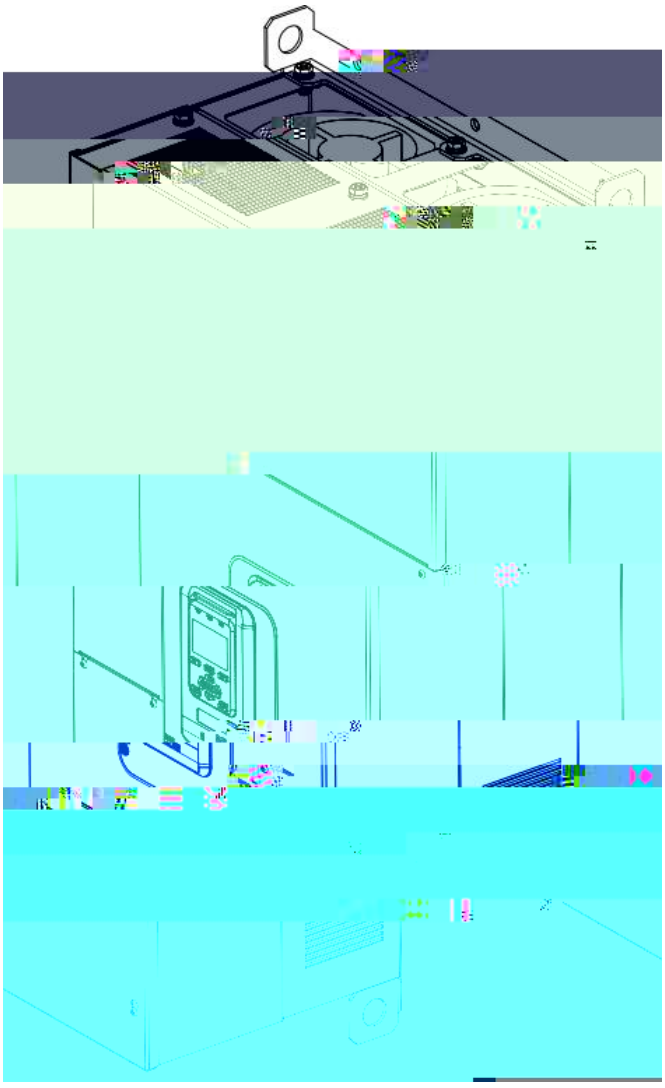
GUIDE



HF620

1.
    1.1
    1.2
    1.3

7.9 2 P9
7.10 3 P10
7.11 4 P11
7.12 1 P12
7.13 2 P13
7.14 3 P14
7.15 4 P15
7.16 1 V/F P16
7.17 2 V/F P17
7.18 3 V/F P18
7.19 4 V/F P19
7.20 1 P20
7.21 2 P21
7.22 3 P22
7.23 4 P23
7.24 MODBUS P32
7.25 P33
8.
8.1
8.2
8.3
8.4
8.5
8.6
8.7
8.8
8.9 V/F
8.10
8.11
9.
9.1
9.2
9.3
10.
10.1
10.2
10.3
10.4
10.5

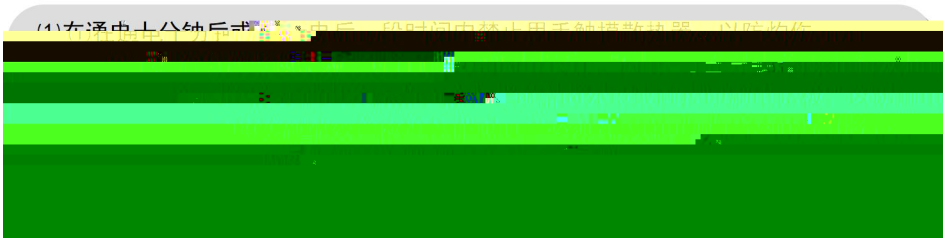
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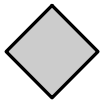
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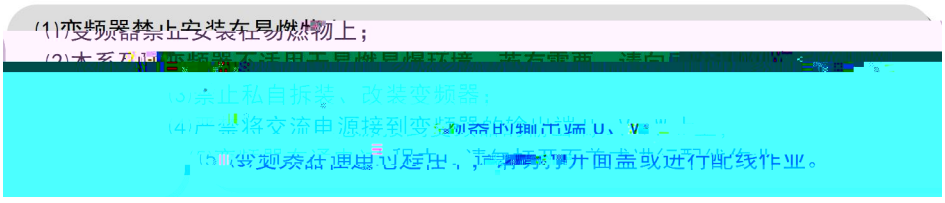












1

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

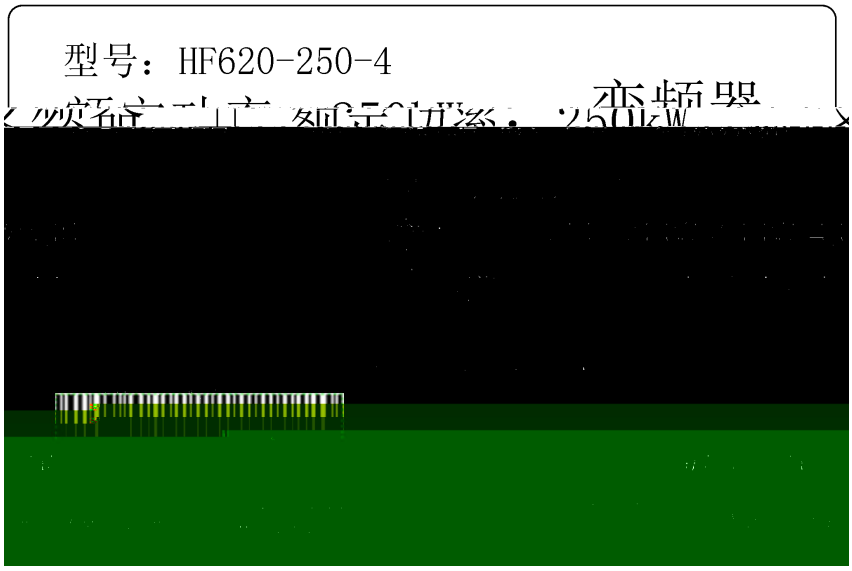
H

2.

2.1

1.

2. >



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

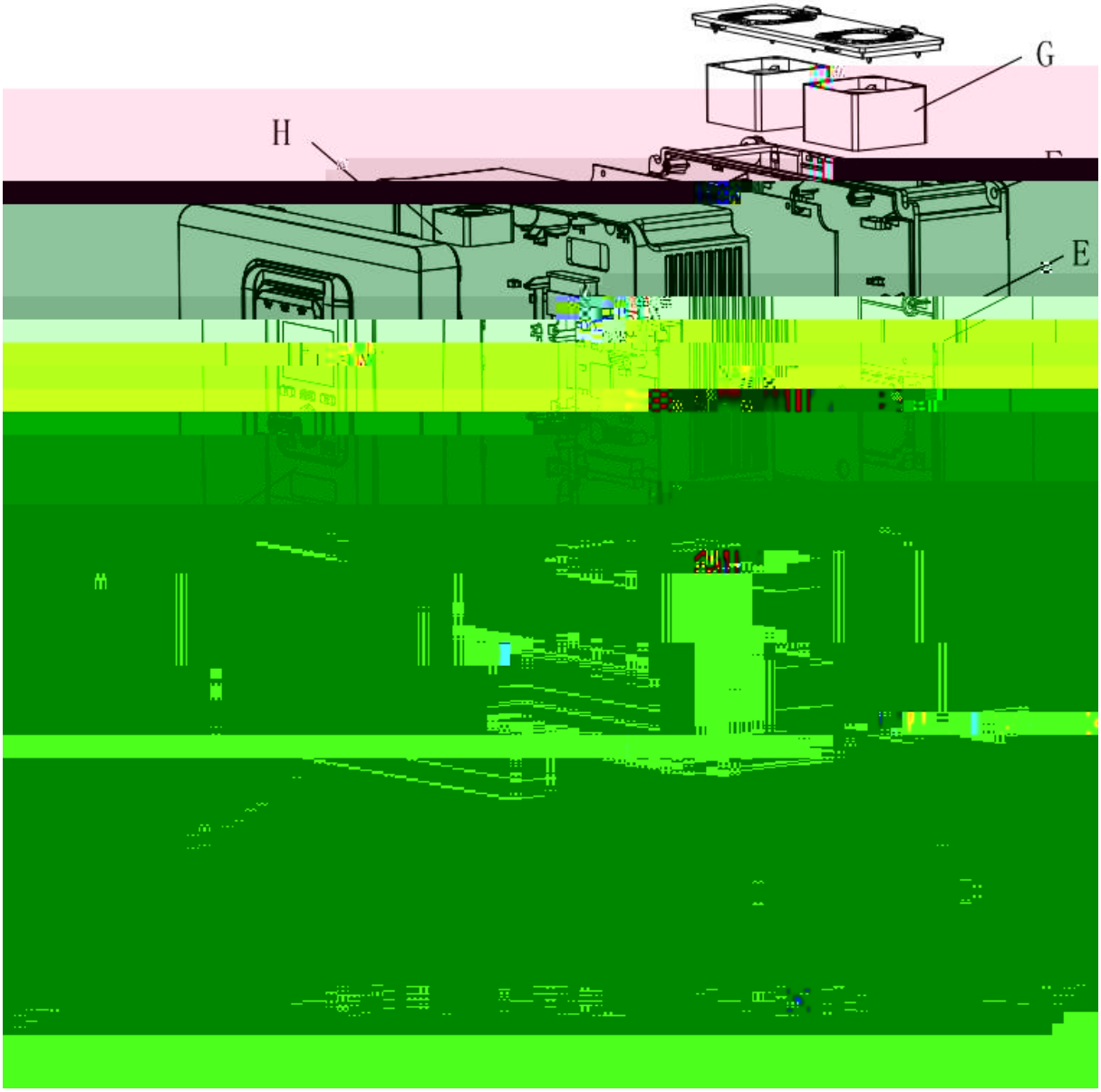
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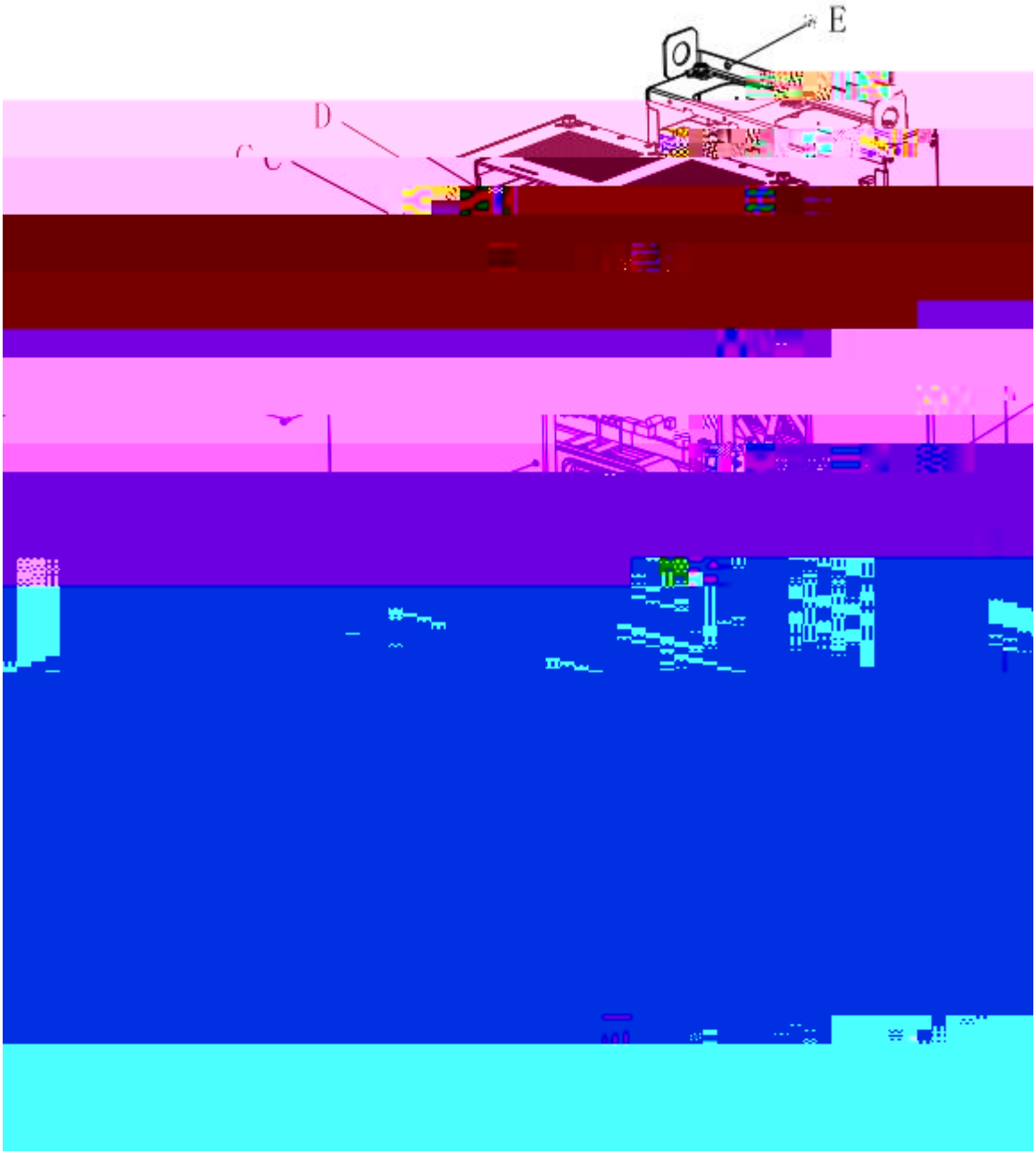
HF620

HF620-0R4-4 HF620-011-4

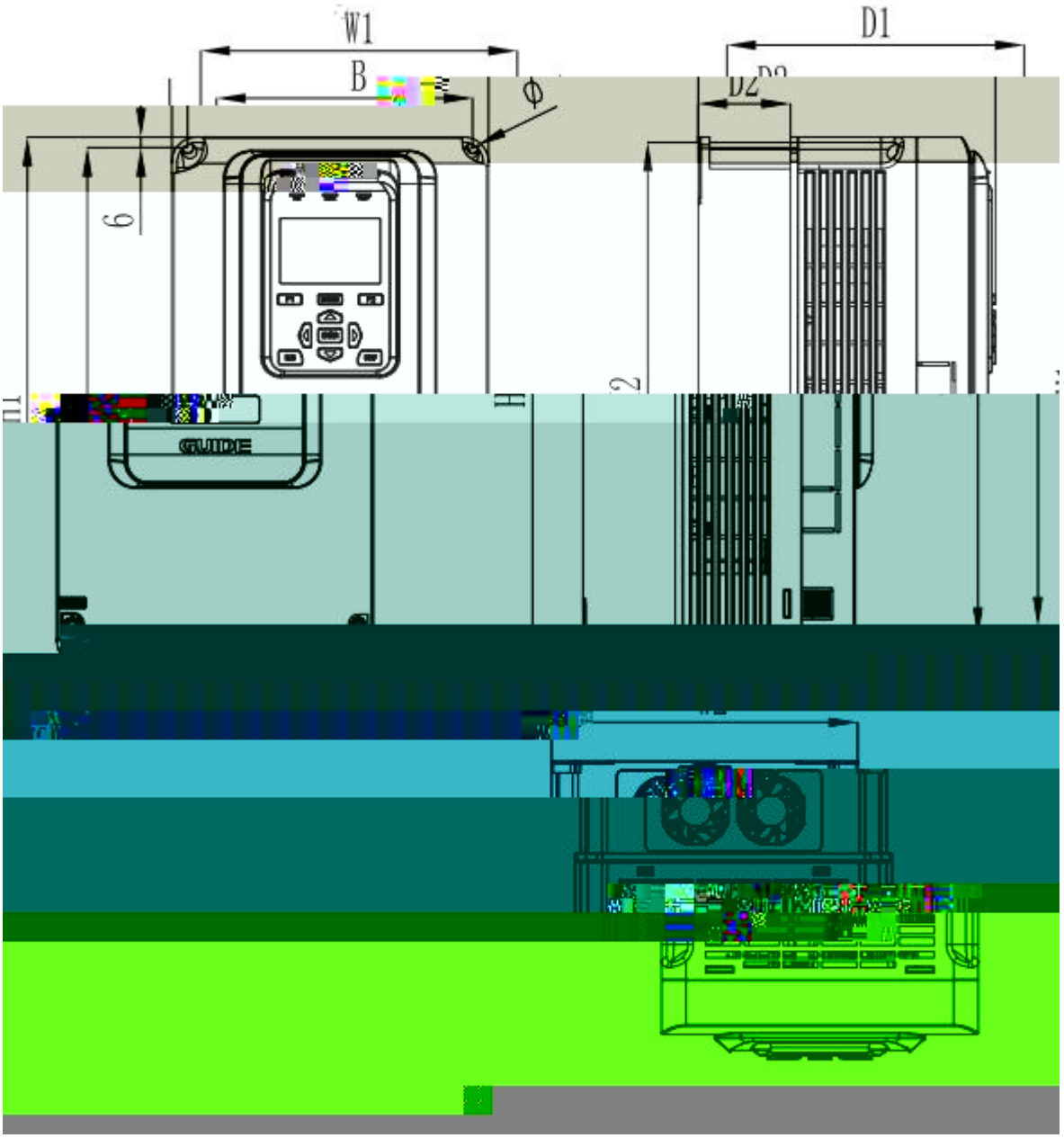



G
F
G-冷却风扇

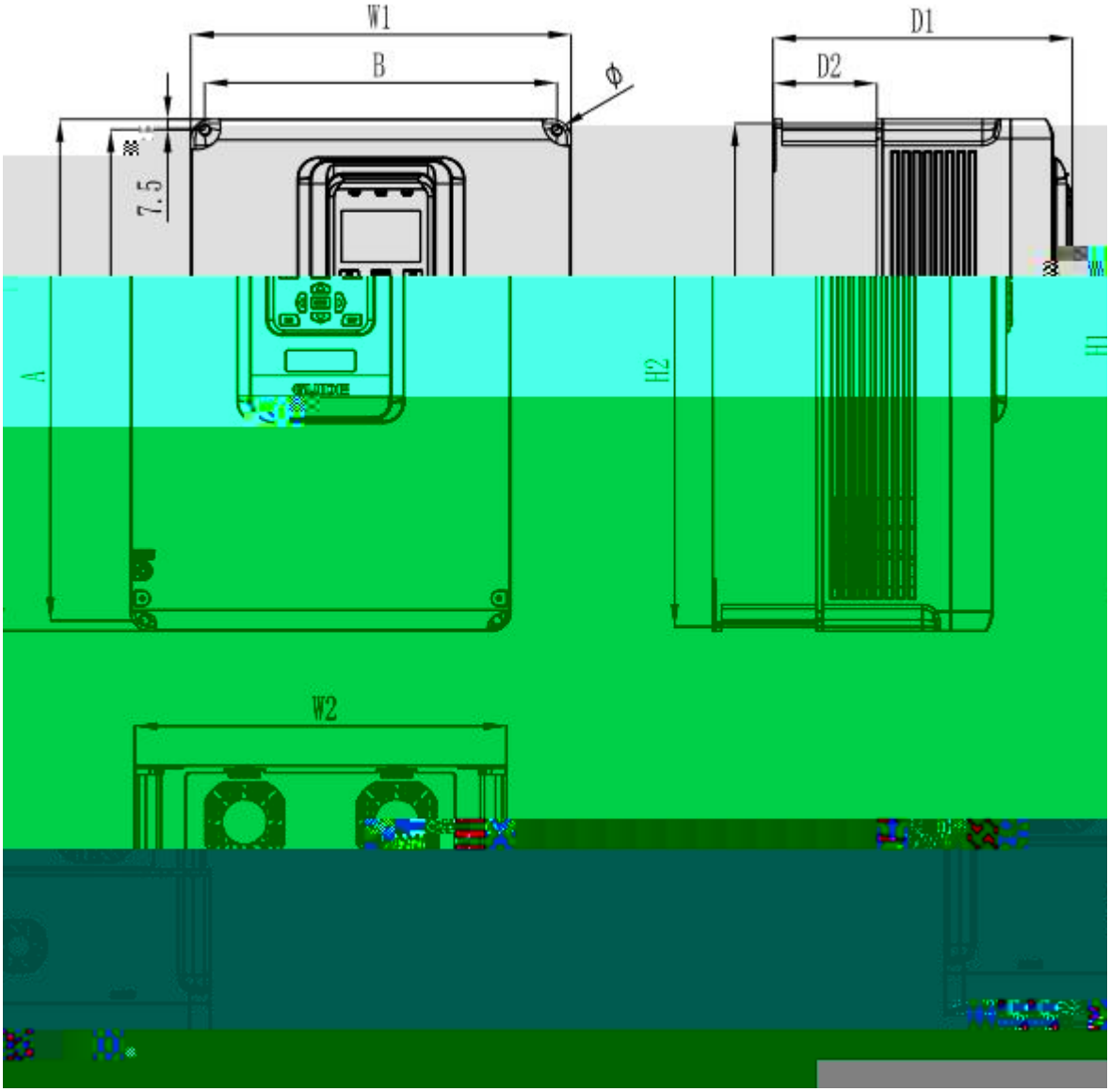

G
H
E


E
D

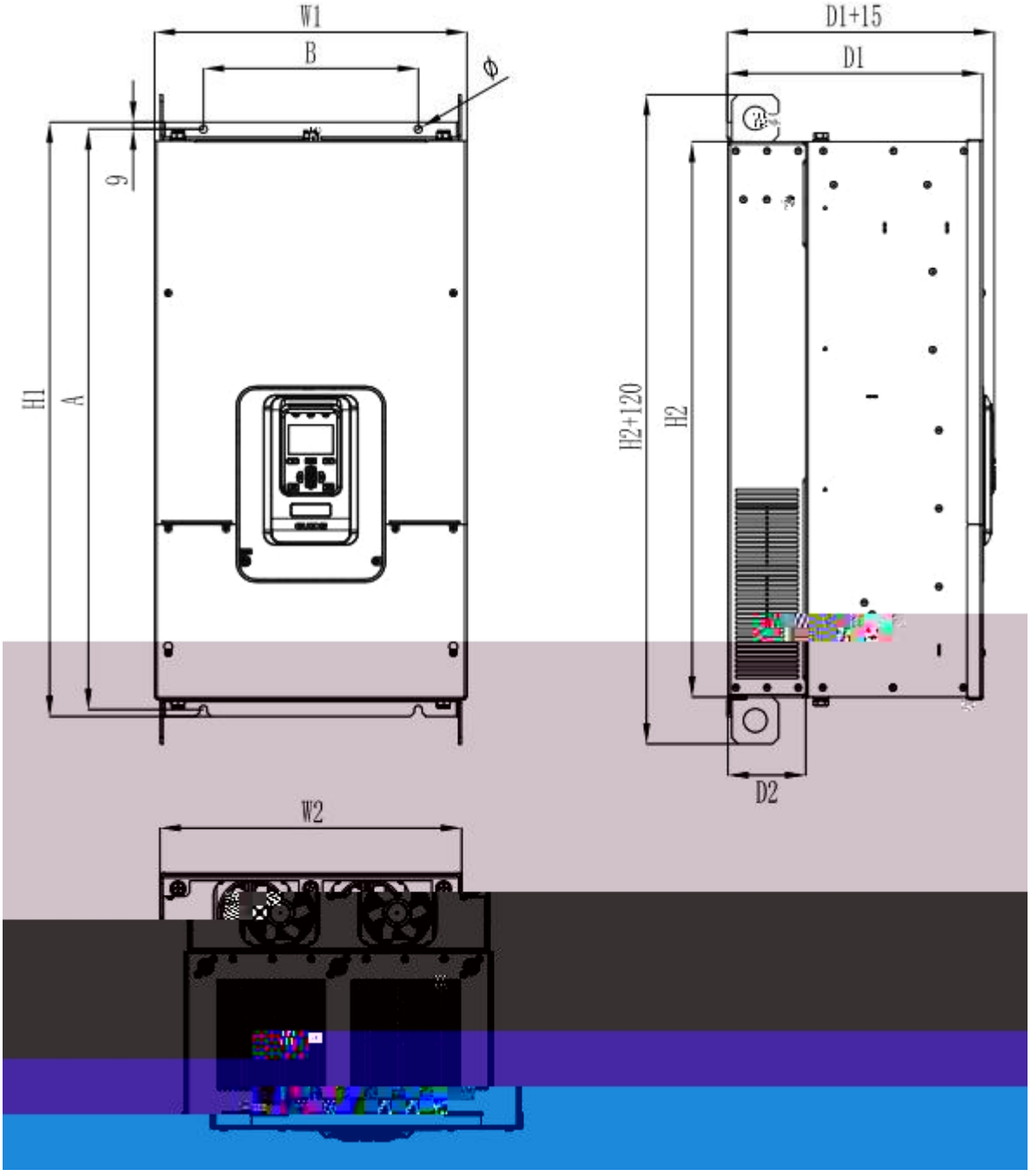
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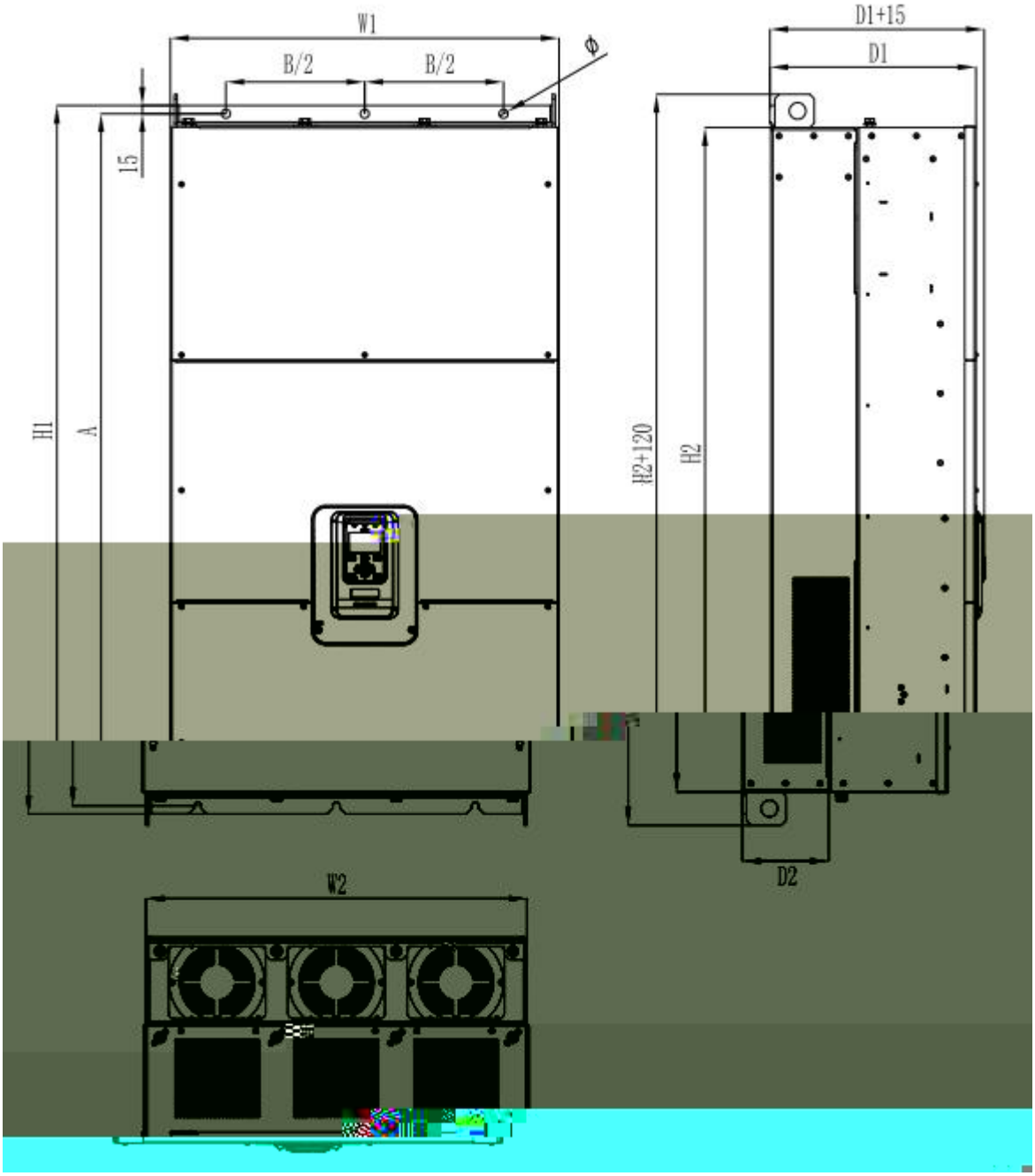
I1-I3



14



15-16



17-19

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

2.6

/ /

8 2 -10 +10V 0mA/4mA 20mA

5 3

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.

3.1

10cm

5cm

6

-10 +40

40

1 1%

50

-20 +60

1 /

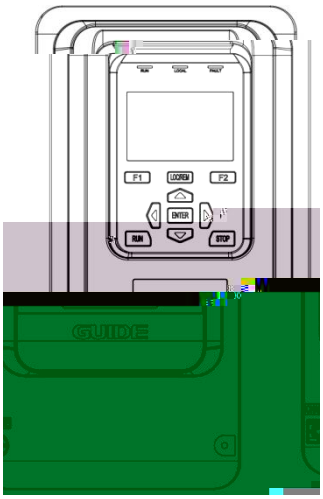
-20 +60

-10

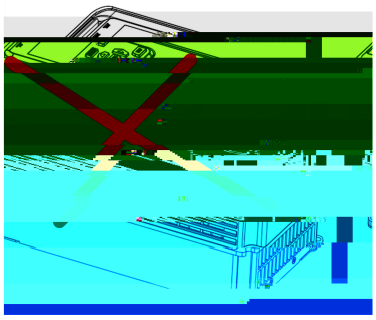
A

3.2

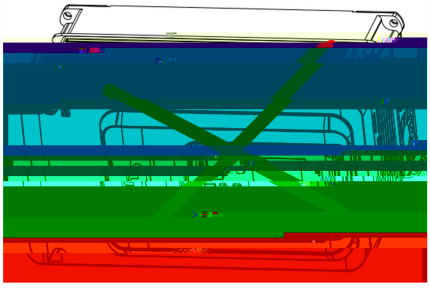
3.2.1



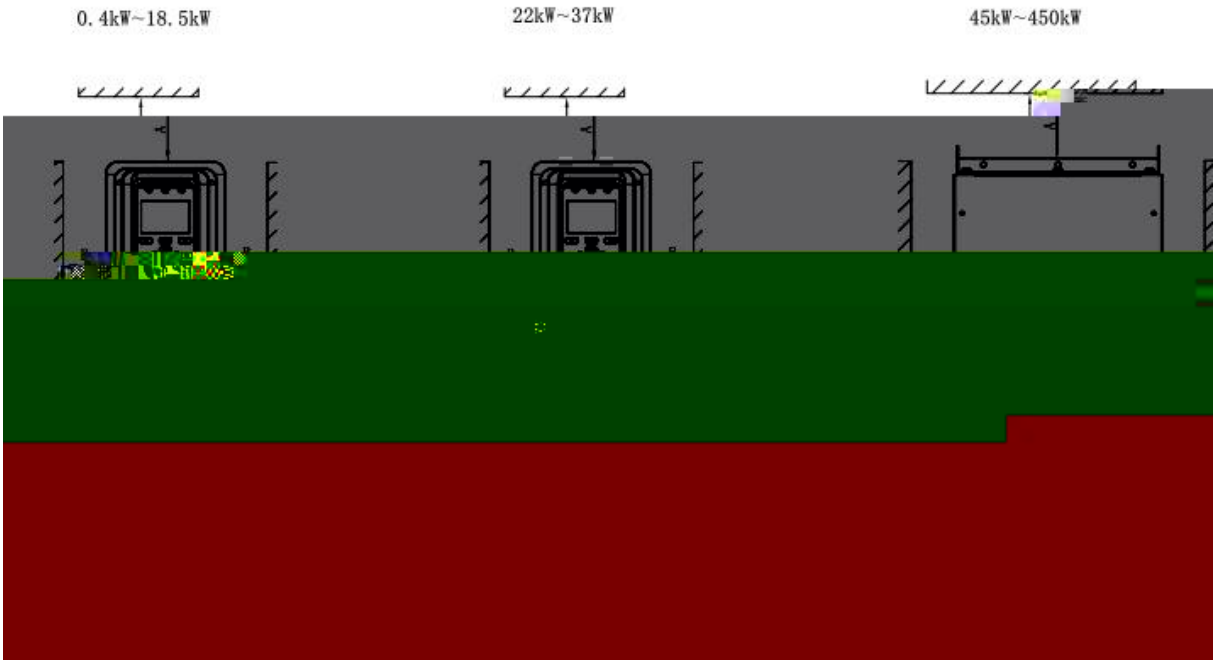
OK



NG

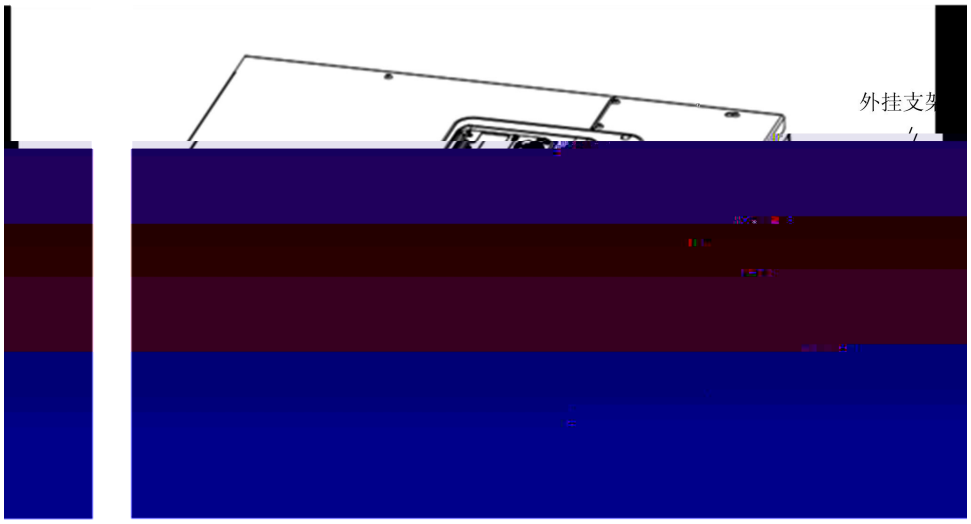


NG

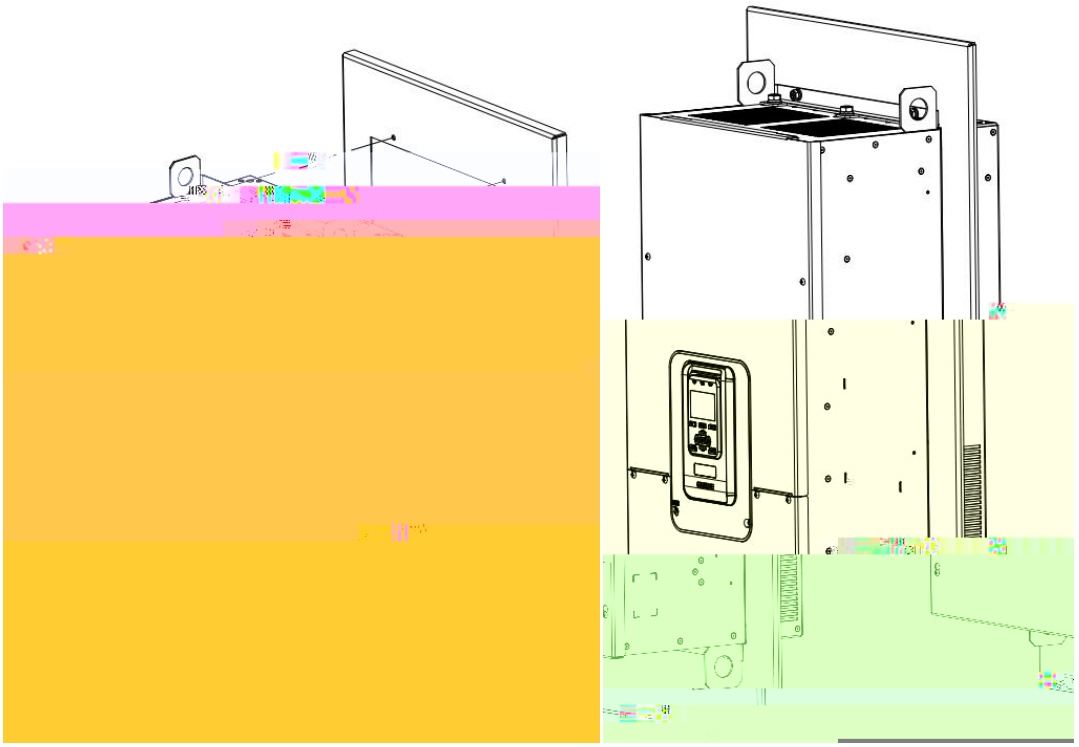


0.4kW~18.5kW	A ≥ 100mm	B ≥ 40mm
22kW~37kW	A ≥ 200mm	B ≥ 50mm
45kW~450kW	A ≥ 300mm	B ≥ 50mm

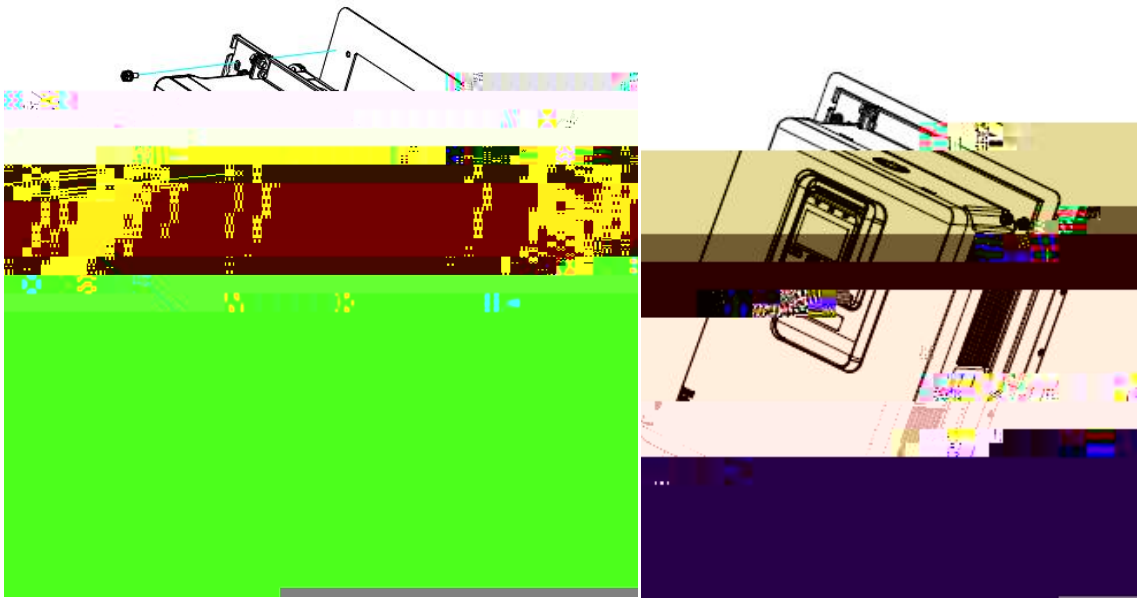
2



3-2



3-3

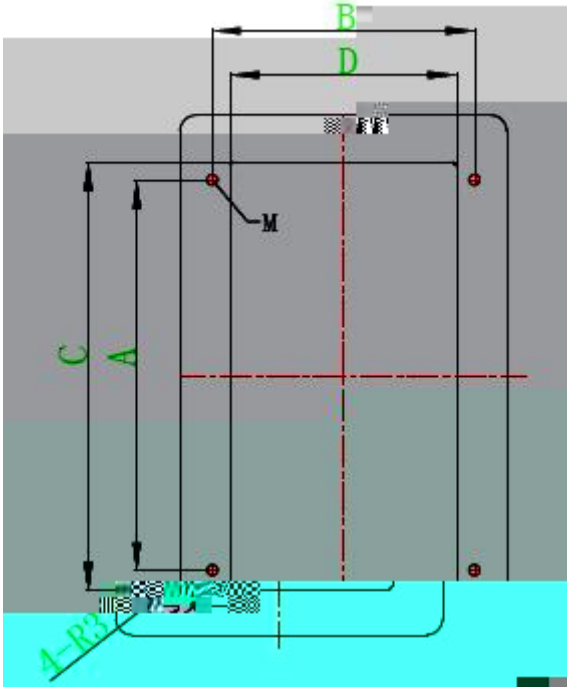


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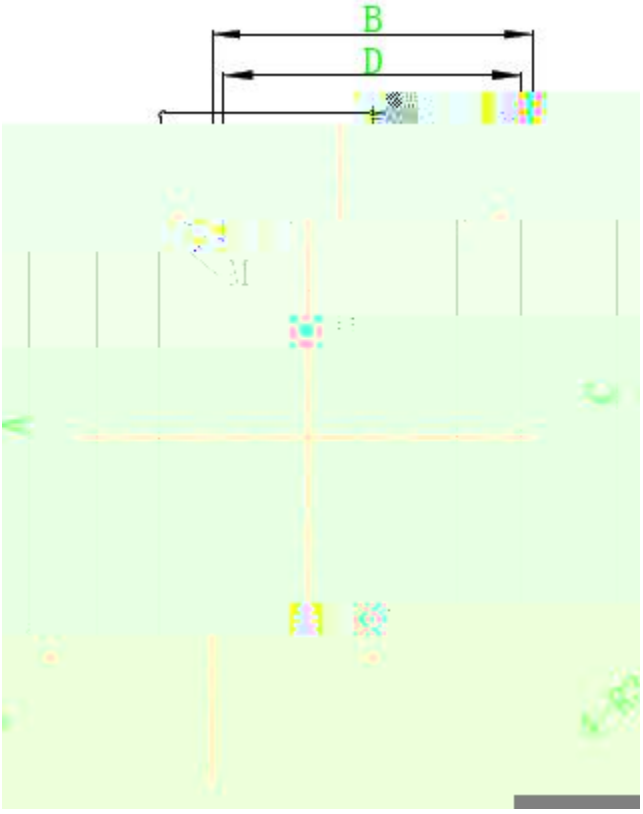
1

2

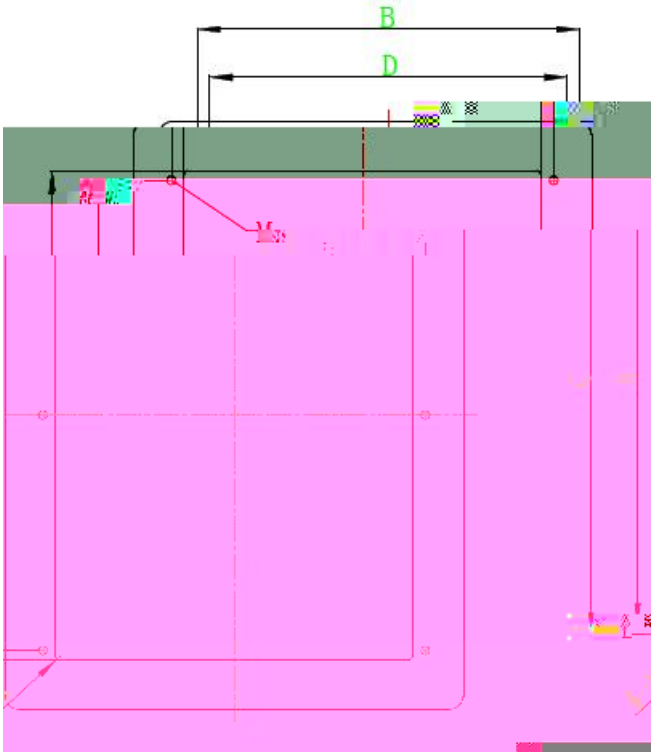
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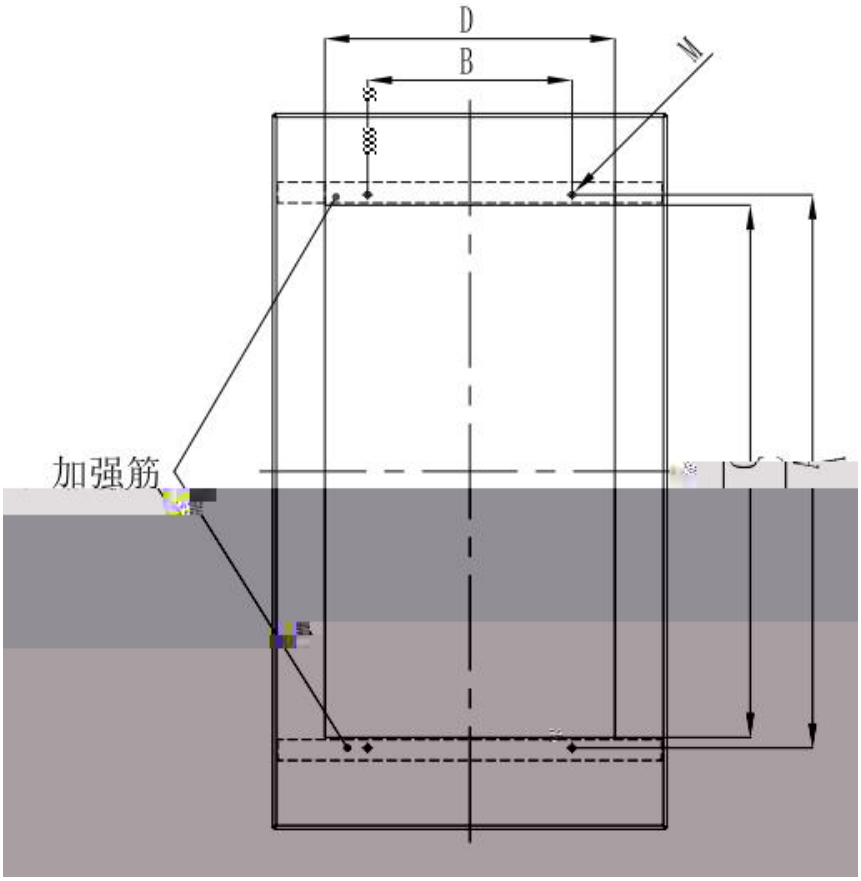
3-5 I1-I2



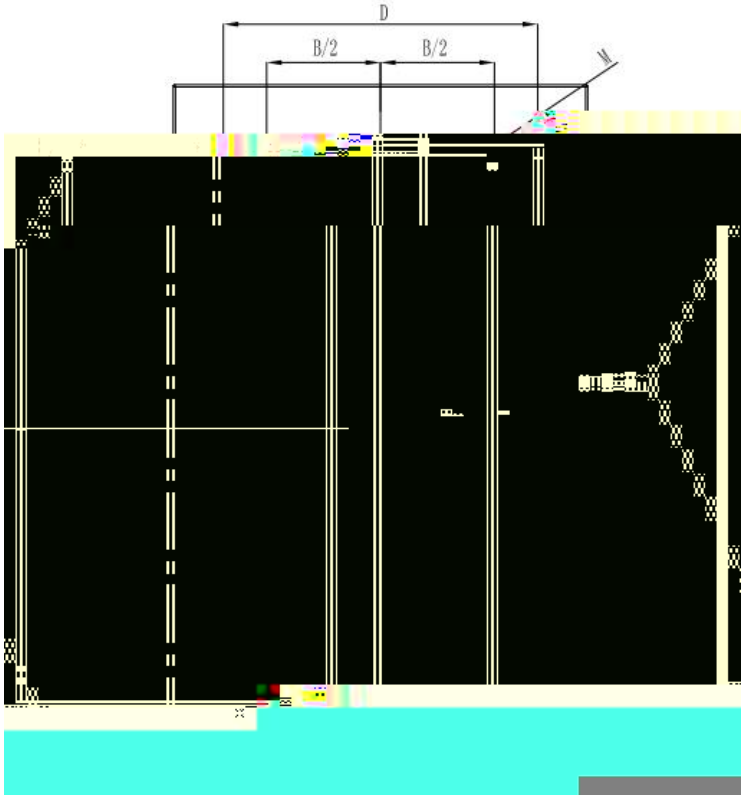
3-6 I3



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

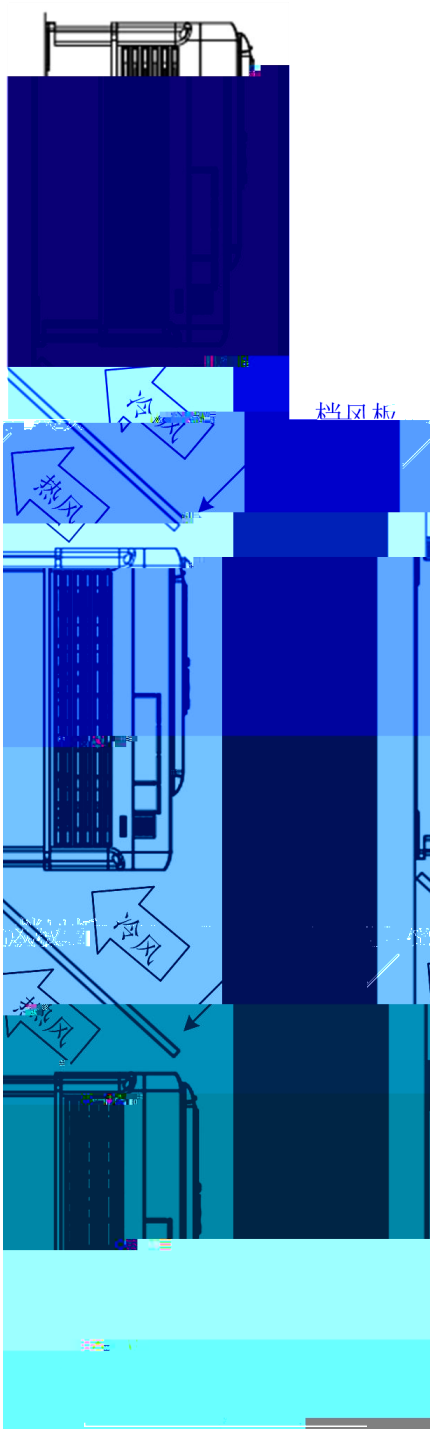
3.2.3

1

100mm

2

3-10

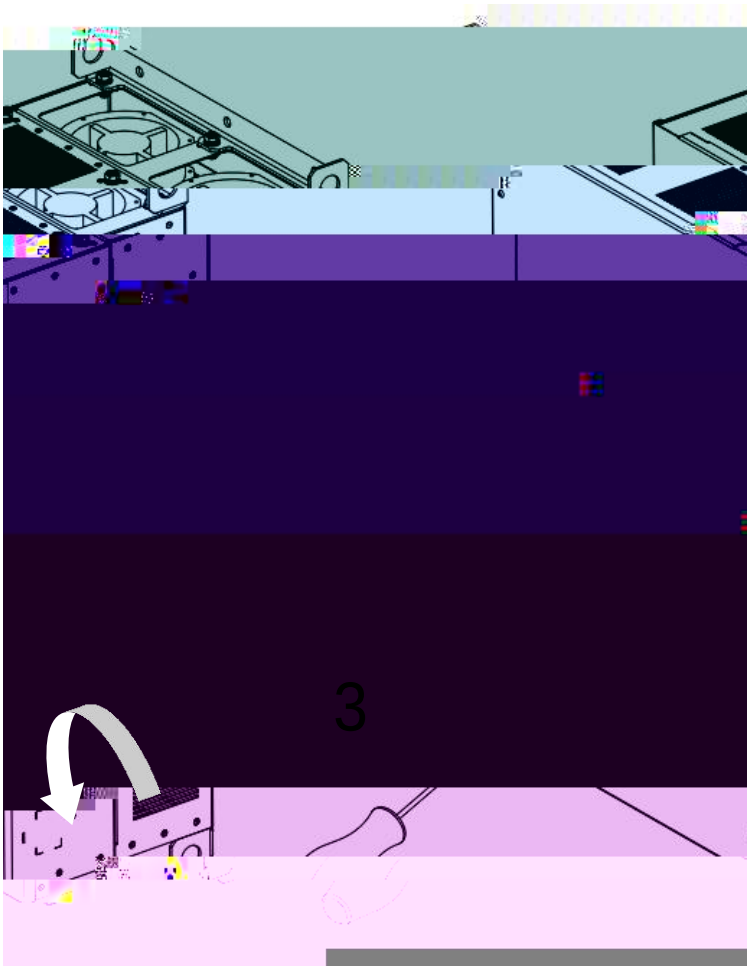


3-10

3

3.3

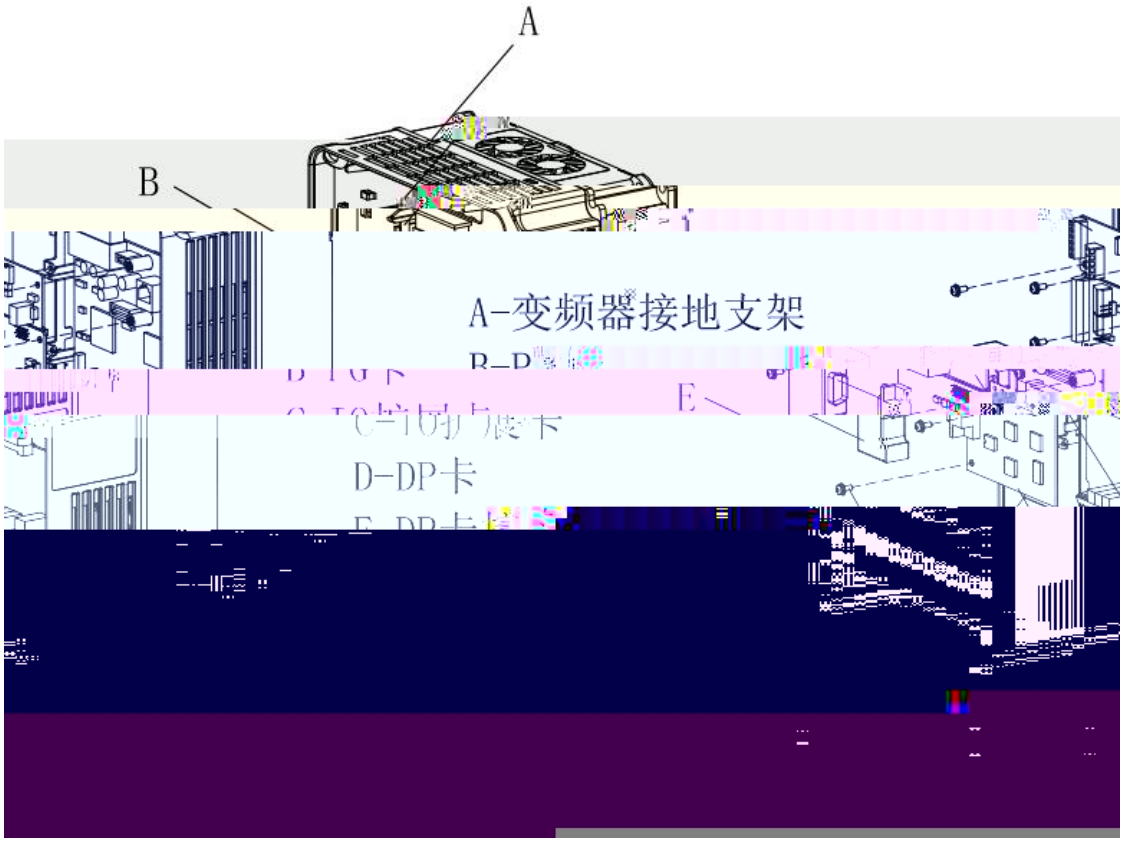
1	1	4	5mm
2	2		
3	3		



3-12

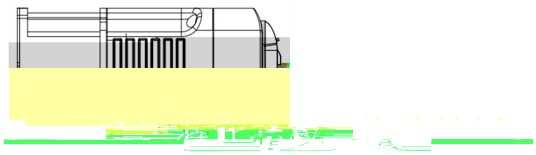
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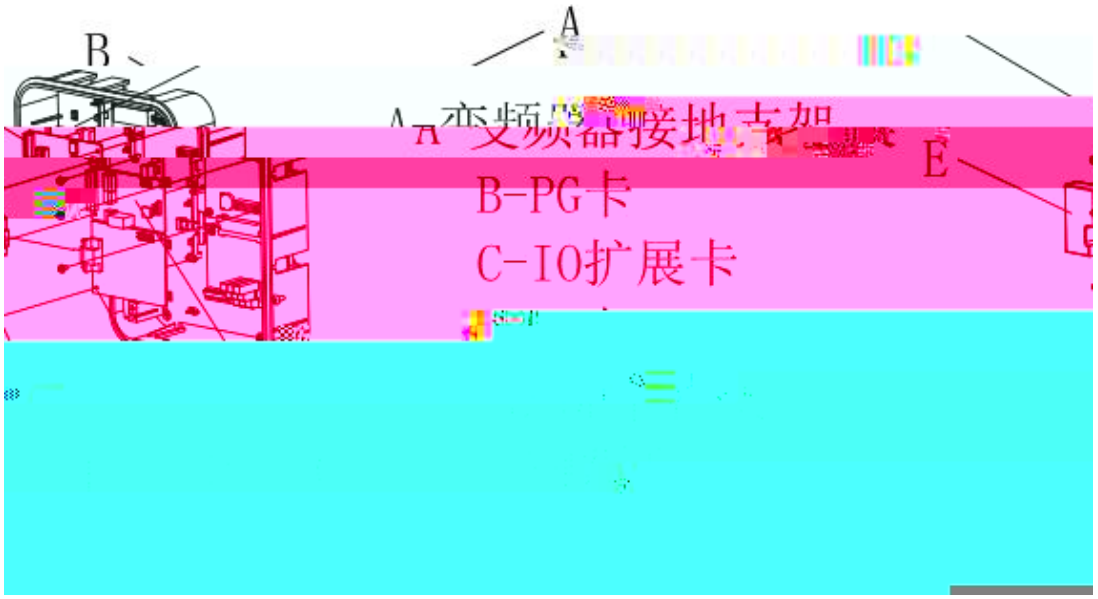
HF620



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

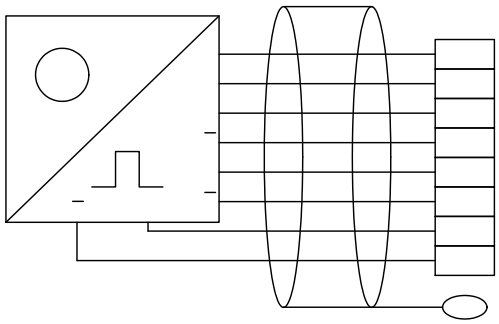
5 PGC2 15V RS-422

PGC2

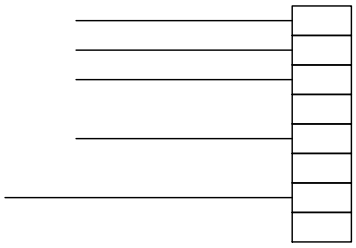
15V

1

a

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

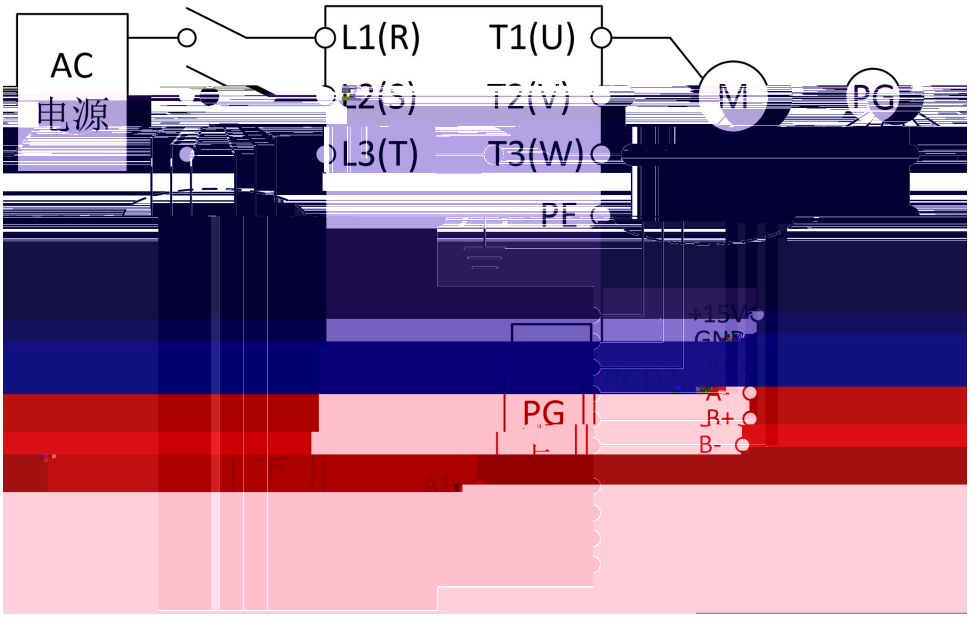
b



4 15V



PGD2



1 PG

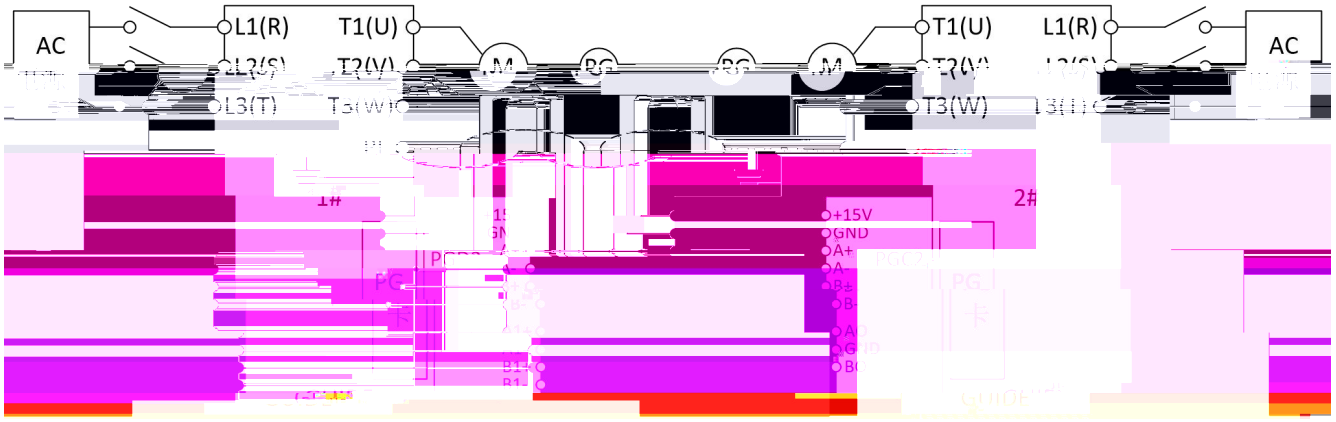
2 PG

3 PE

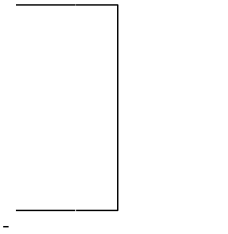
PGD2

1 » »1 mEÃ

b


AC
L1(R)
T1(U)
L3(T)
T3(W)
T1(U)
L1(R)
T3(W)
AC
1#
2#
+15V
GND
A+
A-
B+
B-
PG





4.

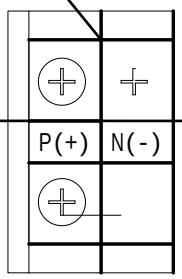
14

15 30 m

4.2

1

0.4kW~75kW +

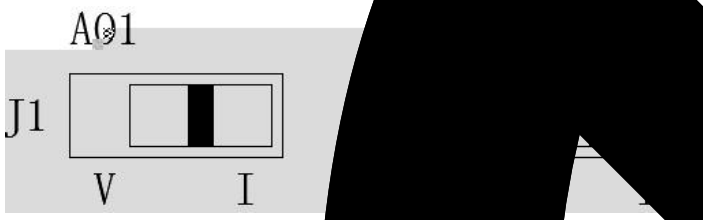


I1	0.4KW	M4	
	0.75KW		
	1.5KW		
	2.2KW		
I2	3.7KW		
	5.5 KW		
	7.5 KW		
	11 KW		
I3	15 KW	M5	
	18.5 KW		
I4	22 KW	M6	
	30 KW		
	37 KW		
I5	45 KW	M8	+
	55 KW		
	75 KW		
I6	90 KW		
	110 KW		
I7	132 KW	M10	
	160 KW		
	185 KW		
I8	220 KW		
	250 KW		
	280 KW		
	315 KW		
I9	355 KW	M12	
	400 KW		
	450 KW		

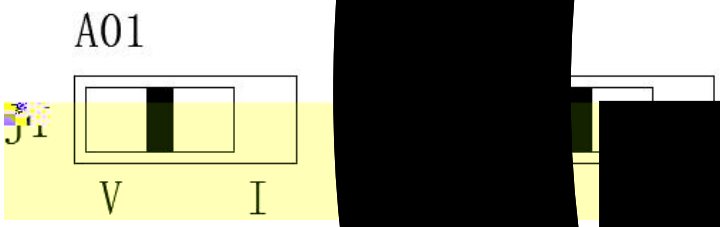
P(+)	
P1	45KW
N(-)	
R S T	
U V W	
DBR	185KW
PE	

1

	1	2			5	6	7	8
	+10V	GND	AI1+	AI1-	AI2+	AI2-	AO1	AO2
	9	10						
			PW	+24V	+24			
		26	27	28				
	24V	DO3	DO4A	DO4C			DO5C	



a.



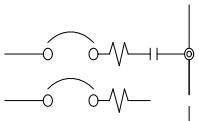
b.

+10V 10V

			2				0	10	
6		AI2-		2					
7		AO1		1					20mA J1
			I a		0 10V J1				
8		AO2		2				0/4	20mA J2
			I a		0 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		0		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.

4.8

		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			

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

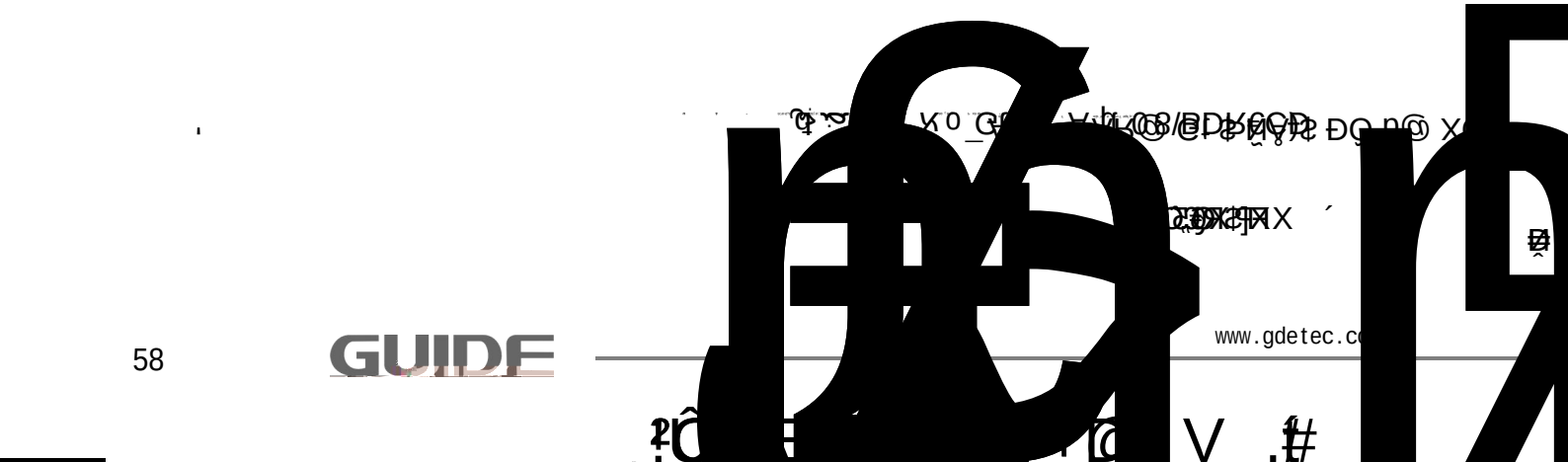
EMC

EMC EMC

2 EMC

20cm

90



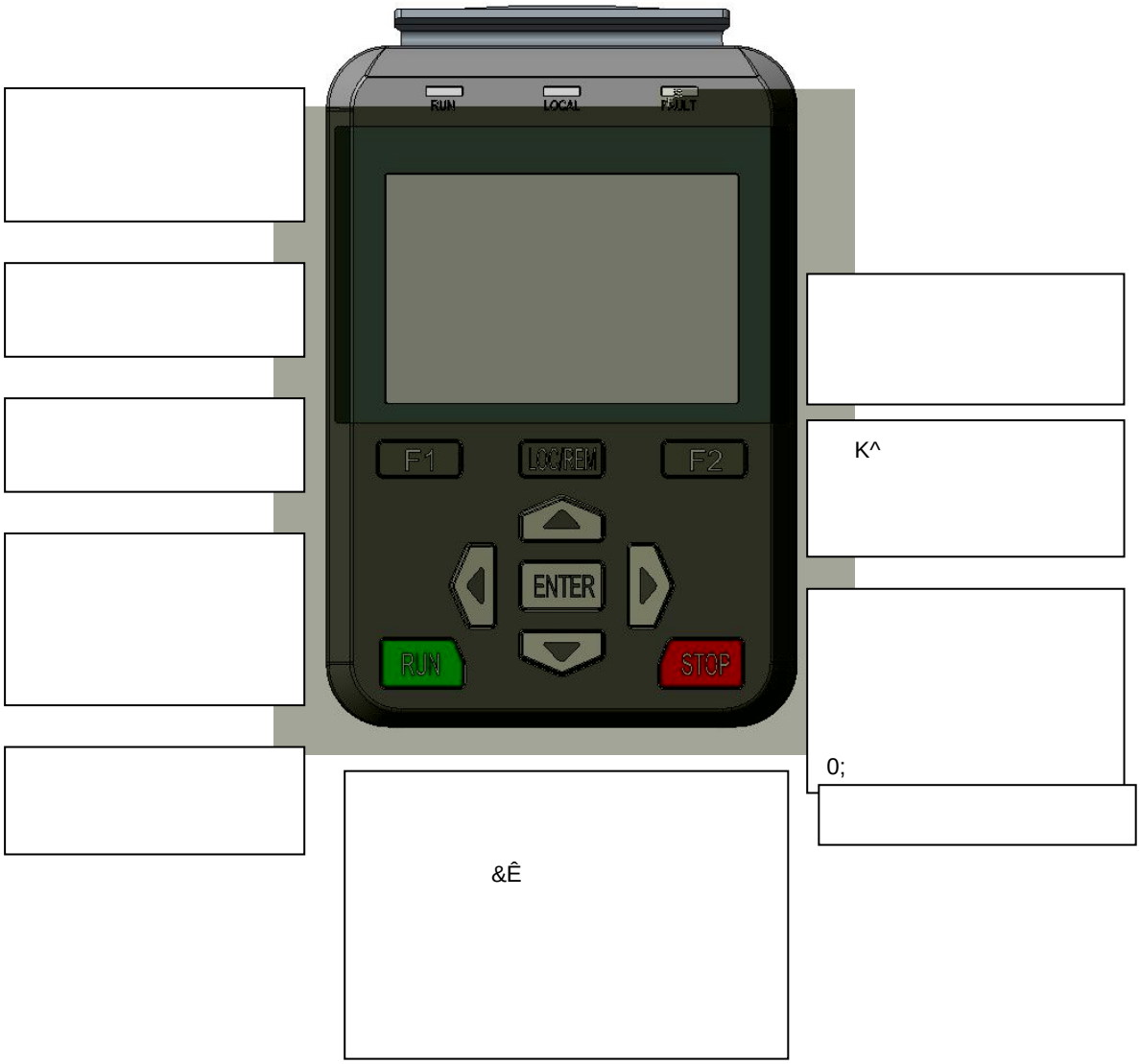
5.

5.1

F1 ESC

LOCAL/REMOTE F2 FOREARD/REVERSE RUN STOP /RESET

ENTER



5.2

▼

▲

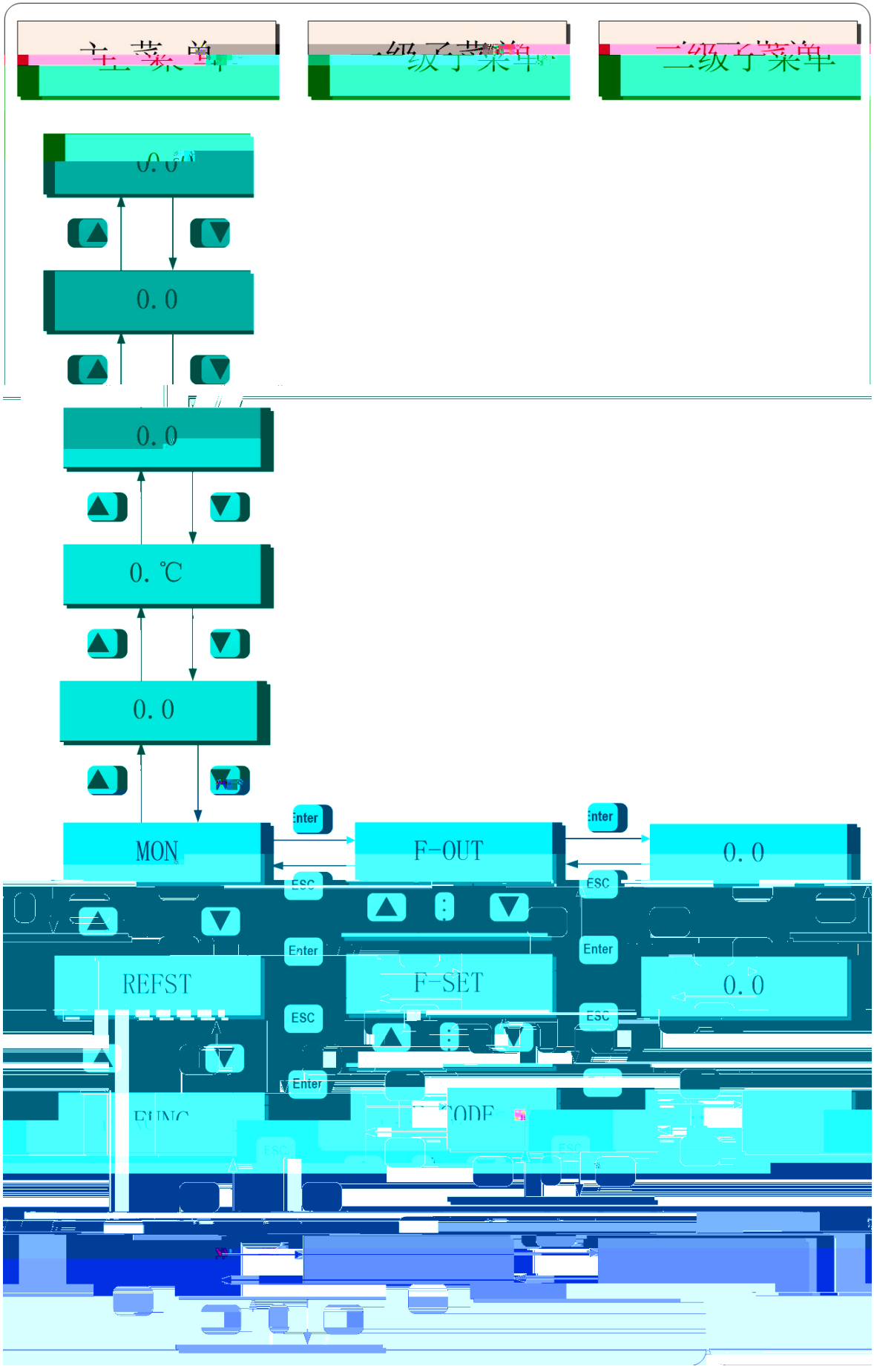
ENTER

RUN STOP LOCAL

F2 LOCAL/REMOTE /

5.3

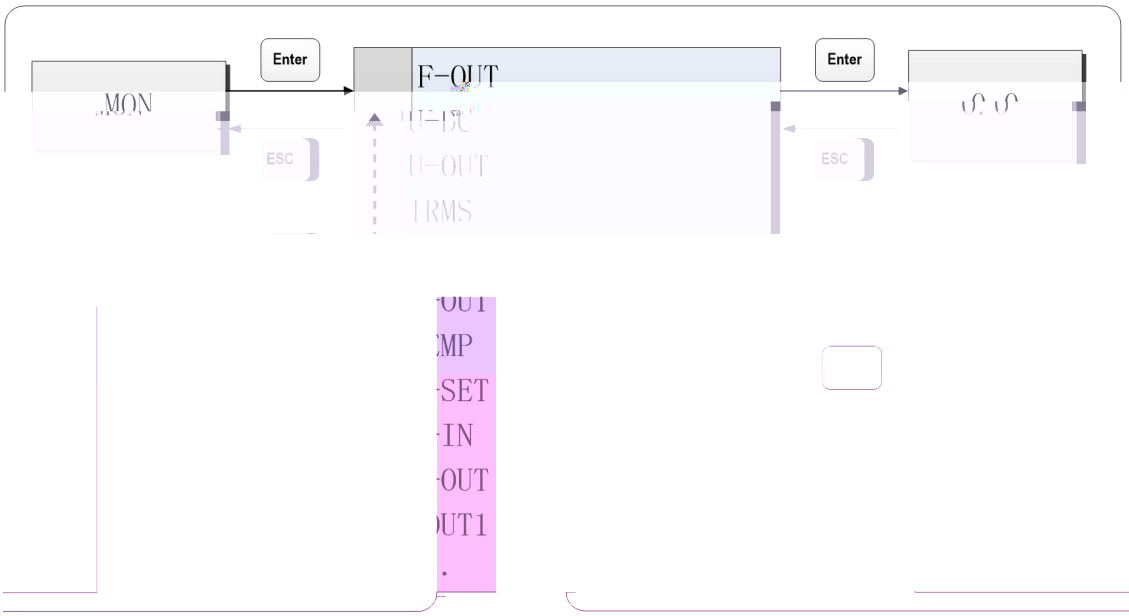
00


0.0
0.0
0.0
0.℃
0.0
MON
F-OUT
0.0
REFST
F-SET
0.0
Enter
ESC

5.4

1 Drive Monitor

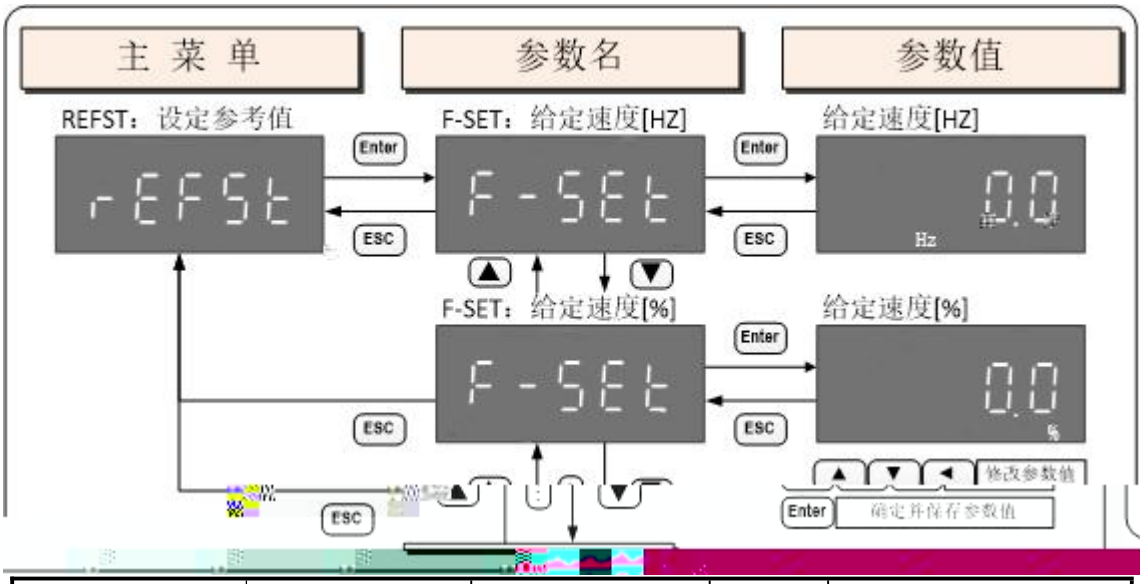
(I/O)



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

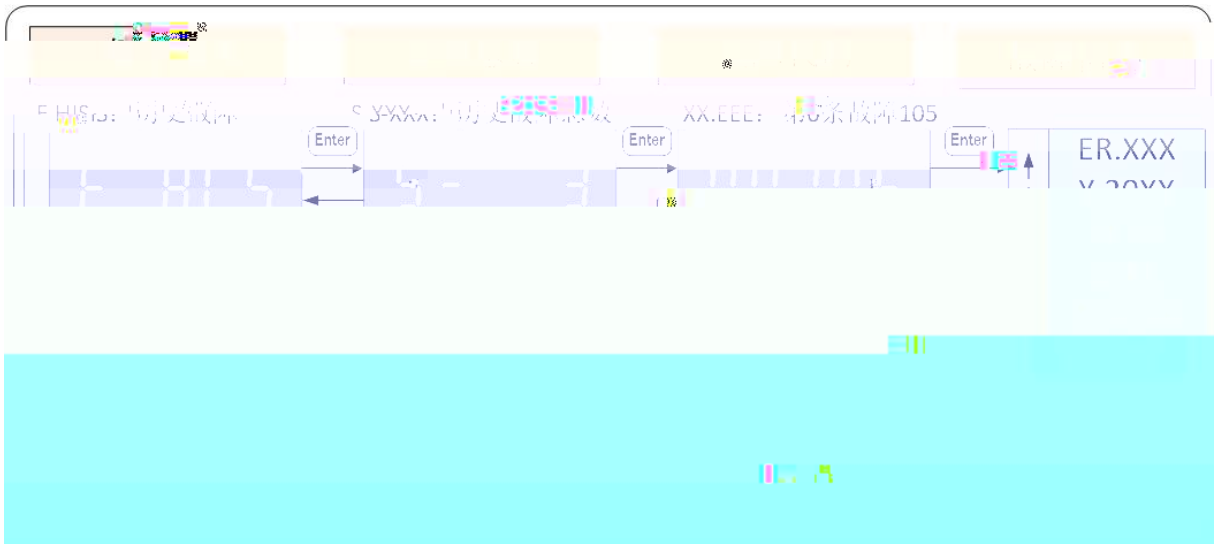
XX 0 0 EEE

ENTER

ER.XXX Y.20XX

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

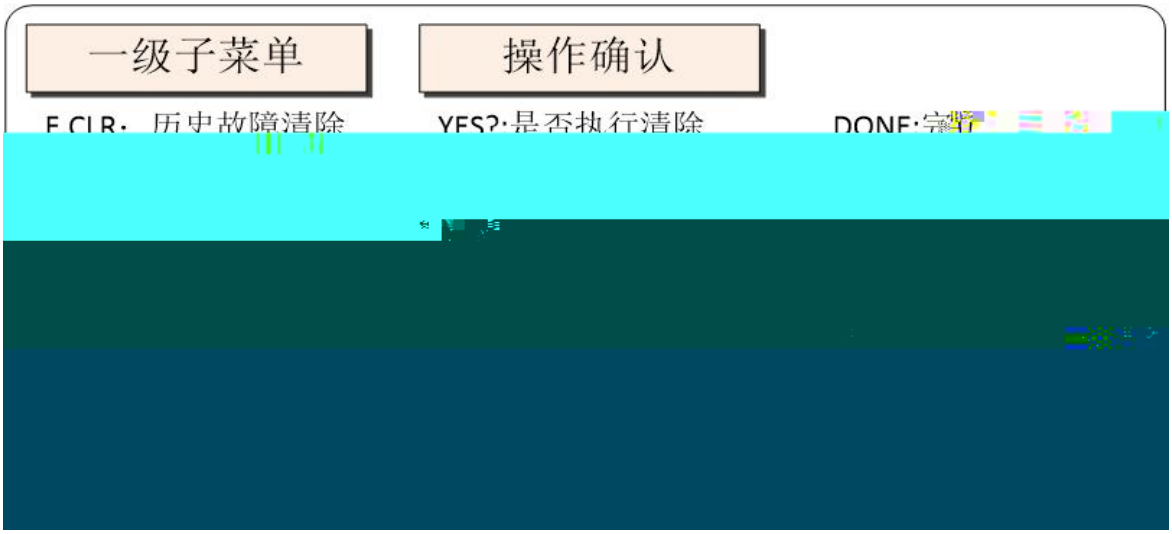
ESC



F.CLR ENTER

YES ? ENTER DONE

CANCE.

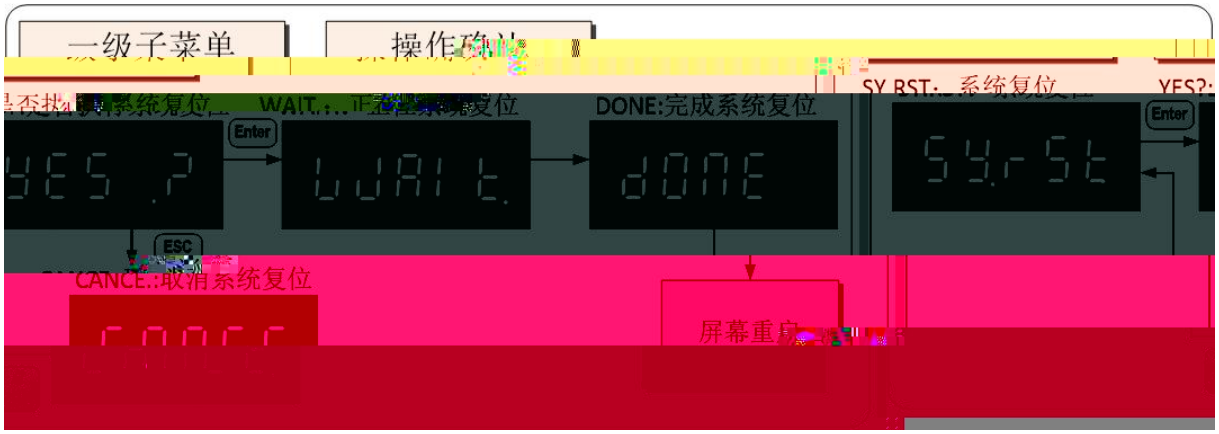


SY.RST ENTER YES ?

ENTER WAIT.

DONE

CANCE.

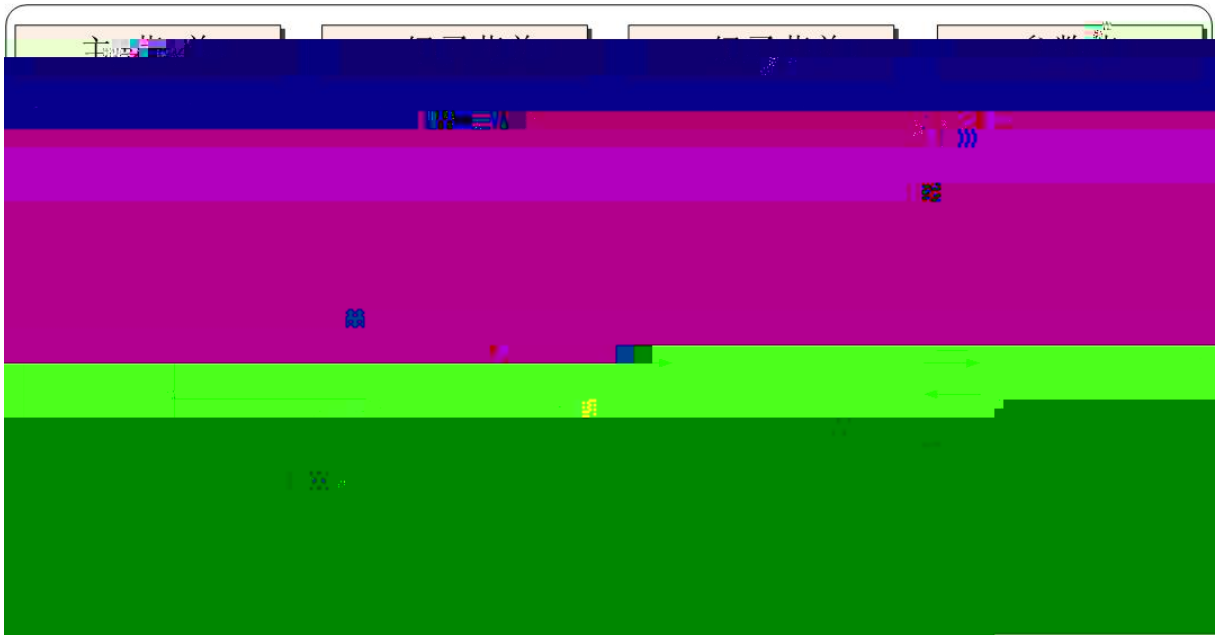


DATE ENTER

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



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

“TX.PRC.” “TX-OK”

ENTER “TX.PRC.”

“TX.PRC.” ESC

ENTER



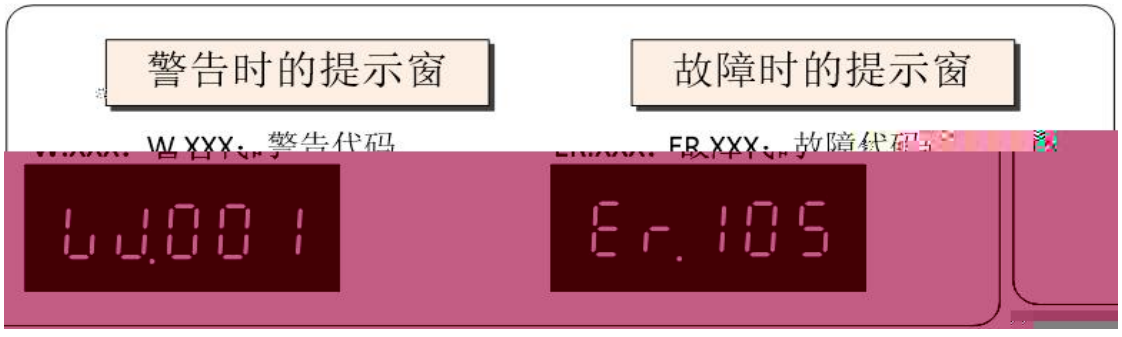
5 Warning and Error

“RESET” “ESC” 15

RESET

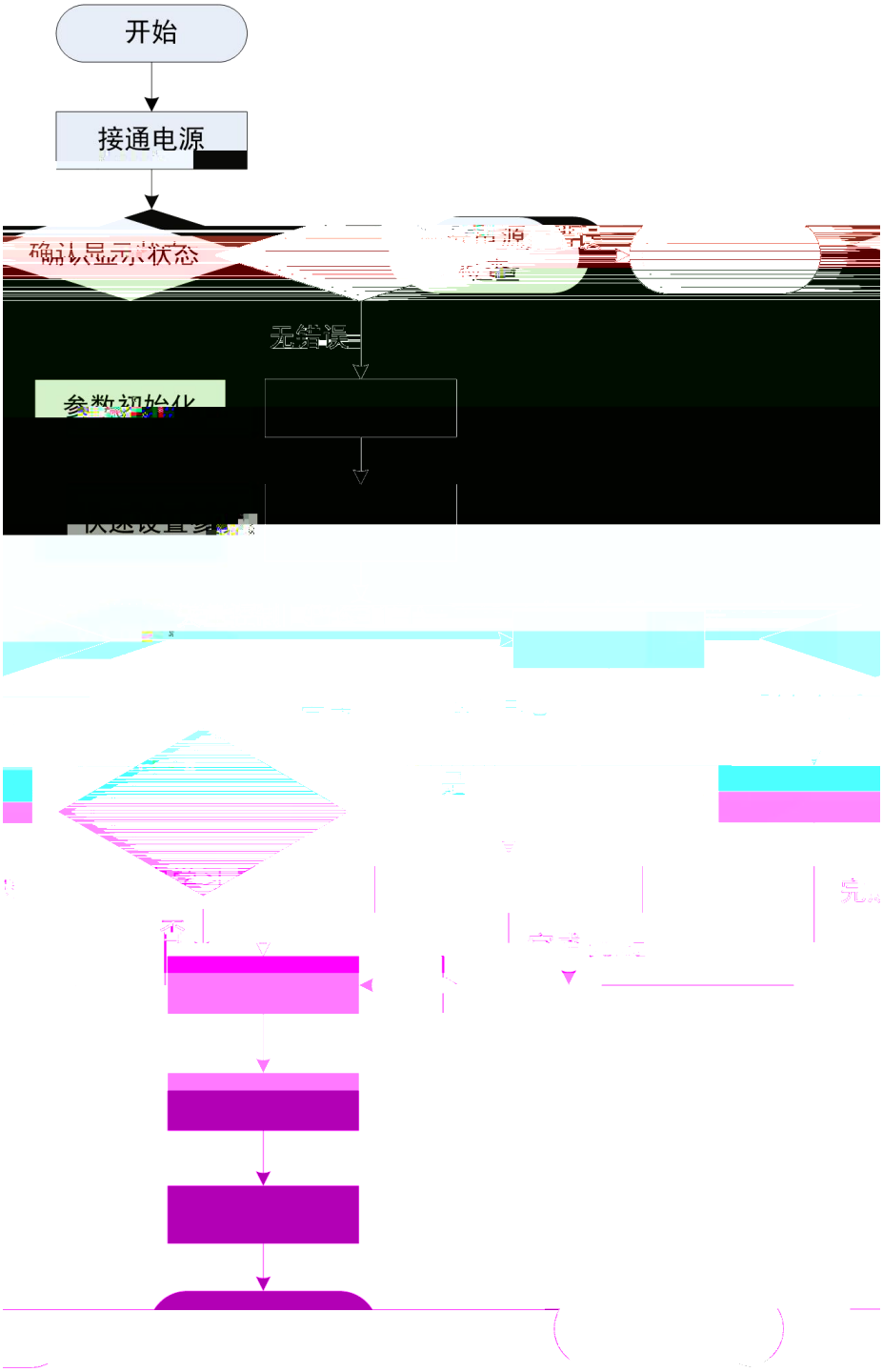
“F.CODE”

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		[1]	
0	1]	0~30	18
P7.4	[ ]	0~300	235%
P7.19	[1]	100.0 720.0[%]	12

6.2.5

j $fÔ•aqÄSPÔê

ÈH! ep° € r

Ø $r Ri i"se

Ä1

6.2.6

HF620

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

0

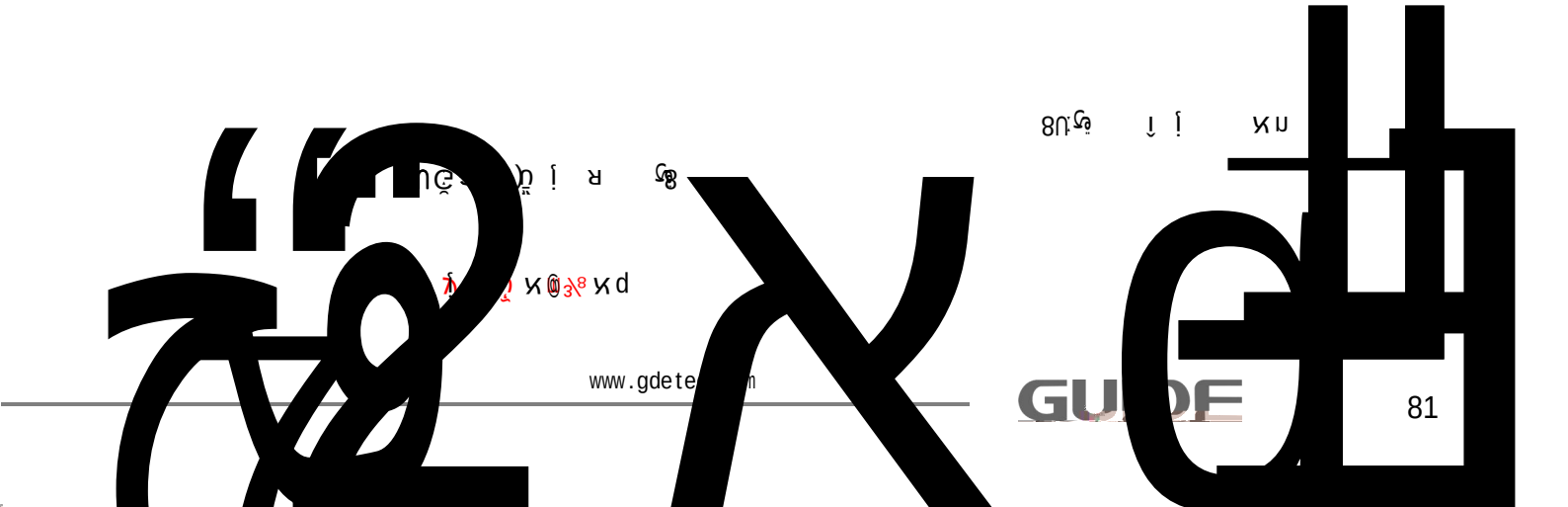
P2.0		[0] [1] [2]	0 2	0	8.1
P2.1		[0] N [1]DP	0 1	0	
P2.2					

19 AFE

20 AFE

21 FUNC 21

22 8.2

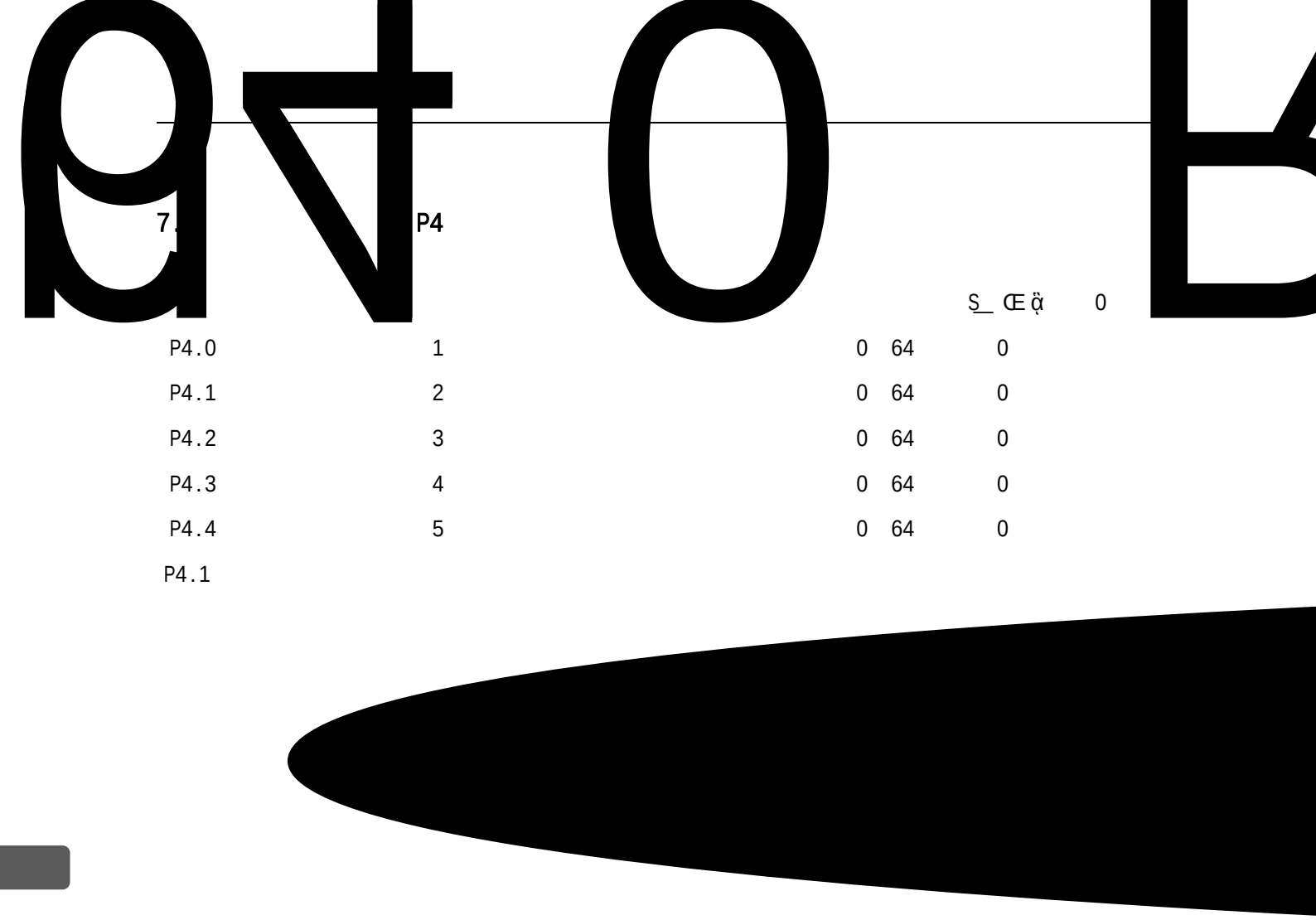


7. P4

S_ Œ ¤ 0

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

P4.1



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 AI1	0 3	1	
P5.1	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	

		AI2	
P5.19	AI2		0.0 1000.0 25.0 [ms] [ms]
P5.20	AI2	AI2	-10.00 10.00 0.000 [V] [V]
P5.21	AI2	AI2	-20.00 20.00 0.000 [mA] [mA]
P5.22	AI2	AI2	-10.00 10.00 0.000 [V] [V]
P5.23	AI2	AI2	0.00 20.00 0.000 [mA] [mA]
P5.24	AI2	AI2	-300.0 300.0 0.0 [%] [%]
P5.25	AI2	AI2	-10.00 10.00 10.000 [V] [V]
P5.26	AI2	AI2	0.00 20.00 20.000 [mA] [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]) AO1	0.0 100.0 [%]	0.0 [%]	

P6.8 AO1

[illegible]

[illegible]

[illegible]

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 30000 [%]	180.0 [%]	8.6
P7.4	[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]	

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 [s]	300.0		

P10.42	5			0.0 [%]	300.0 [%]	300.0	8.7
P10.43	5	P10.40	P10.42	0.0 [s]	300.0	4	

7.11 4 P11

P11.23	5	0.0 300.0 m	

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	1ز 9		0.0	3000.0	50.0	

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

18

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	

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			0.00 100.00 [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	

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	

P19.50		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 [%]	

3

7.20 1 P20

P20.0		[0] [1]		0 1	0	8.10
P20.1		[0] [1] 1 [2] 2 [3] [4] [5]DP [6]MODBUS [7]	P20.3	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] P20.9 [2] 1 [3] 2 [4] [5]DP [6]MODBUS [7]	P20.8	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	

P20.34		[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 [%]	

7.21 2 P21

P21.0	[0] [1]			0 1	0	8.10
P21.1	[0] [1] [2] [3] [4] [5]DP [6]MODBUS [7]	1 2	P21.3	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] P21.9 [2] [3] [4] [5]DP [6]MODBUS [7]	1 2	P21.8	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	

P21.34	[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 1110 [%]	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 100.0 [ms]	250 [ms]	
P21.45				

P21.55 W

P22.15	[0] [1]	0 1	0	8.10
P22.16		0.0 300..		

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				

3

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] [2] [3] [4] [5]DP [6]MODBUS [7]	1 2	P23.3	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] P23.9 [2] [3] [4] [5]DP [6]MODBUS [7]	P23.8 1 2		0 7	0	8.10
P23.8						

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	i„ 9 X ' ¡)· Ó ə x	25 1000 [ms]	75 [ms]	
P23.44		25 1000 [ms]	250 [ms]	
P23.45		0.0 100.0 [%]		
		0 1200		
	¾{		1000	
		[%]		

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]		

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

P33.44	[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

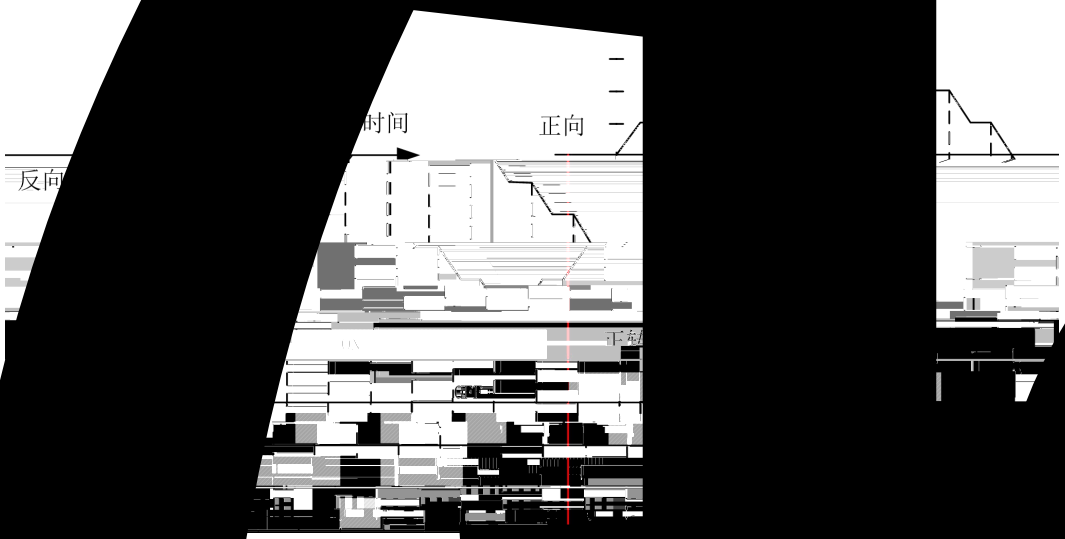
(FORWARD)

频率指令

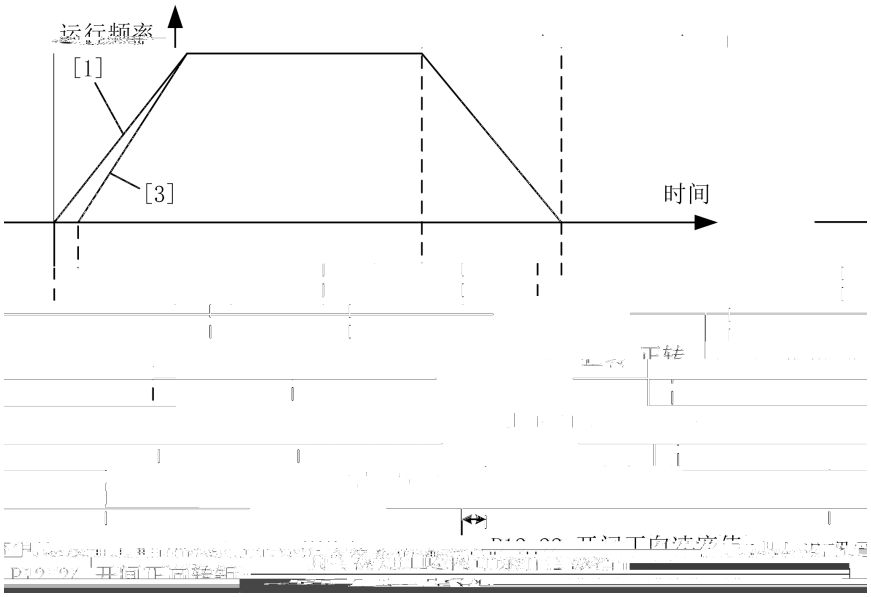
时间

正向

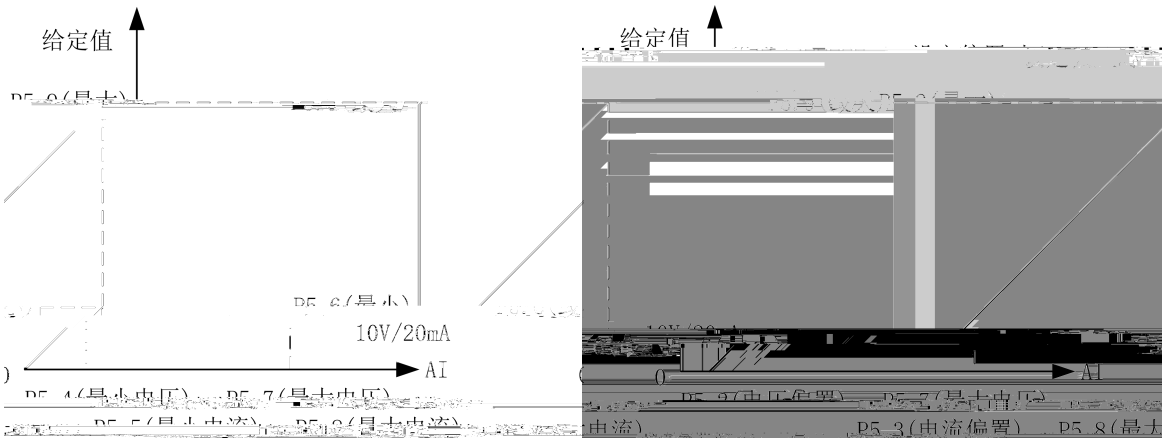
反向



22 “



8.4



8.5

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

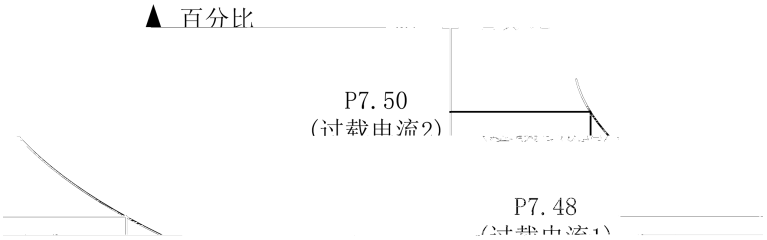
9

P7.33

P7.33

10

P7.48 P7.50



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

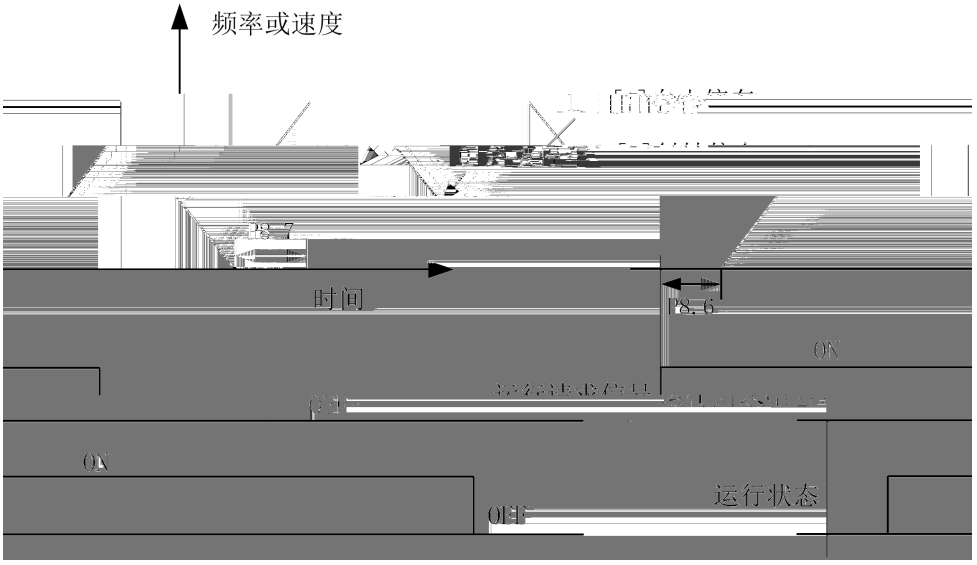
100V 697V

$$= 1.075 \sqrt{2} \text{ P16.0 } 20 \text{ P7.65}$$

$$= 1.075 \sqrt{2} \text{ P16.0 } 20 \text{ P7.66}$$

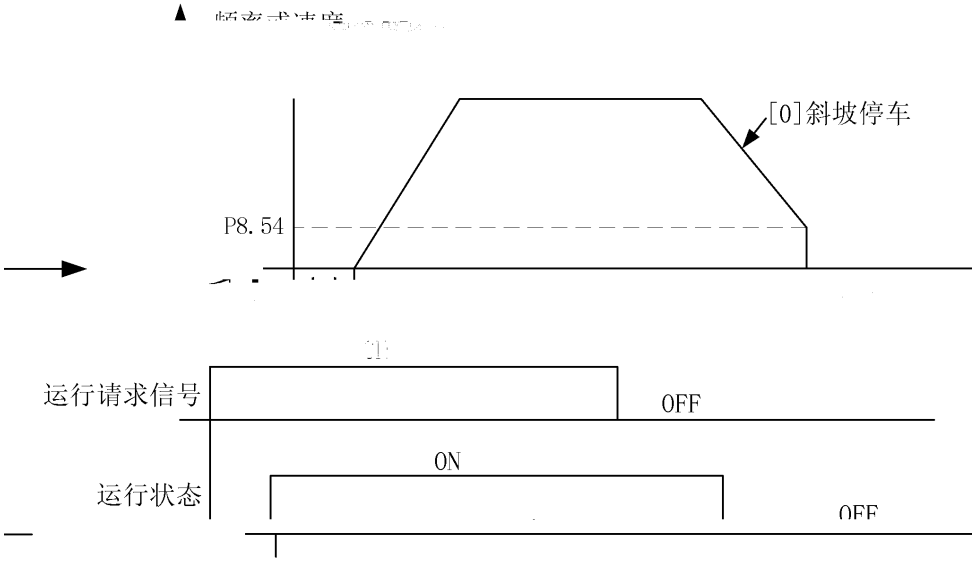
12

P8.7



P8.54 0 P8.3 [0]

P8.54

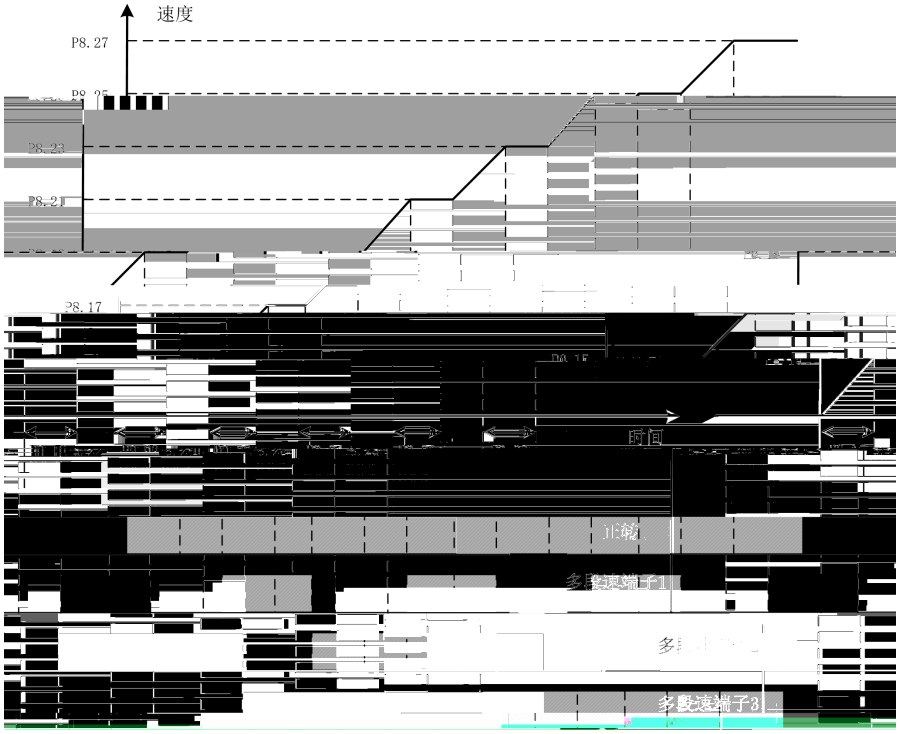


2

P8.14

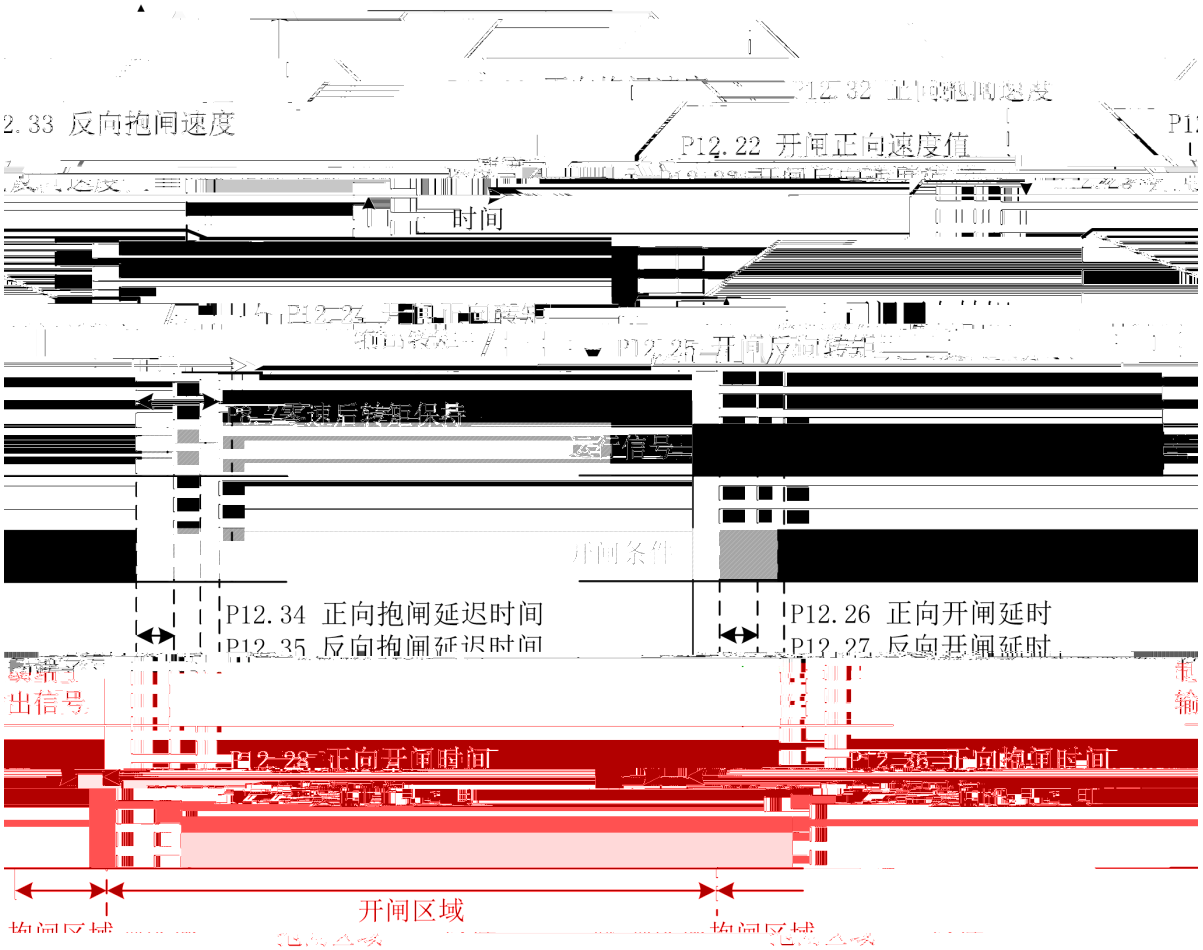
P8.14 P8.33

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%


2.33 反向抱闸速度
P12.22 开闸正向速度值
时间
P12.34 正向抱闸延迟时间
P12.26 正向开闸延时
P12.28 正向开闸时间
开闸区域

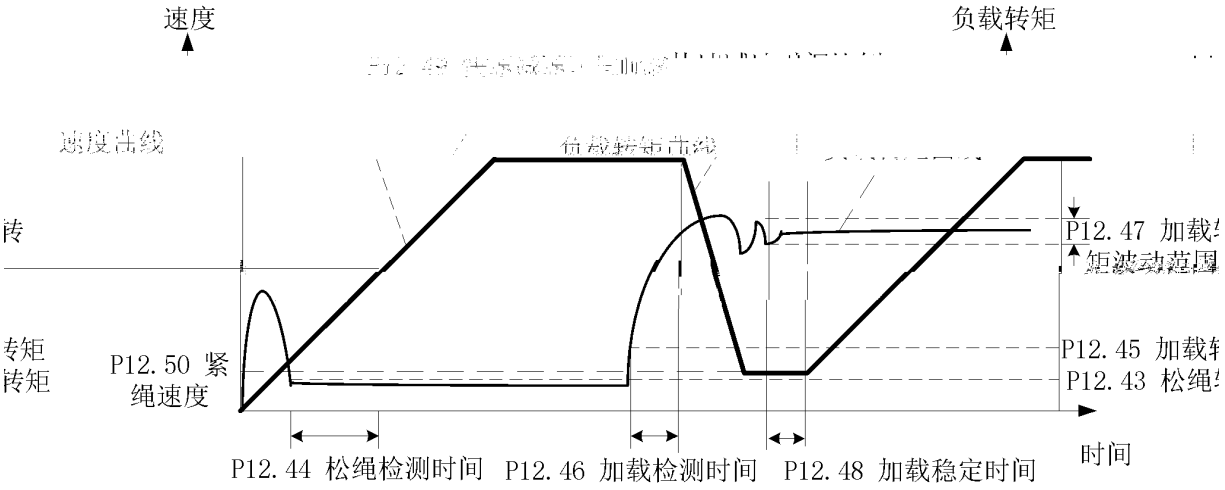
3

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	


速度
负载转矩
速度曲线
负载转矩曲线
P12.47 加载
矩波动范围
P12.45 加载
P12.43 松绳
P12.50 紧
绳速度
时间
P12.44 松绳检测时间
P12.46 加载检测时间
P12.48 加载稳定时间

1

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

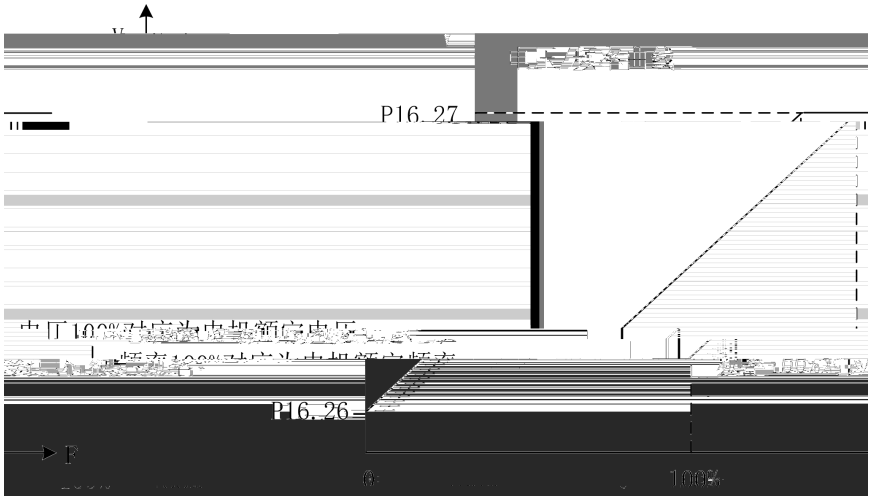
4

P16.15 V/F

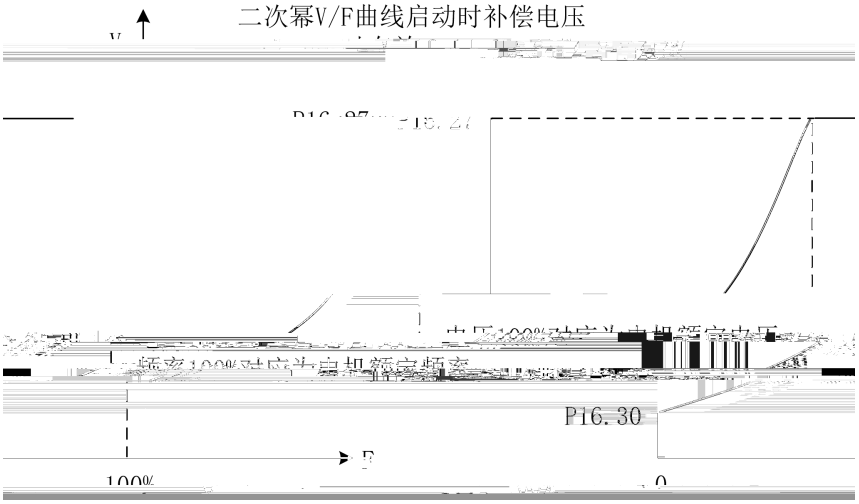
V/F

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



```
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

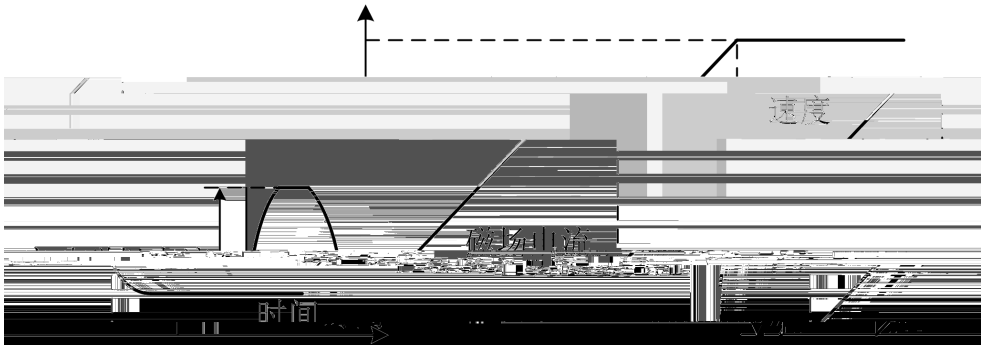
PGD1

PLC DI

DP CW0.10 “1”

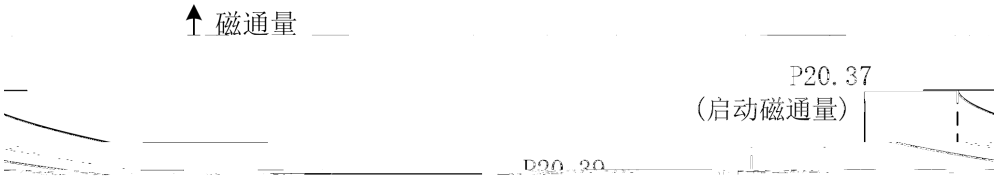
10

P20.36



11

P20.37 P20.40

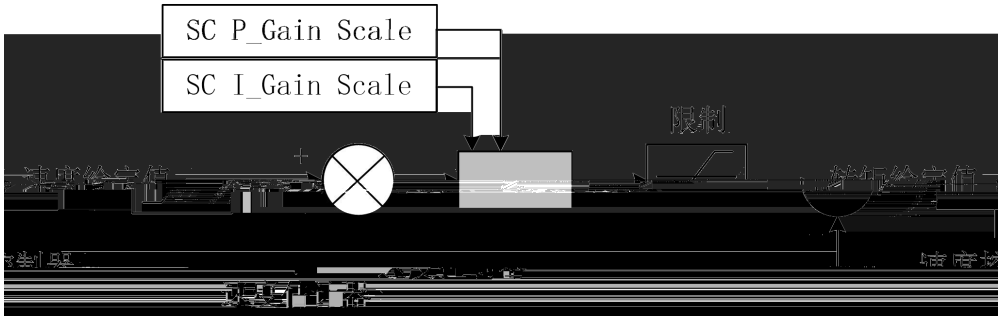


12

P20.55 ,

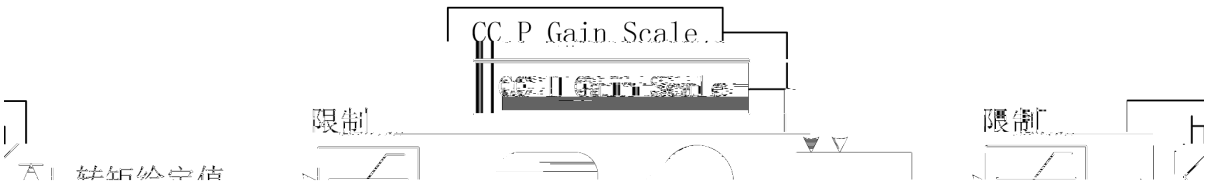
P20.56 ,

%



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_> re	

[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	

		DI
[E143]	LineSWFail	
[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]		

[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

-

-

-
-
-
-
-

-
-
-
-
-
-

-
- ON
- COM

-
-
-

-

-
-
-
-
-
-

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

w