

Bluewave Single Phase Servo(LCD)

1. Salient Features

- **Fast(40ms)** Individual phase correction (R,Y,B can be set to three different voltages).

With this fast correction, it is possible to achieve 'high speed correction '(Volt/Sec).

- Field programmable servo parameters **including correction accuracy** using push button and LCD.

As the servo parameters are stored in Non-volatile memory, the servo parameters will be retained for ever.

The servo parameters like regulation voltage, high cutoff, low cutoff and overload cutoff can be configured in the field without switching off the servo and without disturbing the Hardware.

Independent output voltage setting.

In the conventional analogue board all the servo parameters are configured with variable resistors. The resistance may change on ageing, which affects the servo configuration. In Servo Lite all the parameters are stored digitally in the Non-volatile memory.

- Real time correction.

As the correction is done based on real time signal measurement, the servo will be stable even in non sinusoidal environments.

- Field Programmable **3 stage TRIP and trip delay** for low voltage, high voltage and overload(e.g. : 20 seconds @100% 10 seconds @ 110% 1 second @120% of load).

This is one of the salient advantages over conventional analogue board. All the cutoffs can be configured in three stages. For example

The high cutoff can be configured as
250V for 10 sec,
260 V for 5 sec,
270V immediate.

This will be very useful in the overload cutoff. For the inductive load the starting current will be more. In the analogue board the over load cutoff is configured in such a way to accommodate the starting current. So the purpose of the overload cutoff shall not be met. But here in servo Lite, over load can be differentiated from the starting current as below.

15 A for 10sec

20A for 5sec

30A immediate.

- **Event Logging**, Details of last trip is capture and stored in EEPROM. Elapsed time also displayed for evaluating the cause.

This will be useful in finding the field problem. With this we can make out the reason for previous trip event like high/low cutoff, overlaod cutoff, apart from the event log it also gives the Elapsed time.

2. Real Time measurement of the following parameters using advanced Micro controller.

- Input voltage(Line to Neutral).
- Output voltage(Line to Neutral).
- Frequency.
- Output current.

3. User friendly HMI with

- 1x16 LCD.

- 3 Key Push Button UP, DOWN and OK.
- Built in Buzzer and LED indicator.
- LED Indication for LV, HV and Over load.

4. Field programmable servo parameters and are stored in NV memory.

- Servo Regulation voltage.
- Regulation accuracy eg: +-5volt.
- Start up delay(can be configured to manual Restart).
- CT Ratio.
- Low voltage cut Off Point(3 points).
- Minimum required time at low voltage for TRIP(2 timers for each point third point with immediate Trip).
- High Voltage cut off Point(3 points)..
- Minimum required time at High voltage for TRIP(2 timers for each point third point with immediate Trip).
- Over Load cut off Point(3 points)..
- Minimum required time at Over load for TRIP(2 timers for each point third point with immediate Trip).

5. Easy connection.

- 3x1 molex connector for AC input and Output.
- 3x1 molex connector for 2 motor drive.
- 2x1 RMC for contactor.

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