

Changing Settings on Fronius Primo and Fronius Symo Inverters – Hawaiian Electric Advanced Inverter Requirements

This document contains step-by-step instructions on changing Fronius inverters from the IEEE-compliant factory settings to the full ride-through and fixed power factor settings required by the Hawaiian Electric utilities Rule 14 from January 2016.

Submit AC Trip Limits Form

Provide Fronius Technical Support with completed AC Change Request Form.

/ Perfect Welding / Solar Energy / Perfect Charging



Request Form to Change Inverter AC Trip Limit Parameters

Introduction:
Fronius inverters have internal AC Voltage and Frequency range settings in order to comply with IEEE and utility interconnection terms and regulations. All Fronius inverters are field adjustable to change the trip points according to the UL 1741 and IEEE 1547 standards. Our inverters are tested and certified with the default Voltage and Frequency settings. The IEEE 1547 standard allows an authorized technician to change the operational parameters of the inverter with utility approval. Note that all Fronius inverters have separate anti-islanding protection, which turns the inverter off in case of a power outage.

Product Type: Fronius Galvo, Primo, Symo

Factory Setting and your Proposed Changes:
Please enter your desired changes in the below table's far right column titled "New Values".

Please note: U is the European nomenclature for Voltage.

Parameters	New Values	
U Inner Limit Max		V
U IL Max TripTime	60	cyf
U Inner Limit Min		V
U IL Min TripTime	1260	cyf
U Outer Limit Max		V
U OL Max TripTime	10	cyf
U Outer Limit Min		V
U OL Min TripTime	30	cyf
U Reconnect Min		SEC
U Reconnect Max		SEC
Freq Inner Limit Max	63.000	Hz
Freq IL Max TripTime	1260	cyf
Freq Inner Limit Min	57.000	Hz
Freq IL Min TripTime	1260	cyf
Freq Outer Limit Max	64.000	Hz
Freq OL Max TripTime	10	cyf

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Request Form to Change Inverter AC Trip Limit Parameters

Freq Outer Limit Min	56.000	Hz
Freq OL Min TripTime	10	cyf
Const. Cos Phi	- 0.950	
Frequency Reconnect Max		Hz
Frequency Reconnect Min		Hz
Initial Start Time		SEC
Reconnect Time		SEC

Accept the Proposal:
I am applying to Fronius USA, LLC to receive an access code to change the AC voltage limits on the Fronius inverters listed below. By signing this form, I certify that all of the following is true and accurate:

- I am a licensed electrician and the utility company has endorsed the change in AC voltage values.
- I will treat the code confidential and use it only for the PV system(s) which I applied for on this form.

Applicant Name: _____
Company: _____
Street Address: _____
City: _____ State: _____ ZIP Code: _____
Email: _____ Phone: _____ Fax: _____

Social Number(s) of Fronius Inverter(s) Proposing to Change:

Signature of Applicant: _____ Date: _____

Return this completed form via fax to: (219) 734-5502 or scan and email
To: pv-support-usa@fronius.com

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6797 Fronius Drive
Portage, IN 46368
USA
Toll Free +1 877 376 6487
Fax +1 219 734 5502
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Fronius Technical Support will provide the access code once they have received the completed document.

Select Setup

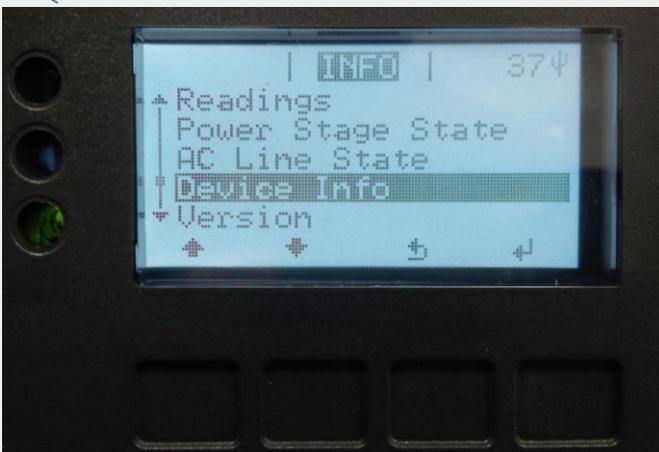
Step 1: When the inverter initializes, it will ask to select the language. Press the  button to make your selection.

Step 2: Select Country should be displayed on the screen. Press the - button until the correct selection is displayed. For Primo inverters, this will be **HI1 US-HI 240V with N**. For Symo inverters, select **HI1 US-HI 240V with N**, **HI2 US-HI 208V with N** or **HI3 US-HI 480V with N** depending on the inverter and voltage of the system. Press the  button to make your selection. All the correct voltage and frequency ride through settings will automatically be adjusted.



Verify Setup

Step 1: When the inverter display is on, navigate to and enter the **INFO** menu. Arrow down until **Device Info** is selected. Press the  button.



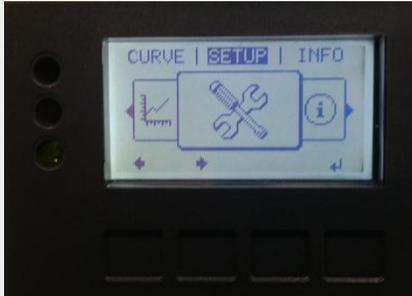
Step 2: **General** will be displayed. Arrow down until **Country Setup** is displayed.



Step 3: Take a picture of the screen for verification to the utility that the correct settings have been used.

Accessing the Hidden Menu

Step 1: When the inverter is displaying wattage, press the  button, scroll over to **SETUP** and press .



Step 2: **STANDBY** should be displayed on the screen. Press the  button 5 times.



Step 3: **Access Code** should now be displayed. Enter the code provided by the Technical Support team. Using + and - change the first number and press  to move onto the next number. Once you are on the last number, press  and the entire number will flash. Press  once more to enter the hidden menu.

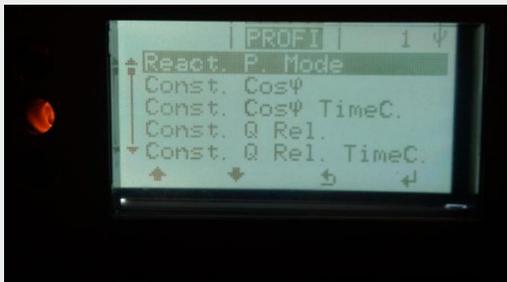


Changing Power Factor to -0.95

Step 1: Press the down arrow until you select **Reactive Power Mode**.



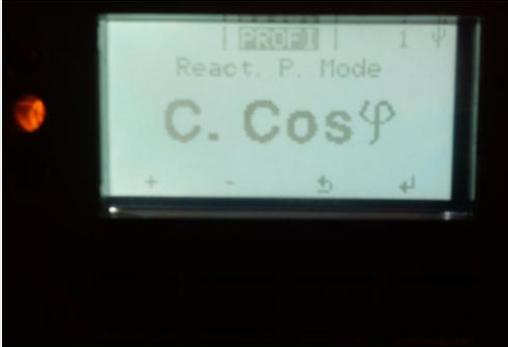
Step 2: Press . **React. P Mode** should be displayed.



Step 3: Press . **OFF** will be displayed.



Step 4: Press the down arrow until you select **C. Cos φ** and press .



Step 5: Press the down arrow until you select **Const. Cos φ** and press .



Step 6: Change + 1.000 to - 0.950 by pressing + and - and  to move onto the next space. Press  on the last number. This will make the entire number flash. *Take a picture of the display as proof for the utility that the setting has been changed.*



Step 7: Press  again and **Const. Cos φ** should be displayed. Press  twice to exit the menu and return to normal operation with the new settings.



SHIFTING THE LIMITS

To verify that the correct settings have been made, the above instructions can be used to access each parameter. Exit each parameter without changing it by pressing .

If you need any assistance, please call the Fronius Technical Support at 877-376-6487, then press 1 for solar, and 1 for technical support. They will gladly assist you with these changes. Or you may email at pv-support-usa@fronius.com.



SHIFTING THE LIMITS

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Company: _____

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City: _____, State: _____, ZIP Code: _____

Email: _____ Phone: _____ Fax: _____

Serial Number(s) of Fronius Inverter(s) Proposing to Change:

Signature of Applicant: _____ Date: _____

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