controlling of escalator·····

1. Requirement

Escalator system is controlled by using SR, which is dragged via three phase asynchronies for 11KW. It can go up and down (each other interconversion). Also it requires safe emergency function, detection function and floodlight.

2. SR Solution

When pressing the up button, the system is activated with star startup For 2.5 seconds and the up contactor, running contactor, protective Contactor and lighting contactor are triggered. Here if pressing the emergency switch, lighting contactor is turned off delay 2 seconds and the above other outputs are turned off immediately.

When pressing the down button, the down contactor is activated and the up contactor is turned off, others are as above.

When pressing the service switch escalator is in detecting status, regardless of pressing up or down contactor, escalator only runs with star startup mode and can't run with angle running mode, others are as above.

3. Components used

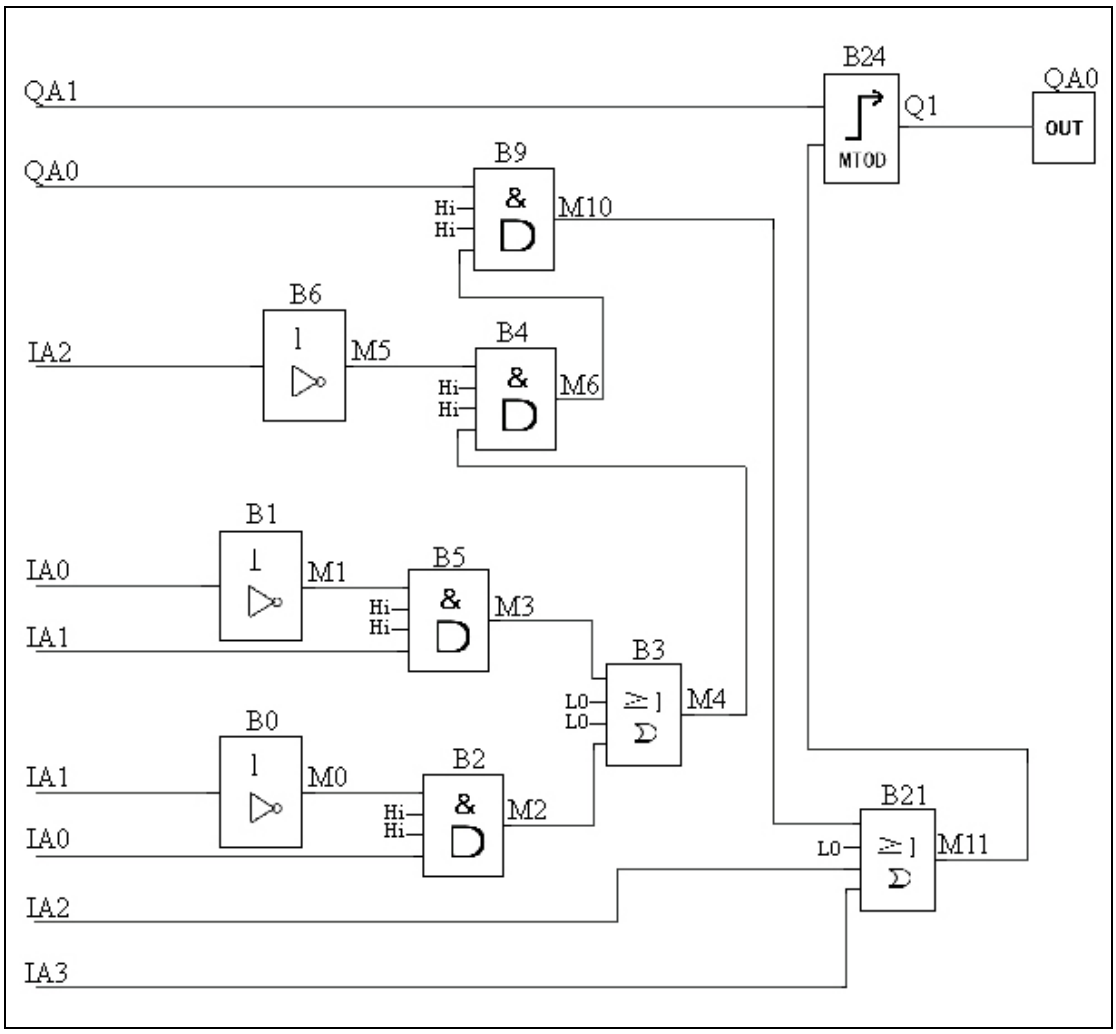
Input	Output
IA0 Up button(NO contact)	QA0 Angle running contactor for motor
IA1 Down button(NO contact)	QA1 Star startup contactor for motor
IA2 Service switch(NO contact)	QA2 Up contactor
IA3 Emergency/reset switch(NO contact)	QA3 Down contactor
	QA4 Running contactor
	QA5 Protective contactor
	QA6 Lighting contactor

4. Advantages and Specialties

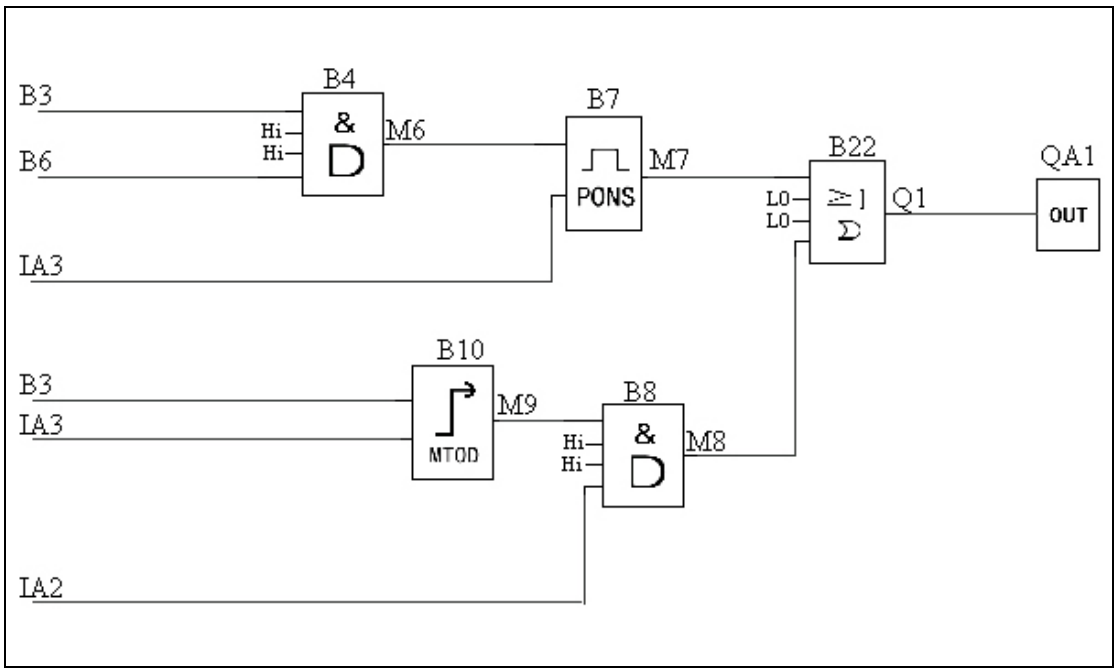
Fewer components are necessary than the traditional solutions.
It resolves many problems as complicated control, promiscuous routing, and difficult detection etc.

5. Software Circuit Diagram

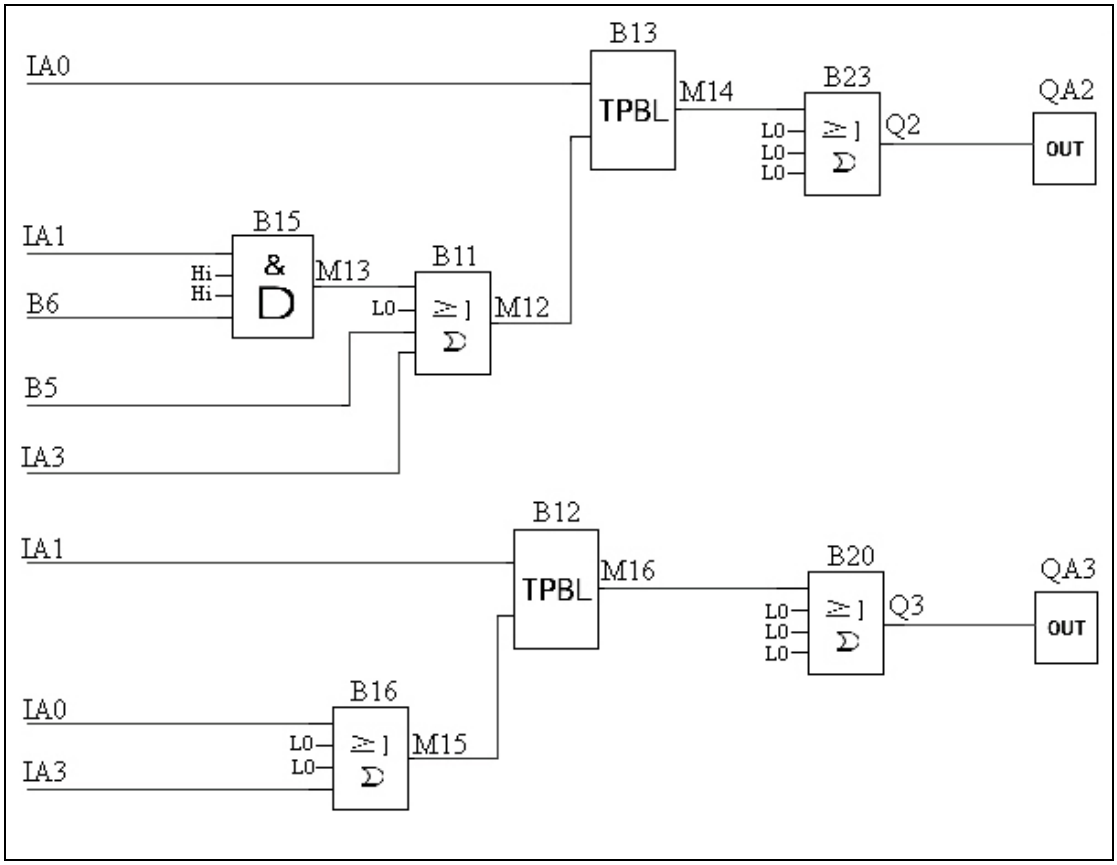
Part I·····



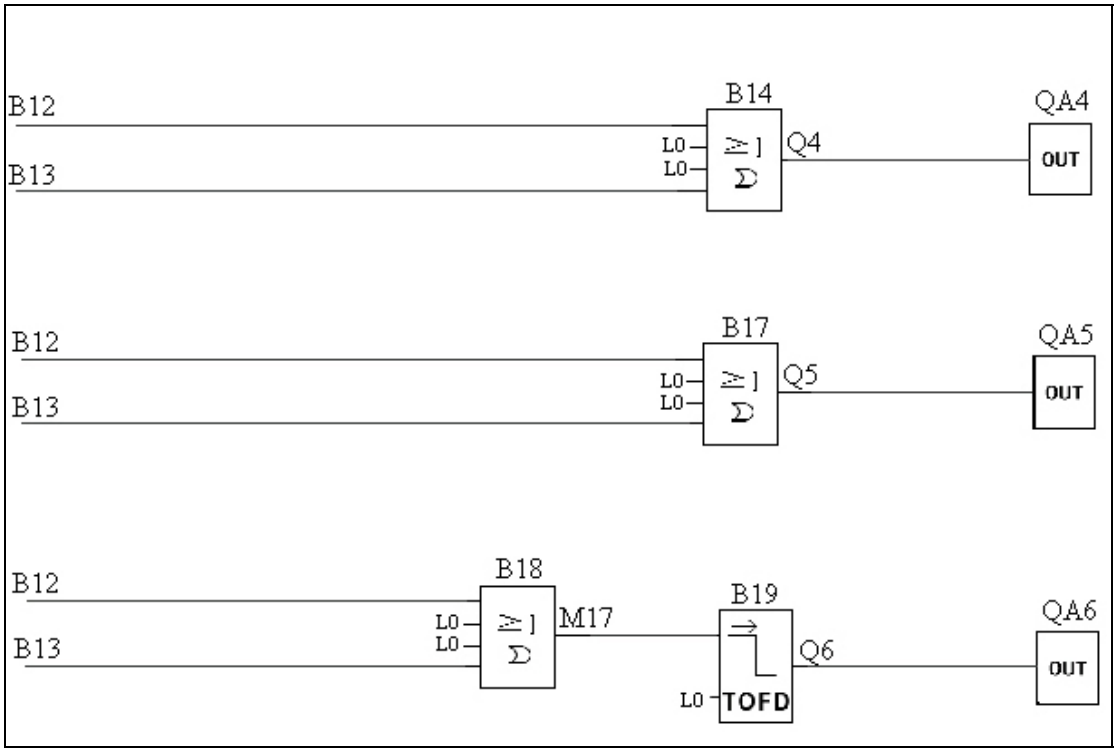
Part II·····


B3
B6
IA3
B4
Hi
Hi
&
M6
B7
PONS
M7
B22
LO
LO
≥1
Σ
Q1
QA1
OUT
B3
IA3
B10
MTOD
M9
B8
Hi
Hi
&
M8
IA2

Part III·····


IA0
B13
TPBL
M14
B23
LO
LO
LO
Q2
QA2
OUT
IA1
B15
Hi
Hi
&
M13
B11
LO
M12
B6
B5
IA3
IA1
B12
TPBL
M16
B20
LO
LO
LO
Q3
QA3
OUT
IA0
B16
LO
LO
M15
IA3

Part IV


B12
B13
B14
L0
L0
Q4
QA4
OUT
B12
B13
B17
L0
L0
Q5
QA5
OUT
B12
B13
B18
L0
L0
M17
B19
L0
TOFD
Q6
QA6
OUT