AE611/621 Programmable Sequential Controller for Dust Collector System Operation Manual

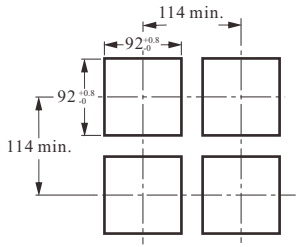
Introduction

Programmable Sequential Controller is an advanced microprocessor controller, which is designed to control solenoid valve. The controller has two sets of 7 segment digital displayer. One digital displayer indicates next air cleaning activation position of filter. The other digital displayer indicates time left for next air cleaning cycle. Purge time, purge period, numbers of controlled solenoid valve are adjustable.
The controller also provides sequential air cleaning cycles after pause. Users can operate the controller from the panel easily.

Specifications

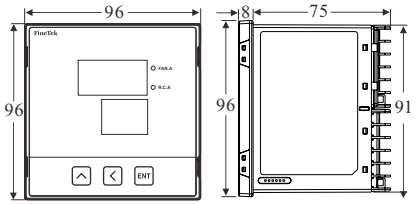
- Power supply: 100~240Vac±10% ,50Hz/60Hz
- Purge period adjustable range: 1~999 sec
- Purge time adjustable range: 10ms~9.99 sec
- Fuse: 3A
- Numbers of sequential control: 1~10 / 20 points
- Output rating: 200VA / 1.2A
- Ambient temperature: -20~60'C
- Display: Two sets of digital displayer
- Input style: 3 buttons
- Output: TRIAC
- Number of after cleaning cycles adjustable: 0~99
- Security test: comply with IEC60947, IEC60092
- Mechanical stress test: comply with IEC60068
- Environment stress test: comply with IEC60529, IEC60068
- Electro magnetic susceptibility test: comply with IEC61000

View of mechanical fastening points on rear of enclosure

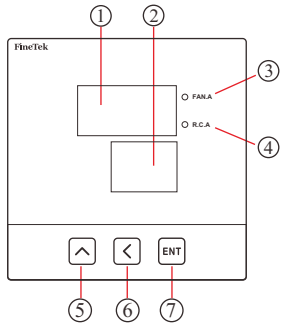


Dimension

96mm(W)x96mm(H)x83mm(D)

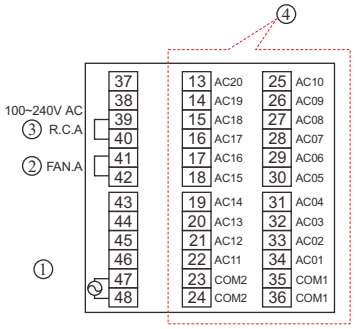


Operation Panel



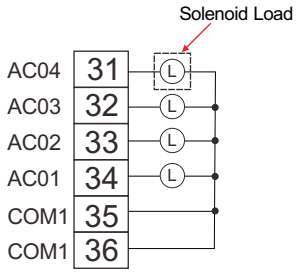
① Upper displayer
② Lower displayer
③ FAN.A contact closed, LED light on
FAN.A contact open, LED light off
④ R.C.A. contact closed, LED light on
R.C.A. contact open, LED light off
⑤ Enter button ENT
⑥ Shift button
⑦ Up button

Wiring

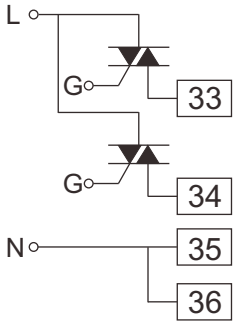


① Power supply: terminals 47, 48
② Fan contacts: terminals 41, 42
If the Fan terminal is connected, it begins after cleaning cycles. When the switch is open, controller operates normally by its settings. When the switch is closed, the controller will flash as the unit performs the "CLC" setting number of After Cleaning Cycles chosen by the user. This avoids dust blockings on filter.
③ Remote control contact (R.C.A.); terminals 39, 40
When remote control is required, please remove jumper, then start remote control. When remote control contact is open, the controller stops working.
④ Output terminals
Output terminals are connected with COM1, COM2, which are common contacts of solenoid valves

Wiring



Output circuit



Notice for wiring

1.Do not touch the terminals when power is on, because there is floating voltage between each output and COM.
2.Output contact voltage is the same as power supply. Please do not drive load with another power supply.
3.Voltage to drive load should be the same as the controller.

Settings

Upper displayer	Command	Adjustable range (Tolerance)
ACt	Purge time	0.01~9.99 sec +/- 5 ms
int	Purge period	001~999 sec +/- 1 ms
CLC	Auto shut-off cleaning cycle	000~099 times
Cnt	Activation numbers	000 ~ total numbers

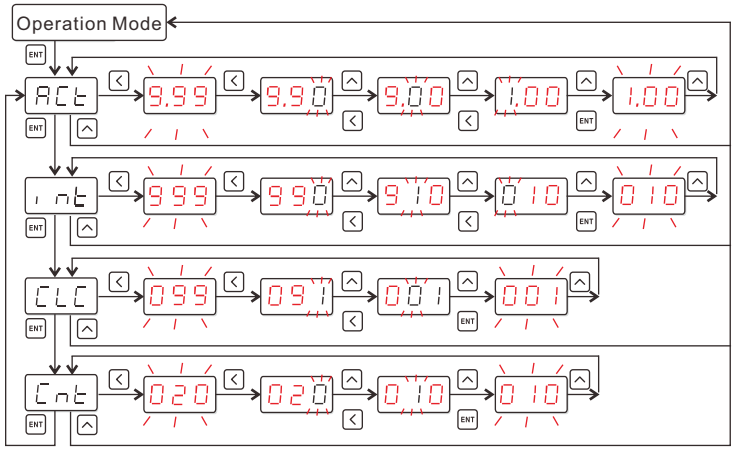
Lower Displayer	Command	Adjustable range
00 ~ total points	Activation points	01~10 points 01~20 points

Operation Commands

Upper displayer	Command	Lower displayer	Command
999~000 sec	count down of purge period	00 ~ total points	next activation point

Operation Flowchart

Upper Displayer



Example of settings:

Purge time = 1 sec
Purge period = 10 sec
Auto shut-off cleaning cycle = 1
Activation number = 10

Steps:

1.Press ENT to enter ACt setting
2.Press < and twinkles 9.99 , and repress to twinkle 9.99 (settings to be changed)
3.Press ^ to < change value to 1.00
4.Press ENT to twinkles 1.00 , then press ^ to complete ACt setting.
5.Press ENT to int , and repeat step 2~4 to change value to 010.
6.Press ENT to CLC , and repeat step 2~4 to change value to 001.
7.Press ENT to Cnt , and repeat step 2~4 to change value to 010.

Trouble Shooting

Symptom	Cause	Solution
7-segment displayer light off	1. no power supply	1. power on
	2. fuse burn out	2. replace fuse
7-segment displayer light on, but diaphragm valve does not work	1. wrong power supply for solenoid valve 2. fan control input contact jumper is removed 3. remote control contact jumper is removed	1. ensure same power supply for solenoid valve and the controller 2. FAN.A contact closed 3. R.C.A. contact closed
Abnormal purge control	1.wrong adjustment for purge time and purge period 2.wrong settings for activation numbers	Reset purge time, purge period and activation numbers
Air leakage	1. wrong installation for solenoid valve 2. mixtures inside solenoid valve or diaphragm valve 3. solenoid valve electricity leakage	1. adjust air inlet direction 2. clean up mixtures and re-start the controller examine wiring for solenoid valve

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