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
-

- 0 <40ms
  0 < ±1%
- ± 2.5 %

2.6

- $\geq 10^5$

2.7

- DC24V
- 2ms

2.8

- IV
- IV
  IV
- IV
  /
- IV
- IV
- 5kV
- IV

2.9

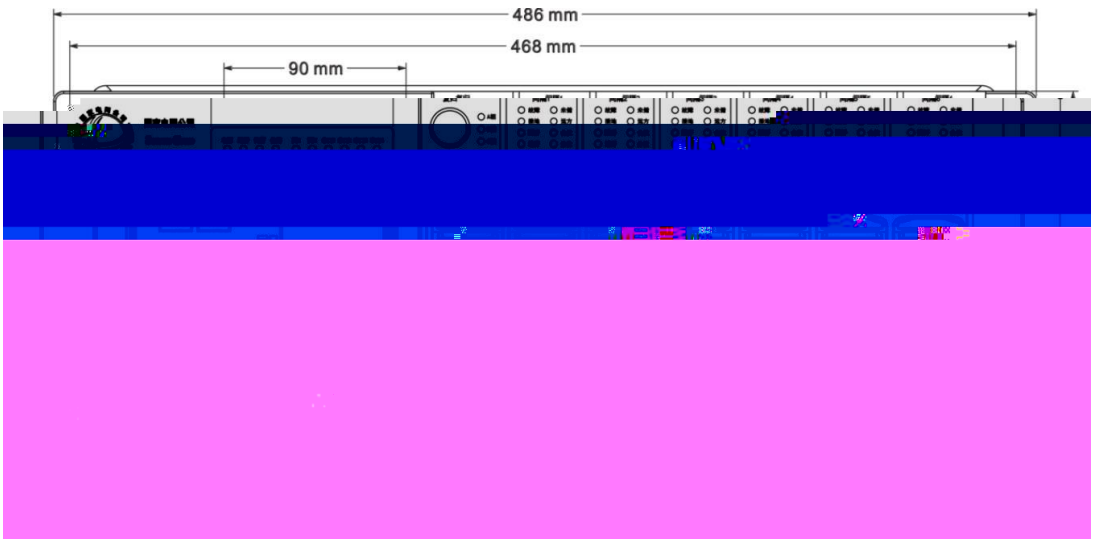
- RS-232 100M
- DL/T 634.5101-2002 DL/T 634.5104-2009 MODBUS
- 1200 bps ~9600 bps 10/100Mbps
-

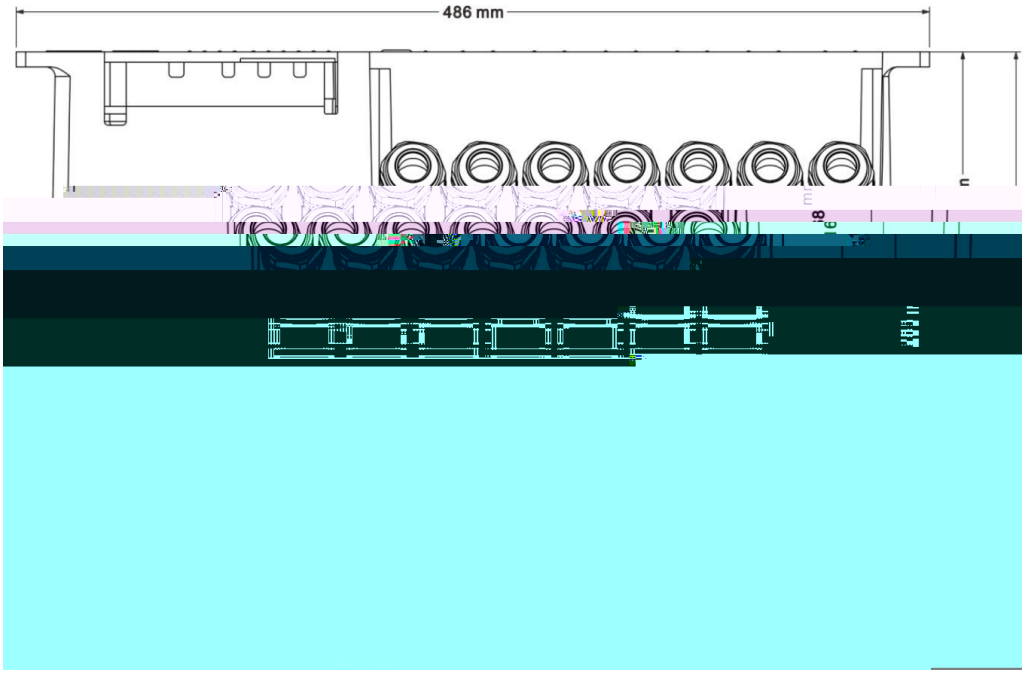
3

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

1

/

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

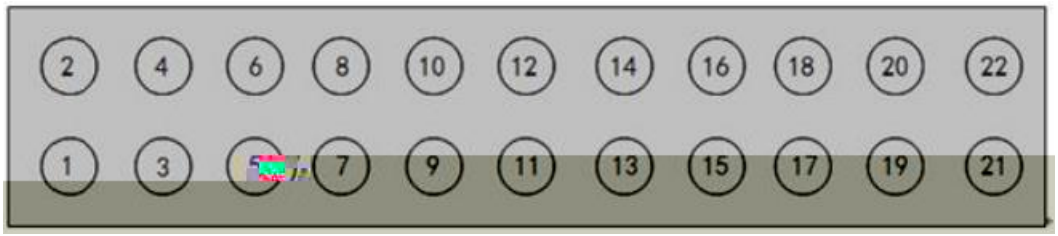
1	GND		
2	GND		
3	VCC4V		4V
4	VCC4V		
5	DCE_TXD		
6	DCE_RXD		
7	DCE_RTS		
8	DCE_CTS		
9	CARD_IN		
10	USB+	/	
11	USB-	/	
12	PCTRL		
13	GND		
14	/RST		

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

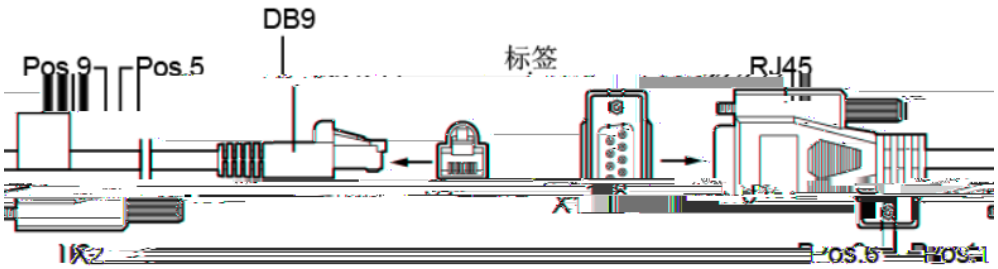
3-2

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



3-8

3-3

3-3

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

3.6

3-4

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				

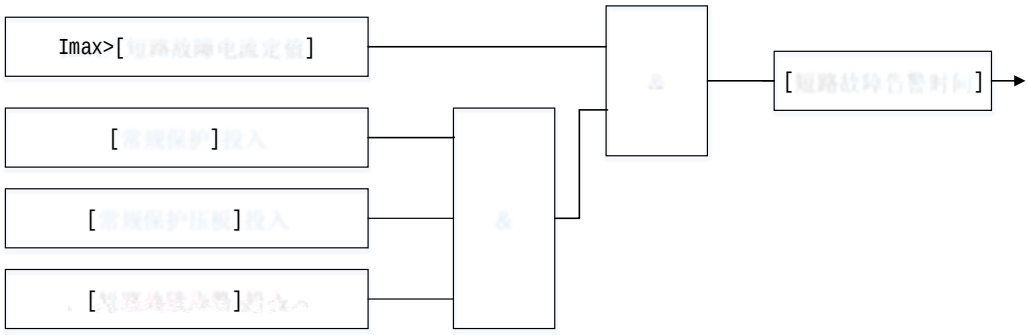
4

4.1

“ ” “ ”

4.1.1

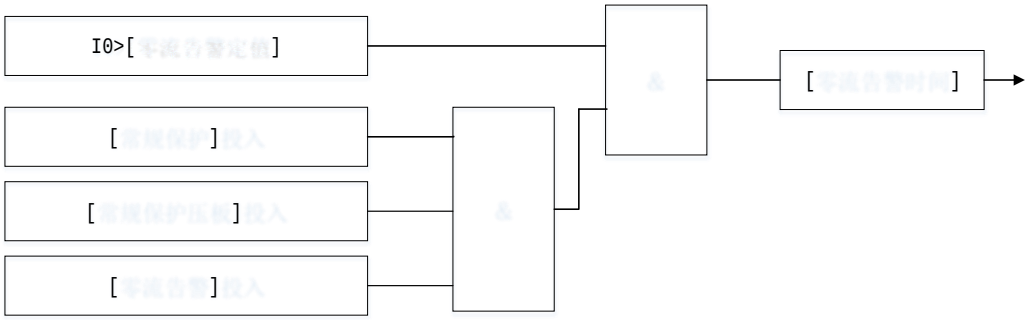
[ ] Imax [ ] [ ]



4-1

4.1.2

[ ] [ ] [ ]

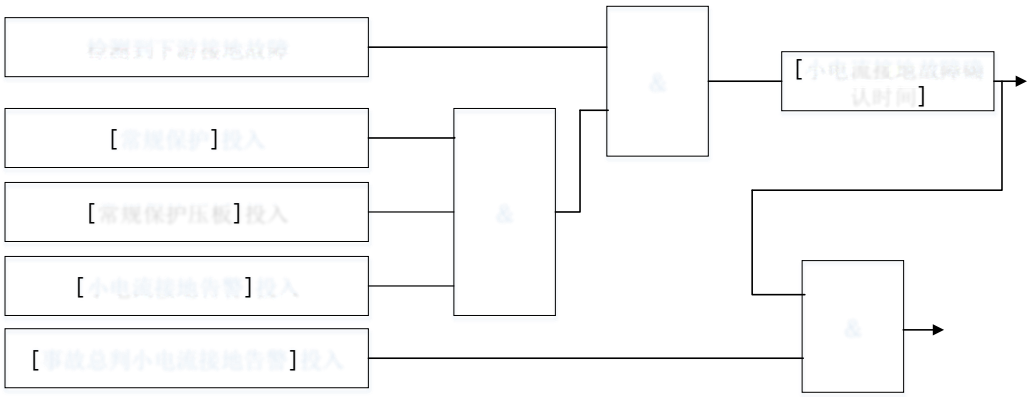


4-2

4.1.3

[ ] [ ]

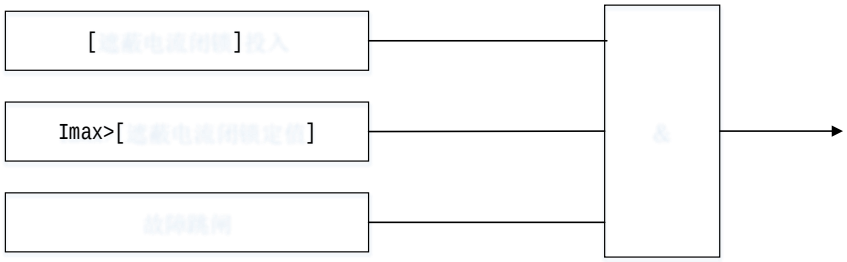
[ ] 0 1



4-3

4.1.4

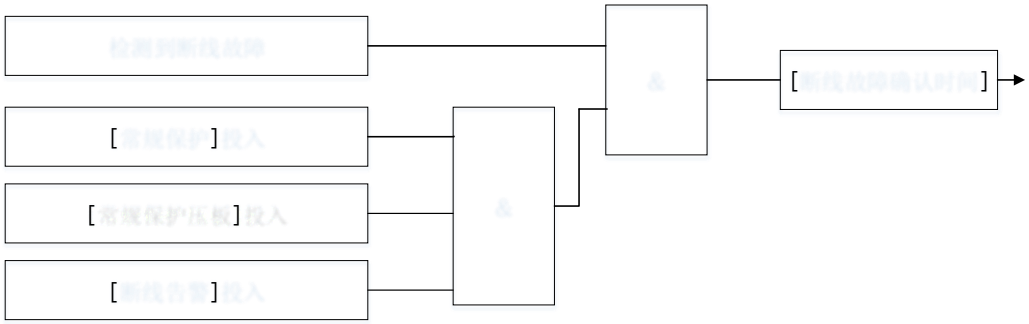
[ ] Imax [ ]



4-4

4.1.5

[ ]



4-5

4.1.6

4-1

1		0 1	

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

4.2

“ ” “ ”

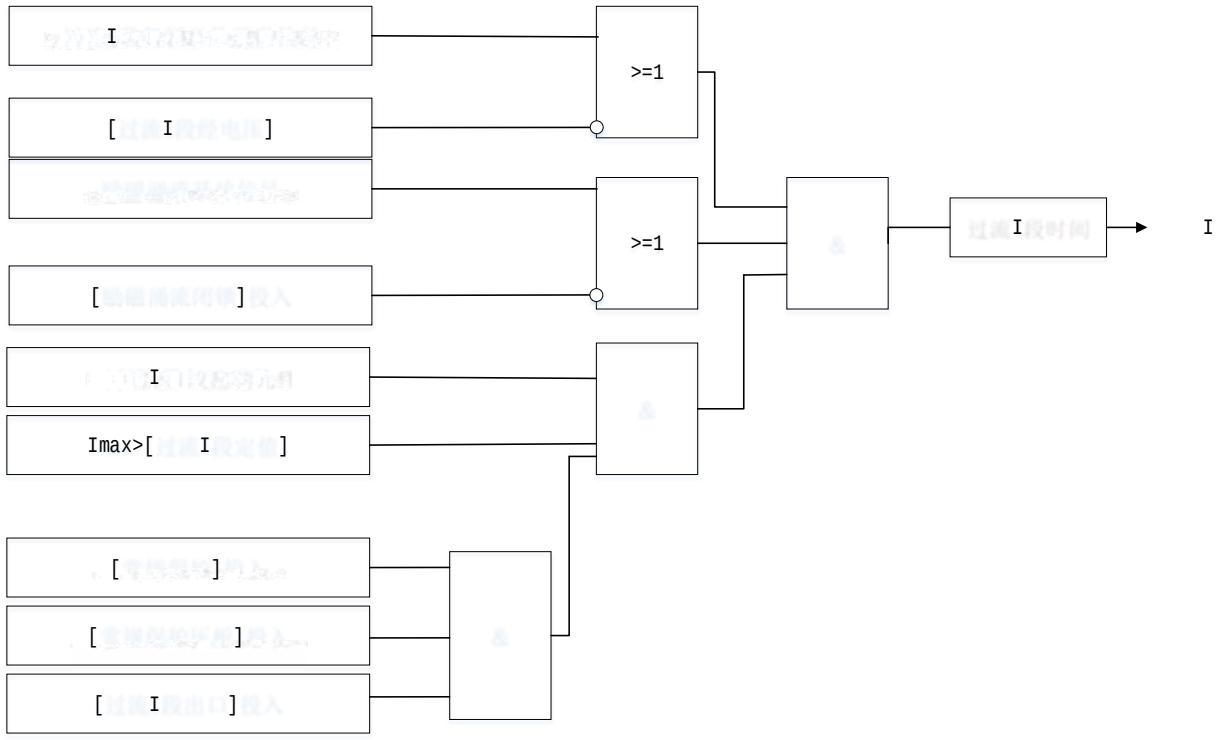
4.2.1 I

Id2 >Kxb · Id

Id2 Id Kxb

[I] I Imax [I]

[I]

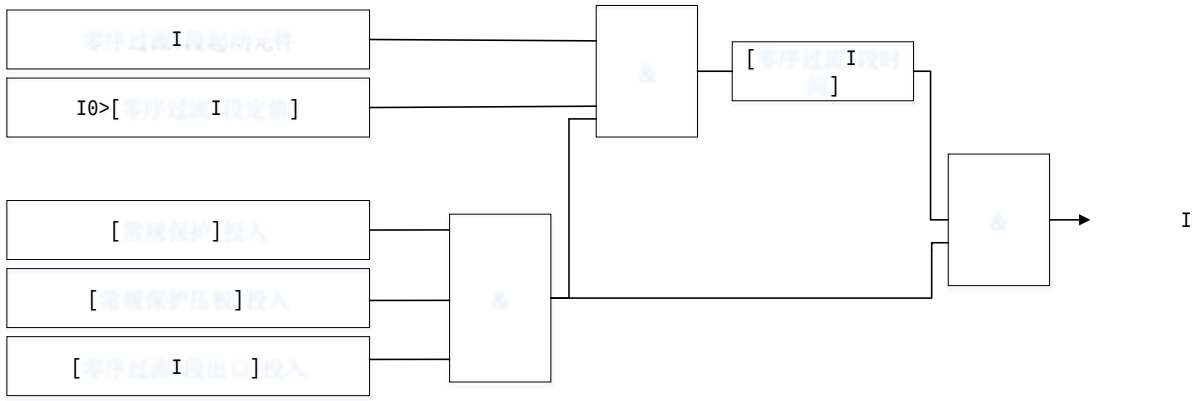


4-6 I

4.2.2 I

[ ] [ ]

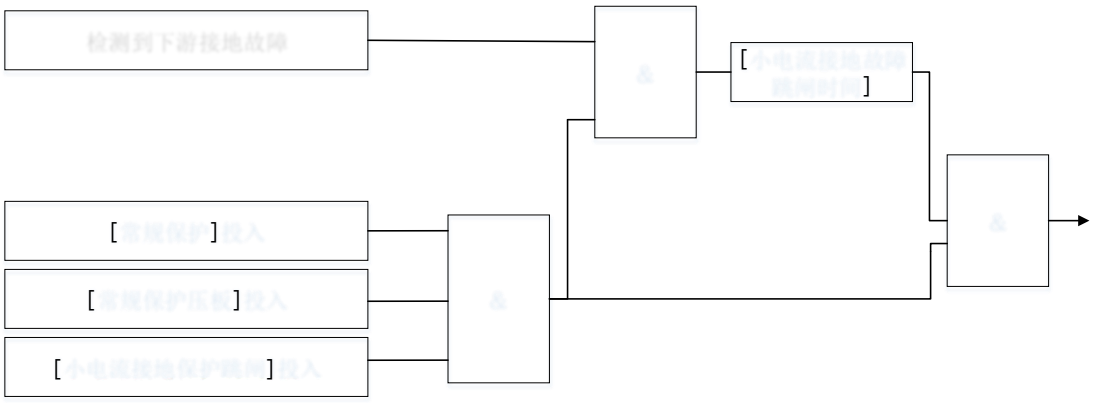
[ ]



4-7

4.2.3

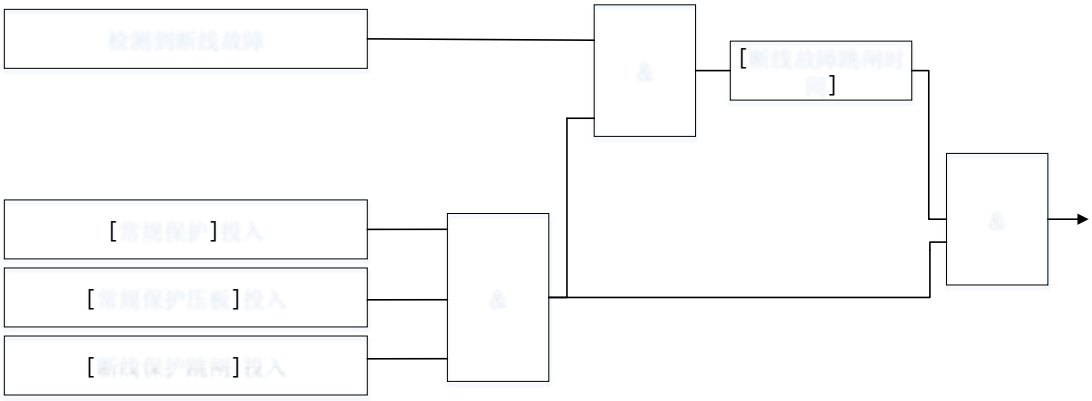
[ ] [ ]



4-8

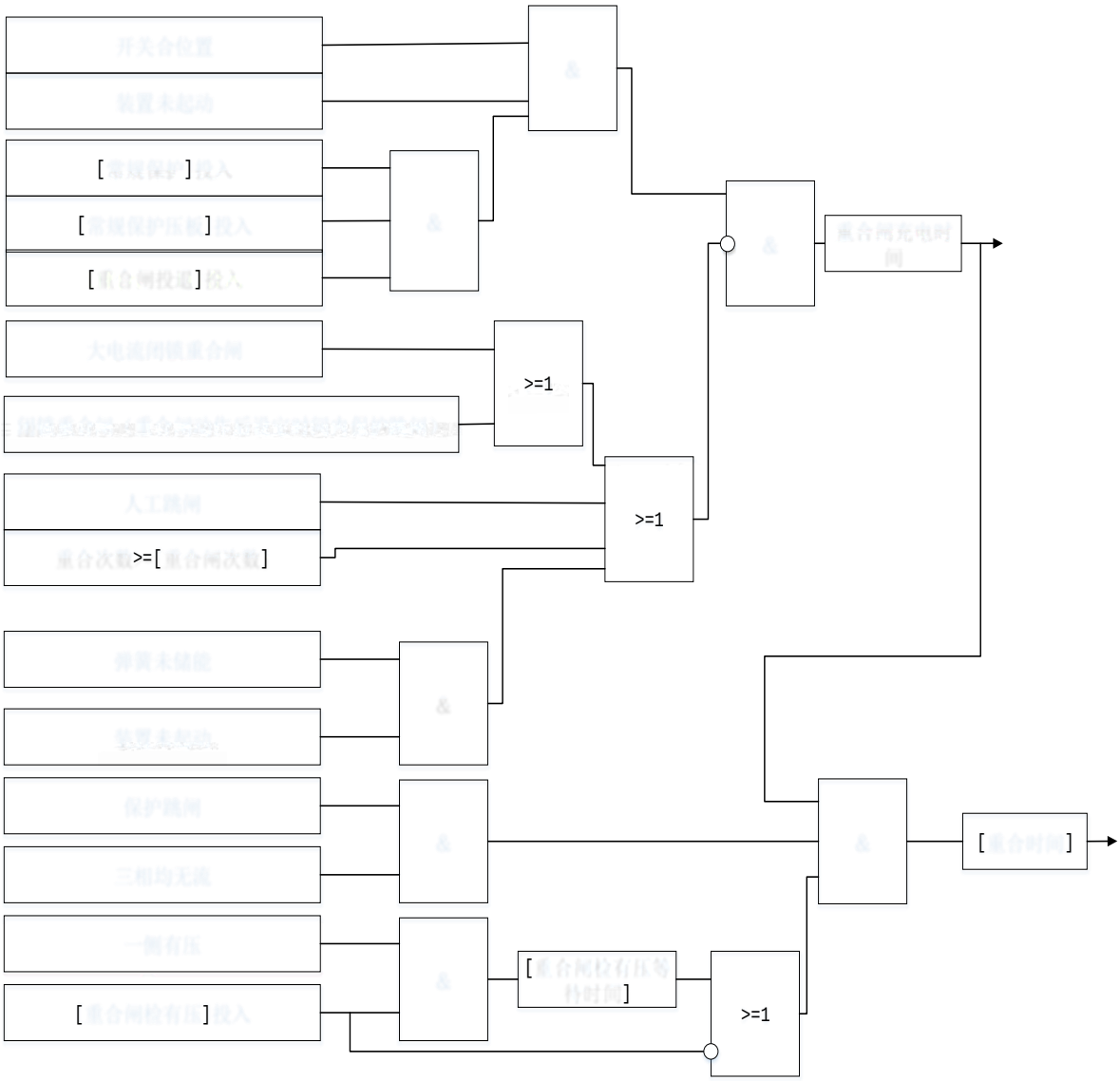
4.2.4

[ ] [ ]

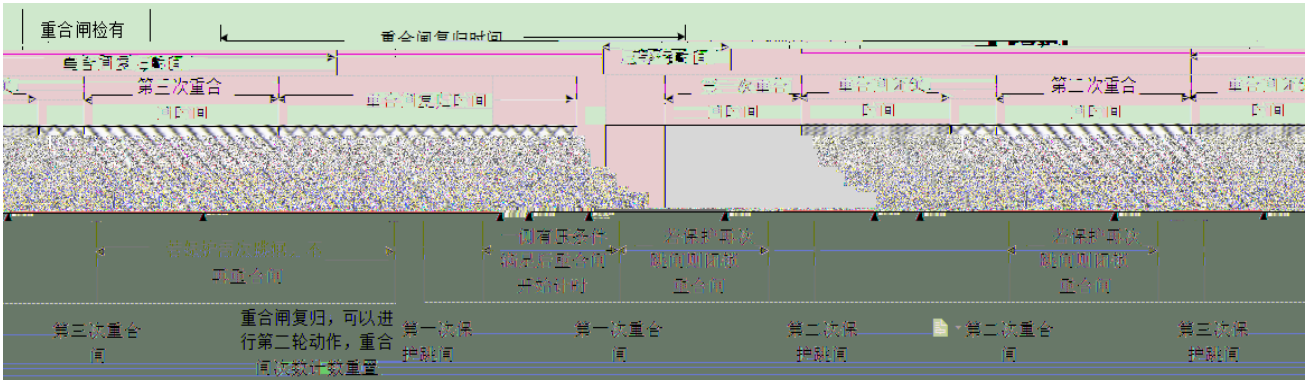


4-9

4.2.5



4-10



4-11

[ ] 3

[ ]

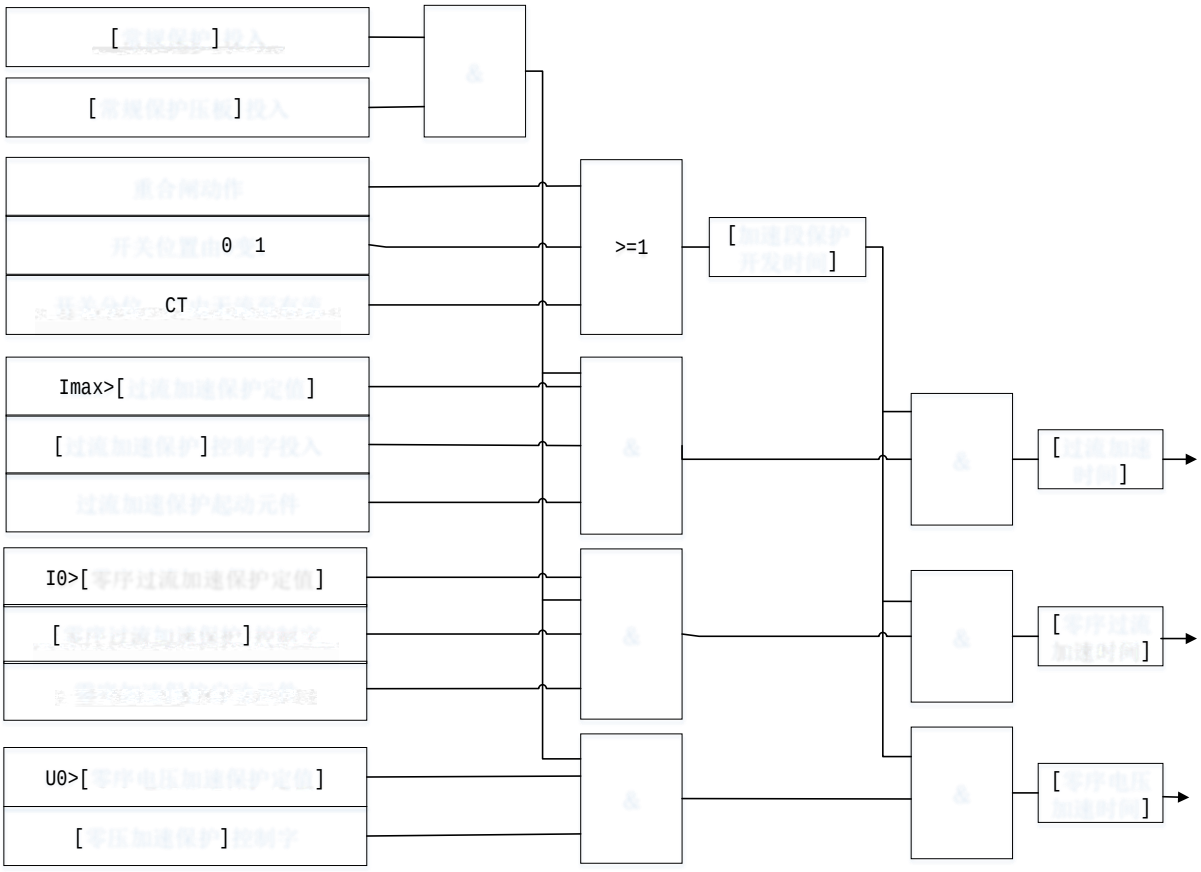
[ ]

[ ] [ ]

[ ] [ ]

4.2.6

[ ]



4-12

4.2.7

4-2

1		0 1	
2		0.04In 10In	A

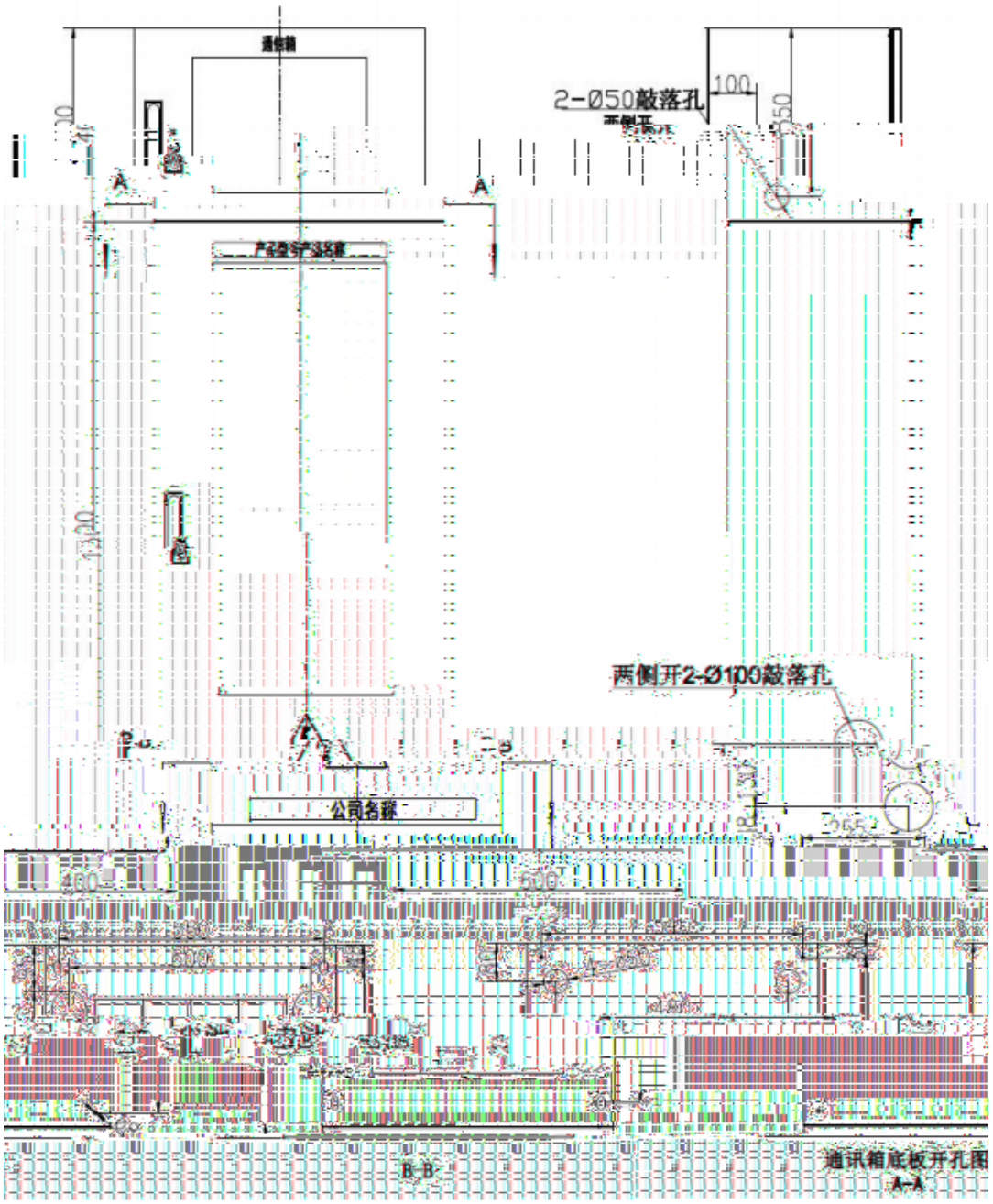
3		0 30	s
4		0.1 0.35	
5		0 1	
6		0 1	
7		0.04In 10In	A
8		0 30	s
9		0 1	
10		0.04In 10In	A
11		0 30	s
12		0 1	
13		0.04In 10In	A
14		0 30	s
15		0 1	
16		0.04In 10In	A
17		0 30	s
18		0 1	
19		0 30	s
20		0 1	
21		0 30	s
22		0 1	
23		1 2 3	
24		0 120	s
25		0 120	s
26		0 120	s
27		0 360	s
28		0 60	s
29		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

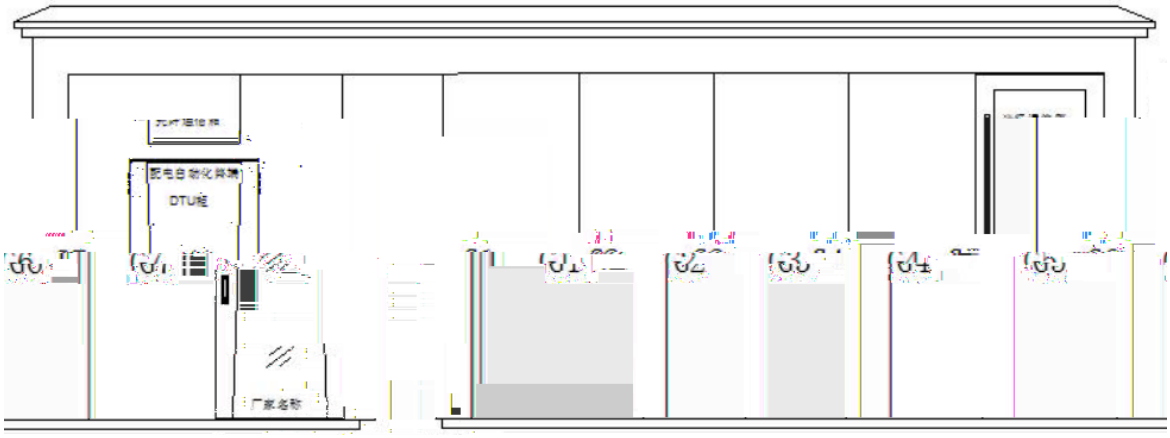
5-1



5-1

5.2

5-2



5-2

1

FA GOOSE

N N

1.1

a)

b)

c)

d)

e)

f)

g)

h)

i)

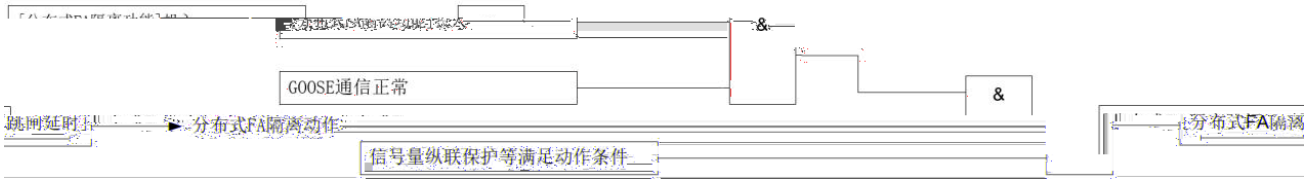
j) FA FA FA FA

k) FA

2

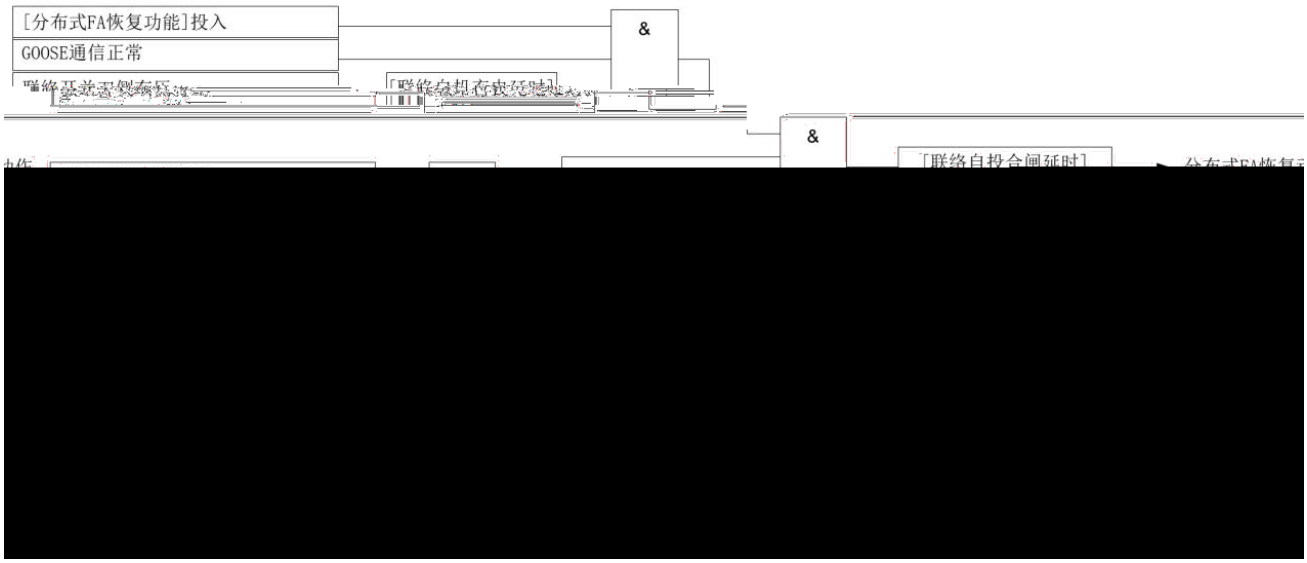
a) FA

FA GOOSE

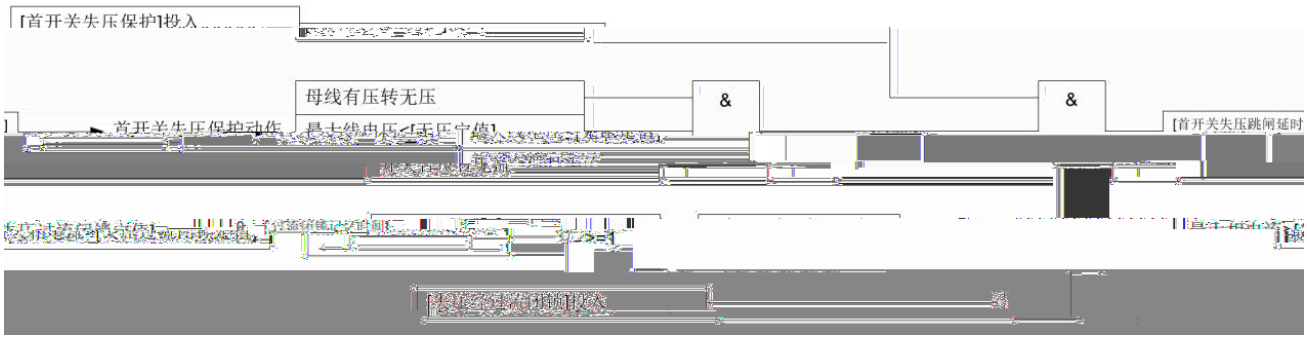


b) FA

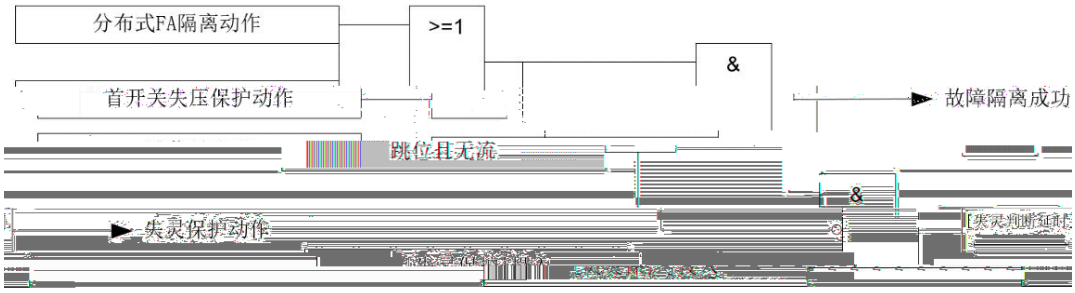
FA



c)



d)


分布式FA隔离动作
>=1
首开关失压保护动作
&
故障隔离成功
跳位且无流
&
失灵保护动作