



## Application Note:

### **Utilizing Large External Current Transformers for Sol-Ark 3 Phase Inverters**

***DISCLAIMER:*** *It is important to carefully read and follow all local code, manufacturer's instructions, and safety guidelines. Sol-Ark LLC disclaims all liability for any personal injury, property damage, or other damage that may result from mis-applying the information in this document.*

## Introduction

This document addresses the selection and programming of larger compatible CTs for Sol-Ark C&I inverters, particularly the 30K and 60K models. While 30K and 60K inverters come with 300A CTs by default, it may be necessary to purchase a larger CTs for larger service sizes (e.g 600A, 1200A).

## Recommended Hardware

The following CT sensor has been tested and recommended for PCS operation of the Sol-Ark 30K-3P-208 and 60K-3P-480 inverters.

**Note:** The installer is responsible for choosing the correct CT sensor for the intended application.

Manufacturer	Model	Input:Output	Programed CT Ratio	Window Size	Website
AccuEnergy	<a href="#">AcuCT-3135R</a>	600A:5A	12000:1	80.0mm x	<a href="#">Brochure</a>
		800A:5A	16000:1	90.0mm	
		1200A:5A	24000:1	(3.10" x 3.50")	
AccuEnergy	<a href="#">AcuCT-4161R</a>	600A: 5A	12000:1	105.0mm x	<a href="#">Brochure</a>
		800A:5A	16000:1	155.0mm	
		1200A:5A	24000:1	(4.10" x 6.10")	

Table 1 AcuCT Characteristics.

## Connection and Installation

The Acuenergy CT sensor should be used on the right most CN1 sensor pinouts, labeled "5A > Input > 1A".

CT Phase A (Pin 1 & 2) [White+, Black-]

CT Phase B (Pin 3 & 4) [White+, Black-]

CT Phase C (Pin 5 & 6) [White+, Black-]

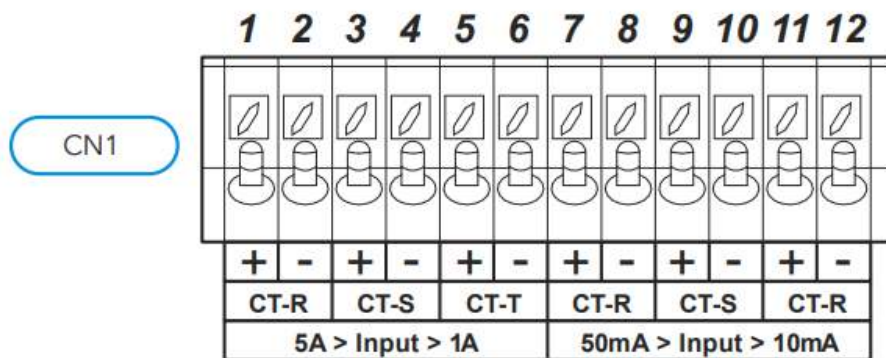


Figure 1 30/60K Inverter CT Wiring Area.

For accurate measurements, ensure the CT sensor's direction arrows point towards the inverter.

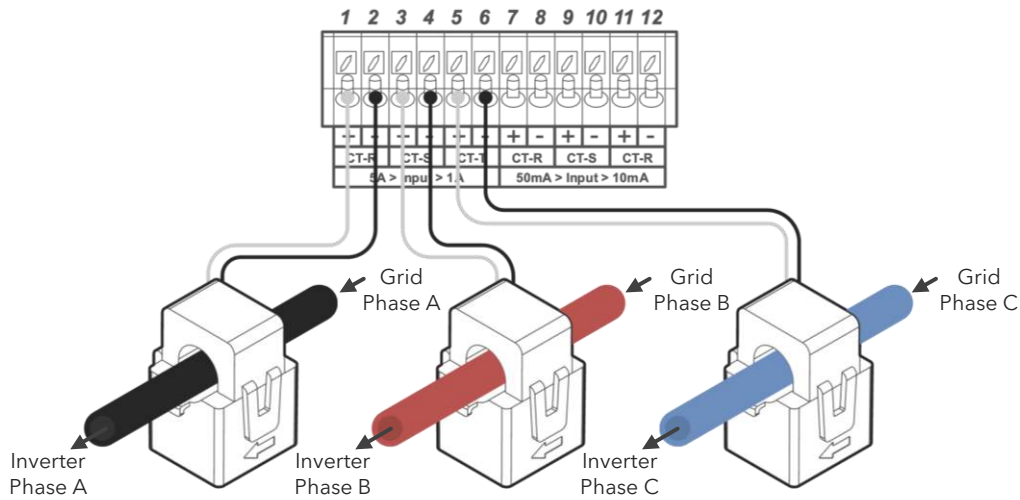


Figure 2 Detail view of CT connections and orientation.

## Programing.

Please note Fig.2. Highlighted in RED is the specific setting that needs to be programmed for modifying the CT ratio. Please program according to the intended CT as shown in Table 1.

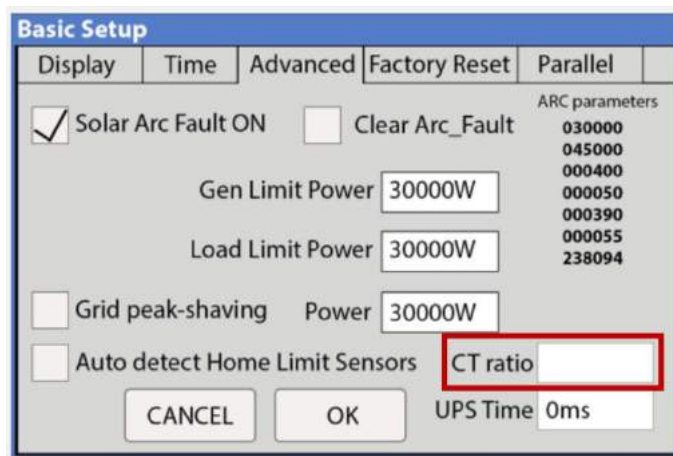


Figure 3 Programmable Screen Setting on the inverter for modifying CT Ratio.

Please enable **Limited Power to Home** function for the inverter to consider CT current readings.

**Note: These CTs are compatible with Sol-Ark Commercial products only  
DO NOT USE for Sol-Ark Residential products.**

For any more information or questions, contact technical support at [support@sol-ark.com](mailto:support@sol-ark.com)