

Split-core AC Current Transformer (CTV-x) (AC Amperage to DC Voltage Transducer)



For use with HOBO® U12 and UX120-06M data loggers and HOBO ZW data nodes

Specifications

Current Range	CTV-A 0-20 AMPS AC CTV-B 0-50 AMPS AC CTV-C 0-100 AMPS AC CTV-D 0-200 AMPS AC CTV-E 0-600 AMPS AC
Accuracy with U12	±4.5% of full scale (includes logger accuracy)
Accuracy with ZW	±4.0% of full scale (includes data node accuracy)
Accuracy with UX120-006M	±2.1% of full scale (includes logger accuracy)
Response time (from 10% to 90% of amplitude):	CTV-A approx. 440 milliseconds CTV-B approx. 200 milliseconds CTV-C approx. 100 milliseconds CTV-D approx. 450 milliseconds CTV-E approx. 490 milliseconds
Input Current	AC current, sine wave, single phase 50 Hz or 60 Hz, load power factor 0.5 to 1.0 lead or lag
Output	0-2.5 V DC
Voltage rating	600 V AC
Temperature rating	CTV-A, CTV-B, CTV-C: -15° to 60°C (5° to 140°F), CTV-D, CTV-E: -15° to 40°C (5° to 104°F)
Construction	Molded plastic housing for indoor use per UL508
Cable	1.8 m (6 ft.)
Window Size	CTV-A, CTV-B, CTV-C: 28 x 20 mm (1.1 x 0.8 in.) CTV-D: 39 x 32 mm (1.54 x 1.26 in.) CTV-E: 74 x 62 mm (2.92 x 2.46 in.)
Dimensions	CTV-A, CTV-B, CTV-C: 79 x 71 x 36 mm (3.1 x 2.8 x 1.4 in.) CTV-D: 100 x 120 x 29 mm (3.92 x 4.72 x 1.14 in.) CTV-E: 135 x 150 x 28 mm (5.3 in. x 5.91 in. x 1.12 in.)
CE	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU)

Notice

- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- The installer is responsible for conformance to all applicable codes.
- Mount this product inside a suitable fire and electrical enclosure.

6225-F MAN-CTV

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH



Failure to follow these instructions will result in death or serious injury.



- Follow safe electrical work practices.
- See NFPA 70E in the USA, or applicable local codes.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Read, understand and follow the instructions before installing this product.
- Turn off all power supplying equipment before working on or inside the equipment.
- Use a properly rated voltage sensing device to confirm power is off.
- DO NOT DEPEND ON THIS PRODUCT FOR VOLTAGE INDICATION

Specification Note: For CE compliance, conductor shall be insulated according to IEC 61010-1:2001, Installation Category III or equivalent. The product design provides for basic insulation only.

Using the CTV with the HOBO logger or data node

1. Insert the 2.5 mm plug of the CTV into an external input (black 2.5 mm jack) of a logger or node.
2. To start a logger, select Launch from the Device menu in HOBOWare®. To start a data node, use HOBOnode Manager within HOBOWare. See the HOBOWare Help for more details.
3. For a logger, select the appropriate channel in the Launch Logger window. For ZW data nodes, select the sensor type (-A, -B, etc.) in the Configure Sensor pane that matches the Current Transformer model number.
4. For a logger or data node, select the correct AC current range, which is provided on the CTV label. Failure to select the correct range will result in inaccurate data. **Do not exceed the AC current rating of the CTV.**

Installation

- The I-bar can be hinged open in order to install the CTV around an individual wire carrying a single phase. Rotate the I-bar open (on the CTV-D and -E units, press in the I-bar tabs to open). Place the wire in the CTV window and then snap the I-bar closed.
- The I-bar on the CTV-D and CTV-E units is fully removable for easy installation. Make sure the I-bar is replaced in the proper orientation to ensure correct readings. The contacts on the unit and I-bar are marked with matching notations.
- The CTV-A, -B, and -C units are provided with a snap-on mounting plate which can be removed from the CTV and mounted separately. Mount the plate under the wire you want to monitor and, once the cable is installed into the CTV, snap the CTV/wire assembly onto the mounting plate.
- Remove the CTV from the plate by opening the CTV and sliding it off the plate or gently rocking the CTV slightly and pulling up at the same time.

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HOBO® UX90 State Logger - UX90-001

Supported Measurements:

Event, Kilowatt Hours (kWh), Motor On/Off, Pulse Input, Runtime, State Open/Closed, Water Flow

One logger with 4 recording modes

Internal reed switch can be used to determine when a door or window is open or closed

Compatible with a wide range of external sensors

Replacement for: H06-001-02, U9-001

Internal Sensor

Maximum State, Event, Runtime Frequency: 1 Hz

Preferred Switch State: No magnet present (normally open)

External Input

External Contact Input: Electronic solid state switch closure or logic driven voltage output

Range: 0 to 3 V DC (USB powered), 0 to 2.5 V DC (battery powered)

Maximum Pulse Frequency: 50 Hz

Maximum State, Event, Runtime Frequency: 1 Hz

Pulse, Event Lockout Time: 0 to 1 second in 100 ms steps

Solid State Switch Closure: Input Low: < 10 K Ω ; Input High: > 500 K Ω

Internal Weak Pull-Up: 100 K Ω

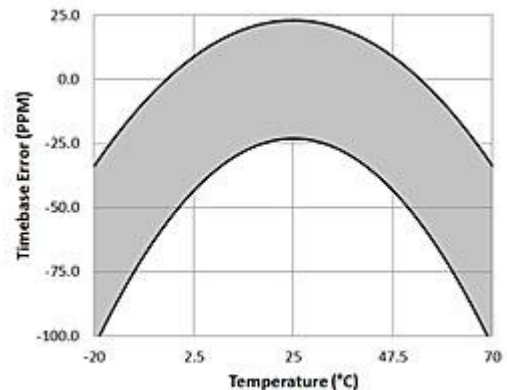
Input Impedance: Solid state switch closure: 100 K Ω pull up

Logger

Resolution: Pulse: 1 pulse, Runtime: 1 second, State and Event: 1 State or Event

Logging Rate: 1 second to 18 hours, 12 minutes, 15 seconds

Time



Plot A: Time Accuracy

Accuracy: ± 1 minute per month at 25°C (77°F) (see Plot A)

Battery Life: 1 year, typical with logging intervals greater than 1 minute and normally open contacts

Memory:

UX90-001: 128 KB (84,650 measurements, maximum)

UX90-001M: 512 KB (346,795 measurements, maximum)

Download Type: USB 2.0 interface

Download Time: 10 seconds for 128 KB; 30 seconds for 512 KB

Logger Operating Range:

Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing)

Launch/Readout: 0° to 50°C (32° to 122°F) per USB specification

LCD: LCD is visible from: 0° to 50°C (32° to 122°F); the LCD may react slowly or go blank in temperatures outside this range

Size: 3.66 x 5.94 x 1.52 cm (1.44 x 2.34 x 0.6 in.)

Weight: 23 g (0.81 oz)

Environmental Rating: IP50



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