

ESP Vibrator Controller
Model No. : EVC 09

AIR CONTROL ENGINEERING PVT. LTD.

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INTRODUCTION:

The Air Control Engineering Pvt. Ltd. make **ESP Vibrator Controller** has been designed to control the vibrating system used for Electrostatic Precipitator. It is designed to be used with Electro-magnetic coil type Vibrators.

The Microprocessor based Instrument is front panel-mounting type and hazard free in operation. It is designed in four types of basic cards, namely 'Main Card', 'Power & Output Card' 'Solenoid Driver Card' and 'CPU & Display Card'. The components are used, which have proven their reliability and easily availability in the local market

The Instrument provides a high degree of flexibility due to field programmability of the operating parameters. It has five predefine group. The 'Cycle Time', 'ON Time', 'Off Time' and 'No. of magnetic coil Output' can be program for each group individually.

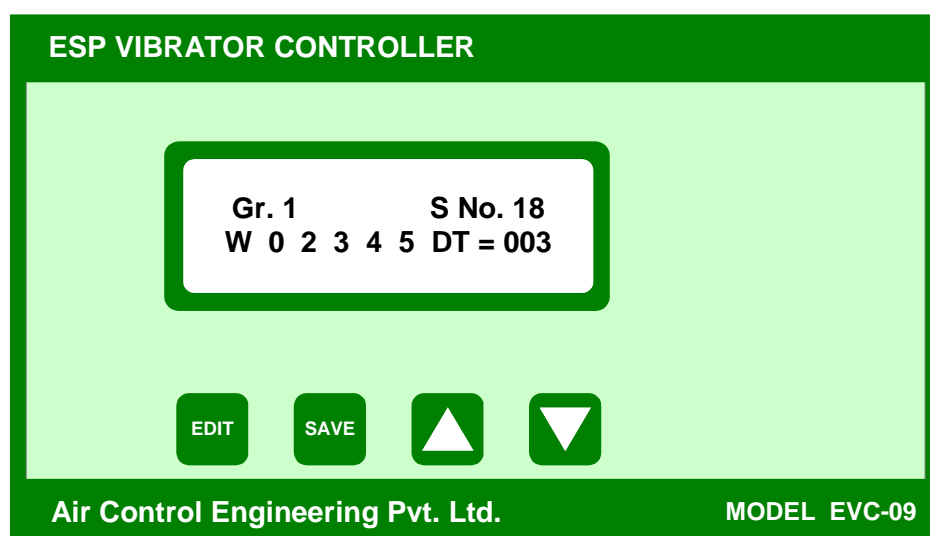
For the successful operation of the precipitator, programmability of those parameters is required. Using these features a good vibrating system can achieve minimum re-entertainment of collected particle and keep the precipitator clean. The instrument provides 'LOG' facility to know the vibrating coli status.

In the following pages features and operation of the Instrument are described, which will give user a brief idea about the systems. The User/Operator should go through the Instruction manual carefully before operating the system.

The Instrument is having a two line back lit LCD Display and four touch keys for programming and control as describe bellow.

KEYs:

- 1) EDIT KEY
- 2) SAVE KEY
- 3) UP KEY
- 4) DOWN KEY



OPERATION:

There are two modes of operation, one is “EDIT” (Supervisory Mode) and another is “RUN” mode.

After “Power ON” press “EDIT” key. The display will go to

Enter Password
005

By using “UP” key and “DOWN” key put the appropriate password value and press “SAVE” key and the controller will enter into “EDIT” mode. By given the wrong password, the controller will go to “RUN” mode.

EDIT Mode:

Note: after entering the edit mode, “UP” key and “DOWN” key are both active to go to next menu or previous menu.

AT the time Power ON, by pressing the “EDIT” key it will enter to edit mode. The first display will be

SET DC Vol.

For 230V AC magnetic coil voltage setting is not applicable though the Regulated 230V AC voltage is coming from Voltage Stabilizer.

Press “UP” key, it will enter to ‘Group-1’ parameter setting mode. The display will be

SET Gr. 1

Press “SAVE” key, it will enter to group-1 edit mode. In this mode ‘Cycle Time’, ‘Magnetic coil ON Time’, ‘Magnetic coil OFF Time’ and ‘Number of Magnetic coil in this group’ can be set. The first display will be

Cycle Time

If press “UP” key, it will enter to ‘Magnetic coil ON Time’ setting mode. If press “SAVE” key, it will show the Cycle Time value in minute. The display will be

Cycle Time
00001

By pressing “UP” or “DOWN” key cycle time can be adjusted and then press “EDIT” key to go to next parameter. The display will be

ON Time (ms)

If press “UP” key, it will enter to ‘Magnetic coil OFF Time’ setting mode. If press “SAVE” key, it will show the ON Time value in mili sec. The display will be

ON Time (ms)
02000

By pressing “UP” or “DOWN” key magnetic coil ‘ON’ time can be adjusted and then press “EDIT” key to go to next parameter. The display will be

OFF Time (Sec)

If press “UP” key, it will enter to ‘Number of magnetic coil in this group’ setting mode. If press “SAVE” key, it will show the OFF Time value in sec. The display will be

OFF Time (Sec)
00001

By pressing “UP” or “DOWN” key magnetic coil ‘OFF’ time can be adjusted and then press “EDIT” key to go to next parameter. The display will be

Number of Relay

If press “UP” key, it will enter to ‘Set Group 2’ setting mode. If press “SAVE” key, it will show the Number of magnetic coil in this group. The display will be

Number of Relay
00003

By pressing “UP” or “DOWN” key number of magnetic coil in this group’ can be adjusted and then press “EDIT” key to go to next parameter. The display will be

SET Gr. 2

In the same way as “Set Group-1” , set all parameters of Group-2, Group-3, Group-4 and Group-5 one by one. Then the parameter “Log Current Set” will come. The display will be

Log Current Set

If press “UP” key, it will enter to ‘Input Calibration’ mode. If press “SAVE” key, it will show the Log Current set value in Amp. The display will be

**Log Current Set
00020**

By pressing “UP” or “DOWN” key Log Current Setting can be adjusted and then press “EDIT” key to go to next parameter. The display will be

Input Calibration

If press “UP” key, it will enter to ‘Log Status Indication’ mode. If press “SAVE” key, it will go to Input Calibration mode (**Note: do not enter into Input Calibration without proper calibration equipment**).

Press ‘UP’ Key and the display will be

Log Status Ind.

If press “UP” key, it will enter to ‘Save and Exit’ mode. If press “SAVE” key, it will show the Status of magnetic coil. The display will be

**Log Status Ind.
S No: 01 OK**

The magnetic coil status will be show in 3 ways – “OK”, “OPEN” or “SHORT”. By “UP” key magnetic coil number can be changed. To come out from this mode press “EDIT” it will go to next parameter. The display will be

SAVE & EXIT

Press “SAVE” key, it will save the data and go to ‘RUN’ mode.

IMPORTANT NOTE:

If any parameter has been changed always exit through “SAVE & EXIT” mode.

FAULT Finding:

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|---------------------|-----------------------------|
| 1) No Power | : Check the 230V AC supply |
| 2) Display “000.00” | : Check 4-20mA input signal |
| 3) For other Faults | : Consult Factory |
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