

TECH TIP – Power Products Generators

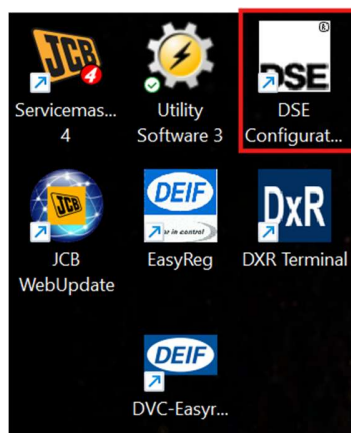


TO002: DeepSea 400V-60Hz Setup

Below are the steps to set up a JCB Generator with a DeepSea panel for 400 Vac, 60 Hz.

Items Needed:

- DSE Configuration Suite Software



Screenshot 1: DSE Configuration Suite Icon

- USB A to B Cable – USB Printer Cable

Procedure:

Step 1: Make sure the battery isolator is in the on position, machine is shut down and controller on. Connect to the DeepSea Controller using the USB A to B cable (USB Printer Cable) and then double click the DSE configuration Suite Icon to start the software.



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Step 2: Connect to the DSE controller on the machine by clicking “Read Configuration from a module.



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Step 3: Click on Generator, Generator Voltage to bring up the screen below. It should have settings for 480 Vac.

Deep Sea Electronics Configuration Suite [7310 MKII Configuration from file 401_S6992 G70RST4F V3.0.0.dse]

File Tools Help

Connect via USB connection Alarm Display Volts as: PhPh Display Temperature in: °C Display Pressure in: Bar No devices detected

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7310 MKII Configuration v7.3

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Scada

Generator Voltage

Under Voltage Alarms

Alarm

Action Shutdown

Trip 431 V PhPh 89.9% 431V PhPh

Pre-Alarm

Trip 446 V PhPh 93.1% 446V PhPh

Activation Delay 5.0s

Loading Voltage

Loading Voltage 455 V PhPh 94.9% 455V PhPh

Enable Alarm

Action Warning

Nominal Voltage

479 V PhPh 100.00% 479V PhPh

Over Voltage Alarms

Pre-Alarm

Return 512 V PhPh 106.9% 512V PhPh

Trip 514 V PhPh 107.2% 514V PhPh

Shutdown

Trip 528 V PhPh 110.1% 528V PhPh

Activation Delay 5.0s

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Step 4: Change the **Nominal Voltage** setting to **400** and the **Over Voltage Alarms, Shutdown** setting to **441**.

The screenshot displays the 'Generator Voltage' configuration interface. It is divided into four main sections:

- Under Voltage Alarms:** Includes an 'Alarm' section with 'Action' set to 'Shutdown', a 'Trip' value of 394 V PhPh (98.7%), and a 'Pre-Alarm' section with a 'Trip' value of 396 V PhPh (99.1%). An 'Activation Delay' of 5.0s is also shown.
- Loading Voltage:** Shows a 'Loading Voltage' of 398 V PhPh (99.6%) and an 'Enable Alarm' checkbox checked with 'Action' set to 'Warning'.
- Nominal Voltage:** This section is highlighted with a red box, showing a 'Nominal Voltage' of 400 V PhPh (100.00%).
- Over Voltage Alarms:** Includes a 'Pre-Alarm' section with 'Return' (438 V PhPh, 109.5%) and 'Trip' (439 V PhPh, 110.0%) values, and a 'Shutdown' section with a 'Trip' value of 441 V PhPh (110.4%). An 'Activation Delay' of 5.0s is also shown.

Step 5: Click the upload to controller button as shown below.

The screenshot shows the 'Deep Sea Electronics Configuration Suite' software interface. The title bar indicates the configuration is for a '7310 MKII Configuration from file 401_S6992 G70RST4F V3.0.0.dse'. The 'File' menu is open, and the 'Upload to controller' icon (a computer with a blue arrow) is highlighted with a red box. The interface also shows a 'Connect via' dropdown set to 'USB connection' and a tree view on the left showing the configuration structure for '7310 MKII Configuration v7.3'.

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Step 6: Start the machine up and manually adjust the voltage down to 400 Vac using the voltage adjustment knob on the door by watching the screen for AC voltage on the controller. You must be quick, or the machine will shut down for overvoltage and may need to repeat this process a couple times. It may be necessary to use the Mecc Alte DxR software and USB to Serial dongle to adjust the voltage. ***Refer to TG002 – Programming Mecc Alte AVR's for the items needed and procedure.***

Note for Paralleling Units:

If this is a paralleling unit it should automatically adjust the voltage down to 400 Vac. If the voltage won't go lower, you may need to adjust the voltage potentiometer on the Mecc Alte AVR. To do this shut down the machine and open the battery disconnect removing the key. Turn the VOLT pot down just a touch and retest. Do this till the generator voltage is at or near 400 Vac.