# D550 设定调压方式
# D550 set voltage adjustment method

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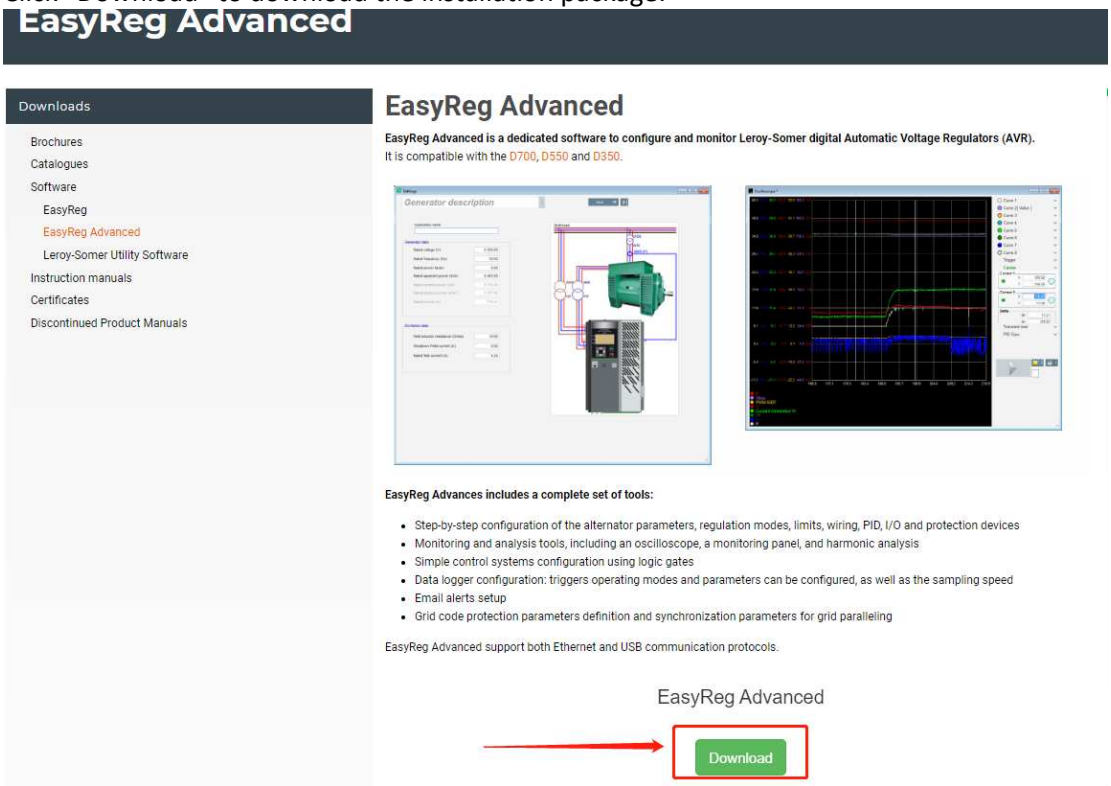
## 1. 软件下载和安装 Software download and installation

D550 软件下载地址：
D550 software download link:
https://acim.nidec.com/generators/leroy-somer/downloads/softwares/easyreg-advanced

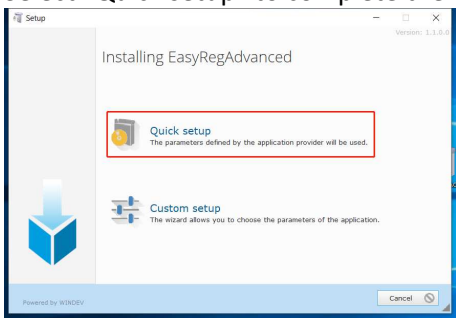
点击 download 下载安装包：
Click “Download” to download the installation package:



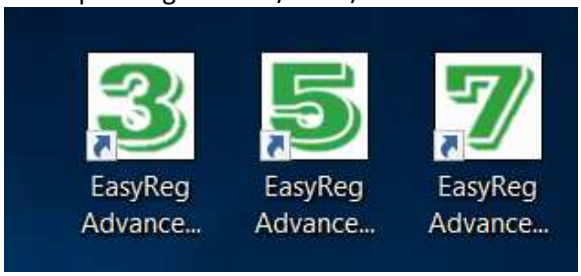

下载完成后，点击安装包进行安装：
After the download is complete, click the installation package to install:

选择英语，然后点击 OK 继续：
Select English and click OK to continue:

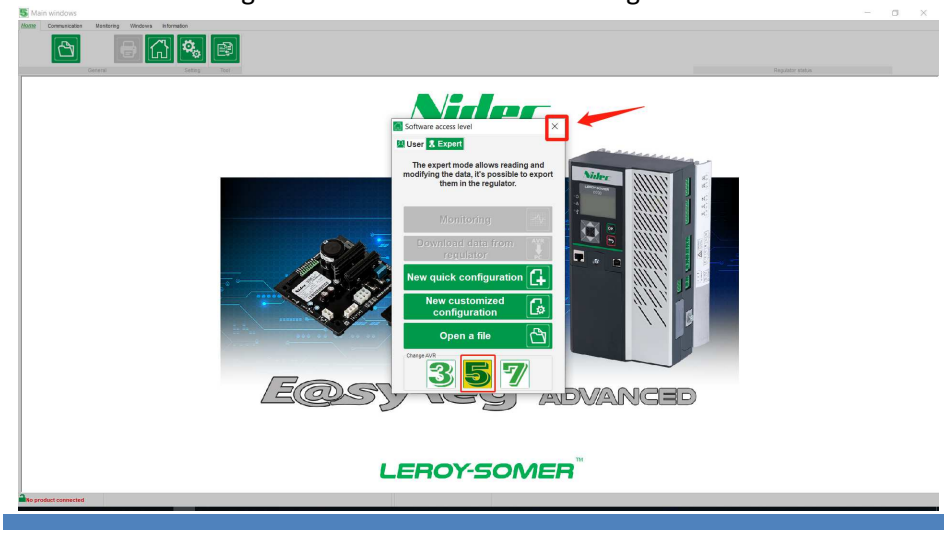

选择 Quick setup 完成安装：
Select “Quick setup” to complete the installation:



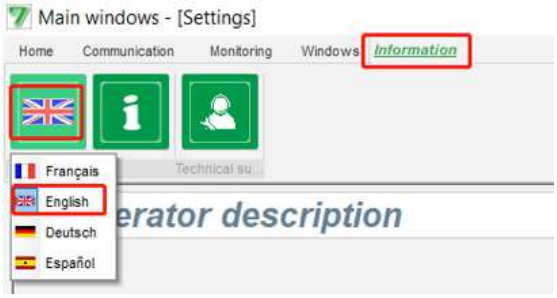

安装完成后，桌面上将出现如下三个图标，分别对应 D350/D550/D700 AVR。点击“5”打开软件：
After the installation is complete, the following three icons will appear on the desktop, corresponding to D350/D550/D700 AVR. Click "5" to open the software:




点击下图中的关闭，对软件进行初始设置。
Click Close in the figure below to make initial settings for the software.



确认软件显示语言：
Confirm the software display language:

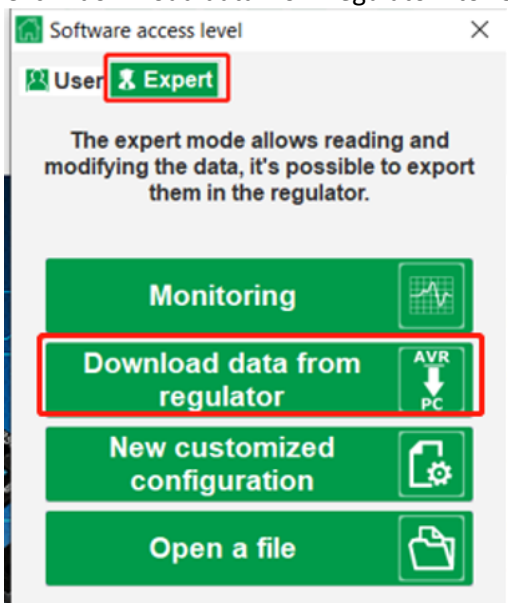



## 2. 软件和 AVR 连接 Software and AVR connection

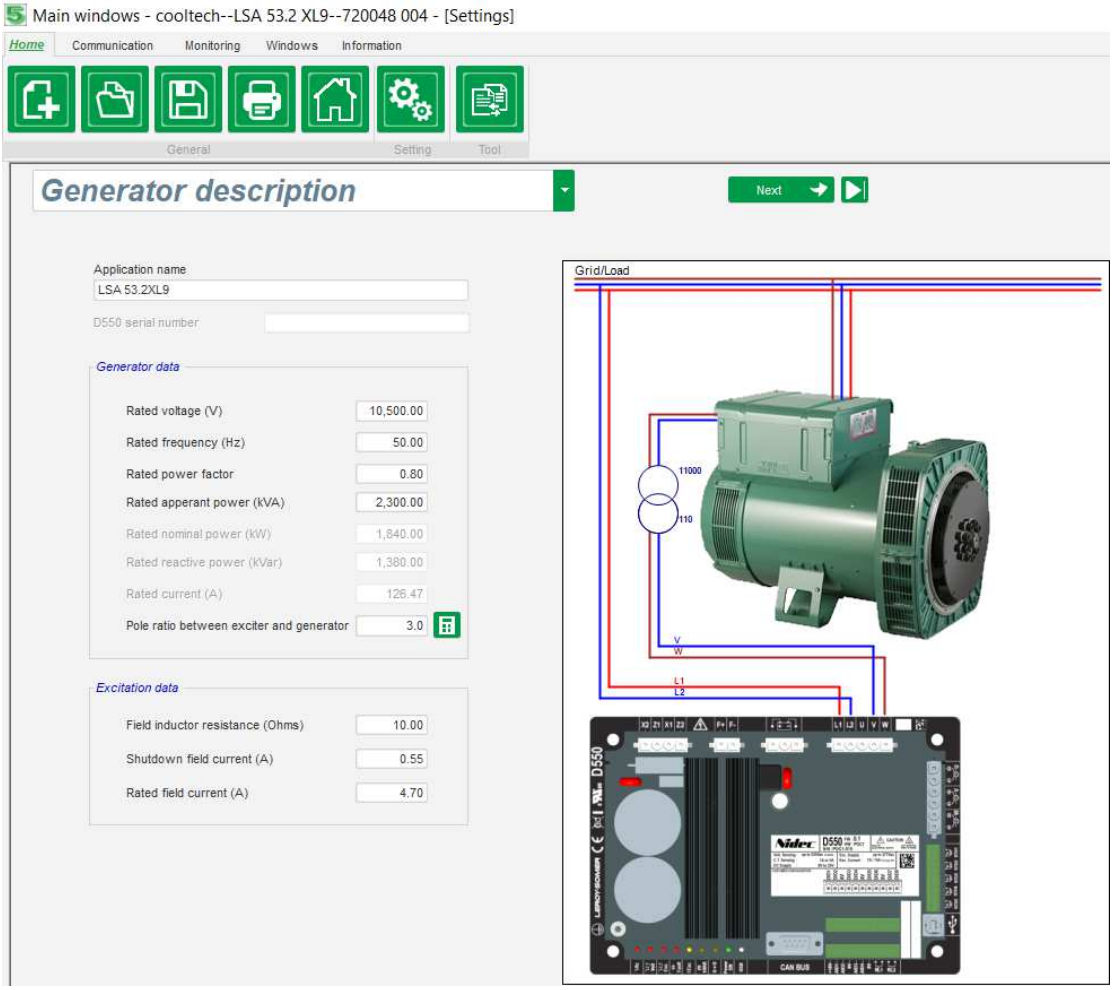
用随机自带的数据线连接电脑和 AVR：
Connect the computer and AVR with the data cable(Provided by LS, shipped with the alternator):


重新打开 D550 软件，点击专家模式。注意下方选择 “5”，左下角显示连接成功：
Reopen the D550 software and click on the expert mode. Note that select "5" in the red box, and the bottom left corner shows that the connection was successful.

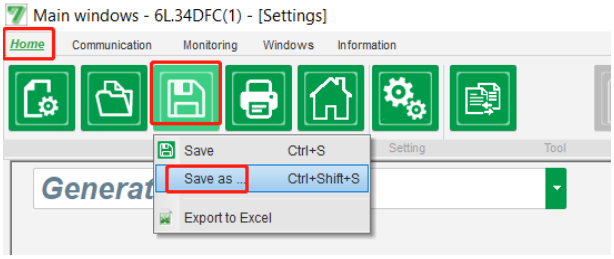
点击 download data from regulator，读取 AVR 的参数配置：
Click "download data from regulator" to read configuration of AVR:



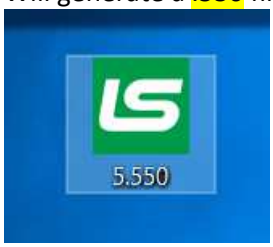

打开后如下图所示： After opening, it is shown in the following figure:



将配置备份至本地，注意存放路径不要放在桌面，文件名为英文：
Back up the configuration to the local, pay attention to the storage path not on the desktop, the file name is in English:

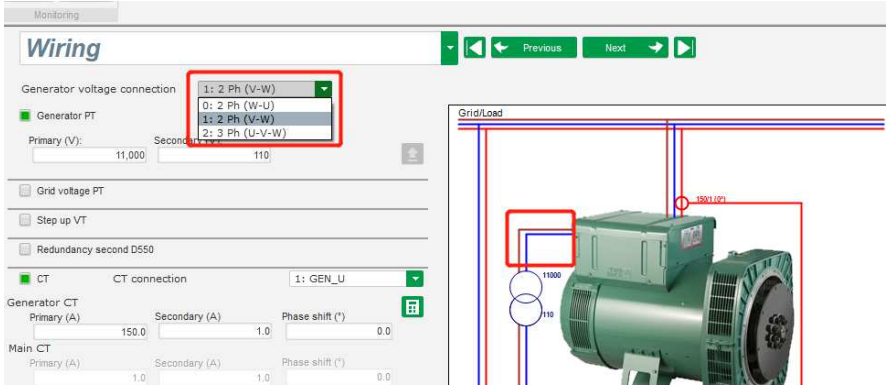



将会生成一个.550 的文件：
Will generate a .550 file:



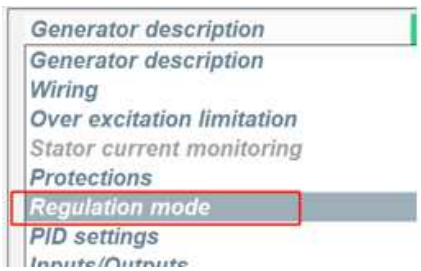

### 3. 接线和互感器配置，Wiring and set transformer

软件中发电机电压检查有 2 相检测和 3 相检测，实际接线和软件选择必须保持一致
如软件中选择 3 相检测，实际接线只有两相，发电机将会过电压.
In software 2 ph and 3 ph can be selected, The actual connection must be consistent with the software selection. If 3 ph is selected in software, but the actual connection is 2 ph, the overvoltage will occur.




### 4. 设置总调压范围 Set the total voltage regulation range

下拉菜单，选择 **Regulation mode**. From the drop-down menu, select Regulation mode.

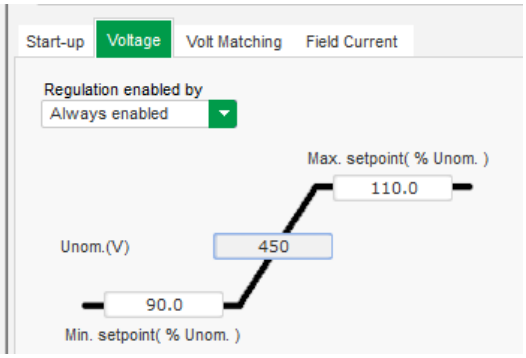


首先设置总调压范围，无论内部还是外部调压，都是在这个范围内。一般设置为 90%-110%。

First set the range of the total voltage regulation, whether internal or external voltage regulation is within this range. Generally set to 90%-110%.

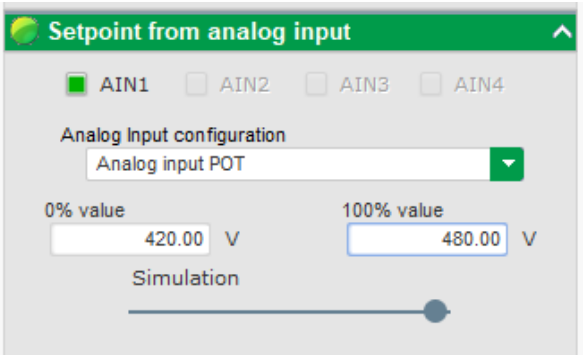
注意如果：Voltage 和 Field Current 都选择 Always enabled, D550 将响应 Field Current 模式

If Both “Voltage”and ” Field Current” are selected Always enabled, D550 will follow “Field Current” mode.




**5. 设置外部模拟量调压 Setpoint from analog input**

点击下方的 setpoint from analog input。Click setpoint from analog input.



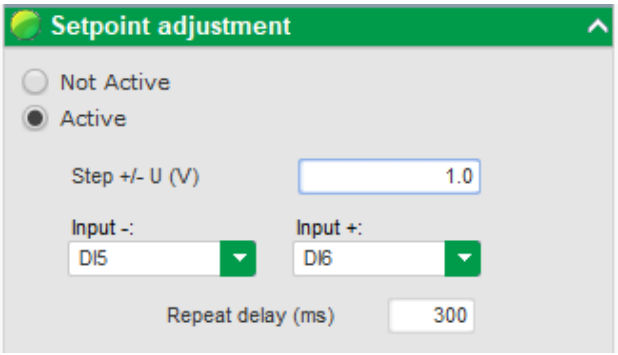

在选择 0/10V 或者 POT，通过 AI1 和 0V 输入外部信号。

“0% value”和“100% value”可根据实际需要进行设定，比如额定电压 450V，可将“0% value”和“100% value”分别设定为 420 和 480。

"0% value" and "100% value" can be set according to actual needs. For example, the rated voltage is 450V, and "0% value" and "100% value" can be set to 420 and 480 respectively.

**6. 设置外部开关量调压 Setpoint switch adjustment**

点击下方的 setpoint adjustment。Click setpoint adjustment.




Step +/-:每一步调压的数值，如设定为 1，代表如下 DI5 或 DI6 开关量动作 1 次，电压变化 1V.

DI5 设定为降电压，DI6 设定为升电压。

Repeat delay：300ms，持续脉冲的的间隔时间。

Step +/-: The value of each step of voltage adjustment. If set to 1, it means that the following DI5 or DI6 switching action will be performed once, and the voltage will change by 1V.

DI5 is set to decrease voltage, and DI6 is set to increase voltage.

Repeat delay: 300ms, the interval time of the continuous pulse.

### 7. 上传修改后的配置 Upload the modified configuration

在进行修改后，需要将程序上传至电脑才生效。选择 PC→AVR 即上传程序至 AVR，待读条完成。

After the modification, the configuration needs to be uploaded to the computer to take effect.

Select PC→AVR to upload the configuration to AVR.


### 8. 电压波动问题 Voltage fluctuation adjustment

当电压的稳态或者瞬态特性超差时，可以尝试调整 PID。

--确保打开了 Negative forcing 和 DC Bus voltage compensation 功能。

--尝试修改 PID 的 G 值，有改善后微调 P 和 D 值，恢复时间可通过 I 值调整。

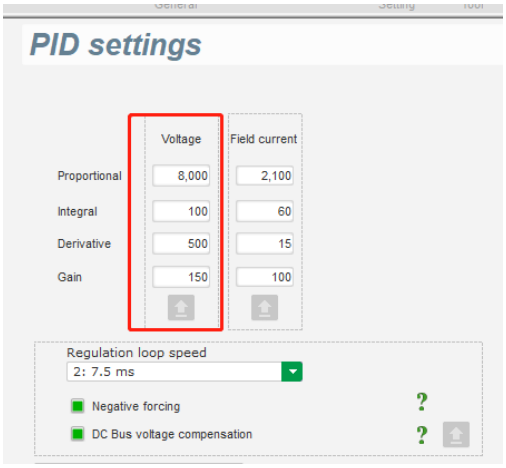
When the steady-state or transient characteristics of the voltage are out of tolerance, you can try to adjust the PID.

-- Make sure that Negative forcing and DC Bus voltage compensation are turned on.

--Try to modify the G value of the PID, fine-tune the P and D values after improvement, and the recovery time can be adjusted by the I value.

--可以在发电机空载时调整。通过点击相应位置的箭头来确保配置成功上传。

Can be adjusted when the generator is not loaded. Make sure the configuration is uploaded successfully by clicking the arrow in the corresponding location.




**9. 软件中参数监控， Voltage fluctuation adjustment**

可选择显示数据或显示曲线。Both Display data and Oscilloscope can be used to monitor.

可以通过以下界面添加需要监控的参数，如励磁电流，主电压，主电流……