

Elscent Automation

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Elscent Frequency Controllers

Elscent has got three models of its Frequency Controllers, namely, EFQC6 and EFQC3. EFQC6 is a 6 Amp version suitable for large vibratory bowl feeders having VA rating of more than 600 VA while EFQC3 is for smaller vibratory bowl feeders and linear vibrators having VA Rating of 600 VA or less. The main features of these Frequency Controllers are –

1. Frequency Adjustment – The major advantage of using a frequency controller is that one can adjust the output frequency of the controller to get the best resonant frequency at which vibratory feeder works best, eliminating the need for manually tuning the vibratory feeder.
2. Automatic Voltage Regulation – This feature helps to eliminate the speed variation caused due to mains voltage fluctuation.
3. Automatic Frequency Adjustment – In case the input frequency changes (due to genset operation), the output frequency remains the same at the preset level.
4. Maximum Output Voltage Adjustment – This provision helps to adjust the maximum output voltage, which in turn reduces chances of damage to a vibratory feeder.
5. Overheat Protection – If the internal voltage in the controller increases, it switches off.
6. Overload cut-off – In case the vibrator current increases its rated value, there is a provision of overload cut-off

The technical specifications of the first two frequency controllers vis a vis the regular EFQ1 N DIG are given in the below chart –

Particulars	EFQC3	EFQC6	EFQ1 N DIG
Input Voltage Range	85 V to 260 V	85 V to 260 V	230 V (+/-) 5%
Output Voltage Range	0 V to 260 V	0 V to 260 V	0 V to 240 V
Output Frequency	40 Hz to 180 Hz	40 Hz to 180 Hz	5 Hz to 180 Hz
Vibrator VA Rating	Upto 600 VA	600 VA to 1300 VA	Upto 1500 VA
Voltage Adjustment Accuracy	1 V	1 V	1 V
Frequency Adjustment Accuracy	0.1 Hz	0.1 Hz	0.1 Hz
On / Off Delay	0 to 20 sec	0 to 20 sec	0 to 20 sec
PLC Control	Start Stop possible from PLC	Start possible from PLC	Stop from PLC possible with 0/10V-



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			0/20mA input
Locking provision	Possible	Possible	Yes. With Password
Sensor	PNP	PNP	PNP * 2 nos.
Amplitude Sensor	Not Applicable	Not Applicable	Provision for ESind3
Soft Start time	0 to 10 sec	0 to 10 sec	0 to 5 sec
Display	Digital LED	Digital LED	Digital LED
Can connect to	1 Vibratory Feeder	1 Vibratory Feeder	1 or 2 Vibratory Feeders
Air Blow Arrangement	Not possible	Not possible	Available (2 sec delay)

Thus, the major advantages of using a Elscont Frequency Controller are –

1. No variation in case of input frequency change (genset working)
2. Mechanical Adjustment of the Vibratory Bowl Feeder / Linear Vibrator is not required
3. The resonance frequency once determined remains stored even after the loss of power
4. No need to change the coils / springs / vibrator in case of 50 Hz and 60 Hz input
5. No variation in case of input voltage fluctuation
6. It is Short Circuit Proof
7. There being no Potentiometer on the Controller (there are up / down buttons), changes of any misuse is eliminated. Locking arrangement / password provision possible.

