
HECO Transient Over-Voltage Trip Declaration of Compliance

965-1036-01-01
Rev A

1.0 Compliance with Hawaiian Electric Companies (HECO) Transient Over-Voltage Trip (TOV)

1.1 Schneider Electric Product Models

Conext™ XW+ Inverter/Charger

- **XW+ 6848 NA** (Product Number: 865-6848-01)
- **XW+ 5848 NA** (Product Number: 865-5548-01)

1.2 Customer

Hawaiian Electric Companies (HECO)

1.3 Requirement

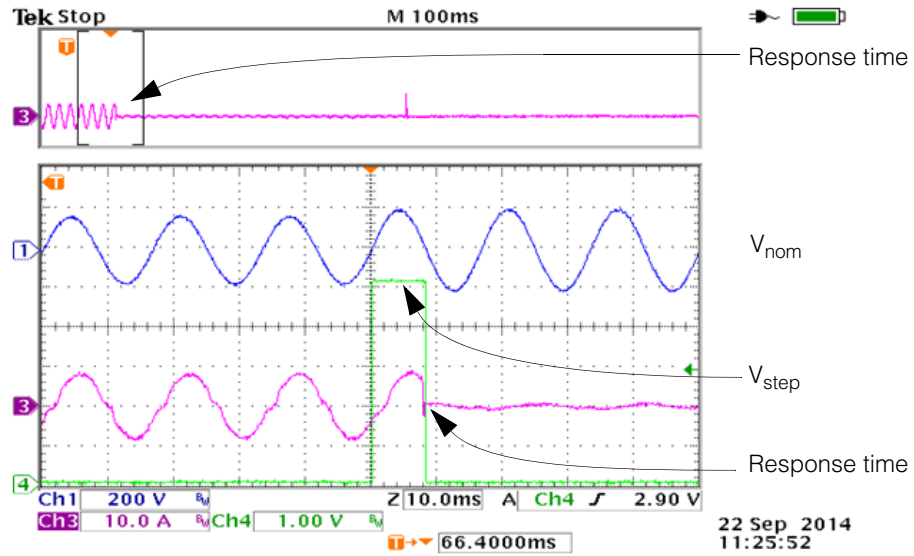
Transient Over-voltage (TOV)

Static inverter equipment which energize the local grid via connection at PCC, shall have the ability to trip (cease export of power) within a duration of 1/60th of a second or less when grid voltage rises above 120% of nominal.

Conext XW+ Inverter/Chargers containing firmware version 2.01 and higher are compliant with this requirement. To demonstrate this compliance, fast over-voltage faults (TOV) were tested at Schneider Electric facilities and disconnect times were measured and recorded.

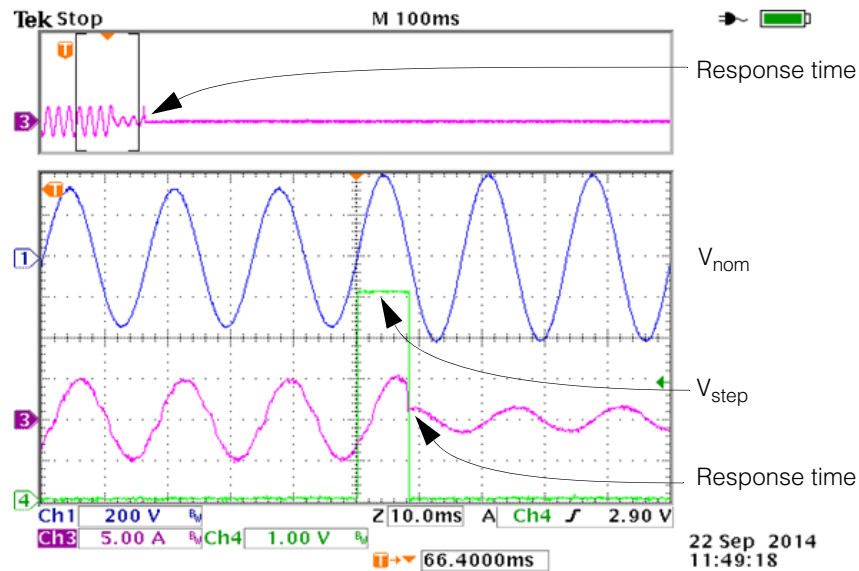
Measurements were made for both 120 VAC and 240 VAC grid connections. The results shown in Figure 1, "Single-phase Grid Connection, L-N, 120 VAC Measurement" on page 2 and Figure 2, "Single-phase connection Grid Connection, L-L, 240 VAC Measurement" on page 2 represent the longest response times after several trials.

Note: The feature **TOV_DISCNCT** is **Enabled** on the inverter under **Advanced Features**.



- $V_{nom} = 120 \text{ VAC}$ (trace 1)
- $V_{step} = 144 \text{ VAC}$ (rising edge of trace 4)
- Response time = 8 ms (falling edge of trace 3)
- **Ceases to energize grid 8 ms after voltage transient begins**

Figure 1 Single-phase Grid Connection, L-N, 120 VAC Measurement



- $V_{nom} = 240 \text{ VAC}$ (trace 1)
- $V_{step} = 288 \text{ VAC}$ (120% of V_{nom} – occurs at rising edge of trace 4)
- Response time = 8 ms (falling edge of trace 3)
- **Ceases to energize grid 8 ms after voltage transient begins**

Figure 2 Single-phase connection Grid Connection, L-L, 240 VAC Measurement

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Date: November 2014

Revision: Rev A

Document Number: 965-1036-01-01

Contact Information

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