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1

PLC
PLC

FX2N PLC

PLC

2 Abstract

The elevator has a broad application in the national economy and life. Elevator has become one of the important transport equipment. From the traditional domestic elevator control relays, contactors composition. It is not only the existence of poor reliability, high cost and high failure rate and other shortcomings, but also with the number of layers increases, changes to the manufacturing and installation of wiring inconvenience. Four-elevator as the control object of the simulation and control system of elevator. Implementation of the elevator with PLC control. The subject of design tasks is controlling four elevators with programmable logic controller (PLC) and achieve all the control requirements. The subject of design thinking is the random logic control theory, according to its own elevator control law in response to random external call signal. The design analysis and discussed the whole process of program design with FX2N PLC controlled model elevator, and described three main areas: control of the system requirements, system configuration, software design. 确ey wor配s PLC control system elevator

relay contactor

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1.1

150

1854

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2600

1203

1889 12

1892

1901

1932
1951

.....170

4 1.2 1.2.1 始

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始 始 始

富 始 始

(1)

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(7)

善 噪

(8)

1.2.2

5 (1)

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(2)

(3)

Programmable Controller PC PLC 1. 2. 3 PLC

PLC

IEC 1987 PLC CAD/CAM

1968

G. M

1969

DEC

Programmable Logic Controller

		20	70		PLC
PLC					
20	80				
16	32	PLC	PLC		PLC

DCS Distributed

Control
System

PLC

- (1)
- (2)
- (3)
- (4)
- (5)

- (6)
- (7) 115V
- (8) 115V/2A
- (9)
- (10) 4K 1.2.6 PLC PLC

www.docin.com 砂嘴颞莠妹帑沫 蛆 廉转鄂鸣恢邛漾 L

7
(1)

PLC

1/10~1/100

PLC

F PLC PLC 30 PLC CPU PLC

PLC

PLC

PLC

PLC

I/O

PLC

CPU

PLC

PLC

(2)

PLC

PLC

PLC

(3)

紧急点

紧种点

紧种点

紧种点

紧种点

紧

种点

点篇点

紧种点

紧种点

(4)

紧种点

紧种点

mm

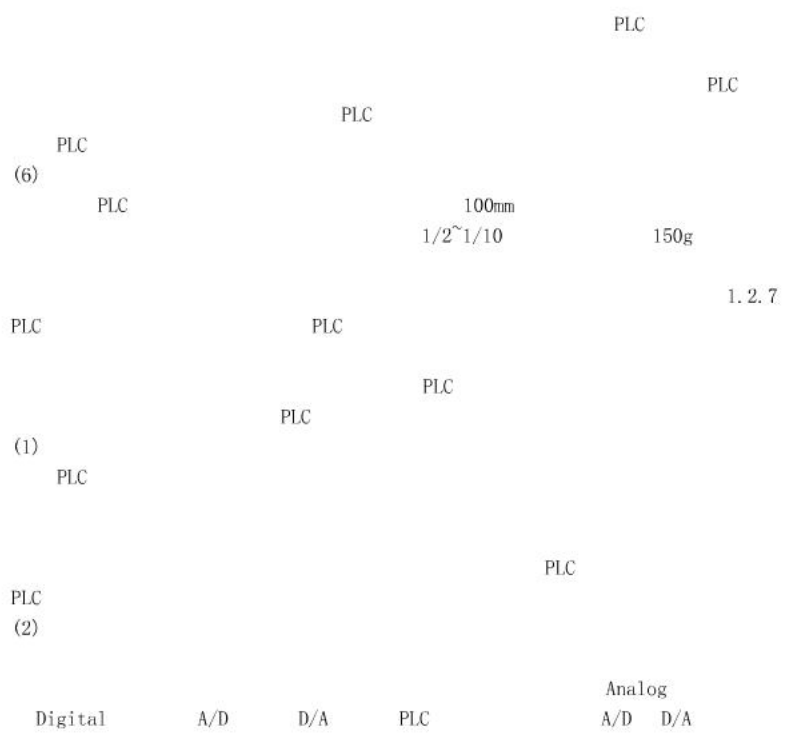
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8

(5)

紧种点

紧种点



(3)
PLC
I/O

紧种点

(4)

PLC

PID

PID

PLC
PID

PLC

(5)

PLC

www.docin.com 佼 | 豹 豈荳?
紧种点 鴨

CPU

PLC

PLC

I/O

(2)

(3) I/O

PLC

I/O

I/O

PLC

I/O

紧种点

益岸精

DI

DO

AI

AO

I/O

220VAC

110VAC

24VDC

4-20mA, 0-20mA

0-10V, 0-5V, -10-10V

12bit, 14bit, 16bit

IO

IO

I/O

I/O

CPU

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璦

10 (4)

PLC PLC

24V

220VAC 110VAC

24VDC

(5)

PLC

CPU

(6) PLC

PLC

PLC PLC
PLC

1. 2. 9 PLC

PLC

PLC

CPU

(1)

PLC

I/O

I/O

(2)

PLC

()

RAM

I/O

I/O

I/O

RAM

(3)

PLC

CPU

I/O

PLC
Diagram

1.2.10
www.docin.com
森

CPU

(1)

LD → Ladder

11

PLC

—
1-1b) 1-1a) PLC
度-度 系示点

(2) FBD → Function Block Diagram

“ ” “ ”
1-2a) 1-2b)
度-形

(3) SFC → Sequential Function Chart

1-3

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度-情
款

12 (4)

IL → Instruction List

CPU

PLC

1-4 1-2a)

(5)

ST → Structured Text

IEC

2.1 FX2N PLC 2.1.1

PLC

PLC

2.1.2
1.5m/s² 始
 $\rho_m \leq 3m/s^3$ 始

始

$am \leq$

+ ρ_m - ρ_m - ρ_m + ρ_m

2-1

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紧种点
13 形-度

鞅

4m/s

岸

0.3s 始

4-10cm

2.1.3

a

p

a p

続
14

CPU

10ms
10ms
PLC

(3)

PLC

“

始 始 始 始

始

始

柄 M—MZ=?M=J dn/dt

?M=M—MZ
90%

PI

PI

120r/min

L

Vm/s

Vm/s

-ag

ε

- ag+ ε

120r/min

mm

?. . 17 (15

PLC

LED

() 2.2

- (1)
- (2)
- (3)

- (4)
- (5)

3.1 PLC I 0 PLC
紧种点 I 0 I 0
I 0 善 噪
I 0 I 0 PLC 20 15
I 0 I 0
15 20 I 0

PLC I 0
3.2 (1) PLC

PLC

(2) I 0 I 0
6 4 I 0

(3) I 0 模 善 噪 ×10

I 0

www.docin.com 氩霏 || 哩方秉 一噎弄沫 ? 點
16

模 ×100

I 0 模 ×200 10

(4)

模 I 0 ×10 增 ×150

25 3.3

5cm 50m min PLC

60ms 3.4

5V 12V 24V 5V

10m 32 64

60%

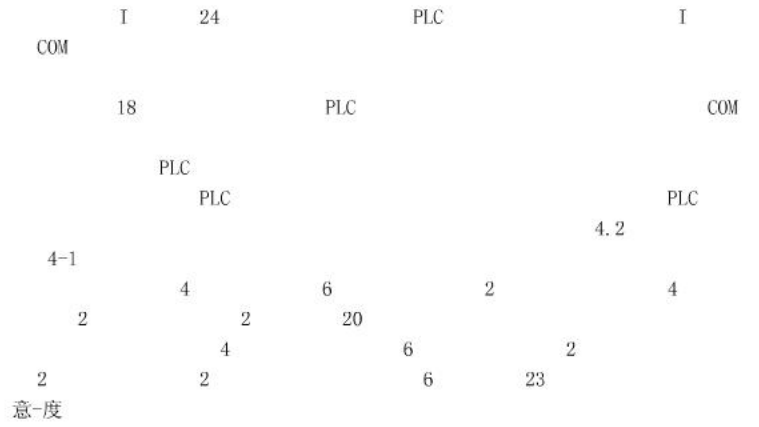
善 噪

FX2N-48MR-001	48	24	3.5	DC24V	24	3.5.1
mm	182	87	90	3.5.2	FX2N-48MR-001	PLC (1) &
CPU	6	256	8			
(2)	0.08 μ s/	100 μ s/	www.docin.com	刊六	雷明满坤	
醋	器铸浆悲					
17 (3)	8000	RAM	16000			
(4)	3072	256	235			
	8000					
PLC					FX2N-48-MR-001	
PLC						

4.1

250V1A

220V50HZ



0

1	X000
0	
1	Y000
1	
2	X001
1	
2	Y001
2	
3	X002
2	
3	Y002
3	
4	X003
3	
4	Y003
4	
1	X004
4	
1	Y004
5	
2	X005
5	
2	Y005
6	
2	X006
6	

2		Y006		
7				
3		X007		
7				
3		Y007		
8				
3		X010		
8				
3		Y010		
9				
4		X011		
9				
4		Y011	www.docin.com K?00 μ s/	www.docin.com 刊六 霏
18	喇满埤 醋	器转浆悲		
10				
		X012		
10			Y012	
11				
		X013		
11				
			Y013	
12				

1	X014		
12		Y014	
13			
2	X015		
13		Y015	
14			
3	X016		
14		Y016	
15			
4	X017		
15		Y017	
16			
16	X020		
16		Y020	Y026
17			
17	X021		
17			
18			
18	X022		
18			

19

X023

19

4.3 PLC

4-1

PLC

X000

X023

Y000

Y026

Y020 Y026

A G

COMI

COM 增 24V

意-度 系示点

5.1

5-1

D0

1

3

D9

D0

D9

D0

D9

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19

技-度

D1 D10
D0

D1 D10 D0 D1 D10
D0

Y

N

Y

N www.docin.com

20 5.2

5.2.1

(1)

X000

Y000

X014

Y000

X000

D1

1

Y000

D1

M0

M1

M2

5-2

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21

技-形

(2)

X006

D7

2

M106

M106

Y017

Y006

M106

Y016

Y006

Y006

D7

M18

M19

M20

5-3

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鸚

22

技-情

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23 5.2.2

D0

D0

5-4

技-意

D0

5.2.3

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柄

D0 (2)
D1 D10 D0 D1 D10
D0 D0
D0 D0
5-5
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24 技-技 www.docin.com
25 5.2.4

5-6
技-控
M30 5.2.5
X012 X013
M31 M32 M33 3S
C0 C1
C0 C1
C0 C1 C0
C0 C1 C0

C1

C0 C1

5-7

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V

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27

技-摘

5.2.6

X001 M3

C1

M40

X002 M6

M41

X003 M9

M42

X005

M72

X007

M72 M71

X011 M71

M70

5-8

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28 技-斷

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29 5.2.7

5-9

技-显

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6.1

PLC

PLC

PLC

PLC

PLC

(1)

紧种点
(2) PLC

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EPR0M

6. 2

6-1

控-度

(2)

Y016 Y017

6-2

控-形

(3)

M0 M29

31 控-情 D0 6-3 www.docin.com (4)

控-意 6-4 (5)

X014 X015
6-5
控-技 (1) X0 度技 X0 度意 6.3

(2)

(3)

3S

(4)

3S

(5)

6.4 PLC

(1)

(2)

(3)

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Z

32

PLC

LED

[1]
[2]

PLC

PLC

2003

2003 [3]
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