GUIDE



1. ..... **1**

2. ..... **3**

2.8.1 PGD2

3. ..... **13**

4. ..... **17**

5. ..... **25**

6. ..... **28**

7. ..... **56**

8. ..... **65**

9. ..... **67**

1.

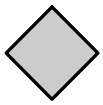
1.1







(1) 请勿在通电状态下拆下控制器的外罩或触摸到内部基板和元件；
(2) 控制器的接地端子必须良好接地；
(3) 不允许有异物掉进控制器内。



(1) 控制器禁止安装在易燃物上；
(2) 本系列控制器不适用于易燃易爆环境，若有需要，请向厂家订购特种控制器；
(3) 禁止私自拆装、改装控制器；
(4) 控制器在通电过程中，请勿打开面盖或进行配线作业。

1.2

(1) PLC DP

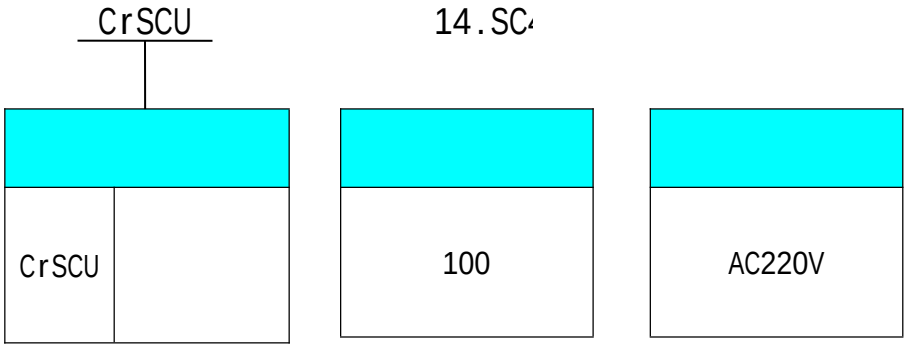
1.3

2.

2.1

1.
2.
3.

2.2



2-2



CrSCU

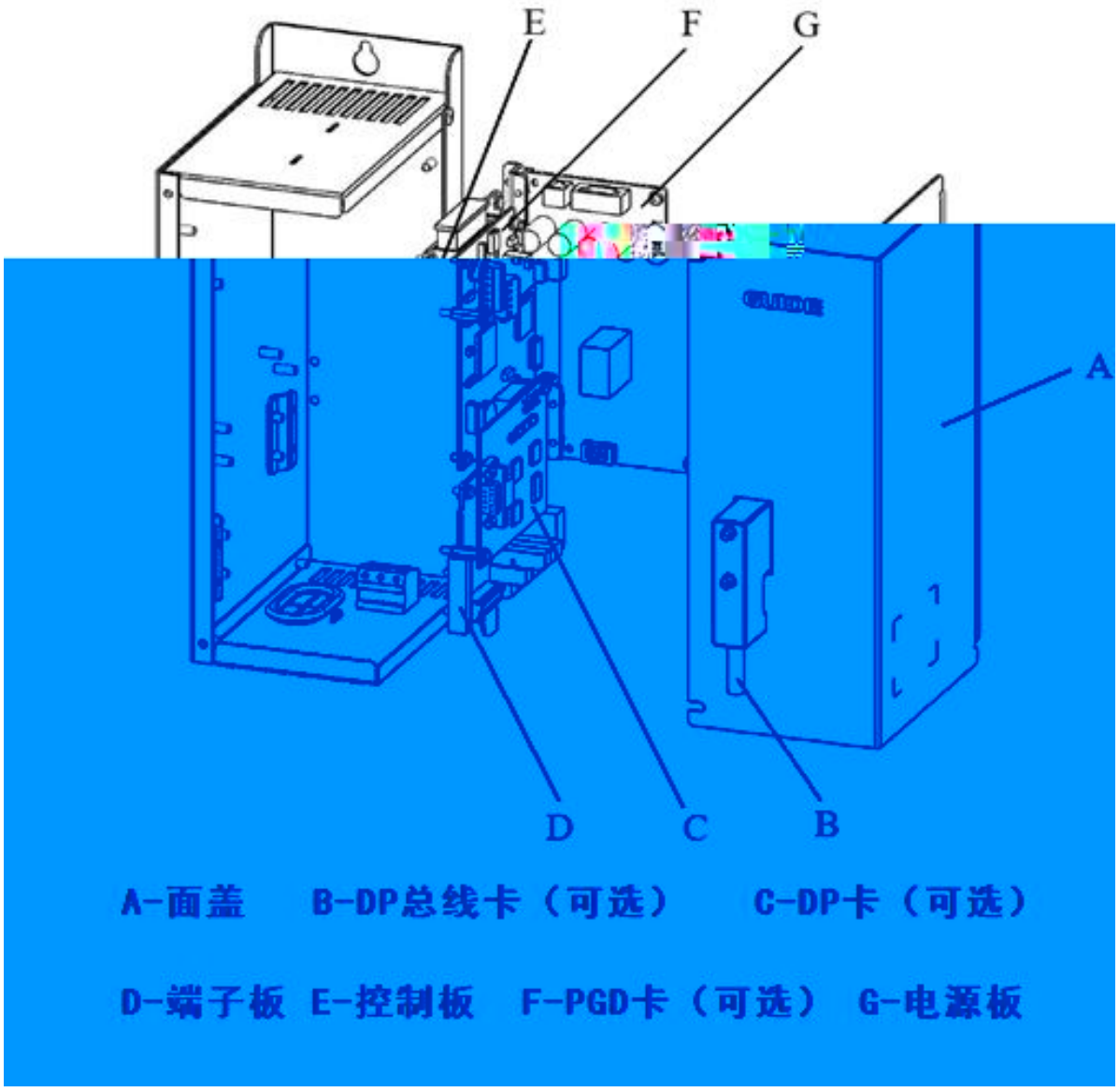
100

220AC 220V

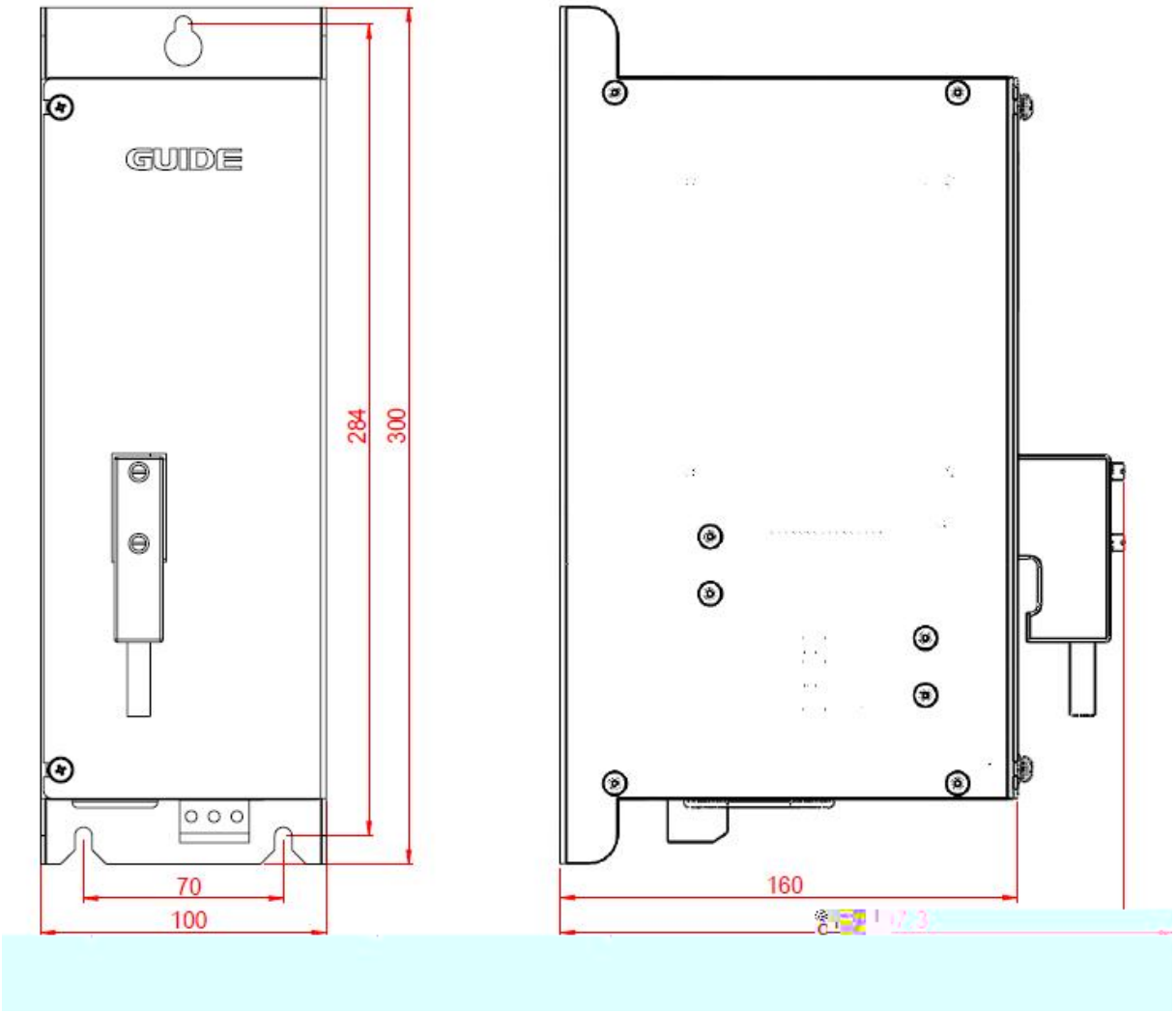
2.3

	AC220V
	DP
	IP20
	95%RH
	1000 1000

2.4



2.5



2.6

(1)

(2)

2.7 :

GDHF-K6C1	GDHF-K6C1 LCD
GDHF-PN02	PROFINET TCP/IP IT GDHF-PN02 PROFINET
GDHF-PGD2 PG	GDHF-PGD2 PG 15V
GDHF-DP03	GDHF-DP03 Profibus

2.8

2.8.1

! 3

2.8.2

GDHF-DP03 J14 GDHF-DP03

- GDHF-DP03
- GDHF-DP03
- DP
- DP

EMC GDHF-DP03

DP

2.8.3

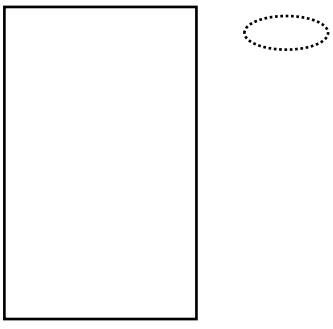
- +e... 0 P ḣ ∃

2.8.4 PROFIBUS

DP

B1	B
A1	A
PE	PROFIBUS
B2	B
A2	A
PE	PROFIBUS

A B



2.9

2.9.

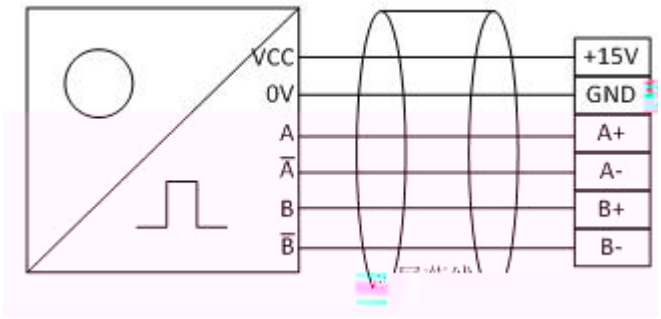
2 PG

3 PE

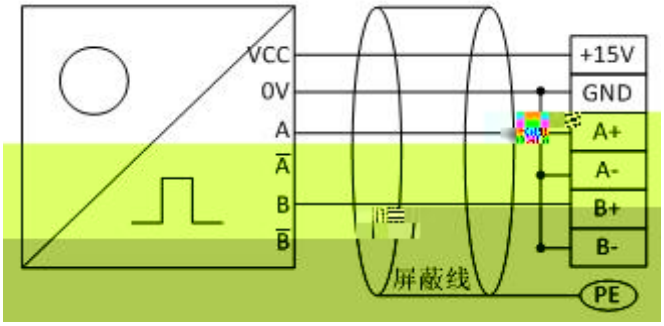
PGD2

1

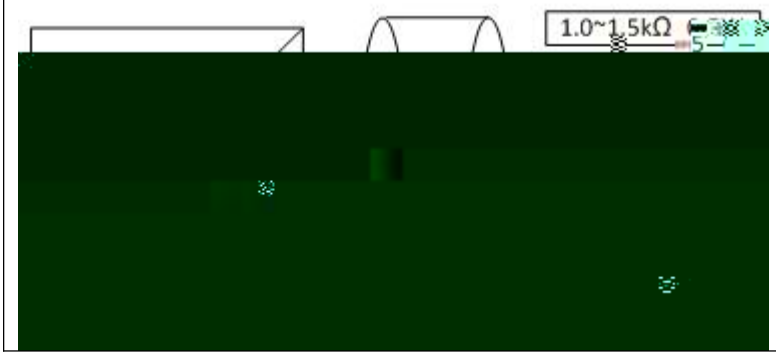
a

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

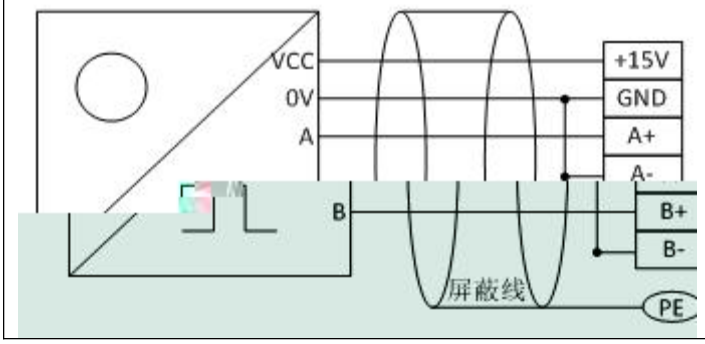
b

		
		HLE45-600L-3F.AC
		RVI78N-10CALA31N-1024
		EC120P45-P6PR-1024

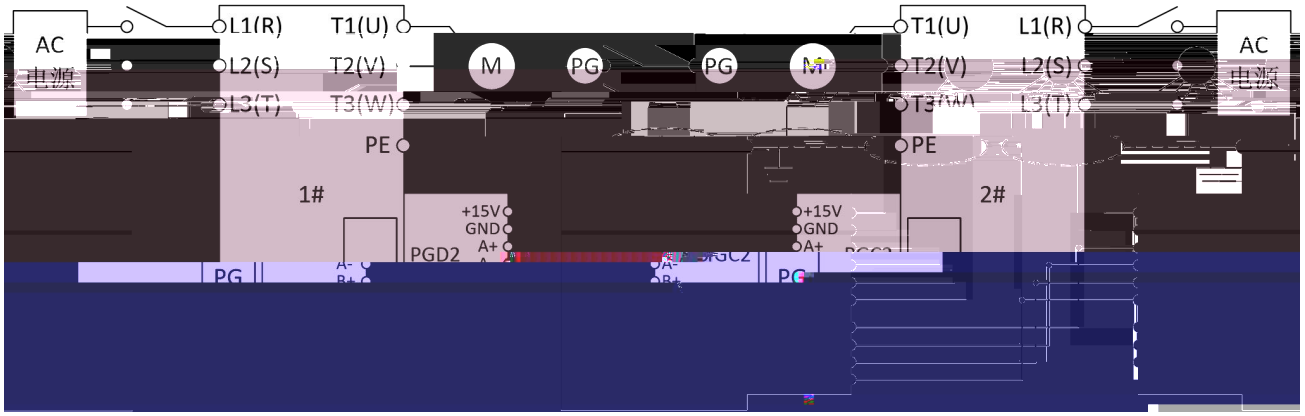
2

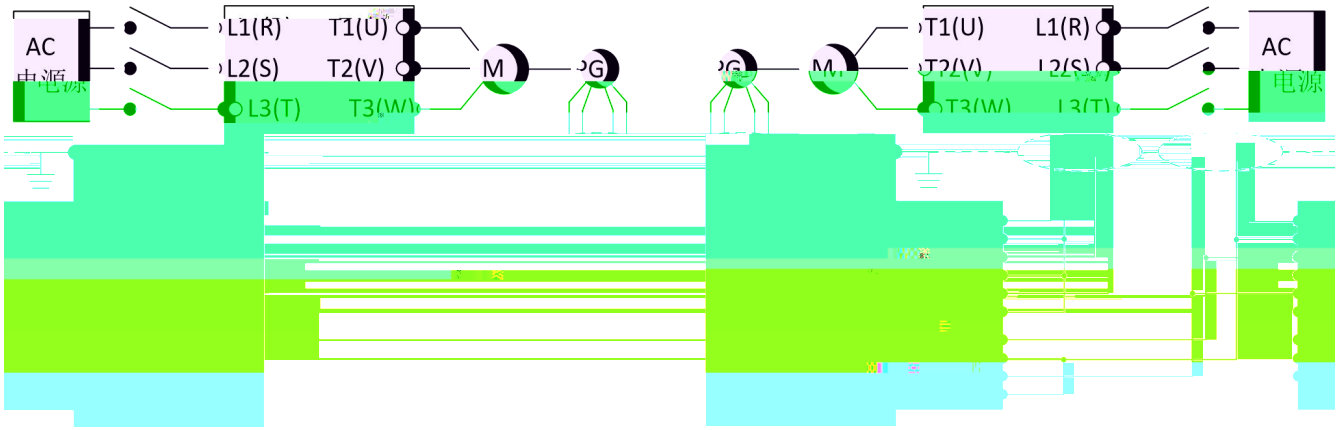
		
		HLE45-1024L-30C.AC
		EB38A6-C4PR-1024

3

		
		HLE45-600L-3R.AC
		EB50A8-N4PR-1024

2

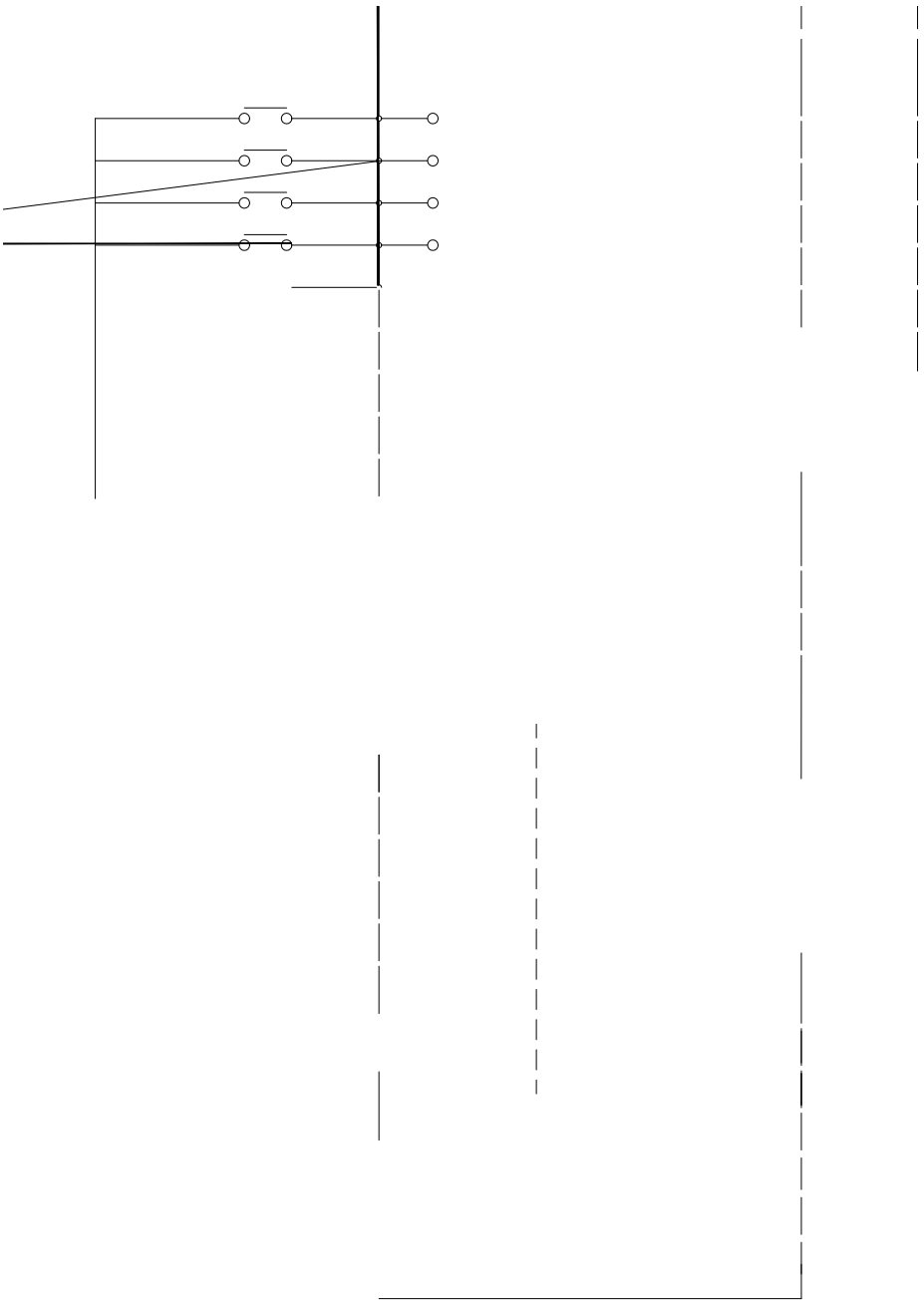




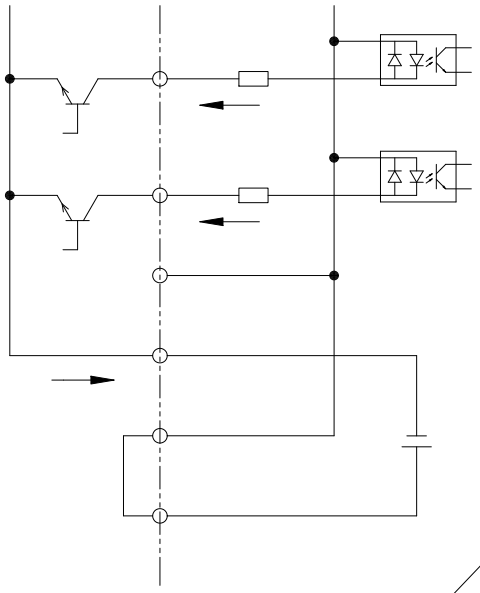
3 :

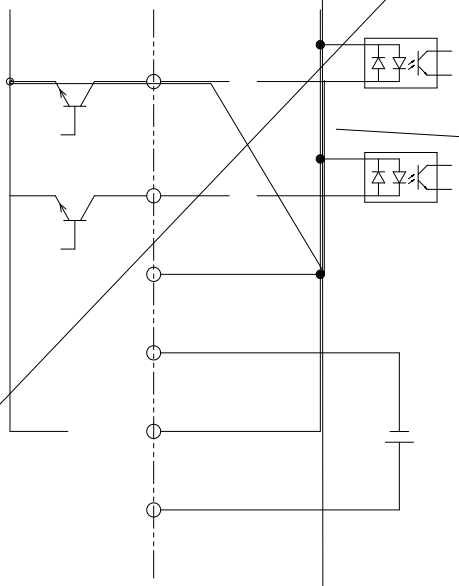
1	1	+10V	10V
2	2	GND	,
3	3	AI1+/AV1	1 0/4 20mA 1 -10 10V
4	4	AI1-	1
5	5	AI2+/AV2	2 0/4 20mA 2 -10 10V
6	6	AI2-	2
7	7	AO1	1 0/4 20mA J1 I a 0 10V J1 V b
8	8	AO2	2 0/4 20mA J2 I a 0 10V J2 V b
9	9	DI1	1
10	10	DI2	2
11	11	DI3	3
12	12	DI4	4
13	13	DI5	5
14	14	DI6	6
15	15	DI7	7
16	16	DI8	8
17	17	PW	
18	18	COM	24V
19	19	PW	
20	20	+24V	24V +
21	21	+24V	24V
22	22	DO1	1 DC24V 50mA
23	23	+24V	24V
24	24	DO2	2 DC24V 50mA
25	25	+24V	24V
26	26	DO3	3 DC24V 50mA
27	27	DO4A	4
28	28	DO4C	4
29	29	DO4B	4
30	30	DO5A	5
31	31	DO5C	5

3.2



N P N





3

4.

4.1

F1 LOCAL/REMOTE

F2 RUN STOP /RESET ENTER



4.2

▼

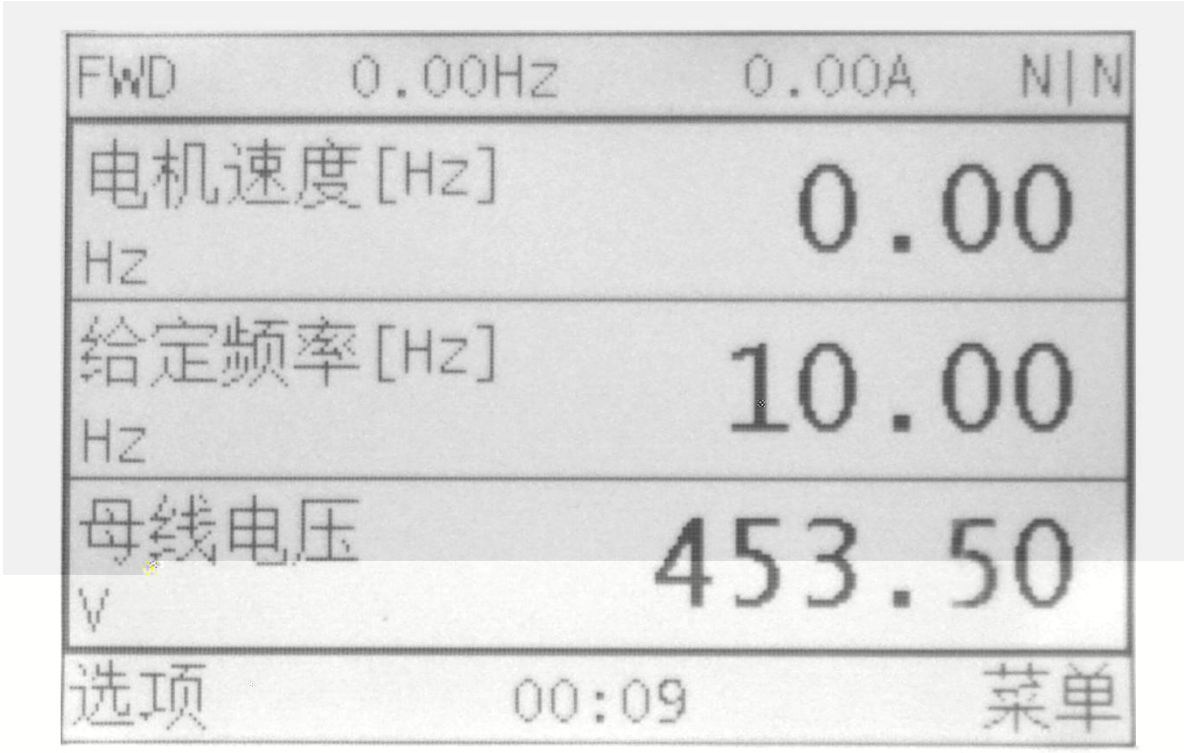
▲

ENTER

RUN STOP

LOCAL/REMOTE /

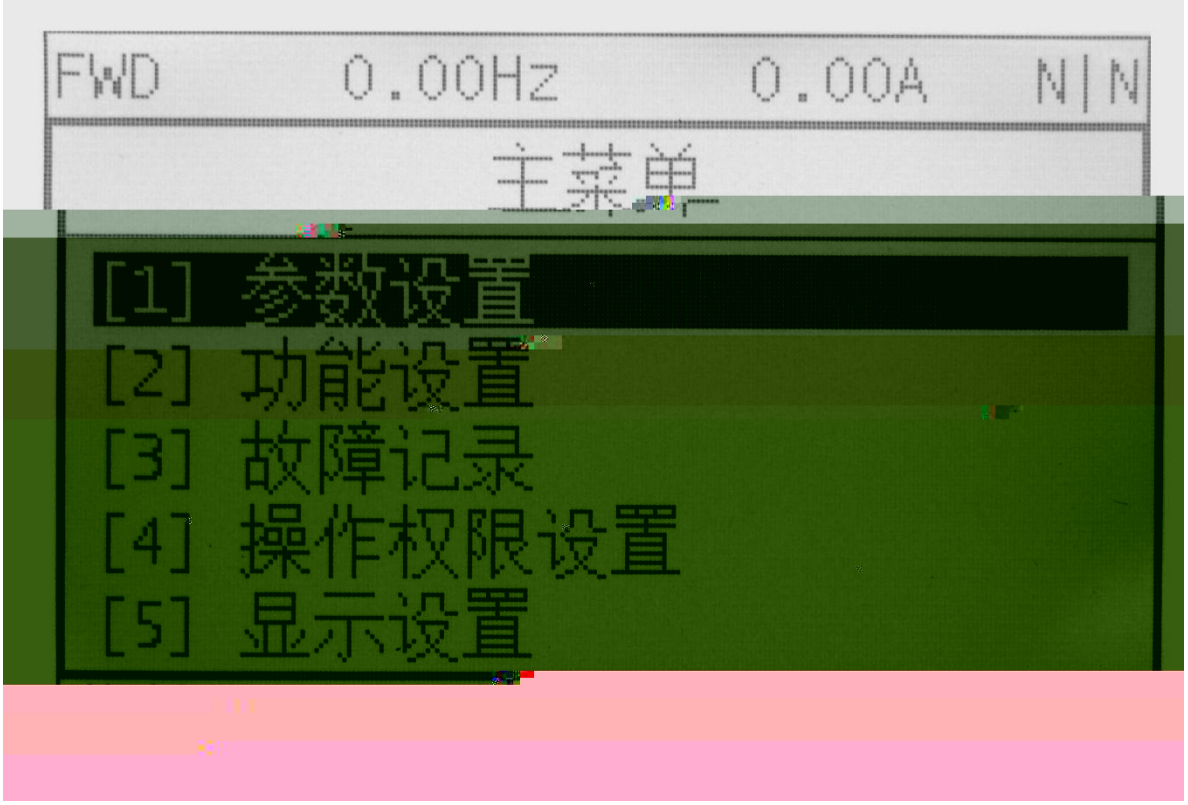
4.3



|

	FWD REV
	:HZ
	A
	N|N W E

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

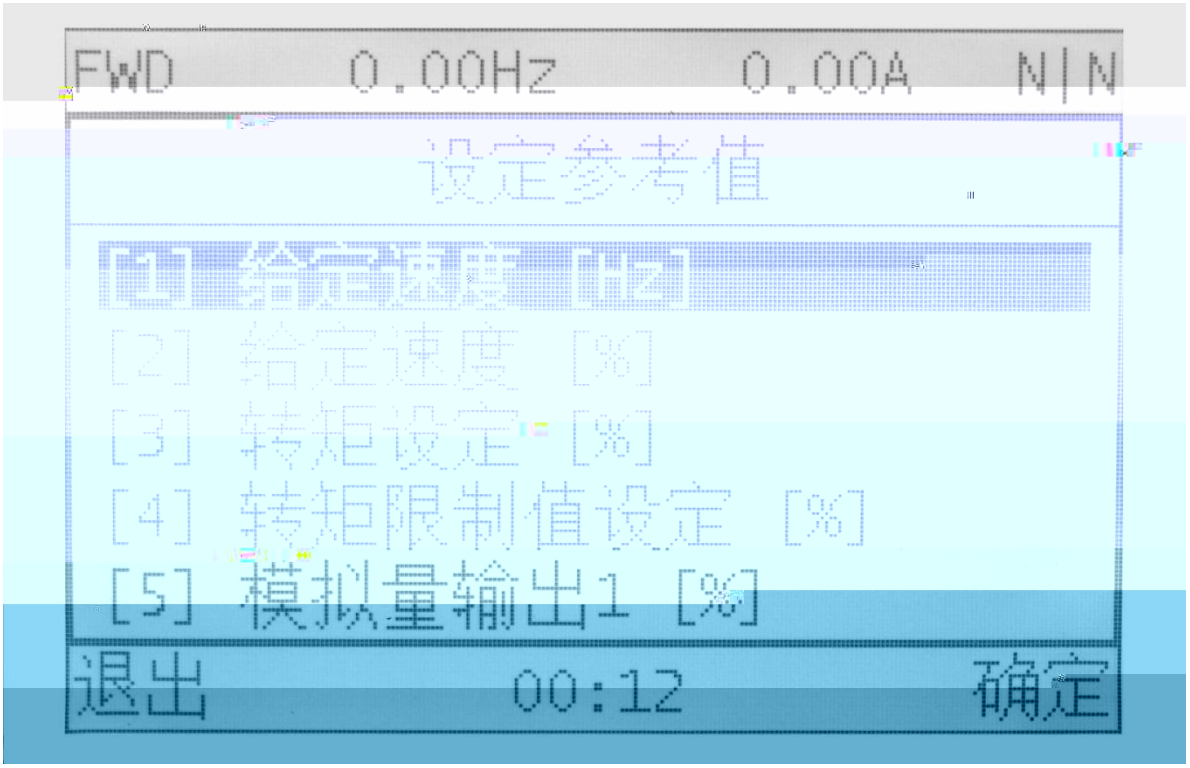


1 Parameter Setting

Function ng

2

4.4



1 Reference Set

Reference Set	Speed	[Hz]	Hz
		[%]	%
	Torque	[%]	%
	Torque limiter	[%]	%
	1	[%]	1
	2	[%]	2

2 Change Direction

3 Current Error

4	Current Warnning
5	Reset Error
6	Monitor Setting
7	Firmware Version

11	Compare Parameter	

1

2

5

4

▼ ▲ “Enter”

3 Fault Record

4 Access Permissions

5 Display Setting

5.

5.1

1

2 V/F

5.2

5.2.1

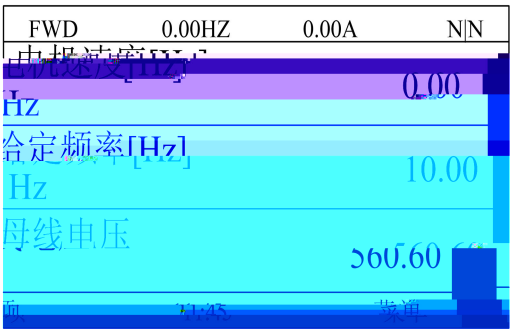
1

AC220V 50Hz

2

3 PG PG

5.2.2





5.2.3

5.4 “ ”

5.2.4

P1.1		485V	-500
P7.14			1000
P7.15			1000
P7.59			0

5.2.5

1 DP

P33.0	Profibus	/ Profibus	1
P33.1		PLC	
P33.21	[W4]	PLC	1 0
P33.22	[W4]		0 1
P33.23	[W5]	PLC	2 1
P33.24	[W5]		0 1
P33.53	[W4]		1 0

P33.54	[W4]		0 1
P33.55	[W5]		19
P33.56	[W5]		2 100
P33.57	[W6]		2 1
P33.58	[W6]		0 1

2

P6.0	AO 1		1
P6.2	AO 1	AO1	-100.0
P6.3	AO 1	AO1	100.0

5.2.6

6.

6.1 P0

P0.0 Ь3'ч		[0] [1]	0 1	0
P0.3		[0]50HZ [1]60HZ	0 1	0
P0.4				

6.2 P2

P2.2		[0] [1]	0 1	0
P2.33			1 100min	10

6

6.3 P3

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

0		
1		
2		
3		
4	.NC	
5		</RST
6	1 0	
7	2 1	
8	3 2	
9	4 3	
10		
11		
12		
13	.NC	
14		
15	.NC	
16		
17	0	1 0 00 1 01 2 10 3 11 4
18	1	
19	AFE	
20		AFE
21	FUNC 21	
22		

23		
24		
25	FUNC 25	
26		
27	FUNC 27	
28		
29 64	FUNC 29 FUNC 64	

6.4 P4

P4.0	1		0 64	0
P4.1	2		0 64	0
P4.2	3		0 64	0
P4.3	4		0 64	0
P4.4	5		0 64	0
P4.16	1		0 500	0
P4.17	2		0 500	0
P4.18	3		0 500	0
P4.19	4		0 500	0

0		
1		8.3
2		ON
3		8.3
4		
5		
6	1	[6] [9]
7	2	
8	3	
9	4	
10	FUNC 10	

11		
12		
13		
14		
15		
16	FUNC 16	
17	0	1
18	1	2
19	2	3
20	3	4
21 31	FUNC 21 FUNC 31	
32		AFE
33 48	FUNC 33 FUNC 48	
49	PROFIBUS 1	PROFIBUS 1 1
50	PROFIBUS 2	PROFIBUS 2 1
51	PROFIBUS 3	PROFIBUS 3 1
52	PROFIBUS 4	PROFIBUS 4 1
53	PROFIBUS 5	PROFIBUS 5 1
54 56	FUNC 54 FUNC 56	
57	1	1 1
58	2	2 1
59	3	3 1
60	4	4 1
61	1	1 1
62	2	2 1
63	3	3 1
64	4	4 1

6.5 P5

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

P5.19	AI2	AI2	0.0 1000.0 [ms]	25.0 [ms]
P5.20	AI2	AI2	-10.00 10.00 [V]	0.000 [V]
P5.21	AI2	AI2	-20.00 20.00 [mA]	0.000 [mA]
P5.22	AI2	AI2	-10.00 10.00 [V]	0.000 [V]
P5.23	AI2	AI2	0.00 20.00 [mA]	0.000 [mA]
P5.24	AI2	AI2	-300.0 300.0 [%]	0.0 [%]
P5.25	AI2	AI2	-10.00 10.00 [V]	10.000 [V]
P5.26	AI2	AI2	0.00 20.00 [mA]	20.000 [mA]
P5.27	AI2	AI2	-300.0 300.0 [%]	100.0 [%]

6.6 P6

P6.0 A01 7-1 0 14 2

P6.2 A01 A01 -300.0/ ( )

P6.7	AO1	AO1 (P6.0 [13])	0.0 100.0 [%]	0.0 [%]
P6.8	AO1	AO1	0.0 1000.0 [ms]	10.0 [ms]
P6.14	AO2	7-1	0 14	4
P6.16	AO2	AO2	-300.0 300.0 [%]	0.0 [%]
P6.17	AO2	AO2	-300.0 300.0 [%]	100.0 [%]
P6.18	AO2 [mA V]	AO2	0.0 100.0 [%]	0.0 [%]
P6.19	AO2 [mA V]	AO2	0.0 100.0 [%]	100.0 [%]
P6.20	AO2	AO2	-100.00 100.00 [%]	0.00 [%]
P6.21	AO2	AO2 (P6.14 [13])	0.0 100.0 [%]	0.0 [%]
P6.22	AO2	AO1	0.0 1000.0 [ms]	10.0 [ms]

6-1

0		
1		
2		
3		

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

6.7 P7

P7.14			60.0 100.0 [ ]	87.5 [ ]
P7.15			50.0 100.0 [ ]	80.0 [ ]
P7.19	[1]	1	100.0 720.0 [%]	120.0 [%]
P7.20	[2]	2	100.0 720.0 [%]	120.0 [%]
P7.21	[3]	3	100.0 720.0 [%]	120.0 [%]
P7.22	[4]	4	100.0 720.0 [%]	120.0 [%]
P7.59		[0] [1]	0 1	1
P7.60			0.10 3.00 [s]	0.30 [s]

6.8 1 P8

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

P8.23	5		0.0 300.0 [%]	300.0 [%]
P8.24	5	P8.21 P8.23	0.0 300.0 [s]	10.00 [s]
P8.25	6		0.0 300.0 [%]	300.0 [%]
P8.26	6	P8.23 P8.25	0.0 300.0 [s]	10.00 [s]
P8.27	7		0.0 300.0 [%]	300.0 [%]
P8.28	7	P8.25 P8.27	0.0 300.0 [s]	10.00 [s]
P8.29	8		0.0 300.0 [%]	300.0 [%]
P8.30	8	P8.27 P8.29	0.0 300.0 [s]	10.00 [s]
P8.32		[0] [1]PROFIBUS [2]MODBUS [3]	0 3	0
P8.33			0.1 10.0	1.0
P8.34	1		0.0 300.0 [%]	100.0 [%]
P8.35	1	P8.34	0.0 300.0 [s]	3.00 [s]
P8.36	2		0.0 300.0 [%]	200.0 [%]
P8.37	2	P8.34 P8.36	0.0 300.0 [s]	4.00 [s]
P8.38	3		0.0 300.0 [%]	240.0 [%]
P8.39	3	P8.36 P8.38	0.0 300.0 [s]	7.00 [s]
P8.40	4		0.0 300.0 [%]	300.0 [%]
P8.41	4	P8.38 P8.40	0.0 300.0 [s]	10.00 [s]

P8.42 5

P8.71		[0] [1]	0 1	0

6.9 1 P12

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

P12.26			0.00 2.00 [s]	0.00 [s]
P12.27			0.00 2.00 [s]	0.00 [s]
P12.28			0.00 2.00 [s]	0.07 [s]
P12.29			0.00 2.00 [s]	0.07 [s]
P12.32			0.0 20.0 [%]	0.0 [%]
P12.33			0.0 20.0 [%]	0.0 [%]
P12.34			0.00 2.00 [s]	0.00 [s]
P12.35			0.00 2.00 [s]	0.00 [s]
P12.36			0.00 2.00 [s]	0.50 [s]
P12.37			0.00 2.00 [s]	0.50 [s]

6.10 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]
P16.9			0 7200 [rpm]	1500 [rpm]

P16.11		[0]V/F [1] [2] [3] [4]	0 4	0
P16.12			1.00 10.00 [kHz]	3.00 [kHz]
P16.14	V/F	[0] V/F [1] V/F [2]	0 3	0
P16.15		[0] [1]	0 1	0
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]
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 [%]
P16.27			0.0 200.0 [%]	100.0 [%]
P16.30			0.0 100.0 [%]	0.0 [%]
P16.33	V/F	V/F	0 6	2
P16.34	V/F 1		0.0 300.0 [Hz]	5.0 [Hz]
P16.35	V/F 1		0.0 125.0 [%]	11.5 [%]

P16.64	V/F	V/F	0.0 1000.0 [%]	100.0 [%]
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 [%]

6.11 Position Control P29

P29.0	Pos Ctrl Type	[0] No Pos Control [1] DI Pos Control [2] PB Pos Control [3] MB Pos Control	0 3	0
P29.1	Pos Ctrl Gain		0.0 5000.0	100.0
P29.2	Transation Speed		0.00 200.00 [m(rad)/min]	1.00 [m(rad)/min]
P29.3	Pulses perMM/MRad	/	0.00 650.00	30.00
P29.4	Pos Reach Bandwidth		0.00 100.00 [mm(mrad)]	10.00 [mm(mrad)]
P29.5	Pos Reach Time		0.0 20.0 [s]	0.5 [s]
P29.7	Crane Part Select	[0] Hoist [1] Slew [2] Luff	0 2	0
P29.8	OutPosCorct_Enable	[0] Disable [1] Enable	0 1	0
P29.10	OutPosCorct_Type	[0] IO [1] Data	0 1	0
P29.16	Base Point 1		0.0 65535 [mm(mrad)]	0 [mm(mrad)]

P29.18	Target Point 1		0.0 65535 [mm(mrad)]	1000 [mm(mrad)]
P29.37	POS Feedback Mode	[0] Normal FCK [1] AI FCK [2] Integral FCK	0 2	0

6.12 DP P33

P33.0	Profibus	[0] [1]	0 1	0	
P33.1		PLC	1 255	1	
P33.2		[0]PPO 1 [1]PPO 2 [2]PPO 5 [3]GUIDE	0 3	2	
P33.3			0 16	14	
P33.4			0 16	14	
P33.5		[0] [1] [2] [3]	0 3	0	
P33.6			0 1000 [ms]	50 [ms]	
P33.7		[0] [1]	0 1	0	
P33.8			0.0 10.0 [s]	3.0 [s]	
P33.13	[W0]	7-2	0 37	0	
P33.14	[W0]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.15	[W1]	7-2	0 37	0	
P33.16	[W1]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	

P33.30	[W8]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	1	
P33.31	[W9]	7-2	0 37	0	
P33.32	[W9]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.33	[W10]	7-2	0 37	0	
P33.34	[W10]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.35	[W11]	7-2	0 37	0	
P33.36	[W11]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.37	[W12]	7-2	0 37	0	
P33.38	[W12]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.39	[W13]	7-2	0 37	0	
P33.40	[W13]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.41	[W14]	7-2	0 37	0	
P33.42	[W14]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	

P33.43	[W15]	7-2	0 37	0	
P33.44	[W15]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000	0 4	0	
P33.45	[W0]	7-3	0 48	0	
P33.46	[W0]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.47	[W1]	7-3	0 48	0	
P33.48	[W1]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.49	[W2]	7-3	0 48	0	
P33.50	[W2]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.51	[W3]	7-3	0 48	0	
P33.52	[W3]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	

P33.53	[W4]	7-3	0 48	1	
P33.54	[W4]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	0	
P33.55	[W5]	7-3	0 48	19	
P33.56	[W5]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	2	
P33.57	[W6]	7-3	0 48	26	
P33.58	[W6]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	6	
P33.59	[W7]	7-3	0 48	30	
P33.60	[W7]	[0] × 1 [1] × 10 [2] × 100 [3] × 1000 [4] × 10000 [5] [%] × 1 [6] [%] × 10 [7] [%] × 100	0 7	1	
P33.61	[W8]	7-3	0 48	14	

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

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

1

0

CW0.0	RUN	‘0’ ‘1’

CWO.1	RUN@REV	‘0’ ‘1’
CWO.2	REQUEST_INFO	‘0’ ‘1’
CWO.3	RESET	‘0’ ‘1’
CWO.4	External FAULT	‘0’ ‘1’ Profibus
CWO.5	External ALARM	‘0’ ‘1’ Profibus
CWO.6	DRIVE ENABLE	‘0’ ‘1’
CWO.8	SPD/TRQ Switch	‘0’ ‘1’
CWO.9	HOOK	‘0’ ‘1’
CWO.10	Anti Crab Open	‘0’ ‘1’
CWO.11	Torque_Limit_Ctrl	‘0’ ‘1’ PROFIBUS
CWO.12 CWO.13	MOTION_CTRL	‘00’ 1 ‘01’ 2 ‘10’ 3 ‘11’ 4
CWO.14	TORQUE_ZERO	‘0’ ‘1’
CWO.15	FREE_RUNNING_STOP	‘0’ ‘1’

1

6

CW1.0	ANTI_SWAY	‘0’ ‘1’
CW1.1	UP_LMT_SW	‘0’ ‘1’
CW1.2	POSITION_CTRL_ENABLE	‘0’ ‘1’
CW1.3	BASE_POINT_1	‘0’ ‘1’
CW1.4	ANTI_SWAY_MEC	‘0’ ‘1’
CW1.5	POS_AI_HOISTRUN	
CW1.6	Soft_Landing	‘0’ ‘1’
CW1.10	AUTO_SEMI_START	‘0’ ‘1’

6

2

0

SW0.0	READY	‘0’ ‘1’
SW0.1	RUN	‘0’ ‘1’
SW0.2	FAULT	‘0’ ‘1’
SW0.3	MOTOR BRAKE	‘0’ ‘1’
SW0.4	WARNING	‘0’ ‘1’
SW0.5	DIRECTION	‘0’ ‘1’

SW0.6	M_STEP0	1 ‘0’ 1 ‘1’ 1
SW0.7	M_STEP1	2 ‘0’ 2 ‘1’ 2
SW0.8	M_STEP2	3 ‘0’ 3 ‘1’ 3
SW0.9	M_STEP3	4 ‘0’ 4 ‘1’ 4
SW0.10	Reserved	
SW0.11	Reserved	
SW0.12	REMOTE/LOCAL	/ ‘0’ ‘1’
SW0.13	Reserved	
SW0.14 SW0.15	MOTION SEL	‘00’ 1 ‘01’ 2 ‘10’ 3 ‘11’ 4

1

SW1.0	TARGET_REACH	‘0’ ‘1’

0		16	4 @32bit
1	0	17	5 @32bit
2	1	18	[Hz]
3	2	19	[rpm]

4	3	20	[%]
5	4	21	[%]
6	[32]	22	[%]
7	[32]	23	[Hz]
8	32_MSW	24	
9	32_LSW	25	
10		26	1[%]
11		27	2[%]
12	0 @32bit	28	
13	1 @32bit	29	
14	2 @32bit	30 37	SET_W12 19
15	3 @32bit		

0		23	
1	0	24	
2	1	25	
3	2	26	
4	3	27	A
5	4	28	B
6	5	29	C
7	0 @32bit	30	
8	1 @32bit	31	
9	2 @32bit	32	
10	3 @32bit	33	1
11	4 @32bit	34	2
12	5 @32bit	35	
13	[32]	36	
14	[32]	37	
15	32bit_MSW	38	
16	32bit_LSW	39	

17		40	
18		41	Mwh
19		42	Kwh
20	[rpm]	43	Mwh
21	[rpm]	44	Kwh
22		45 48	AW26 29

7.

7.1

1

P12.0 [0] [1]

A. [0]

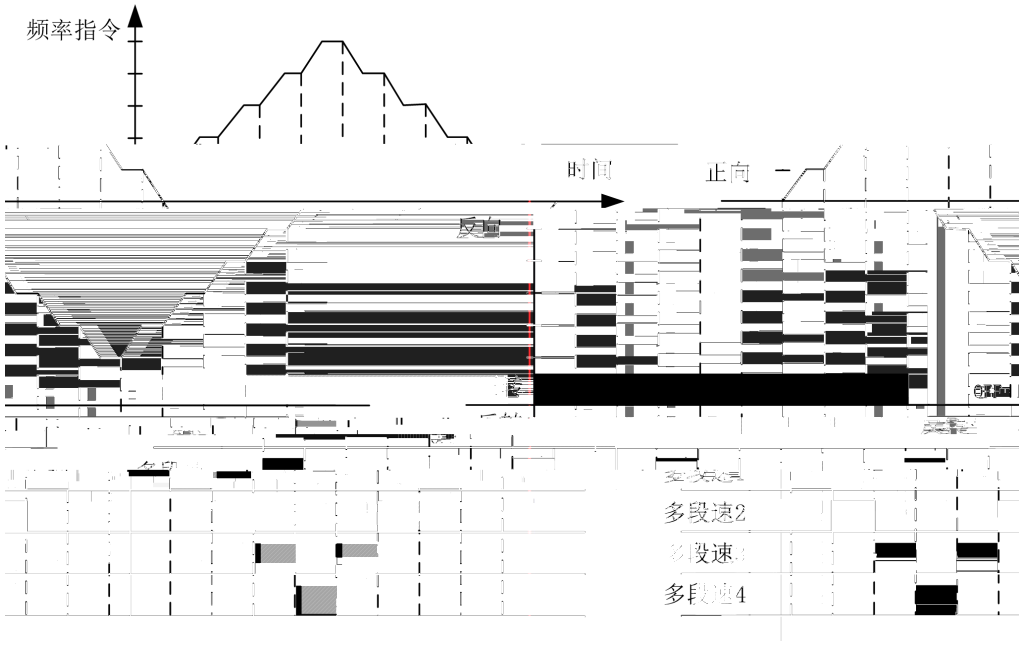
[1] [2] ---1

[6] 1 0 ---2

[7] 2 1 ---3

[8] 3 2 ---4

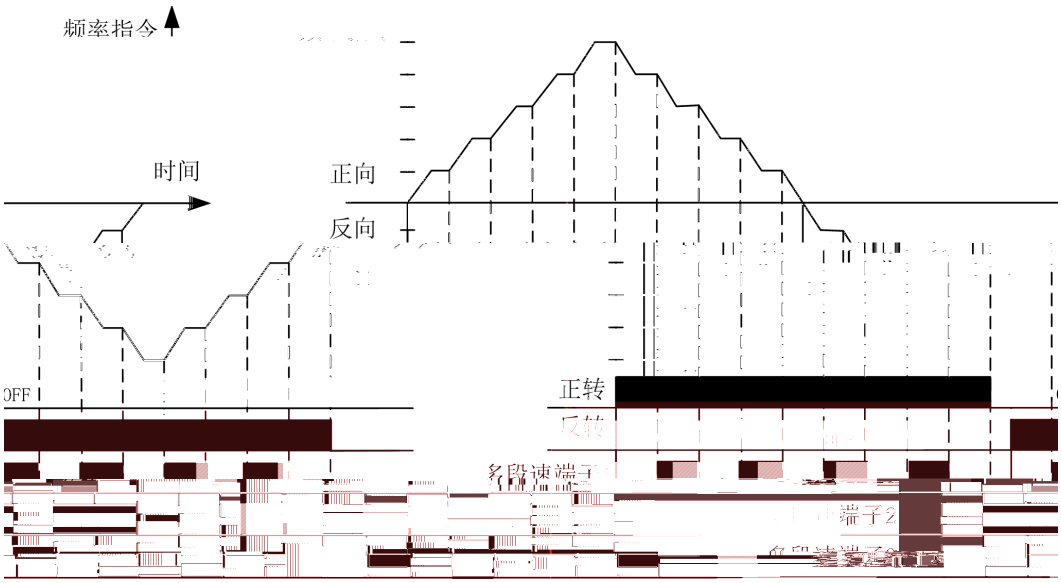
[9] 4 3 ---5



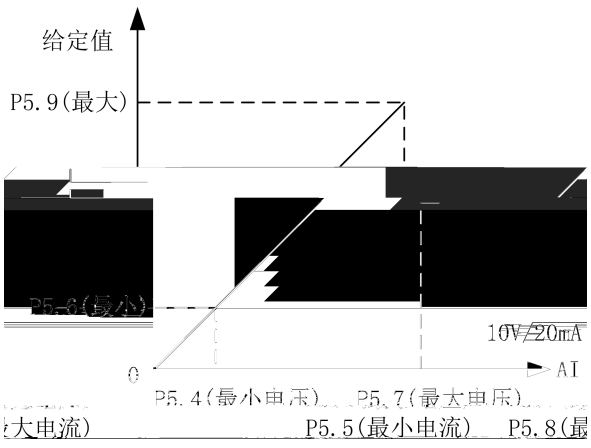
B. [1]

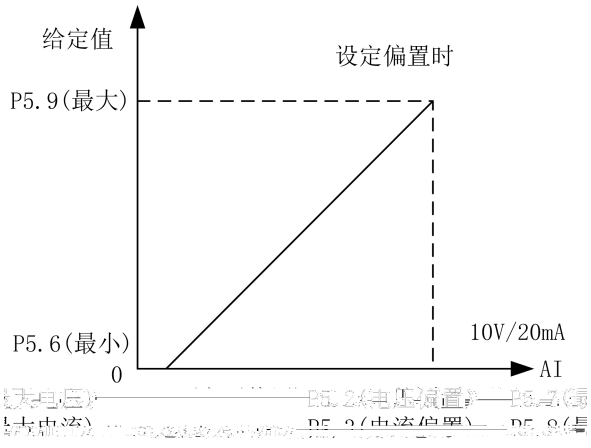
4 16 (8421)

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

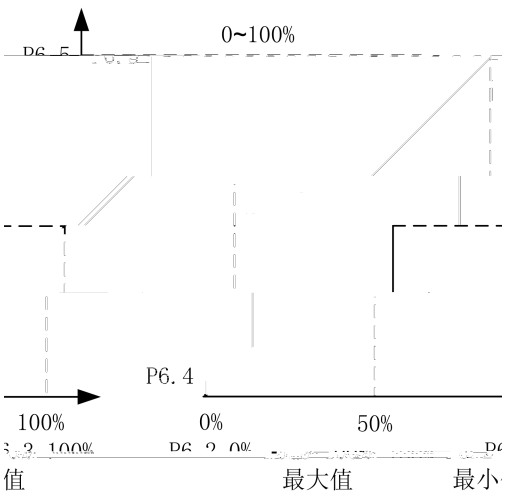


7.2

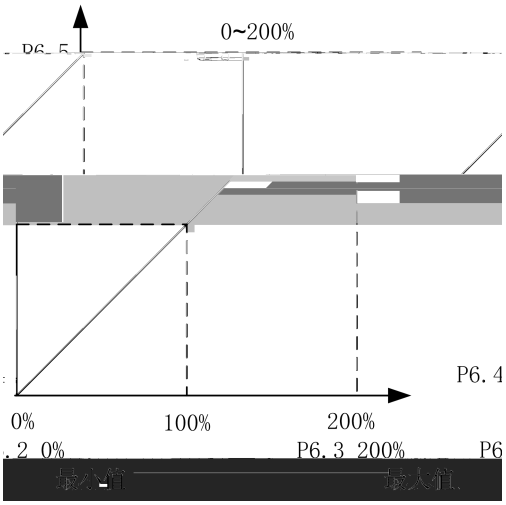




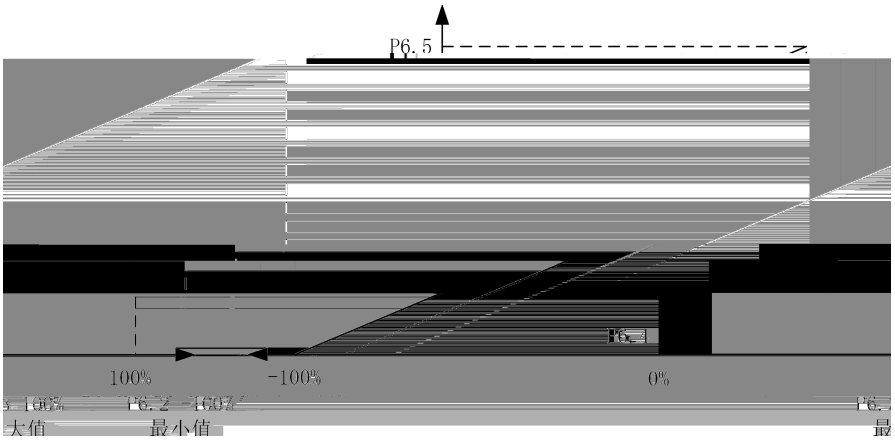
7.3



(a) 0~100%



b 0~200%



c -100~100%

7.4

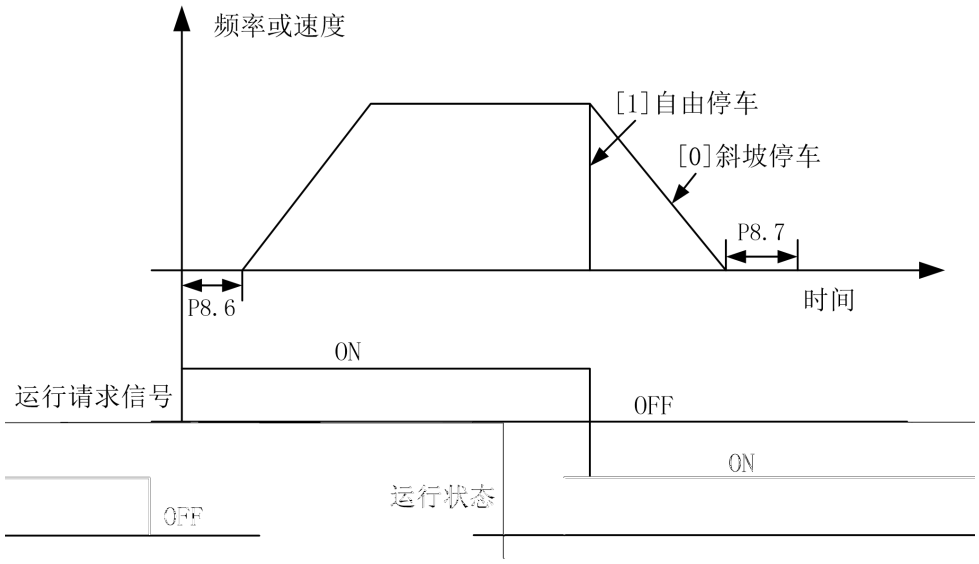
1

P8.3

[0]

P8.6 P8.6

P8.7

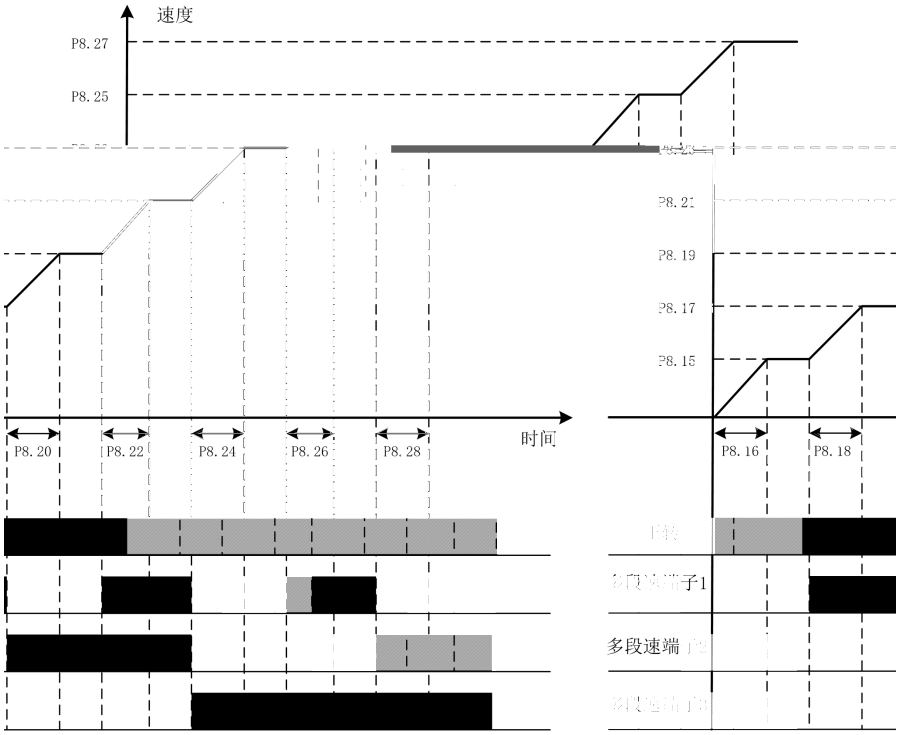


2

P8.14

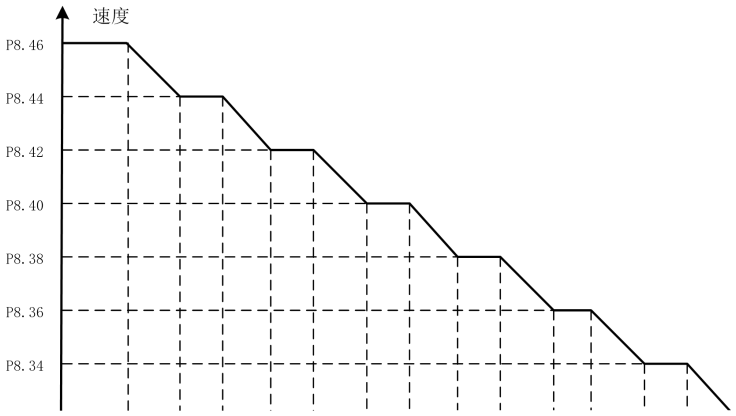
P8.14 P8.33

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%



7

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%

0.1s

3

PROFIBUS MODBUS

P8.13 P8.32

1 =P8.14×P8.16×(×0.001)

1 =P8.33×P8.35×(×0.001)

7.5

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

7.6 V/F

1

P16.0 P16.9

P16.7 120×P16.5/P16.6 P16.9

120×P16.5/P16.7

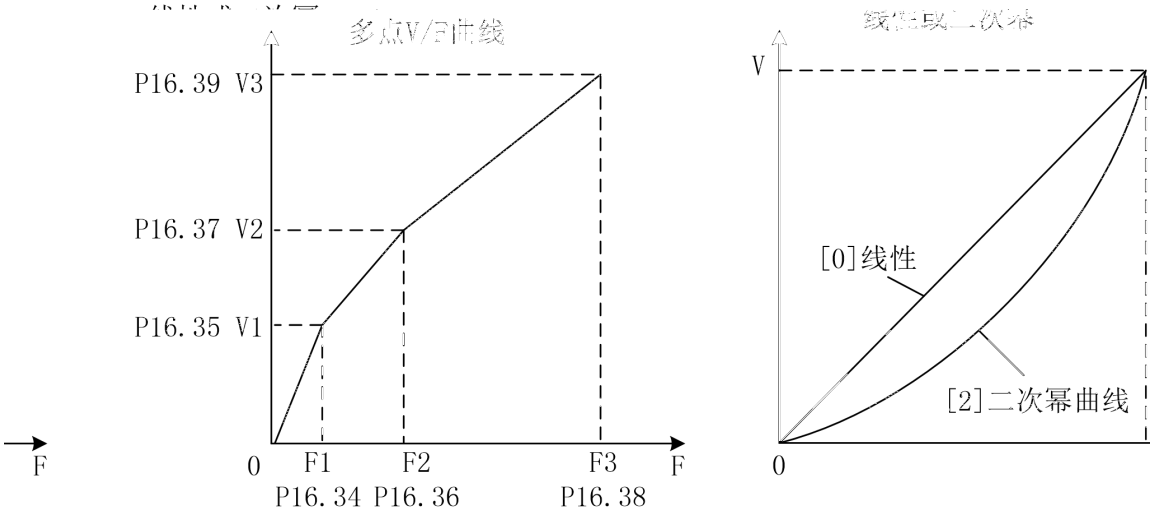
2 V/F

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

7.7

P8.7		15	
P8.59			T =T *0.2485
P8.60		5.5	
P8.61		[0]	
P8.66			
P8.67		5	
P8.68	16		
P8.69	16		

m

$$L = T^2 \frac{g}{(2\pi)(2\pi)} = T^2 \quad 0.2485$$

5 g=9.8

P8.59.

1) " " 101.64 ‘ 2 32

LSW ’ 101.65 ‘ 2 32 MSW ’

2) 1m

101.64 101.65 101.64 x

101.65

7.8

P29.0	Pos Ctrl Type	[2]PB Pos Control	
P29.1	Pos Ctrl Gain	20	
P29.2	Transation Speed		
P29.3	Pulses per MM/MRad		
P29.4	Pos Reach Bandwidth	20.00 mm	
P29.5	Pos Reach Time	0.5 s	
P29.7	Crane Part Select	[1]Hoist	
P29.8	OutPosCorct_Enable	[1]Enabled	
P29.10	OutPosCorct_Type	[0]IO	
P29.16	Base Point 1		
P29.16	Target Point 1		
P29.37	POS Feedback Mode	[1]Integral FCK	

1000r/min 4096 50Hz

=1000*4096/50=81920 P29.3=81.92

8.

8.1

W01	SYS_NOT_RDY	(Ready)	P1.1 -500
W02	NO_DRV_ENABLE	[ ]	P3
W03	LOCAL_EM	[ ]	P3
W04	REMOTE_EM	[ ]	P3
W09	DP P/B ALARM	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

8.2

[E114]	MOP	P7.59
[E115]	OS	P7.19 P7.19
[E118]	PG ERROR	P20.14 P20.15
[E119]	SPEED ABNORMAL	P20.14 P20.15 P7.31 P7.32
[E138]	TEMP_SENSING FAIL	
[E162]	1 CAN SLV1_CAN_ERR	1
[E167]	CAN CAN_ERR	
[E180]	DP P/B ERROR	
[E181]	DP P/B_EM	CW0.4
[E200]	LOCAL_EM	[ ] P3
[E201]	REMOTE_EM	[ ] P3
[E202]	Modbus MODBUS EMERGENCY	Modbus CW0.4
[E203]	DRIVE DISABLED	DP
[E210]	Panel Error	
[E220]	CRC MEMORY CRC ERR	
[E221]	PARAMETER ERROR	

9.



1.

2.

3.

4.



1. CMOS

2.

3.

9.1

9.2

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

9

9.3

PCB		

9.4

5

5

1 40

2 80%

3 24 /

9.5

1

2

5

9