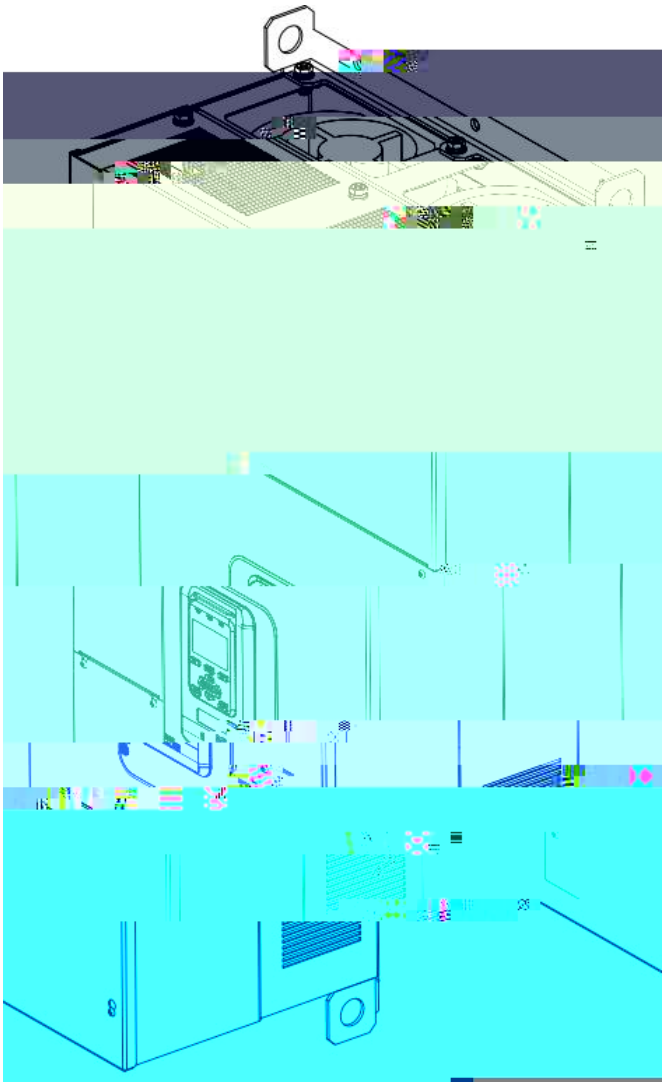
HF650

1.09

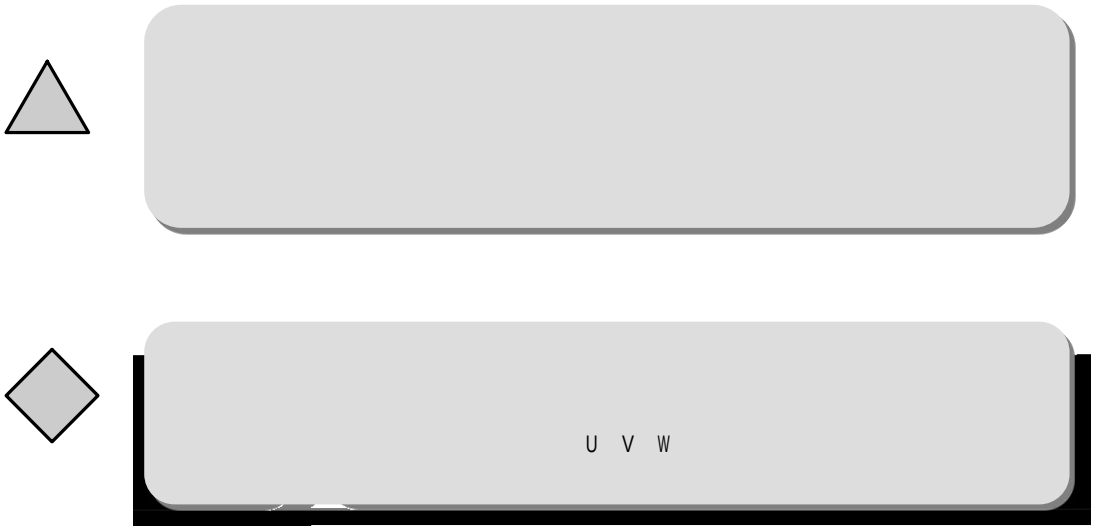
Wuhan Guide Technology Co.,Ltd.



HF650

1.

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

1

RCD

RCM RCD

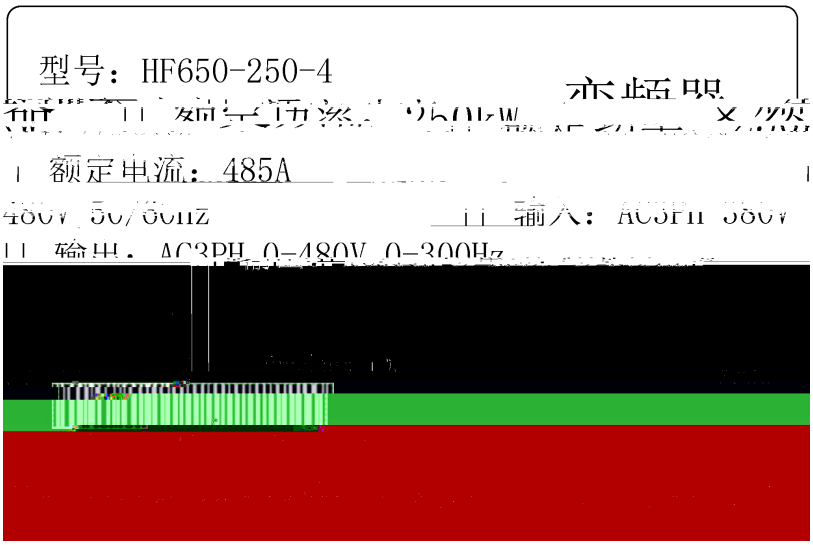
RCM

B RCD RCD

RCD RCD

2

HF650 2-2 250kW



2-2

HF650-250-4 HF650 250kW 400V

AC

3PH

380V-480V 50/60Hz

0-480V 0-300Hz

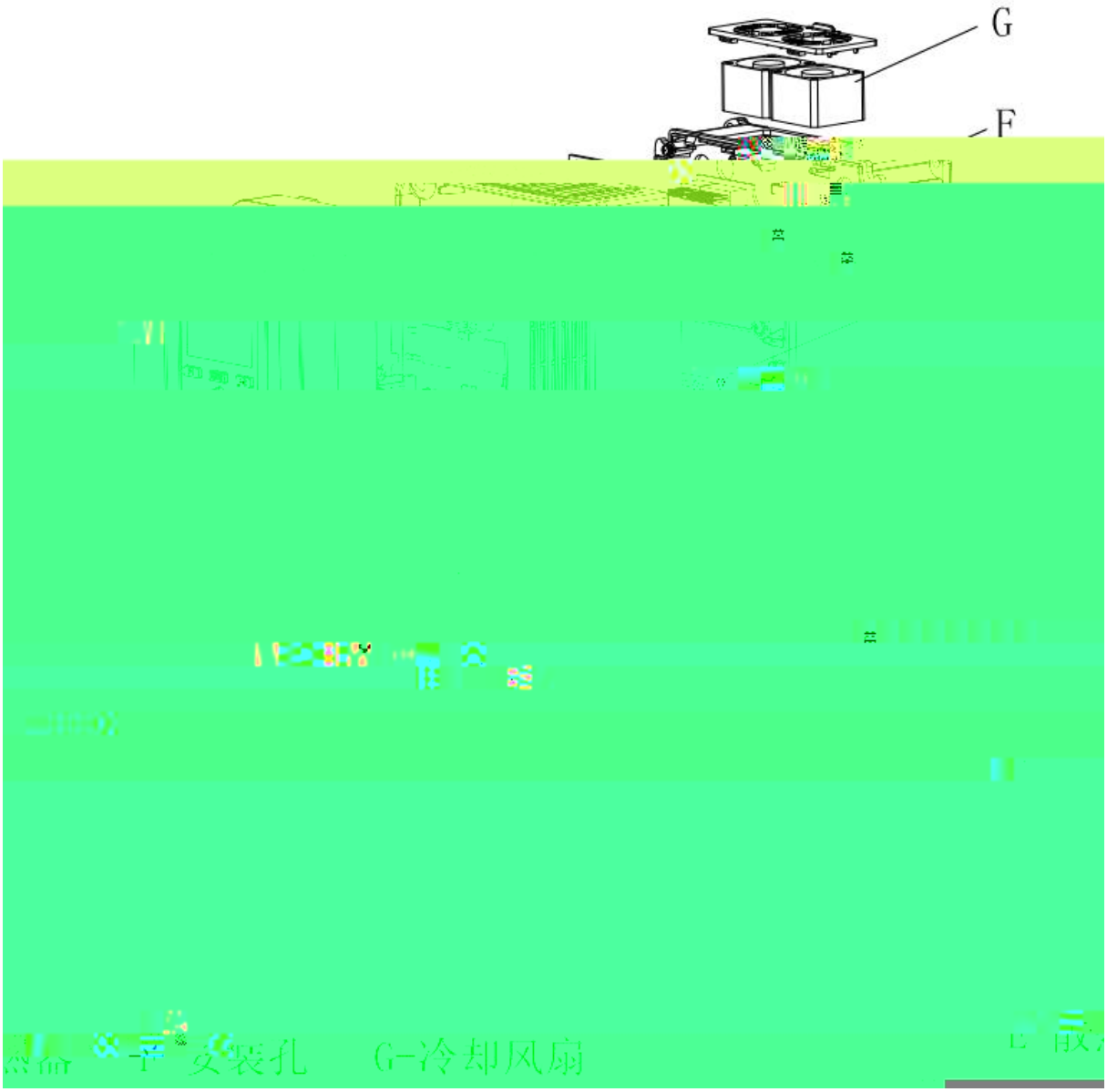
2.3

2-3 HF650

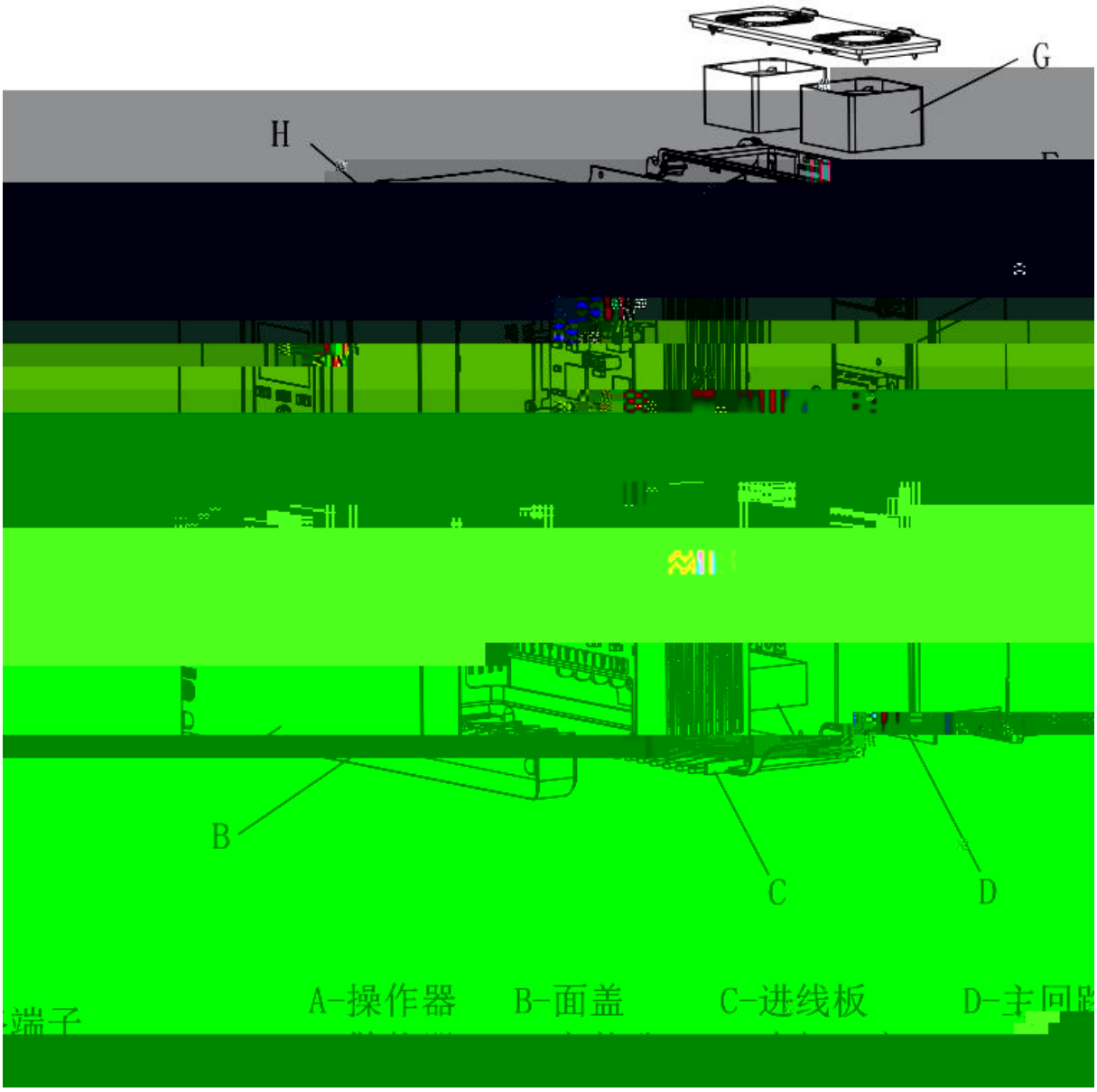
	[A]	[kW]	[A]	[kW]		(kg)
HF650-0R4-4	1.8	0.4	--	--	I1	3
HF650-0R7-4	3.3	0.75	1.8	0.4		
HF650-1R5-4	4.8	1.5	3.3	0.75		
HF650-2R2-4	5.7	2.2	4.8	1.5	I2	3.5
HF650-3R7-4	10.2	3.7	5.7	2.2		
HF650-5R5-4	15	5.5	10.2	3.7		
HF650-7R5-4	18	7.5	15	5.5		
HF650-011-4	24	11	18	7.5	I3	4.5
HF650-015-4	32	15	24	11		
HF650-018-4	41	18.5	32	15	I4	10.5
HF650-022-4	47	22	41	18.5		
HF650-030-4	65	30	47	22		
HF650-037-4	75	37	65	30	I5	35

HF650-045-4	94	45	75	37	I6	52
HF650-055-4	115	55	94	45		
HF650-075-4	155	75	115	55		
HF650-090-4	188	90	155			

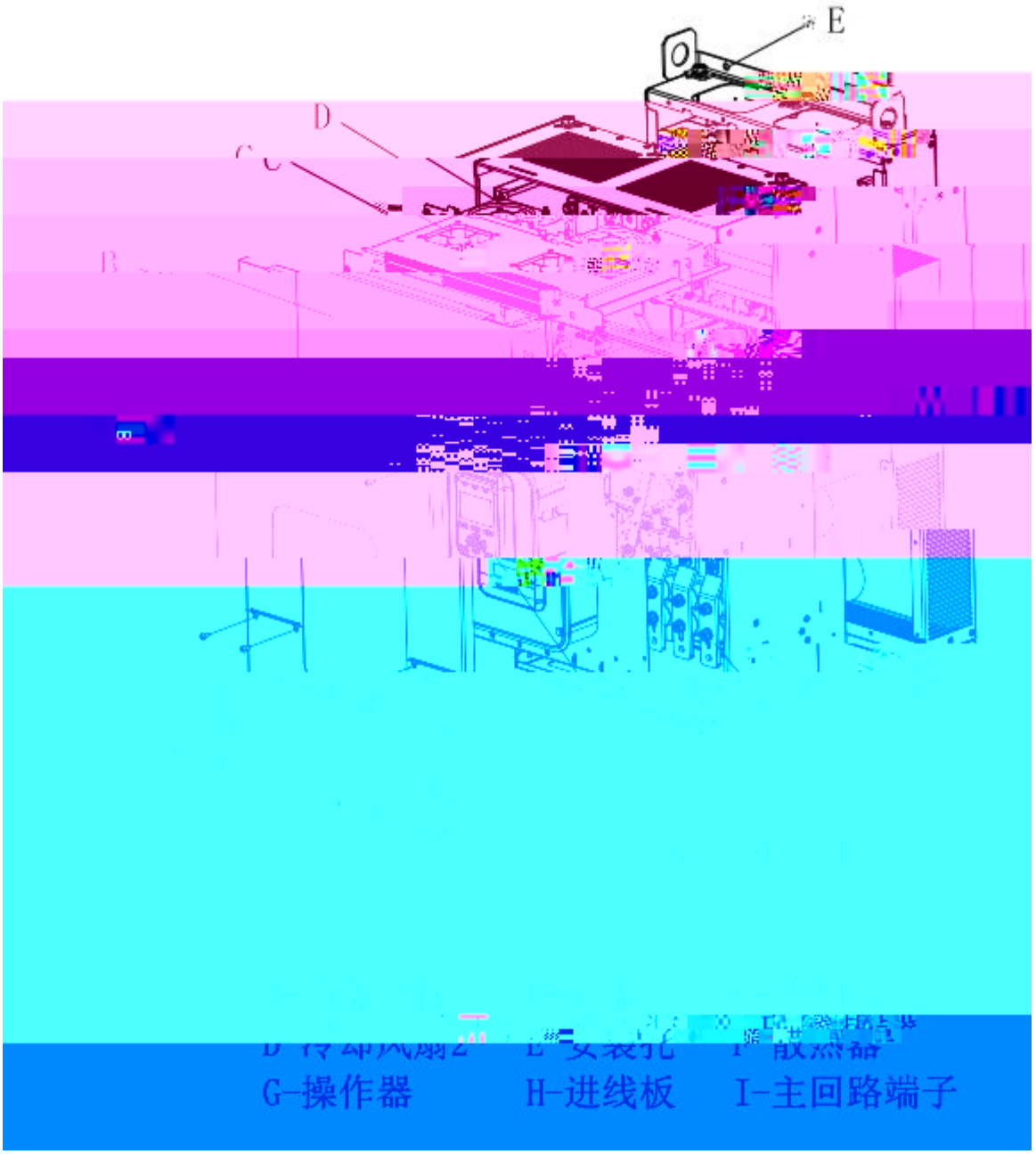
HF650-011-4　HF650-015-4



HF650-018-4　　HF650-030-4

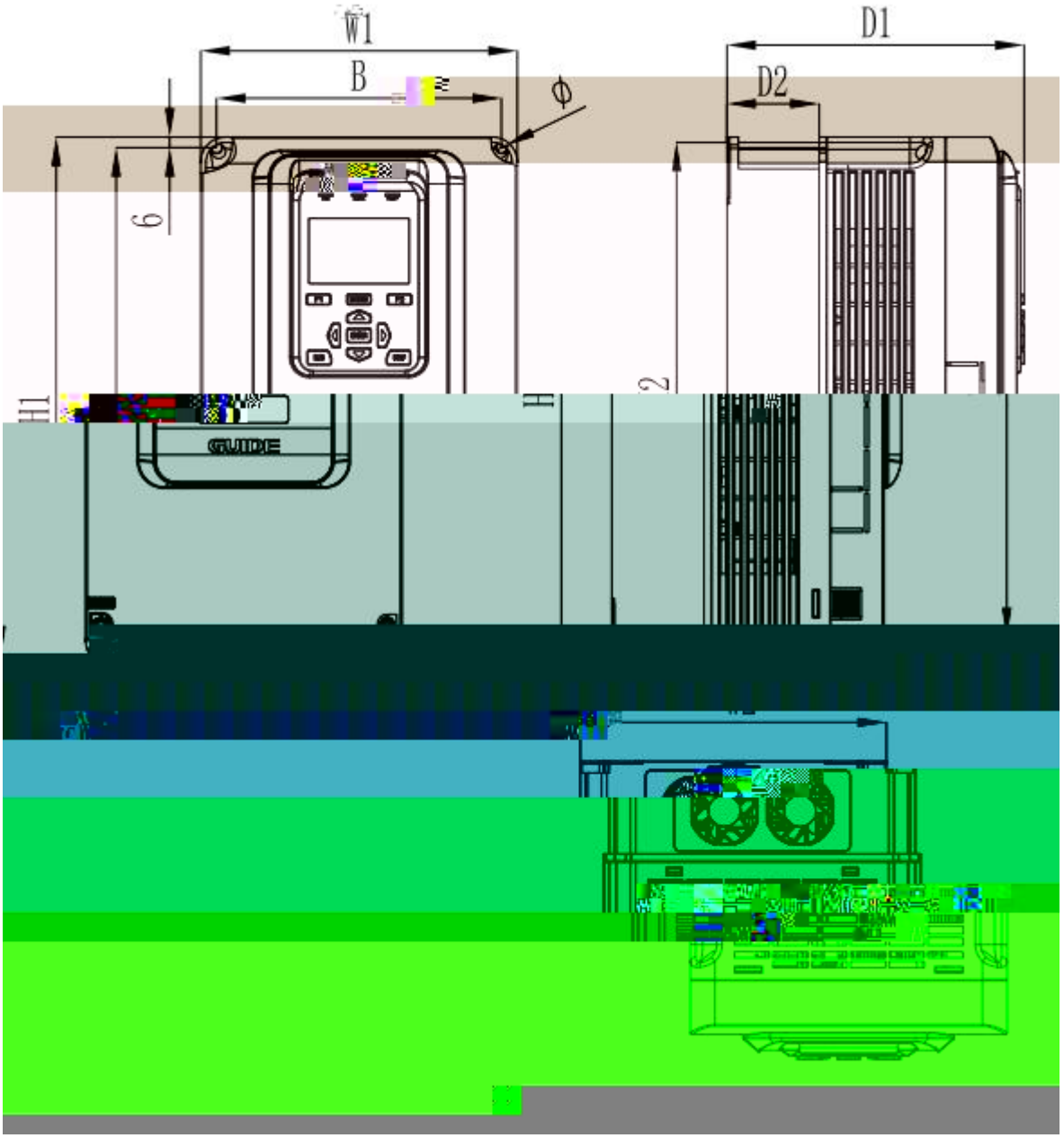


HF650-037-4　　HF650-090-4

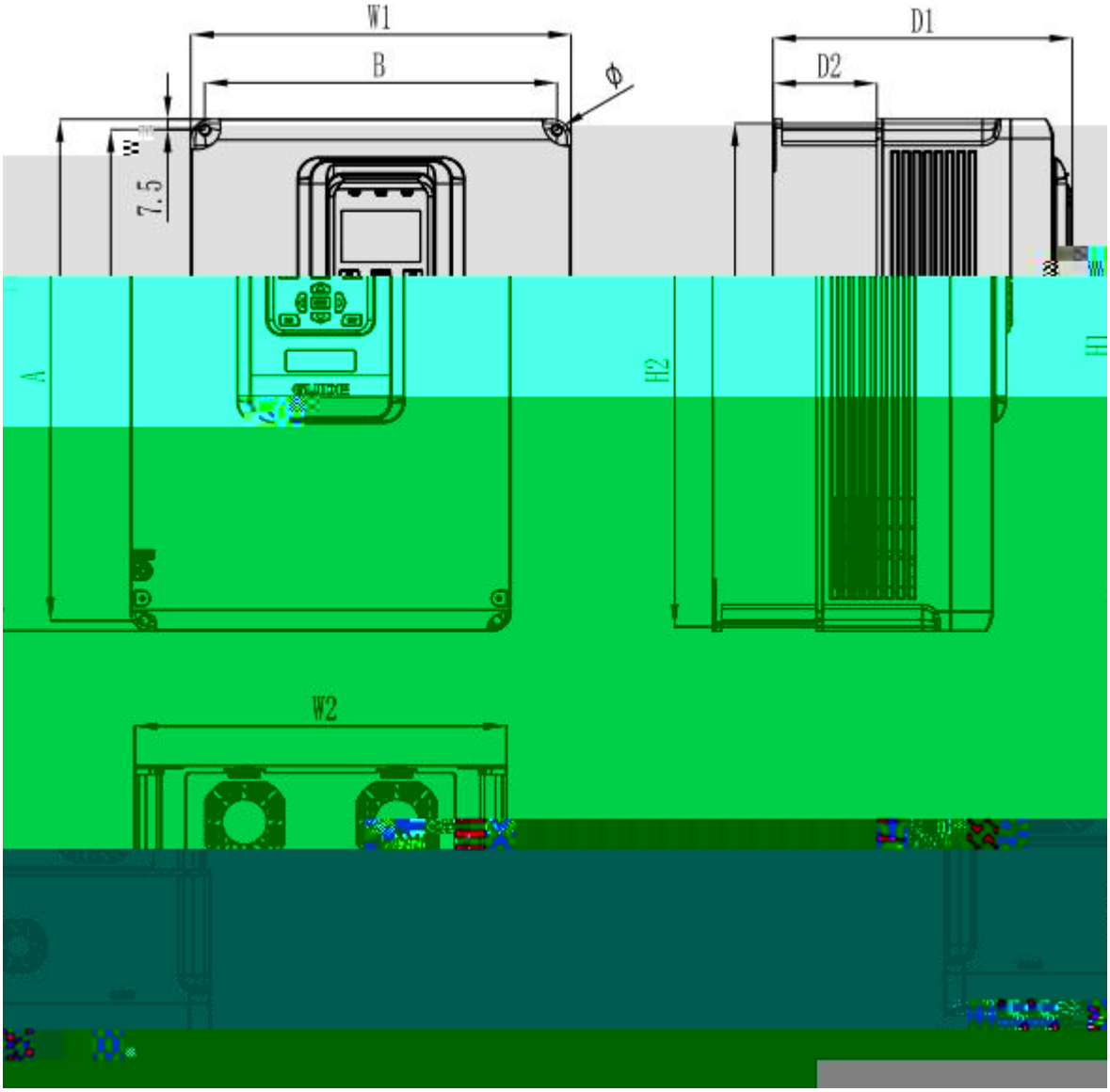


HF650-110-4 HF650-500-4

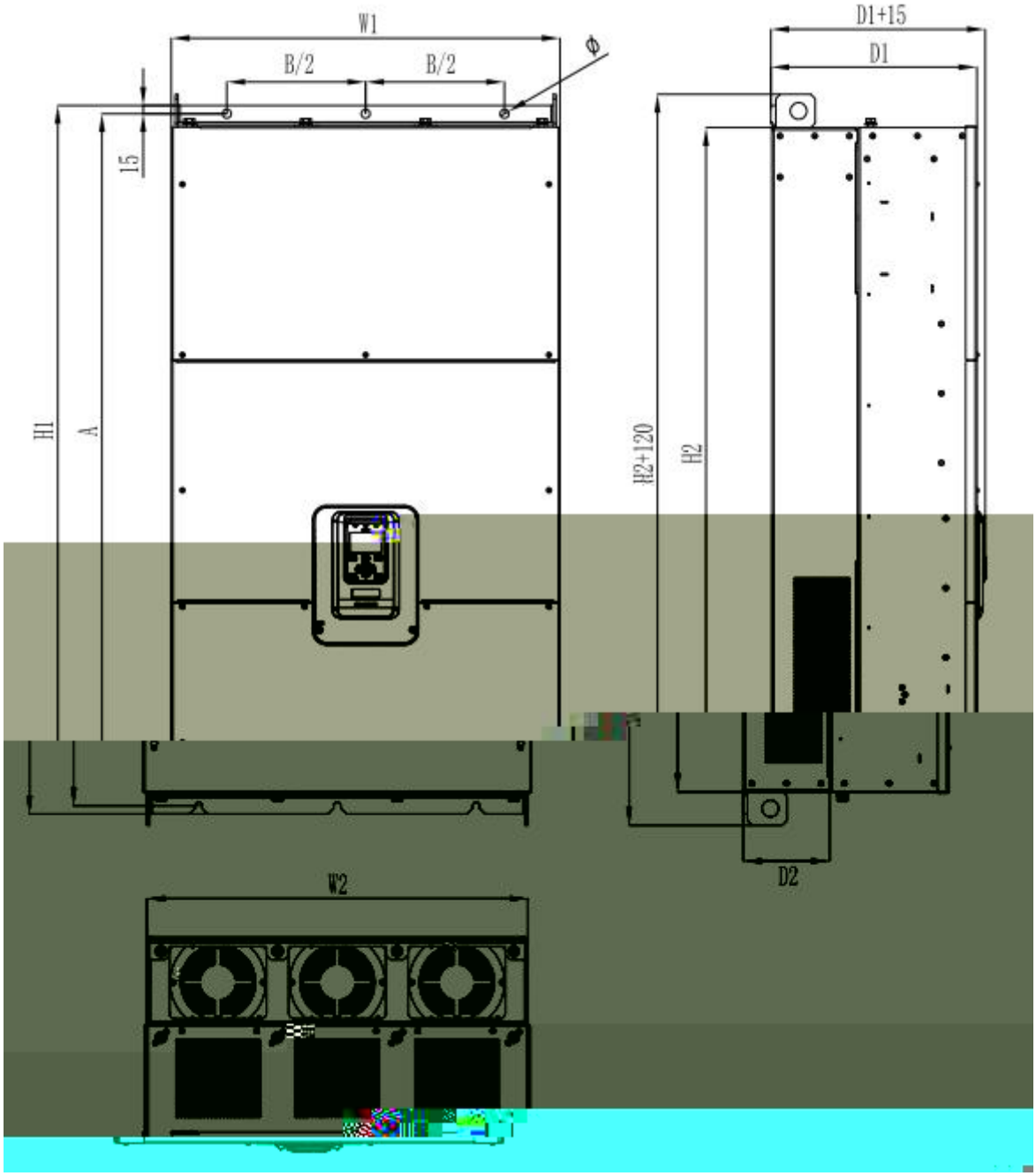
2.5



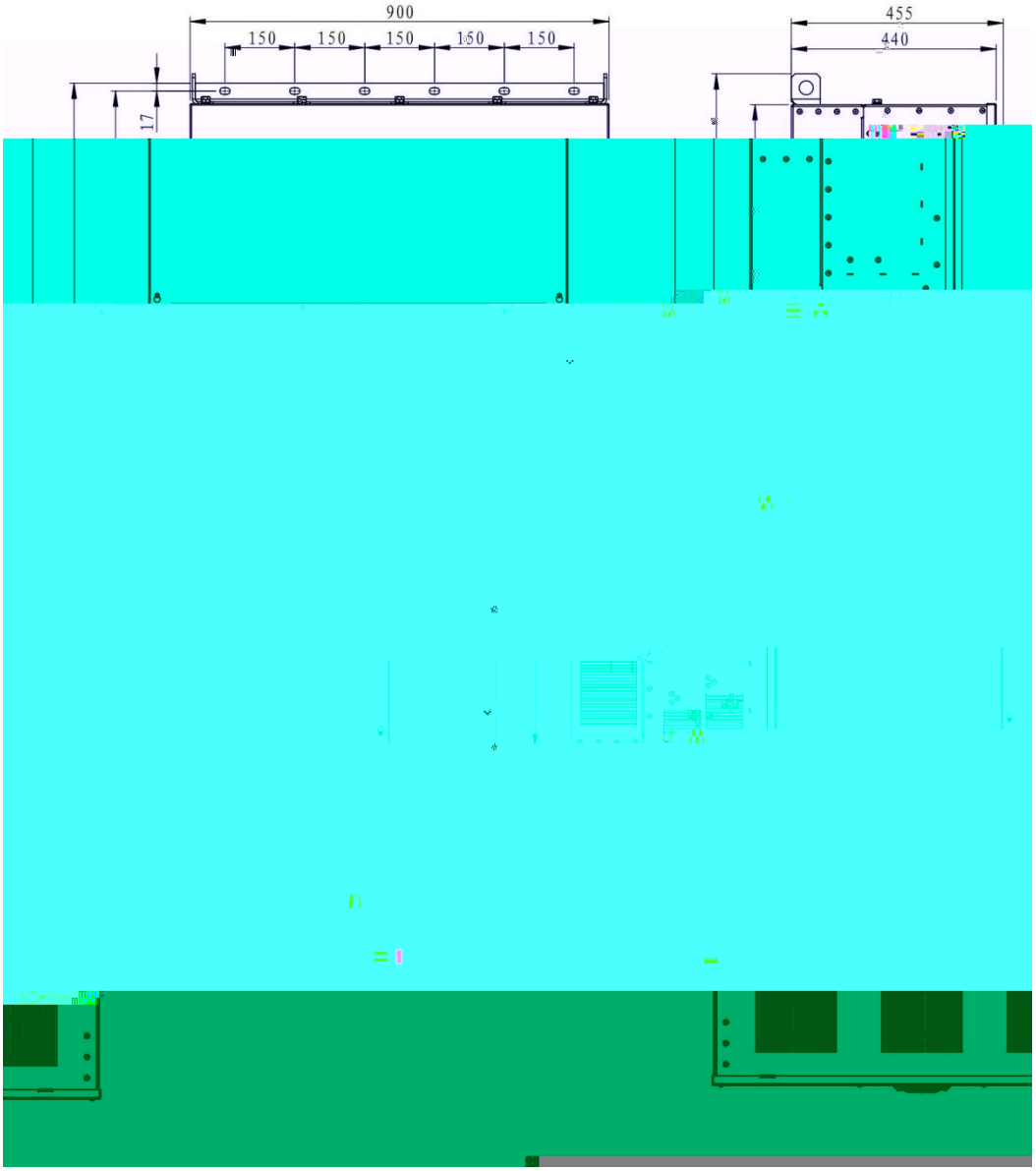
I1-I3



14



17-19


900
150
150
150
150
150
17
455
440

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)
		±0.02% (VC) ±0.2% (SVC) ±0.5% (V/F)
		5 150% 1 200% 5
	PID	
		DP CAN Modbus Ethernet Profinet
		PID / / / / AFE
		8 2 -10 +10V 0mA/4mA 20mA
		5 3 2 2 0 +10V 0mA/4mA 20mA
	LCD	
		1000 1000 100 1% 3000

-10 +40 40 1

1% 50

-10

95%RH

-20 +60 m"

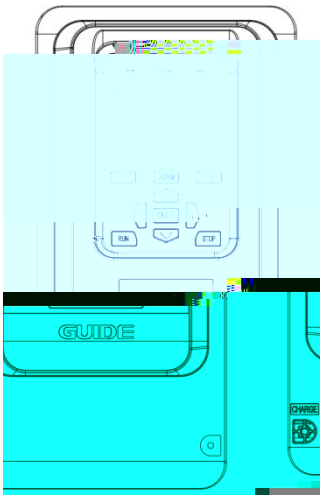
10-30

HF650-015-4	15	0.5	HF650-250-4	250	7.044
HF650-018-4	18.5	0.645	HF650-280-4	280	7.708
HF650-022-4	22	0.722	HF650-315-4	315	8.003
HF650-030-4	30	0.906	HF650-355-4	355	8.718
HF650-037-4	37	1.128	HF650-400-4	400	9.1
HF650-045-4	45	1.313	HF650-500-4	500	11.13

	BU110-4	110KW
	BU160-4	132KW-160KW
	GDBU-4045B	
	GDBU-4220B	

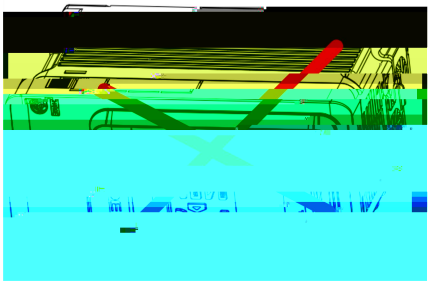
3.2

3.2.1



OK

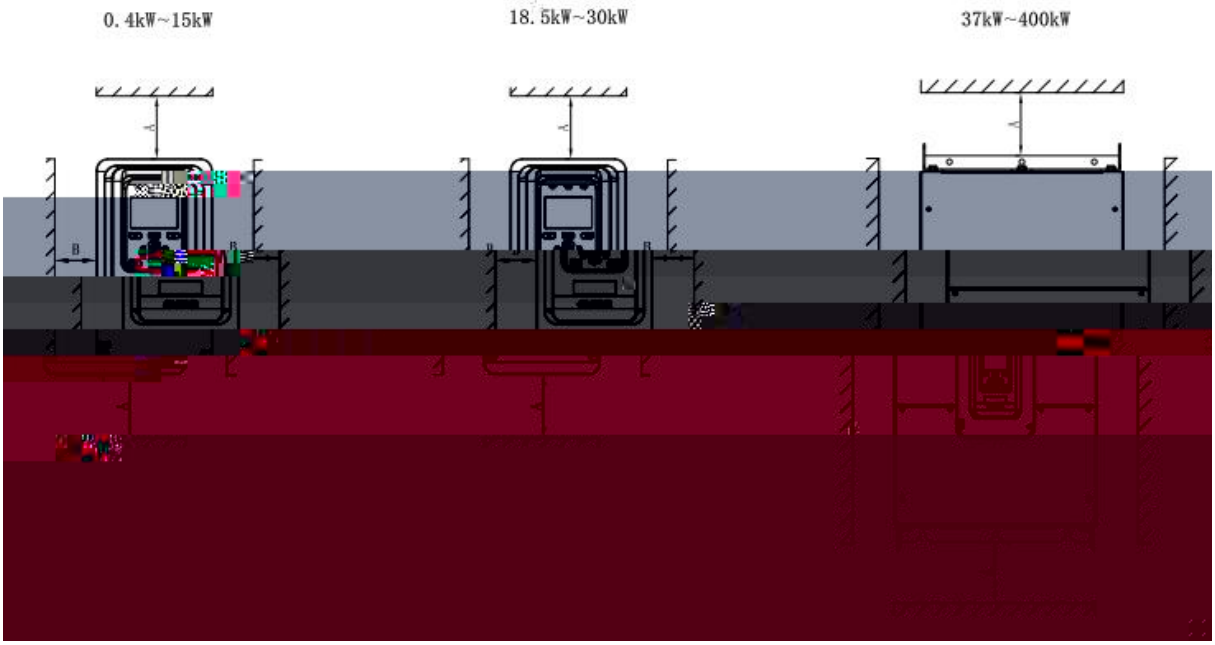
NG



NG

3.2.2

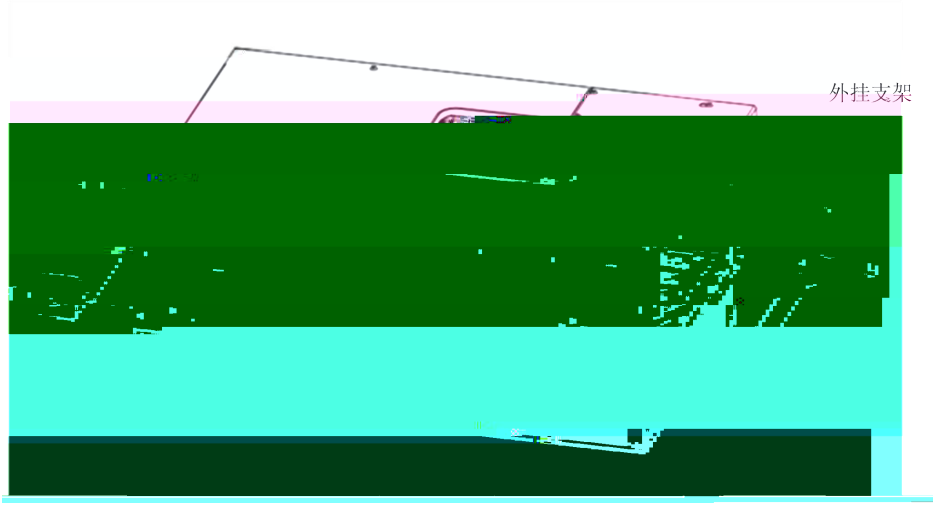
1



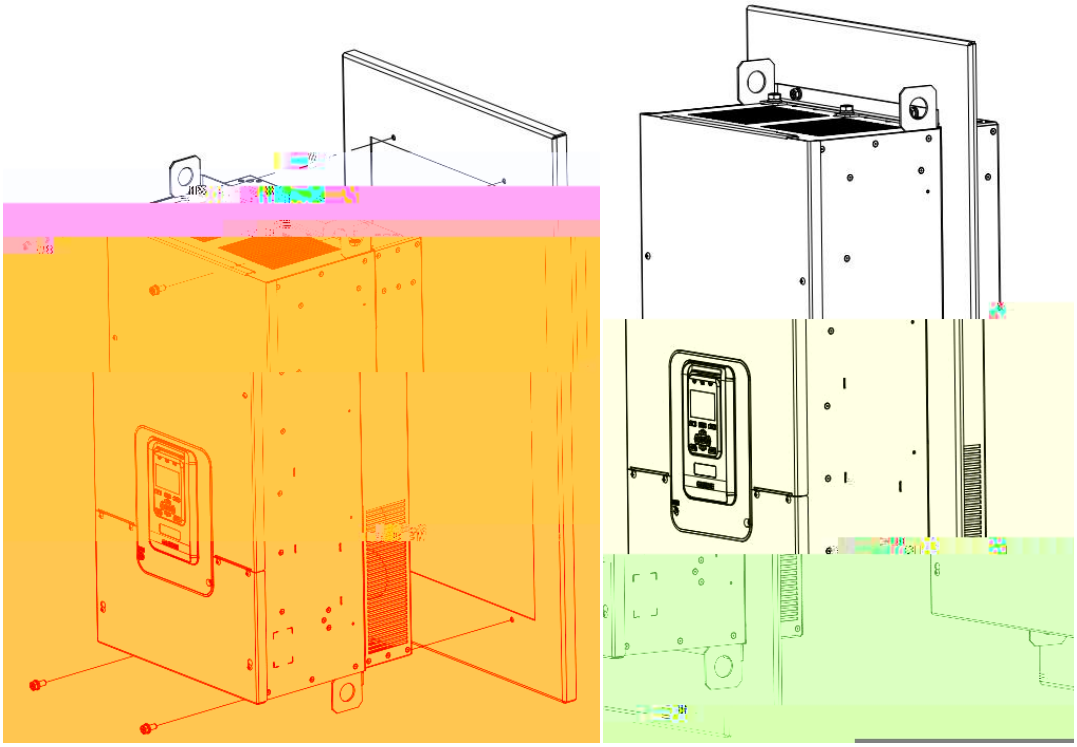
3

0.4kW~15kW	A ≥ 100mm	B ≥ 40mm
18.5kW~30kW	A ≥ 200mm	B ≥ 50mm
37kW~400kW	A ≥ 300mm	B ≥ 50mm
500KW	A ≥ 400mm	B ≥ 50mm

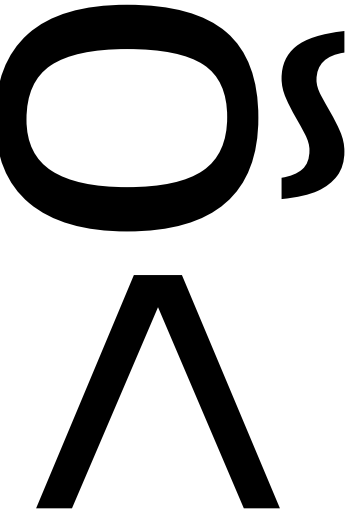
2



3-2



3-3



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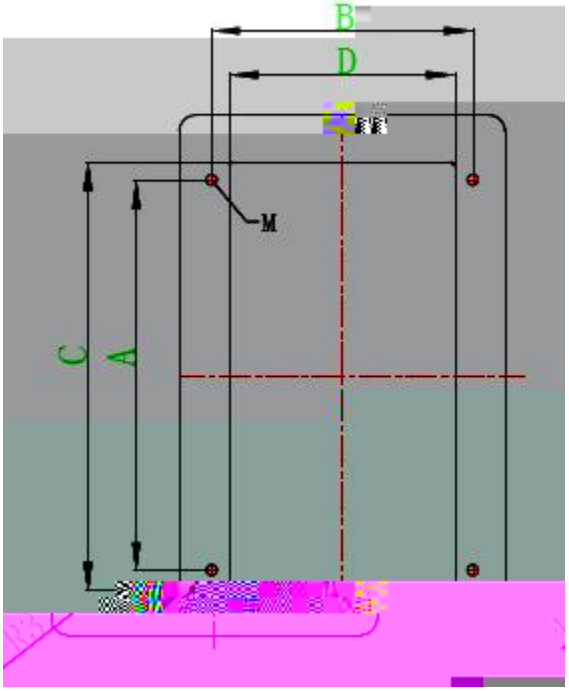
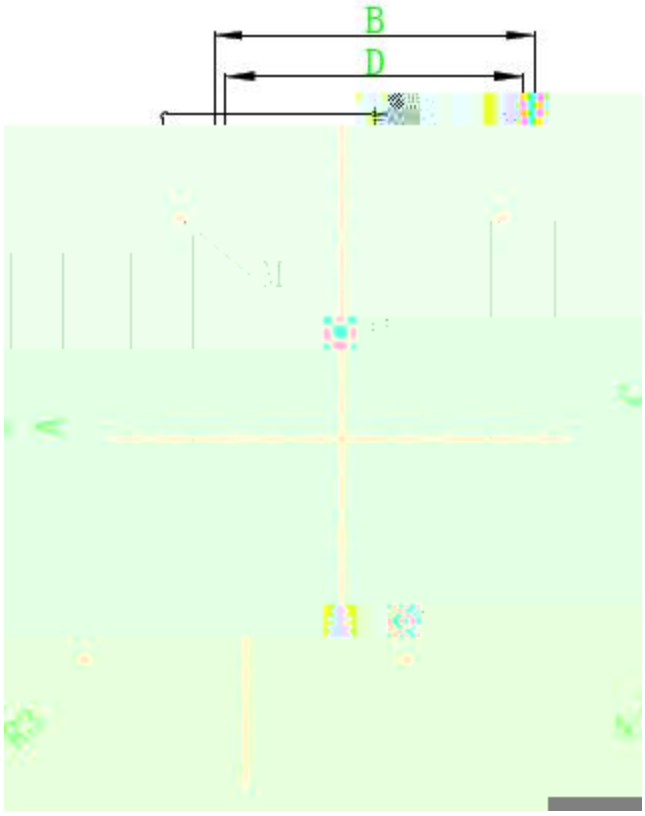
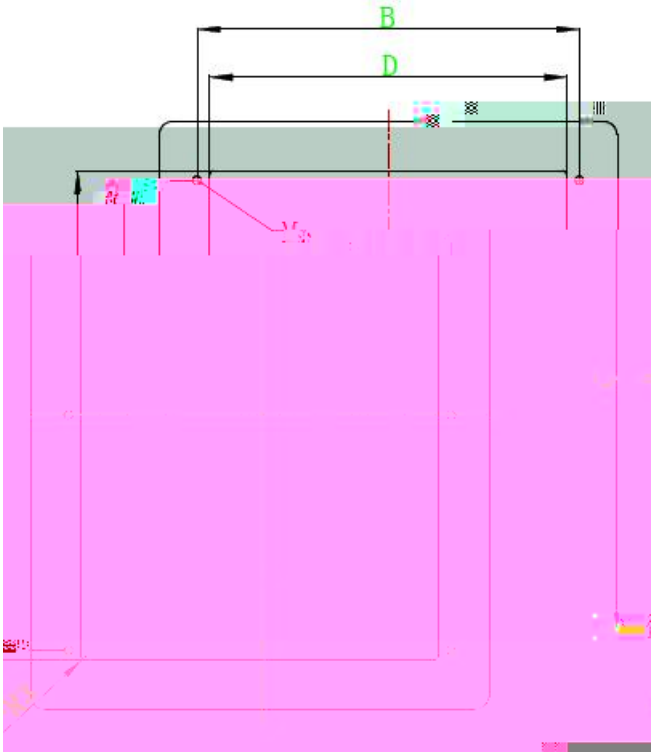


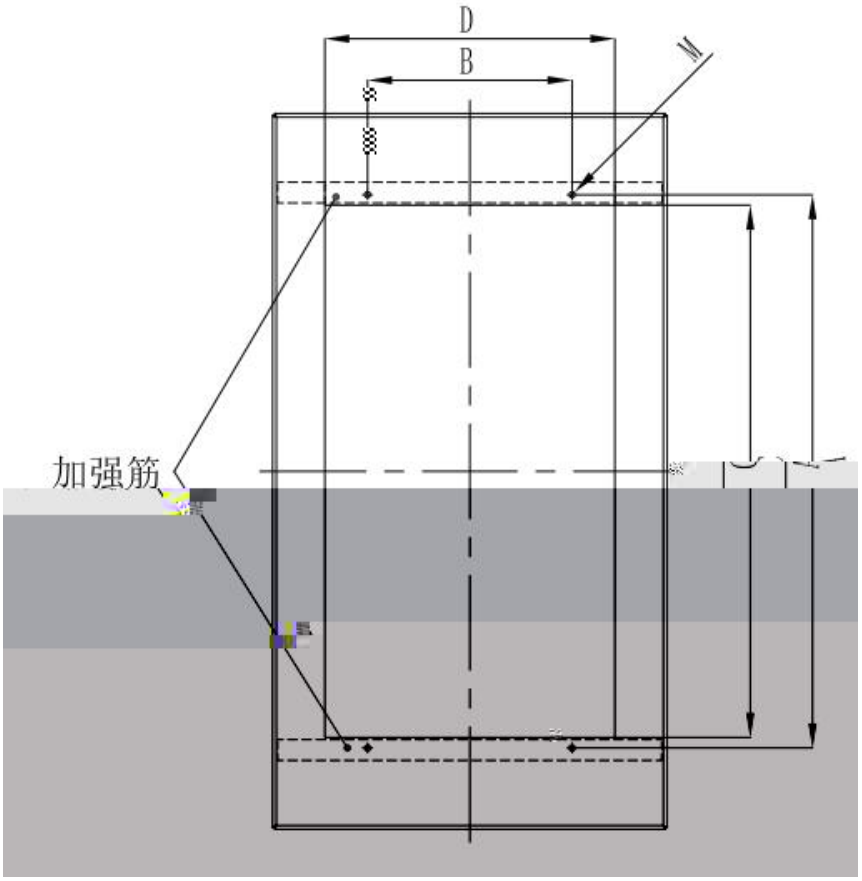
3-5 I1-I2



3-6 I3



3-7 I4



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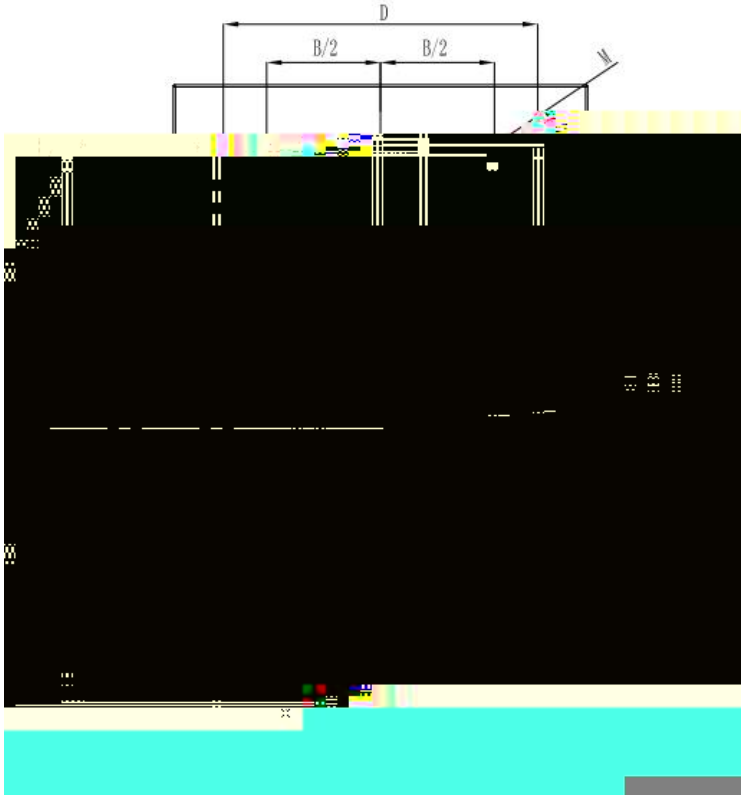
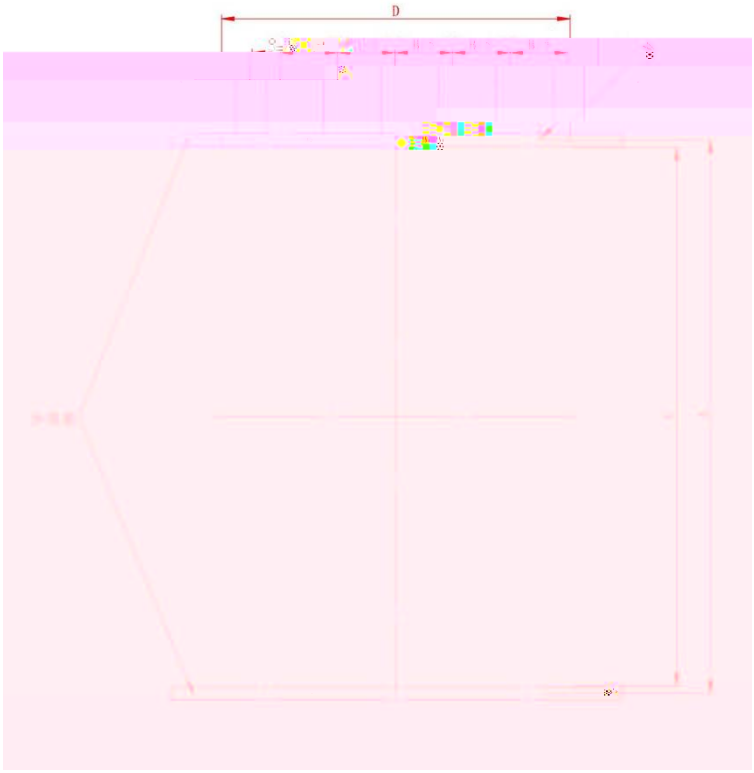


3-9 I7-I9



3-10 I10

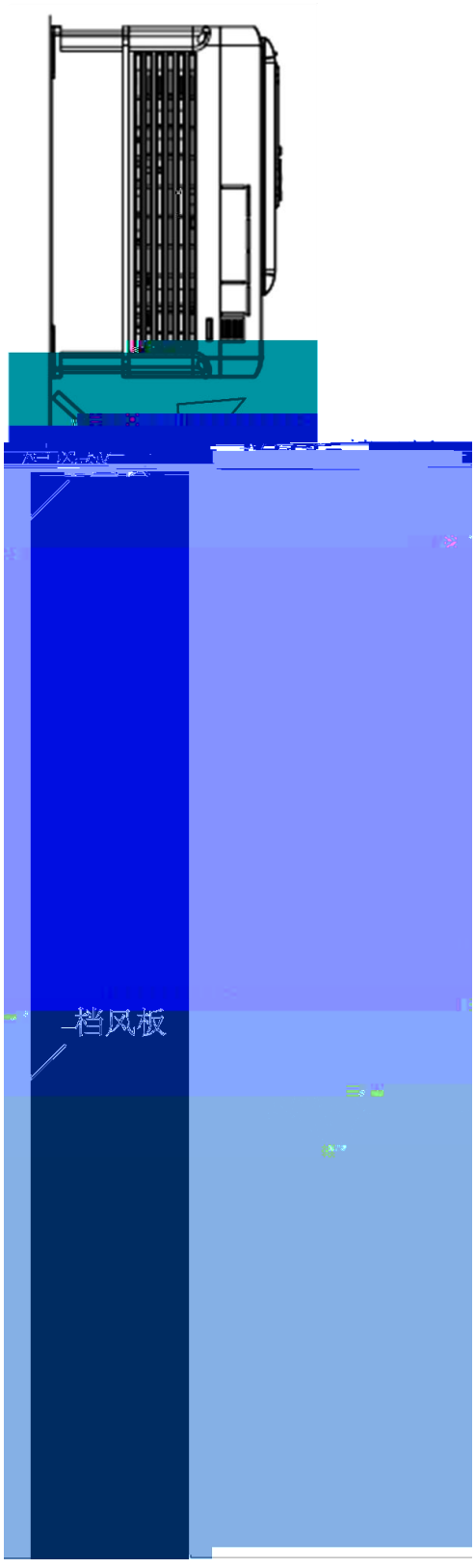
(mm) (mm)

A B C D

I1 240 160 262.5 108 Ď 1

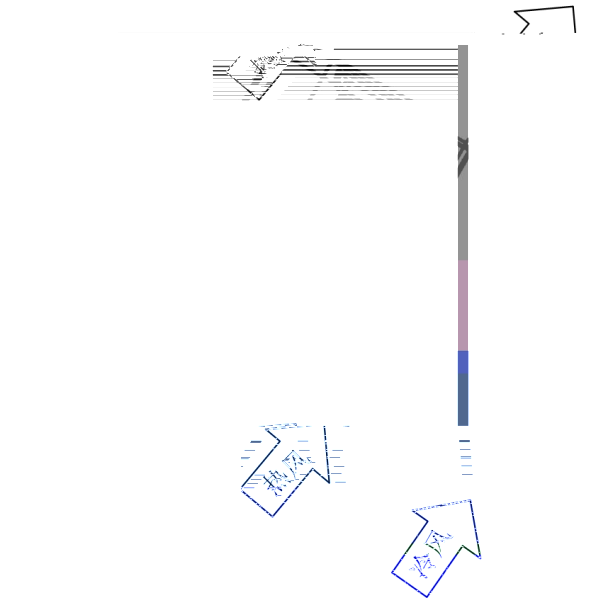
3

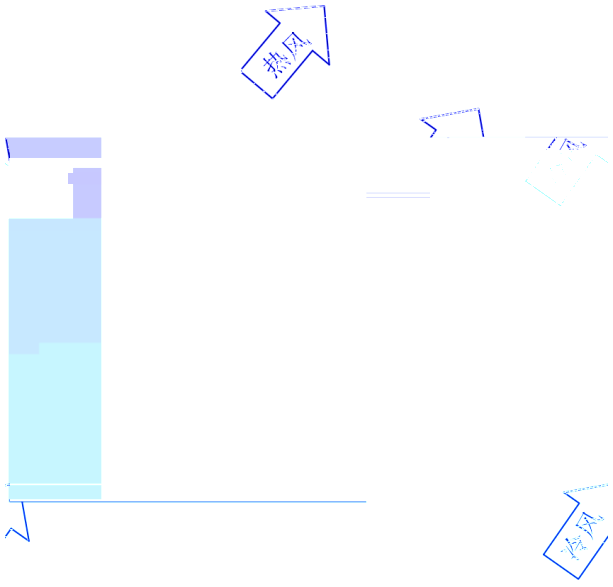
IT SJO JT0 0 Ď J



3-10

3-11





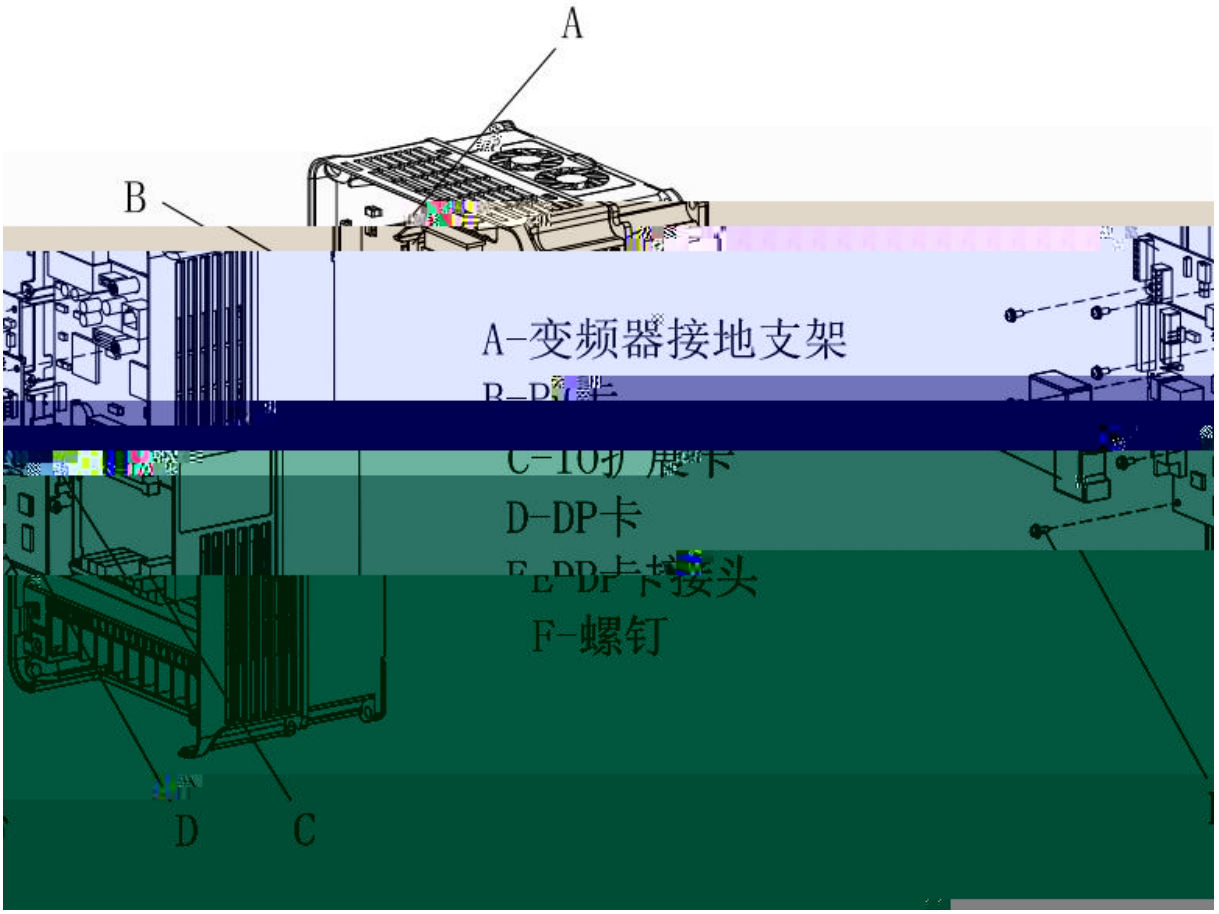
3-11

3.3

1 1 4 5mm Ø o 4

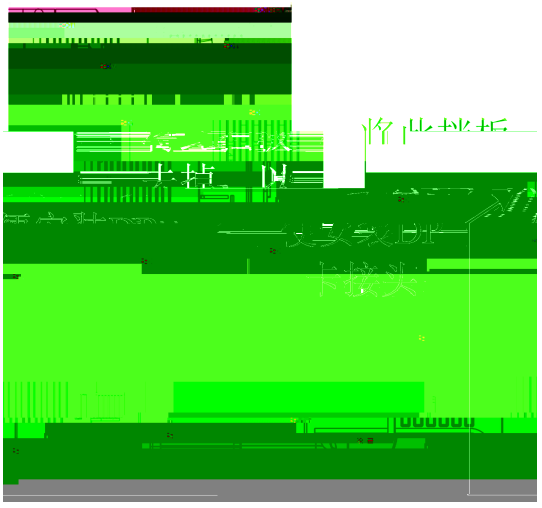
3.4

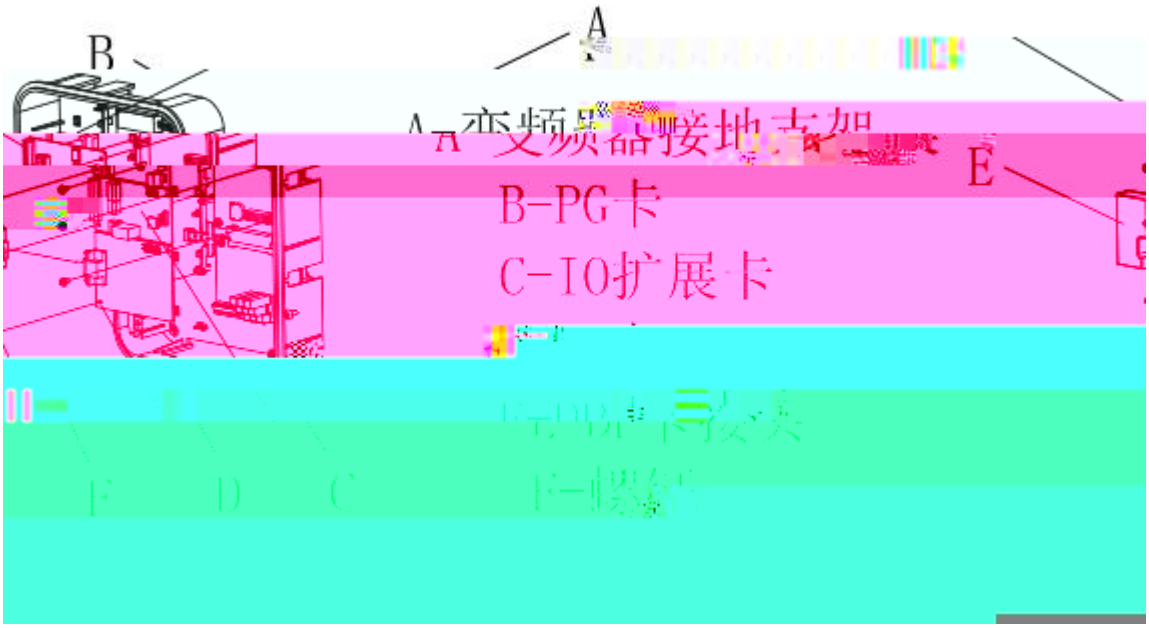
HF650



30kW

15KW DP





30KW

3.5 PGC2

GDHF-PGC2 PG 11

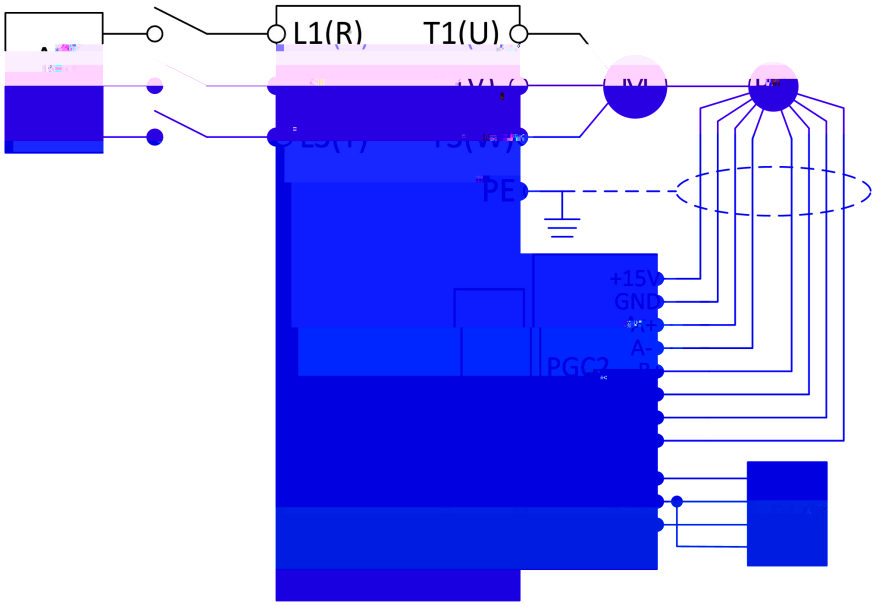
A+	A-	B+	B-	Z+	Z-

+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

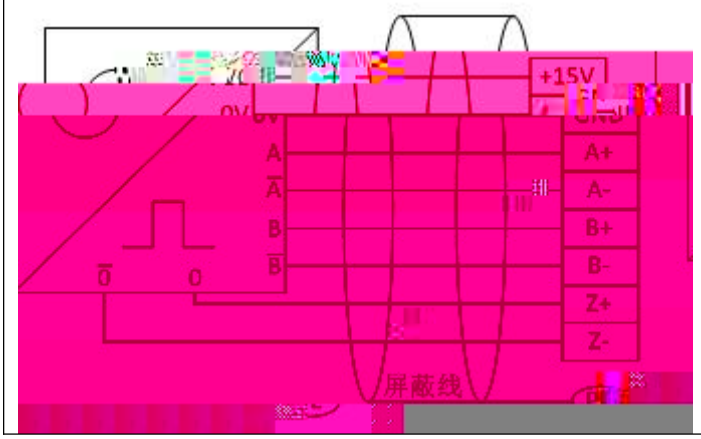
5 PGC2 15V RS-422

PGC2

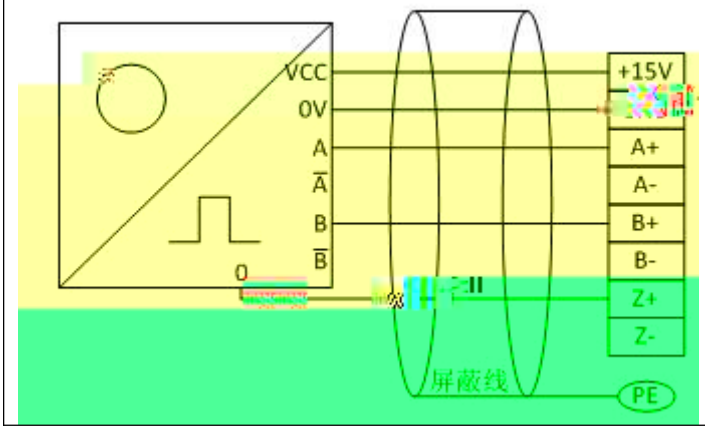
15V

1

a

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

b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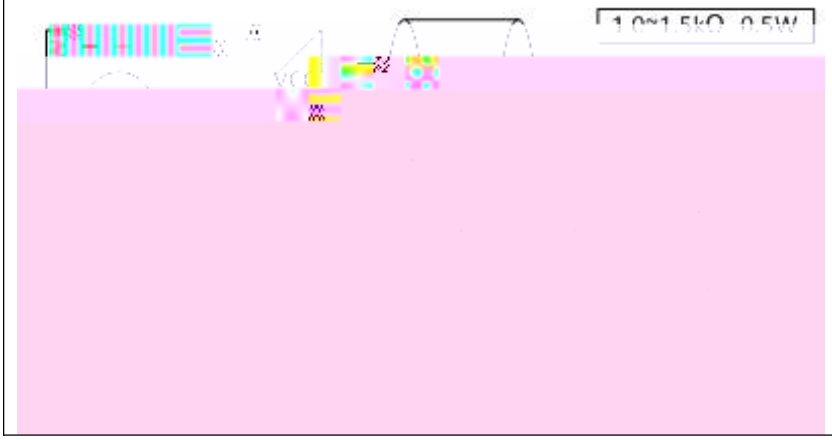
		RVI78N-10CALA31N-1024
		EC120P45-P6PR-1024

2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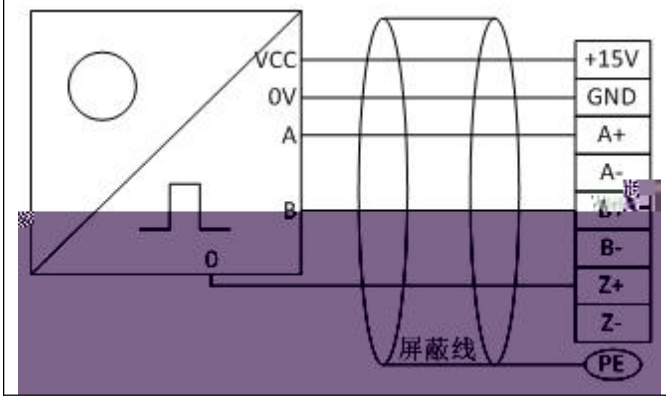
3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1 PG

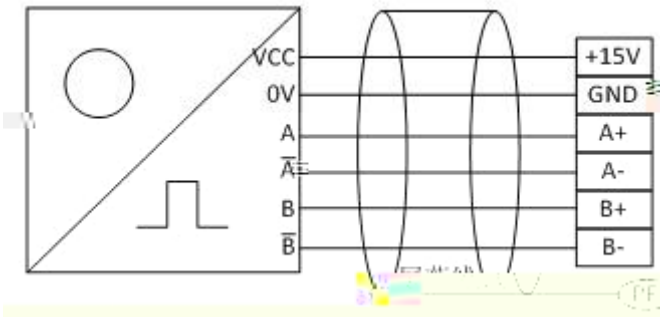
2 PG

3 PE

PGD2

1

a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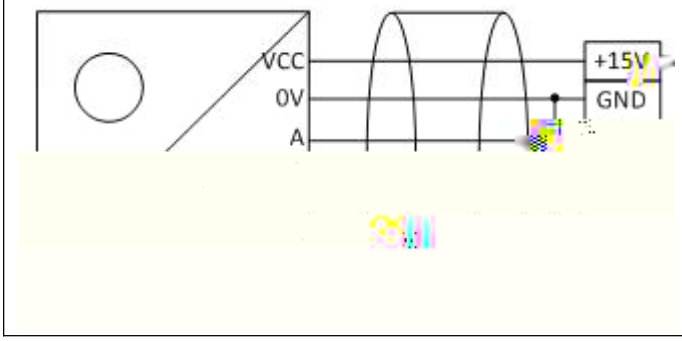
		EC120P45-H6PR-1024

b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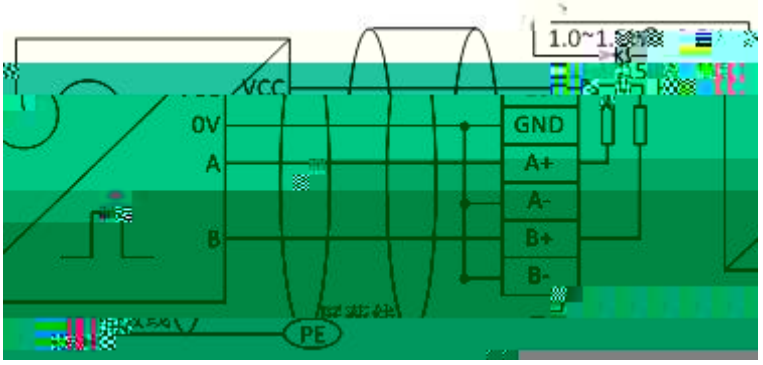
		RVI78N-10CALA31N-1024
		EC120P45-P6PR-1024

2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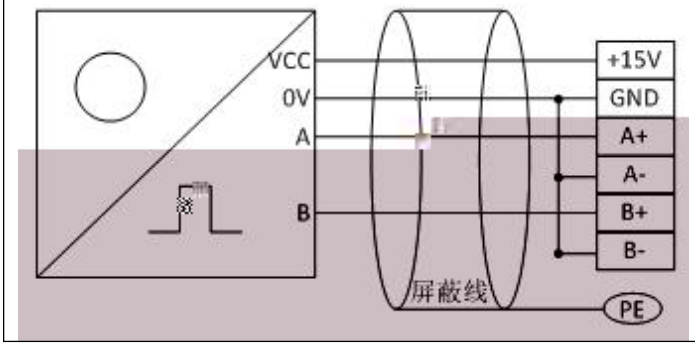
		EB38A6-C4PR-1024

3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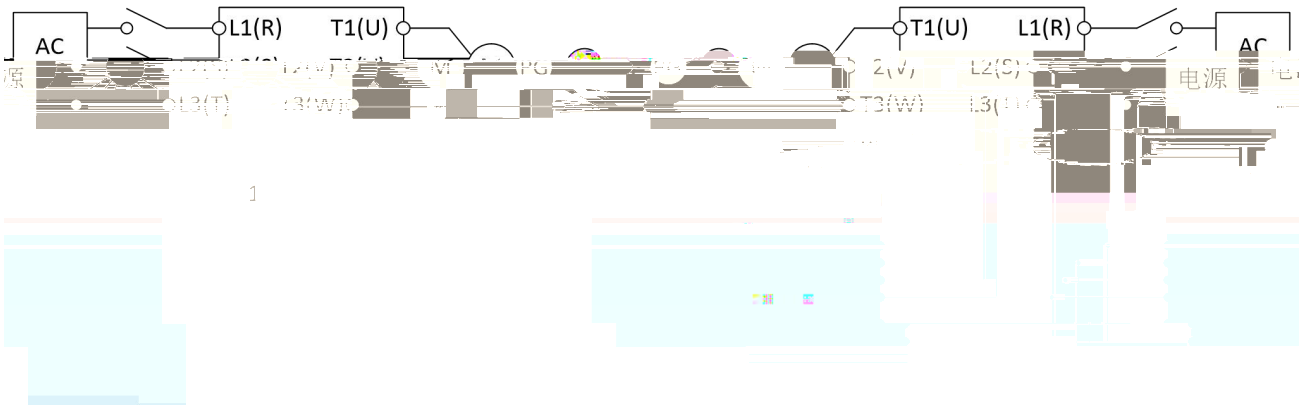
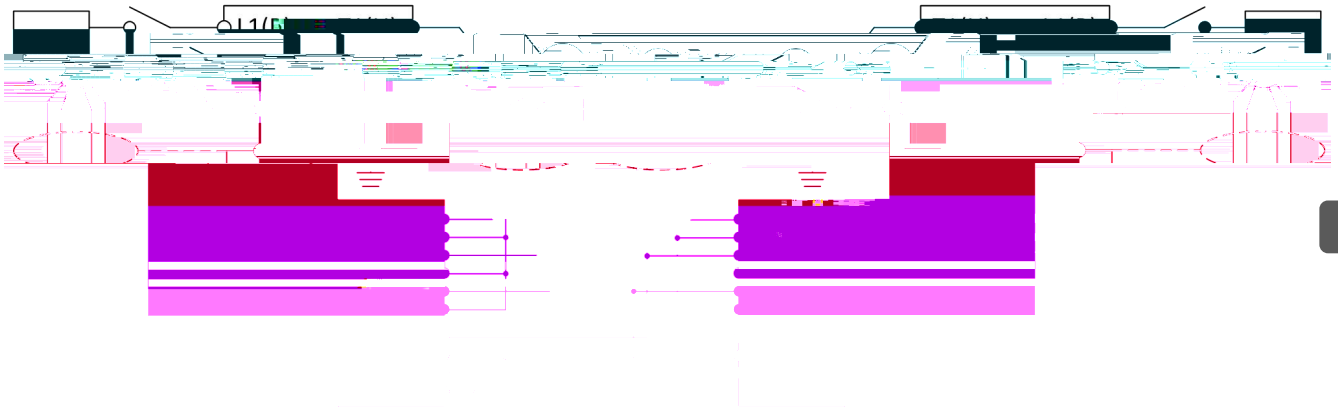
		EB50A8-N4PR-1024


AC
L1(R)
T1(U)
T1(U)
L1(R)
AC
电源



185kW~500kW

P(+)	
P1	37KW
N(-)	
R S T	
U V W	
DBR	160KW
PE	

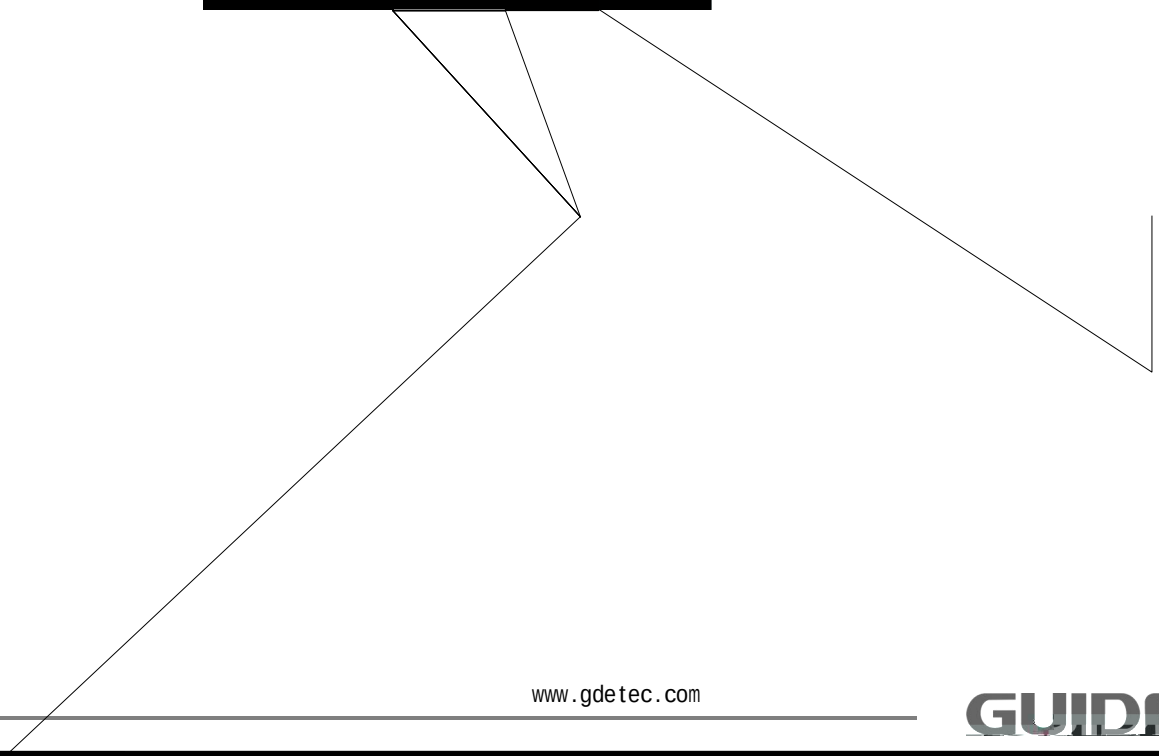
4.3

1

1	[redacted]	3

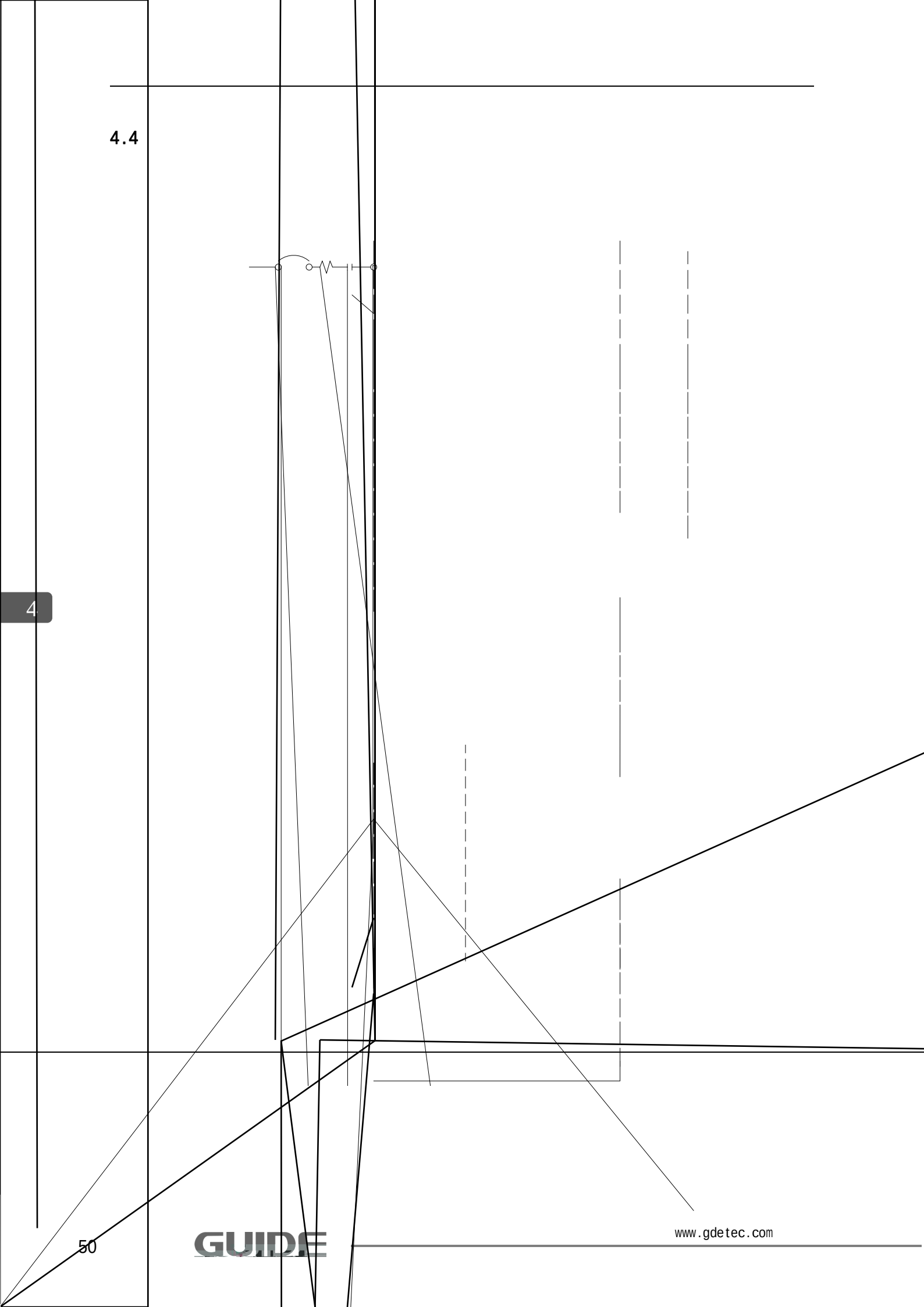
4

[redacted]



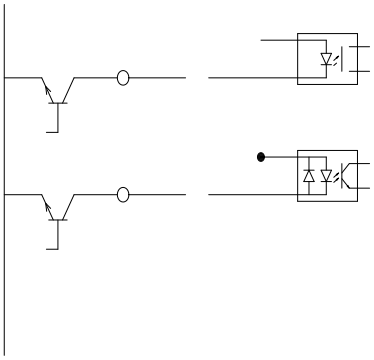
v ŕ ŕ ŕ ŕ ˛ Ф ƥ Ъ ЪѦ Ѧ ɤ ɤɤ Ѧ Ѧ ö ö öö

25	+24V	24V			
26	DO3		3		DC24V 50mA
27	DO4A		4		
				250VAC 3A COS =0.4	
		30VDC 1A			
28	DO4C		4		
29	DO4B		4		
				250VAC 3A COS =0.4	
		30VDC 1A			
30	DO5A		5		
				250VAC 2A COS =0.4	
		30VDC 1A			
31	DO5C		5		

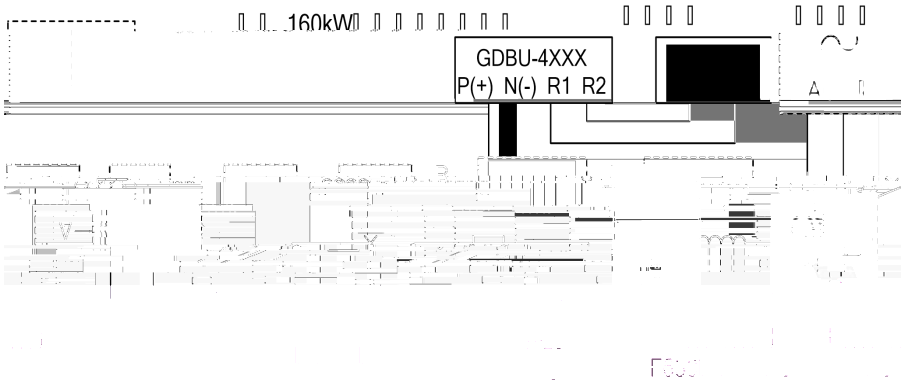


4.5

0V NPN



4.6



	1 2
AC	1 2 3

4.7

A / mm² A

CEFR 40% (AC-3)

4.8

		2%		1%	
HF650-0R4-4	0.4 kW	2.2A	6.4 mH	2.2A	3.2mH
HF650-0R7-4	0.7 kW	4A	3.5 mH	4A	1.8 mH
HF650-1R5-4	1.5 kW	6A	2.4 mH	6A	1.2 mH
HF650-2R2-4	2.2 kW	7A	2.0 mH	7A	1.0 mH
HF650-3R7-4	3.7 kW	12A	1.1 mH	12A	0.6 mH
HF650-5R5-4	5.5kW	19A	743uH	19A	371 uH
HF650-7R5-4	7.5kW	22A	644 uH	22A	322 uH
HF650-011-4	11kW	28A	493 uH	28A	247 uH
HF650-015-4	15kW	38A	368 uH	38A	184 uH
HF650-018-4	18.5kW	49A	283 uH	49A	141 uH
HF650-022-4	22kW	57A	247 uH	57A	123 uH
HF650-030-4	30kW	76A	184 uH	76A	

HF650-185-4	185kW	446A	31 uH	446A	16 uH
HF650-220-4	220kW	528A	26 uH	528A	13 uH
HF650-250-4	250kW	573A	24 uH	573A	12 uH
HF650-280-4	280KW	657A	21 uH	657A	11 uH
HF650-315-4	315kW	735A	19 uH	735A	10 uH
HF650-355-4	355kW	805A	17 uH	805A	9 uH
HF650-400-4	400kW	856A	16 uH	856A	8 uH
HF650-500-4	500kW	1116A	13 uH	1116A	7 uH

4.9

160kW

HF650-018-4	18.5kW	32	24	≥ 6	≥ 8.0
HF650-022-4	22kW	24	20	≥ 8	≥ 11
HF650-030-4					

EMC

b PWM

c

dG

3 EMC

EMC

EMC

5 EMC

aD

360

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b

20cm

90

c

EMC

d

4

5.

5.1

HF650 F1 LOCAL/REMOTE

F2 RUN STOP

RUN STOP

LOCAL/REMOTE /

5.3

k Ö

|

FWD
REV

:HZ

A

N|N

W
E

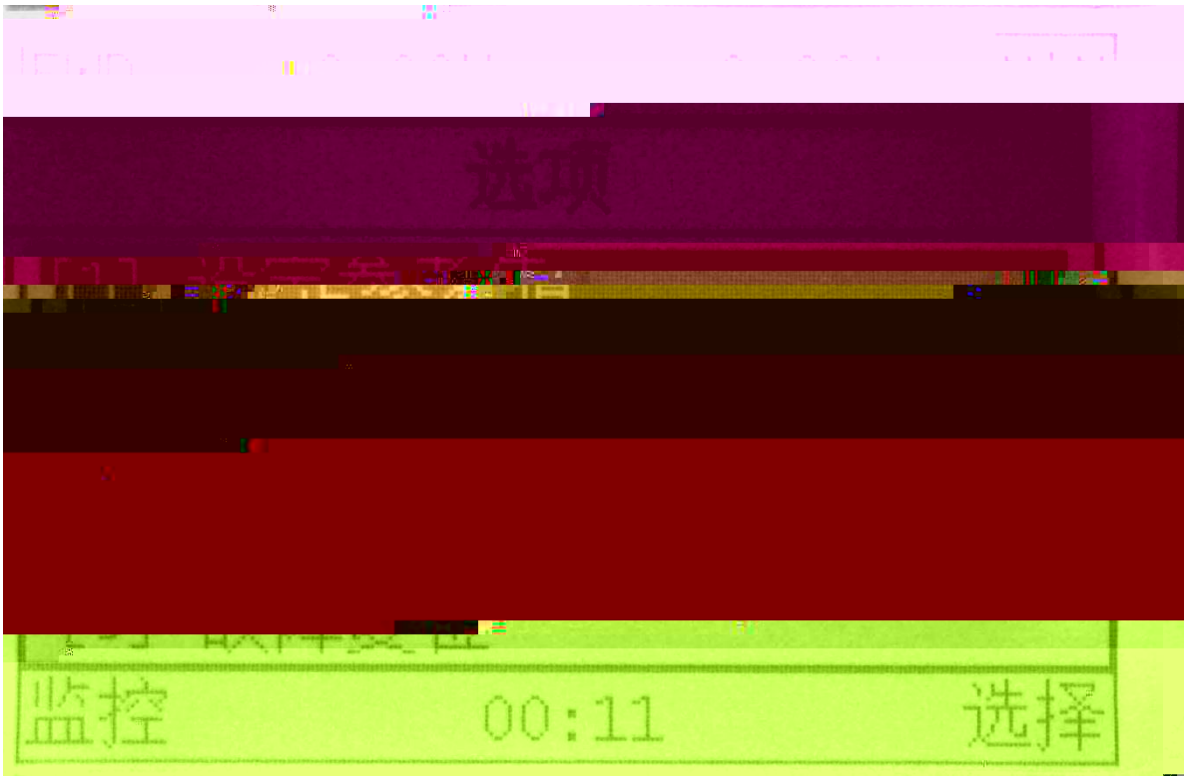
|

3

F1 F2 “ ” “ ” “ ”

“ ” “ ”

ENTER



1	Reference Set	
2	Change Direction	
3	Current Error	
4	Current Warnning	

5	Reset Error	
6	Monitor Setting	
7	Firmware Version	
8	Menu Language	

1	Parameter Setting	
2	Function Setting	
3	Fault Record	
4	Access Permissions	
5	Display Setting	

4 Current Warnning

5 Reset Error

6 Monitor Setting

7 Firmware Version

8 Menu Language

5.5

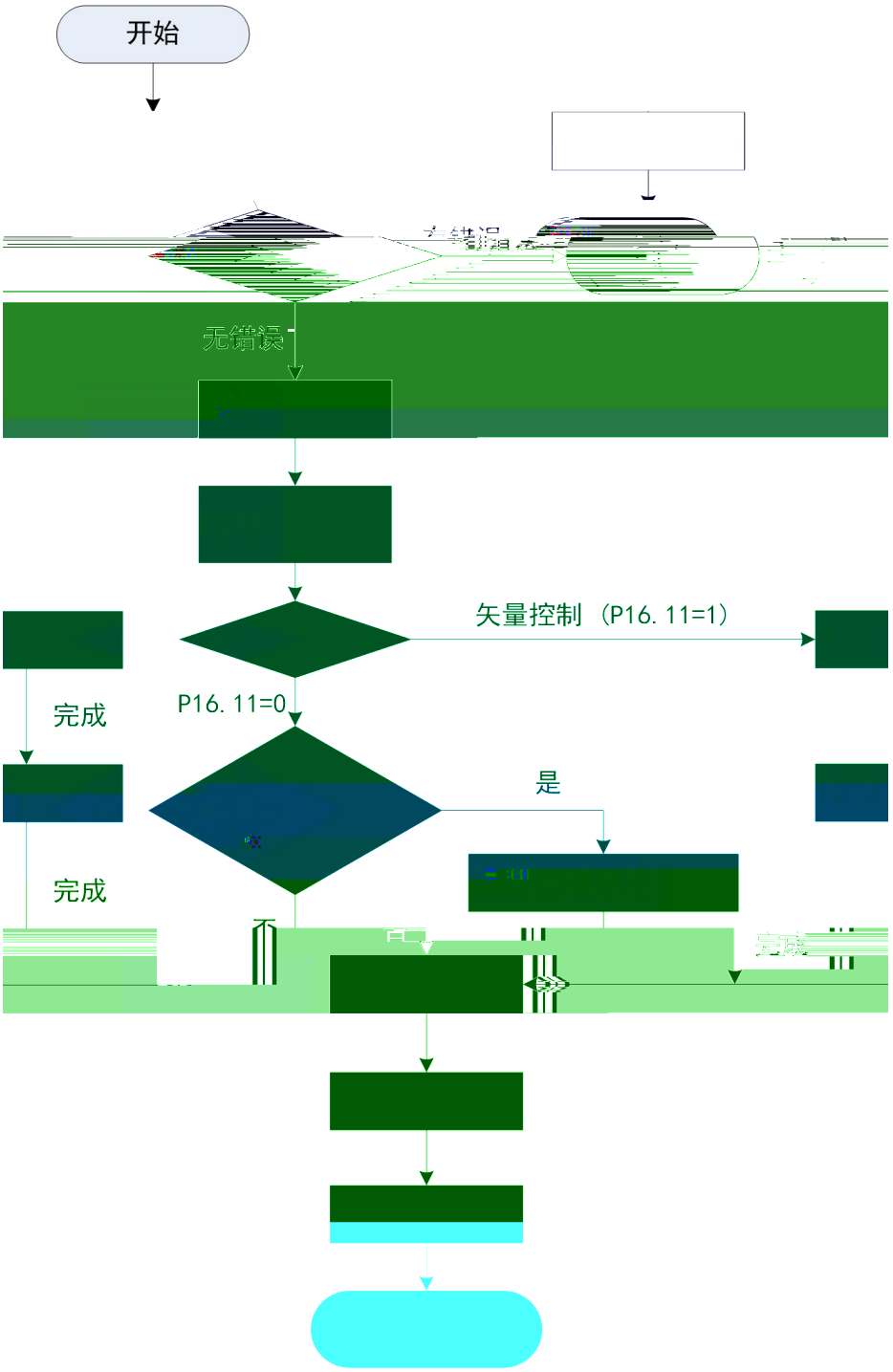
1 Parameter Setting

2 Function Setting

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

6.

6.1



6.2.3

	[4]DP
	[5]MODBUS
	[6]
P8.3	[0]
	[1]

4

5 4 50Hz

P3.4	5		0 32	7	
P3.5	6		0 32	8	
P3.6	7		0 32	0	
P3.7	8		0 32	0	
P3.12		[0] [1]	0 1	0	

0

1

2

3

.NC

4

</RST

5

6 1 0

7 2 1

8.2

8 3 2

9 4 3

10 8.10

11

12

.NC

13

14

.NC

15

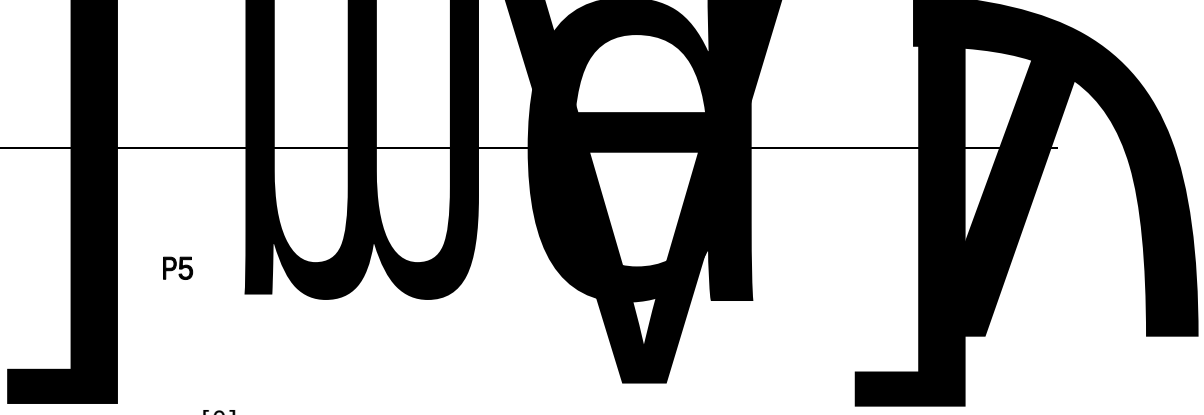
16

17 0 1 0 00

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

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 [13]	(P6.0) AO1	0.0 100.0 [%]	0.0 [%]	
P6.8	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 [%]	

P6.2

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 [%]	[redacted]	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					

[illegible]

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P7.22	[4]		4	100.0 [%]	720.0 [%]	120.0 [%]	8.6
P7.23	1	M1	1	0.00 [s]	3.00 [s]	0.50 [s]	8.6
P7.24	1	M					

P7.60		0.10 [s]	3.00 [s]	0.30 [s]	
P7.64	[0] [1]	0	1	0	8.6
P7.65		-25 [V]	100 [V]	0 [V]	8.6
P7.66		-25 [V]	100 [V]	0 [V]	8.6
P7.69	[0] [1]	0	1	0	8.60
P7.70		-25 [V]	100 [V]	0 [V]	8.6

Bd

P8.39	3	P8.36 P8.38	0.0 300.0 [s]	7.00 [s]	8.7
P8.40	4		0.0 300.0 [%]	300.0 [%]	8.7
P8.41	4	P8.38 P8.40	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
P8.54			0.0 300.0 [%]	0.0 [%]	
P8.55		[0] [1]	0 1	0	
P8.56			0.00 300.00 [s]	3.00 [s]	
P8.57		[0] [1]	0 1	1	
P8.58			0.00 300.00 [s]	1.50 [s]	

7.9 2 P9

P9.0		[0] [1] [2]DP [3]MODBUS [4]	0 4	0	
P9.3		[0] [1]	0 1	0	8.7
P9.6			0.00 300.00 [s]	0.00 [s]	8.7
P9.7			0.00 300.00 [s]	0.00 [s]	8.7
P9.10		[0]I/O [1] 1 [2] 2 [3] [4]DP [5]MODBUS [6]	0 6	0	
P9.13		[0] [1]PROFIBUS [2]MODBUS [3]	0 3	0	8.7
P9.14			0.1 10.0	1.0	8.7
P9.15	1		0.0 300.0 [%]	100.0 [%]	8.7
P9.16	1	P9.15	0.0 300.0 [s]	3.00 [s]	8.7
P9.17	2		0.0 300.0 [%]	200.0 [%]	8.7
P9.18	2	P9.15 P9.17	0.0 300.0 [s]	4.00 [s]	8.7
P9.19	3		0.0 300.0 [%]	240.0 [%]	8.7

P9.39	3	P9.36	P9.38	0.0	300.0 [s]

7.10 3 P10

P10.0		[0] [1] [2]DP [3]MODBUS [4]	0 4	0	
P10.3		[0] [1]	0 1	0	8.7
P10.6			0.00 300.00 [s]	0.00 [s]	8.7
P10.7			0.00 300.00 [s]	0.00 [s]	8.7
P10.10		[0]I/O [1] 1 [2] 2 [3] [4]DP [5]MODBUS [6]	0 6	0	
P10.13		[0] [1]PROFIBUS [2]MODBUS [3]	0 3	0	8.7
P10.14			0.1 10.0	1.0	8.7
P10.15	1		0.0 300.0 [%]	100.0 [%]	8.7
P10.16	1	P10.15	0.0 300.0 [s]	3.00 [s]	8.7
P10.17	2		0.0 300.0 [%]	200.0 [%]	8.7
P10.18	2	P10.15 P10.17	0.0 300.0 [s]	4.00 [s]	8.7
P10.19	3		0.0 300.0 [%]	240.0 [%]	8.7

P10.20	3	P10.17	P10.19	0.0 [s]	300.0 [s]	7.00	8.7
P10.21	4			0.0 [%]	300.0 [%]	300.0	8.7
P10.22	4	P10.19	P10.21	0.0 [s]	300.0 [s]	10.00	8.7
P10.23	5			0.0 [%]	300.0 [%]	300.0	8.7
P10.24	5	P10.21	P10.23	0.0 [s]	300.0 [s]	10.00	8.7
P10.25	6			0.0 [%]	300.0 [%]	300.0	8.7
P10.26	6	P10.23	P10.25	0.0 [s]	300.0 [s]	10.00	8.7
P10.27	7			0.0 [%]	300.0 [%]	300.0	8.7
P10.28	7	P10.25	P10.27	0.0 [s]	300.0 [s]	10.00	8.7
P10.29	8	Aî Ê1\Ô0 "					

P11.39	3	P11.36	P11.38	0.0 [s]	300.0 [s]	7.00	8.7
P11.40	4			0.0 [%]	300.0 [%]	300.0	8.7
P11.41	4	P11.38	P11.40	0.0 [s]	300.0 [s]	10.00	8.7
P11.42	5			0.0 [%]	300.0 [%]	300.0	8.7
P11.43	5	P11.40	P11.42	0.0 [s]	300.0 [s]	10.00	8.7
P11.44	6			0.0 [%]	300.0 [%]	300.0	8.7
P11.45	6	P11.42	P11.44	0.0 [s]	300.0 [s]	10.00	8.7
P11.46	7			0.0 [%]	300.0 [%]	300.0	8.7
P11.47	7	P11.44	P11.46	0.0 [s]	300.0		

[ø
030000.0

8.

7 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					

7.13 2 P13

P13.0		[0] [1]	0 1	1	8.8 88
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					

P13.27			0.00 2.00 [s]	0.00 [s]	8.8
P13.28			0.00 2.00 [s]	0.07 [s]	8.8
P13.29			0.00 2.00 [s]	0.07 [s]	8.8
P13.32			0.0 20.0 [%]	0.0 [%]	8.8
P13.33			0.0 20.0 [%]	0.0 [%]	8.8
P13.34			0.00 2.00 [s]	0.00 [s]	8.8
P13.35			0.00 2.00 [s]	0.00 [s]	8.8
P13.36			0.00 2.00 [s]	0.50 [s]	8.8
P13.37			0.00 2.00 [s]	0.50 [s]	8.8

7.14 3 P14

P14.0		[0] [1]	0	1	1	8.8
P14.1		[0][%] [1][Hz] [2][rpm]	0	2	1	
P14.2	1		0.0	3000.0	10.0	
P14.3	2		0.0	3000.0	20.0	
P14.4	3		0.0	3000.0	35.0	
P14.5	4		0.0	3000.0	50.0	
P14.6	5		0.0	3000.0	50.0	
P14.7	6		0.0	3000.0	50.0	
P14.8	7		0.0	3000.0	50.0	
P14.9						

P14.27			0.00 2.00 [s]	0.00 [s]	8.8
P14.28			0.00 2.00 [s]	0.07 [s]	8.8
P14.29			0.00 2.00 [s]	0.07 [s]	8.8
P14.32			0.0 20.0 [%]	0.0 [%]	8.8
P14.33			0.0 20.0 [%]	0.0 [%]	8.8
P14.34			0.00 2.00 [s]	0.00 [s]	8.8
P14.35			0.00 2.00 [s]	0.00 [s]	8.8
P14.36			0.00 2.00 [s]	0.50 [s]	8.8
P14.37			0.00 2.00 [s]	0.50 [s]	8.8

7.15 4 P15

P15.0		[0] [1]	0 1	1	8.8
P15.1		[0][%] [1][Hz] [2][rpm]	0 2	1	
P15.2	1		0.0 3000.0	10.0	
P15.3	2		0.0 3000.0	20.0	
P15.4	3		0.0 3000.0	35.0	
P15.5	4		0.0 3000.0	50.0	
P15.6	5		0.0 3000.0	50.0	
P15.7	6		0.0 3000.0	50.0	
P15.8	7		0.0 3000.0	50.0	
P15.9	8		0.0 3000.0	50.0	
P15.10	9		0.0 3000.0	50.0	
P15.11	10		0.0 3000.0	50.0	
P15.12	11		0.0 3000.0	50.0	
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			0.0 20.0 [%]	2.0 [%]	8.8
P15.23			0.0 20.0 [%]	0.0 [%]	8.8
P15.24			0.0 200.0 [%]	30.0 [%]	8.8
P15.25			0.0 200.0 [%]	20.0 [%]	8.8
P15.26			0.00 2.00 [s]	0.00 [s]	8.8

P15.27			0.00 2.00 [s]	0.00 [s]	8.8
P15.28			0.00 2.00 [s]	0.07 [s]	8.8
P15.29			0.00 2.00 [s]	0.07 [s]	8.8
P15.32			0.0 20.0 [%]	0.0 [%]	8.8
P15.33			0.0 20.0 [%]	0.0 [%]	8.8
P15.34			0.00 2.00 [s]	0.00 [s]	8.8
P15.35			0.00 2.00 [s]	0.00 [s]	8.8
P15.36			0.00 2.00 [s]	0.50 [s]	8.8
P15.37			0.00 2.00 [s]	0.50 [s]	8.8

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 [s]	100.00 [s]	0.00	8.9
P17.23				

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

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

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	- î į	ʎ o ų		

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]	
P20.12	2x		0.0 300.0 [%]	100.0 [%]	

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	2				

P21.0

[0]
[1]
[0]
[1] 1
[2] 2
[3]
[4]
[5]DP
[6]MODBUS
[7]

P21.3

0 1 0 B.10

P21.13		20.0 [ms]	500.0 [ms]	100.0	8.10
P21.14				

P21.31			0.0 [%]	100.0 [%]	5.0 [%]
P21.32			0.0 [%]	100.0 [%]	5.0 [%]
P21.34		[0] [1]	0	1	0
P21.35					

7.22 3 P22

P22.0		[0] [1]		0 1	0	8.10
P22.1		[0] [1] [2] [3] [4] [5]DP [6]MODBUS [7]	1 2 P22.3	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] P22.9 [2] [3] [4] [5]DP [6]MODBUS [7]	P22.8 1 2	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]	
P22.12	2x			0.0 300.0 [%]	100.0 [%]	

P22.13		20.0 [ms]	500.0 [ms]	100.0 [ms]	8.10
P22.14				

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 [s]	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	

P22.53	Kp	0.0 [%]	1000.0 [%]	100.0 [%]	
P22.54	Ki	0.0 [%]	1000.0 [%]	100.0 [%]	
P22.55		0.0 [%]	1000.0 [%]	100.0 [%]	8.10
P22.56		0.0 [%]	1000.0 [%]	100.0 [%]	8.10

7.23 4 P23

P23.0		[0] [1]			0	1	0	8.10
P23.1		[0] [1] [2] [3] [4] [5]DP [6]MODBUS [7]	1 2	P23.3	0	7	0	8.10
P23.2					0	7	0	

P23.13			20.0 [ms]	500.0 [ms]	100.0 [ms]	8.10
P23.14		1	0	60000	1024	
P23.15	[0] [1]					

P23.31		0.0 [%]	5.0 [%]	
P23.32		0.0	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 [ms]	75 [ms]	
P23.44	、		[%]	

[%]

P23.53	Kp		0.0 1000.0 [%]	100.0 [%]	
P23.54	Ki		0.0 1000.0 [%]	100.0 [%]	
P23.55			0.0 1000.0 [%]	100.0 [%]	8.10
P23.56			0.0 1000.0 [%]	100.0 [%]	8.10
P23.57		[0] [1]	0 1	0	8.10
P23.58			0.0 125.0 [%]	100.0 [%]	8.10
P23.59			1.0 25.0 [%]	2.5 [%]	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
P32.6	Modbus	0- 1-	0 1	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]

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	

P33.54	[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	

7-2

0	
1	0
2	1

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

400kW 800kW 400kW

P2.0

8.2

1

P12.0 [0] [1]

A. [0]

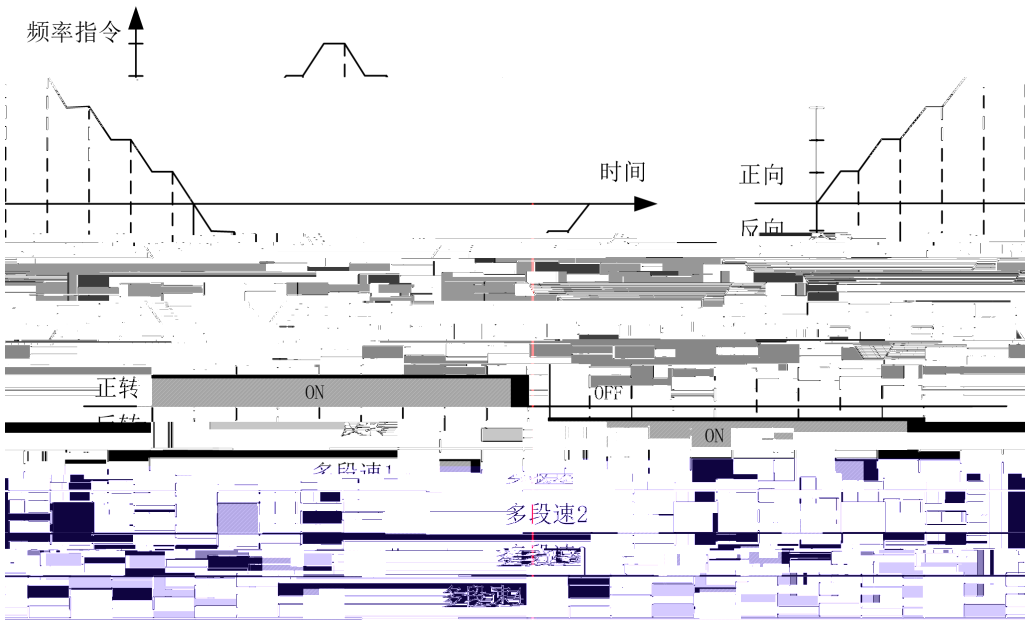
[1] [2] ---1

[6] 1 0 ---2

[7] 2 1 ---3

[8] 3 2 ---4

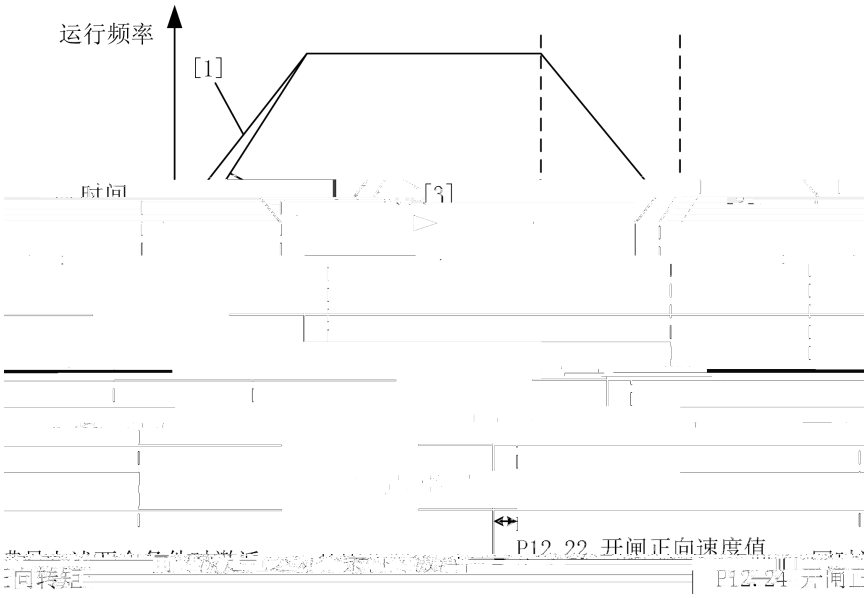
[9] 4 3 ---5



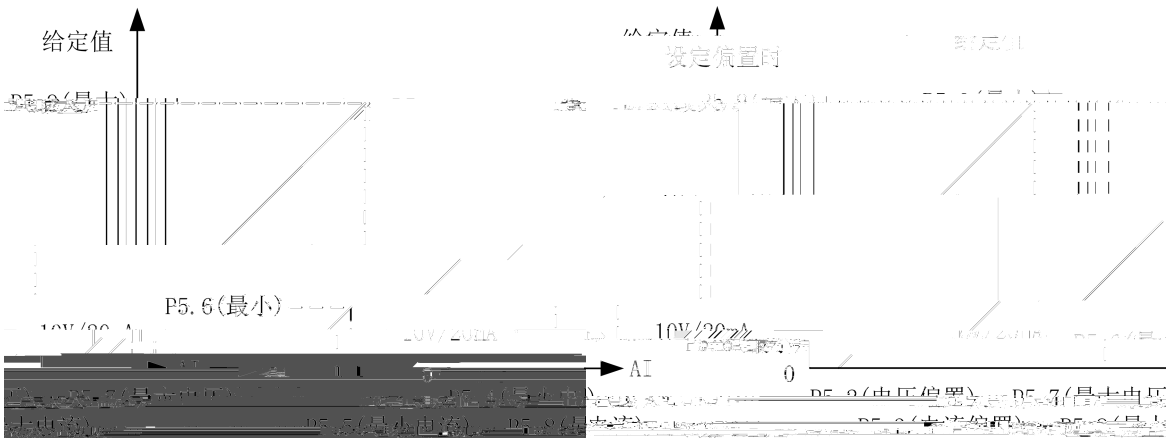
B. [1]

4 16 (8421)

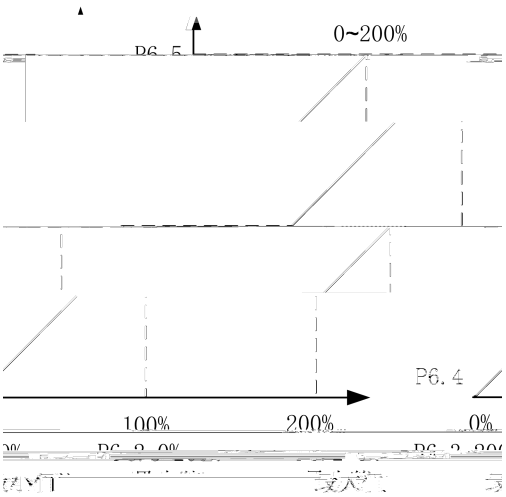
(FORWARD) (REVERSE)



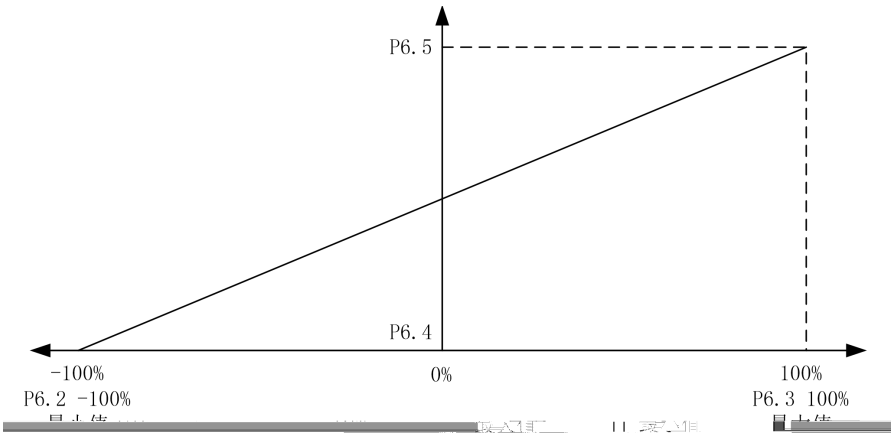
8.4



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

P16.4 $\frac{(\quad)}{3}$ 7.8 16.4 1.414

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

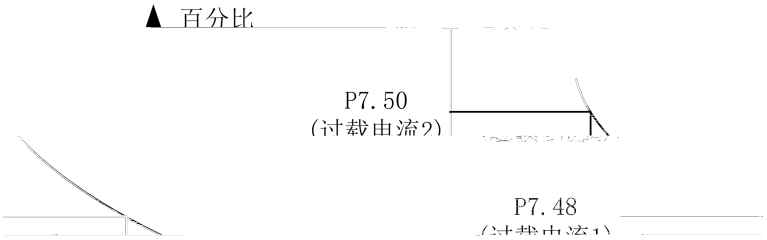
9

P7.33

P7.33

10

P7.48 P7.50



8

11

P7.64 P7.65 P7.66 HF650

37KW-160kW P7.64 1

P7.65

P7.66 P7.66

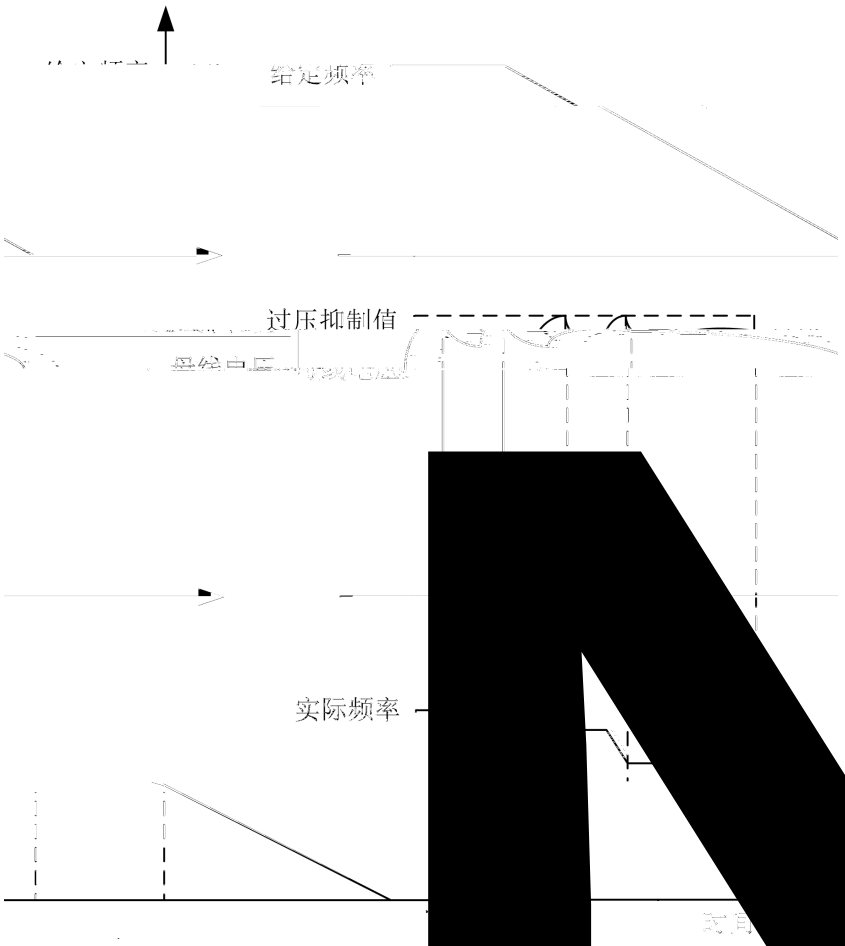
≥P7.65 P16.0 380V P7.65 0V 597V P7.66

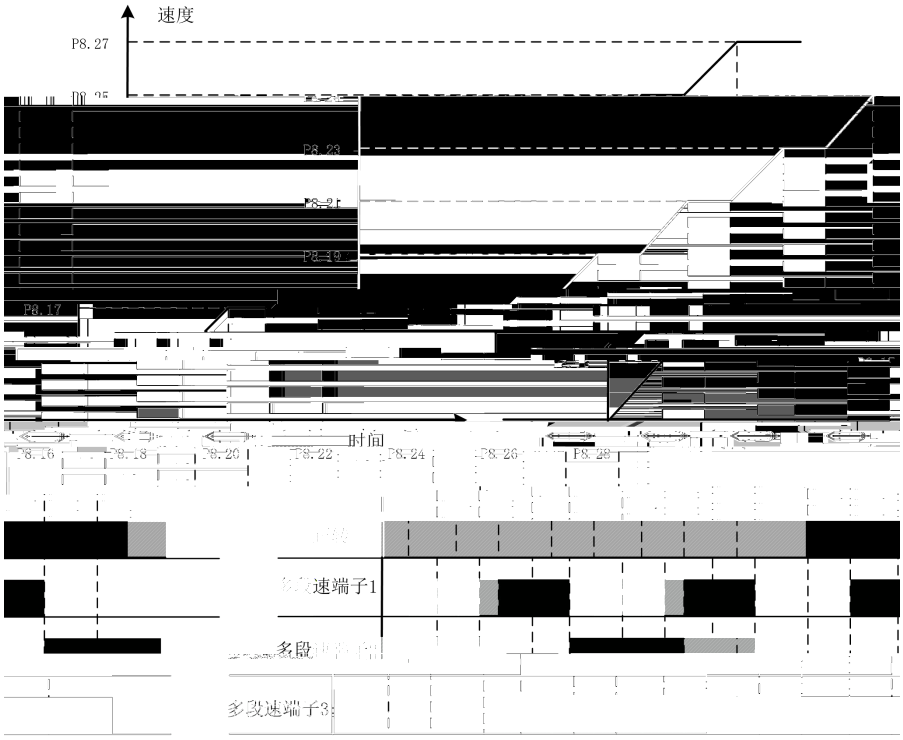
20V

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

0 P16.0 380V P7.70 0V

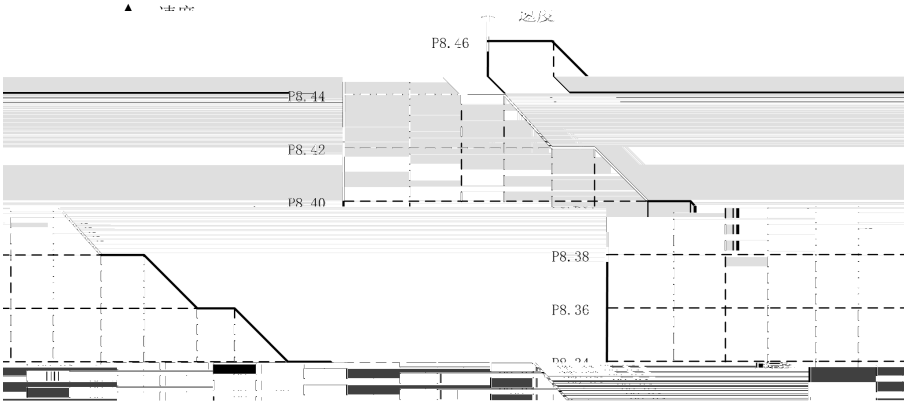
611V = 1.1 $\sqrt{2}$ P16.0 20 P7.70





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%



8

P8.34<P8.36<P8.38<P8.40<P8.42<P8.44<P8.46

P8.34	P8.36	P8.38	P8.40	P8.42	P8.44	P8.46
10%	20%	30%	50%	60%	80%	100%

3

PROFIBUS MODBUS

P8.13 P8.32

1 =P8.14 × P8.16 × (× 0.001)

1 =P8.33 × P8.35 × (× 0.001)

8.8

1

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

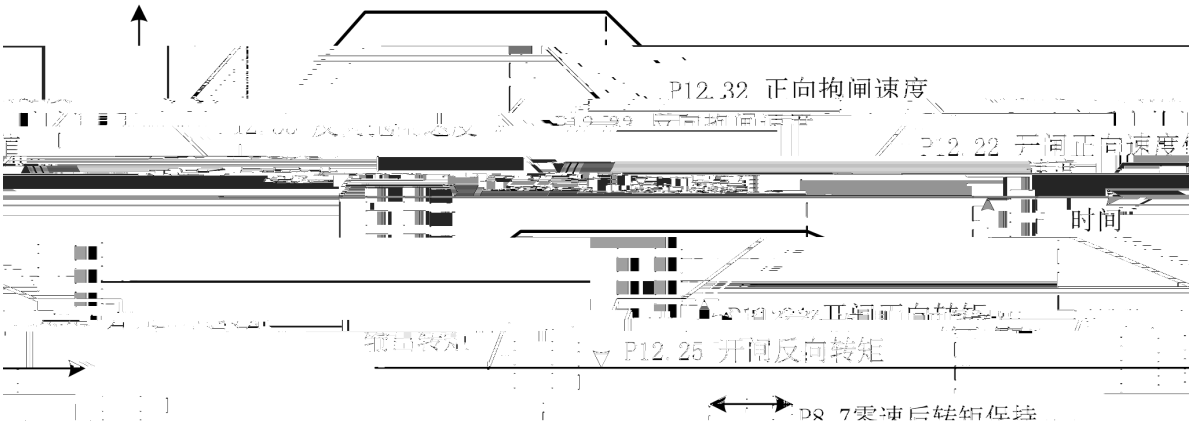
0 OFF 1 ON

2

P12.22 P12.37

[3]

ų 22



8

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

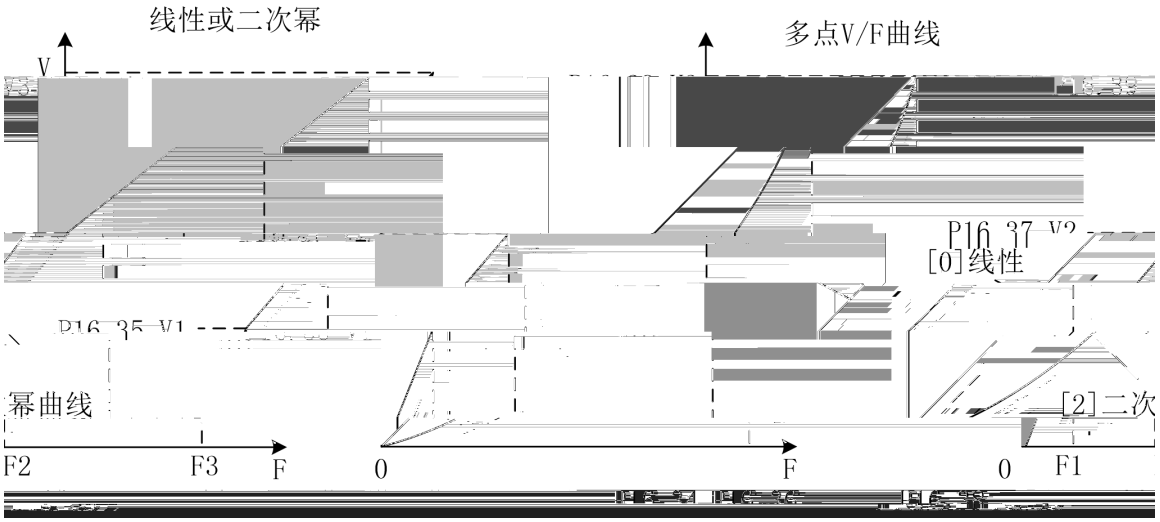
0.5Hz~2Hz >50Hz

1kHz			
5kHz			
10kHz			

kHz

0.4kW 30kW 5

37kW



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

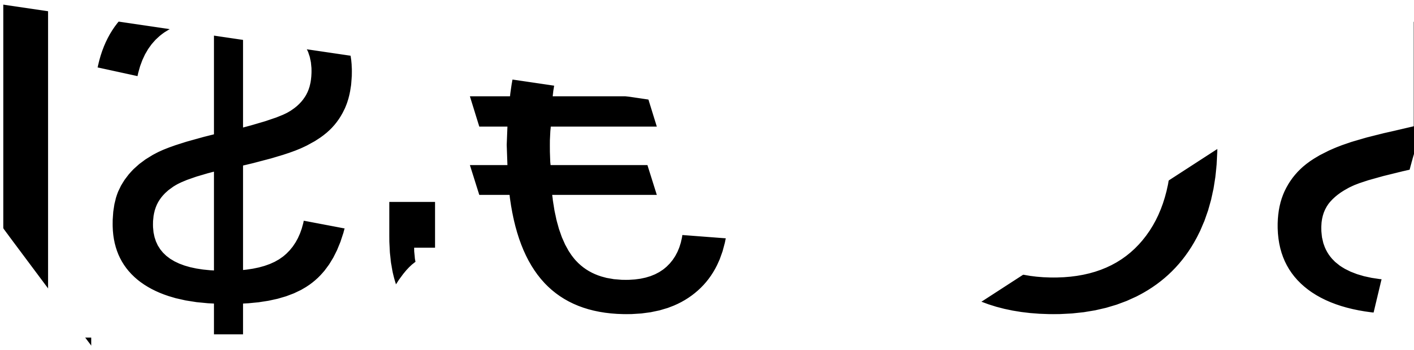
V1 V2 V3 F1 F2 F3

4

P16.15 V/F

V/F ĩ , AĐ

8



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 P20.1≠0 P20.2≠0 1

0

P16.11 [1] [2]

8

P20.3 P20.1 [4]

2

P12.24 P12.25 0%

3

P20.7

P20.8 P20.9 P20.7=1

4

P20.15 A B

A B U V W

[0]

[1] A B

GDHF-PGD2 PG

Äƒ DI

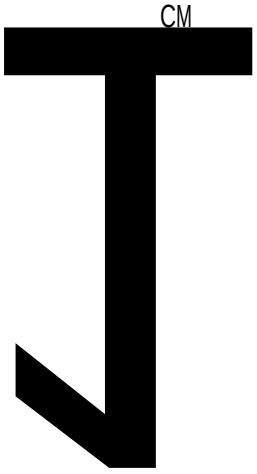
8 2

P20.1 P20.2 [0]

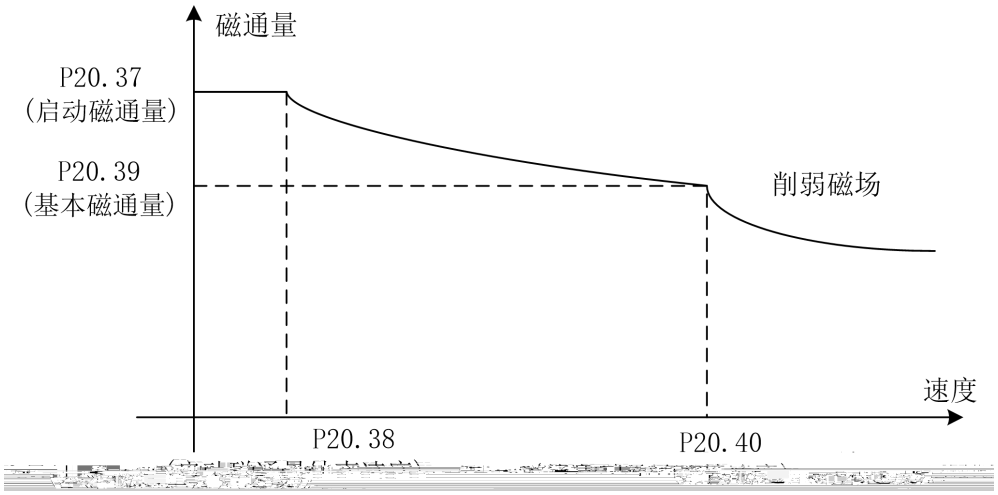
9

PLC DI

DP CM



8



12

P20.57 P20.58 P20.59 P20.57 1

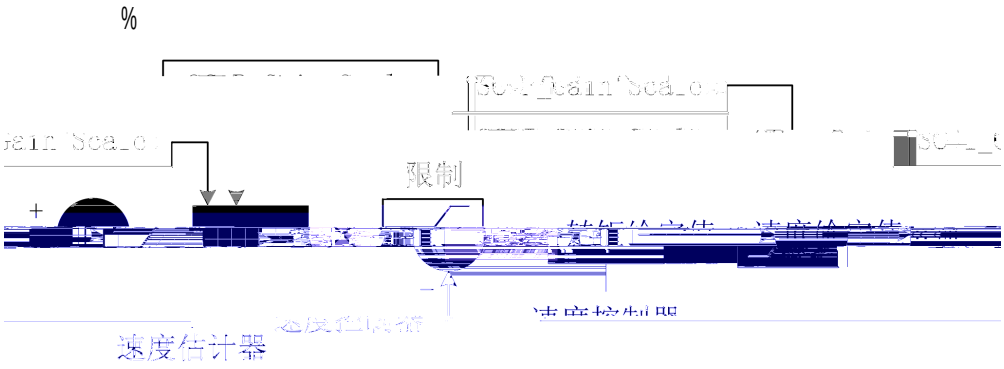
P20.58

P20.59

13

P20.55 ,

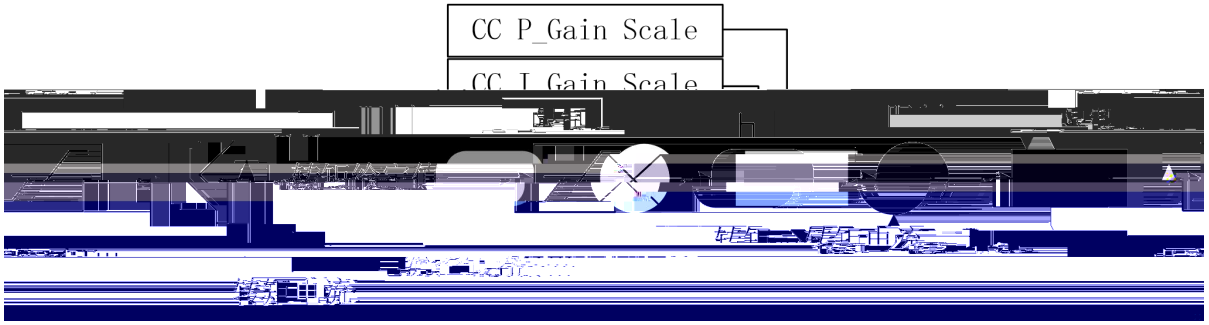
P20.56 ,



14

P20.62 P20.63 %

8


CC P_Gain Scale
CC I_Gain Scale

8.11

9.

9.1

WO1 SYS_NOT_RDY (Ready)

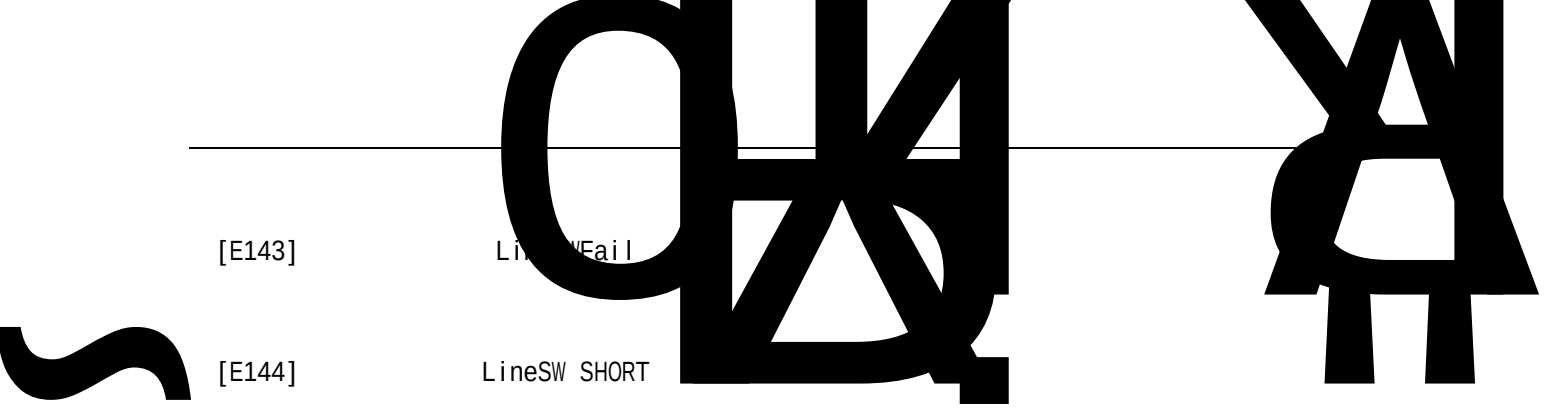
[

WO2 NO_DRV_ENABLE]

ø □ †

9

[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]	Li VFail	
[E144]	LineSW SHORT	
[E145]	(AFE) Line OV	P16.0
[E146]	(AFE) Line Over_Freq	
[E152]	U IGBT PDP[U]	GBT GBT IGBT T
[E154]	V IGBT PDP[V]	

9

9.3

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- ON
- COM

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- ON
- COM

-
-
-

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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

1

2

3

驱动电机控制器用户手册

Wuhan Guide Electric Drive Technology Co.,Ltd.

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