

# Conext™ Core XC and XC-NA Series

TN-XC-055-EN

Revision A

## Grid Tied Photovoltaic Inverter :

## Phase Rotation Technical Note

### NOTICE

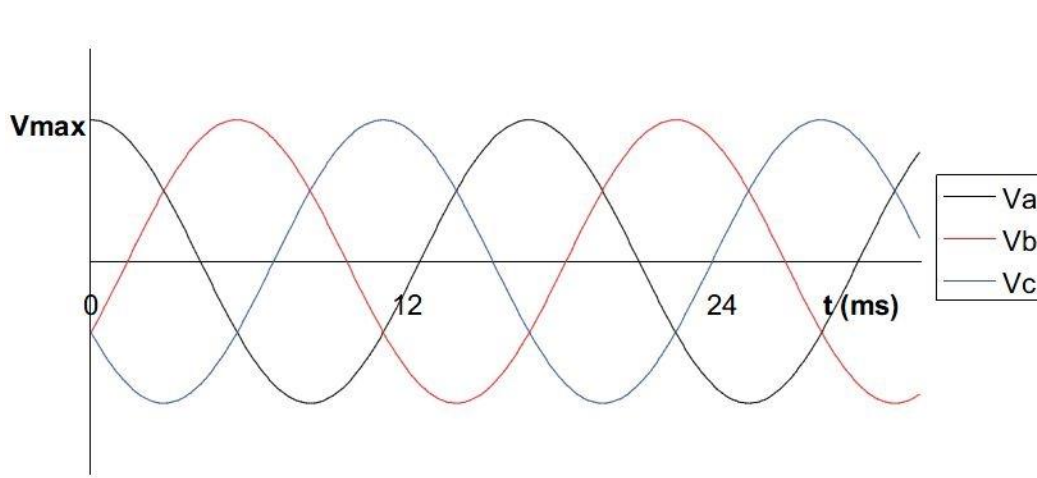
#### EQUIPMENT DAMAGE

When connecting external AC wires to the Conext Core XC and XC-NA Series, positive, clockwise phase rotation must be maintained throughout the installation process in North America and Europe<sup>1</sup>. Outside of these countries, refer to local codes and standards to ensure correct phase rotation for your installation.

**Failure to follow these instructions can result in equipment damage.**

Three-phase power is characterized by three different phases, each with a phase shift 120 degrees from the other two phases. The three phases are typically referred to as “A”, “B”, and “C”. Figure 1 shows a graphic representation of three-phase voltages.

*Figure 1 Graphical representation of three-phase voltages*



<sup>1</sup> Version v3.00B of the firmware auto-detects and corrects phase rotation. Older firmware versions require the inverter to be physically connected in the correct phase rotation.

The peaks of the voltage waveforms are 120° (5.5 ms at 60 Hz) apart. Note that the peak of phase A occurs before the peak of phase B, which in turn occurs before the peak of phase C. This is referred to as an ABC (or clockwise) phase rotation. If any two phase labels are swapped, the result will be CBA (counter-clockwise) phase rotation. The Conext Core XC and XC-NA Series requires clockwise phase rotation at all times in North America and Europe<sup>1</sup>. Outside of these countries, refer to local codes and standards to ensure correct phase rotation for your installation.

Incorrect phase rotation on Conext Core XC and XC-NA Series with firmware version lower than v3.00B may result in incorrect production of reactive power, resulting in Voltage Stable Timeout, and Pre-charge Timeout events.

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### **Contact Information**

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