

Instructions for Smart Grid Parameter Settings

Tools needed:

- DeltaSolar
- Android Phone

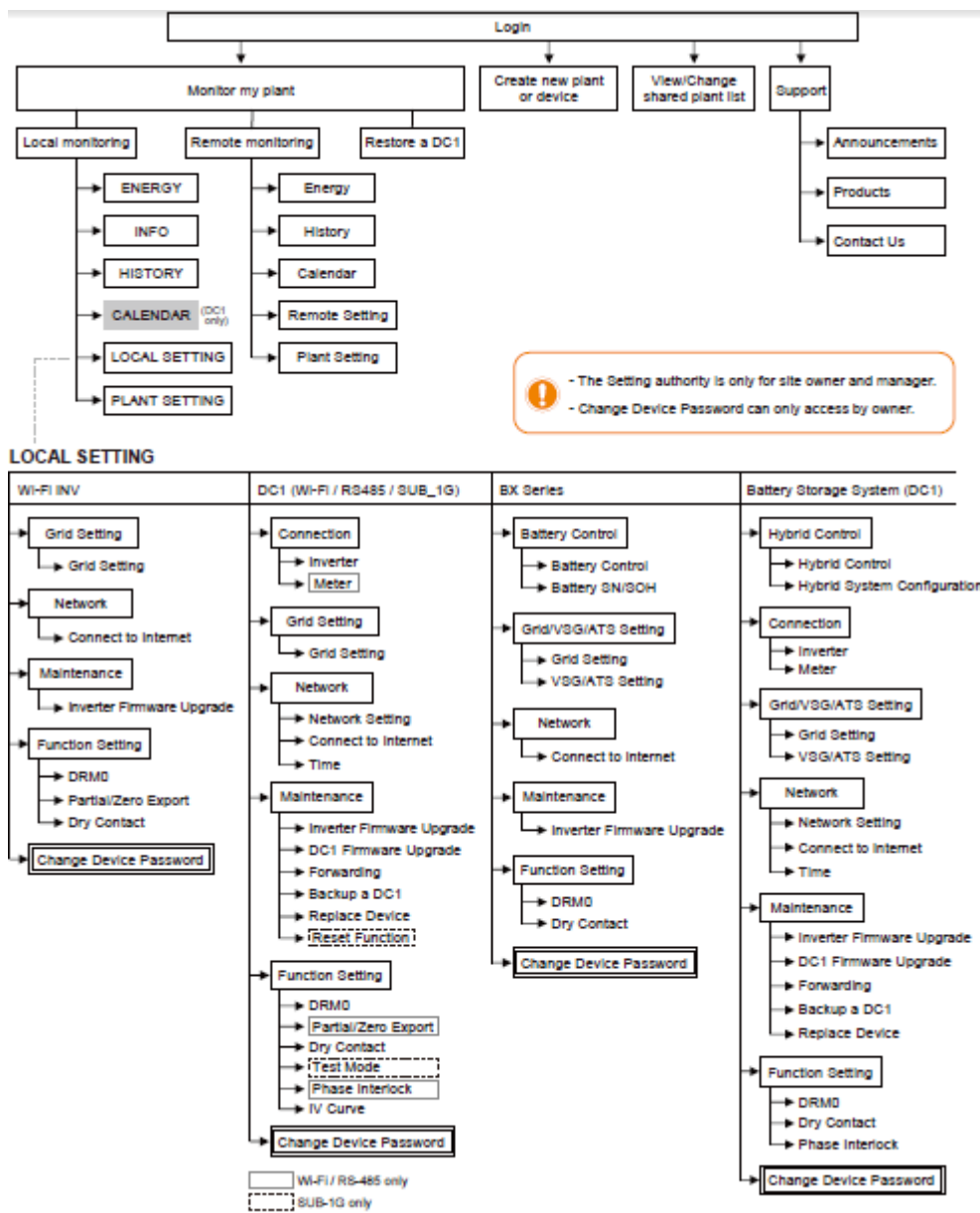
Applicable Inverters:

- H8E
- H9E
- H10E

Procedures for parameter settings:

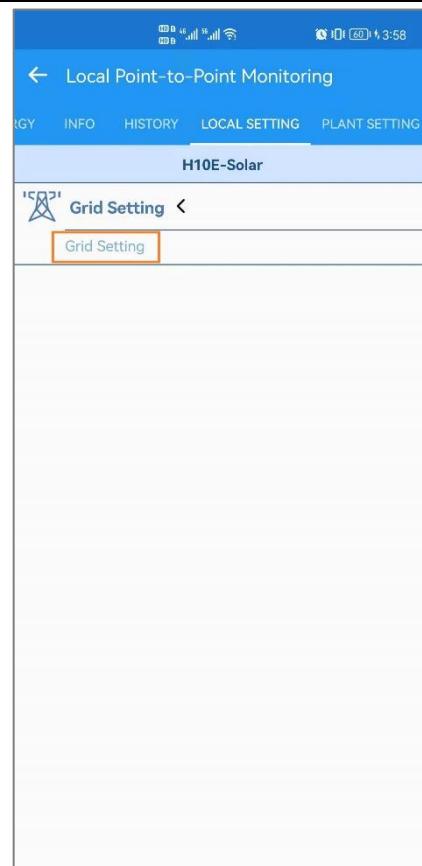
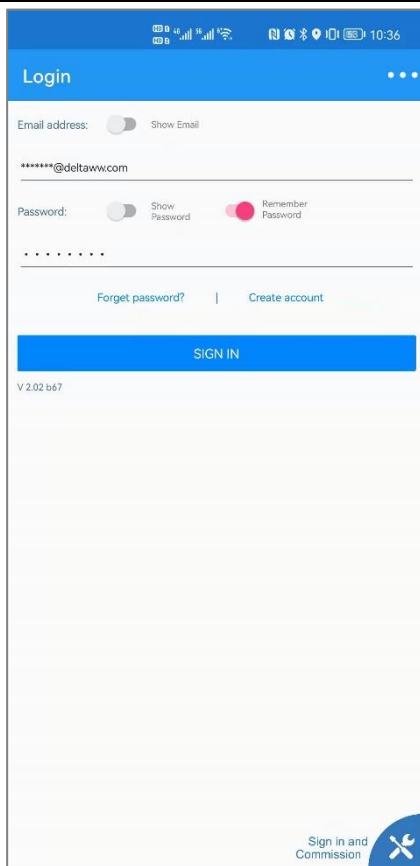
Step 1: Connection

1. Refer to APP2.0 for DeltaSolar installation and basic operation.
2. The App structure was shown as below.



App Structure

3. Select the sheet of 'Local Setting', Click 'Grid Setting' to enter the page of grid setting.



Step 2: Change Parameter settings and Set Grid code

1. The parameters read from the inverter are displayed in the corresponding function blocks. Pull down the page to check the parameters of each function block.
2. The functions included in 'Active Power Control' and 'Reactive Power Control' can be enabled or disabled individually.
3. The current country code is at the top of the interface. Confirm that grid code and utility code is correct before modifying the parameters. Pull down the page to check the parameters of each function block.
4. Each parameter has its own range which is limited according to AS/NZS 4777.2-2020. When you need to modify some parameters, click the currently displayed value and enter the value in the valid range correctly.
5. After the modification is completed, click the 'Single Set' button at the bottom of each function block to save the parameter settings. Multiple modified parameters support simultaneous saving. Then the current parameters are automatically re-read to determine whether the parameters have been modified successfully.

For Australia and New Zealand, there are four utility code can be selected. They are **AS4777.2_2_AU_A**, **AS4777.2_2_AU_B**, **AS4777.2_2_AU_C**, **AS4777.2_2_NZ**. Select the correct country code according to the installation region. Here '**AS4777.2_2_AU_A**' is selected for an example.

9:42
← Grid Setting

Select Inverter ID:

Selected inverter model:

Installation Settings

Country

SINGLE SET

SAME MODEL SET

Insulation Resistance kΩ

Maximum Power W

SINGLE SET

SAME MODEL SET

Grid Settings - Connection

Grid tie/Standalone Mode

External Control

Reconnection Time s

SINGLE SET

SAME MODEL SET

Grid Settings - Voltage

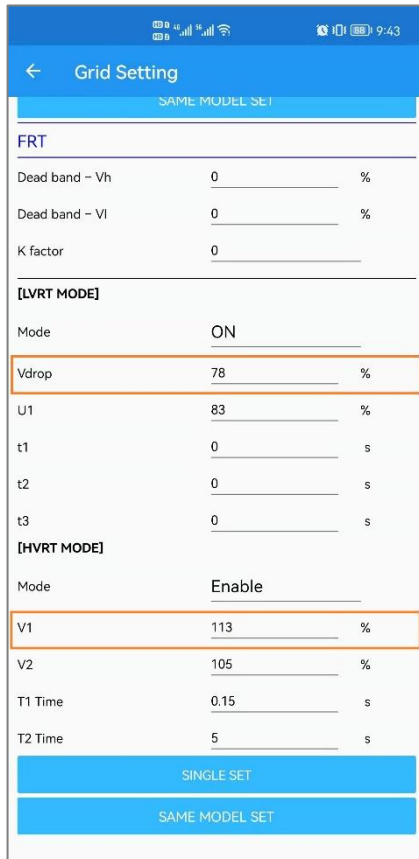
Vac High Off V

Vac High On V

Step 3: Corresponding parameters for each function

Read the settings from each sheet. There're one or several smart grid function blocks per sheet. The default settings of each function block that read from Delta H8E/H9E/H10E inverter were shown as below.

1, Settings of Voltage Limit (Passive anti-islanding Protection) and Voltage Ride-Through (L/HVRT)



The screenshot shows the 'Grid Setting' interface with the following parameters:

FRT		
Dead band - Vh	0	%
Dead band - Vl	0	%
K factor	0	

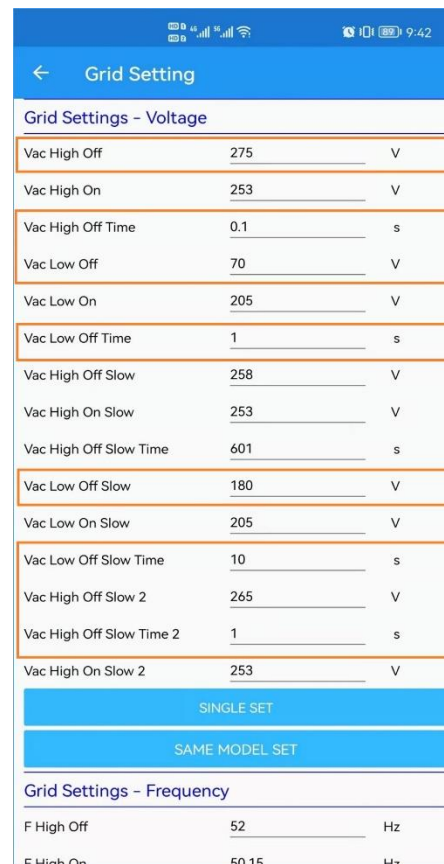
[LVVRT MODE]

Mode	ON	
Vdrop	78	%
U1	83	%
t1	0	s
t2	0	s
t3	0	s

[HVVRT MODE]

Mode	Enable	
V1	113	%
V2	105	%
T1 Time	0.15	s
T2 Time	5	s

Buttons: SINGLE SET, SAME MODEL SET



The screenshot shows the 'Grid Setting' interface with the following parameters:

Grid Settings - Voltage

Vac High Off	275	V
Vac High On	253	V
Vac High Off Time	0.1	s
Vac Low Off	70	V
Vac Low On	205	V
Vac Low Off Time	1	s
Vac High Off Slow	258	V
Vac High On Slow	253	V
Vac High Off Slow Time	601	s
Vac Low Off Slow	180	V
Vac Low On Slow	205	V
Vac Low Off Slow Time	10	s
Vac High Off Slow 2	265	V
Vac High Off Slow Time 2	1	s
Vac High On Slow 2	253	V

Grid Settings - Frequency

F High Off	52	Hz
F High On	50.15	Hz

Buttons: SINGLE SET, SAME MODEL SET

Where:

For LVVRT,

'V_{drop}' is setpoint of under voltage limits. The default value of V_{drop} is 78%V_{nominal}. It is fixed and unchangeable.

't1' is setting of Trip Time of under voltage. The default value of t1 is 10.5s. It is fixed and unchangeable.

For HVVRT,

'V1' is setpoint of over voltage. The default value of V1 is 113%V_{nominal}. It is fixed and unchangeable.

'T1 time' is setting of Trip Time of over voltage. The default value of t1 is 1.5s. It is fixed and unchangeable.

For Passive anti-islanding voltage limit value,

'Vac Low off' is setpoint of under voltage 2 limits. The default value of Vac Low off is 70V. It is

fixed and unchangeable.

'Vac Low off Time' is trip time of under voltage 2 limits. The default value of 'Vac Low off Time' is 1s. The valid range of 'Vac Low off Time' is [0~2] s. Unit: s.

'Vac Low off Slow' is setpoint of under voltage 1 limits. The default value of 'Vac Low off Slow' is 180V. It is fixed and unchangeable.

'Vac Low off Slow Time' is trip time of under voltage 1 limits. The default value of 'Vac Low off Time' is 10s. The valid range of 'Vac Low off Slow Time' is [2~11] s. Unit: s

'Vac High off' is setpoint of under voltage 2 limits. The default value of Vac High off is 275V. It is fixed and unchangeable.

'Vac High off Time' is trip time of under voltage 2 limits. The default value of 'Vac High off Time' is 0.2s. The valid range of 'Vac High off Time' is [0.2~2] s. Unit: s

'Vac High off Slow 2' is setpoint of under voltage 1 limits. The default value of 'Vac High off Slow' is 265V. It is fixed and unchangeable.

'Vac High off Slow 2 Time' is trip time of under voltage 1 limits. The default value of 'Vac High off Time' is 1s. The valid range of 'Vac High off Time' is [0~0.2] s. Unit: s

Refer to the figure above for the definitions of Under Voltage and Over Voltage.

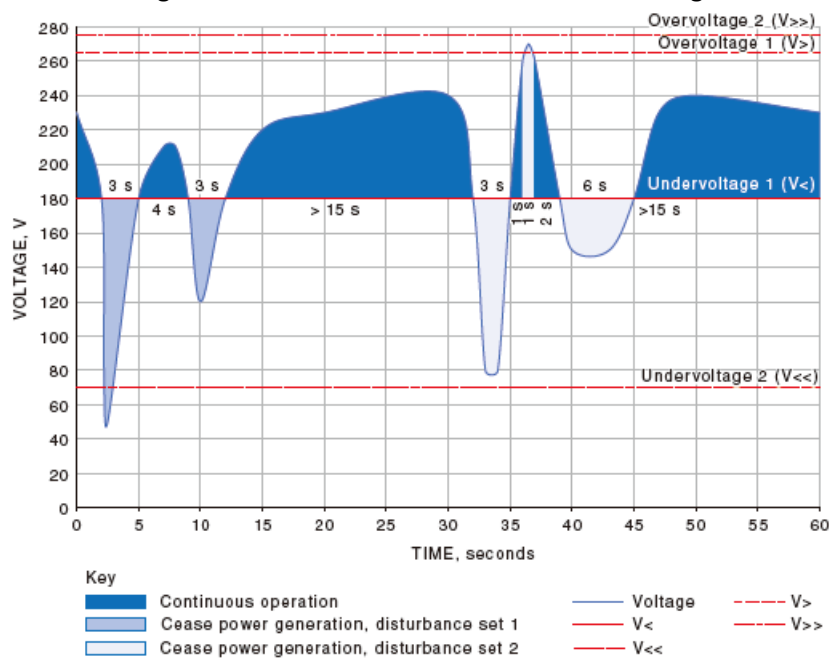


Fig. Example of two multiple voltage disturbance events where the inverter is required to remain in continuous operation

2, Settings of Frequency Limit (Passive ant-islanding Protection)



Grid Setting

Grid Settings - Frequency

F High Off	52	Hz
F High On	50.15	Hz
F High Off Time	0.1	s
Fac Low Off	47	Hz
Fac Low On	47.5	Hz
Fac Low Off Time	1	s
Fac High Off Slow	70	Hz
Fac High On Slow	70	Hz
Fac High Off Slow Time	655.35	s
Fac Low Off Slow	0	Hz
Fac Low On Slow	0	Hz
Fac Low Off Slow Time	655.35	s

SINGLE SET

SAME MODEL SET

Ramp-up Power

Ramp-up Power	100	%
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SINGLE SET

SAME MODEL SET

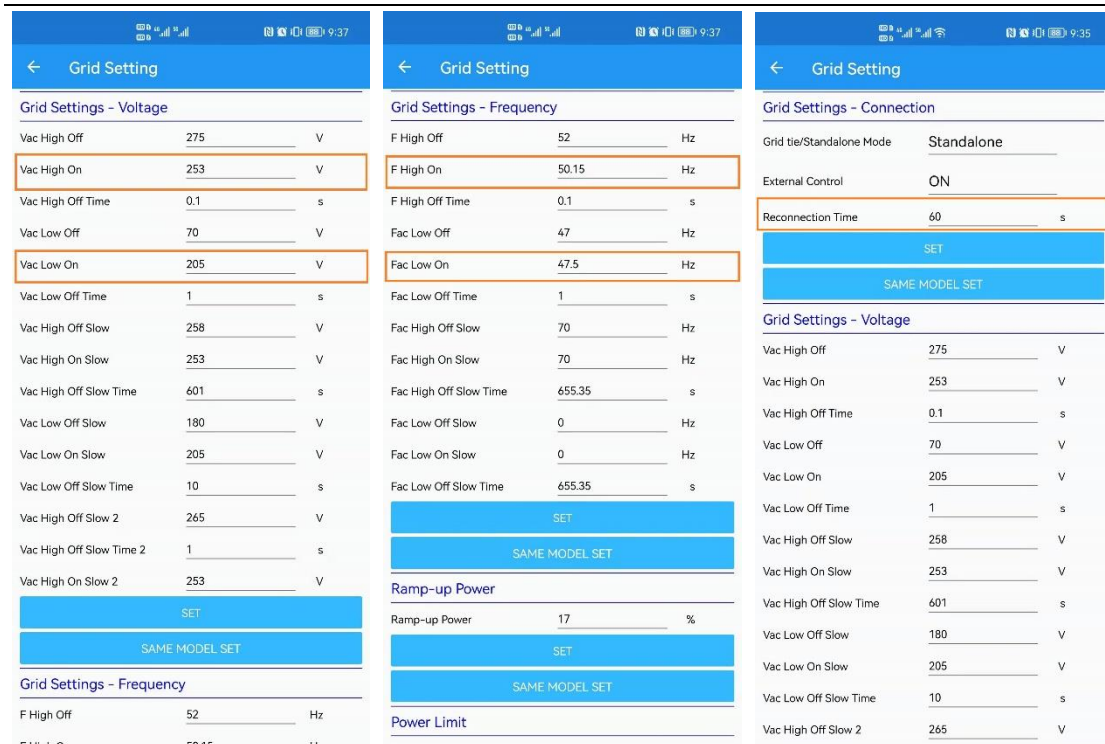
Power Limit

Where:

'OF1 Frequency' is setpoint of lower limit of frequency. The default value for **AS4777.2_2_AU_A** and **AS4777.2_2_AU_B** is 47Hz. The default value for **AS4777.2_2_AU_C** and **AS4777.2_2_NZ** is 45Hz. It can not be changed from DeltaSolar APP.

'UF1 Frequency' is setpoint of upper limit of frequency. The default value for **AS4777.2_2_AU_A** and **AS4777.2_2_AU_B** is 52Hz. The default value for **AS4777.2_2_AU_C** and **AS4777.2_2_NZ** is 55Hz. It can not be changed from DeltaSolar APP.

3, Settings of Connection and Reconnection



Note:

The settings of connection and reconnection is fixed and can not be changed from DeltaSolar APP.

The lower voltage limit of connection and reconnection is $89.1\% V_{\text{nominal}}$.

The upper voltage limit of connection and reconnection is $110\% V_{\text{nominal}}$.

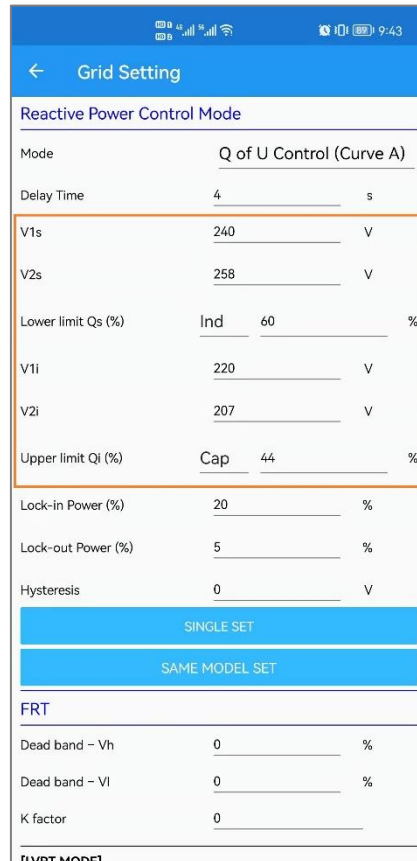
The lower frequency limit of connection and reconnection is 47.5Hz

The upper voltage limit of connection and reconnection is 50.15Hz.

The reconnection time is set to 60s by default. It is fixed and can not be changed from DeltaSolar APP.

4, Volt-Var Response Mode

The volt–var response mode varies the reactive power absorbed or supplied by the inverter in response to the voltage at its grid-interactive port. It is shown as Q of U Control mode on Delta Solar App. The volt–var response mode is enabled by default for H8E/H9E/H10E. The page of Q(U) is show as below.



Reactive Power Control Mode			
Mode	Q of U Control (Curve A)		
Delay Time	4		s
V1s	240		V
V2s	258		V
Lower limit Qs (%)	Ind	60	%
V1i	220		V
V2i	207		V
Upper limit Qi (%)	Cap	44	%
Lock-in Power (%)	20		%
Lock-out Power (%)	5		%
Hysteresis	0		V
SINGLE SET			
SAME MODEL SET			
FRT			
Dead band – Vh	0		%
Dead band – Vl	0		%
K factor	0		
FVRT MODE			

Where:

The default settings of Q(U) will be shown as above.

‘V_{1i}’ is setpoint of V_{V1} (V_{V1} = the voltage at Q1). Unit: V

‘V_{2i}’ is setpoint of V_{V2} (V_{V2} = the voltage at Q2). Unit: V

‘V_{1s}’ is setpoint of V_{V3} (V_{V3} = the voltage at Q3). Unit: V

‘V_{2s}’ is setpoint value of V_{V4} (V_{V4} = the voltage at Q4). Unit: V

‘Lower limit Qs(%)’ is set value of Q1 (Q1 = the max reactive power production setting).
Unit: %Q_{max}

‘Upper limit Qi(%)’ is set value of Q4 (Q4 = the max reactive power absorption setting).
Unit: %Q_{max}

Note:

Default Activation States for Q(U) operations is activated.

The valid range of ‘V_{2i}’ is [180~230]V.

The valid range of ‘V_{2i}’ is [180~230]V.

The valid range of 'V_{1s}' is [230~265]V.

The valid range of V_{2s}' is [230~265]V.

The valid range of 'Lower limit Qs(%)' is [30~60]% absorbing.

The valid range of 'Upper limit Qi(%)' is [30~60]% supplying.

For **AS4777.2_2_AU_A**,

The default setting of 'V_{2i}' is 207V.

The default setting of 'V_{2i}' is 220V.

The default setting of 'V_{1s}' is 240V.

The default setting of 'V_{2s}' is 258V.

The default setting of 'Lower limit Qs(%)' is 60% absorbing.

The default setting of 'Upper limit Qi(%)' is 44% supplying.

For **AS4777.2_2_AU_B**,

The default setting of 'V_{2i}' is 205V.

The default setting of 'V_{2i}' is 220V.

The default setting of 'V_{1s}' is 235V.

The default setting of 'V_{2s}' is 255V.

The default setting of 'Lower limit Qs(%)' is 40% absorbing.

The default setting of 'Upper limit Qi(%)' is 30% supplying.

For **AS4777.2_2_AU_C**,

The default setting of 'V_{2i}' is 215V.

The default setting of 'V_{2i}' is 230V.

The default setting of 'V_{1s}' is 240V.

The default setting of 'V_{2s}' is 255V.

The default setting of 'Lower limit Qs(%)' is 60% absorbing.

The default setting of 'Upper limit Qi(%)' is 44% supplying.

For **AS4777.2_2_NZ**,

The default setting of 'V_{2i}' is 207V.

The default setting of 'V_{2i}' is 220V.

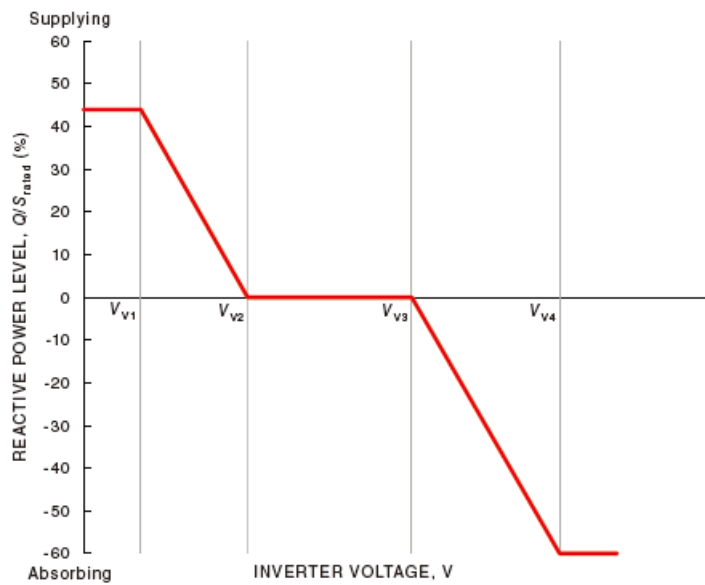
The default setting of 'V_{1s}' is 235V.

The default setting of 'V_{2s}' is 244V.

The default setting of 'Lower limit Qs(%)' is 60% absorbing.

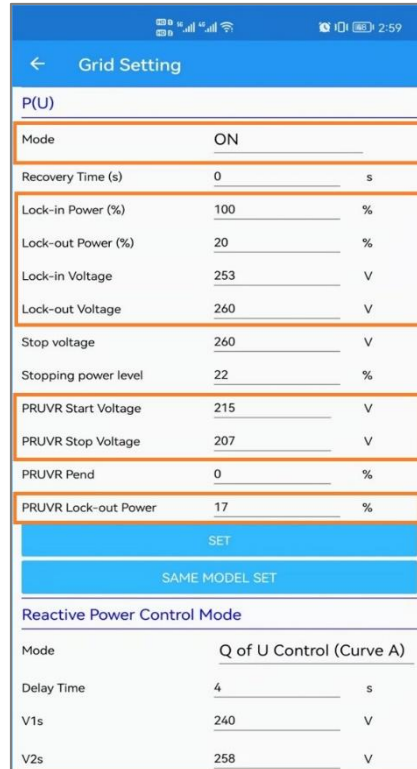
The default setting of 'Upper limit Qi(%)' is 60% supplying.

Refer to the figure below for the definitions of V_{1i}(V_{V1}), V_{2i}(V_{V2}), V_{1s}(V_{V3}), V_{2s}(V_{V4}), Lower limit Qs and Upper limit Qi.



5, Volt-Watt response mode

The volt-watt response mode varies the maximum active power output level of the inverter in response to the voltage at its grid-interactive port. It is shown as P(U) mode on DeltaSolar APP. The volt-watt response mode is enabled by default for H8E/H9E/H10E. The Page of P(U) is shown as below.



The screenshot shows the 'Grid Setting' screen for P(U) mode. The 'Mode' is set to 'ON'. The 'Recovery Time (s)' is 0. The 'Lock-in Power (%)' is 100, 'Lock-out Power (%)' is 20, 'Lock-in Voltage' is 253 V, and 'Lock-out Voltage' is 260 V. The 'Stop voltage' is 260 V and the 'Stopping power level' is 22%. The 'PRUVR Start Voltage' is 215 V, 'PRUVR Stop Voltage' is 207 V, 'PRUVR Pend' is 0%, and 'PRUVR Lock-out Power' is 17%. The 'Reactive Power Control Mode' is set to 'Q of U Control (Curve A)', with a 'Delay Time' of 4 s, 'V1s' of 240 V, and 'V2s' of 258 V.

Where:

'Volt/Watt' is shown as P(U) on APP. The mode switch is ON/OFF of Volt-Watt.

'Lock-in Voltage' is setpoint of V_{W1} (V_{W1} = the voltage at P1). Unit: V

'Lock-out Voltage' is setpoint of V_{W2} (V_{W2} = the voltage at P2). Unit: V

'Lock-in Power(%)' is setpoint of P1 ($P1$ = Rated active power production setting). Unit: $\%P_{rated}$

'Lock-out Power(%)' is setpoint of P2 ($P2$ = Inverter's Min Active Power). Unit: $\%P_{rated}$

Note:

Default Activation States for Volt-Watt operations is activated.

The valid range of ' V_{W1} ' is [235~255]V. Default ' V_{W1} ' setting for **AS4777.2_2_AU_A** and **AS4777.2_2_AU_C** is 253V. For **AS4777.2_2_AU_B**. It is 250V. For **AS4777.2_2_NZ**. It is 242V.

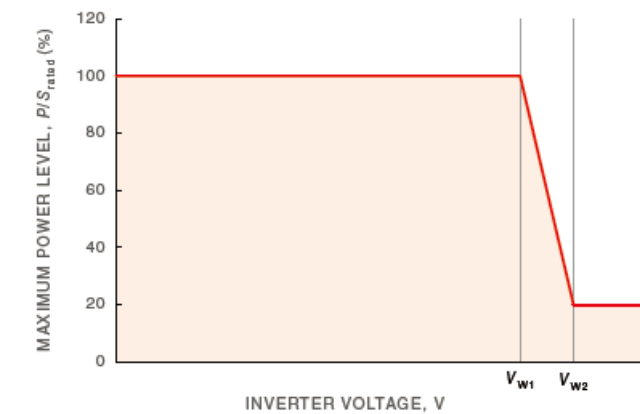
The valid range of ' V_{W2} ' is [240~265]V. Default ' V_{W2} ' setting for **AS4777.2_2_AU_A**, **AS4777.2_2_AU_B**, **AS4777.2_2_AU_C** is 260V. For **AS4777.2_2_NZ**, it is 250V.

The valid range of ' $P1$ ' is [100.0]. It is fixed and can't be changed.

The valid range of ' $P2$ ' is [0~100.0]. Default ' $P2$ ' setting = 20.

Refer to the figure below for the definitions of V_{W1} , V_{W2} , P1 and P2.

The valid range of 'Response Time' is [0s-10s]. Default 'Response Time' setting = 1s.



For Energy storage system,

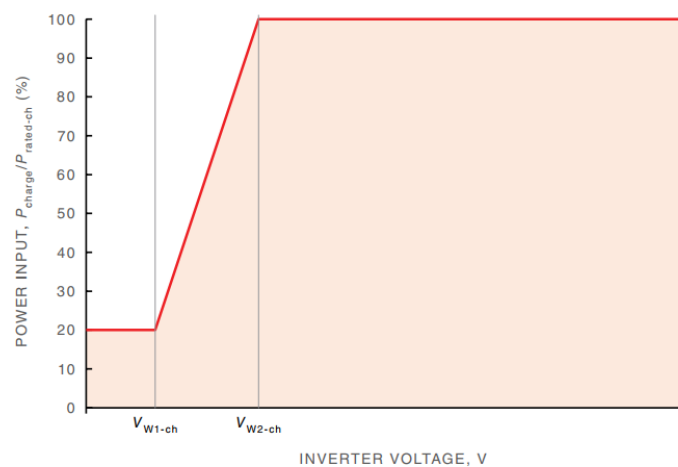
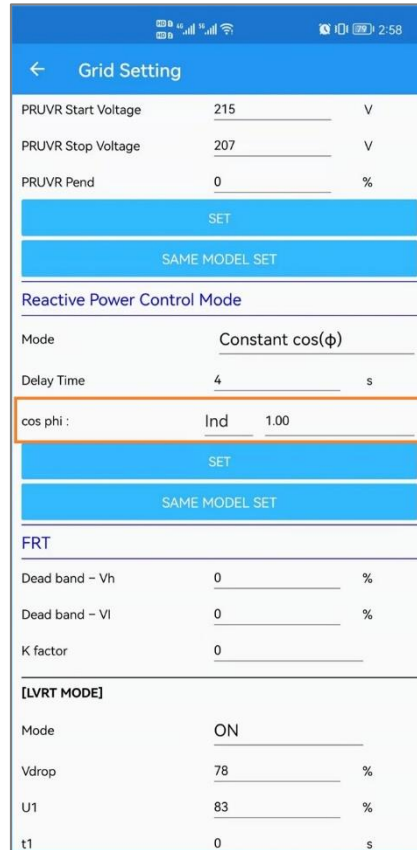


Figure 3.4 — Example curve for the volt-watt response mode for multiple mode inverters with energy storage when charging

6, Fixed Power Factor



Grid Setting		
PRUVR Start Voltage	215	V
PRUVR Stop Voltage	207	V
PRUVR Pend	0	%
SET		
SAME MODEL SET		
Reactive Power Control Mode		
Mode	Constant $\cos(\phi)$	
Delay Time	4	s
cos phi :	Ind	1.00
SET		
SAME MODEL SET		
FRT		
Dead band - Vh	0	%
Dead band - Vl	0	%
K factor	0	
[LVRT MODE]		
Mode	ON	
Vdrop	78	%
U1	83	%
t1	0	s

Where:

If the function of 'Constant $\cos(\phi)$ ' was selected for the reactive power control mode, the default settings of 'Constant $\cos(\phi)$ ' will be shown as above.

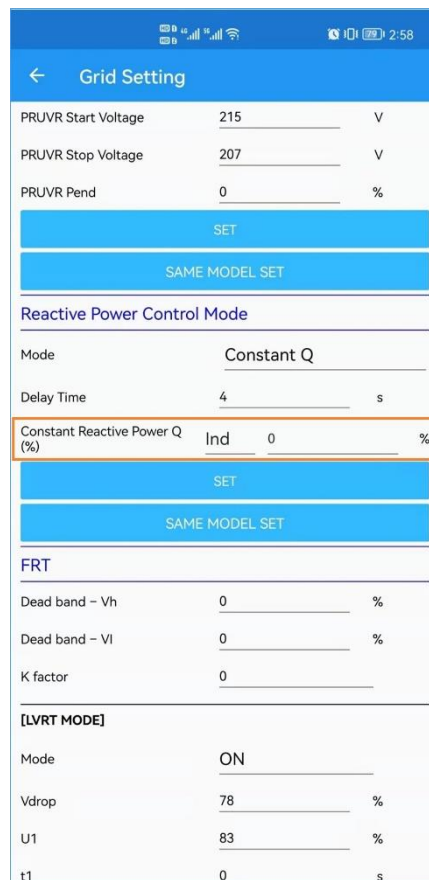
'cos phi' is the setting of Power Factor.

Note:

Default Activation States for 'Constant $\cos(\phi)$ ' operations is deactivation.

The valid range of 'cos phi' is [-0.8~0.8]. Default 'cos phi' setting = 1.

7, Fix Q Mode



Grid Setting		
PRUVR Start Voltage	215	V
PRUVR Stop Voltage	207	V
PRUVR Pend	0	%
SET		
SAME MODEL SET		
Reactive Power Control Mode		
Mode	Constant Q	
Delay Time	4	s
Constant Reactive Power Q (%)	Ind 0	%
SET		
SAME MODEL SET		
FRT		
Dead band - Vh	0	%
Dead band - Vl	0	%
K factor	0	
[LVRT MODE]		
Mode	ON	
Vdrop	78	%
U1	83	%
t1	0	s

Where:

If the function of 'Constant Q' was selected for the reactive power control mode, the default settings of 'Constant Q' will be shown as above.

'Constant Reactive Power Q(%)' is the setting of Fixed Q.

Note:

Default Activation States for 'Constant Q' operations is deactivation.

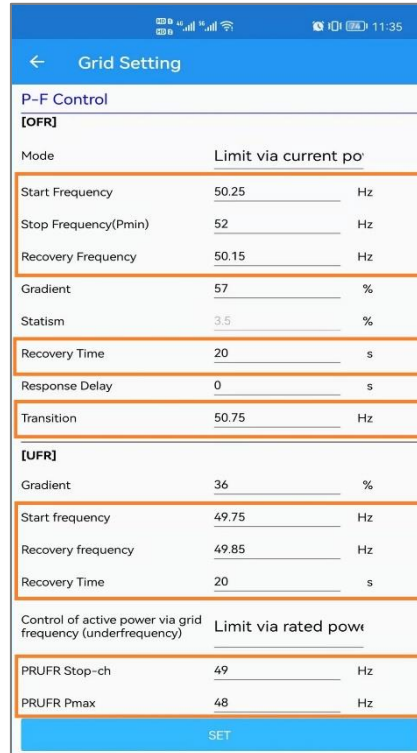
The valid range of 'Constant Reactive Power Q(%)' is [-100~100]. Default 'Constant Reactive Power Q(%)' setting = 0.

8, Settings of Freq-Watt (FW)

'Freq/Watt' function is shown as 'P-F Control on APP. It is limiting the power per current Power by default.

For response to an increase in frequency (show as 'OFR' on APP), when a disturbance results in an increase in frequency that exceeds the continuous operation range (f_{ULCO}), Delta H8E/H9E/H10E inverter will reduce the power output linearly with the increase in frequency until f_{Pmin} is reached. When a disturbance results in an increase in frequency that exceeds

$f_{transition}$, Delta H8E/H9E/H10E inverter will increase the power input level through the grid-interactive port, linearly with the increase in frequency until f_{Pmin} is reached, the maximum charge rate of the energy storage is reached, or the state of charge of the energy storage is full.



P-F Control	
[OFR]	
Mode	Limit via current po
Start Frequency	50.25 Hz
Stop Frequency(Pmin)	52 Hz
Recovery Frequency	50.15 Hz
Gradient	57 %
Statism	3.5 %
Recovery Time	20 s
Response Delay	0 s
Transition	50.75 Hz
[UFR]	
Gradient	36 %
Start frequency	49.75 Hz
Recovery frequency	49.85 Hz
Recovery Time	20 s
Control of active power via grid frequency (underfrequency)	
	Limit via rated power
PRUFR Stop-ch	49 Hz
PRUFR Pmax	48 Hz
SET	

Where:

‘Start Frequency’ is setting of Upper limit of continuous operation range(f_{ULCO}) . Unit: Hz.

‘Stop Frequency’ is setting of frequency where power level is minimum (f_{Pmin}). Unit: Hz.

‘Recovery Frequency’ is setting of the frequency range for returning to continuous operation ($f_{ULCO} - f_{hyst}$) . Unit: Hz. For **AS4777.2_2_AU_A**, **AS4777.2_2_AU_B** and **AS4777.2_2_NZ**, the value of f_{hyst} is 0.1Hz. For **AS4777.2_2_AU_C**, the value of f_{hyst} is 0.05Hz. ‘Recovery Frequency’ is not allowed to set individually. It was changed per ‘Start Frequency’. If the value of ‘Start Frequency’ is changed, the value of ‘Recovery Frequency’ will be changed accordingly.

‘Recovery Time’ is the period that the frequency is maintained within the continuous operation region (less the hysteresis margin). It is fixed to 20s and unchangeable.

‘Transition’ is frequency where discharging power level is zero($f_{transition}$). Unit: Hz.

Note:

Default Activation States for Freq-Watt operations is activated.

The valid range of ‘Start Frequency’ is [50.1~50.5]Hz. For **AS4777.2_2_AU_A**, the default setting of ‘Start Frequency’ is 50.25Hz. For **AS4777.2_2_AU_B**, the default setting is 50.15Hz. For **AS4777.2_2_AU_C**, the default setting is 50.5Hz. For **AS4777.2_2_NZ**, the default setting is 50.2Hz.

The valid range of ‘Stop Frequency’ is [51~53]Hz. For **AS4777.2_2_AU_A**, **AS4777.2_2_AU_B**, and **AS4777.2_2_NZ**, the default setting of ‘Stop Frequency’ is 52Hz. For **AS4777.2_2_AU_C**, the default setting is 53Hz.

The valid range of 'Transition' is [50.5~52]Hz. For **AS4777.2_2_AU_A** and **AS4777.2_2_AU_B**, the default setting of 'Transition' is 50.75Hz. For **AS4777.2_2_AU_C**, the default setting is 51.75Hz. For **AS4777.2_2_NZ**, the default setting is 51Hz.

Refer to the figure below for the definitions of Start Frequency(f_{ULCO}), Stop Frequency(f_{Pmin}), Recovery Frequency($f_{ULCO} - f_{hyst}$) and Transition($f_{transition}$).

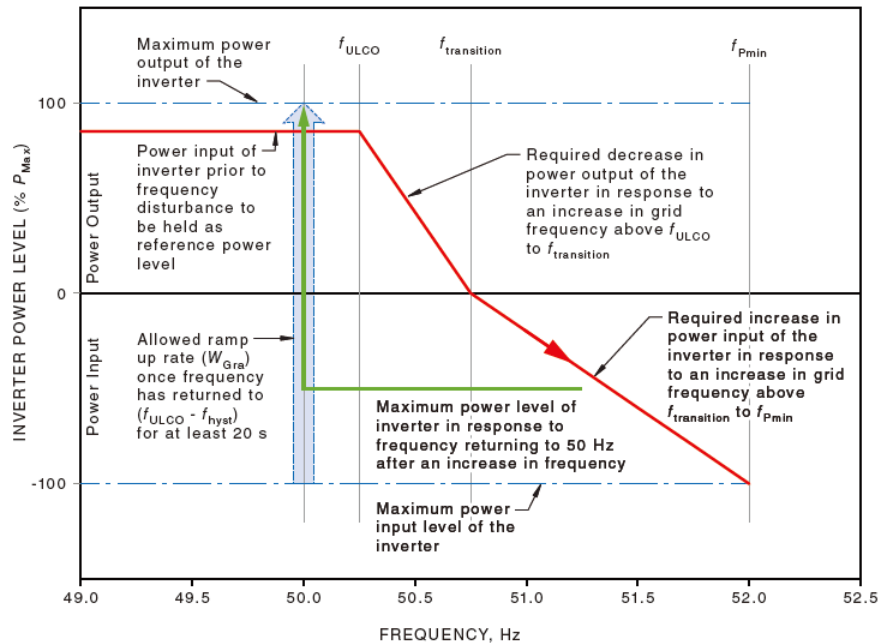
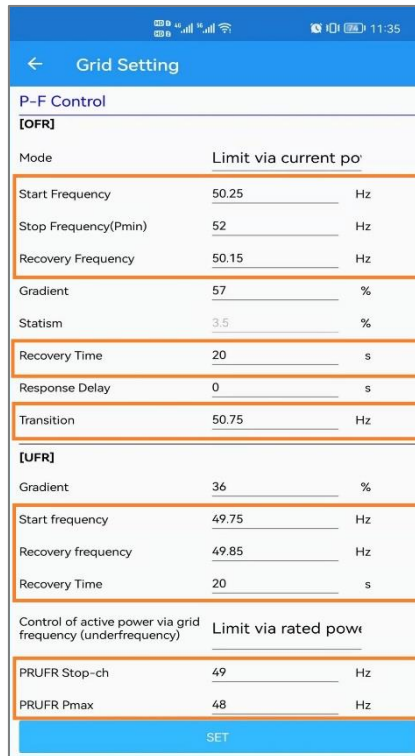


Fig. Frequency response for an increase in frequency for the H8E/H9E/H10E inverter with energy storage for $f_{transition}$ of 50.75 Hz

For response to a decrease in frequency (UFR), when a disturbance results in a decrease in frequency below the continuous operation range (f_{LLCO}), Delta H8E/H9E/H10E inverter will increase the power output linearly with the decrease in frequency until the lower limit frequency range (f_{Pmax}) is reached. When a disturbance results in a decrease in frequency that falls below $f_{stop-ch}$, Delta H8E/H9E/H10E inverter with energy storage will increase the power output level through the grid-interactive port linearly with the decrease in frequency until f_{Pmax} is reached, the maximum discharge rate of the energy storage is reached, or the state of charge of the energy storage is exhausted.



P-F Control		
[OFR]		
Mode	Limit via current po	
Start Frequency	50.25	Hz
Stop Frequency(Pmin)	52	Hz
Recovery Frequency	50.15	Hz
Gradient	57	%
Statism	3.5	%
Recovery Time	20	s
Response Delay	0	s
Transition	50.75	Hz
[UFR]		
Gradient	36	%
Start frequency	49.75	Hz
Recovery frequency	49.85	Hz
Recovery Time	20	s
Control of active power via grid frequency (underfrequency) Limit via rated power		
PRUFR Stop-ch	49	Hz
PRUFR Pmax	48	Hz
SET		

Where:

'Start Frequency' is setting of Lower limit of continuous operation range(f_{LLCO}). Unit: Hz.

'PRUFR Pmax' is setting of frequency where output power level is maximum (f_{Pmax}). Unit: Hz.

'Recovery Frequency' is setting of the frequency range for returning to continuous operation ($f_{LLCO} + f_{hyst}$). Unit: Hz. For **AS4777.2_2_AU_A**, **AS4777.2_2_AU_B** and **AS4777.2_2_NZ**, the value of f_{hyst} is 0.1Hz. For **AS4777.2_2_AU_C**, the value of f_{hyst} is 0.05Hz. 'Recovery Frequency' is not allowed to set individually. It was changed per 'Start Frequency'. If the value of 'Start Frequency' is changed, the value of 'Recovery Frequency' will be changed accordingly.

'Recovery Time' is the period that the frequency is maintained within the continuous operation region (less the hysteresis margin). It is fixed to 20s and unchangeable.

'PRUFR Stop-ch' is frequency where charging power level is zero($f_{stop-ch}$). Unit: Hz.

Note:

Default Activation States for Freq-Watt operations is activated.

The valid range of 'Start Frequency' is [49.5~49.9]Hz. For **AS4777.2_2_AU_A**, the default setting of 'Start Frequency' is 49.75Hz. For **AS4777.2_2_AU_B**, the default setting is 49.85Hz. For **AS4777.2_2_AU_C**, the default setting is 49.5Hz. For **AS4777.2_2_NZ**, the default setting is 49.8Hz.

The valid range of 'PRUFR Pmax' is [47~49]Hz. For **AS4777.2_2_AU_A**, **AS4777.2_2_AU_B**, and **AS4777.2_2_NZ**, the default setting of 'PRUFR Pmax' is 48Hz. For **AS4777.2_2_AU_C**, the default setting is 47Hz.

The valid range of 'PRUFR Stop-ch' is [48~49.5]Hz. For **AS4777.2_2_AU_A** and **AS4777.2_2_AU_B**, the default setting of 'Transition' is 49Hz. For **AS4777.2_2_AU_C**, the default setting is 48.25Hz. For **AS4777.2_2_NZ**, the default setting is 49Hz.

Refer to the figure below for the definitions of Start Frequency (f_{LLCO}), PRUFR Pmax (f_{Pmax}), Recovery Frequency ($f_{LLCO} + f_{hyst}$) and PRUFR Stop-ch ($f_{stop-ch}$).

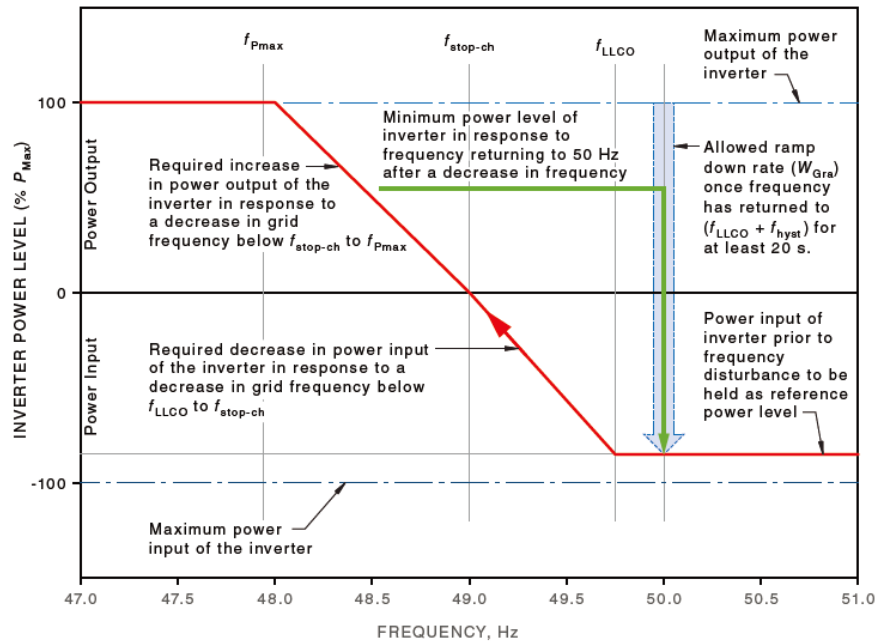
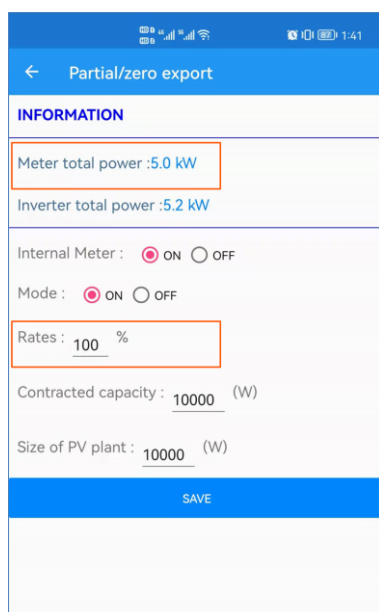


Fig. Two-stage frequency response for a decrease in frequency for H8E/H9E/H10E inverter with energy storage with $f_{stop-ch}$ 49.0 Hz

9, Settings of Export Limit

The Max export power limit of HxE inverters is 5000VA. The value of export power limit can be set to a smaller value. The valid range of export power limit is $[0 \sim 100\%] * 5000VA$. For example, if Rate is set to 50%, that means the inverter will export $50\% * 5000VA = 2500VA$ to the grid.



10, Settings of Anti-islanding

Delta H8E/H9E/H10E use reactive power injection method.

Anti-islanding test was performed with grid support functions enabled according to AS/NZS 4777.2-2020. The trip time of anti-islanding can meet the requirements of within 2 seconds.

Appendix: Firmware Version Statement

The DSP firmware of V01.04 or higher can fully meet AS/NZS 4777.2-2020 and the settings of country code 'AS4777.2_2_AU_A', 'AS4777.2_2_AU_B', 'AS4777.2_2_AU_C' and 'AS4777.2_2_NZ' are according to AS/NZS 4777.2-2020. The firmware version can be checked from the 'Info' sheet. Pull down page of 'Info' and the DSP firmware version are shown in the block of 'FW version' on APP as below.



Local Point-to-Point Monitoring				
ENERGY	INFO	HISTORY	LOCAL SETTING	PLANT SET
Meter info				
Voltage	218.30 V			
Current	2.13 A			
Power	396 W - Feed-in			
Meter Status	On			
Switching Time 1	---			
Switching Time 2	---			
Switching Time 3	---			
Switching Time 4	---			
Switching Time 5	---			
Battery				
Voltage	430.7 V			
Current	1.03 A - Discharge			
Power	443 W - Discharge			
SOH	Good			
SOC	80			
Estimated Time	< 20 minutes			
FW Version				
COMM	99.67			
DSP	01.04			
RED	---			
ARC	---			
SMC	---			
SBMS	01.00			
RBMS	00.01			
WIFI	1.7.8			
DD	01.00			