	1465 [rpm]	
P18.7			2 12 [pole]	4 [pole]	8.9
P18.9			0 7200 [rpm]	1500 [rpm]	8.9
P18.11		[0]V/F [1] [2] [3] [4]	0 4	0	
P18.12			1.00 10.00 [kHz]	3.00 [kHz]	8.9
P18.14	V/F	[0] V/F [1] V/F [2]	0 3	0	8.9
P18.15		[0] [1]	0 1	0	8.9
P18.16			2 500 [ms]	500 [ms]	
P18.17	V/F	[0] [1]	0 1	0	
P18.18			10 1000 [ms]	200 [ms]	
P18.19		[0] [1]	0 1	0	

P18.22			0.00 [s]	0.00 [s]	8.9
P18.23		V/F	0.00 300.00 [Hz]	0.00 [Hz]	
P18.24		V/F	0.00 300.00 [Hz]	50.00 [Hz]	
P18.25			0.0 120.0 [%]	100.0 [%]	
P18.26	V/F	V/F	0.00 10.00 [%]	0.75 [%]	8.9
P18.27			0.0 200.0 [%]	100.0 [%]	8.9
P18.30			0.0 100.0 [%]	0.0 [%]	8.9
P18.33	V/F	V/F	0 6	2	8.9
P18.34	V/F 1		0.0 300.0 [Hz]	5.0 [Hz]	
P18.35	V/F 1		0.0 125.0 [%]	11.5 [%]	
P18.36	V/F 2		0.0 300.0 [Hz]	50.0 [Hz]	
P18.37	V/F 2		0.0 125.0 [%]	100.0 [%]	
P18.38	V/F 3		0.0 300.0 [Hz]	50.0 [Hz]	
P18.39	V/F 3		0.0 125.0 [%]	100.0 [%]	
P18.40	V/F 4		0.0 300.0 [Hz]	50.0 [Hz]	
P18.41	V/F 4		0.0 125.0 [%]	100.0 [%]	
P18.42	V/F 5		0.0 300.0 [Hz]	50.0 [Hz]	
P18.43	V/F 5		0.0 125.0 [%]	100.0 [%]	
P18.44	V/F 6		0.0 300.0 [Hz]	50.0 [Hz]	
P18.45	V/F 6		0.0 125.0 [%]	100.0 [%]	
P18.48		[0] [1]PID 1 [2]PID 2 [3]	0 3	0	

P18.50			0.00 300.00 [s]	0.00 [s]	8.9
P18.51			0.0 150.0 [%]	70.0 [%]	8.9
P18.52			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P18.54			0.00 300.00 [s]	0.00 [s]	8.9
P18.55			0.0 150.0 [%]	75.0 [%]	8.9
P18.56			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P18.59			0.0 1000.0 [%]	100.0 [%]	
P18.60			0.0 1000.0 [%]	100.0 [%]	
P18.61			0.0 1000.0 [%]	100.0 [%]	
P18.62			0.0 1000.0 [%]	100.0 [%]	
P18.64	V/F	V/F	0.0 1000.0 [%]	100.0 [%]	8.9
P18.66		V/F	0.0 1000.0 [%]	100.0 [%]	
P18.67			0.0 1000.0 [%]	100.0 [%]	
P18.68			0.0 1000.0 [%]	100.0 [%]	
P18.69			0.0 1000.0 [%]	100.0 [%]	
P18.70			0.0 1000.0 [%]	100.0 [%]	

7.19 4 V/F P19

P19.0			320 460 [V]	380 [V]	
P19.2			0.0 4000.0 [kW]	 [kW]	
P19.3			320 460 [V]	380 [V]	
P19.4			0.0 6500.0 [A]	 [A]	
P19.5			0.0 300.0 [Hz]	50.0 [Hz]	
P19.6			0 6000 [rpm]	1465 [rpm]	
P19.7			2 12 [pole]	4 [pole]	8.9
P19.9			0 7200 [rpm]	1500 [rpm]	8.9
P19.11		[0]V/F [1] [2] [3] [4]	0 4	0	
P19.12			1.00 10.00 [kHz]	3.00 [kHz]	8.9
P19.14	V/F	[0] V/F [1] V/F [2]	0 3	0	8.9
P19.15		[0] [1]	0 1	0	8.9
P19.16			2 500 [ms]	500 [ms]	
P19.17	V/F	[0] [1]	0 1	0	
P19.18			10 1000 [ms]	200 [ms]	
P19.19		[0] [1]	0 1	0	

P19.22			0.00 100.00 [s]	0.00 [s]	8.9
P19.23		V/F	0.00 300.00 [Hz]	0.00 [Hz]	
P19.24		V/F	0.00 300.00 [Hz]	50.00 [Hz]	
P19.25			0.0 120.0 [%]	100.0 [%]	
P19.26	V/F	V/F	0.00 10.00 [%]	0.75 [%]	8.9
P19.27			0.0 200.0 [%]	100.0 [%]	8.9
P19.30			0.0 100.0 [%]	0.0 [%]	8.9
P19.33	V/F	V/F	0 6	2	8.9
P19.34	V/F 1		0.0 300.0 [Hz]	5.0 [Hz]	
P19.35	V/F 1		0.0 125.0 [%]	11.5 [%]	
P19.36	V/F 2		0.0 300.0 [Hz]	50.0 [Hz]	
P19.37	V/F 2		0.0 125.0 [%]	100.0 [%]	
P19.38	V/F 3		0.0 300.0 [Hz]	50.0 [Hz]	
P19.39	V/F 3		0.0 125.0 [%]	100.0 [%]	
P19.40	V/F 4		0.0 300.0 [Hz]	50.0 [Hz]	
P19.41	V/F 4		0.0 125.0 [%]	100.0 [%]	
P19.42	V/F 5		0.0 300.0 [Hz]	50.0 [Hz]	
P19.43	V/F 5		0.0 125.0 [%]	100.0 [%]	
P19.44	V/F 6		0.0 300.0 [Hz]	50.0 [Hz]	
P19.45	V/F 6		0.0 125.0 [%]	100.0 [%]	
P19.48		[0] [1]PID 1 [2]PID 2 [3]	0 3	0	

P19.50			0.00 300.00 [s]	0.00 [s]	8.9
P19.51			0.0 150.0 [%]	70.0 [%]	8.9
P19.52			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P19.54			0.00 300.00 [s]	0.00 [s]	8.9
P19.55			0.0 150.0 [%]	75.0 [%]	8.9
P19.56			0.00 5.00 [Hz]	0.00 [Hz]	8.9
P19.59			0.0 1000.0 [%]	100.0 [%]	
P19.60			0.0 1000.0 [%]	100.0 [%]	
P19.61			0.0 1000.0 [%]	100.0 [%]	
P19.62			0.0 1000.0 [%]	100.0 [%]	
P19.64	V/F	V/F	0.0 1000.0 [%]	100.0 [%]	8.9
P19.66		V/F	0.0 1000.0 [%]	100.0 [%]	
P19.67			0.0 1000.0 [%]	100.0 [%]	
P19.68			0.0 1000.0 [%]	100.0 [%]	
P19.69			0.0 1000.0 [%]	100.0 [%]	
P19.70			0.0 1000.0 [%]	100.0 [%]	

7.20 1 P20

P20.0		[0] [1]	0 1	0	8.10
P20.1		[0] [1] 1 [2] 2 [3] [4] P20.3 [5]DP [6]MODBUS [7]	0 7	0	8.10
P20.2			0 7	0	
P20.3			-300.0 300.0 [%]	0.0 [%]	8.10
P20.5			0 1000 [ms]	0 [ms]	
P20.6			0.0 200.0 [%]	100.0 [%]	8.10
P20.7		[0] [1] P20.8 P20.9 [2] 1 [3] 2 [4] [5]DP [6]MODBUS [7]	0 7	0	8.10
P20.8		P20.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P20.9		P20.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P20.11			0 1000 [ms]	0 [ms]	
P20.13			20.0 500.0 [ms]	100.0 [ms]	8.10
P20.14		1	0 60000	1024	

P20.15		[0] [1]	0 1	0	8.10
P20.16			0.0 300.0 [%]	100.0 [%]	
P20.17			0.0 300.0 [%]	100.0 [%]	
P20.18			0.0 300.0 [%]	0.0 [%]	
P20.19			0.0 300.0 [%]	0.0 [%]	
P20.20		[0] [1]	0 1	0	
P20.21		[0] [1]	0 1	0	
P20.22			0.0 300.0 [%]	160.0 [%]	
P20.23			0.0 200.0 [%]	20.0 [%]	
P20.24			0.0 300.0 [%]	100.0 [%]	
P20.25			0.0 200.0 [%]	100.0 [%]	
P20.26			0.0 1000.0 [%]	0.0 [%]	8.10
P20.27			0.00 15.00 [%]	2.00 [%]	8.10
P20.28		[0] P20.16 P20.17 [1] [2] [3]DP	0 3	0	
P20.30		[0] P20.31 P20.32 [1] 1 [2] 2 [3]	0 3	0	
P20.31			0.0 100.0 [%]	5.0 [%]	
P20.32			0.0 100.0 [%]	5.0 [%]	

P20.34		[0] [1]	0 1	0	8.10
P20.35			0.0 100.0 [s]	0.0 [s]	
P20.36			50.0 150.0 [%]	110.0 [%]	
P20.37			0.0 150.0 [%]	100.0 [%]	8.10
P20.38			0.0 100.0 [%]	25.0 [%]	8.10
P20.39			0.0 120.0 [%]	100.0 [%]	8.10
P20.40			0.0 150.0 [%]	100.0 [%]	8.10
P20.41			0.0 150.0 [%]	135.0 [%]	
P20.42		[0] [1]	0 1	1	
P20.43			25 1000 [ms]	75 [ms]	
P20.44			25 1000 [ms]	250 [ms]	
P20.45			0.0 100.0 [%]	22.0 [%]	
P20.46			0.0 100.0 [%]	18.0 [%]	
P20.47			0.0 200.0 [%]	92.0 [%]	
P20.48			0.0 200.0 [%]	87.0 [%]	
P20.49			0.0 150.0 [%]	100.0 [%]	
P20.51			0.0 1000.0 [%]	100.0 [%]	
P20.52			0.0 1000.0 [%]	100.0 [%]	
P20.53	Kp		0.0 1000.0 [%]	100.0 [%]	
P20.54	Ki		0.0 1000.0 [%]	100.0 [%]	

P20.55			0.0 1000.0 [%]	100.0 [%]	8.10
P20.56			0.0 1000.0 [%]	100.0 [%]	8.10
P20.60	DROOP	0 DROOP	0.0 100.0 [%]	0.0 [%]	8.10
P20.61	DROOP	DROOP	30 2000 [ms]	50 [ms]	8.10
P20.62			0.0 1000.0 [%]	100.0 [%]	8.10
P20.63			0.0 1000.0 [%]	100.0 [%]	8.10
P20.64	2	2	0.0 100.0 [%]	0.0 [%]	8.10
P20.65	2	2	30 2000.0 ms	50 ms	
P20.98		( )	0.01 300.00 [s]	0.75 [s]	
P20.99			0.00 10.00 [%]	0.00 [%]	

7.21 2 P21

P21.0		[0] [1]	0 1	0	8.10
P21.1		[0] [1] 1 [2] 2 [3] [4] P21.3 [5]DP [6]MODBUS [7]	0 7	0	8.10
P21.2			0 7	0	
P21.3			-300.0 300.0 [%]	0.0 [%]	8.10
P21.5			0 1000 [ms]	0 [ms]	
P21.6			0.0 200.0 [%]	100.0 [%]	8.10
P21.7		[0] [1] P21.8 P21.9 [2] 1 [3] 2 [4] [5]DP [6]MODBUS [7]	0 7	0	8.10
P21.8		P21.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P21.9		P21.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P21.11			0 1000 [ms]	0 [ms]	
P21.13			20.0 500.0 [ms]	100.0 [ms]	8.10
P21.14		1	0 60000	1024	

P21.15		[0] [1]	0 1	0	8.10
P21.16			0.0 300.0 [%]	100.0 [%]	
P21.17			0.0 300.0 [%]	100.0 [%]	
P21.18			0.0 300.0 [%]	0.0 [%]	
P21.19			0.0 300.0 [%]	0.0 [%]	
P21.20		[0] [1]	0 1	0	
P21.21		[0] [1]	0 1	0	
P21.22			0.0 300.0 [%]	160.0 [%]	
P21.23			0.0 200.0 [%]	20.0 [%]	
P21.24			0.0 300.0 [%]	100.0 [%]	
P21.25			0.0 200.0 [%]	100.0 [%]	
P21.26			0.0 1000.0 [%]	0.0 [%]	8.10
P21.27			0.00 15.00 [%]	2.00 [%]	8.10
P21.28		[0] P21.16 P21.17 [1] [2] [3]DP	0 3	0	
P21.30		[0] P21.31 P21.32 [1] 1 [2] 2 [3]	0 3	0	
P21.31			0.0 100.0 [%]	5.0 [%]	
P21.32			0.0 100.0 [%]	5.0 [%]	

P21.34		[0] [1]	0 1	0	8.10
P21.35			0.0 100.0 [s]	0.0 [s]	
P21.36			50.0 150.0 [%]	110.0 [%]	
P21.37			0.0 150.0 [%]	100.0 [%]	8.10
P21.38			0.0 100.0 [%]	25.0 [%]	8.10
P21.39			0.0 120.0 [%]	100.0 [%]	8.10
P21.40			0.0 150.0 [%]	100.0 [%]	8.10
P21.41			0.0 150.0 [%]	135.0 [%]	
P21.42		[0] [1]	0 1	1	
P21.43			25 1000 [ms]	75 [ms]	
P21.44			25 1000 [ms]	250 [ms]	
P21.45			0.0 100.0 [%]	22.0 [%]	
P21.46			0.0 100.0 [%]	18.0 [%]	
P21.47			0.0 200.0 [%]	92.0 [%]	
P21.48			0.0 200.0 [%]	87.0 [%]	
P21.49			0.0 150.0 [%]	100.0 [%]	
P21.51			0.0 1000.0 [%]	100.0 [%]	
P21.52			0.0 1000.0 [%]	100.0 [%]	
P21.53	Kp		0.0 1000.0 [%]	100.0 [%]	
P21.54	Ki		0.0 1000.0 [%]	100.0 [%]	

P21.55			0.0 1000.0 [%]	100.0 [%]	8.10
P21.56			0.0 1000.0 [%]	100.0 [%]	8.10
P21.60	DROOP	0 DROOP	0.0 100.0 [%]	0.0 [%]	8.10
P21.61	DROOP	DROOP	30 2000 [ms]	50 [ms]	8.10
P21.62			0.0 1000.0 [%]	100.0 [%]	8.10
P21.63			0.0 1000.0 [%]	100.0 [%]	8.10
P21.64	2	2	0.0 100.0 [%]	0.0 [%]	8.10
P21.65	2	2	30 2000.0 ms	50 ms	
P21.98		( )	0.01 300.00 [s]	0.75 [s]	
P21.99			0.00 10.00 [%]	0.00 [%]	

7.22 3 P22

P22.0		[0] [1]	0 1	0	8.10
P22.1		[0] [1] 1 [2] 2 [3] [4] P22.3 [5]DP [6]MODBUS [7]	0 7	0	8.10
P22.2			0 7	0	
P22.3			-300.0 300.0 [%]	0.0 [%]	8.10
P22.5			0 1000 [ms]	0 [ms]	
P22.6			0.0 200.0 [%]	100.0 [%]	8.10
P22.7		[0] [1] P22.8 P22.9 [2] 1 [3] 2 [4] [5]DP [6]MODBUS [7]	0 7	0	8.10
P22.8		P22.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P22.9		P22.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P22.11			0 1000 [ms]	0 [ms]	
P22.13			20.0 500.0 [ms]	100.0 [ms]	8.10
P22.14		1	0 60000	1024	

P22.15		[0] [1]	0 1	0	8.10
P22.16			0.0 300.0 [%]	100.0 [%]	
P22.17			0.0 300.0 [%]	100.0 [%]	
P22.18			0.0 300.0 [%]	0.0 [%]	
P22.19			0.0 300.0 [%]	0.0 [%]	
P22.20		[0] [1]	0 1	0	
P22.21		[0] [1]	0 1	0	
P22.22			0.0 300.0 [%]	160.0 [%]	
P22.23			0.0 200.0 [%]	20.0 [%]	
P22.24			0.0 300.0 [%]	100.0 [%]	
P22.25			0.0 200.0 [%]	100.0 [%]	
P22.26			0.0 1000.0 [%]	0.0 [%]	8.10
P22.27			0.00 15.00 [%]	2.00 [%]	8.10
P22.28		[0] P22.16 P22.17 [1] [2] [3]DP	0 3	0	
P22.30		[0] P22.31 P22.32 [1] 1 [2] 2 [3]	0 3	0	
P22.31			0.0 100.0 [%]	5.0 [%]	
P22.32			0.0 100.0 [%]	5.0 [%]	

P22.34	[0] [1]	0 1	0	8.10
P22.35		0.0 100.0 [s]	0.0 [s]	
P22.36		50.0 150.0 [%]	110.0 [%]	
P22.37		0.0 150.0 [%]	100.0 [%]	8.10
P22.38		0.0 100.0 [%]	25.0 [%]	8.10
P22.39		0.0 120.0 [%]	100.0 [%]	8.10
P22.40		0.0 150.0 [%]	100.0 [%]	8.10
P22.41		0.0 150.0 [%]	135.0 [%]	
P22.42	[0] [1]	0 1	1	
P22.43		25 1000 [ms]	75 [ms]	
P22.44		25 1000 [ms]	250 [ms]	
P22.45		0.0 100.0 [%]	22.0 [%]	
P22.46		0.0 100.0 [%]	18.0 [%]	
P22.47				

P22.55			0.0 1000.0 [%]	100.0 [%]	8.10
P22.56			0.0 1000.0 [%]	100.0 [%]	8.10
P22.60	DROOP	0 DROOP	0.0 100.0 [%]	0.0 [%]	8.10
P22.61	DROOP	DROOP	30 2000 [ms]	50 [ms]	8.10
P22.62			0.0 1000.0 [%]	100.0 [%]	8.10
P22.63			0.0 1000.0 [%]	100.0 [%]	8.10
P22.64	2	2	0.0 100.0 [%]	0.0 [%]	8.10
P22.65	2	2	30 2000.0 ms	50 ms	
P22.98		( )	0.01 300.00 [s]	0.75 [s]	
P22.99			0.00 10.00 [%]	0.00 [%]	

7.23 4 P23

P23.0		[0] [1]	0 1	0	8.10
P23.1		[0] [1] 1 [2] 2 [3] [4] P23.3 [5]DP [6]MODBUS [7]	0 7	0	8.10
P23.2			0 7	0	
P23.3			-300.0 300.0 [%]	0.0 [%]	8.10
P23.5			0 1000 [ms]	0 [ms]	
P23.6			0.0 200.0 [%]	100.0 [%]	8.10
P23.7		[0] [1] P23.8 P23.9 [2] 1 [3] 2 [4] [5]DP [6]MODBUS [7]	0 7	0	8.10
P23.8		P23.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P23.9		P23.7 [1]	0.0 300.0 [%]	200.0 [%]	8.10
P23.11			0 1000 [ms]	0 [ms]	
P23.13			20.0 500.0 [ms]	100.0 [ms]	8.10
P23.14		1	0 60000	1024	

P23.15		[0] [1]	0 1	0	8.10
P23.16			0.0 300.0 [%]	100.0 [%]	
P23.17			0.0 300.0 [%]	100.0 [%]	
P23.18			0.0 300.0 [%]	0.0 [%]	
P23.19			0.0 300.0 [%]	0.0 [%]	
P23.20		[0] [1]	0 1	0	
P23.21		[0] [1]	0 1	0	
P23.22			0.0 300.0 [%]	160.0 [%]	
P23.23			0.0 200.0 [%]	20.0 [%]	
P23.24			0.0 300.0 [%]	100.0 [%]	
P23.25			0.0 200.0 [%]	100.0 [%]	
P23.26			0.0 1000.0 [%]	0.0 [%]	8.10
P23.27			0.00 15.00 [%]	2.00 [%]	8.10
P23.28		[0] P23.16 P23.17 [1] [2] [3]DP	0 3	0	
P23.30		[0] P23.31 P23.32 [1] 1 [2] 2 [3]	0 3	0	
P23.31			0.0 100.0 [%]	5.0 [%]	
P23.32			0.0 100.0 [%]	5.0 [%]	

P23.34	[0] [1]	0 1	0	8.10
P23.35		0.0 100.0 [s]	0.0 [s]	
P23.36		50.0 150.0 [%]	110.0 [%]	
P23.37		0.0 150.0 [%]	100.0 [%]	8.10
P23.38		0.0 100.0 [%]	25.0 [%]	8.10
P23.39		0.0 120.0 [%]	100.0 [%]	8.10
P23.40		0.0 150.0 [%]	100.0 [%]	8.10
P23.41		0.0 150.0 [%]	135.0 [%]	
P23.42	[0] [1]	0 1	1	
P23.43		25 1000 [ms]	75 [ms]	
P23.44		25 1000 [ms]	250 [ms]	
P23.45		0.0 100.0 [%]		

P23.55			0.0 1000.0 [%]	100.0 [%]	8.10
P23.56			0.0 1000.0 [%]	100.0 [%]	8.10
P23.60	DROOP	0 DROOP	0.0 100.0 [%]	0.0 [%]	8.10
P23.61	DROOP	DROOP	30 2000 [ms]	50 [ms]	8.10
P23.62			0.0 1000.0 [%]	100.0 [%]	8.10
P23.63			0.0 1000.0 [%]	100.0 [%]	8.10
P23.64	2	2	0.0 100.0 [%]	0.0 [%]	8.10
P23.65	2	2	30 2000.0 ms	50 ms	
P23.98		( )	0.01 300.00 [s]	0.75 [s]	
P23.99			0.00 10.00 [%]	0.00 [%]	

7.24 MODBUS P32

P32.0	MODBUS	[0] [1]	0 1	0	
P32.1	MODBUS ID		1 255	1	
P32.2		[0]RS485 [1]RS232	0 1	0	
P32.3		[0] 9600 BPS [1] 14400 BPS [2] 19200 BPS [3] 38400 BPS [4] 56000 BPS [5] 57600 BPS [6] 115200 BPS	0 6	3	
P32.4		[0] None_8_1_CFG [1] Even_8_1_CFG [2] Odd_8_1_CFG [3] None_8_2_CFG [4] Even_8_2_CFG [5] Odd_8_2_CFG	0 5	0	
P32.5	Modbus	Modbus 0 Modbus	0 100 [s]	0 [s]	0s

7.25 P33

P33.0	Profibus	[0] [1]	0 1	0	
P33.1		PLC	1 255	1	
P33.2		[0]PPO1 [1]PPO2 [2]PPO5 [3]GUIDE	0 3	2	
P33.3			0 16	14	
P33.4			0 16	14	
P33.5		[0] [1] [2] [3]	0 3	0	
P33.6			0 1000 [ms]	50 [ms]	
P33.7		[0] [1]	0 1	0	
P33.8			0.0 10.0 [s]	3.0 [s]	
P33.13	[WO]	7-2	0 37	0	
P33.14	[WO]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.15	[W1]	7-2	0 37	0	
P33.16	[W1]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.17	[W2]	7-2	0 37	0	

P33.18	[W2]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.19	[W3]	7-2	0 37	0	
P33.20	[W3]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.21	[W4]	7-2	0 37	1	
P33.22	[W4]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.23	[W5]	7-2	0 37	18	
P33.24	[W5]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	2	
P33.25	[W6]	7-2	0 37	21	
P33.26	[W6]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	1	
P33.27	[W7]	7-2	0 37	22	
P33.28	[W7]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	1	
P33.29	[W8]	7-2	0 37	23	
P33.30	[W8]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	1	

P33.31	[W9]	7-2	0 37	0	
P33.32	[W9]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.33	[W10]	7-2	0 37	0	
P33.34	[W10]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.35	[W11]	7-2	0 37	0	
P33.36	[W11]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.37	[W12]	7-2	0 37	0	
P33.38	[W12]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.39	[W13]	7-2	0 37	0	
P33.40	[W13]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.41	[W14]	7-2	0 37	0	
P33.42	[W14]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.43	[W15]	7-2	0 37	0	

P33.44	[W15]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.45	[W0]	7-3	0 48	0	
P33.46	[W0]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.47	[W1]	7-3	0 48	0	
P33.48	[W1]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.49	[W2]	7-3	0 48	0	
P33.50	[W2]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.51	[W3]	7-3	0 48	0	
P33.52	[W3]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.53	[W4]	7-3	0 48	1	

P33.54	[W4]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.55	[W5]	7-3	0 48	19	
P33.56	[W5]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	2	
P33.57	[W6]	7-3	0 48	26	
P33.58	[W6]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	6	
P33.59	[W7]	7-3	0 48	30	
P33.60	[W7]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	1	
P33.61	[W8]	7-3	0 48	14	

P33.62	[W8]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.63	[W9]	7-3	0 48	13	
P33.64	[W9]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.65	[W10]	7-3	0 48	40	
P33.66	[W10]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	6	
P33.67	[W11]	7-3	0 48	0	
P33.68	[W11]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.69	[W12]	7-3	0 48	0	

P33.70	[W12]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.71	[W13]	7-3	0 48	0	
P33.72	[W13]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.73	[W14]	7-3	0 48	0	
P33.74	[W14]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.75	[W15]	7-3	0 48	0	
P33.76	[W15]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	

7-3

0	
1	0
2	1
3	2
4	3
5	4
6	5
7	0 @32bit
8	1 @32bit
9	2 @32bit
10	3 @32bit
11	4 @32bit
12	5 @32bit
13	[32]
14	[32]
15	32bit_MSW
16	32bit_LSW
17	
18	
19	
20	[rpm]
21	[rpm]
22	
23	
24	
25	
26	
27	A
28	B

29	C
30	
31	
32	
33	1
34	2
35	
36	
37	
38	
39	
40	
41	Mwh
42	Kwh
43	Mwh
44	Kwh
45 48	AW26 29

8.

8.1

450kW 800kW 400kW

P2.0

8.2

1

P12.0 [0] [1]

A. [0]

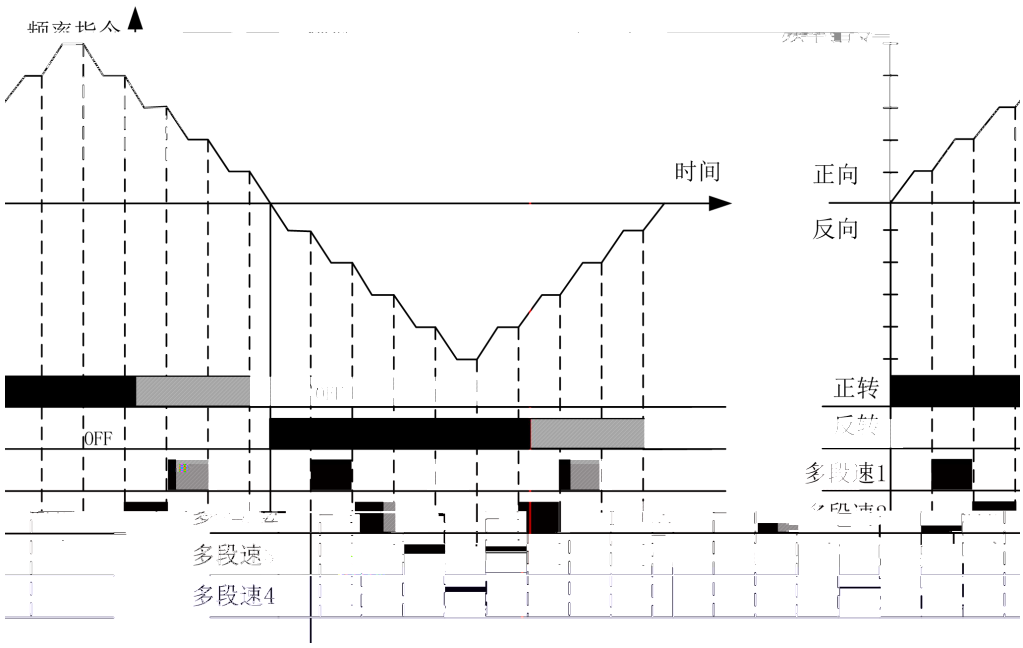
[1] [2] ---1

[6] 1 0 ---2

[7] 2 1 ---3

[8] 3 2 ---4

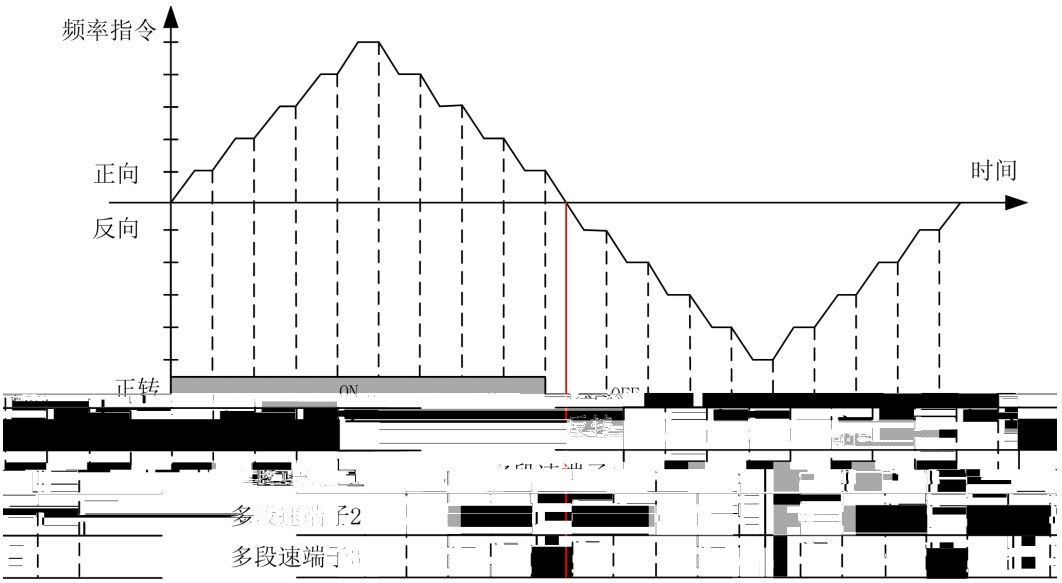
[9] 4 3 ---5



B. [1]

4 16 (8421)

(FORWARD) (REVERSE) P12.2(1)



2

DI 22 “ ”

10Hz E106 “ 1 ”

10Hz 2s E107

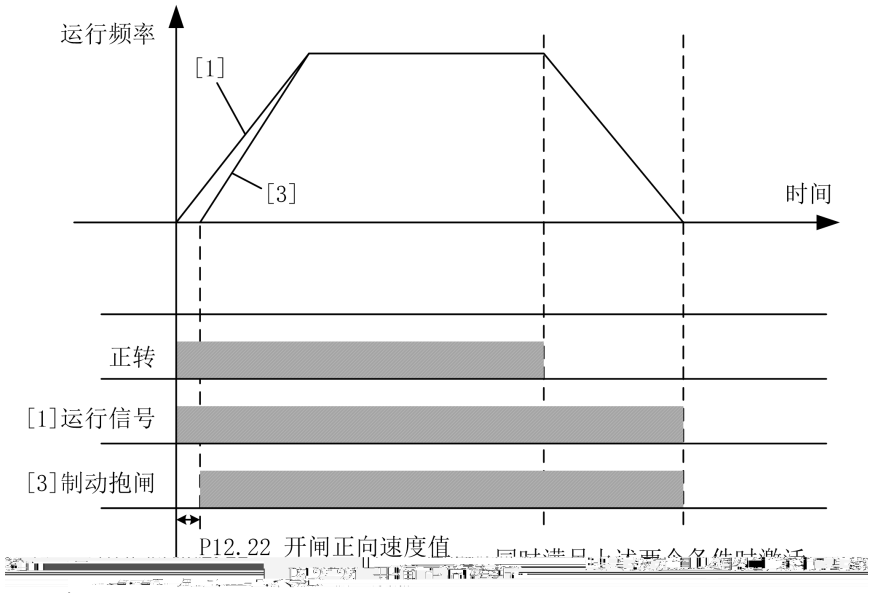
“ 2 ”

8.3

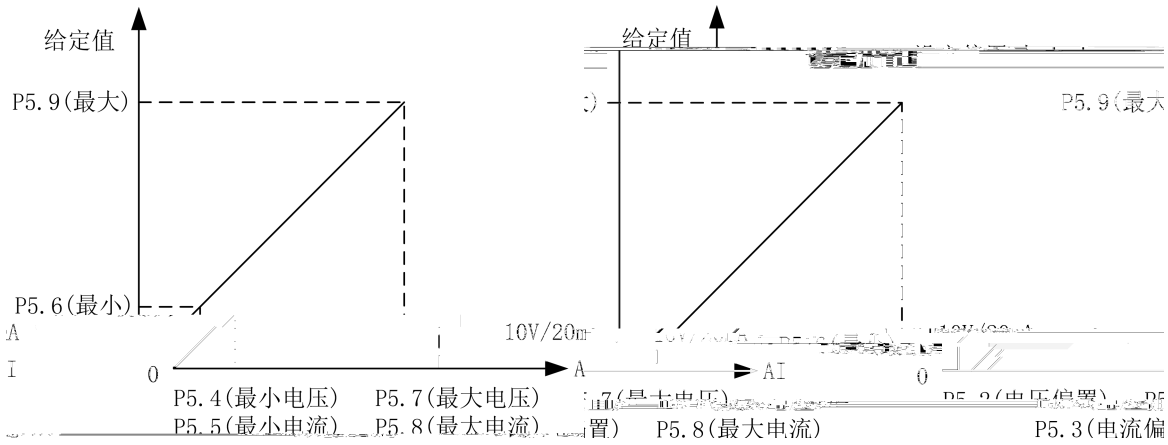
/

[1] [3] [3]

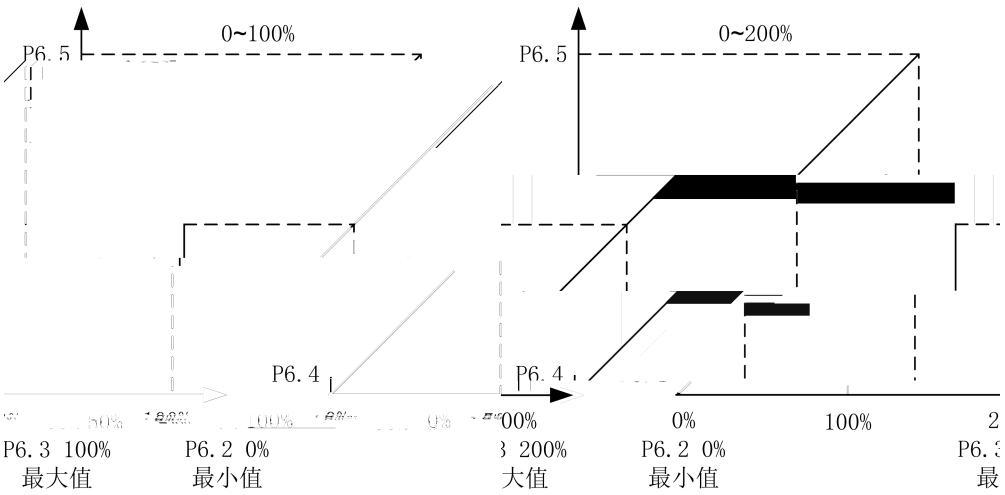
[1] [3]


运行频率
[1]
[3]
时间
正转
[1]运行信号
[3]制动抱闸
P12.22 开闸正向速度值

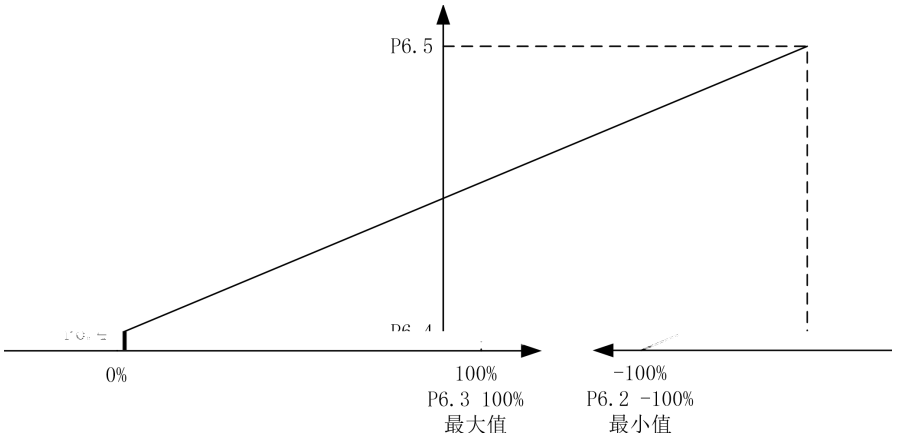
8.4


给定值
P5.9(最大)
P5.6(最小)
0
P5.4(最小电压)
P5.5(最小电流)
P5.7(最大电压)
P5.8(最大电流)
给定值
P5.8(最大电流)
P5.3(电流偏

8.5



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



c -100~100%

8.6

1

P7.0 P7.1 P7.2 P7.3

2

P7.4 P7.5 P7.6 P7.7 P7.4 P16.4

3

P7.8 P7.9 P7.10 P7.11 $I_a + I_b + I_c$

P16.4 $\frac{I_a + I_b + I_c}{} > P$ P

4

P7.12 P7.13 P7.12

P7.13

5

P7.14 IGBT P7.14

P7.15 IGBT P7.15

6

P7.19 P7.20 P7.21 P7.22 P7.19

P7.19 P7.22

7

P7.23 P16.11=1 P7.23

P7.23

P7.24 P7.26 P17.11=1 P18.11=1 P19.11=1

8

P7.31 P7.32 P16.11=2

P7.31 100% P7.32

P7.31 P7.32

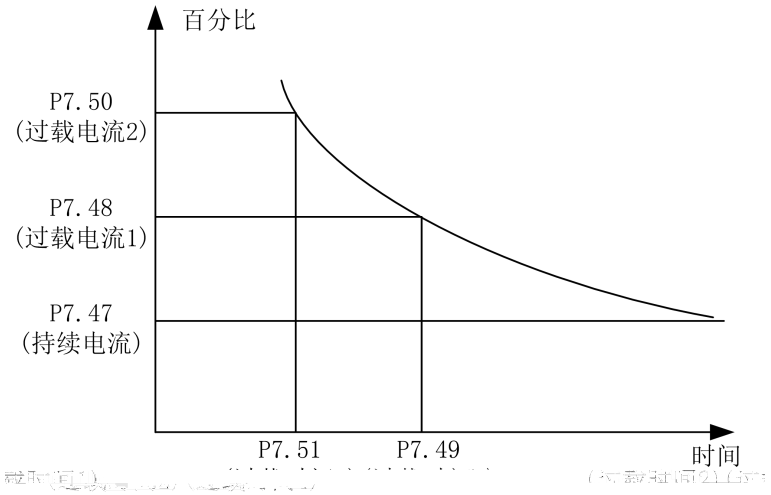
9

P7.33

P7.33

10

P7.48 P7.50



11

P7.64 P7.65 P7.66 HF620

45KW-185KW P7.64 1

P7.65

P7.66 P7.66

≥P7.65 P16.0 380V P7.65 50V 647V P7.66

100V 697V

= √ + +

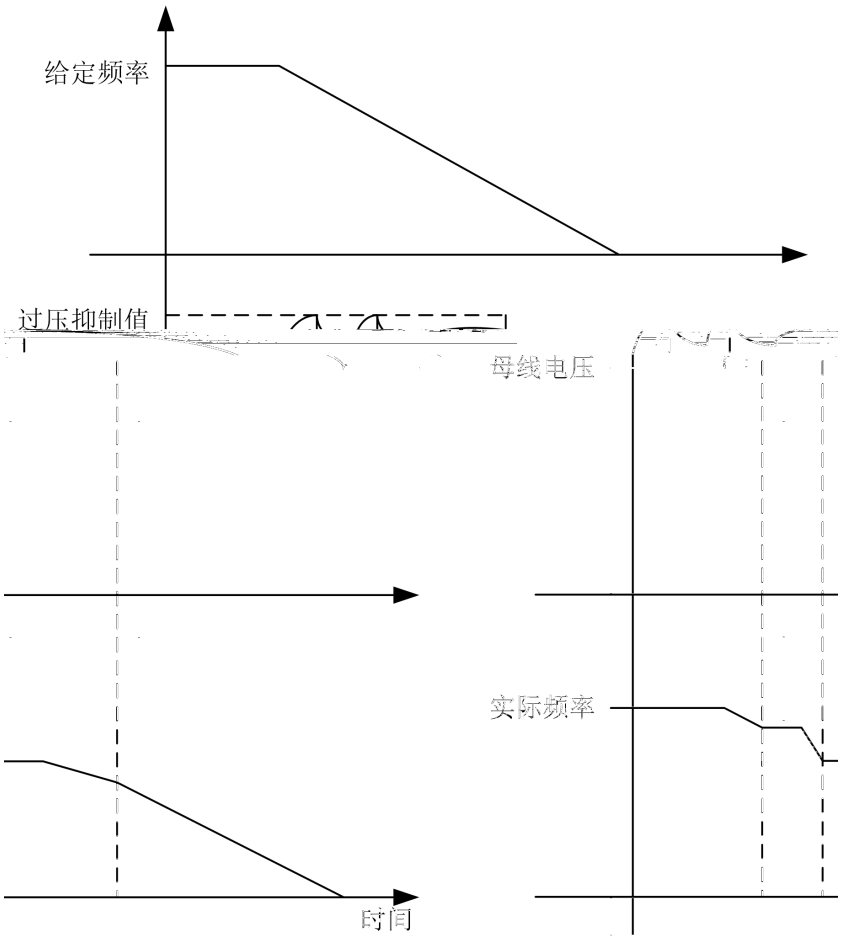
= √ + +

12

P7.69 P7.70 P7.71 P7.69

0 P16.0 380V P7.70 100V

711V = √ + +



P7.71 P7.71

8.7

1

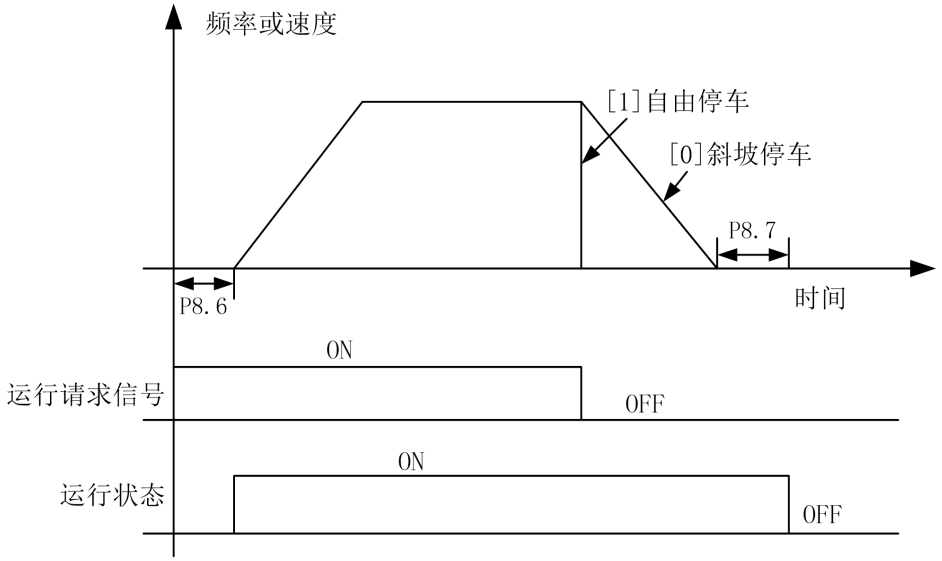
P8.3

[0]

[1]

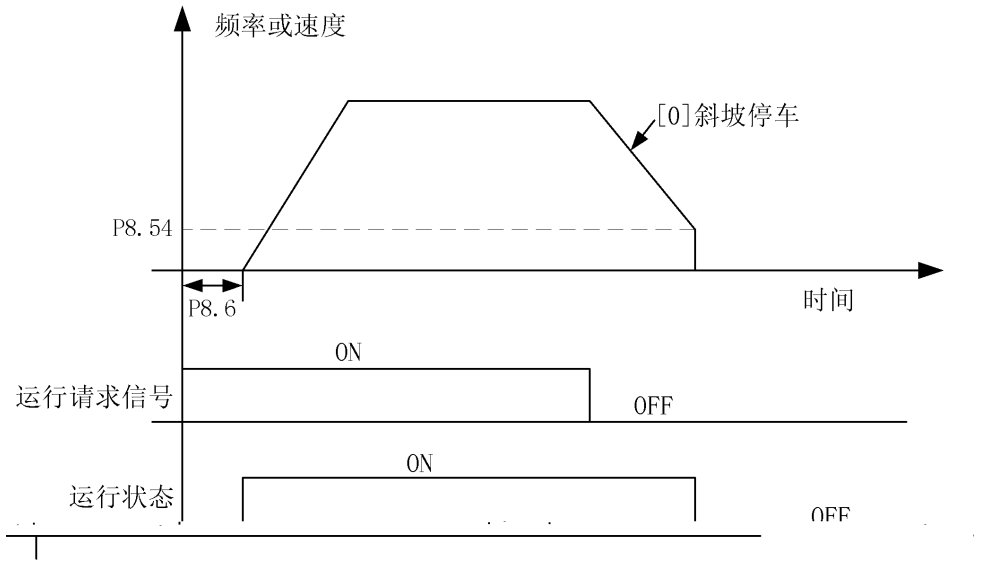
P8.6 P8.6

P8.7



P8.54 0 P8.3 [0]

P8.54

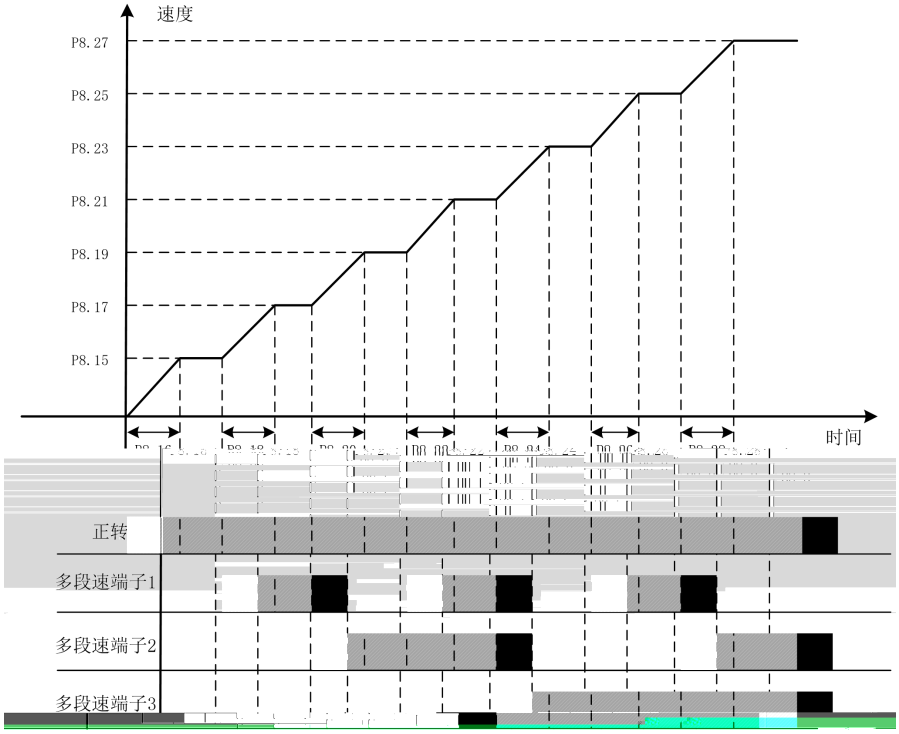


2

P8.14

P8.14 P8.33

P8.33



P8.15<P8.17<P8.19<P8.21<P8.23<P8.25<P8.27

P8.15	P8.17	P8.19	P8.21	P8.23	P8.25	P8.27
10%	20%	30%	50%	60%	80%	100%

P12.2 P12.17

P12.0=[1]

	1	2	3	4
1	0	0	0	0
2	1	0	0	0
3	0	1	0	0
4	1	1	0	0
5	0	0	1	0
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

P12.22 P12.37

[3]

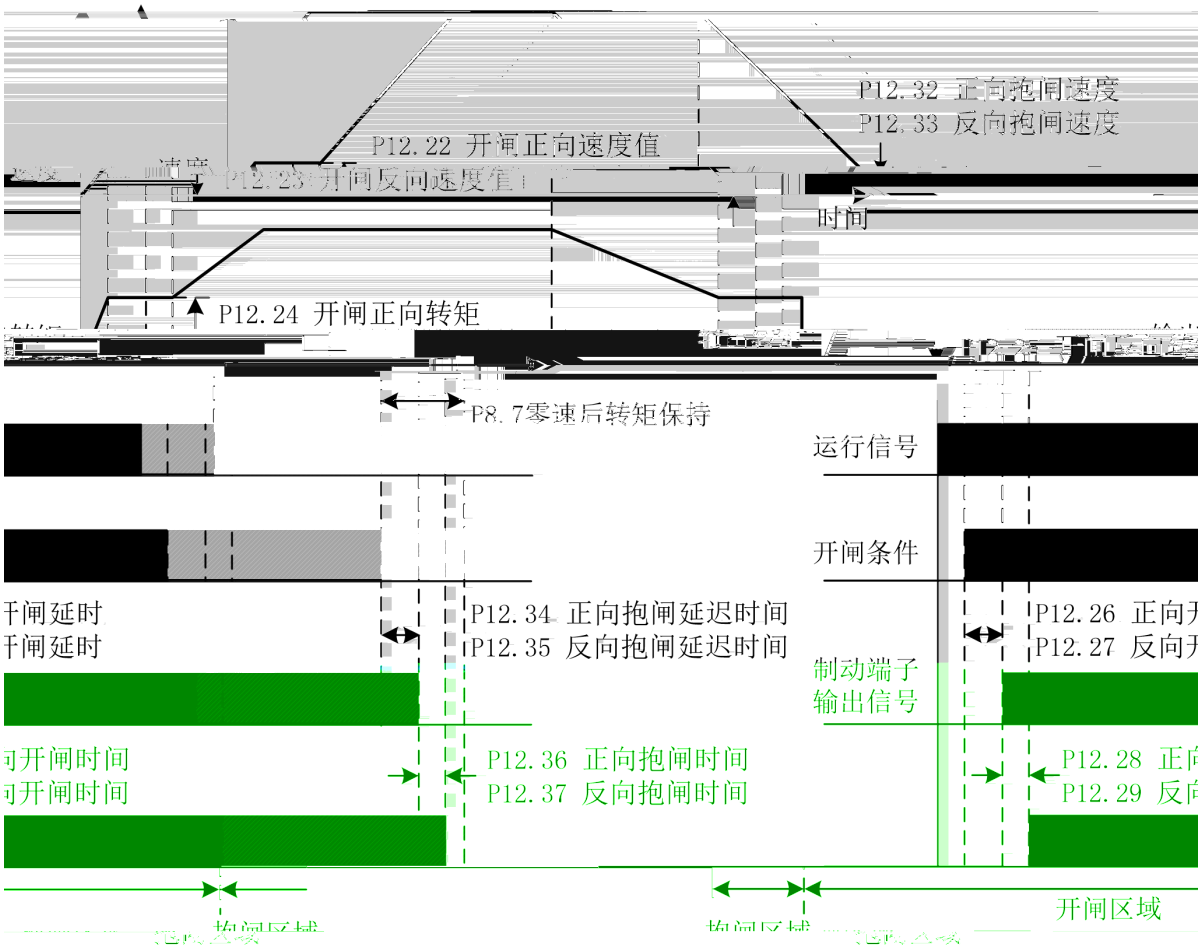
P12.22 P12.23 P12.24 P12.25

P12.32[ ] P12.33[ ]

P12.28 P12.29

P12.36 P12.37

P16


P12.32 正向抱闸速度
P12.33 反向抱闸速度
P12.22 开闸正向速度值
时间
P12.24 开闸正向转矩
P8.7零速后转矩保持
运行信号
开闸条件
P12.34 正向抱闸延迟时间
P12.35 反向抱闸延迟时间
制动端子
输出信号
P12.36 正向抱闸时间
P12.37 反向抱闸时间
开闸区域

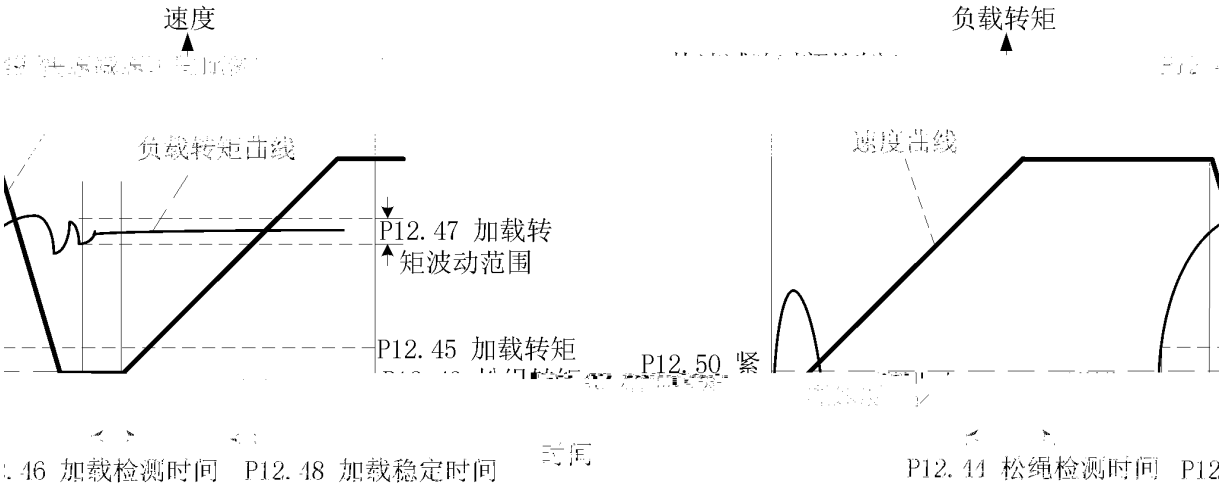
3

P4.2	3	16		
P4.3	4	3		
P12.40		10%	100% P16.6	
P12.41		0.1s		

4

P12.43		20%	
P12.44		0.2s	
P12.45		30%	P 12.43

P12.46		0.1s	
P12.47		10%	
P12.48		3s	P12.47
P12.49		0.2	
P12.50		3%	
P12.38		1	1 0
P4.3	4	3	



1

8.9 V/F

1

P16.0 P16.9

P16.7 120×P16.5/P16.6 P16.9

120×P16.5/P16.7

P16.2 P16.4

2

P16.12

0.5Hz~2Hz >50Hz

1kHz			
5kHz			
10kHz			

	kHz
0.4kW 37kW	5
45kW 160kW	3
185kW 450kW	2

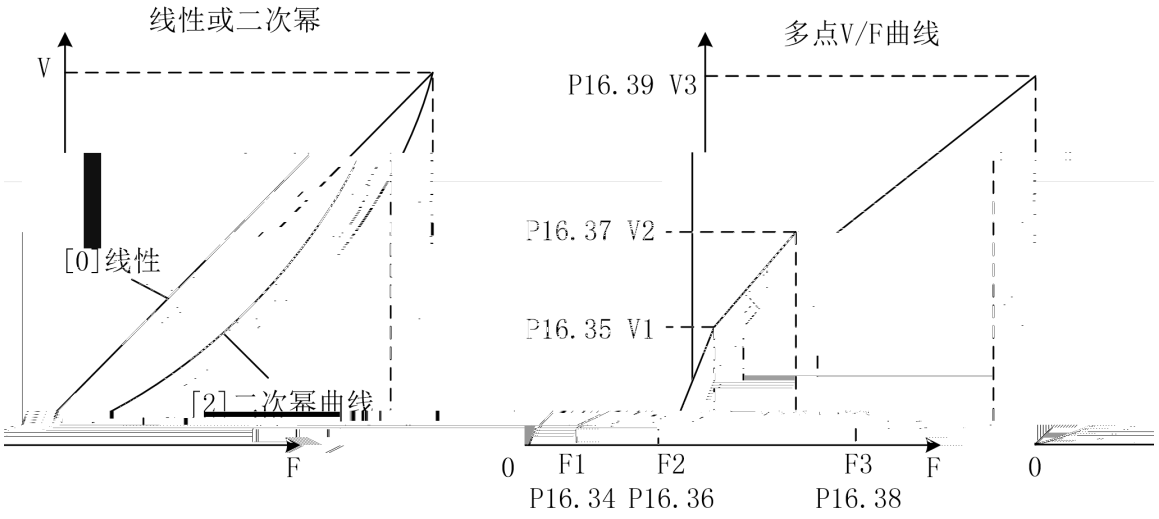
3 V/F

P16.14 V/F P16.11=0

[0] V/F

[1] V/F P16.33 P16.45 V/F

[2]



P16.34 P16.45 V/F V/F

V1 V2 V3 F1 F2 F3

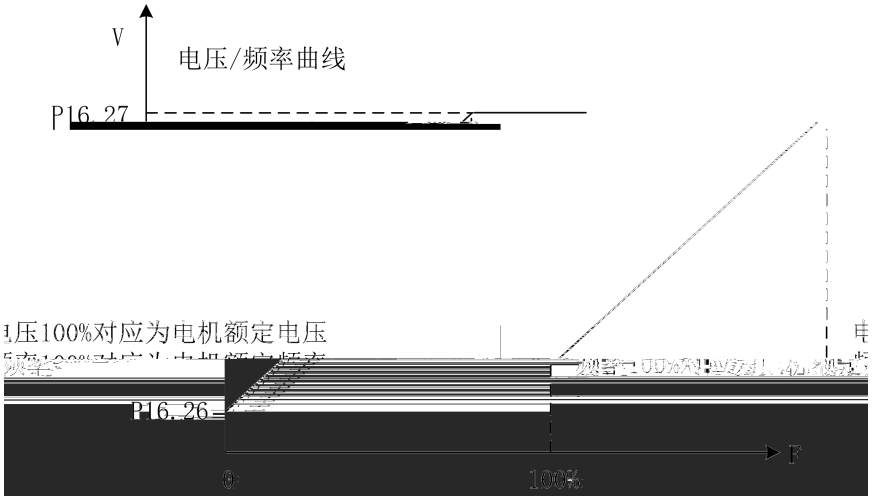
4

P16.15 V/F

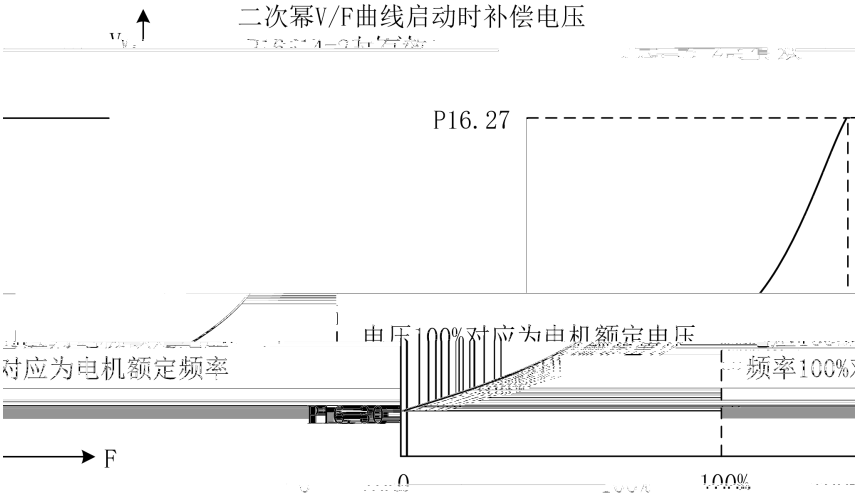
V/F

5

P16.14=[0] V/F V/F P16.26 P16.26 P16.27



P16.14=[2] V/F P16.30 P16.30 P16.27



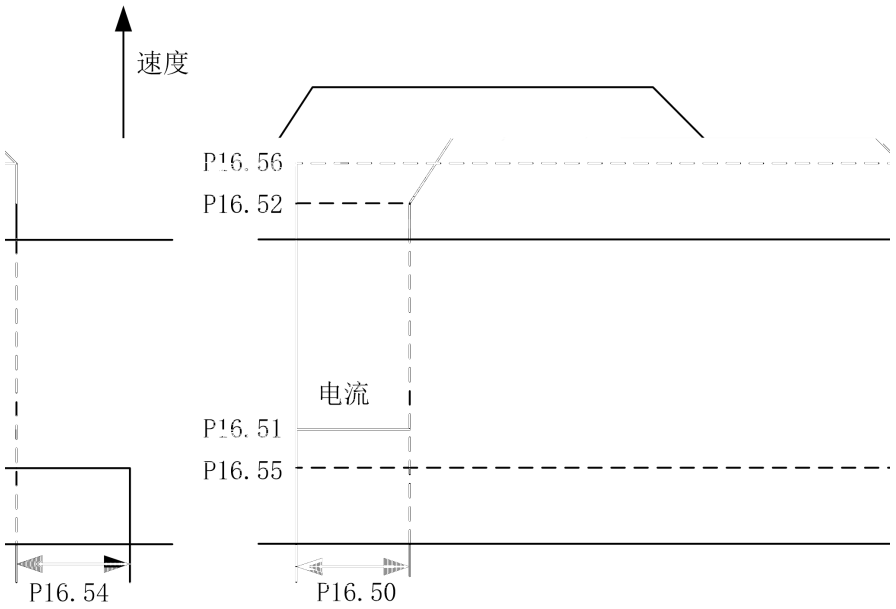
6

P16.50 P16.56

V/F

P16.50 P16.51 P16.52

P16.54 P16.55 P16.56



7

P16.64

8.10

1

P20.0

P20.0=0 P20.1=0 P20.2=0

P20.0=0 P20.1≠0 P20.2≠0

```
P20.0=1
```

P20.26 P20.27 0

2%

P20.34 [0] 1

0 P20.26 P20.27 0

P20.26 50% 100% P20.27 3% 5%

P20.34 [1] 2

200 P20.26 P20.27 0

HF620 P20.34 [1]

HF620 P20.34 [0]

6 DROOP

DROOP DROOP

P20.60 0

DROOP P20.61 DROOP

7 1

8 2

P20.1 P20.2 [0]

9

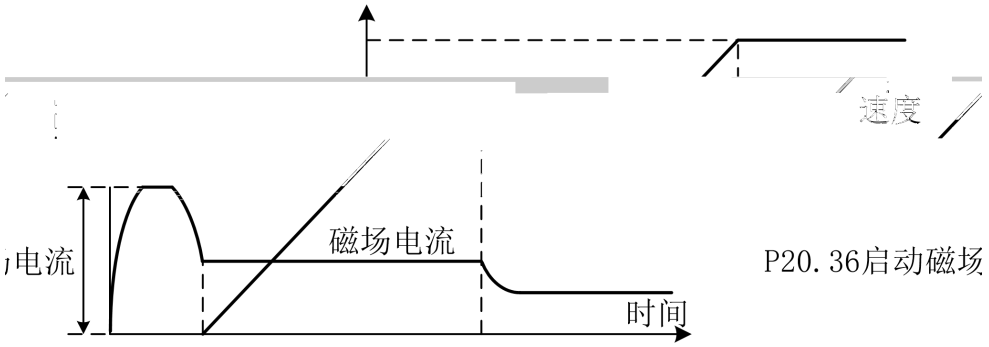
PGD1

PLC DI

DP CW0.10 “1”

10

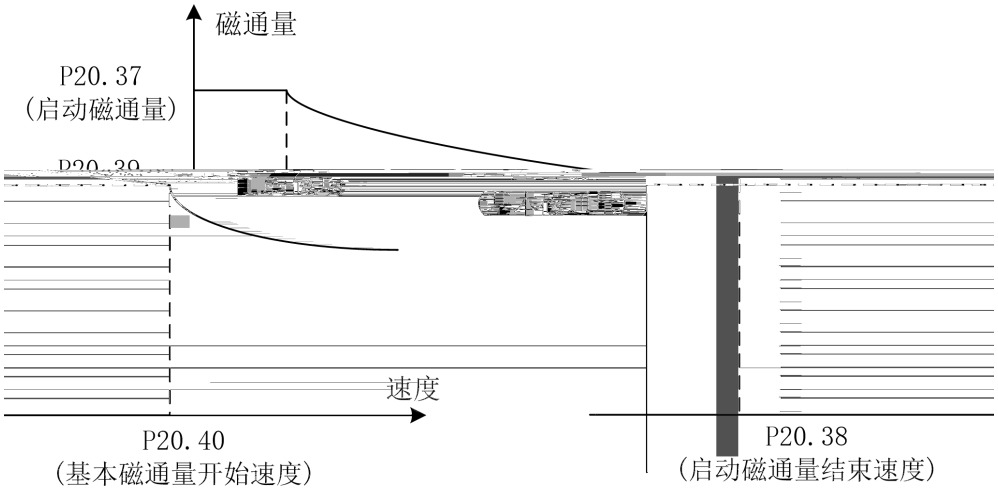
P20.36



P20.36启动磁场

11

P20.37 P20.40

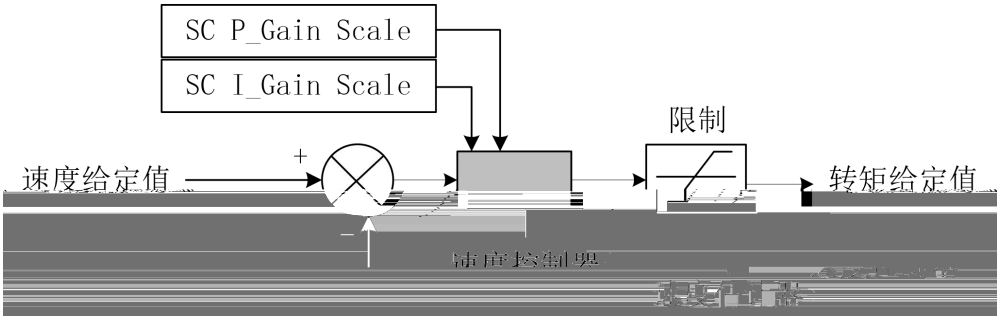


12

P20.55 ,

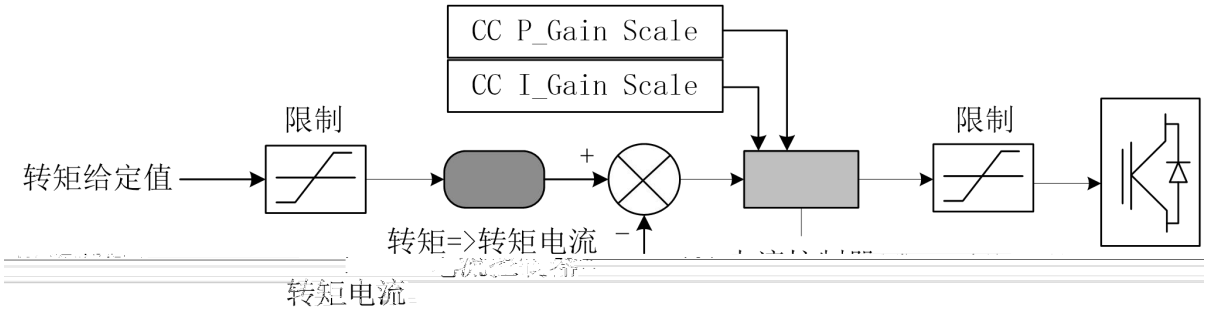
P20.56 ,

%



13

P20.62 P20.63 %



9.

9.1

W01	SYS_NOT_RDY	(Ready)	
W02	NO_DRV_ENABLE	[ ]	P3
W03	LOCAL_EM	[ ]	P3
W04	REMOTE_EM	[ ]	P3
W06	OT	P7.14( )	
W09	DP P/BALARM	DP	DP
W10	MODBUS MODBUS ALARM	Modbus	Modbus
W15	PARAMETER ERROR		
W18	Temp_Sensing Fail		
W20	SLV_NOT_RDY		
W21	1 SLV1_CAN_ERR	1	1

9.2

[E051]	U IGBT ERR_UTnotreset	IGBT IGBT
[E053]	V IGBT ERR_UTnotreset	IGBT IGBT
[E054]	W IGBT ERR_UTnotreset	IGBT IGBT
[E056]	ERR_SLAVE_FAULTnotreset	
[E057]	ERR_DBnotreset	IGBT IGBT

[E111]	OL	P7.48(1) P7.49(1) P7.48 P7.49
[E112]	ZC	P7.8
[E113]	MIP	
[E114]	MOP	
[E115]	OS	P7.19 P7.19
[E116]	SLVC Fail	P7.23
[E117]	MOTOR STALL	P20.14 P20.15
[E118]	PG ERROR	P20.14 P20.15
[E119]	SPEED ABNORMAL	P20.14 P20.15 P7.31 P7.32
[E120]	IGBT OT	
[E138]	TEMP_SENSINGFAIL	
[E139]	Pre_Charging Fail	 P7.95
[E140]	LineUV	
[E141]	Line OPEN	
[E142]	LineDetectionError	

[E143]	LineSWFail	DI
[E144]	LineSW SHORT	
[E145]	(AFE) Line OV	P16.0
[E146]	(AFE) Line Over_Freq	
[E152]	U IGBT PDP[U]	IGBT IGBT
[E154]	V IGBT PDP[V]	IGBT IGBT
[E155]	W IGBT PDP[W]	IGBT IGBT
[E156]	Hardware OC	
[E157]	PDP[DB]	
[E160]	SLAVE FAULT	
[E161]	SLV_NOT_RDY	
[E162]	1 CAN SLV1_CAN_ERR	1
[E167]	CAN CAN_ERR	
[E170]	MOTOR TUNING FAIL	P7.33
[E180]	DP P/B ERROR	
[E181]	DP P/B_EM	CW0.4
[E200]	LOCAL_EM	[ ] P3

[E201]	REMOTE_EM	[ ] P3
[E202]	Modbus MODBUS EMERGENCY	Modbus CW0.4
[E203]	DRIVE DISABLED	DP
[E204]	DI ERR DUPLICATE DI SET	DI
[E210]	Panel Error	
[E220]	CRC MEMORY CRC ERR	
[E221]	PARAMETER ERROR	

9.3

- ON
- COM
- N

- ON
- COM
- æ ╜ȁ ╫ ╫p

10.

1.

2.

3.

4.

1. CMOS

2.

3.

10.1

10.2

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

10.3

	2	1 2
PCB		

10.4

5

5

(400-0077-570)

1 40

2 80%

3 24 /

10.5

1

2

5

1

2

3