DECLARACIÓN DEL FABRICANTE

POR EL CUAL SE INFOR A XM Y AL CND SOBRE LOS AJUSTES DE BANDA MUERTA Y THRESHOLD DE LAS FUNCIONES HVRT Y LVRT PARA INYECCIÓN RÁPIDA DE CORRIENTE REACTIVA PARAMETRIZADAS EN LOS INVERSORES 215KTL-H0 DEL PROYECTO FUNDACIÓN DE ENEL GREEN POWER

Gracias por elegirnos como proveedor de equipos para su proyecto de energía solar fotovoltaica.

Por medio de la presente, HUAWEI Technologies Co., Ltd. Se permite notificar que los inversores tipo String de la referencia 215KTL-H0 que fueron suministrados para el proyecto FUNDACIÓN de Enel Green Power han sido parametrizados en sus funcionalidades HVRT y LVRT para inyección rápida de corriente reactiva de la siguiente manera:

Configuration Options	Setting Range	Current Setting
LVRT Triggering Threshold [V]	0 - 800	680
LVRT Gradient K1	0.0 - 10.0	2.0
HVRT Triggering Threshold [V]	800 - 1088	880
HVRT Gradient K1	0.0 - 10.0	2.0

Tabla 1. Parámetros HVRT, LVRT y Factor K

Dead Band Setting	85% - 110%
	680 V - 880 V

Tabla 2. Dead Band Settings

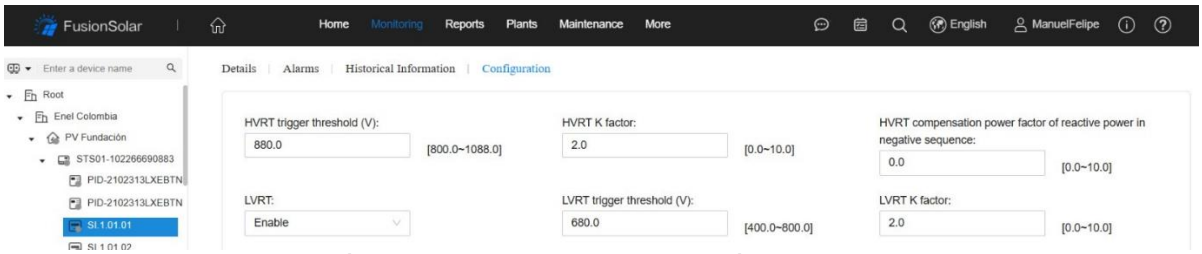

Figura 1. Configuración HVRT y LVRT del proyecto Fundación vista desde el FusionSolar App

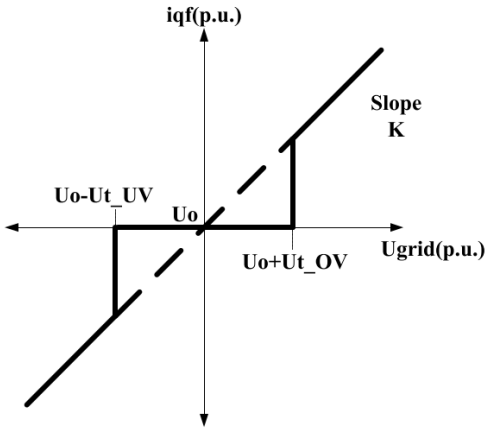

Figura 2. Slope K for the reactive current control strategie

Definiciones:

Dead Band: Voltage range in which the fast-reactive current injection control does not operate.

LVRT REACTIVE CURRENT CONTROL STRATEGIES: When the inverter detects the grid voltage drops, the reactive current Iq behaves as the following formula. Iq is the capacitive reactive current, k is the factor that reflects the ratio of reactive current and the gird voltage drop value, IN is the nominal current of the inverter, Upu is the grid positive phase sequence voltage ratio through the fault, U0 is 0.5s the grid voltage average before the fault. The max value of I_q was limited to the nominal current of the inverter; the default value of k is 2.

The I_q during LVRT satisfies the following formula: $I_q = Iq + Iq0$ $(-IN \le I_q \le IN)$. The Iq0 is 0.5s reactive current average before the fault.

- For 3-phase symmetrical faults:
  $Iq = k \times (U0 - Upu) \times IN$ $(-IN \le Iq \le IN)$
- For unsymmetrical faults:
  $Iq = k \times (U0 - Upu) \times IN$ $(-0.4 \times IN \le Iq \le 0.4 \times IN)$

LVRT: LVRT is short for low voltage ride-through. When the grid voltage is abnormally low for a short time, the inverter cannot disconnect from the power grid immediately and has to work for some time.

LVRT triggering threshold (V): Specifies the threshold for triggering LVRT. The threshold settings should meet the local grid standard.

LVRT gradient K1: During LVRT, the inverter needs to generate reactive power to support the power grid. This parameter is used to set the to set the positive- sequence reactive power generated by the solar inverter. For example, if you set LVRT reactive power compensation factor to 2, the positive sequence reactive current generated by the solar inverter is 20% of the rated current when the AC voltage decreases by 10% during LVRT.

HVRT: HVRT is short for high voltage ride-through. When the grid voltage is abnormally high for a short time, the inverter cannot disconnect from the power grid immediately and has to work for some time.

HVRT triggering threshold (V): Specifies the threshold for triggering HVRT. The threshold settings should meet the local grid standard.

HVRT gradient K1: During HVRT, the solar inverter needs to generate positive-sequence reactive power to support the power grid. This parameter is used to set the positive sequence reactive power generated by the solar inverter. For example, if you set HVRT compensation power factor of reactive power in positive sequence to 2, the increment of positive-sequence reactive current generated by the solar inverter is 20% of the rated current when the AC voltage increases by 10% during HVRT.

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