5.4.1 FORMING CAPACITORS

The following step-by-step procedure will set the majority of the parameters required for actual startup of the ICS controller in normal submersible pump operating conditions. Be sure to follow the steps in the order presented.

Turn on the Main Input Power Switch, then press the OFF key on the Keypad.

1. Set DRIVE MODEL to nameplate rating of controller.
2. Set OVERLOAD PARAMETER to maximum rating of controller.
3. Set SEC OL TRIP to 5 seconds.
4. Set VOLTS AT 60HZ to 230.
5. Set START FREQUENCY to 10 Hz.
6. Set SYNC DELAY to 2 seconds.
7. Set HIGH SPEED CLAMP to hertz required for application.
8. Set LOW SPEED CLAMP to hertz required for application.
9. Set V BOOST to zero
10. Set I LIMIT to maximum for rating of contoller.
11. Set I LIMIT SYNC to maximum for rating of contoller.
12. Set V BOOST SYNC to zero.
13. Set V CLAMP to value of incoming voltage, no greater than 480 volts.
14. Set ACCEL TIME to 10 seconds.
15. Set DECEL TIME to 10 seconds.
16. Set REGULATOR GAIN to 70 %.
17. Set SLIP COMP to zero.

18. Set FAULT RESTART PARAMETERS

    a. Set FLT RESTARTS to 5.

    b. Set MIN RESTART to 30 minutes.

    c. Set MIN FLTREST to 30 minutes.

19. Set UNDERLOAD PARAMETERS

    a. Set AMPS UL SET to zero.

    b. Set MIN RESTART to 30 minutes.

    c. Set UL RESTARTS to 5.

    d. Set SEC UL TRIP to 30 seconds.

20. Set SET FREQUENCY to 60 Hz SET SPD.

21. Set CLOCK to current time.

22. Set DATE to current date.

23. Set FREQUENCY AVOIDANCE to OFF.

24. Set OUTPUT ROTATION to FORWARD.

25. Select MODE 1, and ENTER.

26. Press DISPLAY STATUS.

27. Start controller. Controller will ramp to 60 Hertz.

28. Press DISPLAY OUTPUT AMPS/VOLTS to monitor output volts, at 60 Hertz drive should have 230 volts out.

29. Increase VOLTS AT 60 HZ. in 50 volt increments with five minute pauses between each increase until maximum output voltage is reached.

30. Press OFF to stop controller.

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