CXC HP CT-IPM

Quickstart Guide

Part Number: 0180028-QS

Read this document carefully

This document contains important safety instructions that must be followed during the installation, servicing, and maintenance of this product. Keep it in a safe place. If there are any questions regarding the safe installation or operation of this product contact EnerSys Energy Systems or your nearest Alpha® representative.

Save this document for future reference.

Introduction

The Cordex High Performance Current Transducer Interface and Power Module (CXC HP CT-IPM) interfaces with current transducers and translates transducer signals to the current inputs available on Cordex® CXC HP smart peripherals.

The current transducers are paired with the CXC HP CT-IPM and connected to Cordex® monitoring devices such as the CXC HP L-ADIO, CXC HP 6i-ADIO, and CXC HP HV-ADIO peripherals. The CXC HP CT-IPM makes it possible to measure the RMS value of an AC feed (50/60Hz) or the direct value of a DC feed. It provides CAN power via the **CAN OUT** connector. This feature is intended for power injection in to existing CAN lines. The CXC HP CT-IPM does not by itself communicate via CAN.

The **ACCT** outputs provide an RMS representation of the current when measuring AC while the **DCCT** outputs preserve the polarity information when measuring DC current. Both AC and DC currents can be measured using the same transducer.

The CXC HP CT-IPM setup consists of two parts – the Wiring setup and the Cordex® CXC HP controller setup. The Cordex® CXC HP controller setup describes the process for creating the module in the system – allowing you to view the data through the controller.

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Specifications

Electrical	
Input voltage	10 to 60 Vdc
Input power	11 W
Input current	1.2 A max.
Features	
LED	**Solid blue:** Power
CT interface	• ±10 Vdc signal DC or 50/60 Hz AC • ±15 Vdc bias for sensor
Analog output	• **DCCT output:** ±200 mVdc • **ACCT output:** 0 to 200 mVdc
CAN power	• 5 Vdc 500 mA max., on CAN Out connector only • Signal pass through
Mechanical	
Dimensions H × W × D	131.3 × 83.9 × 28.9 mm (5.1 × 3.3 × 1.2 in.)
Weight	0.16 kg (0.35 lb)
Mounting	• 3RU height • 19-inch or 23-inch rack mount (option) • DIN rail mount (option) • Panel mount (option)
Environmental	
Temperature	**Extended:** –40 to 70°C (–40 to 158°F)
Relative humidity	0 to 95% non-condensing
Elevation	–500 to 2000 m (–1640 to 6562 ft)

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Agency compliance

Agency compliance	
Safety	EN 62368-1 (Pending)
EMC	• FCC CFR47 Part 15/B- Class B • CAN ICES-003(B) / NMB-003(B) • EN55032 (CISPR 22) Class B • ETSI EN 300 386 • EN 61000-4-2 • EN 61000-4-3 • EN 61000-4-4 • EN 61000-4-6
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna. • Increase the separation between the equipment and receiver. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for help.	

General safety

You must read and understand the following warnings before installing the system and its component. Failure to do so could result in personal injury or death.

- Read and follow all instructions included in this document.
- Only trained personnel are qualified to install or replace this equipment and its components.
- Use proper lifting techniques whenever handling equipment, parts, or batteries.

Electrical safety

WARNING

The Cordex® CXC HP controller used in the power system is Safety Extra Low Voltage (SELV) so no shock hazard exists. However, high currents are possible if I/O lines are not correctly fused. The DC output from the rectifiers and the battery system has a high short circuit current capacity that may cause severe burns and electrical arcing. Use extreme care when working inside the shelf while the system is energized. Do not make contact with live components or parts.

Before working with any live battery or power system, follow these precautions:

- Remove all metallic jewelry, such as watches, rings, metal rimmed glasses, or necklaces.
- Wear safety glasses with side shields at all times during the installation.
- Use OSHA approved insulated hand tools. Do not rest tools on top of batteries.

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Installation and safety precautions

Only qualified personnel should install and connect the power components within the Cordex® power system.

The installer should follow all applicable local rules and regulations for electrical and battery installations; for example, CSA, UL, CEC, NEC, OSHA, and local fire codes. It is suitable for installation as part of the Common Bonding Network in one or more of the following locations:

- Network Telecommunication Facilities
- Locations where the NEC applies
- OSP

Wiring setup

CAUTION

To reduce the risk of fire, only use 0.14 mm² (26 AWG) or larger wire. When wiring the CXC HP CT-IPM power connection, use an over current protection in line that is appropriate with the wiring used. Make sure Ground is connected on both the system chassis and the CXC HP CT-IPM.

1. Install the CXC HP CT-IPM in your system by mounting it on a rack, panel, or DIN rail.
2. Choose an appropriate sized current transducer and place it on the AC or DC line. Connect the current transducer to the CXC HP CT-IPM input using one of the standard cable wires. You can connect up to three current transducers per CXC HP CT-IPM. If more are needed, multiple CXC HP CT-IPM modules can be used.
3. Connect auxiliary power (10 to 60Vdc range) to the CXC HP CT-IPM. Make sure Ground (GND) is connected on both the chassis and the connector plug.
4. Connect each output of the CXC HP CT-IPM to a current input on a CXC HP L-ADIO or CXC HP 6i-ADIO peripheral. To preserve the polarity information when measuring DC, use the **DCCT** output channels (wired between **COM** and **DCCT**). When measuring AC currents (50/60Hz) connect to the **ACCT** output for an RMS representation of the AC current (wired between **COM** and **ACCT**).
5. Connect a CAN communication cable back to the CXC HP L-ADIO peripheral or controller.

NOTICE

The CXC HP CT-IPM attenuates the signals received by the current transducer 50 times in order to make them compatible with the current inputs of Cordex® CXC HP family devices. The correct ramp coefficient is automatically calculated when the wizard is used on the Cordex® CXC HP controller.

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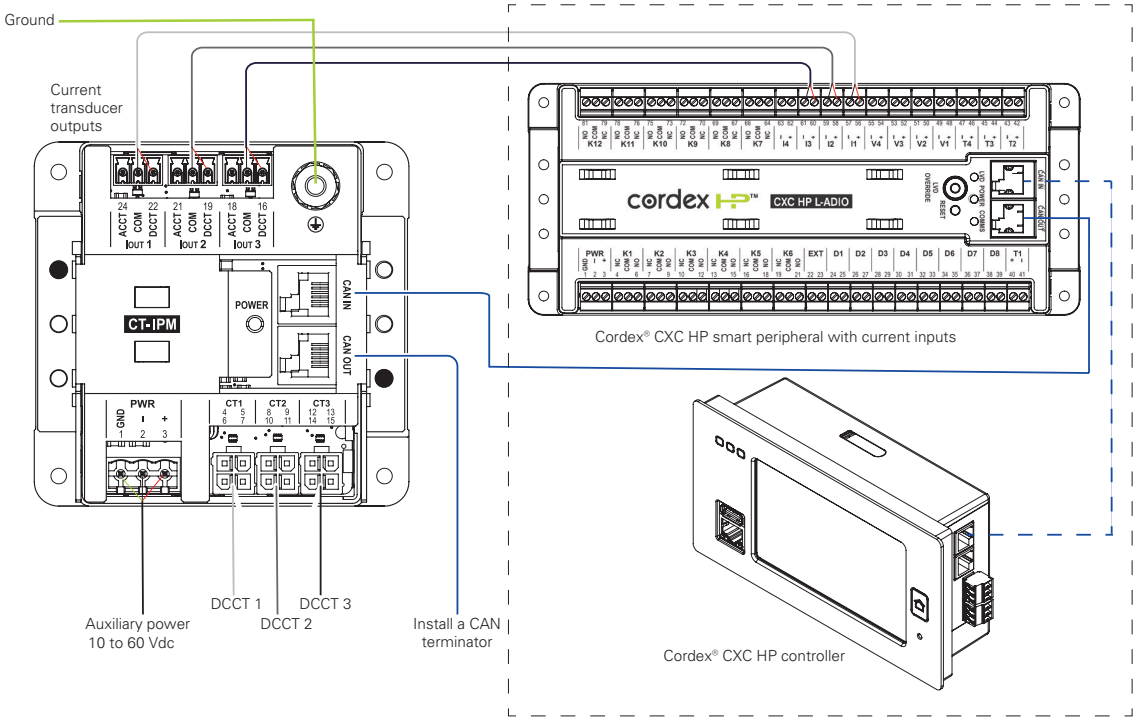


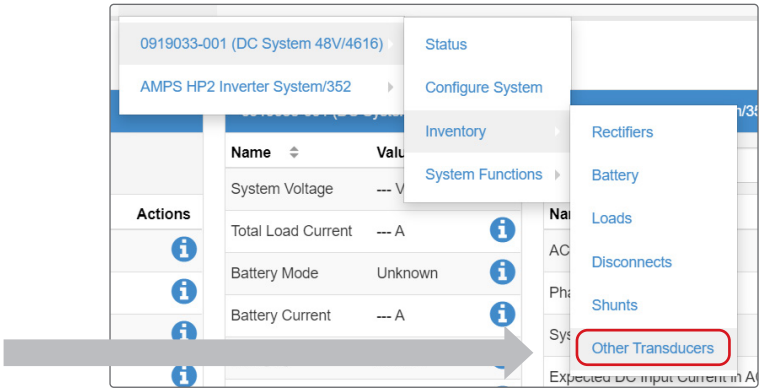
Figure 1: CXC HP CT-IPM wiring overview

Cordex® CXC HP controller setup

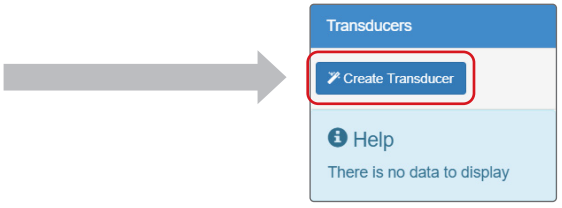
NOTICE

Ensure the Cordex® CXC HP controller is using software version 6.10 or later.

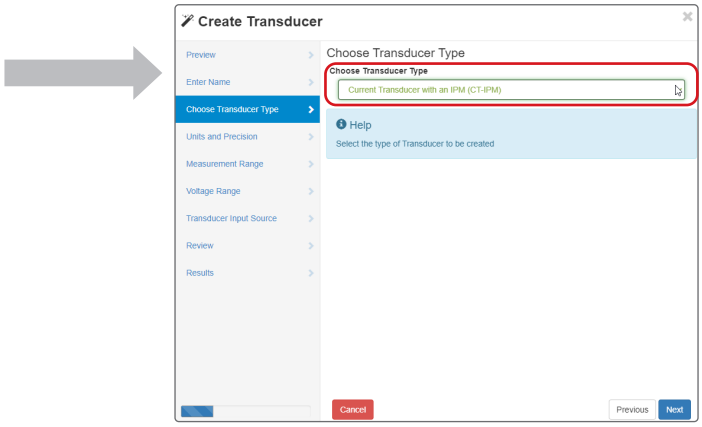
1. Sign in to the Cordex® CXC HP controller via the web interface or the local LCD interface.
2. Go to **System > User System > Inventory > Other Transducers**.



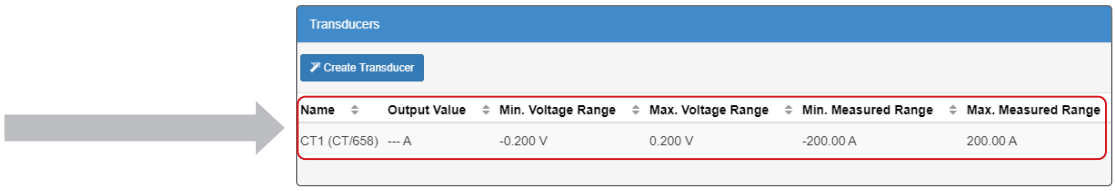
3. To add a current transducer, select **Create Transducer** to launch the wizard.



4. Follow the wizard to complete setup process. **Note:** Select **Current Transducer with an IPM (CT-IPM)** under **Choose Transducer Type**.



Once finished, select **Done** to save changes.



5. The new current transducer along with its data will appear in the table on the **Other Transducers** page.
6. Repeat this process for all remaining current transducers.

For technical support, contact the Alpha Support team:

Canada and US: +1 888-462-7487
International: +1 604-436-5547
Email: support@alpha.ca

World Headquarters
2366 Bernville Road
Reading, PA 19605 USA
+1 610-208-1991 / +1 800-538-3627

EnerSys EMEA
EH Europe GmbH
Baarerstrasse 18
6300 Zug Switzerland

EnerSys Asia
152 Beach Road
Gateway East Building #11-08
Singapore 189721 / +65 6508 1780