



1	.....	1
1.1	.....	1
1.2	.....	1
1.3	.....	2
2	.....	3
2.1	.....	3
2.2	.....	3
2.3	.....	3
2.4	.....	3
2.5	.....	3
2.6	.....	4
2.7	.....	4
2.8	.....	4
2.9	.....	4
2.10	.....	4
2.11	.....	4
3	.....	5
3.1	.....	5
3.2	.....	6
3.3	.....	8
3.4	.....	9
3.5	RS-232	10
3.6	.....	10
3.7	.....	11
4	.....	13
4.1	.....	13
4.2	.....	15
5	.....	20
5.1	.....	20
5.2	.....	21
	.....	23
1	.....	23
2	.....	24

1

1.1

DTU

12kV

/



1.2

-
-
-
-
-
-

“ ”

1.3

➤	≤1000			
➤	- 40	~ + 70	20	30
➤		0.3g	0.15g	
1.67				
➤	25			
➤	0.1W/cm ² (	0.5m/s)		
➤	≤25m/s			
➤	10mm			
➤				

2

2.1

- AC220V
- 50Hz
- -20%~+20%
- -5%~+5%
- 10%
- 20W

50VA

2.2

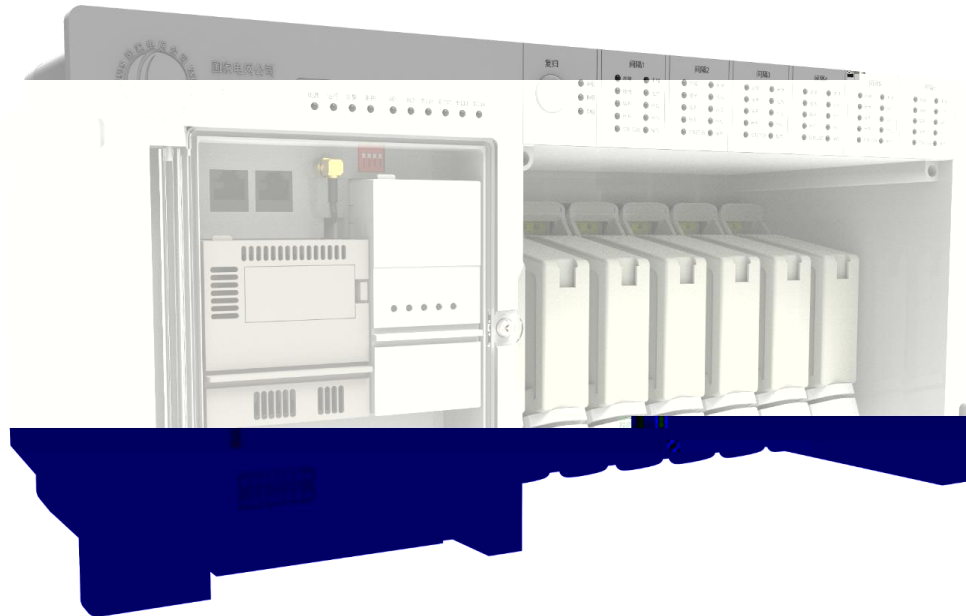
- 5A 1A
- AC57.7V 220V
- AC100V
-

3

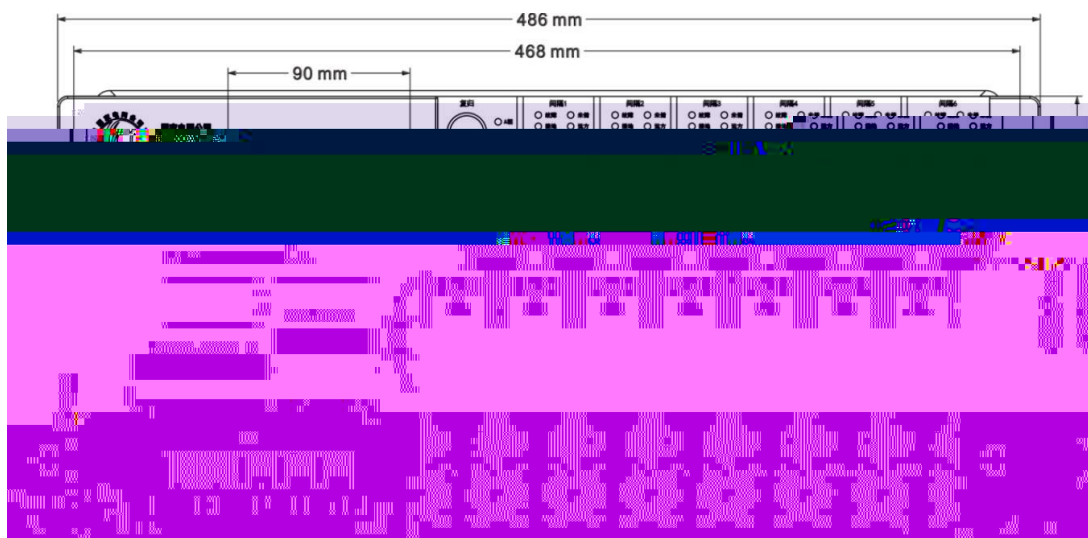
3.1

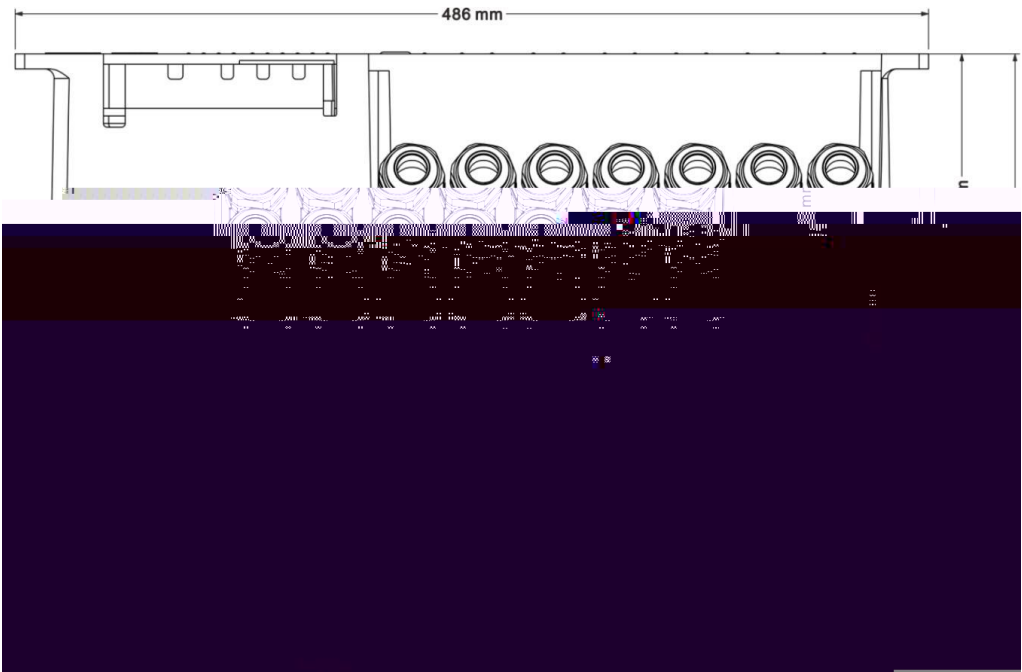
3-1

449mm/215.5mm/283mm



3-1





3-2

				1 RJ45	
2 RJ45	FA	3 RJ45	RJ45		
RJ45	4	DIP	12	3.81	

3.2

3.2.1

3.2.1.1



3-3

1s

- 1
- 2 FA
- 1
- 2

3
4

3.2.1.2



3-4

- | | |
|---|---|
| A | A |
| B | B |
| C | C |

3.2.1.3



3-5

3.2.2

PWR

WWAN

4G

/

4Hz

4G

4G

/

2G

2G

3G

3G

2G 3G

4G

2G

3G

3.2.3

PWR

T/R

NET

/

4Hz

/

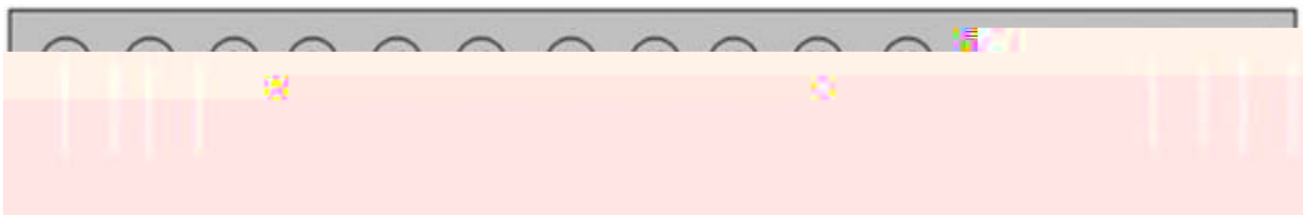
/

3.3

 2×15

3-6

3-1



3-6

3-1

1	GND		
2	GND		
3	VCC4V		4V
4	VCC4V		
5	DCE_TXD		
6	DCE_RXD		
7	DCE_RTS		
8	DCE_CTS		
9	CARD_IN		
10	USB+	/	
11	USB-	/	
12	PCTRL		
13	GND		
14	/RST		

15	ON/OFF		
16	STATE0		
17	STATE1		
18	STATE2		
19	SDA	/	
20	SCL		
21	/LED_ACT		
22	/LED_LINK		
23	TD2+		
24	TD2-		
25	RD2+		
26	RD2-		
27	VCC3V3		3.3V
28	VCC3V3		
29	GND		
30	GND		

3.4

2×11

3-7

3-2



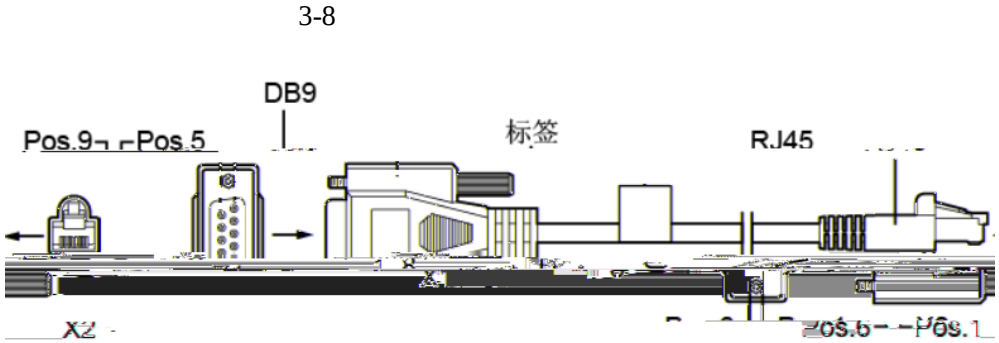
3-7

3-2

1	SDA	/	12C SDA /
2	SCL		12C SCL
3	GND		

12	DCE_CTS		
13	DCE_TXD		
14	DCE_RXD		
15	/RST		
16	CARD_IN		
17	TD+		
18	TD-		
19	RD+		
20	RD-		
21	GND		
22	GND		

3.5
RS-232



3-8
3-3

X1(RJ45)			X2(DB9)
3	TXD	→	2
4	GND	—	5
5	GND	—	5
6	RXD	←	3
1 TXD RXD RXD TXD 2			

3.6

1	P		RJ45
2	Q		
3	NC		
4	NC		

5	NC		
6	NC		
7	S		
8	COM		

3-5

1	2	3	4		
OFF	OFF	OFF	OFF		
ON	OFF	OFF	OFF	1	
OFF	ON	OFF	OFF	2	
ON	ON	OFF	OFF	3	
OFF	OFF	ON	OFF	4	
ON	OFF	ON	OFF	5	
OFF	ON	ON	OFF	6	

3.7

3-6

7	/	C +	21	BY	
8	/	C -	22	BY	
9	/	+	23	+	
10	/	-	24	-	
11	Ua	A /	25	BY	
12	Ub	B /	26	BY	
13	BY		27		
14	BY				

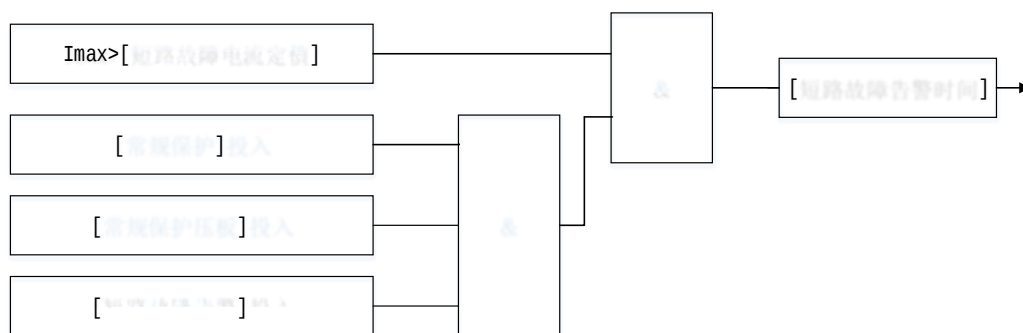
4

4.1

“ ” “ ”

4.1.1

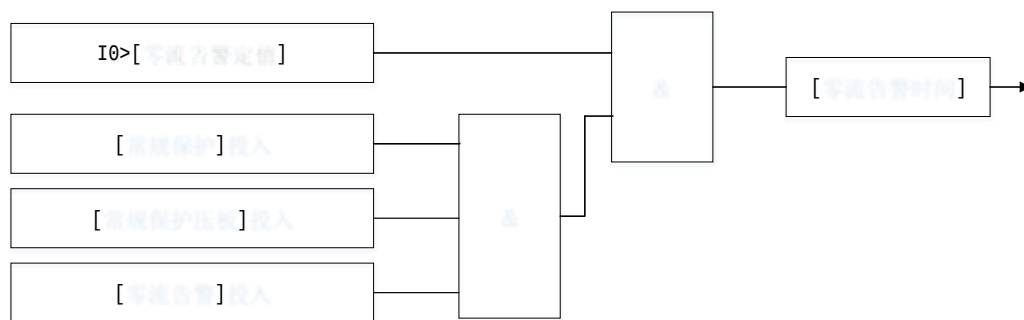
[] I_{max} [] []



4-1

4.1.2

[] [] []

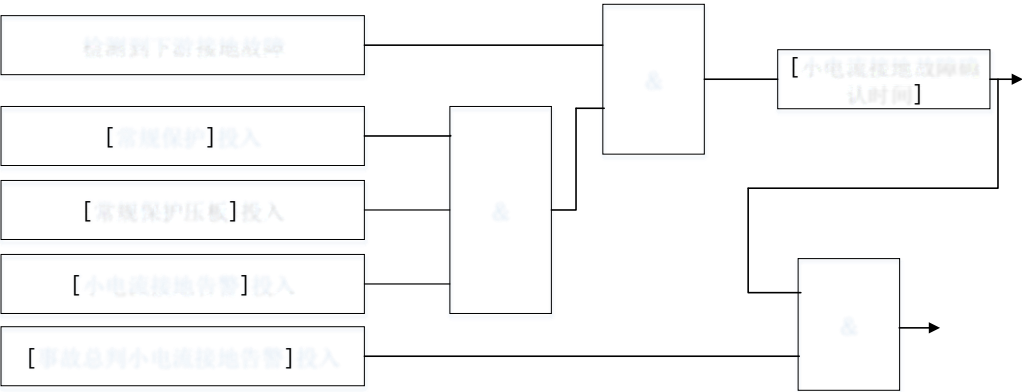


4-2

4.1.3

[] []

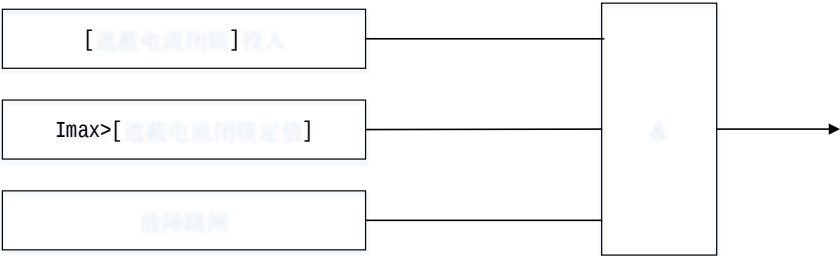
[] 0 1



4-3

4.1.4

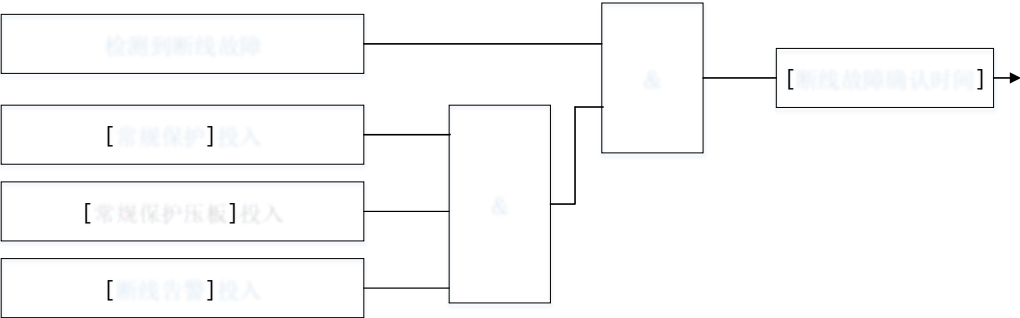
[] Imax []



4-4

4.1.5

[]



4-5

4.1.6

4-1

1		0 1	

2		$0.04I_n \sim 10I_n$	A
3		0 30	s
4		0 1	
5		$0.02I_n \sim 10I_n$	A
6		0 30	s
7		0 1	
8		$0.0I_n \sim 10I_n$	A
9		0 1	
10		0 30	s
11		0 1	
12		0 1	
13		0 30	s

4.2

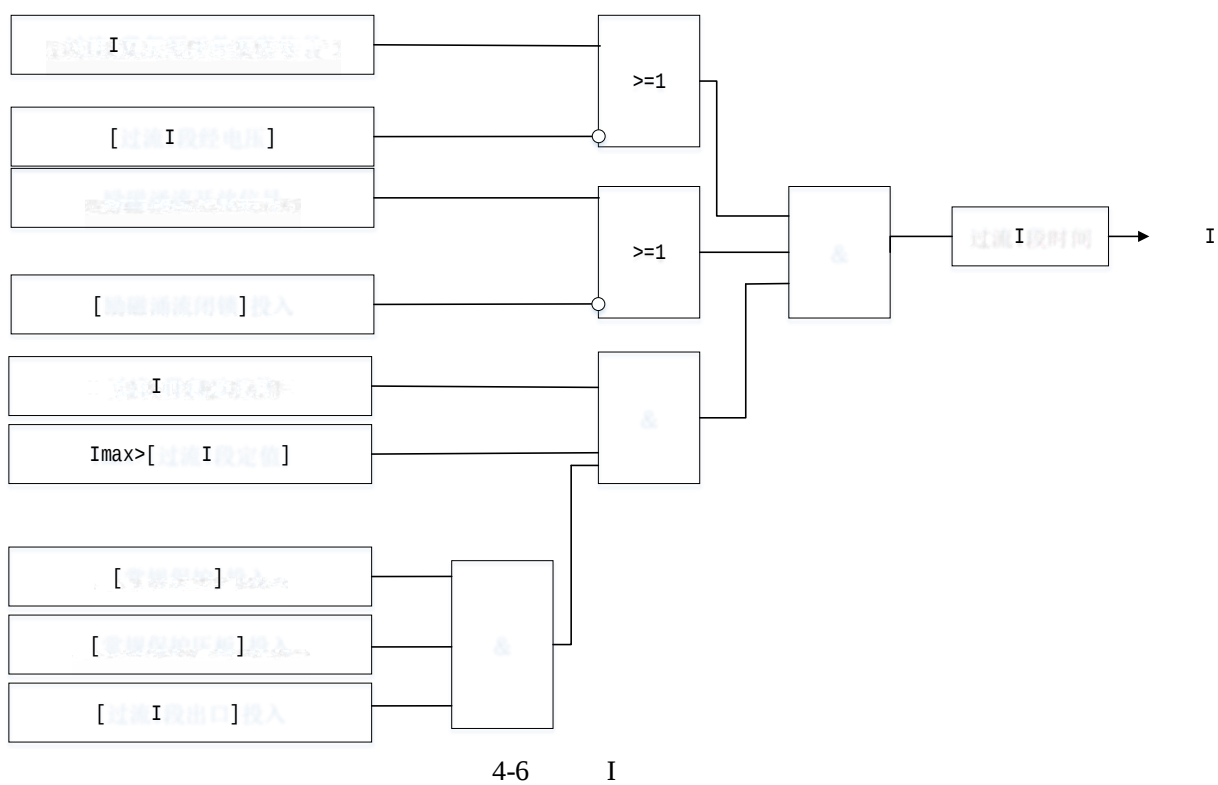
“ ” “ ”

4.2.1 I

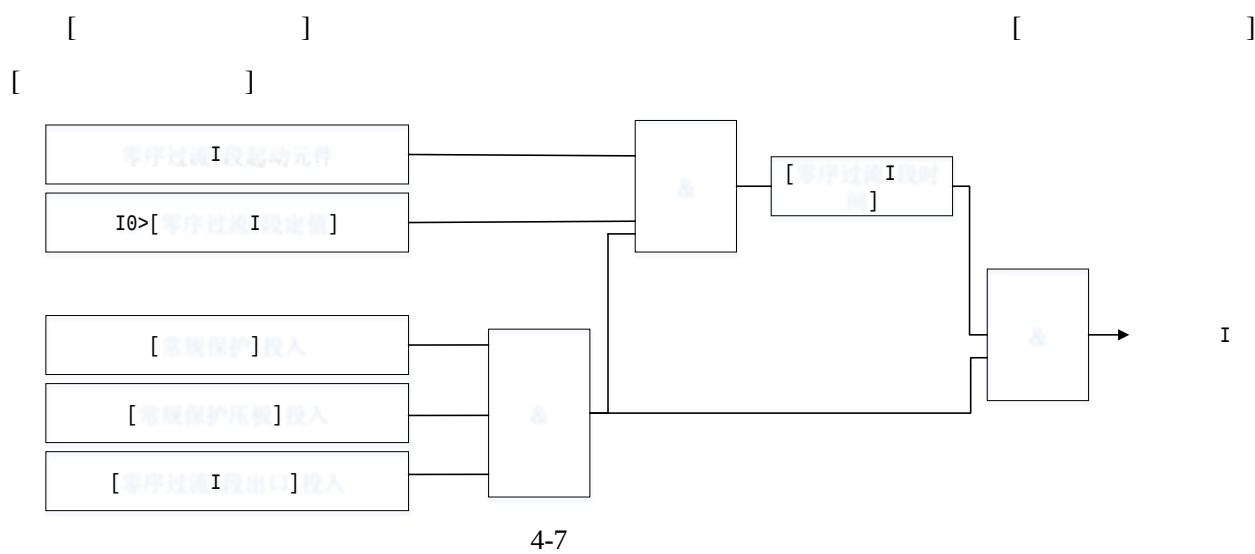
$I_{d2} > K_{xb} \cdot I_d$

I_{d2} I_d K_{xb}

$$\left[\begin{matrix} I \\ I \end{matrix} \right] \quad I \quad I_{max} \quad \left[\begin{matrix} I \\ I \end{matrix} \right]$$

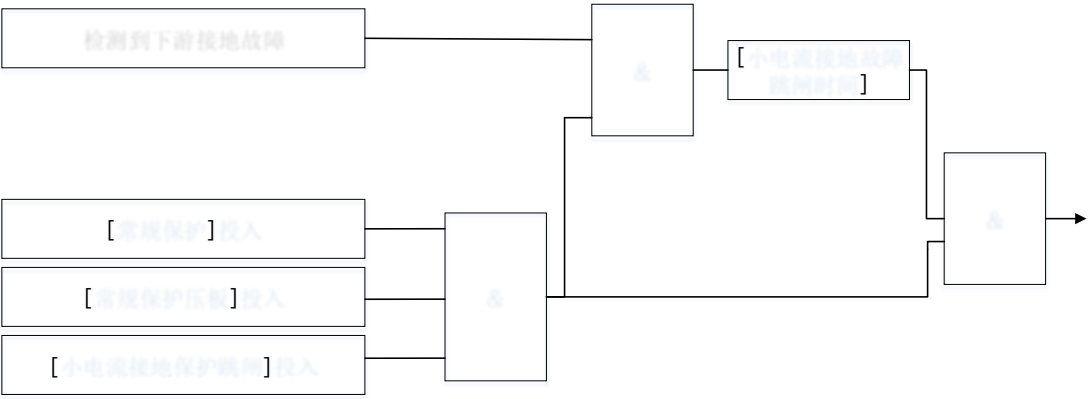


4.2.2 I



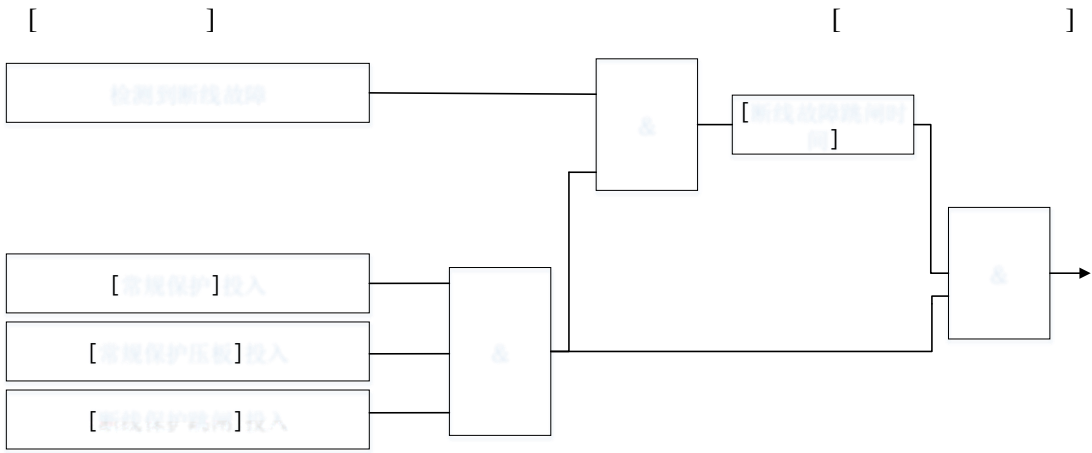
4.2.3

[] []



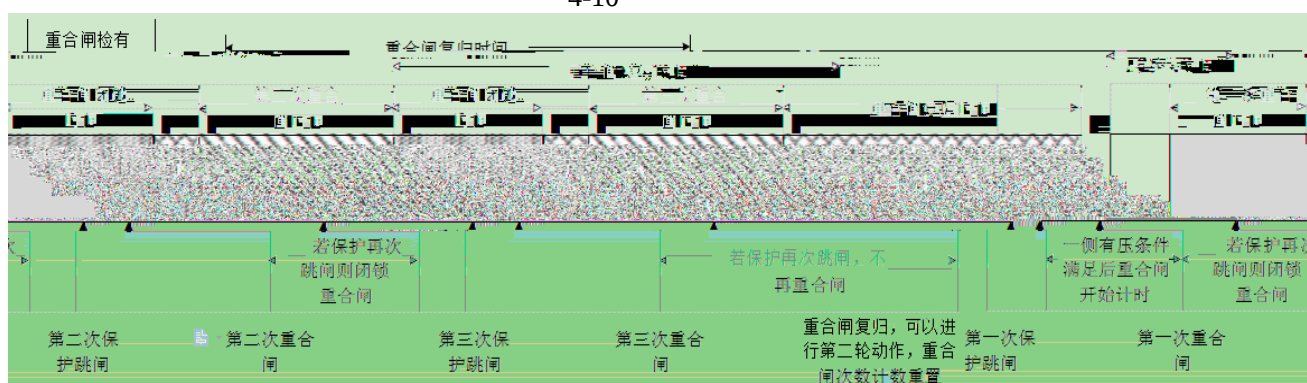
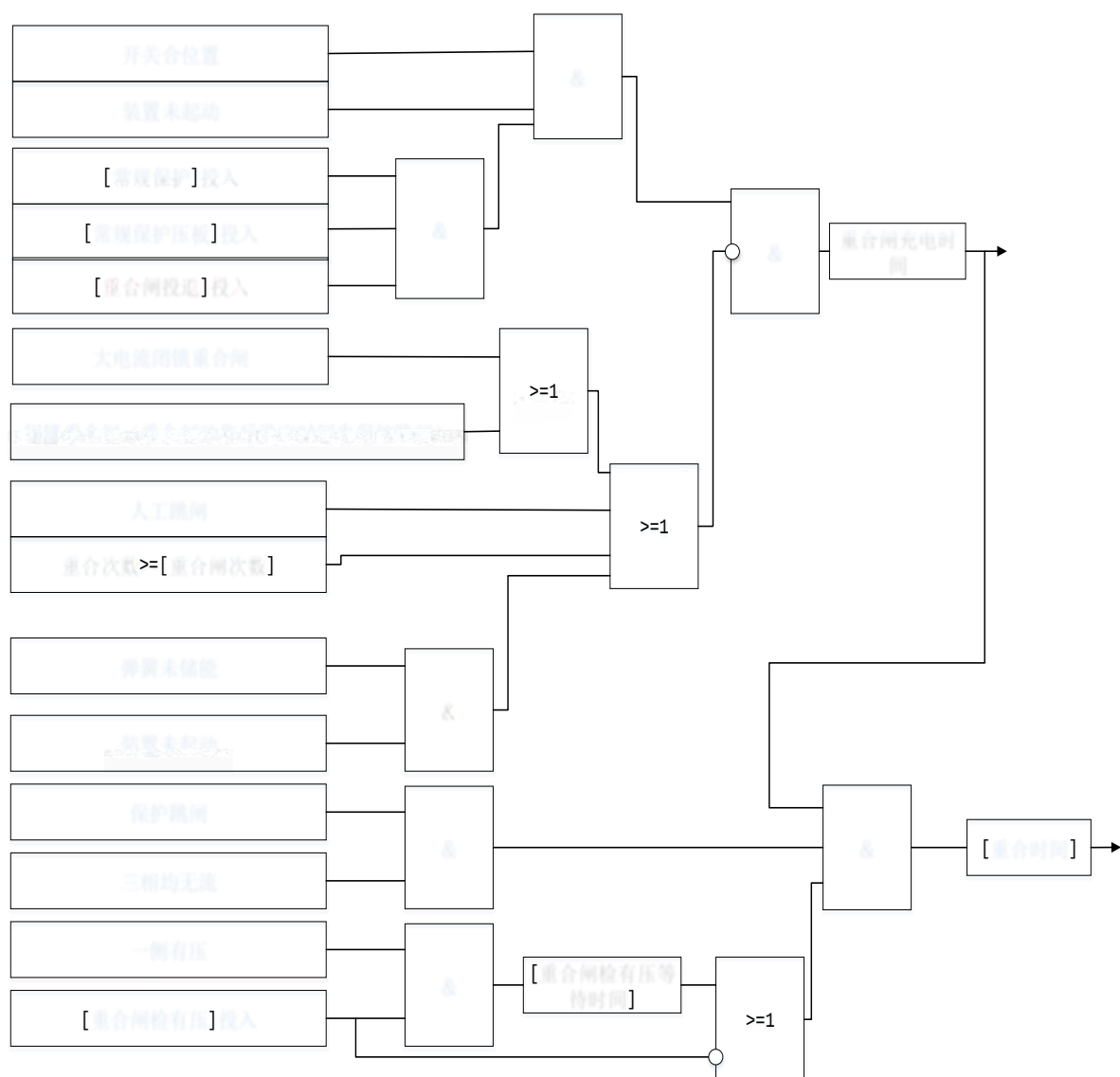
4-8

4.2.4



4-9

4.2.5


$$[\quad]$$
$$[\quad]$$

$$\left[\begin{array}{c} \vdots \\ \vdots \\ \vdots \end{array} \right] \quad \left[\begin{array}{c} \vdots \\ \vdots \\ \vdots \end{array} \right]$$
$$[\quad]$$


4-2

1		0 1	
2		0.04In 10In	A

3		0 30	s
4		0.1 0.35	
5		0 1	
6		0 1	
7		0.04In 10In	A
8		0 30	s
9		0 1	
10		0.04In 10In	A
11		0 30	s
12		0 1	
13		0.04In 10In	A
14		0 30	s
15		0 1	
16		0.04In 10In	A
17		0 30	s
18		0 1	
19		0 30	s
20		0 1	
21		0 30	s
22		0 1	
23		1 2 3	
24		0 120	s
25		0 120	s
26		0 120	s
27		0 360	s
28		0 60	s
29		0 1	
30		0.04In 10In	A
31		0 1	
32		0 60	s
33		0 1	
34		0.04In 10In	A
35		0 1	
36		0 60	s
37		0.04In 10In	A
38		0 1	
39		0.04In 10In	A
40		0 1	
41		0 100	V

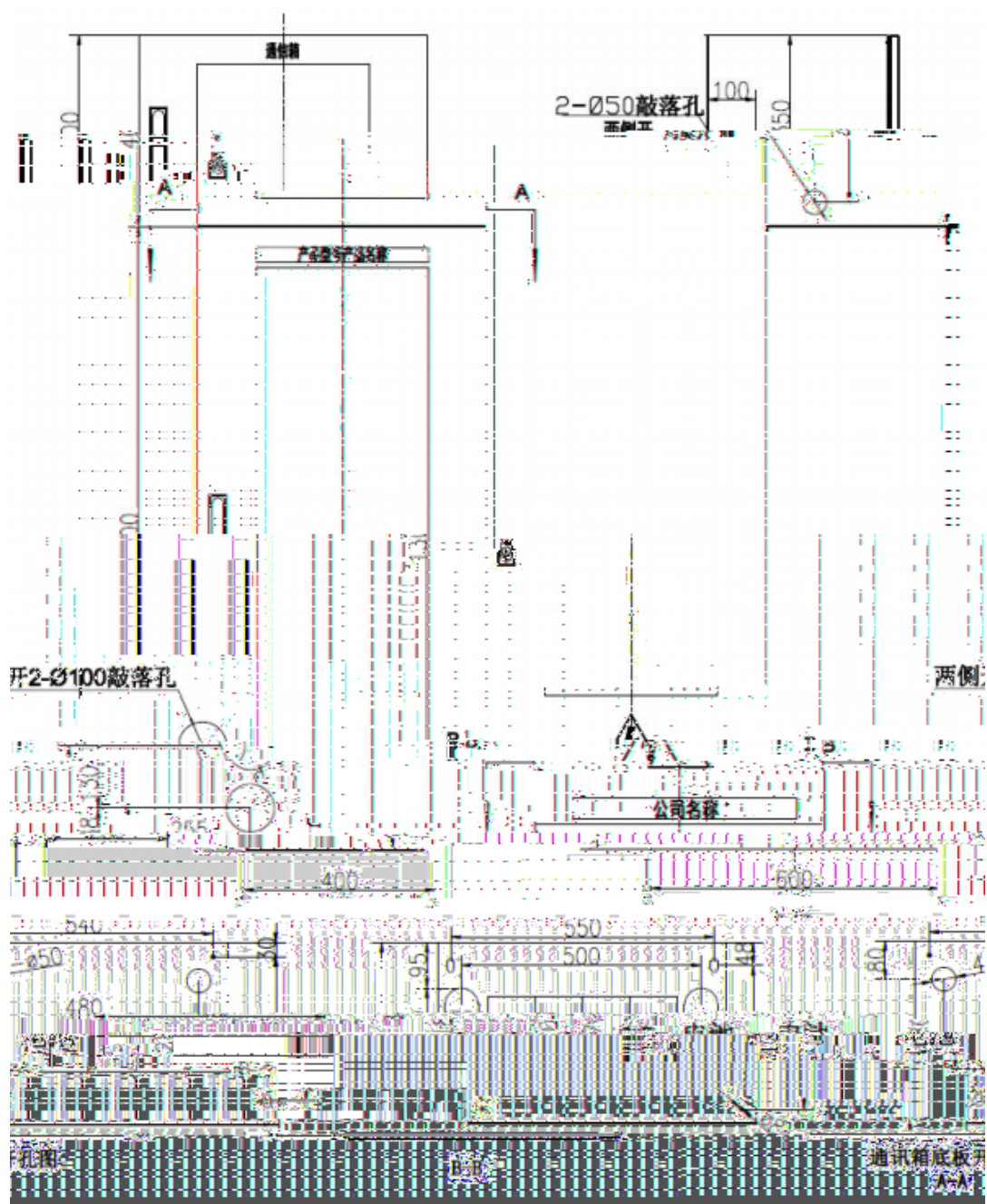
5

5.1

1700mm*600mm*400mm

1300mm*600mm*400mm

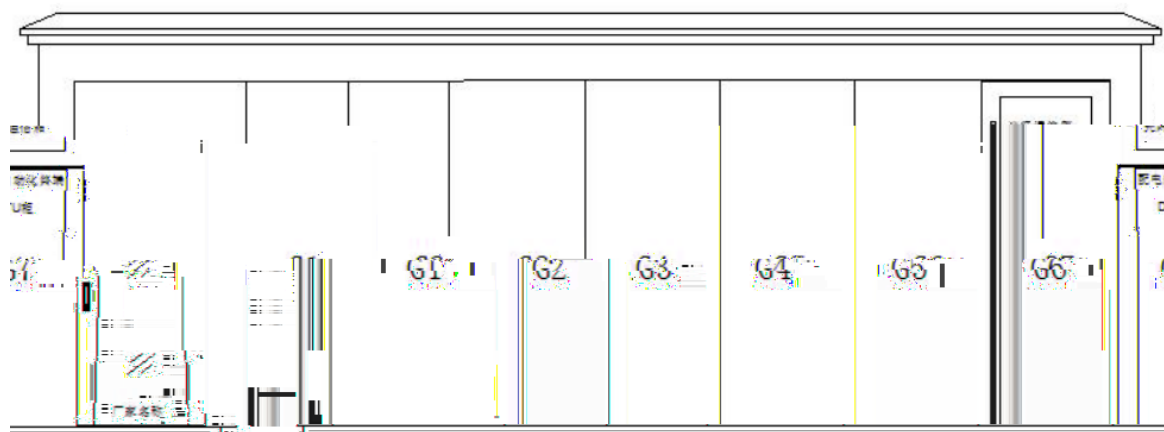
5-1



5-1

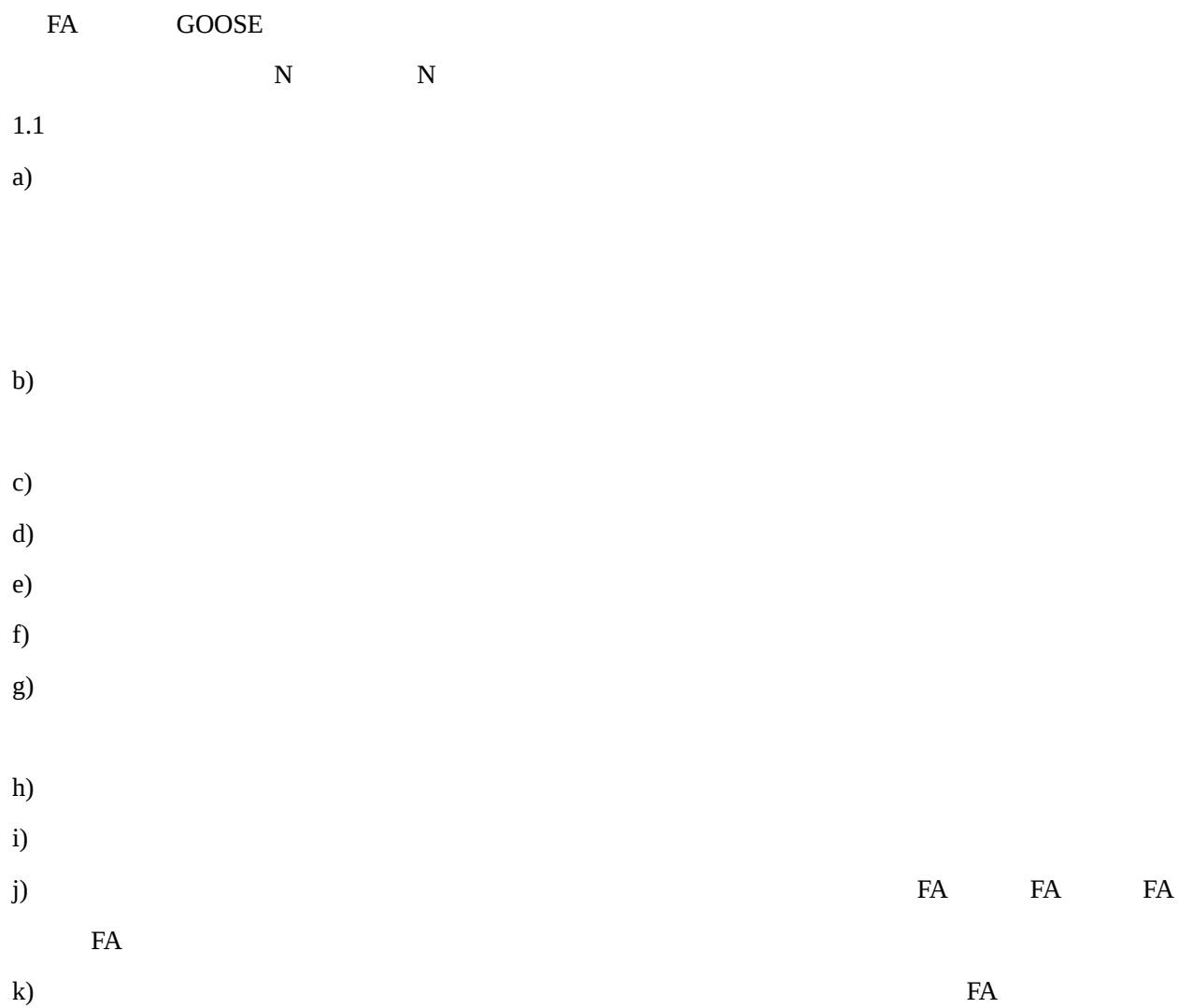
5.2

5-2



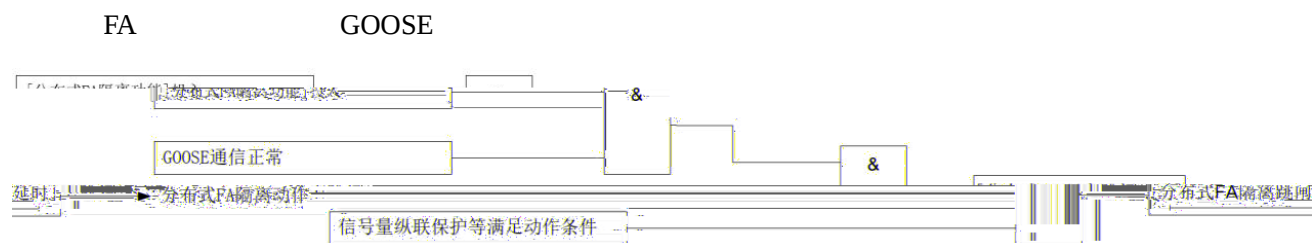
5-2

1



2

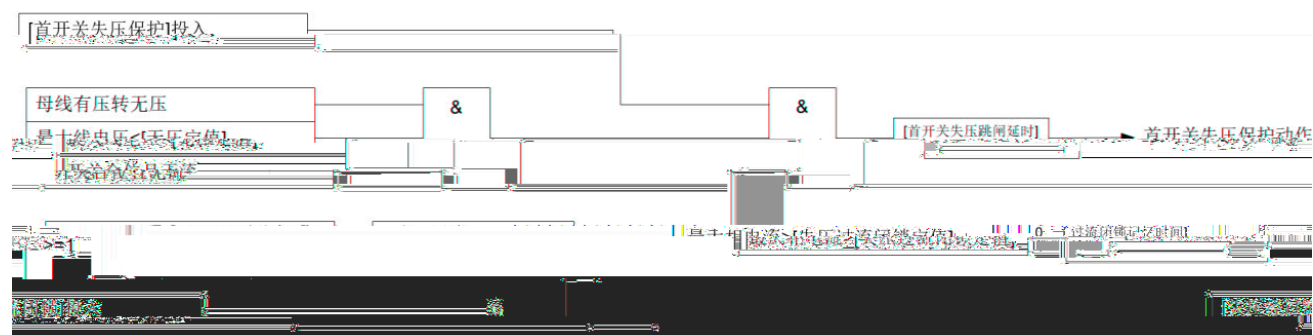
a) FA



b) FA



c)



d)

