

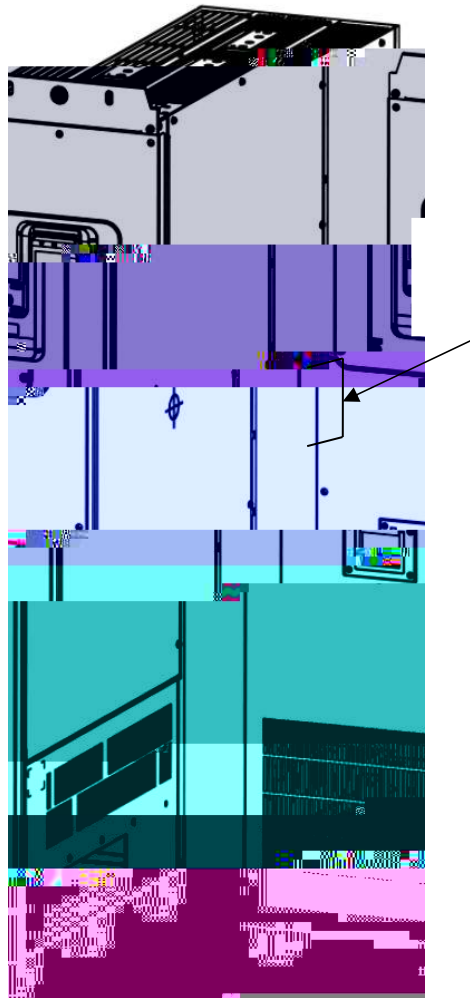
HF650

7.3.1	.....	)
7.3.2	.....	)
7.3.3	.....	+
7.3.4	.....	+
7.3.5	.....	++
7.3.6	.....	+,
7.3.7	.....	+ -
7.3.8	.....	+ -
7.3.9	.....	, \$
8	.....	, %
8.1	.....	, %
8.1.1	.....	, %
8.1.2	.....	, %
8.1.3	.....	, &
8.1.4	.....	,
8.1.5	.....	,
8.1.6	.....	, (
8.1.7 AFE	.....	, (
8.2	.....	, *
9	.....	, +
9.1	.....	, +
9.2	.....	, ,
9.3	.....	- %
10	.....	- (
10.1	.....	- (
10.2	.....	- )
10.3	.....	- )
10.4	.....	- *
10.5	.....	- *
	- +

1.

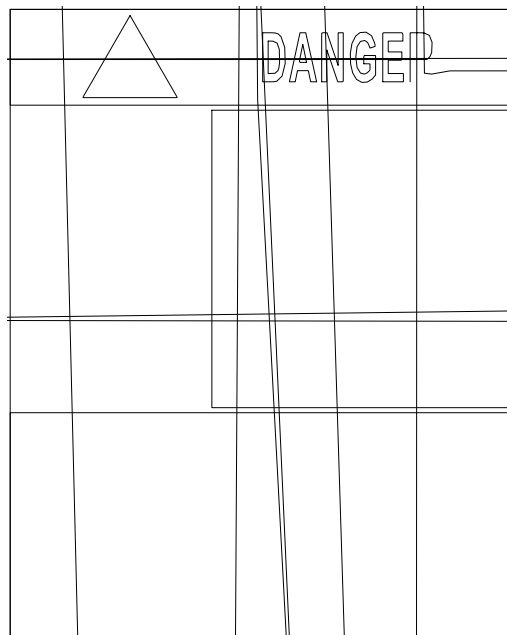
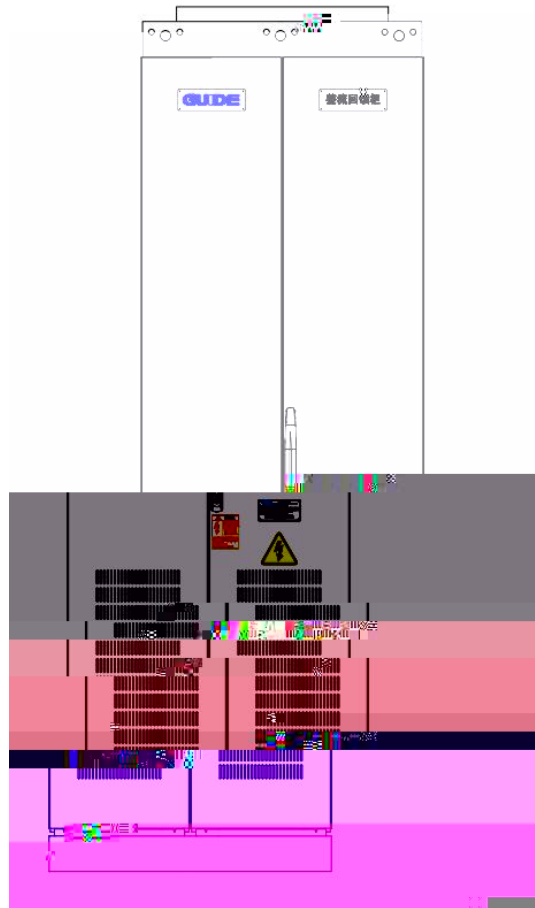
1.1



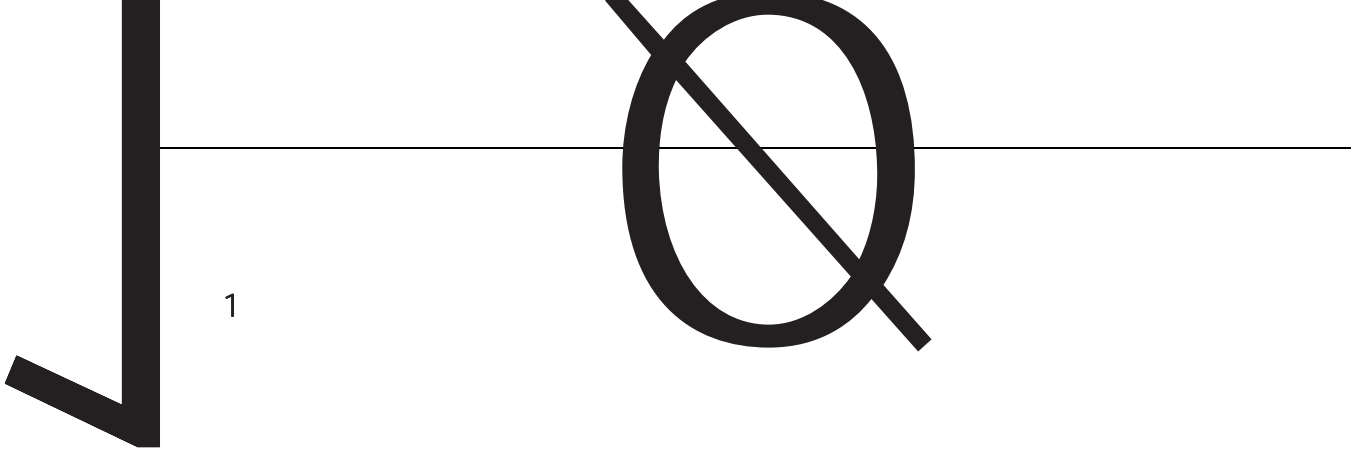


HF650A-450-4-D

HF650A-400-4-C



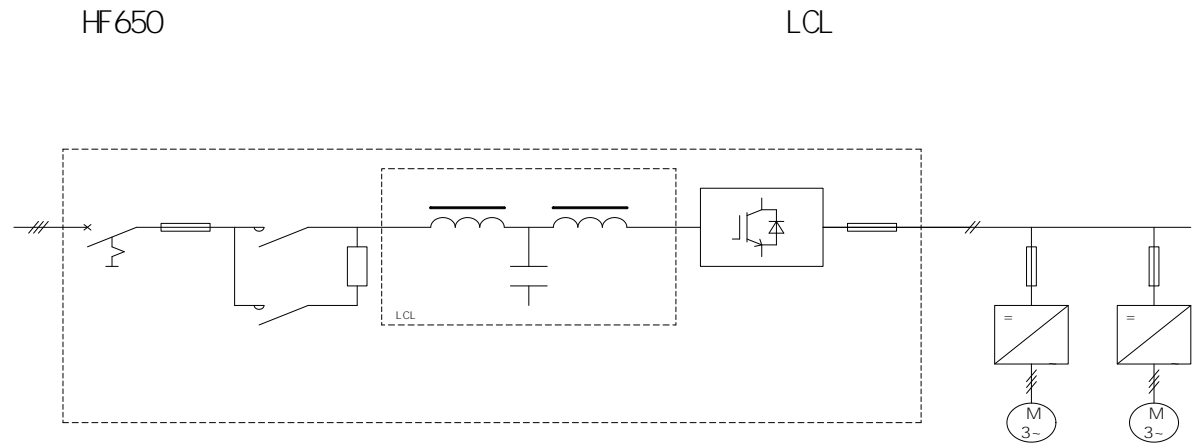
1. 2  gdyż zresztą, ó, a



1

2

2.1



HF650

LCL

IGBT

AFE

DC15V

IGBT

2.2

1

AFE

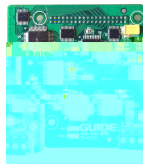
V/F

2

3		PI D
		/
		/
		/
		/

2 3



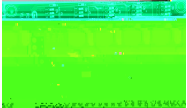



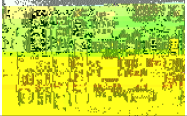
GDHF - DP03



GDHF - DP03

Profi bus

03 00

GDHF - KL4 4		GDHF - KL4 HF 650B	4	HF 650A 4
GDHF - FB01			1	HF 650A HF 650B
GDHF - FB02				HF 650A HF 650B
GDHF - FB03				HF 650A HF 650B
GDHF - FB04				HF 650A HF 650B
GDHF - FB05				HF 650A HF 650B
GDHF - FB06				HF 650A HF 650B

2 4

1.

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3.

- R S T
- U V W
- P N

4.

12

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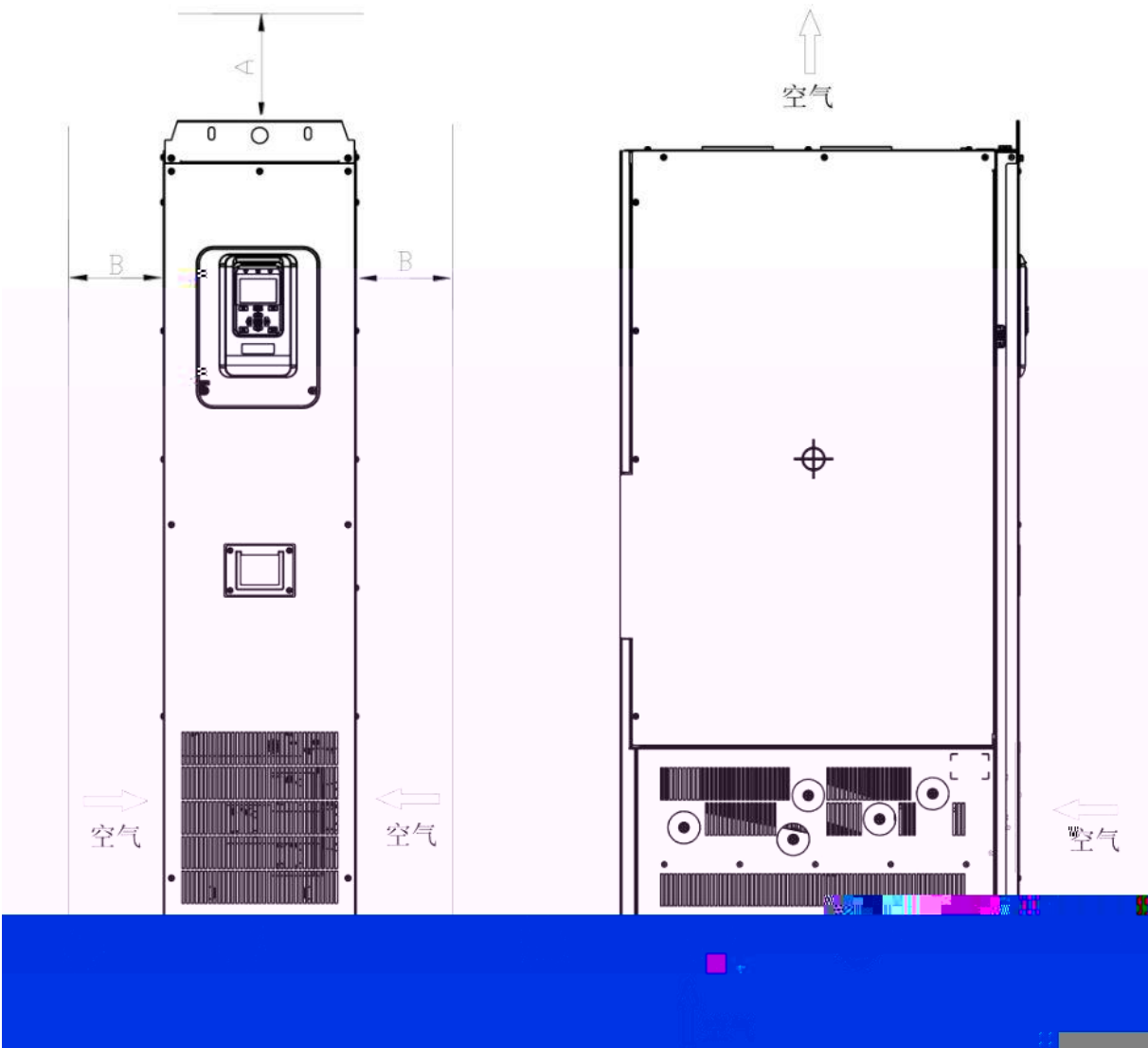


10cm

5cm



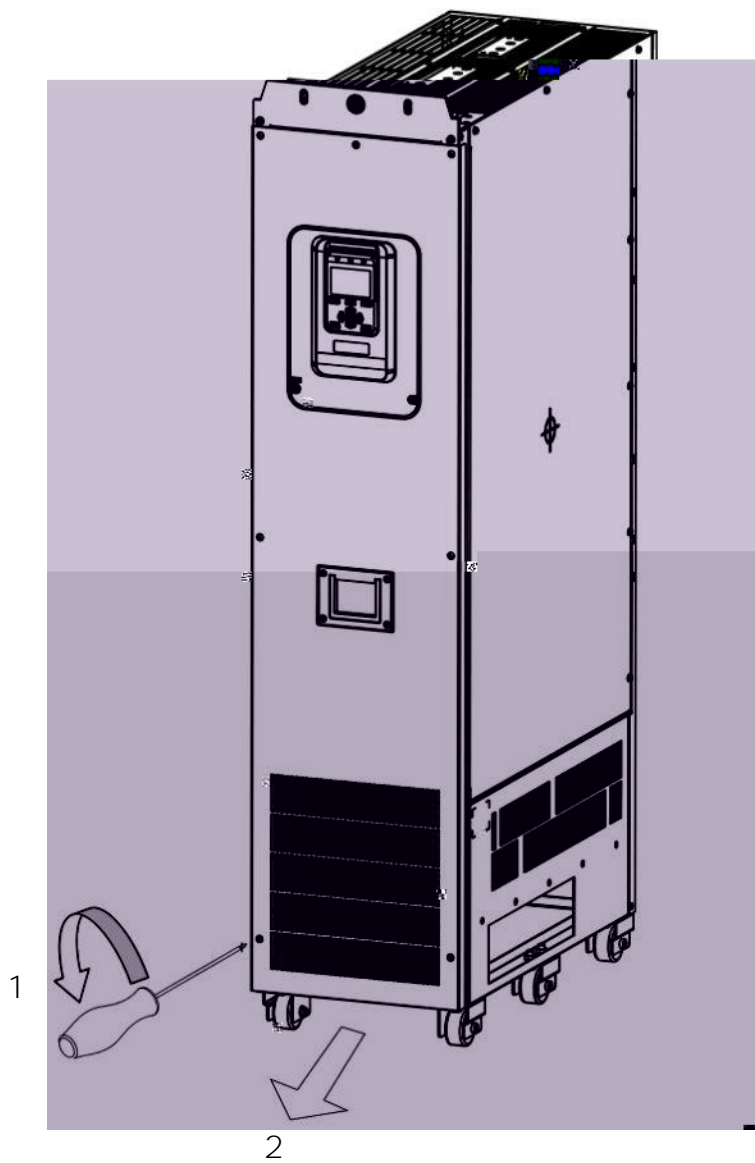
2.4.2



	A 200mm	B 50mm

2.4.3

- | | | |
|---|---|---|
| 1 | 1 | 7 |
| 2 | 2 | |



2.4.4



1.

2.

3.

3.

3.1

LCL

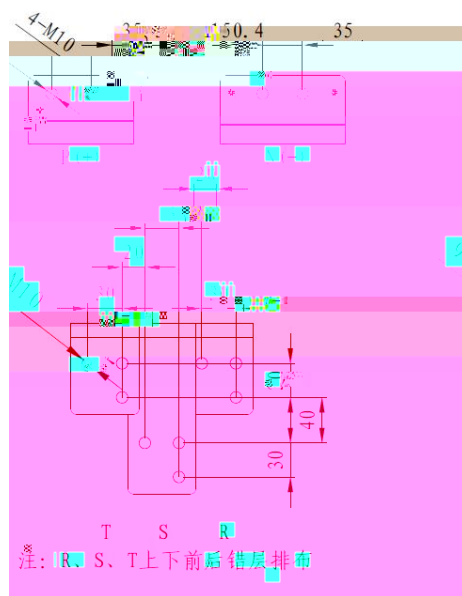
LCL

3.2

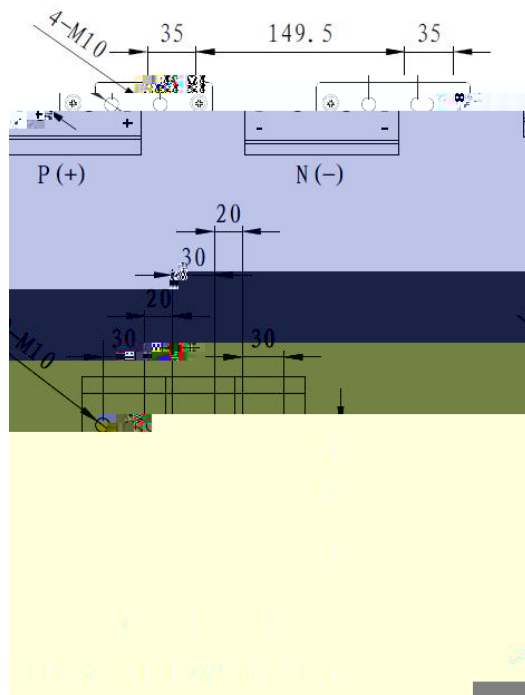
1



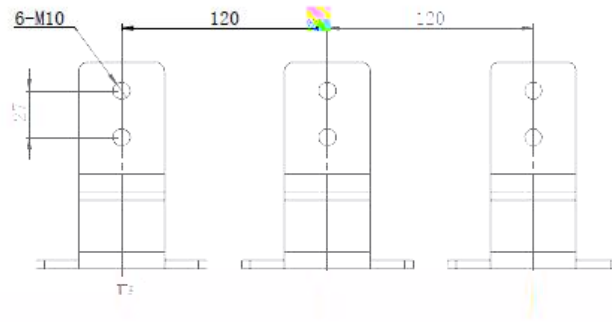
P	
N	
R S T	
PE	



HF650A-250-4-D



HF650A-450-4-D



HF650A-250-4-D LCL

2

1

	1	2	3	4	5	6	7	8
	+10V	GND	AI 1+	AI 1-	AI 2+	AI 2-	AO1	AO2
	9	10	11	12	13	14	15	16

5	AI 2+/AV2	2		0/4 20mA
		2		-10 10V
6	AI 2-	2		
7	AO1	1		0/4 20mA J1
		l a	0 10V J1	V b
8	AO2	2		0/4 20mA J2
		l a	0 10V J2	V b
9	DI 1		1	
10	DI 2		2	
11	DI 3		3	
12	DI 4		4	
13	DI 5		5	
14	DI 6		6	
15	DI 7		7	
16	DI 8		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	
28	DO4C		4	
29	DO4B		4	
30	DO5A		5	

31

DO5C

5

5 DC15V

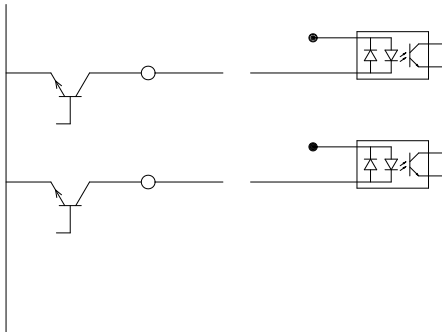
PGND DC15V

+15V DC15V

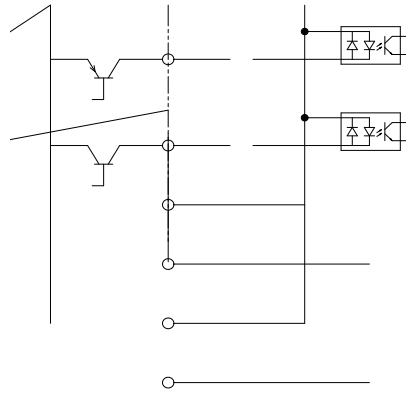
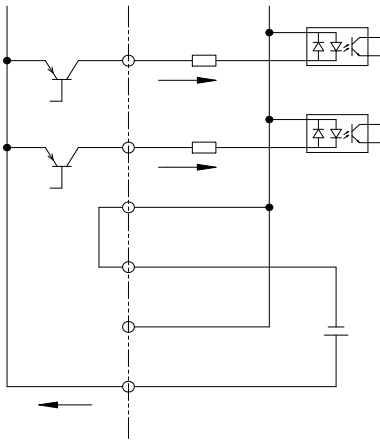
6

0V

NPN



P N P



100mm

2. HF650A- 500- 4- C HF650A- 500- 4- C- Z1 500kW

100mm

620V

	kW	(kVA)	(A)	(A)
HF 650A- 250- 4- D HF 650A- 250- 4- C	250	263	400	403
HF 650A- 315- 4- D HF 650A- 315- 4- C	315	332	504	508
HF 650A- 400- 4- D HF 650A- 400- 4- C	400	421	640	645
HF 650A- 450- 4- D	450	473	720	726
HF 650A- 500- 4- C	500	526	760	767
HF 650A- 630- 4- C	630	663	958	965
HF 650A- 800- 4- C	800	842	1216	1226
HF 650A- 1200- 4- C	1200	1263	1824	1838
HF 650A- 1600- 4- C	1600	1684	2432	2451
HF 650A- 2000- 4- C	2000	2105	3040	3064
HF 650A- 2400- 4- C	2400	2526	3648	3676

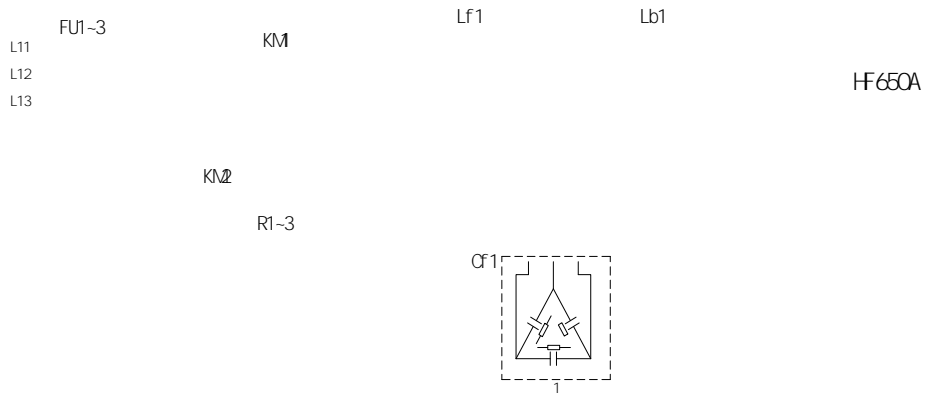
3. 4

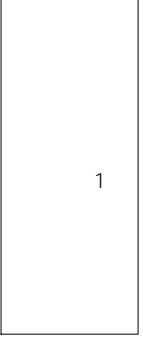
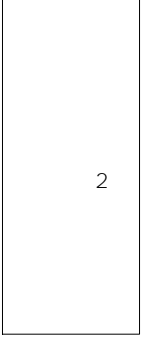
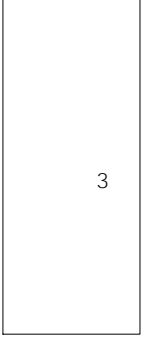
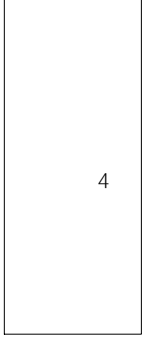
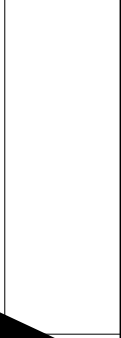
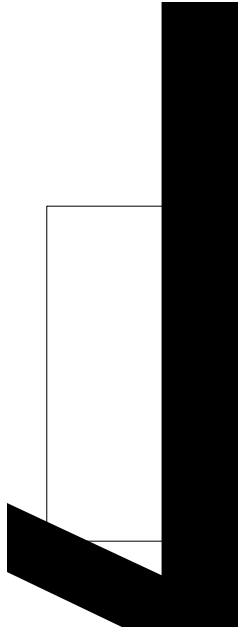
LCL

	LCL	Lf	Lb	Cf	Lf	Lb	Cf
HF 650A- 250- 4- D	GDHF 650- LCL- 250	ACL- 250- 4	PWA 250- 4	CAP- 250- 4			3× 4R
HF 650A- 315- 4- D	GDHF 650- LCL- 315	ACL- 315- 4	PWA 315- 4	CAP- 315- 4			3× 2R5
HF 650A- 400- 4- D	GDHF 650- LCL- 400	ACL- 400- 4	PWA 400- 4	CAP- 400- 4			3× 2R5
HF 650A- 450- 4- D	GDHF 650- LCL- 400	ACL- 400- 4	PWA 400- 4	CAP- 400- 4			3× 2R5

-
- 1. LCL Lf Lb Cf
 - 2. 450kW LCL
 - 3. -C LCL

3.5





3. 6

380V 480V

50 / 60Hz

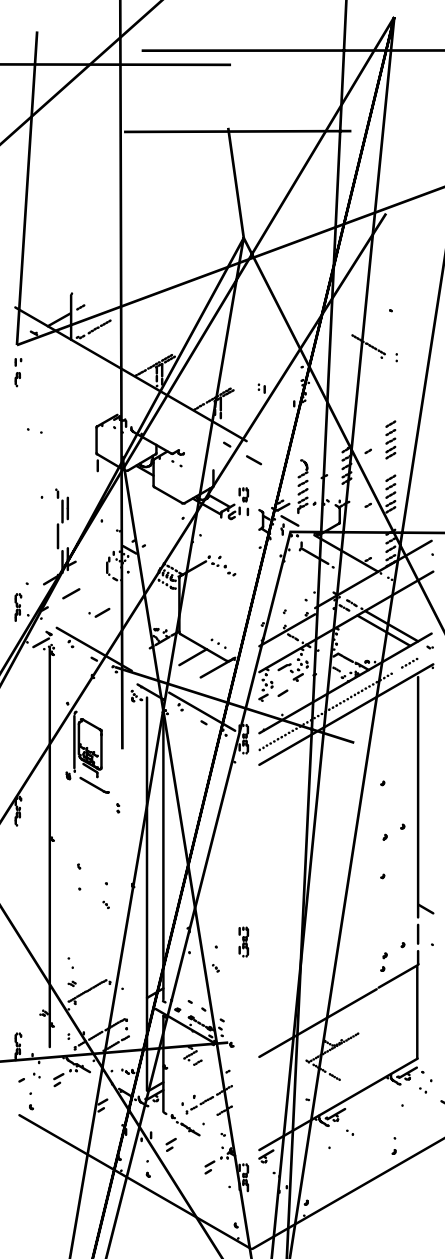
-

8

1

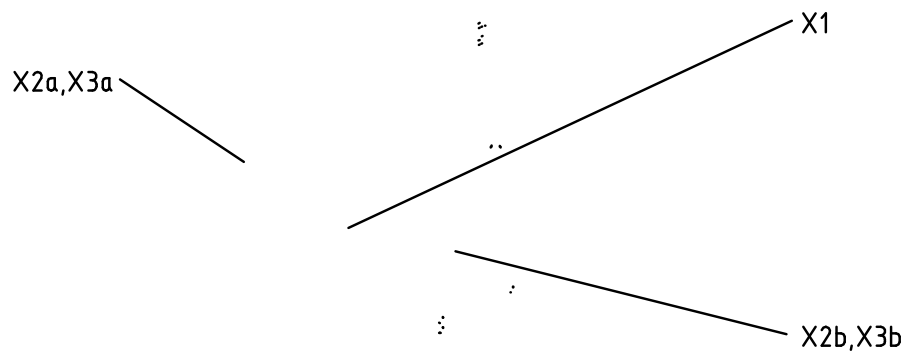
450kW

450kW



1

a



2

b

		C							
		X1	X2	X3	X4	X2a	X2b	X3a	X3b
		AFE							
1						N2		N2	
N1						-		-	
2						N3	N1	N3	N1
N2						-	-	-	-
3						N4	N2	N4	N2
N3						-	-	-	-
4						N5	N3	N5	N3
N4						-	-	-	-
5									
N5									

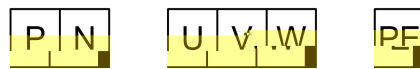
	kW	1			2		
HF650A- 500- 4- C HF650A- 630- 4- C HF650A- 800- 4- C	500~800	N1	N2	/	/	/	/
HF650A- 1200- 4- C	1200	N1	N2	N3	/	/	/
HF650A- 1600- 4- C	1600	N1	N2	N3	N4	/	/
HF650A- 2000- 4- C	2000	N1	N2	N3	N4	N5	/
HF650A- 2400- 4- C	2400	N1	N2	N3	N4	N5	N6

4.

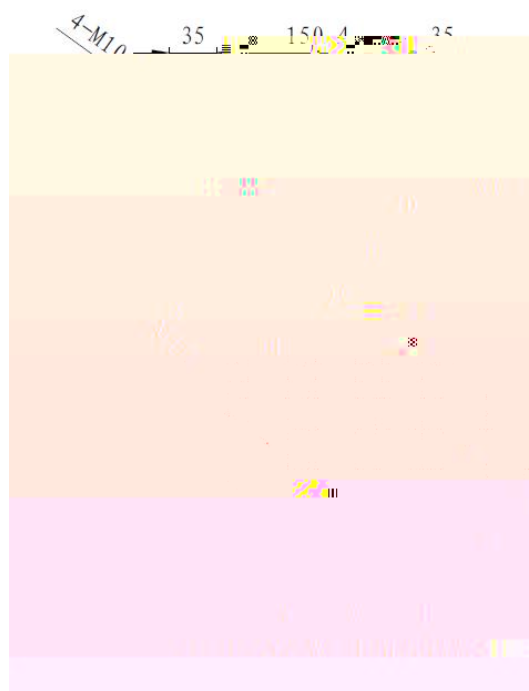
4.1

4.2

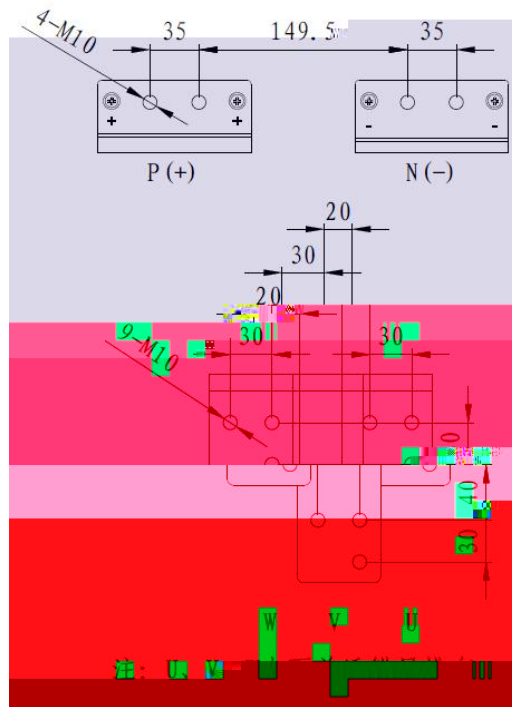
1



P	
N	
U V W	
PE	



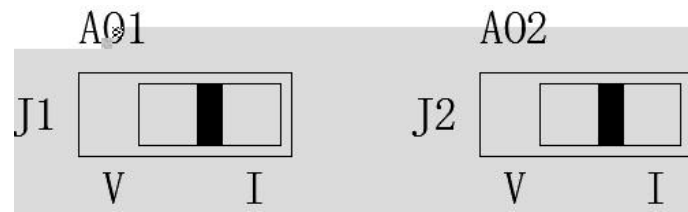
HF650B-250-4-D



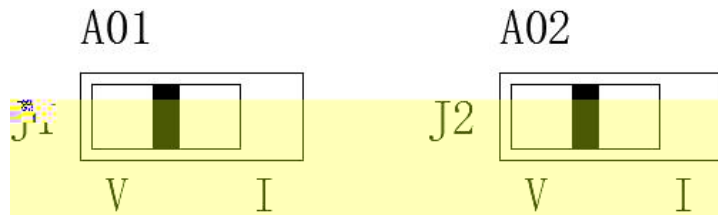
HF650B-400-4-D

2

3



a.



b.

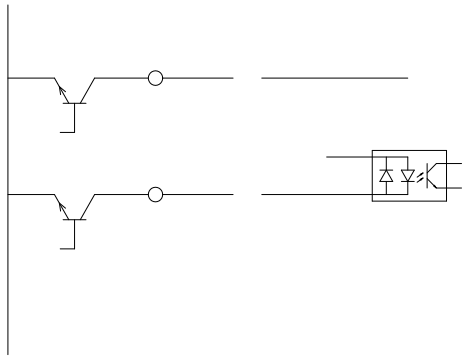
4

1	+10V	10V		
2	GND			
3	AI 1+/AV1	1	0/4 20mA	
		1	-10 10V	
4	AI 1-	1		
5	AI 2+/AV2	2	0/4 20mA	
		2	-10 10V	
6	AI 2-	2		
7	A01	1	0/4 20mA	J1
		I a	0 10V J1	V b
8	A02	2	0/4 20mA	J2
		I a	0 10V J2	V b
9	DI 1	1		
10	DI 2	2		
11	DI 3	3		
12	DI 4	4		
13	DI 5	5		

14	DI 6		6		
15	DI 7		7		
16	DI 8		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		
28	DO4C		4		
29	DO4B		4		
30	DO5A		5		
31	DO5C		5		

5

OV NPN



4.3



	kW	A	(A)	(A)
HF 650B- 160- 4- D	160	287	330	270
HF 650B- 185- 4- D	185	332	365	320
HF 650B- 200- 4- D	200	360	415	370
HF 650B- 220- 4- D	220	394	438	415
HF 650B- 250- 4- D	250	448	485	440
HF 650B- 315- 4- D	315	565	610	490
HF 650B- 355- 4- D	355	636	668	580
HF 650B- 400- 4- D	400	717	720	634
HF 650B- 500- 4- C	500	896	920	745
HF 650B- 630- 4- C	630	1129	1100	940
HF 650B- 800- 4- C	800	1434	1290	1140

DC620V

4. 4

HF 650B- 160- 4- D	OCL - 160- 4
HF 650B- 185- 4- D	OCL - 185- 4
HF 650B- 200- 4- D	OCL - 200- 4
HF 650B- 220- 4- D	OCL - 220- 4
HF 650B- 250- 4- D	OCL - 250- 4
HF 650B- 315- 4- D	OCL - 315- 4
HF 650B- 355- 4- D	OCL - 355- 4
HF 650B- 400- 4- D	OCL - 400- 4

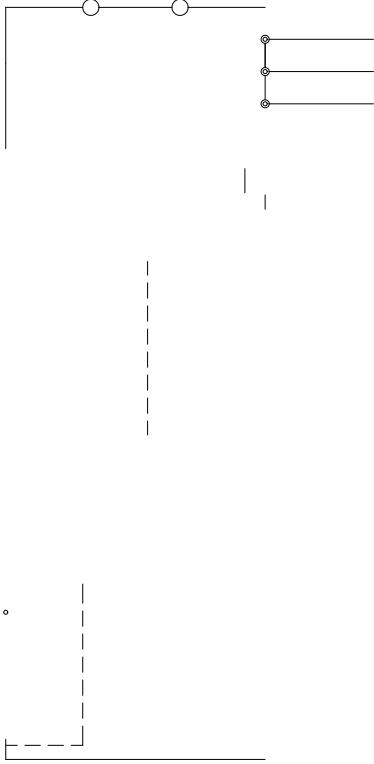
1.

50

2.

400kW

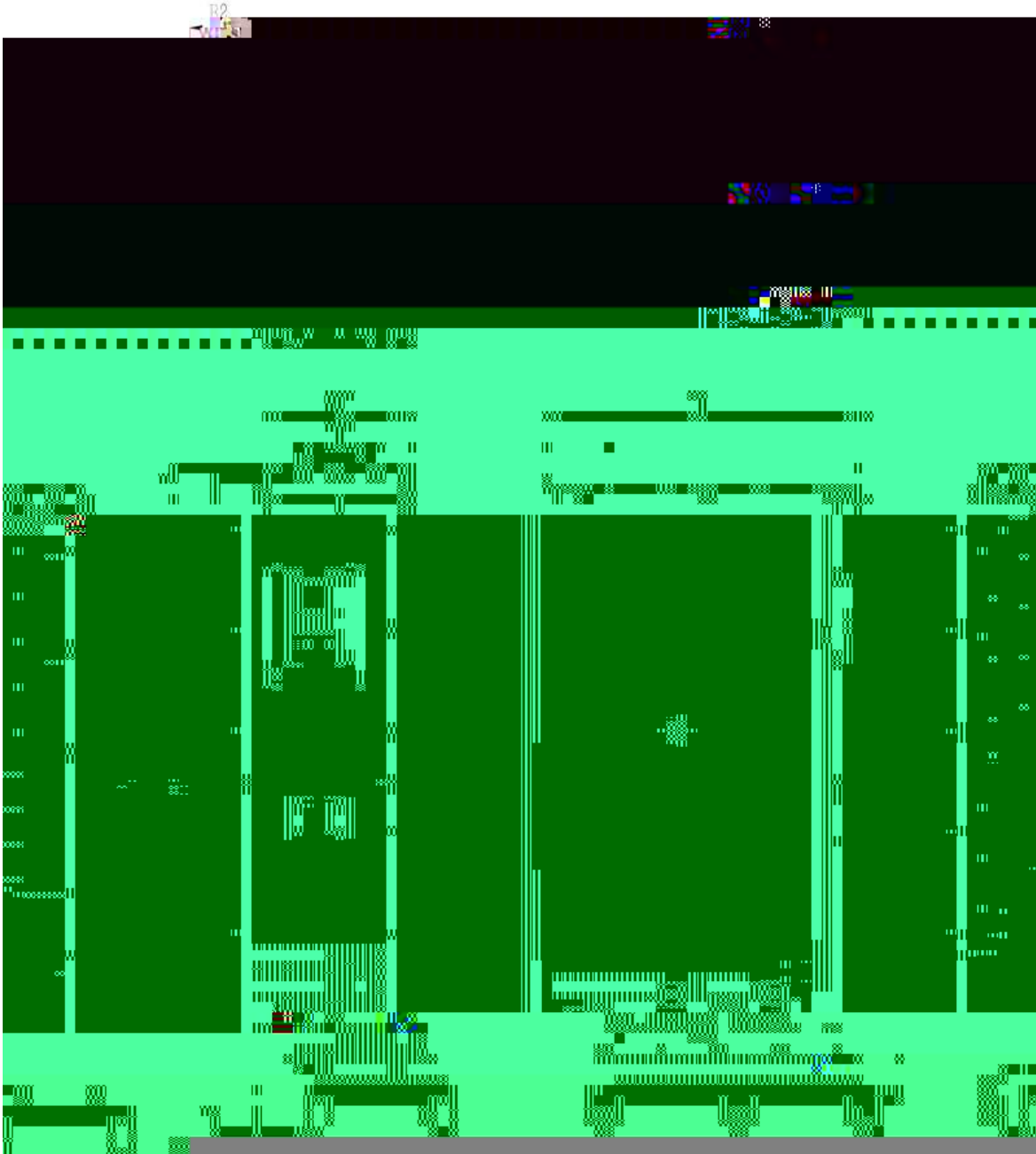
4.5



	mm ²	V/A
HF650B- 160- 4- D	95	1000/500
HF650B- 185- 4- D	95	1000/630
HF650B- 200- 4- D	95	1000/630

5.

5.1



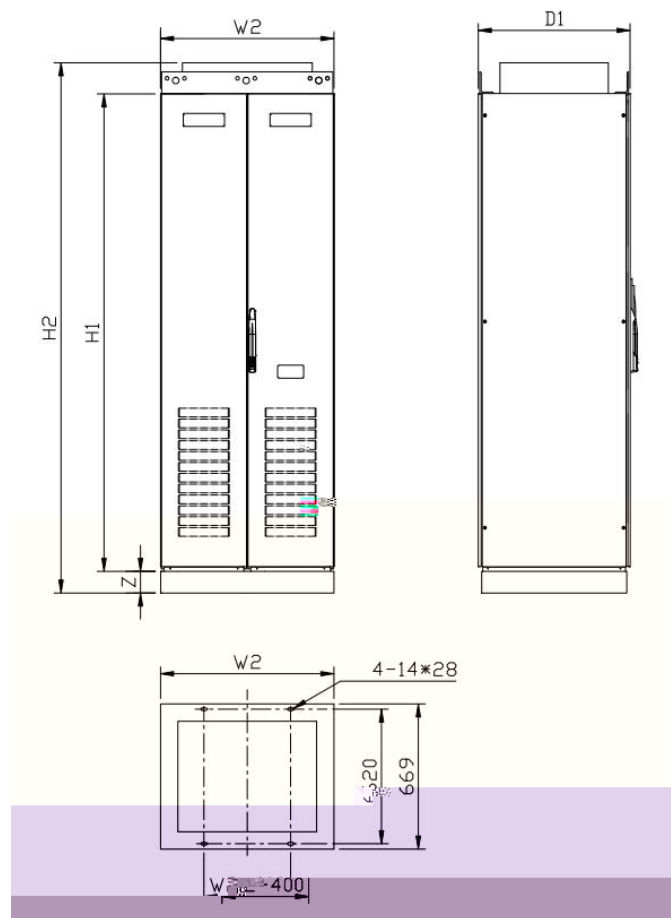
(250KW-450KW)

250kW-450kW

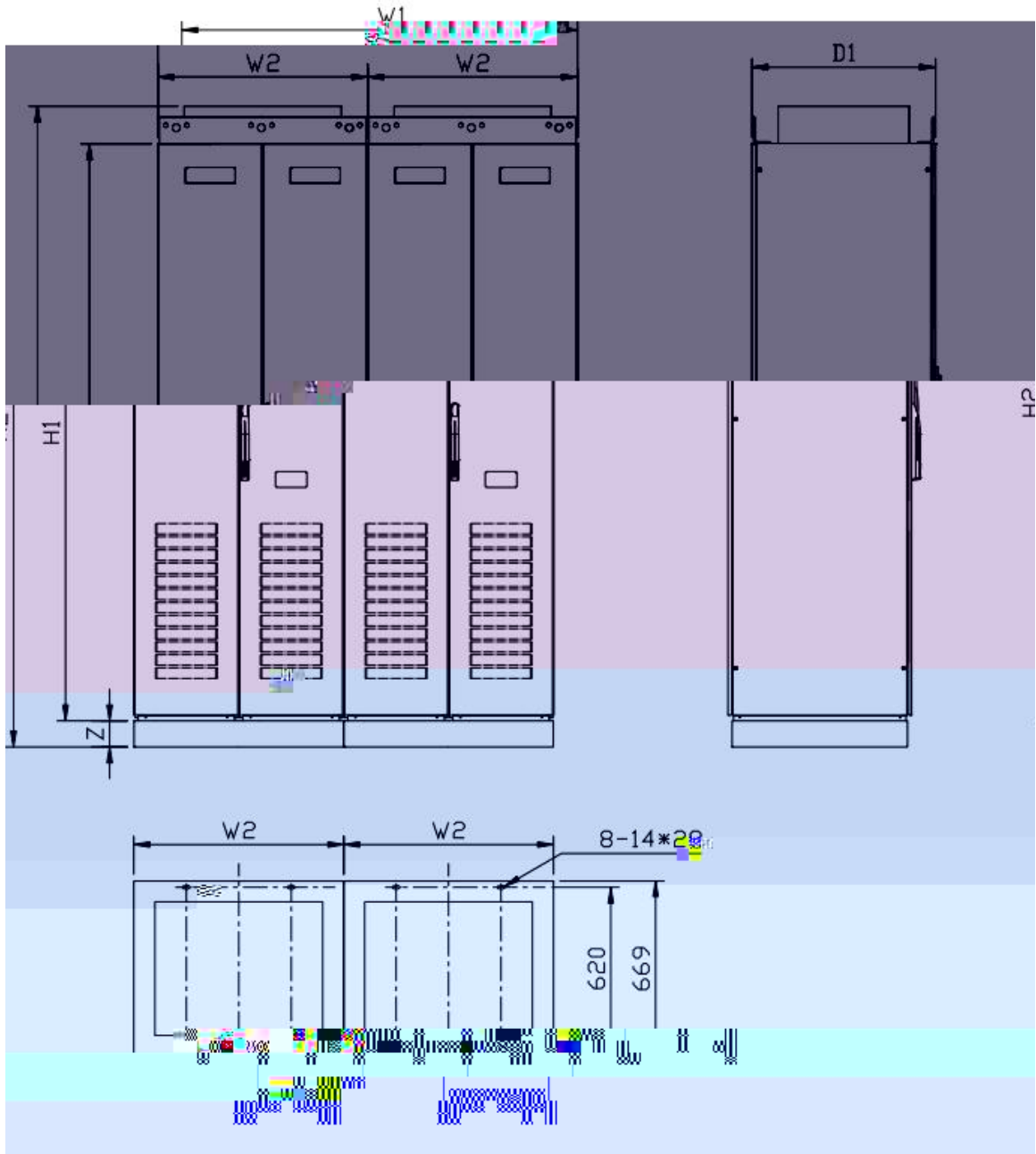
	mm			mm				8.8	kg
	H1	W1	D1	A1	B1	B2			
HF650A- 250- 4- D	1316	300	520	1295	150	100	4- 10	4-M8	150
HF650A- 315- 4- D	1316	300	620	1295	150	100	4- 10	4-M8	200
HF650A- 400- 4- D									
HF650A- 450- 4- D									

5.2

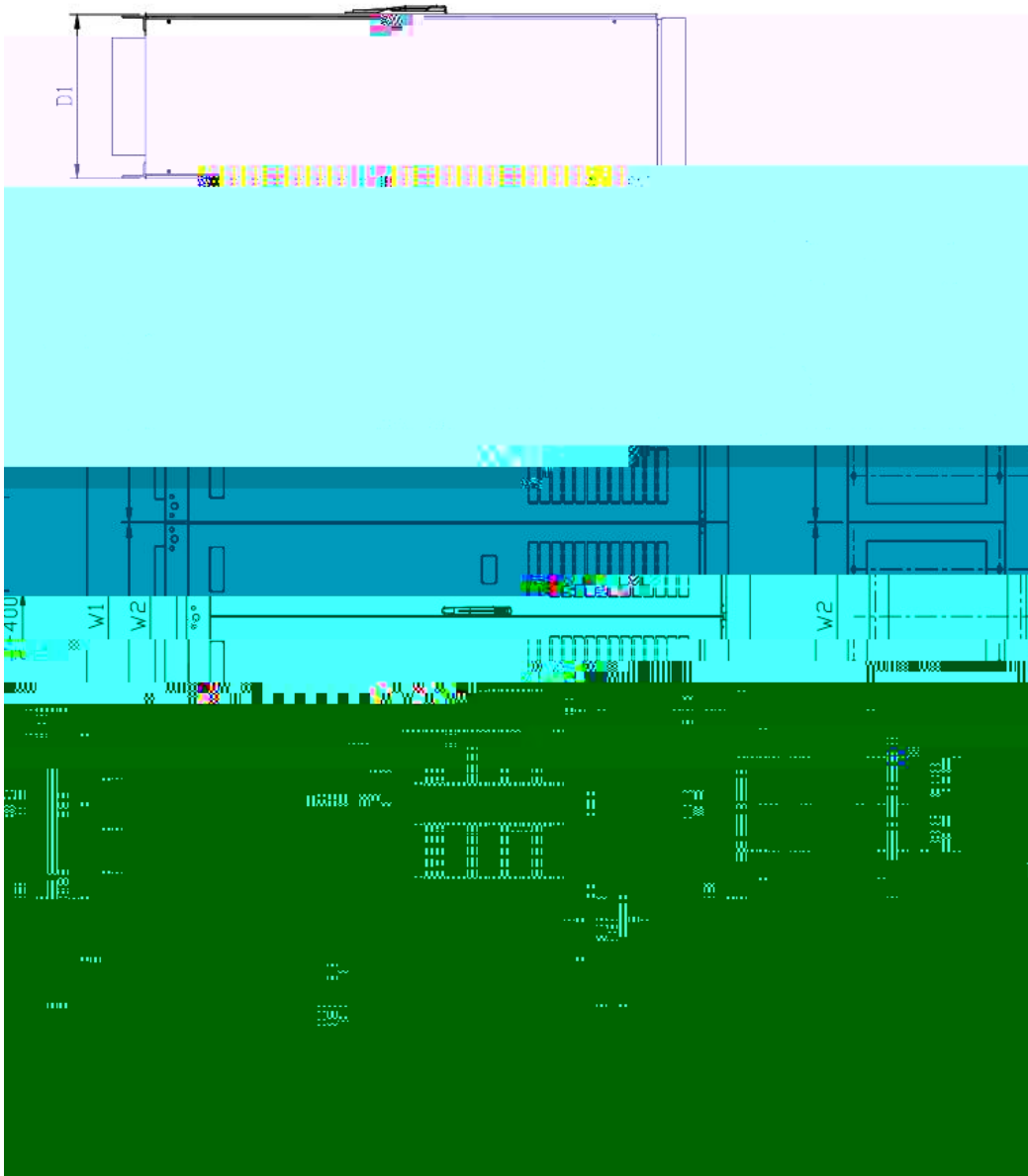
250kW-2400kW



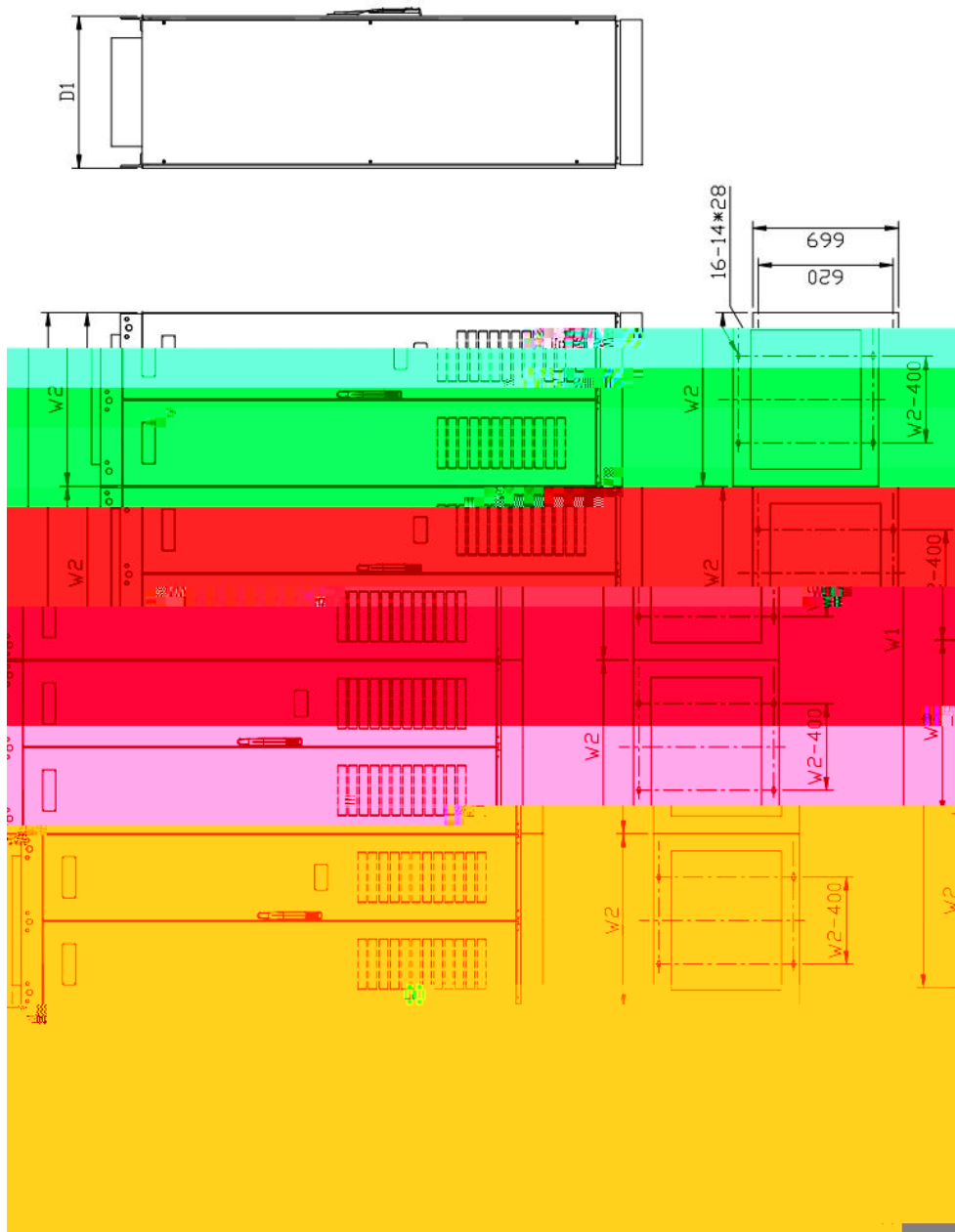
HF650A- 250- 4- C HF650A- 315- 4- C HF650A- 400- 4- C



HF650A-500-4-C HF650A-630-4-C HF650A-800-4-C



HF650A-1200-4-C



HF650A-1600-4-C





250kW 315kW 400kW

		mm						kg
		H1	H2	W1	W2	D1	Z	
1	HF 650A- 250- 4- C HF 650A- 250- 4- C- Z1	2200	2440	/	800	700	100	1000
	HF 650A- 315- 4- C HF 650A- 315- 4- C- Z1							
	HF 650A- 400- 4- C HF 650A- 400- 4- C- Z1							
2	HF 650A- 250- 4- C- Z2 HF 650A- 315- 4- C- Z2	2200	2540	/	800	700	200	1000
	HF 650A- 400- 4- C- Z2							
	HF 650A- 250- 4- C- Z3 HF 650A- 315- 4- C- Z3							
3	HF 650A- 315- 4- C- Z3 HF 650A- 400- 4- C- Z3	2200	2590	/	800	700	250	1000
	HF 650A- 250- 4- C- Z4 HF 650A- 315- 4- C- Z4							
	HF 650A- 400- 4- C- Z4							
4	HF 650A- 250- 4- C- Z4 HF 650A- 315- 4- C- Z4	2200	2640	/	800	700	300	1000
	HF 650A- 400- 4- C- Z4							

500kW 630kW 800kW

		mm						kg
		H1	H2	W1	W2	D1	Z	
1	HF 650A- 500- 4- C HF 650A- 500- 4- C- Z1	2200	2440	1600	800	700	100	1800
	HF 650A- 630- 4- C HF 650A- 630- 4- C- Z1							
	HF 650A- 800- 4- C HF 650A- 800- 4- C- Z1							
2	HF 650A- 500- 4- C- Z2 HF 650A- 630- 4- C- Z2	2200	2540	1600	800	700	200	1800
	HF 650A- 800- 4- C- Z2							
	HF 650A- 500- 4- C- Z3 HF 650A- 630- 4- C- Z3							
3	HF 650A- 630- 4- C- Z3 HF 650A- 800- 4- C- Z3	2200	2590	1600	800	700	250	1800
	HF 650A- 500- 4- C- Z4 HF 650A- 630- 4- C- Z4							
	HF 650A- 800- 4- C- Z4							
4	HF 650A- 560- 4- C- Z4 HF 650A- 630- 4- C- Z4	2200	2640	1600	800	700	300	1800
	HF 650A- 800- 4- C- Z4							

1200kW

		mm						kg
		H1	H2	V1	V2	D1	Z	
1	HF 650A- 1200- 4- C HF 650A- 1200- 4- C- Z1	2200	2440	2400	800	700	100	2800
2	HF 650A- 1200- 4- C- Z2	2200	2540	2400	800	700	200	2800
3	HF 650A- 1200- 4- C- Z3	2200	2590	2400	800	700	250	2800
4	HF 650A- 1200- 4- C- Z4	2200	2640	2400	800	700	300	2800

1600kW

		mm						kg
		H1	H2	V1	V2	D1	Z	
1	HF 650A- 1600- 4- C HF 650A- 1600- 4- C- Z1	2200	2440	3200	800	700	100	3800
2	HF 650A- 1600- 4- C- Z2	2220	2540	3200	800	700	200	3800
3	HF 650A- 1600- 4- C- Z3	2200	2590	3200	800	700	250	3800
4	HF 650A- 1600- 4- C- Z4	2200	2640	3200	800	700	300	3800

2000kW

		mm						kg
		H1	H2	V1	V2	D1	Z	
1	HF 650A- 2000- 4- C HF 650A- 2000- 4- C- Z1	2200	2440	4000	800	700	100	4800
2	HF 650A- 2000- 4- C- Z2	2200	2540	4000	800	700	200	4800
3	HF 650A- 2000- 4- C- Z3	2200	2590	4000	800	700	250	4800
4	HF 650A- 2000- 4- C- Z4	2200	2640	4000	800	700	300	4800

2400 0 n

5.3



(160kW-400kW)

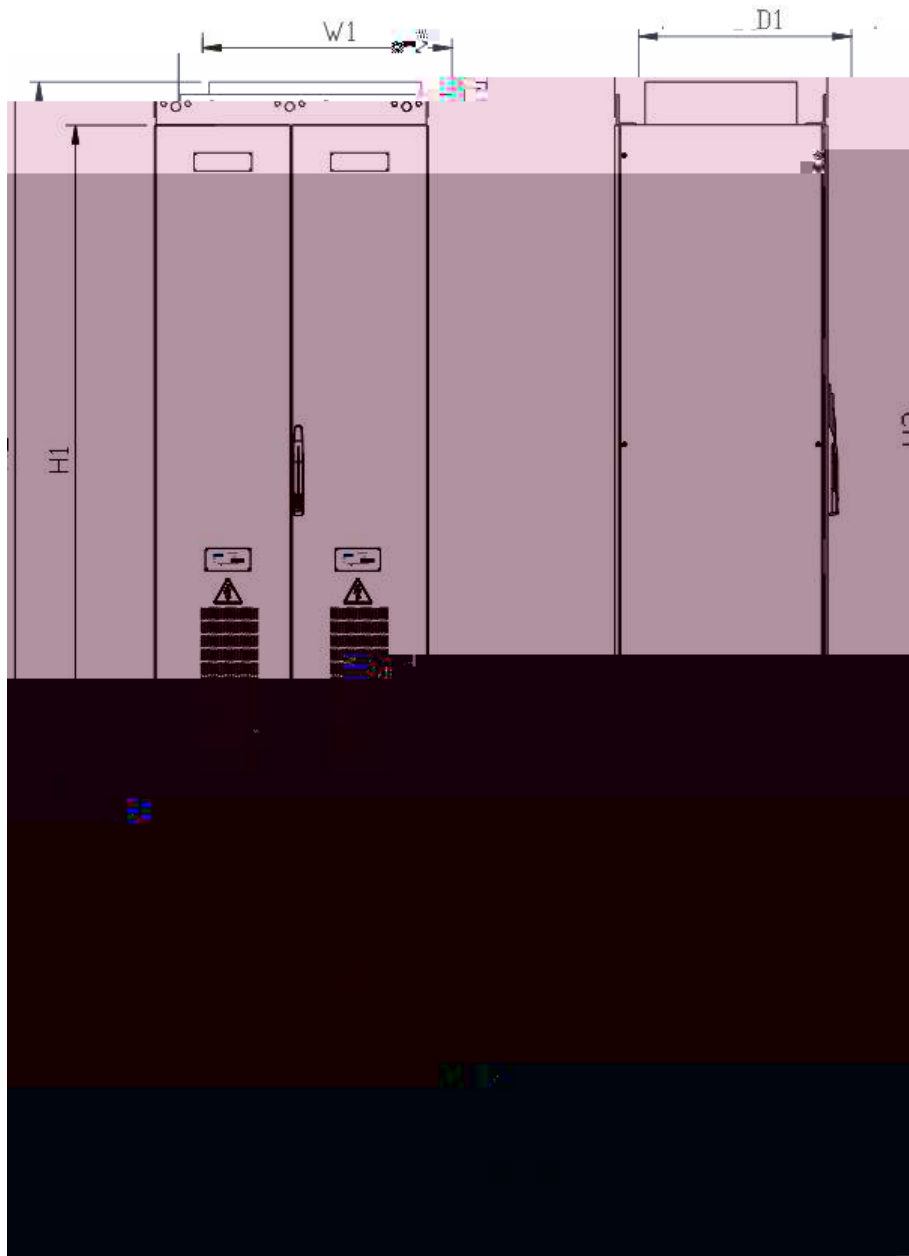
160kW-400kW

	mm			mm			4- 10	8 8	kg
	H1	W1	D1	A1	B1	B2			
HF 650B- 160- 4- D	1316	300	520	1295	150	100	4- 10	4- M8	120
HF 650B- 185- 4- D									
HF 650B- 200- 4- D									
HF 650B- 220- 4- D									
HF 650B- 250- 4- D	1316	300	620	1295	150	100	4- 10	4- M8	150
HF 650B- 280- 4- D									

HF 650B- 315- 4- D									
HF 650B- 355- 4- D									
HF 650B- 400- 4- D									

500kW

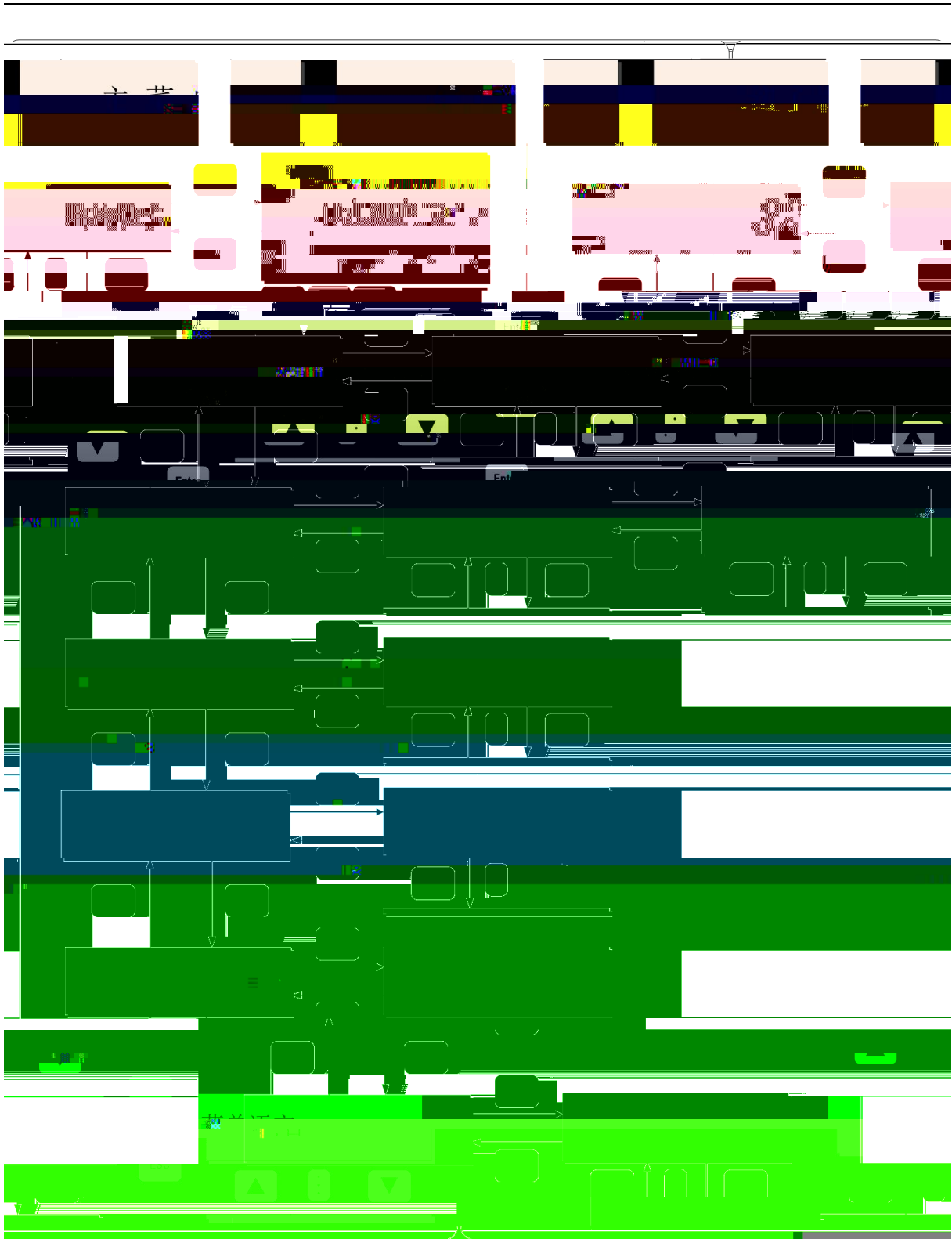
5. 4



		mm					kg
		H1	H2	W	D1	Z	
1	HF 650B- 500- 4- C HF 650B- 500- 4- C- Z1	2200	2440	800	700	100	900
	HF 650B- 560- 4- C HF 650B- 560- 4- C- Z1						
	HF 650B- 630- 4- C HF 650B- 630- 4- C- Z1						
	HF 650B- 800- 4- C HF 650B- 800- 4- C- Z1						
2	HF 650B- 500- 4- C- Z2	2200	2540	800	700	200	900
	HF 650B- 560- 4- C- Z2						
	HF 650B- 630- 4- C- Z2						
	HF 650B- 800- 4- C- Z2						
3	HF 650B- 500- 4- C- Z3	2200	2590	800	700	250	900
	HF 650B- 560- 4- C- Z3						
	HF 650B- 630- 4- C- Z3						
	HF 650B- 800- 4- C- Z3						
4	HF 650B- 500- 4- C- Z4	2200	2640	800	700	300	900
	HF 650B- 560- 4- C- Z4						
	HF 650B- 630- 4- C- Z4						
	HF 650B- 800- 4- C- Z4						



6.2

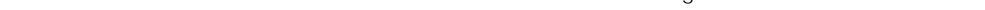


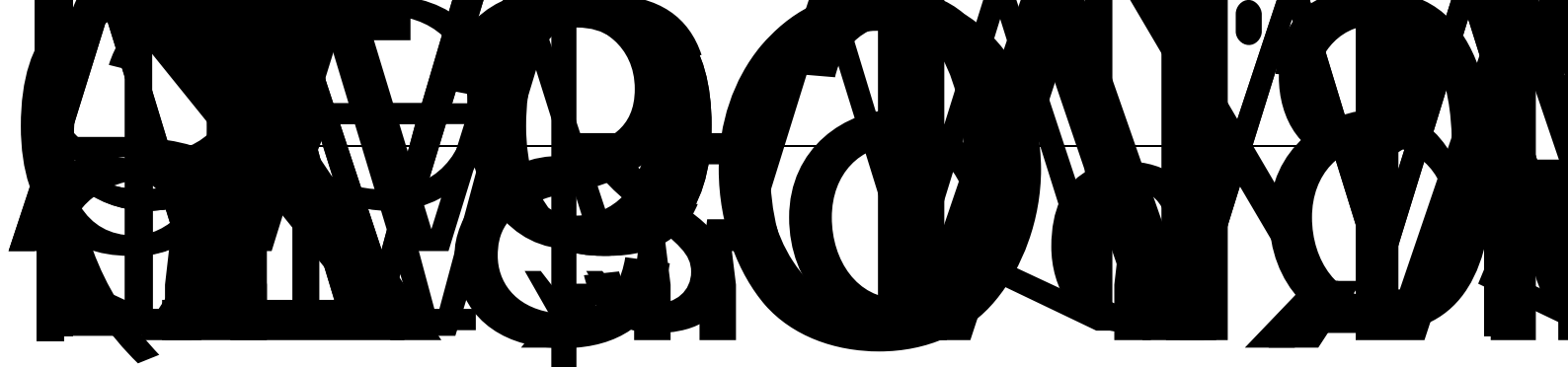
6.4

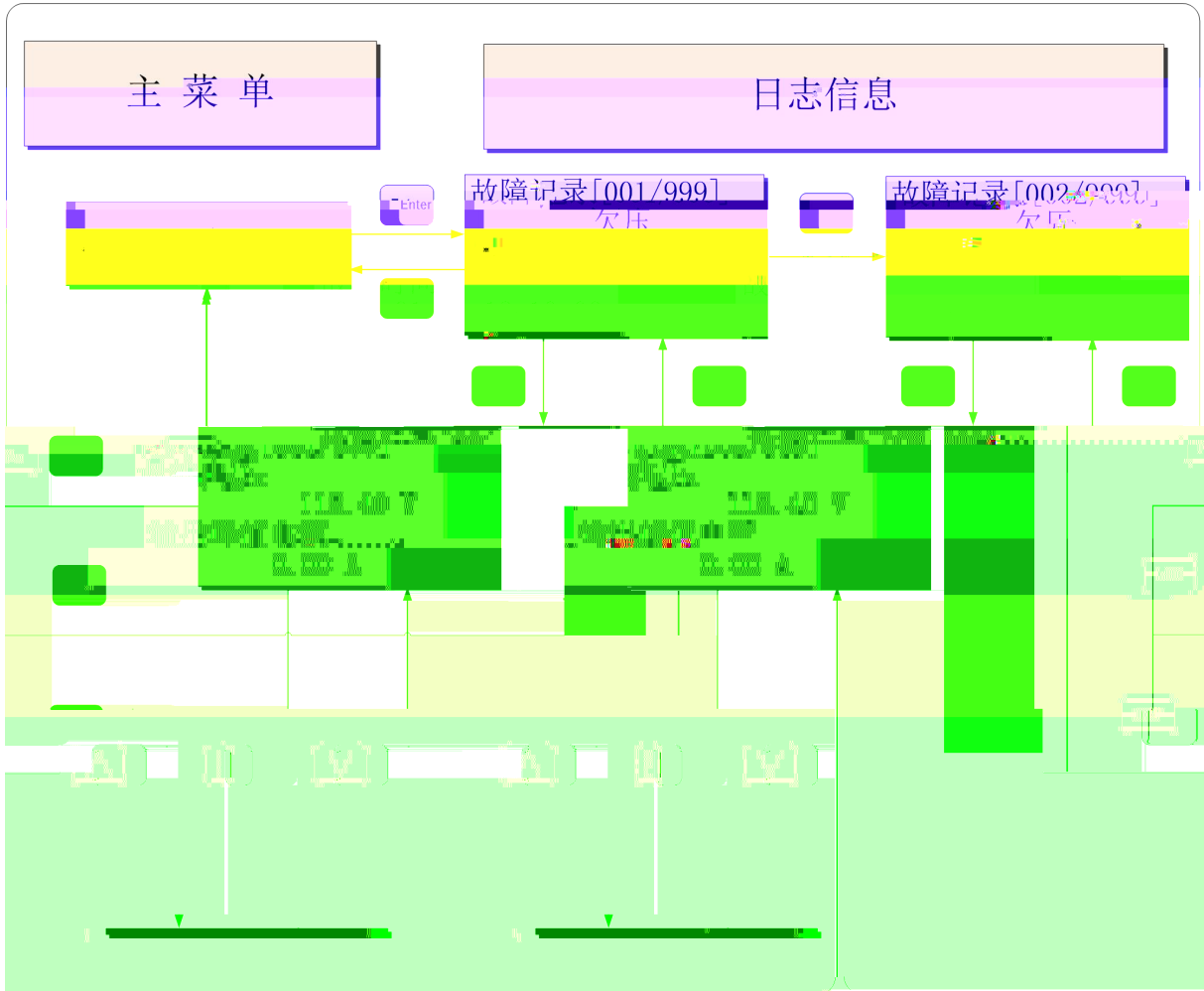
1 Drive Monitor

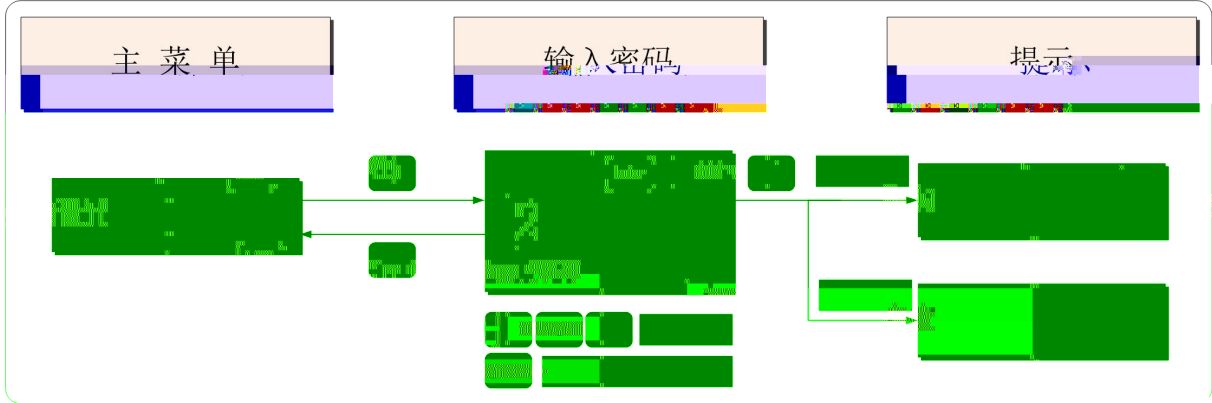
Function Set

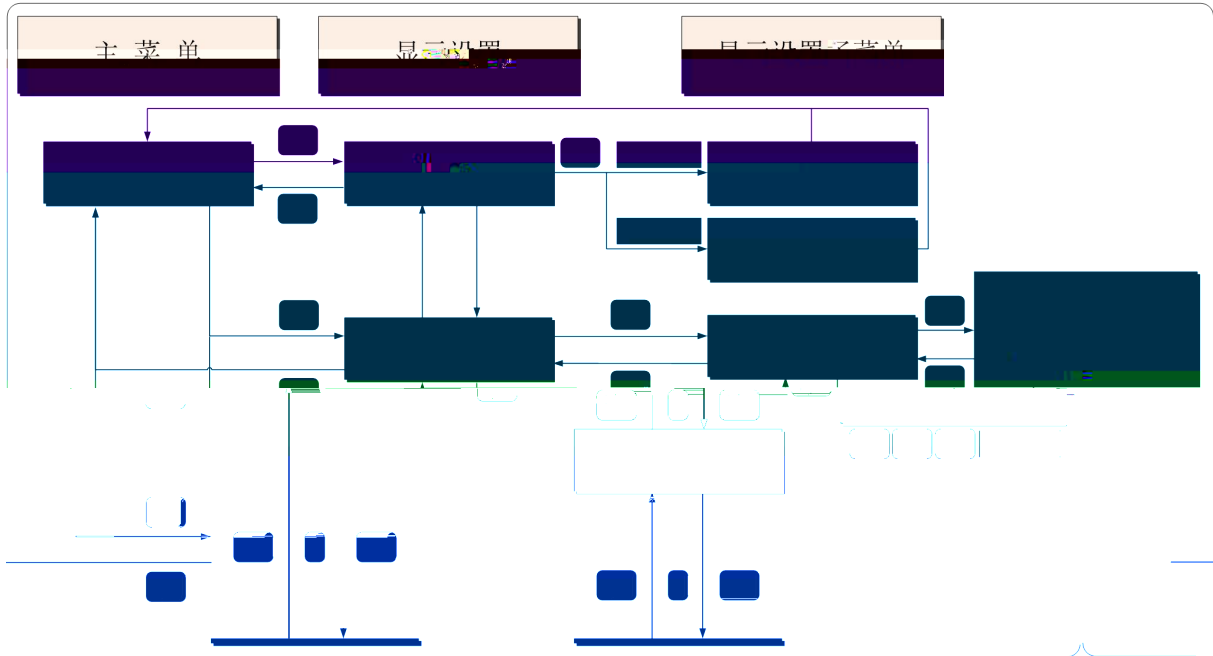
Function Set		
	AFE	AFE



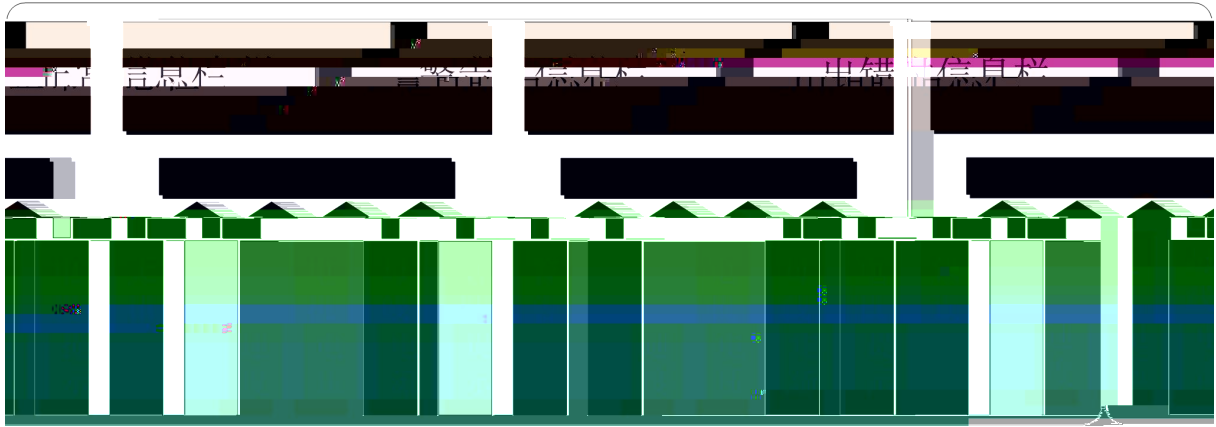








Display Set		4	4			1
		4		5	8	
				"	"	
			"	"		



" RESET"

" ESC"

" " " "

" RESET"

" " "

"

" RESET"

15



P7. 0	180%	
P7. 4	200%	
P7. 12	730V	430V 800V
P8. 6	300s	300s 0. 5s
P16. 0	380V	
P16. 2		400kW 400kW
P16. 4		400kW 640A
P16. 11	3	
P16. 12	3	3K
P24. 7	0V	ADJ

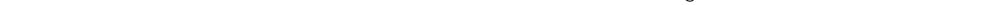
P16. 0 P24. 7 =P16. 0
+P24. 7 P16. 0

P16. 0 375V 580V
375V P16. 0 400V 600V
400V P16. 0 430V 630V
430V P16. 0 450V 665V
450V P16. 0 460V 680V
P16. 0 460V 700V
620V P16. 0 380V P24. 7
20V 620V
380V Local /Remote Local Run
I GBT 300s
" AFE " 49- 51Hz " AFE "
Stop
P8. 6 0. 5s Run



Stop

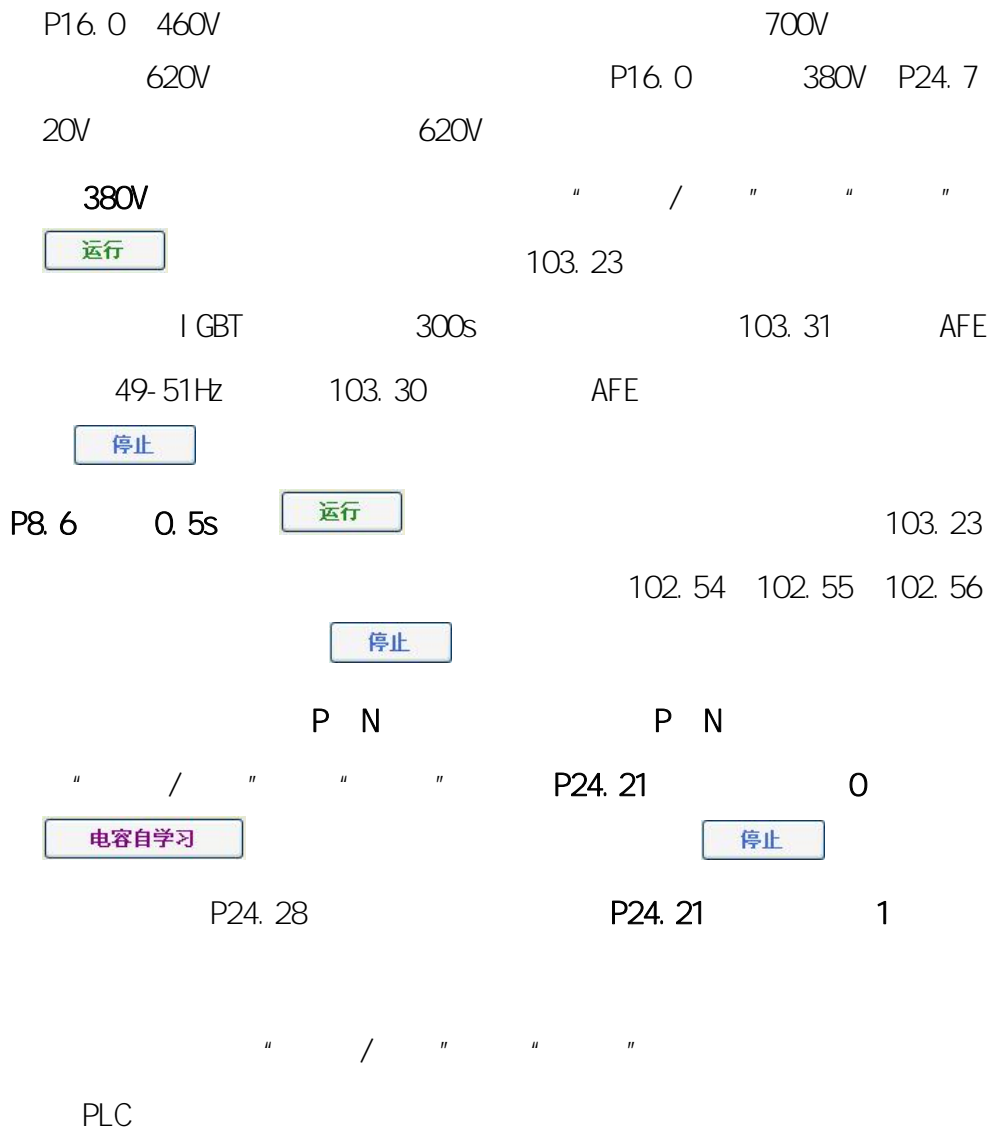
Local o P N A B C Local /Remote



P3. 0	1	
P3. 1	20	
P3. 3	5	
P4. 1 D02	2	
P4. 3 D04	0	DO
P4. 4 D05	32	
P7. 0	180%	
P7. 4	200%	
P7. 12	730V	430V 800V
P8. 6	300s	300s 0. 5s
P16. 0	380V	
P16. 2		400kW 400kW
P16. 4		400kW 640A
P16. 11	3	
P16. 12	3	3K
P24. 7	0V	ADJ

P16. 0 P24. 7 =P16. 0
+P24. 7 P16. 0

P16. 0	375V	580V
375V	P16. 0	400V
400V	P16. 0	430V
430V	P16. 0	450V
450V	P16. 0	460V

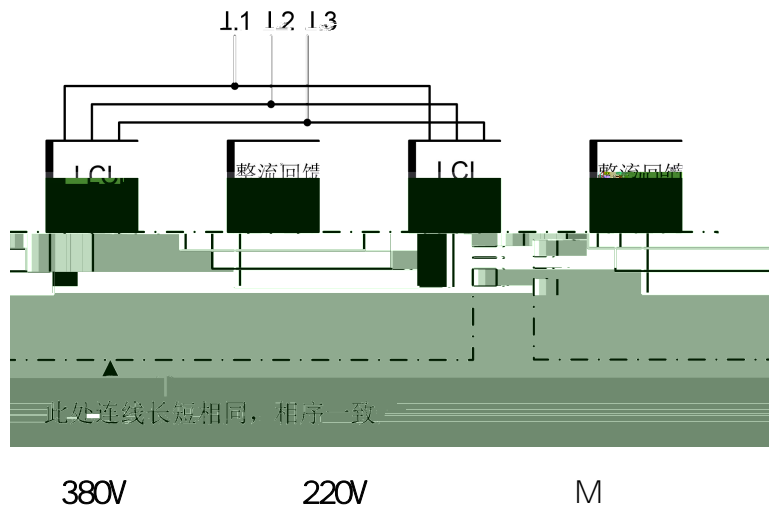


7.1.2

500kW 630kW 800kW

DI 1 DI 2 DI 4
 DO2
 DO4 DO
 DO5

1



P4. 1 D02	2	
P7. 0	180%	
P7. 4	200%	
P7. 12	730V	430V 800V
P16. 0	380V	
P16. 2	1/2	800kW 400kW
P16. 4	1/2	800kW 608A
P16. 11	3	
P16. 12	3	3K

P2. 0	1	
P2. 3	1	
P3. 0	1	
P3. 1	20	
P3. 3	5	
P4. 1 D02	2	
P4. 3 D04	0	DO
P4. 4 D05	32	
P7. 0	180%	
P7. 4	200%	
P7. 12	730V	430V 800V
P8. 6	300s	300s 0. 5s

P16. 0	380V		
P16. 2		800kW	800kW
P16. 4		800kW	1216A
P16. 11	3		
P16. 12	3		3K
P24. 7	0V		ADJ

P16. 0 P24. 7

=P16. 0

P12161

A

ЫЫЫЫ

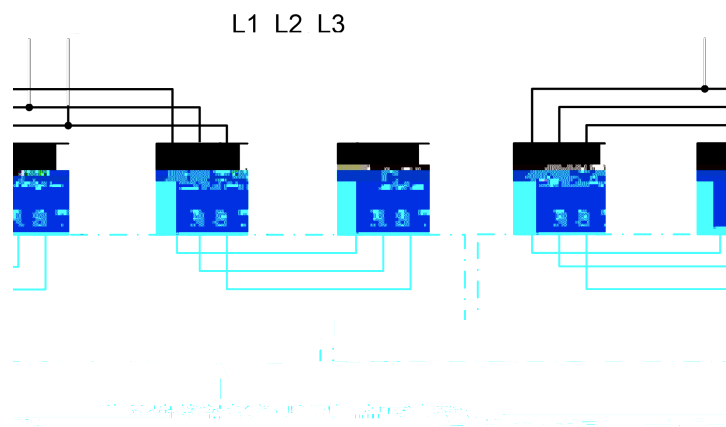
>ЫЯ

GUIDE

69

		P N		P N	Local /Remote
Local	P24. 21		0	" "	
" "		Stop			P24. 28
	P24. 21	1			
Local /Remote		Remote			PLC

2



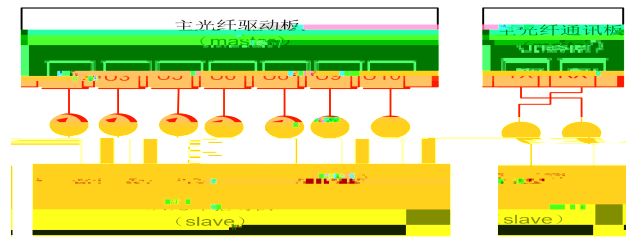
	380V		220V		PO. 1		
					DI	DO	
		DO					
P16. 11	0 V/F	P4. 1	57	P4. 3	58	P4. 4	
59							
		100. 15	100. 16	100. 17	1		
		100. 15	100. 16	100. 17	0		DO2
PLC	DO4			DO5			

参数	名称	值	单位
100.15	DO 功能本地测试 1	1	
100.16	DO 功能本地测试 2	0	
100.17	DO 功能本地测试 3	0	

P3.0-P3.7 0 PLC DI DI

DI 1

参数	名称	16	13	12	11	10	9	8	7	6	5	4	3	2
101.5	数字量输入端子 [01 ~ 16]													
101.6	数字量输出端子 [01 ~ 16]													



P2.0	2		
P4.3 DO4	0		DO
P4.4 DO5	32		
P4.1 DO2	2		
P7.0	180%		
P7.4	200%		
P7.12	730V		430V
P16.0	380V		800V
P16.2		1/2	800kW 400kW
P16.4		1/2	800kW 608A
P16.11	3		
P16.12	3		3K

7.2



7.3.3

6

7.3.4

	[0]	
	[1]	
P8.0	[2] DP	1
	[3] MODBUS	
	[4]	
P8.3	[0]	1
	[1]	
P8.6	0 300s	0
P8.7		

8 0

	[0]	0	0
	[1]		
	[2]		
	[3]		
	[4]		
	[5]		
	[6]		
	[7]		
	[8]		
	[9]		
	[10]		

P16. 0		380V
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]

7. 3. 5

1

P16. 11 [1] [2]
[0] V/F

2

V/F (P20. 74)
P20. 74

P20. 78 P20. 79 P20. 84

"

"

"

"

3

P20. 79 P20. 84

P20. 85-P20. 97



4

"

"

"

"

50%

P20. 98

P20. 98

7. 3. 6

HF650

7. 5%

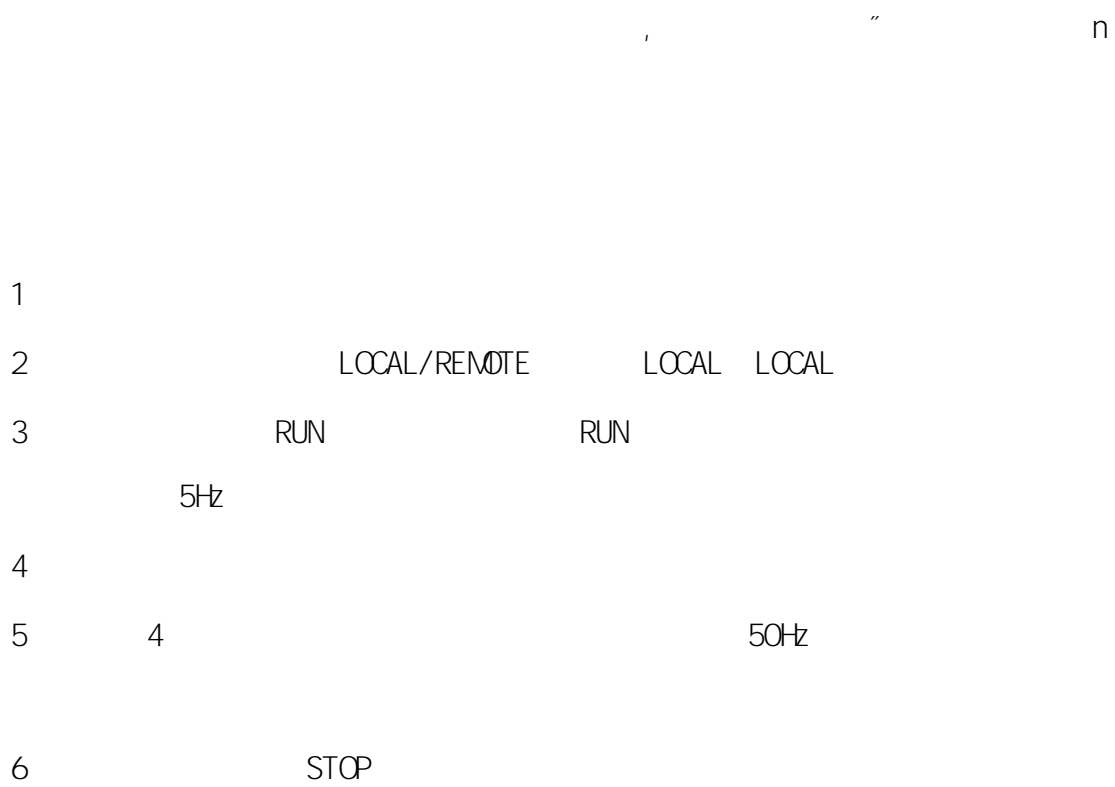
5

0%

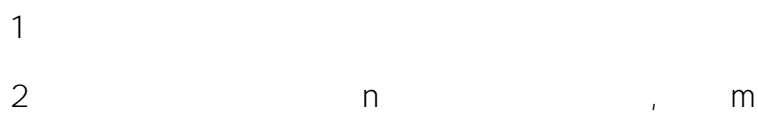
50%



7.3.7



7.3.8



1

2

1

2

7.3.9

8.

8.1

8.1.1

P2.0		[0] [1] [2]	0 2	0	450kW [0] 450kW [1] [2]
P2.2		[0] [1]	0 1	0	
P2.3			0 5	1	

8.1.2

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

0		
1		
5		</RST
14		
15	. NC	
20		

8.1.3

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	[32]

0		
1		
2		ON
32		

8.1.4

P7.0	[1]		0.0 300.0 [%]	180.0 [%]	
P7.4	[1]		0.0 300.0 [%]	235.0 [%]	
P7.12			600 820 [V]	800 [V]	
P7.13			300 500 [V]	350 [V]	
P7.14			60.0 100.0 []	87.5 []	
P7.47			0.0 300.0 [%]	100.0 [%]	
P7.48	1	1	0.0 300.0 [%]	150.0 [%]	
P7.49	1	1	0.00 60.00 [s]	60.00 [s]	
P7.50	2	2	0.0 300.0 [%]	200.0 [%]	
P7.51	2	2	0.00 5.00 [s]	5.00 [s]	
P7.95			0.0 20.0 [s]	15.00 [s]	

8.1.5

P8.0		[0] [1] [2] DP [3] MODBUS [4]	0 4	0	
------	--	---	-----	---	--

P8. 6			0. 00 300. 00 [s]	0. 00 [s]	IGBT
-------	--	--	-------------------------	--------------	------

8. 1. 6

P16. 0			320 460 [V]	380 [V]	
P16. 2			0. 0 4000. 0 [kW]	[kW]	
P16. 4			0. 0 6500. 0 [A]	[A]	
P16. 11		[0] V/F [1] [2] [3] [4]	0 4	0	[3]
P16. 12			3 8 [kHz]	3 [kHz]	3 8kHz

8. 1. 7 AFE

P24. 0		[0] [1] 1 [2] 2 [3] [4] DP [5] MODBUS [6]	0 6	0	AFE [0]
P24. 1	@		0 347	0	

P24. 2		[0] [1] 1 [2] 2 [3] DP [4] MODBUS [5]	0 5	0	AFE [0]
P24. 3	@		0 347	0	
P24. 7	ADJ		- 30 30[V]	0[V]	
P24. 12	Kp		0 1000[%]	100[%]	
P24. 13	Ki		0 1000[%]	100[%]	
P24. 14	@		0 1000[%]	200[%]	
P24. 15	@		0 1000[%]	200[%]	
P24. 16	Kp		0 1000[%]	100[%]	
P24. 17	Ki		0 1000[%]	100[%]	
P24. 21		[0] [1]	0 1	0	
P24. 22			0 300[ns]	30[ns]	
P24. 25		[0] [1]	0 1	1	
P24. 26			0 150[%]	100[%]	
P24. 27	PWM LB	LB	0 65 [ns]	0	AFE

9.

9.1

V01	SYS_NOT_RDY	(Ready)	
V02	NO_DRV_ENABLE]

9.2



[E050] U IGBT OVO
ERR_UT not reset

[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		P2

[E138]

[E160]	SLVE FAULT	
[E161]	SLV_NOT_RDY	
[E162]	1 SLV1_CAN_ERR	1
[E163]	2 SLV2_CAN_ERR	2
[E164]	3 SLV3_CAN_ERR	3
[E165]	4 SLV4_CAN_ERR	4
[E166]	5 SLV5_CAN_ERR	5
[E170]	MOTOR TUNING FAIL	P7. 33
[E180]	DP P/B ERROR	
[E181]	DP P/B_EM	CV0. 4
[E200]	LOCAL_EM	[] P3
[E201]	REMOTE_EM	[] P3
[E202]	Mdbus MODBUS EMERGENCY	Mdbus
[E203]	DRIVE DISABLED	DP
[E210]	Panel Error	
[E220]	CRC MEMORY CRC ERR	
[E221]	PARAMETER ERROR	

10.

	
1	
2	
3	
4	
	
1	CMDS
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

