

Physical distribution equipment controller

Operation Instructions of NA4541

Main Functions and Technical Indexes

This controller is the rise and fall platform controller with four-route control outputs , which can be divided into the Chinese mode and the Italian mode. The Chinese mode consists of the electromotor, the platform valve and the panel valve. The Italian mode consists of the electromotor, the valve. Three-phase current detection. The Main functions of NA4540 are as follows:

☛ **Electromotor running times and current display:** It displays the running current when electromotor is running; and displays the accumulative running times of the electromotor in the other time.

☛ **Overload protection:** Cut off the electromotor output when three-phase average current exceeds rated current.

☛ **Deficient-phase protection:** Cut off the electromotor output when testing deficient-phase or three-phase current unbalance seriously.

☛ **China mode:** outputs: electromotor (three-phase), platform valve (DC), panel valve (DC).

☛ **Italy mode:** outputs: electromotor (three-phase), valve (AC).

☛ **External alarm mode:** two external alarm, connected threshold switch and emergency switch, can be set to always open, always closed or disabled.

Main technical Indexes:

☛ **Current display range:** 0~50A

☛ **Current setting range:** 0.5~10A , Setting range can be limited

☛ **Power supply:** AC 380V±10%

☛ **Operating environment:** Temperature -10℃~50℃, Humidity≤85%, without coagulate dew

☛ **Output load capability:**

China mode: Electromotor: 8A/380VAC; Platform valve: DC24V; Panel valve :DC24V

Italy mode: Electromotor: 8A/380VAC; valve :AC 24V

☛ **Executive standard:** Q/320585 XYK 01 (NA4541-X)

Operating Guide


I . Display function


The controller normally displays accumulative running times of the electromotor (electromotor running 6 seconds counts 1 time, 12 seconds count 2 times, and then analogize according to the above rule), and displays the running current when electromotor is running.


II . On/Off

Press the “ON/OFF” key to turn on or turn off the controller. the “ON/OFF” indicating lamp lights when the controller is on; the “ON/OFF” indicating lamp extinguishes when the controller is closedown.


III. China mode

Under China mode, press the key “


Press the key “





Press the key “








IV. Italy mode

Under Italy mode, press the key “

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









running after loosen the key and the indicator lamp “” extinguishes.

Press the key “”, the valve runs and the indicator lamp “”lights; press the “” again, the valve stop running and the indicator lamp “” extinguishes.

Press the key “”, electromotor and valve run, the indicator lamp “” and “” light; electromotor stop running after loosen the key, the indicator lamp “” extinguishes, the valve still runs, the indicator lamp “”lights. F24 can set the valve stop time, (Factory setting is the valve always open,press “”,valve stop,the indicator lamp“” extinguishes).

V. Advanced setting

Advanced setting can adjust some internal parameters to meet all different kinds of need. These parameters are supplied for the professional skilled technologists, and the common users needn't to know. Please don't change the internal parameters of the controller casually, in case of the abnormality of the controller.

Under the closedown state, use a set of password to enter the state of advanced setting, the password is “up-down-up-down-up-up-down”. According to this order, press the key “” and “” continuously, the interval of pressing two keys must be less than 1 second, if the password is right, you can enter the state of parameter setting, and the display shows “Fxx”, “xx” is two digit number, means parameter code. Using key “” or “” can select the parameter code. Selecting one parameter code then pressing the key “”,will display the corresponding parameter value, here you can use “”or “” to set the parameter value, then press the key “” to return to the state of showing parameter code after finishing setting. (“” means “up”, “” means “down”, “” means “set”)

Internal parameter code is shown in the following table:

Sort	Code	Parameter Name	Setting Latitude	Factory Setting	Unit	Remark
Mode	F11	China mode/Italy mode	-	Chn	-	Chn: China mode Ity: Italy mode
Motor	F21	Electromotor rating current	0.5 – 10	4	A	
	F22	Reset accumulative running times of electromotor	-	NO	-	NO: not reset YES: reset
	F23	The longest running time of electromotor by pressing the short panel key under Italy mode	1 – 10	0	s	0:OFF
	F24	The delay stop time of valve by pressing the short panel key under Italy mode	10-100	100	s	100: means valve always open 10-99: means seconds
	F50	External alarm 1 mode	0-2	2	-	0: without external alarm 1: always open, alarm when closed 2: always closed, alarm when open
	F51	External alarm 2 mode	0-2	2	-	0: without external alarm 1: always open, alarm when closed 2: always closed, alarm when open
Test	F99	output signal of test	Under this function, display and attract all relays in turn, forbid use it when the controller is running! It can exit by press any key or automatically exit after 30s.			
	F00	Exit setting				

VI. Alarm processing

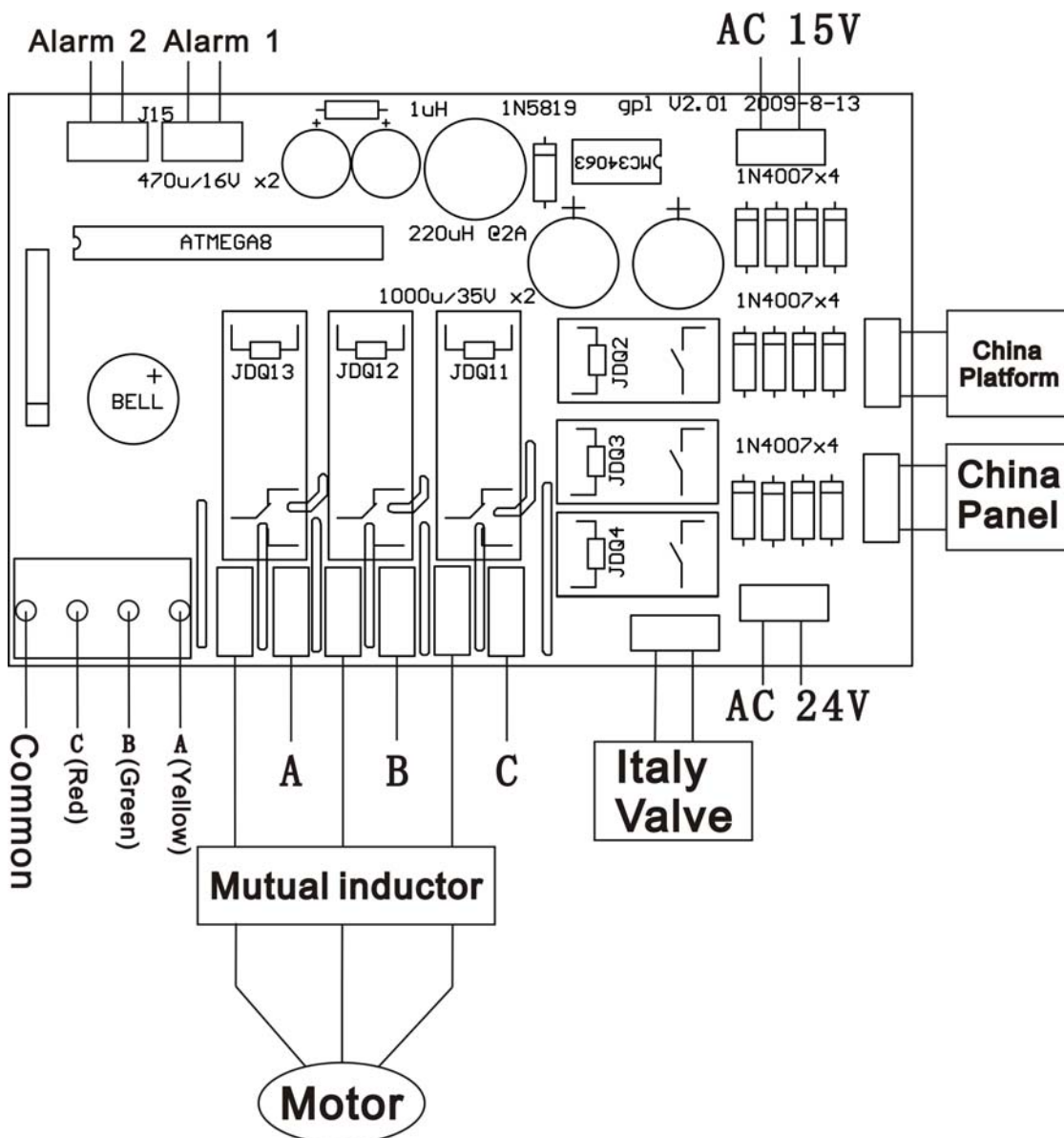
Under alarm state, the controller displays the alarm codes, the codes meanings are as follows:

Code	Meaning	Causation
OVL	Over load	Load current is over the rating current
PHA	Deficient-phase	Deficient phase or three-phase current unbalance seriously
door	External alarm 1	Threshold switch open only
EnEr	External alarm 2	Emergency switch signal only

How to resume from the alarm state?

When overload or deficient-phase occurs, “ON/OFF” indicator lamp flashes , displays the alarm code and cut off the output of electromotor. Press the key “ON/OFF” to turn off, then press the key “ON/OFF” again to turn on it ,could resume from the alarm (protecting) state.

Wiring diagram:



Notice:

1. Please use power supply transformers and current mutual inductors supplied by our company.
2. Three-phase wires of the protected electromotor must perforate through the three small holes in the current mutual inductor respectively.
3. The installation and debugging must be operated by professionals who hold correlative certificates.
4. External connecting:
 - Big Plastic plug(blue): +1, -1, +2 are three-phase power supply input lines. -2 is grounding line.
 - Six pins plug: 1 brown wire, 2 blue wire (DC24V)are China mode panel valve wires.
 - 3 red wire, 4 blue wire (DC24V)are China mode platform valve wires.
 - 5 and 6 wires are Italy electromagnetic valve wires.
 - Four pins plug(big): connect to electromotor line, green、Red and Blue lines are ABC three-phase, yellow-green line is grounding line.
 - Four pins plug(small): connect to single-strand line: 1 red line 2 blue line threshold switch line.
 - connect to double-strand line:1 blue line 2 yellow line threshold switch line.
 - 3 red line 4 black line emergency switch line.
5. Fuse type : 10A.